PRESENTED

TO

THE UNIVERSITY OF TORONTO

BY

[Signature]

[Signature]
THE

POPULAR ENCYCLOPEDIA;

BEING A GENERAL DICTIONARY OF

ARTS, SCIENCES, LITERATURE, BIOGRAPHY, HISTORY,

AND

POLITICAL ECONOMY.

REPRINTED FROM THE AMERICAN EDITION OF THE "CONVERSATIONS LEXICON."

WITH CORRECTIONS AND ADDITIONS,

SO AS TO RENDER IT SUITABLE TO THIS COUNTRY, AND BRING IT DOWN TO THE PRESENT TIME.

WITH

DISSERTATIONS

ON THE RISE AND PROGRESS OF LITERATURE,
BY SIR D. K. SANDFORD, A.M. Oxon., D.C.L.

ON THE PROGRESS OF SCIENCE,
BY THOMAS THOMSON, M.D., F.R.S.L. & E., &c. &c.

AND

ON THE PROGRESS OF THE FINE ARTS,
BY ALLAN CUNNINGHAM, Esq.

VOLUME IV—PART II.

GLASGOW:
BLACKIE & SON, 38, QUEEN STREET,
AND 5, SOUTH COLLEGE STREET, EDINBURGH,
to the hardships and perils of his daring enterprise. They gained the confidence of the great navigator, who immediately took him into his service, and promoted him to be a corporal of marines. He embarked accordingly, and performed the whole voyage round in the British navy; but nothing further is known of him, in that situation, than that he refused to serve against his country. In 1782, he made his way home, and took lodgings at Southold, with his mother, who kept a boarding house, and by whom he was not recognised, after an absence of eight years. We find him soon afterwards at L'Orient, whither he had gone in order to carry into effect his plan of a voyage to the Pacific Ocean. At L'Orient, the principal merchants of the place actually furnished him a vessel of 500 tons; but when he was on the point of setting out, the voyage was entirely abandoned by the merchants, in a mysterious understanding with the government. He then went to Paris, where he concerted a scheme with the famous Paul Jones for accomplishing his object, which was also frustrated, and, after making other anxious and fruitless efforts, he gave up altogether the idea of reaching the North-west Coast by sea, and applied to the empress Catharine of Russia, through the medium of Mr Jefferson, then American minister in Paris, for permission to pass through her dominions, having come to the resolution of travelling by land through the northern regions of Europe and Asia, crossing over Bering's straits to the American continent, and pursuing his route down the coast, and to the interior. After waiting, however, for an answer from the carriage for more than five months, he accepted an invitation from London to embark in a British ship, which was in readiness to sail for the Pacific ocean, and of which the owners undertook to have him set on shore on the Northwest coast. After forming his plan, which was warmly entered into by Sir Joseph Banks and other distinguished men of science, and which was to land at Nootka sound, thence strike directly into the interior, and pursue his course to Virginia, he embarked with no other equipment than two large casks of biscuit, four of tea, and a barrel of honey. He thought himself secure of his object; but the vessel was not out of sight of land before it was brought back by an order from the government, and the voyage was finally relinquished. Bearing up with wonderful fortitude against these reverses, he next determined to make the tour of the Gile, from London east, on foot, and proceeded to St Petersburg in the prosecution of this design, through the most unfrequented parts of Finland. In that city his letters procured him eminent acquaintances, among whom Professor Pallas and count de Ségur proved his chief patrons. After waiting there nearly three months, he obtained his passport for the prosecution of his journey to Siberia. On his arrival at Yakutsk, he was prevented, by the Russian commandant at the place, from proceeding further; and at Irkutsk, whither he had returned, he was arrested as a dangerous republican, and put into a gibbets with two guards, conducted with all speed to Moscow, and thence to the frontiers of Poland, where he was released, with an intimation, that if he returned again to the dominions of the empress, he should be hanged. After an absence of fifteen years, he returned to England, and having more appeal to the British ministry, to use his own words, "disappointed, ragged, pennyless, but with a whole heart." He was now thirty-seven years of age. Scarcely had he taken lodgings in London, when Sir Joseph Banks proposed to him, on behalf of the African association, an expedition into the interior of Africa. He accordingly sought an immediate interview with the secretary of the Niger, the proposed Cairo, with a letter; and, on being asked by him when he would set out, he answered, To morrow morning. The route traced for him, by the association, was, from Alexandria to Grand Cairo, from Cairo to Senmaar, and thence westward, in the latitude and supposed direction of the Niger, to the red sea. When he was on the point of proceeding on his journey after three months of vexations delay, when exposure to the heat of the sun, and to other deleterious influences of the climate, at the most unfavourable season of the year, brought on a bilious attack, which proved fatal towards the end of November, 1788. Zeal, activity, courage, honour and intelligence distinguished his short but remarkable career. See Sparks's Life of Ledyard, Cambridge, New England, 1828.

LEE, ANN. See Shakers.

LEE, ARTHUR, a distinguished American revolutionary patriot, was born in Westmoreland county, Virginia, December 20, 1740. He was the youngest of five brothers, all of whom became eminent. He was sent to the school at Eton, in England, and upon the completion of his course there, entered the university of Edinburgh, where he commenced the study of medicine, and took his degree of M. D. with great distinction, winning a medal for the best botanical treatise, which was published by order of the university. Having travelled through Holland, Germany, Italy, and France, doctor Lee returned to Virginia, and commenced the practice of his profession at Williamsburgh, then the metropolis. His success was great; but the bent of his mind to politics determined him, before long, to return to England, and, under every order in which he might acquire familiarity with the science of politics and government, and fit himself for taking a part in public affairs, which were then beginning to wear a highly interesting and serious aspect. Before his return, he had heard the parliamentary debates on the stamp act, and when the duty bill was brought in, he wrote two pieces of anonymous papers in relation to it. In 1776, he went again to London, which city he found the stronghold of popular opposition, and the society of the supporters of the bill of rights the most active in conducting it. Of this society he became a member, with the design of connecting the grievances of the two nations, and purchased the freedom of the city, which qualified him to vote in municipal affairs. The complaints of America were introduced into the famous Middlesex petition by Mr Lee, associated with Wilkes; and he also produced a petition to the House of Commons. Members of the club would support no candidate for parliament who would not pledged himself to promote the granting of the power of self-taxation to America. The celebrated Junius was an adviser of this body, and with him Mr Lee had an amicable discussion on some points of American policy, about which they happened to differ. His political publications at this period—in which he adopted the signature of Junius Americanus—were numerous, and procured for him the acquaintance of Burke, doctor Price, and others of the popular leaders. In 1778, he was admitted to the bar, and became the refuge of those who were under the most favourable auspices; and such success attended his exertions as to enable him to lay the foundations of an ample fortune. In the same year
the assembly of Massachusetts appointed him their agent, in case of the absence or death of doctor Franklin; and before either of the contingencies occurred, he assisted freely to spare. As a testimony of the sense of his services, that state subsequently, in 1784, presented him with a tract of land containing 4000 acres. In the spring of 1774, he set out on a tour to France and Italy, and, when at Paris, published an Appeal to the People of Great Britain. Hearing, however, of the dissolution of parliament, before he had completed his journey, he hastily returned from Turin to London. On the return of doctor Franklin to America, in the same year, he became the sole agent of Massachusetts. The secret committee of congress appointed Mr. Lee their London correspondent. The principal object of this regulation was, to learn what was to be hoped from the European powers. Mr. Lee directed his inquiries particularly to the French ambassador at the British court, through whom he obtained assurances from the count de Vergennes, that his government would secretly furnish to the colonies £200,000 worth of arms and ammunition, to be transported from Holland to the West Indies. He was afterwards appointed by congress one of the commission to the court of France, in conjunction with Silas Deane, to whom doctor Franklin was afterwards added, and continued to labouer incessantly for the great end of enabling the United States to be strong, being the coalition, and never-failing vigilance in detecting whatever might prove injurious to its interests. At the same time, he also acted as agent for Virginia, and had the address to procure, under circumstances of special favour, from the royal arsenal, warlike stores to the amount of nearly £260,000. In December, 1777, congress appointed him sole commissioner to Spain, still retaining him on the commission to France. The British ambassador remonstrated against his reception, in consequence of which he was detained at Burgos, on his way to Madrid; but, upon sending a spirited reply to the remonstrance, no further interruption was attempted, and he proceeded to the capital. He there pursued the same policy which he had practised in London and Paris, ingratiating himself and his cause with the men of influence, and appealing boldly and directly to the government, from which he procured a large, unexpected loan. Having accomplished all that seemed practicable, he returned to Paris; when, the commissioners having determined on the expediency of conciliating Frederick of Prussia, and prevailing with him to withhold his assistance from Britain, Mr. Lee was selected for that duty, and required to Berlin, where he was allowed to reside in a private character, and to correspond secretly with the court. He succeeded in obtaining from Frederick an assurance that he would afford no facilities to Great Britain, in procuring additional German auxiliaries, and that he would publish no song, though any part of his dominions, of any troops which that country might forward engage in Germany. He obtained, also, permission for the citizens of the United States to carry on a direct commerce with the subjects of Prussia, and for himself to purchase, for the use of the United States, arms from the arsenals from which the king supplied his forces. While in Berlin, his papers were stolen from his chamber; but, upon an order from the king to investigate the affair, they were secretly returned. The blame of this act he cast on the British envoy, who, on the representation of the British minister, was recalled. When Mr. Lee left Berlin, it was with an understanding that a correspondence should be carried on between Baron Schulenburg and himself, on the affairs of the United States, and that he should keep the king constantly informed of the events of the war with Great Britain, which he did during his residence in Paris. He was also assured that Prussia "would not be the last to acknowledge his services to his country." In forming the commercial treaty with France, Mr. Lee objected to two articles, in which it was stipulated that no duties should be charged by the respective governments on any merchandise exported to the French West Indies, which yielded revenue to the United States; and, on the suggestion of France, the decision was left to congress, who directed that they should be expunged. Upon the recall of Mr. Deane, between whom and Mr. Lee there had been some misunderstanding, John Adams was appointed in his place. Their services, however, were soon afterwards superseded by the appointment of doctor Franklin as minister plenipotentiary. During the period of his commission, the peculations of the subordinate agents, who were employed to conduct the commercial details of the public business, had excited the vigilant inspection and unceasing reprehension of Mr. Lee. This interference created complaints and insinuations, which were artfully disseminated in the United States. These rumours were, in a measure, successful in exciting the suspicions of some members of congress; and when, in 1779, it was determined to send a minister to Spain,—and Mr Lee was certainly so prominent to the prosecution of the business, that it was the fittest candidate,—he was not appointed, although nominated. Upon learning his virtual censure, he resigned his appointments, and returned to America in 1780. He prepared an elaborate report of his official proceedings, and answers to all the charges which had been circulated to his prejudice; but, upon requesting leave to vindicate himself with these in congress, that body expressed their full confidence in his patriotism, asserting that they had no accusations to make, and requested him to communicate his views and information acquired during his residence abroad. In 1781, he was elected to the assembly of Virginia, and by it returned to congress, where he continued to represent the state until 1785. In 1784, he was sent on a delegation to make treaties with the Indians on the northern frontier. He was next called to the board of treasury, with Samuel Osgood and Walter Livingston, in which he continued from 1784 to 1789. Within the same year, he also served as a member of a committee to revise the laws of Virginia. On the dissolution of the treasury board, he once more sought the shades of retirement, and established himself on a farm on the Rappahannock, where he died Dec. 12, 1792.—See R. H. Lee's Life of Arthur Lee (Boston, 1829), and the review of the same in the North American Review; also his letters in Sparks's Diplomatic Correspondence of the Revolution (Boston, 1831).

LEE, CHARLES, a major-general in the American revolutionary war, was a native of North Wales, and became an officer at the age of eleven years. He served under General Braddock, in the expedition against the Ohio, where he commanded a company of grenadiers, at the unsuccessful assault of Ticonderoga, by general Abercrombie, and was wounded. He distinguished himself in 1762, under general Burgoyne, in Portugal. He afterwards wrote on the side of the American colonies, in a contest between the English ministry and the French, and the Polish service. During his absence, the stamp act passed, and the hostility to it manifested by general Lee rendered him obnoxious to the royalists of the court of Vienna. In the course of two or three years, he wandered all over Europe, until a duel with an English officer, in which he was killed, obliged him to flee; and, in 1773, he sailed from London for New York. The quarrel
between Great Britain and her colonies had now assumed a serious aspect, and Lee formed the resolution to espouse the cause of the latter. Travelling through the colonies, he became acquainted with the most conspicuous friends of colonial emancipation, and, though yet a British officer on half-pay, was induced in encouraging the Americans to maintain their rights and in censuring the measures of the ministry. In 1775, Lee received a commission from congress, and immediately resigned the one he held in the British service; at the same time declaring to the secretary of war his readiness to engage in any honourable service for the king, but only upon the condition that he should not be concerned in censuring the measures as inconsistent with the liberty of the subject. In the quality of major-general in the continental service, Lee accompanied general Washington to the camp before Boston. In 1776, he was directed by the commander-in-chief to occupy New York, and to defend that city and the North river against the enemy. On his arrival there, Lee set about strengthening the defences of the city, disarming and securing those who were inimical to the American cause, and checked the intercourse subsisting between the British mainland and the town, which was afterwards invested with the chief command in the southern department. His presence in the south inspired a happy andard confidance in soldiers and people, while his conduct on the memorable attack of the British upon Sullivan island raised his military reputation. After the dispersion of the British at this fortress, Lee passed into Georgia, where he remained some weeks, employing himself in fortifying the colony, and chastising the frontier Indians. Congress anticipating a concentration of the British forces, for the purpose of making a powerful assault on New York, Lee was ordered to Philadephia, and was despatched to the camp at Haarlem, with permission to visit the posts in New Jersey. He reached the army in time to recommend its extraction from a situation, where, had the British used proper diligence in their operations, it would have been completely destroyed. The opinion of Lee induced the council of war to make a precipitate movement during the night, by which they escaped the toils into which they would otherwise have fallen. While marching through the Jerseys to join general Washington, Lee was made prisoner by the British (December 13, 1776), as he had been separated from the main body, and carried to New York. Washington proposed to exchange for him six field officers; but general Howe refused to consider Lee as a deserter from the British army, and refused to release him on those terms. Several British officers were exchanged, and held answerable for the treatment of general Lee. The latter was, however, treated in a manner unworthy of a generous enemy, until the surrender of Burgoyne, October 17, 1781. At that event, he was exchanged. The battle of Monmouth continued the struggle for the possession of New Jersey. Being directed by general Washington to advance and attack the enemy’s rear, he approached very near, but, instead of obeying his instructions, suffered his troops to make a disorderly retreat. The commander-in-chief met him in the flight, and reprehended him for his conduct. Lee replied in improper language, and was treated with considerable severity. Lee resigned his commission, but afterwards rejoined Lee, and was arrested, and arraigned before a court-martial, for disobedience of orders, misbehaviour before the enemy, and disrespect to the commander-in-chief. August 12, 1778, he was found guilty of the charges, and sentenced to be suspended from any commission in the armies of the United States for the period of one year. The concurrence of congress in this sentence was thought necessary; and, while yet in suspense as to its determination, he published a defence of his conduct. His abuse of general Washington’s character, in this pamphlet, led to a duel with colonel Laurens, one of the aids of the commander-in-chief, in which Lee was wounded. Congress confirmed the sentence of the court-martial in his case, though without previous discussion, to which he retired to an estate he had purchased in Virginia, where he lived, secluded in a small hovel, destitute of glass windows or plastering, amusing himself with his books and dogs. While in this situation, he composed a set of political and military queries, in which his bitter feelings were freely vented, and which were afterwards published in Baltimore, where they created considerable disturbance. In 1782, he went to Philadelphia, where he engaged lodgings in a tavern, and, a few days after his arrival, was seized with a fever, of which he died in obscurity, October 9, 1782. It is said he would not have been employed to the end in the profession which had engaged the best portion of his life, for the last words he was heard to utter were, “Stand by me, my brave grenadiers.” From respect to his former services, a large concourse of the people, including many public characters, was present at his interment and American, joined in the funeral solemnities.

General Lee was brave in action, of a sound judgment in military affairs, and possessed of the affection of his officers and men. Sensible of his military talents, and in a new and chief command, and was little scrupulous about the means to be employed to attain that dignity. Whatever might have been his motives for engaging in the American cause, he sacrificed much for it, and was useful in its advancement. He was a classical scholar, and possessed an excellent memory and a brilliant fancy. His temper was morose and aversive. His satirical spirit made him many enemies. Though a gentleman in his manners, when he chose to appear such, he was often coarse, and, towards the latter part of his life particularly, became very negligent about his personal appearance. He was a very fond of dress, which he never carried into the company of ladies. With all his faults, however, he was distinguished for sincerity, veracity, and adherence to his friends. He was rather above the middle size. His countenance was not agreeable. Many persons considered him an atheist, though some exulted in ideas of a Supreme Being appear in his correspondence. He published some essays on military, political, and literary subjects, which, together with his extensive correspondence, were collected in a volume in 1792. A pamphlet which he wrote on American affairs, in the earliest part of his life, was much approved of by the Americans, and particularly commended by doctor Franklin. It was his earnest desire, expressed in his will, that he should not be buried in any church or churchyard, or within a mile of any Presbyterian or Anabaptist meeting-house; and he added as his reason, that since his residence in America, he had kept so much bad company while living, that he wished to avoid it when dead.—See Memoirs of Charles Lee (Dublin, 1792); Anecdotes of Charles Lee (London, 1797); Girdlestone’s Facts proving Charles Lee to have been Janius (London, 1813.)

LEE, Henry, general, a distinguished officer of the American revolution, was born in the colony of Virginia, January 29, 1756, of a highly distinguished
family. He received the rudiments of his education from a private tutor, and was then sent to Princeton College, where he was graduated in the eighteenth year of his age. In 1774, soon after his return home, he was intrusted with the management of all the private concerns of his father, whilst the latter was engaged in negro trade. He organized a band of Indian tribes on behalf of the colony, and, in the execution of this charge, he displayed a degree of prudence, industry, and ability beyond his years. In 1776, he was appointed a captain of one of the six companies of cavalry, raised by Virginia, after she had thrown off the authority of the mother country. About this time, the large arms sent by Great Britain into America rendered it indispensable that every possible reinforcement should be sent to general Washington, and, in consequence, those companies were incorporated into one regiment, under the command of lieutenant-colonel Blum, and offered by Virginia to Congress. Their services were accepted, and, in September, 1777, they joined the main army of the provincials. Young Lee was thus afforded an opportunity of winning distinction, which he quickly did. He maintained a strict system of discipline, and was extremely careful of his men and horses, by which he was enabled to move with light and elocutionary rapidity, and to strike the enemy by surprise, with certainty and success. He particularly attracted the notice of Washington, who, at the battle of Germantown, selected him, with his company, to attend as his body-guard. In January, 1778, the British formed a plan to capture him. Two hundred of their cavalry succeeded in approaching his quarters, a stone house, unperceived, at a time when his troopers were disperbered in search of forage. There were only ten men with him, most of them officers; but, with these, he defended the house obstinately, and the assailants were constrained to retreat. In consequence of this and other exploits, he was, shortly afterwards, promoted by Congress to the rank of major, with the command of a separate corps of cavalry, consisting of three companies, to which both cavalry and infantry were subsequently added. In 1780 he was sent, with his legion, to the army of the south, under Greene, having been previously raised to a lieutenant-colonelcy, and continued with it until the end of the war. In the famous retreat of Greene, before Cornwallis, into Virginia, Lee's legion formed the rear-guard of the American army, and repelled every attempt of the enemy to impede its march. After Greene had offered his resignation to return to civilian life for safety, he sent Lee and colonel Pickens into North Carolina, to watch and intercept the movements of Cornwallis, intending to return himself into that state, and bring the British general to battle. While the two colonels were marching to surprise Tarleton, Lee fell in with a couple of messengers sent to the British officer from colonel Pyle, the commander of a body of 400 American royalists. The messengers mistook Lee for Tarleton, as the accoutrements of his troopers were similar to those of the British officer, and communicated to him full information concerning Pyle's movements. Availing himself of the mistake, Lee personated Tarleton, and sent one of the messengers to Pyle, with directions for him to take post at a certain station, where he and Pickens soon after came up with him and dispersed his force. At the battle of Guilford court-house, which happened soon afterwards, Lee almost entirely crushed the enemy himself. He was placed with his legion, on the left of the front line of Greene's army, and, although the North Carolina militia, the principal force attached to their position, abandoned them at the very commencement of the action, they yet contrived to keep the enemy at bay, until the order to retreat was given by the American general. Previous to the battle in the morning, Lee encountered the cavalry of Tarleton, and drove them back with considerable loss. During the interval between this battle and that of Camden, in which Greene was worsted by lord Hawdon, Lee took several forts. After the latter engagement, Lee was sent to the interior of Virginia, in the expectation of Augustus, in Georgia, and, in his way thither, surprised and took fort Godolphin, in which there was a valuable deposit of the enemy's military stores. On his junction with Pickens, they immediately invested Fort Cornwallis, on which the fate of Augusta depended. The commander of this fort was colonel Brown, who was particularly obnoxious to the Americans; and his life would have been a sacrifice to their hatred, had it not been for the precautions of colonel Lee. He then returned, with his prisoners, to the army of Greene, who was, at that time, besieging the fortress of Ninety-Six. In that siege Lee laid a conspicuous snare, and, in the attempt made to take the place by storm, he was charged with the attack in one quarter. He was completely successful; but, the other assault having been less fortunate, the siege was raised. In the action which, a short time subsequently, occurred at Trenton, he was placed at the head of his horse. By opportunely dismounting his cavalry, he greatly contributed to the enemy's defeat. In the ensuing month of October, he was sent by Greene on a special mission to the commander-in-chief; then employed in the siege of Yorktown, for the purpose of requesting him to prevail on the count de Grasse to afford naval assistance, to enable Greene to lay siege to and take Charleston, with the British army, in the south. He arrived at Yorktown about the time of the surrender of Cornwallis, and, after executing his commission, returned to Greene. Near the end of the war, he was appointed in the fall of 1786, he was appointed a delegate to Congress from the state of Virginia, in which station he remained until the present constitution of the United States was carried into operation. In the interim, he was elected a member of the convention of Virginia, which met in June, 1788, and ratified that constitution, of which instrument he was a strenuous and eloquent advocate. He was afterwards chosen a member of the house of delegates of his native state. In 1792, he retired from his seat in the assembly, on being raised to the chair of governor, which he filled for three successive terms. In the latter year of his life he was appointed by president Washington to command the forces which he was constrained to send into the western counties of Pennsylvania, in order to quell the disturbances by which they were agitated. He performed this duty in the most satisfactory manner. In 1799, he was again chosen a member of congress, and, while there, in the same year, he was selected to pronounce a funeral oration upon Washington. He returned his seat until the accession of Mr Jefferson to the chief magistracy of the Union, when he retired into private life, after which he never held any conspicuous office. The latter years of his life were harassed by pecuniary embarrassments, occasioned, in a measure, by his generous hospitality. It was while he was confined, in 1809, within the bounds of Spotsylvania county, on account of pecuniary obligations, that he prepared for publication his excellent memoirs of the Southern States, one of whose principal objects he had made to conspicuous a part—a work which, if not remarkable for great polish of style, is entitled, from its bold, manly, and sincere tone, as well as the power of the descriptions, and the interest of the information, to rank with the best works relating to the revolutionary war.—General Lee happened to be in.
Baltimore, in 1814, when the printing-office of an obnoxious paper was threatened by the populace. He was induced, by personal friendship, to take part in the outbreak at Stratford, Westmoreland county, Virginia, which was made on the Baltimore jail, to which the party of defenders were carried for safety, he was severely wounded. His health decayed in consequence, and he repaired to the West Indies, hoping to stop the ravages of disease. In 1816, he returned, to the disfranchising disfranchise, the members of the legislature of the island, near St Mary's, Georgia.

Lee, Nathaniel, a dramatic poet, was educated at Cambridge, whither he went in 1668, and afterwards went to London, mislaid, it is said, by the promises of Villiers, duke of Buckingham. Neglected by his patron, he turned his attention to the drama, and, in 1675, produced his tragedy of Nero, and, from that time to 1681, produced a tragedy yearly. He also tried his abilities as an actor, but failed in the attempt. In 1684, insanity rendered his confinement necessary, and he was taken into Bethlem hospital, where he remained until 1688, when he was discharged, and wrote two more tragedies, the Princess of Cleves, and the Massacre of Paris, which appeared in 1689 and 1690. He died in 1691 or 1692, in consequence of some injury received in a drunken night fight. His last piece was the play of which he was acted with applause; but his natural fire and pathos were buried in a torrent of words, and clouded by a tendency to turgid and bombastic eloquence.

Lee, Richard Henry, a signer of the American Declaration of Independence, was born January 29, 1732, at Stratford, Westmoreland county, Virginia, and, after a course of private tuition in his father's house, was sent to the academy of Wakefield, in Yorkshire, England, where he became distinguished for his proficiency in the classics. He returned to his native country when about in his nineteenth year, and his fortune rendering it unnecessary for him to devote himself to any profession, his time was most usefully spent in the improvement of his mind. The first endeavour which he made to serve his country, was in the capacity of captain of the volunteer companies which were raised in 1755, for the purpose of acting against the Creek and Cherokee Indians, who were disappointed, however, in his patriotic desires, Braddock having refused to accept any more assistance from the provincials than he was obliged to. In his twenty-fifth year, Lee was appointed a justice of the peace for his native county—an office then given only to persons of the highest character, and generally but to persons of considerable experience. Not long afterwards, he was chosen a delegate to the house of burgesses, from Westmoreland county, and thus commenced the career of politics, for which he was peculiarly fitted, both by his natural disposition and talents, and the studies in which he was versed. With all the sagacity, history, the principles of the civil law, and the laws of his own country, had occupied the principal share of his time, whilst he had not neglected the more elegant departments of polite literature; and he soon obtained distinction in debate. His voice was always the subject of those high councils in which were advocated by the republican or anti-aristocratic portion of the legislature; and, when, in 1764, the declaratory act was passed in the British parliament, in pursuance of the right claimed by that body of taxing America, he was the first to bring forward the subject to the notice of the assembly of which he was a member. A special committee having, in consequence, been appointed to draught an address to the King, a memorial to the house of lords, and a remonstrance to the house of commons, Mr Lee was placed on it, and selected to prepare the two first papers. These, accordingly, proceeded from his pen, and, in the words of the historian Hume, "are not only the genuine products of the revolution, and abound in the firm and eloquent sentiments of freemen." In 1765, Patrick Henry introduced in the Virginia legislature his resolutions against the stamp act, which had just been passed by the British parliament. Mr Lee added his "invaluable and most salutary and useful and most zealous assistance. Not long after it had been carried, in spite of the efforts of the influence of the colonial, who advocated the measures of the mother country, Mr Lee, amongst other methods which he took to prevent the operations of the stamp act, planned and effected an association "for the purpose of deterring all persons from accepting the office of vender of stamp paper, and for awing into silence and inactivity those who might still be attached to the supremacy of the mother country, and disposed to advocate the right of colony taxation." The association bound themselves to exert every faculty to accomplish the end for which they had united together, "at every hazard, and paying no regard to danger or to death." In consequence of the opposition the stamp act encountered in the colonies, the British ministry were forced to repeal it; but a detail with a revision of this epoch in the mother country "to bind the colonies in all cases whatever." In 1767, parliament having passed two acts, one laying a tax on tea, and the other requiring the legislature of the colony "to make provision for quartering a part of the regular army." Mr Lee exerted himself in every way to excite a spirit of hostility to them, perceiving, as he did, their despotic tendency, and feeling, even then, that a struggle for freedom must eventually take place. It would be impossible for us, consistently with our limits, to enter into a minute detail of the unceasing efforts of Mr Lee's patriotism between this period and the assembling of the first congress in Philadelphia; we can only mention that the celebrated plan which was adopted in 1773, by the house of burgesses, for the formation of corresponding committees to be organized by the legislatures of the several colonies, and also that of corresponding clubs or societies, among those of the colonies, for the purposes of diffusing among the people a correct knowledge of their rights, of keeping them informed of every attempt to infringe them, and of rousing a spirit of resistance to arbitrary measures,—both originated with him. The same idea had, about the same time, been conceived and proposed by Samuel Adams in Massachusetts—a circumstance which has occasioned a dispute concerning the merit of having given birth to measures which were the forerunners of the general congress. It cannot be doubted, however, that Mr Lee followed only the suggestions of his own mind with regard to the proposal.
of congress to the people of British America. In the following year, he was unanimously elected, by the people of Westmoreland county, as a representative of that county in the congress, and subsequently was sent to the second congress. At this period, hostilities were in full operation between the two countries, and one of the first acts of the new congress was to invest George Washington with the command of its armies. His commission and instructions were furnished by Mr. Lee, as chairman of the committee appointed for that purpose. The other committees on which he served in this session, were those named to prepare munitions of war, to encourage the manufacture of salt-petre and arms, and to devise a plan for the more rapid diffusion of intelligence throughout the colonies. The second address of congress to the people of Great Britain—a composition unsurpassed by any of the state papers of the time—was written by him this session. But the most important of his services, in this second congressional term, was his mission to France, June 7, 1776, "that these united colonies are, and of right ought to be, free and independent states; that they are absolved from all allegiance to the British crown; and that all political connexion between them and the state of Great Britain is, and ought to be, totally dissolved." His speech on this occasion, was met with the acclamations of America, and the most brilliant displays of eloquence ever heard on the floor. After a protracted debate, it was determined, June 10, to postpone the consideration of this resolution until the first Monday of the ensuing month of July; but a committee was ordered to be immediately appointed to prepare a declaration of independence. Of this committee he would have been the chairman, according to parliamentary regulations with regard to the original mover of an approved resolution; but he was obliged, on the same day (the 10th), to leave congress, and hasten to Virginia, in consequence of the dangerous illness of some of the members of his family. Mr. Jefferson was substituted for him, and drew up the declaration. In August following, Mr Lee returned to his seat in congress, which he continued to occupy until June, 1777, pursuing, with unabated ardour, the path which was to lead to the freedom and happiness of his country. In that month, he solicited leave of absence, and returned to Virginia. This step was taken on account of the delicate state of his health, and also for the purpose of clearing his reputation from certain statements which malice or over-heated zeal, or both, had falsely assigned to him. He actually did, by demanding an inquiry into the allegations against him, from the assembly of his native state. The result of this inquiry was a most honourable acquittal, accompanied by a vote of thanks to him for the fidelity and zeal of his patriotic services, which the speaker of the house, the venerable George Wythe, in communicating it to him, prefaced by a warm and flattering eulogy. In August, 1778, he was again elected to congress, but was forced, by his declining health, to withdraw, in a great degree, from the arduous labours to which he had hitherto devoted himself. In 1780, he retired from his seat, and declined returning to it until 1784. In the interval, he served in the assembly of Virginia, and, at the head of the militia of his county, protected it from the incursions of the enemy. In 1784, he was chosen president of congress by a unanimous vote of the states; and, in 1786, was re-elected to the Virginian assembly. In the convention which adopted the present constitution of the United States, Mr Lee joined in the vote of congress which submitted the plan they proposed to the adoptions of the people of the states. He was, however, hostile to it himself, thinking that it had too great a tendency to consolidation. When it was adopted, he and Mr Grayson were chosen the first senators from Virginia under it, and in that capacity, he moved and carried several amendments. In 1792, his health forced him to retire from public life, when he was again honoured by the Virginia legislature with a vote of thanks. He died June 19, 1794.
are in general well built, and, in the modern part of the town, which is daily extending, handsome and elegant. In the other parts, the streets are narrow and dark, and there is a great deal of seclusion, as it is mentioned by Bede, the ecclesiastical historian; and it is also noticed in Doomsday Survey. A castle formerly existed here, which was besieged by king Stephen in 1159; and in this fortress Richard II., after his deposition, in 1399, was confined for a short time. Leeds, writing to the reigning monarch of Henry VIII., describes Leeds as "A pretty market-town, subsisting chiefly by clothing, reasonably well built, and as large as Bradford, but not so quick as it." The town received its first charter of incorporation from Charles I. in 1629, when Sir John Savile, afterwards ennobled, was made the first honorary alderman; and in compliment to him, the arms of the town are very appropriately decorated with Lord Savile’s supporters, two of the Athenian birds, sacred to Minerva, the goddess of wisdom, and patience of the arts of spinning and weaving of his own creation, and two rings were given to the town by Charles I., in 1661, and renewed by James II. in 1684.

Leeds has long been famous not only for the manufacture of woolen cloth in general, but also as a mart for the two varieties of mixed and white broad cloths. The mixed cloths are those which are made with dyed wool, which in the seventeenth century, were exposed for sale on the battlements of the long and wide bridge over the Aire, and afterwards in the open air in the street, called the Briggate. The inconvenience and damage to the cloth, from exposure to the weather, suggested the necessity of a different arrangement; and in 1758 the mixed cloth-hall was erected at the general expense of the merchants and manufacturers. This is a quadrangular edifice, surrounding a large open area, from which it receives the light abundantly, by a great number of lofty windows; it is 138 yards in length, and sixty-six in breadth, divided in the interior into six departments, or covered streets, each including two rows of stands, amounting in number to 1800, held as freehold property by various manufacturers, every stand being marked with the name of the proprietor. This hall is exclusively appropriated to the use of persons who have served regular apprenticeship to the trade in the mystery of making coloured cloths. The markets are held on Tuesdays and Saturdays, and only for an hour and a half each day, at which period alone sales can take place. The market-bell rings at six o'clock in the morning in summer, and at seven in winter, when the markets are speedily filled, the benches covered with cloth, and the proprietors respectively take their stands; the bell ceasing, the buyers enter, and proceed with secrecy, silence, and expedition, to bargain for the cloth they may require, and business is thus summarily transacted, often involving an exchange of property to a vast amount. When the time for selling is terminated, the bell again rings, and any merchant staying in the hall after it has ceased, becomes liable to a penalty. The hall is under the management of fifteen trustees, who hold their meetings in an octagonal building, erected near the entrance to this hall. Simulating its plan to the preceding, is the white cloth-hall, which is divided into five streets, each with a double row of stands, amounting in all to twelve hundred and ten. The markets are held here on the same days, but they do not commence till after the conclusion of those at the mixed cloth-hall, and are subject nearly to the same regulations. Besides these principal stands, there is also a small hall of more recent erection, in Albion Street, appropriated to the use of such clothiers as are excluded from the others in consequence of not having served as apprentices to the trade. The manufacturing district whence these halls are supplied, extends about ten miles southwards of Leeds, fifteen miles south-west, and thirty miles north and west; the mixed cloths being made chiefly in the neighbourhood of the river Aire, and the white cloths in that of the Calder. Large quantities of fancy goods are also made, such as swadowns, tollitines, kenemurers, bear-skins, shalloons, stuffs, Scotch wools, camlets, and whole-cloths, and blankets and shawls in very great variety. Near the town, are potteries, where large quantities of earthenware are made, and exported thence to Scotland, Ireland, Holland, Germany, Russia, the Baltic, and the Mediterranean; here also are establishments for making canvass, sucking, thread, &c.; others for the finer kinds of linen; and in or near Leeds are several cotton-mills, chiefly worked by means of steam-engines. Here are also iron and brass foundries, with establishments for making various kinds of machinery; oil and mustard mills, paper mills, silk-mills, and works for the preparation of oil of vitriol, aquafortis, and other chemical articles. Within the parish, which is thirty miles in circumference, are several productive coal-mines; and there are likewise quarries of argillaceous schist, whence is procured an abundant supply of slates and flagstones for paving.

Leeds also contains the elegant public structures, among which may be mentioned the theatre, the new court house, and the commercial buildings. It enjoys the benefits of a Literary and Philosophical Society, an institution for the promotion of the fine arts, several public libraries, &c. The population of Leeds, which in 1775 was only 17,117, amounted in 1811 to 151,038.

LEER (ätumæ porrurn), a mild kind of onion, much cultivated and highly esteemed in some places for culinary purposes. The stem is rather tall, and the flowers are disposed in large compact balls, which are supported on purple peduncles.

LEeward ISLANDS. The terms Leeward and Windward, applied to the West India islands, were given them from their situation in a voyage from the ports of Spain to Carthagena or Porto Bello. The islands, which lie to leeward, extend from Porto Rico to Dominica.

LEEWARD, To, denotes towards that part of the horizon which lies under the lee, or whither the wind blows.

LEFEBVRE, FRANCOIS JOSEPH, duke of Dantzic, marshal and peer of France, &c., born at Ruffec, department of the Upper Rhine, in 1755, and after having served with distinction in the wars of the republic and the empire, died in 1820. He entered the military service in the garde François, and at the revolution was sergeant. Having warmly embraced the new principles, and distinguished himself by his prudence and firmness, his promotion was rapid. In 1794, he was made general of division; and, in the succeeding campaigns, continued to render himself conspicuous with his courage and ability. He espoused the cause of general Bonaparte, whose designs he was able to forward on the eighteenth Brumaire, as he had, at that time, the command of the seventeenth military division, which included Paris. His services on this occasion were rewarded by the dignity of his command, and the sword of the grand cross of the legion of honour. He bore an important part in the victory of Jean, distinguished himself at Eylau, and received the chief command at the siege of Dantzic, at which he gave the most brilliant proofs of genius and humanity. In 1808, he served in Spain; in 1809, again in Germany, and in the Russian campaign, commanded the imperial guard. After the abdication of the emperor, the king created him peer, and, during the hundred days,
LEFEVRE—LEGEND.

Napoleon included him in his upper chamber. His name was consequently erased after the second restoration; but Lefort was again summoned to take his seat.

LEFEVRE, Robert; a portrait painter in Paris; a pupil of Regnault. He produced also historical pieces of great merit, which, with those of David, Girodet, Gueunier, and Gerard, belong to the best of the modern French school. His sketches are among the best. He died in 1831.

LEFORT, Francis James, the celebrated favourite of Peter the Great, was born at Geneva, 1656. His father, a merchant in that place, sent him to Hamburg to become acquainted with commerce; but, having spent a fortune for a military education, he went to Paris, then to Marseilles, in his fourteenth year, and entered first the French and afterwards the Dutch service, which he left to go to Moscow, by the way of Archangel, in 1675. Here he became secretary to the Danish ambassador; and a fortunate accident gave him an opportunity to gain the favour of the young czar, Alexiowich, which he retained till his death. In both was the germ of greatness, which was gradually developed. Peter felt that he needed an instructor and assistant; and Lefort possessed talents fitted for both offices. The first great secret which came to the czar was in a rebellion of the Strelitz (1688). Lefort quelled the insurrection, and saved the prince from the danger which threatened his life. This service gained for him the unbounded confidence of the czar, who was now become the absolute master of Russia. Lefort's influence increased daily. He established the military system of Russia, and laid the foundation of her navy, which Peter afterwards carried to such a degree of perfection. When Peter travelled into foreign lands, in 1697, Lefort was the principal of the embassy, in the train of which the czar remained incognito.

In the mean time, the nobles, jealous of the favour shown to a foreigner, saw a favourable opportunity to revenge themselves, in the long absence of Lefort and the czar. The Strelitz rebelled; but Peter darter on them with the rapidity of an eagle, and took a bloody revenge. The czar, Lefort, and Menzioff executed the guilty with their own hands. Soon after, Lefort died (1699).

Legitimate. There are several kinds of legate, but Lepatatus notus is a mere title connected with an episcopal see, by the grant of the pope. These see lie out of the Roman states; among them are those of Treves, Cologne, Salzburg. The real envos are called legati missi. Among them, the legati a latere have the highest rank, and are sent on particularly important missions to the principal courts, or the chief provinces of the papal dominions as governors. They are taken from the college of cardinals only. The districts of the States of the Church, therefore, are called legationes. Legates who are not cardinals are called legati missi. If they are sent cum facultate legati a latere, their power is increased to that of a legate a latere. All Catholic governments, however, do not that they equal authority. Thus the Austrian expressly prohibits any clergyman from transacting business with the pope through the legate.

LEGATION is used to signify the body of official persons attached to an embassy; hence secretary of legation. (See Ministers, Foreign.) Counsellor of legation is a title bestowed in Germany—the land of counsellors—on certain officers connected with the ministry for foreign affairs. Very often, however, it is a mere honorary title, conferred upon persons who may not be especially employed in legation business. Jean Paul Richter, who was made counsellor of legation by one of the petty princes. Legation also signifies a division of the States of the Church. See Legate.

LEGATO (Ital.); a word used in opposition to staccato, and implying that the notes of the movement or passage to which it is affixed are to be performed in a close, smooth, and gliding manner, holding each note till the next is struck.

LEGEND (legendum); the title of a book containing the lessons that were to be read daily in the service of the early Roman Catholic church. The term legend was afterwards applied to collections of biographies of saints and martyrs, or of remarkable stories relating to them, because they were read at matins, and in the refectories of cloisters, and were earnestly recommended to the perusal of the laity as proofs of the Roman Catholic faith. The Roman breviaries likewise contain histories of the lives of saints and martyrs, which were read on the days of the saints whom they commemorated. They originated in the twelfth or thirteenth century, and they contributed much to the extinction of the old German (heathen) heroic traditions. In the middle ages, a collection of the lives of the saints was known by the name of Legenda Sanctorum, or Historia Lombardica. There is a celebrated collection, called the Golden Legend (Aurea Legenda), by Jacobus de Voragine, archbishop of Genoa, who died in the year 1298. The histories of saints, which are founded merely on tradition, are also known by the name of Legends. (See Baillie's historical and critical treatise on the histories of the saints and martyrs, in his work entitled Les Vies des Saints.) As these histories were often nothing more than pious fictions, the name of a legend was given by the incredulous to all fables of a similar nature, to any story of a supernatural kind, which was retailed by tales Augustinus, who was bishop of Verona in the sixteenth century, in his work De Rhetorica Christiana, ascribes the numerous fables, which have been ushered to the world under the title of legends, in part to the custom prevailing, in many monasteries, of requiring the monks to write Latin parables and dissertations on the most striking circumstances, or actions in the lives of the saints, in which they were allowed to ascribe to tyrants and persecuted saints such works and actions as they considered most adapted to their situation and character. This gave rise to those embellishments of history, which were preserved, and afterwards found in monasteries, and mistaken for true histories. Although many of the legends are tasteless and unmeaning fictions, the offspring of childish credulity, or intended to gratify it, there is also a number of them which are rich in poetry and ingenious fables among them. Hence many poets have attempted to avail themselves of these rude materials, and to retell them in a more polished style; and therefore, every poetical fiction, in the style of ecclesiastical tradition, whether in verse or prose, is called a legend. The principal characteristic of a legend is the miraculous, which should be of a religious nature, or relating to some traditions of the church, without, however, having references in the Greek or Jewish Scriptures. The introduction of Christianity, and, like the traditions of the church, wholly different from the mythos, or ancient fable. The style proper to it is plain and simple, such as would naturally flow from the gentle inspira-
LEGHORN—LEGION.

425

tion of a pious heart, and wholly inconsistent with ornament and poetical decorations. 

Legend is also used for the motto or words en-
graved on a coin, print, or similar object. A figure upon a medal or coin. The meaning of this term is similar to that of inscription; but the latter refers chiefly to the writing placed in the middle of the coin, while the legend, as we have just observed, summarizes it.

LEGHORN (Livorno): a commercial city in Tuscany, on the Mediterranean; lat. 43° 33′ S.N.; lon. 10° 16′ 53″ E. The streets are even and well paved, but narrow and dark, from the height of the houses, which are of stone: there are, however, no palaces, like those of the other towns of Italy. The finest street is the strada Ferdinanda, which passes through the middle of the town to the port, through the piazza d'armi. The town occupies but a small space in proportion to its population, contains seven churches, one archiepiscopal palace, one Greek, one Armenian church, and 65,355 inhabitants, amongst whom is a considerable community of Jews. The port and town is an important quarantine establishment with three lazarettos. The coral works produce 160,000 dollars yearly. There are also distilleries of rosoglio, tanneries, dyeries, paper, and tobacco manufactories. The port is annually visited by more than 4000 ships. A packet sails between this place and Marseilles. Leghorn is the principal commercial town of Italy, and has an extensive trade to the Levant. The principal commercial nations have consuls at Leghorn. Commerce is principally in the hands of foreigners, particularly the British. The Armenians and Jews are the general brokers of all nations. Much commission business is carried on, and there are large dealings in bills of exchange. The exports of Leghorn consist principally of raw and manufactured silks, olive-oil, fruits, shumac, valonia, wines, rags, brimstone, cheese, marble, argol, anchovies, munn, Juniper berries, hemp, skins, corn, &c. Leghorn plaiting for horse-hair is second in greatness, and large quantities are imported into Britain. The imports are very numerous and valuable comprising all sorts of commodities, with the exception of those produced by Italy. Recently, however, the trade of Leghorn has fallen off. Since 1653, it has been an important commercial place. The town, which was till then insignificant, was at that time enlarged. The port is protected by two strong towers situated on rocks in the sea, and by an old castle. It is liable to become choked, and has not sufficient depth for large ships; these, therefore, have to anchor outside the mole which protects the harbour. This is 600 paces in length, is well paved, and used for riding. On the place before the inner port is the colossal marble statue of the grand duke Ferdinand III. From thence a bridge leads to the outer port, where the greater number of vessels are at anchor. Without the port, on a rock in the sea, is a light-house. Good water for drinking is brought from Pisa, to which little vessels go daily, drawn by men or horses. Between the town and the surrounding suburbs is a long promenade, called gli Sarti. The mole, the piazza d'armi, the road to Monte Nero, a place of pilgrimage, and others, are the public promenades. In 1829, Leghorn was still an open town. When the port of Pisa was destroyed, the prosperity of Leghorn increased, particularly when it passed to Florence in 1421 and 1495. Alexander of Medici made it a strong-hold, and built the citadel. Cosmo I. declared the port a free port. From this time forward, the wealth of Leghorn has increased (inter-

erupted, the head of other nations upon the figure. It is a gold medal, the year 1804, by the yellow fever. The society of arts and sciences there established is called Academia Labro nica.

LEGIO FULMINATRIX (the thundering legion). This term was applied to a Roman legion in the time of the emperor Aurelius. The following account of the name is given by the Christian tradi-
tions. After the expulsion of the Marcomanni and Quadi from Hungary, the emperor Marcus Aurelius, pursuing these German tribes with a detachment of his forces, A. D. 174, was shut up in a valley, surrounded on every side by high mountains. To those who were thus cut off from the main body of the army, the heat and the want of water were no less dangerous than the attacks of the enemy. In this crisis, a sudden shower of rain rekindled the Roman sol-
diers. At the same time, a storm of hail, attended with thunder, fell, and 9000 of the legion, who were now easily repulsed and conquered. Both heathen and Christian authors agree in their relation of the principal circum-
cumstances of this event. The adherents of each religion saw in it the influence of the prayers of their brethren. According to Dio Cassius (Excerpta, Xiphilin., i. xxxi. cap. 80), the excellence of the emperor was so highly admired by an Egyptian sorcerer in the train of the emperor; according to Capitolinus (Vita Marc. Aurel., cap. 24), it was the effect of the emperor's prayers; but, according to Tertullian (Apologet., cap. 5, Ad Scopum, cap. 4) and Eusebius (Hist. Eccles. t. v., cap. 5), it was brought about by the prayers of the Christians in his army; hence the legion to which these Chris-
tians belonged was denominated fulminatrix. The letter of the emperor Marcus Aurelius, commonly printed in Greek in the first apology of Justin Martyr, gives the same account with the Christian writers; but it is spurious. The marble pillar erected at Rome in honour of Marcus Aurelius, and still standing, represents this deliverance of the Roman army, the Roman soldiers catching the falling rain, and a warrior praying for its descent. It is not, however, to be considered as a memorial of any influence exerted by the Christians in the event.

LEGION; a division of the Roman army. Under Romulus, it was composed of 1000 foot and 100 horse, selected from each of the three tribes. The body thus selected (hence the name legio) amounted, therefore, to 3300 men. In the time of Polybius, a legion consisted of 4200 men, and it was finally increased to 5500 foot. All the soldiers of a legion were Roman citizens; no slaves were admitted, except in cases of the most pressing necessity; nor any citizen under seventeen years old, except in peculiar circumstances of danger. There was com-
monly an equal number of auxiliaries attached to each legion, so that, in the later periods of Roman history, we must understand by a legion, a corps of 9000 or 10,000 men. The foot of each legion, when it consisted of 3000 men, were divided into ten cohorts, and each cohort into three companies (manu-
pullis) of 100 each, hence called centuriae. When the legion was enlarged, the same division was still retained, with the difference that each manu-
pulus was now divided into two centuries, and each cen-
tury into ten decuriae. The command of a legion was styled the legatus. Sometimes, instead of a legate, six military tribunes were appointed, one
ench, was commanded in succession for the space of a month, under the direction of the consul. The principal standard of a legion was a silver eagle; and the legion was named from their com-
mander (as the Claudia legion), or from the place
In the time of Augustus, the army consisted of twenty-five legions. Legion is also used, proverbially, to signify a large and indefinite number of persons or things. This term was revived in the time of Napoleon, and has since been commonly applied to a body of troops of an indefinite number, and usually of different kinds. Such legions are mostly formed at the beginning of a war, and dissolved at the close. Of this sort were the English-German legion, and the Russian-German legion, in the last war for the independence of Europe. The French national guards were divided into legions and cohorts. After the dissolution of the army raised by Napoleon in 1815, the remains of which had retired beyond the Loire, the new French army was divided into legions, which were named from the departments. This arrangement, however, was abolished towards the close of the year 1820.

LEGION OF HONOUR (légion d'honneur); an order instituted by Napoleon, while consul, May 19, 1802, for military and civil merit. The proposition produced much debate in the legislative body, and passed after a strong opposition. It was the object of Napoleon to kindle a spirit of ambition, the most necessary national element for the support of wars, of which he foresaw that it would be necessary for him to wage many, and for this purpose the institution was admirably calculated. At the same time, it cannot be denied that, abstractly considered, it is to be regretted, that a nation, which had just declared itself so loudly for liberty, should appear so eager for ribands—an invention of those very times against which the revolution was directed. Moreau, who was altogether opposed to Napoleon, ridiculed the institution. The cross of the legion of honour was given to all who had previously received a military weapon as a mark of honour, and to a great number of new members. Its effect upon the soldiers was very great. After Napoleon's assumption of the imperial dignity, the statutes received some modifications. The oath was originally as follows: "I swear, on my honour, to devote myself to the service of the republic, to the preservation of the integrity of its territory, to the defence of its government, its laws, and the property by them consecrated; to oppose, by every means which justice, reason and the law authorize, all acts tending to re-establish the feudal system, or to revive the titles and distinctions belonging to it; finally, to contribute, to the utmost of my power, to the maintenance of liberty and equality." After Napoleon became emperor, the form of the oath was somewhat changed. The members swore to devote themselves to the service of the empire, to the preservation of the integrity of the French territory, to the defence of the emperor, to the support of the laws, and of the property which they had made sacred; to combat, by all the means which justice, reason and the laws authorized, every attempt to re-establish the feudal régime, and to concur, with all their might, in maintaining liberty and equality. The democratization of the star consisting of the portrait of Napoleon, surrounded by a wreath of oak and laurel, with the legend Napoléon, empereur et roi; on the reverse was the French eagle with a thunderbolt in its talons, and the legend Honneur et patrie. The star was suspended from the neck of the officers of gold, and was suspended from a red ribbon with a white margin. The order consisted of grand-crosses (grand astrales), who wore the cross on a broad ribbon hanging over the left shoulder, and a star on the left side of the breast; of grand-officers, who wore the cross in the button-hole, and a star, somewhat smaller on the left side; of commanders, who wore the cross round the neck; of officers, who wore the gold cross with a bow in the button-hole, and of legionaries, who wore the silver cross with a simple ribbon in the button-hole. The legion was composed of sixteen orders, each of which had its seat in a different city, and contained 407 members; the whole number was, therefore, at first, 6512. Each cohort had a chancellor, treasurer and chief—the whole order a grand-chancellor and grand-treasurer. The pension of a grand-officer was 5000 francs, annually; of a commander, 2000; of an officer, 1000; of a legionary, 250 francs. There was also an institution for the education of the daughters of members of the legion of honour at Ecouen, under the care of Madame Campan. After the restoration of the Bourbons, the order underwent essential changes. The chancery of Henry IV. was substituted for that of Napoleon, with the legend Roi de France et de Navarre; and, on the reverse, the fleur-de-lis took the place of the eagle. The grand-crosses were limited to eighty, the grand-officers to 160, the commanders to 400, the officers to 2000; the number of the legionaries was left unlimited. New members received no pensions, whilst those of the old members exceeded the prescribed sum; but on the death of the old members, the new ones were to receive their pensions. Foreign members received no pensions. It was evident that the legion of honour was coldly treated by the Bourbons, who restored the old orders. The members retired during the hundred days, of course, not acknowledged by the Bourbons; but, in 1831, general Lamargue obtained their acknowledgment by a spirited speech, in the chamber of deputies, for which they sent him a sword with an inscription. Military honours are paid to the members of the legion, as they are also to the bearers of the croix de Juillet, which has been granted to 1528 persons who distinguished themselves during the struggle of July, 1830. This cross takes precedence of that of the legion of honour.

LEGISLATION. See Law.

LEGISLATIVE BODY (corps législatif); an assembly, in the time of the French consuliate and empire, consisting of 300 persons, which had neither the right to discuss nor to initiate a law, but merely to vote on a law proposed by the government and discussed by the tribunate (as long as that body existed), and to confirm the laws of the tribunate. They also had the right to vote. It was an extremely lame contrivance, showing the public inexperience of the French at that time.

LEGISLATURE, HOUSES OF. Whether it is preferable to have two houses of legislature or one, has been a question on which politicians have entertained different opinions, though, at present, public
opinion appears to be in favour of two houses, the instances of Britain and the United States of America, giving great weight to this division of the legislative functions, not only because the proportion of the two houses in the legislature is often a unit, but that the plan, though not better suited to the conditions of each other. In England, which has led the way in constitutional institutions, a happy conjunction of circumstances early united the clergy with the high nobility into one house, and the lower nobility, or gentry, with the representatives of the cities, into another; whilst, in the countries of the European continent, the clergy, the nobility, and the representatives of the cities, although they constituted different estates (in some cases, the superior nobility [mag- nates] and the free peasants formed also distinct estates), made but one legislative body; and, in most cases, the representation was so unequal that the nobility and clergy entirely outweighed the commons, threw all the burdens of the state upon the citizens and peasantry, and prevented, almost entirely, the development of constitutional establishments. In England, however, the division into two houses has had the effect of lessening the assumptions of different classes, by making them mutually checks upon each other, developing constitutional and public law, and introducing general taxation, and has contributed most essentially to the superiority in political advantages of the English people over the other nations of Europe. See the article Britain, division Parliament; in that article, also, will be found an account of the privileges of the two houses, and of the difference between them.

In the more important British colonial establishments, political institutions, modelled, to a considerable degree, on those of the mother country, have been introduced—a governor, with a council (appointed by the British government), and a house, or assembly, with members elected by the people. This is the case where the extent and population of the colony warrants such an organization, and where the colony does not belong to a company, or where the great number of members of the assembly would, in the absence of any allotted or fixed quantity of members, does not prevent such an establishment. Thus a council and a house of assembly exist in the two Canadas, Nova Scotia, New Brunswick, the British West Indies, and they existed in many of the colonies, which afterwards declared themselves the United States of America. The latter established, on declaring themselves independent, a congress, consisting of delegates from the several states, invested with certain powers by the articles of confederation, and forming but one body. After the close of the revolutionary struggle, the federal constitution established a house of representatives, chosen by the people of the several states, to which a senate, consisting of a number of members chosen by the legislatures of the several states for six years. The separate states also established each two houses of legislature, with the exception of Vermont, which has but one. In Massachusetts and New Hampshire, the senators are apportioned between the two houses, in proportion to the amount of taxes paid by the districts respectively. In the other states, the rule of apportionment is that of numbers. In the tabular view of all the constitutions of the United States, prefixed to the article Constitution, the reader will find the term for which, and the conditions upon which, the members of the two houses are elected, in the different states, and for the federal government.

The French revolution began by uniting the three estates in one house, in 1789. Different constitutions were framed in rapid succession. The constitution of Sept. 3, 1791 (monarchical), established but one legislative body; the constitution of 1795, for the United States of France (republican), declared, in section thirty-nine, the legislative body "one, indivisible, and permanent." The constitution of the year III., Sept. 23, 1795 (with a directory of five members), established a council of elders, consisting of 250 members, and a senate of 100. The latter were to be, at least, thirty-five years of age, those of the former, at least, forty years. The council of five hundred had the exclusive right of initiating laws. Both were chosen for three years. The constitution of Dec. 13, 1799 (consular), established a legislative body, which could only adopt or reject propositions made by the government, and communicated and discussed by the tribunate. (See Legislative Body.) The members were chosen for five years. There was also a conservative senate. (See Senate.) The consul for life, and the imperial government, retained the legislative body, but the tribunate was abolished. The Charte Constitutionelle at last established houses of peers (for life or hereditary), and of representatives—the latter on the basis of taxation. See Charte Constitutionnelle, Election, and France.) In the article France, it will be seen, that, in 1830, when the elder Bourbon line was declared to have forfeited the throne, it was provided, in the additions to the charter, that the organization of the peerage should undergo a revision in 1831: the result we shall give under the article Peer.

Poland, by the constitution granted by the emperor Alexander, had two houses—a senate, consisting of members appointed for life by the sovereign, and not by the viceroy, and a house of representatives. The kingdom of Norway has two chambers—the Logthing (q. v.) and the Odelsting, both together composing the Storthing. (q. v.) Bavaria, Hanover, Wurtemberg, Baden, and Hesse-Darmstadt, have each two houses. The constitution which Joseph Napoleon gave to Spain, July 6, 1808, established one house, the cortes, consisting of three estates—the prelates, nobility, and people, with a senate, which, however, is not to be considered as a branch of the legislature. The constitution of the cortes of March 19, 1812, established one house, of which the organization was imitated in Piedmont, Naples and Portugal, at the time of the respective revolutions in those countries. The constitution granted to Naples by Joseph Napoleon, June 20, 1808, established one house—a national parliament—consisting of five branches (seides), those of prelates, nobility, landholders, learned men and merchants. Lord Hen- linck's constitution for Sicily (1812) established two houses. In Sweden, by the constitution of June 7, 1809, there is but one house, consisting of the estates—the nobility, clergy, citizens, and crown peasants. In the kingdom of the Netherlands, there were two houses of a common diet, chosen by the members for life; and, also, two houses of the provincial estates. Saxe-Weimar has but one house, as hails Saxo-Hildburghausen, at least before its union with Meiningen. Under the article Netherlands, we shall give the new Belgian constitution. In the Ionian Islands, the diet of ten of each of the three estates of representatives of forty members for life; (See Ionian Islands.) The diet of Switzerland (Tagatzugang) consists of nineteen deputies, who vote according to instructions from their respective cantons. The constitution of the German diet (Bundestag) is similar. (See Germanic Confederation.) Neither of these bodies has any resemblance to the congress of the United States of America. The constitutions of the new American governments, as Colombia, Brazil, Mexico, &c., have,
LEGITIMACY.

In general, established two houses, on the plan of the same United States. In Bolivia, the legislative department consists of three branches, the tribunals, the senators, and the censors. (See Brazil, Peru, Mexico, &c.) We ought to mention, in this respect, that, in most of the governments, the executive has also a legislative voice, in so far that its sanction is required to give the force of law to the acts of the legislative bodies. Thus, in Britain and France, the royal assent is necessary to the passage of a bill. In the United States of America, the president, as well as the largest of the states, the governors, have a provisional veto.

LEGITIMACY; from law (the law), whence legitime (conformable to law); hence legitimate children are the offspring of a lawful marriage; and these which are born out of wedlock are said to be legitimated when they are declared legitimate by the state. A person legitimates his claims when he produces legal proof of their justice. After the French revolution, in the last century, had deprived the Bourbons of the throne of France, to which they laid claim by virtue of their right of succession, and, in particular, after their recovery of it, in 1814, the word legitimacy is very common in the language of European politics. The question, Who is the legitimate ruler? is intimately connected with the general subject of sovereignty. (q.v.) Formerly, when political questions were treated less scientifically, legitimacy was not so much a point of contest. States, countries, nations, passed by inheritance, conquest, marriage contracts, &c., and the legitimacy of a prince was decided, generally, like an affair of ordinary diplomacy; less, however, in the case of Britain than of the continent. But when the allies dethroned Napoleon and his brothers, they wanted something to oppose to the claims which he derived from his election by the people. A phantom was therefore created, at the congress of Vienna, called legitimacy, and since that time, that has been constantly used, but never defined, which, indeed, it cannot be, because the facts before the world are too stubborn for this theory of the hereditary descent of nations, like common property. If this right of inheritance could be proved, legitimacy would be something very easily definable; but there is a difference between an estate and a nation. The Austrian Observer, a semi-official paper, in order to prove the Turks legitimate were of Greece, defined legitimacy thus: "Every nation which is legitimate within a particular region, both by a natural right, and as a member of a series of treaties with other lawful sovereigns." Austrian logic! Misconceptions of certain passages of the Old Testament, a confusion of religious and political ideas, together with feudal views surviving the institutions which gave them birth, have involved the question of legitimacy in great obscurity. The most absurd doctrines have been broached in the attempt to support this doctrine of the holy alliance, and other follies, which have been maintained at the expense of the blood and happiness of nations. If it rests on long possession, we might ask how many generations are required to legitimate robbery; or we might say, with Luther, that, on this principle, Satan is the most legitimate of rulers, because his kingdom is the oldest. In our prosaic times, those who rest the right of sovereignty on birth cannot, like the ancients, make a Jupiter or an Apollo the founder of a new nation, or the daughter of a divine prince from their divine descent; and, if they look no higher than a human ancestor, it will be hard to prove the direct descent of many a princely house from the source whence it derives its claims to sovereignty. The recent events show how often plebeian blood has been mixed with royal. It is needless to spend time in refuting a theory which even Chateaufraud, once its staunch defender, has disclaimed. In a late speech, he says, "I do not believe in the divine right of kings," and "monarchy is no longer a religion; it is a political form."

For the state as a society of men with equal rights, and the government as established for their welfare, the question is easily solved. He who rules with the approbation of the people is legitimate. If, after submitting, for a while, to one family, they choose to transfer their allegiance to another, who is, unquestionably, the right to do so. The mistakes to which they may be liable, in using their rights, do not affect the rights themselves. The good of the people is the sole object of government, and no title, however, high-sounding, or old, or well-earned, can contest with it. History, moreover, is full of instances of reigning houses displaced by revolutions, and succeeded by others, which have been considered legitimate, on account of their acceptance by the people.

The word legitimacy is now commonly used, in Europe, to denote the lawfulness of the government, in a hereditary monarchy, where the supreme dignity and sovereignty are transmitted from one to another, according to the right of primogeniture. In this sense, Napoleon Bonaparte is called an illegitimate ruler of France, though he was acknowledged by the French nation, and by other powers (even by Spain), to which Napoleon, and his brother, the States, on the continent, as the eldest brother of Louis XVI., is called a legitimate ruler of France, because (agreeable to the Salic law, which prevails in the French monarchy), after the death of Louis XVI., his son was to succeed to the throne, under the title of Louis XVII.; and, as he died without children or brood, his brother could not succeed, his first cousin (formerly count of Provence) was to be considered as Louis XVIII., although the Bourbon dynasty, in fact, ceased to rule at the death of Louis XVI. This signification of the word is plainly too limited; for, 1. it is not adapted to states with elective governments, notwithstanding a regular government is established in them, as well, as in hereditary states, by constitutional laws, and consequently there are legitimate rulers in them; 2. it is not adapted to hereditary states, if the reigning family becomes extinct, when a new family must be called by the nation to the throne, or a different form of hereditary succession be adopted, in regard to the right of the king to fill the highest offices of dignity and power. But there is an error, also, at the very foundation of the above definition of legitimacy: it supposes that the state, that is, the people living in a certain territory, in civil union, is the private property of a single family, transmissible, like all other private possessions, from the parents to their children, or other relations, as long as any branch of the family is living; for one man can never, rightfully, be the property of another—still less a multitude of people, in civil union, or a state. If the idea of property was applicable in this case, the ruler ought rather to be called the property of the state, than the state the property of the ruler; but the idea does not admit of being applied to the relation existing between a state and its governor. This relation can be properly considered only as a contract by which the dominion of the state is given to a sovereign. It is both virtual and tacit, or express and formal, and whether the supreme power is given to a definite individual, who is appointed anew every time, or to a whole

What follows of the article Legitimacy from this point, must be taken as the view of Continental jurists on the subject.
family, from which the rulers are to succeed one another, without a fresh choice, in order to prevent the dangers attendant on frequent elections. But there is another fact, the existence of which is proved by the word *legitimacy*, by which we are to understand the order existing in a state, and established by law, with respect to the form of government, and the persons to whom it is intrusted. The historical origin of this order is not to be taken into the account, but merely the fact that it is established by the law (which, in theory, expresses nothing else than the universal will, or the will of the people), and has thus gained the form of a right. If we look to history, we shall find few governments that have a claim to legitimacy as having been lawful in their origin. As regards the Bourbons, it is well known that Hugh Capet, the founder of the third dynasty of the French kings, from whom also the Bourbons descended, gained the French throne, to the injury of the existing sovereigns, by his courage and ability, in the tenth century. If it is asserted that illegitimate and his persons made legitimate, by being transmitted from one person to another, then it must be conceded, that, if Napoleon had died before his abdication, and left the power to his son, the latter would have been a legitimate sovereign of France, and consequently there would have been two legitimate dynasties in the kingdom of France, a fact which would not have been easily understood how mere transfer can make that power legitimate which was at first illegitimate. It cannot be considered the same as prescription (præscriptio); for prescription only takes place when a positive law, relating to the rights of private persons, has fixed a certain period, within which some result takes place; but neither national law, nor the laws of single states, fix any kind of prescription in regard to the rights of a government. A ruler, in truth, becomes legitimate, if the people submit to him, and thus in fact, if not formally, consent to cede to him the supreme dignity and power; but this was the case with Napoleon. The French people acknowledged him their sovereign—first under the title of *first consul*, and afterwards under the title of *emperor*; and the state of things thus established in France, was approved even by foreign powers. The king of France had been dethroned on account of him, because, when he took the reins of the government, he had come from Egypt without an army, and his power was far too small to subdue the whole French people. Grant that one party was unjust in declaring the family of Louis XVI. to have forfeited the throne, still the French princes, by their flight from France, had, in a manner, bannished themselves, and resigned their claims to the throne; for these claims could not be maintained by words merely, but required action. They were not permitted to leave the king, with whose person all their rights were connected; on the contrary, they were bound to defend him and his rights, as a sovereign, even at the peril of their lives. But as they regarded only their own safety, and deserted France and its throne, it might easily be shown that they, in fact, renounced their claims, and even promoted that anarchy, from which none but a mighty hand could rescue their country. If now France acknowledged its deliverer (for such Napoleon, at that time, indisputably appeared) as its monarch, because the old dynasty suffered its claims to be overlooked, what was wanting to make him a legitimate sovereign? But this legitimacy was wanting, when, on his return from Elba, he undertook to resume the throne of France; for in this case, he overthrew an existing political order, and occasioned a kind of anarchy. A large part of France formally withstood him, and refused to send representatives to the *champ de Mai*, where he intended to establish his legitimacy. Moreover, no foreign power recognised his authority. What the event would have been if Napoleon had not been permitted to fly and to reside in that part of the world which he later did take possession of, is certain that the modern French theory of legitimacy would have been subjected to the greatest difficulties. This theory, however, has never been reduced to practice, but only the more limited one above-expounded, as is proved by history in general, and, particularly, by the history of Britain, where the throne of the Stuarts is now occupied by sovereigns, whom all the world looks upon as legitimate, though, till the death of the last pretender, they must have been viewed, according to the ultra theory, as illegitimate. This leads us to the conclusion, that the proper point of view for considering legitimacy, at present, in Europe, is not, in relation to the lawful title to power, but only to its actual existence; and that the national law of modern Europe, while it aims to put an end to the convulsions of the last thirty years, is founded on the support of the present state of things. The principle of legitimacy, that no one by the unanimous consent of the principal European powers. Hence arises a very definite notion of legitimacy, wholly free from the difficulties which occur in accounting for the lawful origin of power. For, on this ground, it is no longer necessary to show how a national and a foreign action. This latter, however, does not exist at all, but only that it is now acknowledged. The acknowledgment is that of the European *powers*, so called by way of eminence; that is, according to the use of the term since the congress of Vienna, in 1815, of all those states which do not depend entirely for their existence on a federative union; or of the eight powers which signed the peace of Paris; or, in a more limited sense, of the five powers which sent their commissioners to the last congress. In this practically admitted signification, legitimacy relates not merely to the dynasty, but also to the forms of government. It holds strict monarchical principles, as a general rule, and allows only the few actually existing exceptions; but it would be impossible to acknowledge an antimonarchical change, even though it were proposed voluntarily by the sovereign himself; for with this idea of legitimacy is closely connected the idea of the European states, changed by force of arms, any alterations in the government, which are opposed to the monarchical principles of other states; and as, in this, it has reference only to the dangers which may accrue to other states from the establishment of republican institutions in any one, it considers only the fact of their existence, not the manner of their origin. The right of armed interference in the internal affairs of foreign states, it is well known, has never been disputed, but by Britain and America. Indeed, it has been maintained even by philosophers (Kant, *Zum ewigen Frieden*—On perpetual Peace) who make it a fundamental article of international law, that no state should be without a representative government. This right of armed intervention, however, admits of serious question: if it was once acknowledged, it might be used, also, by republics. In addition to the importance of the doctrine of legitimacy, in regard to subjects of international law, it is equally important as respects the internal government of a state: as it depends chiefly upon this to decide how far the acts of a government, merely usurped, can be obligatory on the legitimate government, if it should be again restored. This obligation can neither be maintained nor denied, unconditionally. It is impossible to declare all those acts of the public authority, which have taken place during a long usurpation, invalid. It would be equally absurd to treat as absolutely unalterable all abuses of justice (confiscations, penal laws, attacks
upon the private property of the legitimate ruling house) by which the usurpation was attended. If the previous usurper can refuse to the people the right of submitting, at least for a season, to that power which has been established in the place of the legitimate government, especially when the latter has ceased to struggle against the usurper, or continues its resistance without sufficient means. This principle was nowhere expressed so early and so decidedly as in Britain; for nowhere has there been such a variety of governments, which were afterwards declared to be mere usurpations, as there, during the contest, for sixty-four years, between the houses of York and Lancaster, and, subsequently at the time of the commonwealth and of Cromwell. Hence the British early learned to distinguish actual sovereignty (government de facto) from legal government (government de jure), and laid down the position, that subjects were bound to yield obedience, even to an usurper, as long as he is in possession of public power, and that they are equally guilty of high treason in forming conspiracies against such a usurper, as against the lawful monarch.

(This is said by Sir Matthew Hale, in his Pleas of the Crown, l. 60; Blackstone, Commentaries, i. 370, and 457.) Yet, if a prince is an impostor, as James II. of York, when he had deprived the house of Lancaster of the throne, in the person of Henry VI., persons were punished, who had been guilty of treason against the last King of the deposed house; and an express law of Henry VII., in the year 1495, declared all persons innocent, who had promised or yielded obedience to the king de facto (the usurper).

Although Charles II. numbered the years of his reign from the death of his father (Jan. 30, 1649), yet all the acts of the interregnum remained in full force, unless they were necessarily repealed by the enactment of new laws. In France, at the restoration, the statesmen were obliged to adopt the same principle. The idea of legitimacy is to be considered, moreover, in reference to the limits of the power of sovereigns, as well the natural and universal, as the positive or conventional. Even the ancients distinguished tyranny—power without a just foundation (tyrannis absque tito, or usurpation)—from the unjust use of power in itself legitimate (tyrannis exercitio); and, if legitimacy is once viewed as a principle of national law, it must necessarily be as much an object of support, in this latter relation, as it is against usurpation, in the former. A constitutional state of things is as much required in this view as in the others, and for a higher purpose. If the European powers are justifiable in maintaining their monarchial principles, they are no less authorized to maintain them in their purity; that is, as the means of legal authority, and to prevent the ruin of those institutions by which they are to be kept from degenerating into despotism; or, if these institutions have already been destroyed, to renew them, as prudence and the spirit of the times will allow. This authority, which may be deduced from a necessary duty, they have particularly when it is requisite to support an existing government, by arms, against usurpation or the violence of the mob. When this view of legitimacy finds place among the practical principles of national law (and it cannot be said to be rejected, as much has already been done in its spirit), an important step will have been taken towards the re-establishment of the grand project of universal order, a universal tribunal, and universal peace. See Malte Brun's Traité de la Légimité, &c., Paris, 1825; and the articles ALEXANDER, A La-Chapelle, Congress, Holy Alliance.

LEHMANN, ANNA; a minister of the royal Saxon army, and the inventor of a method of topographical drawing, which is called after his name. He was the son of a miller in humble circumstances, and born at Aix-la-Chapelle, or more probably at Saxau electoriate. His early education he received from the village smith, and afterwards worked in the mill. The recruiting officers, who often attacked the lower class of people in disguise, waylaid him, and carried him off to their quarters, as he was walking to church. Lehmann soon distinguished himself by his industry and skill in writing and drawing. In 1793, he obtained his discharge, in order to devote himself entirely to topographical labours, and surveyed about 500 square miles in the Erzgebirge, together with several private owners. On the request of the common facilities for surveying, led him to the invention and application of those important rules, which are found in the second volume of his work. Lehmann also gained much experience in regard to the origin and constitution of single elevations, and the surveying of mountainous chains, and afterwards founded upon it his method of topographical drawing, translated into English by Siborn. He made the campaigns under Napoleon, in the Saxon army, and performed important services. Napoleon held him in high estimation. By constant application to his profession, he contracted a disease which finally terminated his life, at Dresden, Sept. 6, 1825. Lehmann is considered a hero of the soldier. It was published, after his death, by professor Fischer, with Lehmann's last improvements.

LEIBNITZ, GOTTFRIED WILHELM, baron of, one of the most celebrated scholars and philosophers that Germany has ever produced, was born at Leipsic, July 3, 1646. His father, who was professor of jurisprudence in that city, died before his son had completed his sixth year. Leibnitz attended the school of St. Nicholas, in Leipsic, till he was fifteen years old, without, however, adhering strictly to the prescribed course, as he was devotedly attached to Livy and Virgil, among the Latin writers. The latter he knew almost entirely by heart, and, even in his old age, he used to repeat whole books of his poems. He was soon distinguished for rapidity of comprehension and facility of expression. At the age of fifteen years, he began his academical course at Leipsic, and, although his principal study was ostensibly law, he paid particular attention to mathematics and philosophy, at that time taught by James Thomasius. He passed one year at Jena, in order to avail himself of the instructions of the celebrated mathematician Ehrhard Weigel. After his return to Leipsic, he was appointed assistant in the Frankfurt, and published a splendid proof of his progress, in his philosophical dissertation De Principe Individuationis, which he defended under Thomasius (1664), and which was followed by several legal treatises, e. g. De Conditionibus (1665), and by a remarkable philosophico-mathematical treatise, De Arte combinatoria. In his twentieth year, he presented himself to the legal faculty, as a candidate for a doctorate, but was refused on account of his youth, and received his degree at Altorf. He was offered the place of professor extraordinary of law, in that university, but he preferred going to Nuremberg, where there were many distinguished men. The baron Von Boineburg, minister to the elector of Mentz, having become acquainted with him, withdrew him from a society of alchemists, in that city, with which he had connected himself, and, promising him a place in the service of the elector, took him to Frankfurt on the Main. There, in 1667, his Nova Methodus discendae docendque jurisprudentiae, which is remarkable for its clear, and, at the same time, profound views, and which, at the request of his patron, was soon followed by a treatise, in which he endeavoured to prove the Poles, that
It was for their interest to elect the prince of Neuburg king in preference to any of the other candidates. At the suggestion of Boineburg, he was now named an electoral counsellor, and chancellor of justice; but this business could not satisfy a mind thirsting for knowledge. He continued his literary labours, and published his *Theoria Motus abstracti*, and *Theoria Motus concreti* (1671—two works, remarkable only for the boldness of their views), and also his *Scuracuta Trinitatis, per nova Argumenta logica defensa*, a work directed against the attacks of the Pole Wissowsatius, on the doctrine of the Trinity. In the mean time, the literary splendour of Paris had attracted his attention, and he willingly undertook to engage in the publication of the documents of the royal academy of sciences at Berlin, and, when the institution was completed, according to his plan, the elector made him president of the academy (1700). Leibniz furnished a great part of the papers in the *Miscellanea Berolinensia*, which the new academy of sciences, established in 1700, had begun to publish. He had composed, three years after, his successor having little taste for the sciences, Leibniz foresaw the fall of the society, and therefore hastened to Vienna, to obtain for it the protection of the emperor Charles VI. His efforts were unsuccessful, although he got a most flattering appointment as privy counsellor, with a salary of 1000 roubles. Loaded with honours, he crowned his literary fame by his celebrated *Essai de Théodicée* (1710), in which he maintained the doctrines of pre-established harmony and optimism, and which was followed (1715) by his *Essai sur l'Entendement humain*. The life of this individual, so highly favoured by fortune, was not entirely free from calamity. His unfortunate controversy with Newton, concerning the discovery of the differential calculus, and the pains of the gout, imibated the close of his active life. He died in his seventieth year, November 14, 1716. His monument, constructed in the form of a temple, bears the simple inscription *Omnis Leibniti*. Leibnitz was of the middle size, thin, but of firm health, with an habitual stoop. His hair was black in his youth, but labour early rendered it white; and his eyes, which were short-sighted, were strong, even in old age. He had a pleasing countenance, a warm temperament, and as much animation in his delivery as he had in his labours. He studied during nearly the whole night, and often took his sleep in his chair, which is preserved in the library at Hanover. Reading every thing, without distinction, he contended himself with taking short extracts, on little pieces of paper, which he kept in different compartments, though his memory was so excellent that he had little need to refer to them. His correspondence, which extended even to China, together with the other relations which he maintained with different classes of men, took up a great part of his time. In his intercourse with others, he was easy, without arrogance or jealousy; irritable, but quickly reconciled. His expenses were very moderate, and his enemies reproached him with avarice. He was totally negligent of his domestic affairs, and was never married.

The spirit of the age, the study of the older systems of philosophy, among which the Grecian had occupied much of his attention, and, above all, the mathematical turn of his mind, combined to produce his peculiar system of philosophy. He expected to reform philosophy by giving it this direction, and he hoped to establish its principles in such a manner that the strife between different parties would cease of itself. On this account, he was in favour of rationalism (q. v.), in the sense in which it was maintained by Plato, and the system of demonstration, which
prevented him from entirely rejecting the scholastic philosophy. There are in philosophy, as in mathematics, necessary truths, which cannot be learned from experience, but must be grounded in the soul itself, as they rest on principles, the proof of which is independent of the faculty of reason. This forms the basis of the Leibnizian rationalism, the principal characteristics of which are a peculiar theory of knowledge, the doctrine of Monadology, and the Theodicea, or doctrine of optimism. With regard to knowledge, according to this system. 1. The necessary truths are innate in the soul, not, indeed, actual, but objects of knowledge, but capable of being called forth by circumstances. Whatever is derived from the senses is confused, and distinct knowledge is possessed only by the understanding. These views are opposed to the empiricism of Locke. In order to attain truth, it is necessary to use the rules of logic, as mathematics also use them, by unrolling, analytically, the simple truths contained in a subject, until the fundamental truth is attained. The Cartesian criterion—clearness and distinctness—is not sufficient. "Our conclusions," says Leibniz (Op. ii. 24), "rest on two grand and principal principles of contradiction (according to which we deem that false which involves a contradiction, and that true which is opposed to falsehood), and the principle of the sufficient reason (which teaches that no assertion is true, if no sufficient reason can be given why it is true, rather than false), which leads to an absolute final reason, independent of accidental circumstances. But the final reason of the certainty of innate necessary truths is in God, as the source of all necessary and eternal truth. 2. Monadology forms the central point of the system, and Leibniz believed that, in this, he had discovered the grandest and principal characteristic of actual knowledge. All experience teaches us that there are compound substances; consequently there must be simple ones. The senses give us only confused, the understanding distinct, knowledge; and the simple, which cannot be recognised by the senses, is the ground of the compound. These simple substances, from which the compound are formed, and each of which differs, in its qualities, from all others, since there are no two things exactly alike, Leibnitz calls monads, of which he assumes four sorts—pure monads (or living beings), the souls of beasts, the souls of men, and God, who, as the origin of all knowledge, of reality, and of all things, is the origin of all things. Leibniz calls the Monads monads. All created monads are united with bodies, or, rather, all finite beings are aggregates of monads, some having a central and governing monad. The different classes of monads conceive of the universe with different degrees of distinctness: God alone conceives it perfectly. There is no actual influence (influentia physica) of one thing on another, but only an ideal connection; i. e. the internal changes of each monad are so arranged as to agree with the changes in the monads immediately connected with it. The cause of this agreement is the infinite wisdom and almighty power of the Deity. The divine understanding is the prototype of all truth, beauty, and absolute good, and by it all the interior changes in the monads were so predetermined, that there is a perfect harmony in their succession. This predetermination or established harmony was arranged by the Godhead when the universe of the world was formed. The Theodicea is the defence of the supreme wisdom of the Creator of the world, which had been impugned, on account of the existence of evil. Such a Theodicea Leibnitz attempted, particularly on account of the contrary views brought forward by Bayle. According to the Leibnitzian system, an infinite number of words are possible in the divine understanding; but, of all possible ones, God has chosen and formed the best. Every thing which really is, is best in connection, even if, by itself, it is imperfect. This system is therefore denominatated optimism. Each being being arranged to the highest degree of happiness of which it is capable, is to contribute, as a part, to the perfection of the whole. The existence of evil is no argument against this system, because metaphysical evil is merely a necessary imperfection in the nature of finite things, from which perfection (physical evil) suffering) and moral evil (sin) necessarily proceed. Monads, through being objects in the freedom of finite spirits, which consists in choosing, according to grounds of preference, one among many physically possible actions; for, although every thing in the world is necessarily determined, still man, being ignorant of the future, must act from the convictions of his reason. Leibnitz nowhere makes a complete connected exposition of this philosophical system, but has only proposed it in his writings, by piecemeal, and it is therefore difficult to follow his course of thought.

This is not the place to enter into a more critical examination of the value of these hypotheses; it is sufficient to observe, that they have been of the greatest service in promoting the progress of reason, as they have given that impulse to the philosophical world, which his mathematical discoveries, to an account of which we now proceed, gave to the mathematicians of his time. His attention was early directed to mathematical researches; and, in a letter to the Countess of Kielmannsberg (1716), he relates, that, even in his sixteenth year, he was occupied in considering the differences of those numbers whose succession forms a regular series. He thus arrived at the law of constant magnitude which is found exactly, or by approximation, if the members of the series, and then their first, second, &c., differences are subtracted from each other; but, when he was in England, wishing to publish his supposed discovery, he found himself anticipated by a French mathematician, Regnault. A second similar affair induced him to study Mercator's Logarithmotechnia, which he carried with him to France, where he surprised Huygens by communicating to him his discovery of an infinite series for the surface of the circle, similar to that of Mercator for the hyperbola. This was made known by Oldenburg to Newton, who confirmed the authenticity of the origin. This was stated by this result, Leibnitz resumed his researches into the difference of numbers, and, in this way, he was led to the discovery of the differential calculus. In a letter of June 24, 1677, he communicated this discovery to Oldenburg, for Newton's examination. In comparing the whole course of reasoning which he pursues in his calculations, with the views which lie at the foundation of Newton's method of fluxions, not the least similarity can be discovered between the two methods; which is the best proof that each of these great men, in reality, attained the same result for himself, entirely independent of the other. Leibnitz, however, received no answer from Newton to this remarkable letter, and things remained in this state till 1682, when the Acta Eruditorum was commenced. Leibnitz was, from the beginning, one of its most active contributors, and, in the October number of 1684, he published a complete account of his differential calculus, exactly as he had communicated it to Newton. It is worthy of remark, that, at this time, no one questioned the claims of Leibnitz to the discovery of this new mode of calculation. On the contrary, Newton publicly acknowledged the merit of the German, and made the most honourable mention of him in his Principia. Leibnitz continued,
with untiring activity, to make improvements in his method. The differential calculus, together with its conceptions, was much elaborated by both Leibnitz and Newton, which John Bernoulli gave the name of integral calculus, was in high esteem on the continent, and had been much used and extended, both by Bernoulli and the marquis de l'Hospital, when, in 1699, twenty-two years after the letter of Leibnitz to Newton, which was dated June 21, 1677, and fifteen years after the publication of the theory in the manner already mentioned, in the October (1684) number of the Acta Eruditorum, it was contended, for the first time, by Fatio de Dufliff, that Newton was the discoverer of this mode of reckoning. This article was written in an offensive tone, and Leibnitz answered it in the Acta Eruditorum. His reply for a time put an end to the dispute; but five years afterwards (1704), Newton, having published his Optics, at the close of which he appended an exposition of his method of fluxions, which he claimed to have invented as early as 1666; and, besides a second edition of the Acta Eruditorum, gave an extract from this work in the next year, and, by making a comparison between the method of fluxions and the system of differential calculus, to the disadvantage of the former, awakened anew the dispute between the parties. Keill, professor of astronomy at Oxford, having examined the different systems of fluxions, Transactions for 1708, not only that Newton was the original inventor of the new system, but that Leibnitz had formed his upon Newton's merely by changing the expressions and the signs. Leibnitz, therefore, wrote to Henn Sloane, secretary to the royal society, to request the society to decide between him and Keill. The society immediately named a committee, who came to the following conclusion, that, in reality, there was no difference between the calculus and fluxions, and that the question did not turn on the invention of the one or the other, but on priority, with respect to which there was strong proof that Newton had possessed the system fifteen years before the publication of Leibnitz's article in the Acta Eruditorum, and that, therefore, Keill's assertion concerning Leibnitz could not be considered as a calumny. This decision of the society only rendered the schism between the parties wider; and Leibnitz rendered the quarrel irreconcilable, by sending a letter to the abbé Conti, who was then in England, and acted the part of a mediator between the parties. In this letter, which was intended to be shown to Newton, among other offences, Leibnitz charged that the former was impossible that he should have invented the algorithm of infinitely small magnitudes before himself. Newton replied through Conti; and the dispute continued till the death of Leibnitz.

Lewis Dutens, secretary of legation in the English service, published the most complete and accurate edition of the works of Leibnitz—"Go. Guilt. Leibniti Opera omnia" (Geneva, 1768, six volumes, 4to). In Dutens' edition, however, all those philosophical works are omitted which Raspe had published (Amsterdam, 1789, 4to), under the title "Oeuvres philosophiques de M. Leibnitz." Both collections should be united. Dutens did not accomplish his undertaking without great difficulty, and he describes, in a very interesting manner, the obstacles he encountered in collecting writings so numerous and so widely scattered, and his correspondence on the subject has been published by M. B. Defrémery, under the title "Voyageur qui se repose" (volume 1, p. 240). Ecard, his intimate friend, and, after his death, librarian at Hanover, first wrote the life of this extraordinary man, who had surveyed the whole field of science with a penetrating eye. We have also eulogies on him by Kastner (1769); by Bailly and Pontencelle.
LEIGHTON - LEIPSIC.

LEIGHTON, Robert, an ecclesiastical of singular learning, integrity, and benevolence, was born in Edinburgh in 1611, and received his education at the university there, which he entered as a student in 1627. He was subsequently sent to France, and, on his return, obtained Presbyterian ordination, and was settled at Newbattle, near Edinburgh. Disapproved of by his Presbyterian brethren, as not sufficiently pietistical in his discourses, he resigned his living, and was soon after chosen principal of the university of Edinburgh. When Charles II. resolved to re-establish episcopacy in Scotland; Dr Leighton was induced to accept a historic episcopacy, a title which he chose the better to disguise his principles. Dunblane, and would not join in the pompous entry of his brethren into Edinburgh. He, nevertheless, became archbishop of Glasgow, chiefly impelled, it is believed, by a hope of furthering a scheme of reconciliation between the Presbyterians and Episcopalians. Disappointed in this hope, as also in his wishes to moderate the seditious feelings of both parties, he went to London, and requested leave to resign his see; but his resignation was not accepted. He, never, however, returned to Scotland, and died in London, Feb. 1, 1684, in the seventy-first year of his age. Archbishop Leighton was a man of moderate learning, moderation, and disinterestedness; for, although his bishopric produced only £200, and his archbishopric barely £400 per annum, he founded exhibitions both in the colleges of Edinburgh and Glasgow. As a preacher, he was admired beyond all his contemporaries, and his works have not yet lost their popularity, a complete edition of them having been published in 1808 (6 vols. 8vo.), with a life of the author.

LEIPSIC (properly, Leipzig). There is, perhaps, no city in Europe of its size and population, so important in literary, commercial, and historical connexion, as Leipsic. At the end of the tenth century, a little Saxonian village stood in the angle formed by the confluence of the Parde with the Pleisse. It received its name from the numerous linden (Sclavonic, lip, lipa) in the neighbourhood. The first mention of Leipsic, as a fortified city, with walls and ditch surrounding it existed in the twelfth century, in the time of Otho the Rich, who established the two fairs of Easter and Michaelmas. The bull which Alexander V. issued in 1409, for the establishment of the university, calls it “the populous and spacious Lipa.” The city itself, at that time, was probably of the same extent as now. The first impression of the city was made in 1454. But during the peace which followed the seven years’ war, the fortifications fell into decay, and the ditch was converted into a garden, which, instead of ramparts, encircled the whole city. With the increasing prosperity of the citizens, the city received new embellishments. Leipsic stands in a large plain, which is fertile, and enlivened by thriving villages. According to Oberreit, the observatory is situated in lat. 51° 20’ 19” N., lon. 12° 21’ 45” E. Population, 41,000. The plains of Leipsic are watered by four rivers—the Pleisse, the Elster, the Parde, and the Luppe. The city has four gates, and is divided into four quarters, containing seven squares, six principal streets, and twelve small streets. The principal public buildings, some of which are fine specimens of architecture, are, the town-hall, built in 1599, the exchange, the churches of St Thomas and St Nicholas, the St Thomas school, the Auerbach court, the Pleissenburg with the observatory, the cloth hall, &c. Among the inhabitants are many descendants of the fugitive Huguenots, Italians, and some Jews, enjoying protection. The city of Leipsic, which draws foreigners from almost all nations to the great fairs, has, not, indeed, the extent which it had thirty years since, but it employs, nevertheless, directly, or indirectly, the majority of the inhabitants. Between 8000 and 9000 purchasers assemble at the great fairs. The principal articles are horses (400 to 500 select animals is the average number offered for sale), peltry, cotton stuffs, colonial products, English and French goods, and the productions of the Erzgebirge, books and works of art. There are, in the city, about 300 retail dealers, and 200 wholesale merchants. Traders often come hither from distant countries—Greeks, Russians, and even Indians. The battle of Leipzig was fought June 14, 1813. Every German publisher has an agent there, who receives and disposes of his publications. The agents send packages of books, twice a week, to all parts of Germany. Twice a year, a book-fair is held at Leipsic, which is attended by booksellers from all parts of the country. Some French, Russian, and British booksellers are also present. The Leipsic annual catalogue of books shows the immense number that are written in Germany. Manufacturers, in general, have been pursued with little success in Leipsic; but the manufacture of gold and silver thread, of tobacco, of playing cards, oil-cloth, bed-clothes, and various articles of the kind, are conducted with distinction. Leipsic is the largest city in Germany, the number of inhabitants being employed, for years, a large number of workmen. The university library, of about 60,000 volumes, with 1600 manuscripts, is principally rich in the philosophical and medical departments, as well as in ancient theology. It was formed from the libraries of the suppressed monasteries. The public library, founded in 1605, contains valuable treasures of history and jurisprudence. The collections of paintings of Speck, Keil, and other private individuals, are uncommonly extensive and easily accessible to amateurs. To the young musician, Leipsic affords great opportunities of improvement. The principal productions of the modern instrumental music are here heard in great perfection. For centuries have the two learned schools of St Thomas and St Nicholas been celebrated. Gesner, Ernesti, Fischer, Reiske, were educated here. The university was founded, in 1409, by a great number of the students from Prague, with their books. The instruction in the new institution, the universities of Prague and Paris. Many of the most famous scholars of Germany have taught in this institution, which now numbers 1300 students and upwards of seventy professors. Botanical gardens, hospitals; and other necessary establishments, are connected with the university.

LEIPSIC, BATTLES OF. Twice have the destinies of Germany been decided by arms on the plains of Leipsic—Sept. 7, 1631, and Oct. 18, 1813; and the battle of Nov. 2, 1642, was by no means unimportant in its consequences. In the battle of Sept. 7, 1631, the military talents of Gustavus Adolphus, and the superior tactics of the Swedes, prevailed over the Catholic German generals, Tilly and Pappenheim, and Tilly was shown not to be invincible. Of his army of 35,000 to 40,000 men 8000 fell, 3000 were taken prisoners. The victory was decisive, and Protestant principles triumphed in North Germany. In this battle, the Swedes made good use of their leather cannons. Eleven years after, in 1642, the Swedes defeated, at the same place, the imperial Saxons and Tilsit, by which they forced William II and Piccolomini. But the battle of 1813 was most remarkable for its extent and duration, the magnitude of the contending armies, and the importance of its consequences. For the campaign of 1813, the allied powers had formed the plan of operating on the flanks of Napoleon, and uniting in his rear.
LEIPSIC.

With this view, the movements of the Silesian army, under Blucher, and the northern army under the crown prince Charles John of Sweden (Borodacte), were directed to the Lower Elbe, and the movements of the main army, under Schwarzenburg, to the Upper Elbe. Circumstances finally determined the country around Leipsic, as the place where the junction of the arms of the two northern armies should be cut off from the Saal. In all probability, Napoleon was well aware of this project, but expected to frustrate it. A rapid march between the Mulda and Elbe, a quick passage over the latter river at Dessau, ostensibly with the view of advancing upon Berlin, were to deceive and retard the northern armies. But Napoleon time to turn against Schwarzenburg, and drive him to the mountains of Saxony. If he was conquered, Blucher and John were to be defeated and destroyed. In conformity with the plan of the allies, the great Bohemian army, of 120,000 men, marched, on the 12th of October, in three columns, against Leipsic, over the Erfigbirge. Napoleon, meanwhile, assembled his troops in and around Leipsic. October 15, he mustered his army, and gave the generals their orders. His whole force amounted to 60,000 or 90,000 men, the corps of Ney being still on the road, or employed under Murmurt, to prepare the passage to the northward. In case of an unfortunate issue, the corps of Bertrand was to secure the pass of Linderau. Prince Schwarzenburg commanded the allied forces, although the three monarchs of Austria, Prussia and Russia were present. His purpose was an attack, with three columns, on the position of the French. About seven o'clock in the morning of the 16th, the allied troops put themselves in motion, carried the French outposts, at the villages of Markelsburg, Wachau, and Liebertwolkwitz, and evidently pressed on the enemy's position. The corps of Victor was obliged to relieve Liebertwolkwitz to general Kienau. About nine o'clock, the battle had become general, and the thunder of innumerable pieces of artillery was scarcely ever heard so powerful and so uninterrupted by the oldest soldiers. Both parties displayed the most brilliant courage. The movement of the left wing of the allies suffered considerably from the firmness of the Poles, who resisted every attempt to cross the Pleisse, and, favoured by the ground, kept up an effective fire. Napoleon ordered, in person, the battle on the heights of Liebertwolkwitz. MacDonald carried the Swedish centre, with great precision, and was secured to the left wing of the French an essential advantage; but Wachau was the scene of the most obstinate conflict. From this place Napoleon attacked, repeatedly, the centre of the allies. The corps of Ney, which arrived at this juncture from Delisch, might have decided the day, but Blucher's army also came in sight. It had pressed forward, from Halle to Sueditz, on the 16th of October, attacked the duke of Ragusa at Wahren, Lindenthal and Breitenfeld, gained a decisive victory at Mockern, after a severe resistance, and now threatened Leipsic from this quarter. Ney had, consequently, to be detached against it, and the decisive moment was lost: the emperor Alexander even recovered a lost battery, by the attack of his regiment of Cossack guards; the Russian grenadiers restored the balance of power between the Pleisse and Wachau; and, notwithstanding, the French were still able to offer resistance, in an extent of small portion of ground, so that the two parties were very nearly in the same position, in the evening, as before the battle. But the arrival of the northern army, which Napoleon had not in the least expected, but of which he was aware before the allies made known him desires to the front. On the 17th of October, the arms of the contending forces were permitted to repose, by a tacit agreement; the allies waited for the arrival of their third main body, under Bennigsen, from Dresden, by way of Grimma, and Napoleon was meditating an honourable retreat, for which purpose he ordered the three columns to act against the allies, by means of the captive Austrian count Meerkeld. He is said to have proposed an armistice, demanded permission to cross the Saal without opposition, professed the cession of the fortresses of the Oder and Vistula, and manifested an inclination for peace. From these proposals, the allies ascertained his weakness, and refused to listen to the proposals, particularly as they were now informed of the arrival of the northern army, before which Ney and the duke of Ragusa retreated, over the Parde, to Schonfeld. Napoleon was thus reduced, on the 18th, to the necessity of sustaining a defensive battle, and was compelled to retreat. He took a position more in the rear, between the Pleisse and Parde, protected by several villages. The northern suburbs of Leipsic were defended by a battery, and by Dombrowski and the duke of Padua (Arrigla). Bertrand kept the pass of Linderau open, by which the allies were necessitated to proceed, and was conveyed to Lutzen. Napoleon himself took his station in the midst of his guard, at Probsthekin, that he might send aid to every weak point, and be able to superintend the whole. According to their plan of the 16th, the allies aimed at a junction with Bennigsen and the northern army. They soon found themselves on a more favourable ground, which gave complete efficiency to their cannon and musketry. They gained various successes, and effected a union with Bennigsen. Notwithstanding his ill fortune, Napoleon was able to fill the chasms and repair his disadvantages; his line was nowhere broken, nor was he ever assailed in the rear; the force of the allies was gradually exhausted, and a fair retreat seemed possible for the French; but it was difficult, on account of the want of a free passage for the columns, because all the ways leading to the western suburbs of Leipsic, and beyond, to the narrow pass of Linderau, were covered with flying baggage wagons, and troops in great confusion, and no bridges over the Pleisse had been prepared for such an event, and no precautions had been taken. It was but a short time before, the allies, having lost their transports, and the garden walls of the suburb, and similar objects, had been transformed into means of defence. Poniatowsky and Macdonald were now appointed to cover the retreat, which took place at daybreak, 19th October. Hardly had the allies observed that the position of the French was abandoned, when they made preparations to assail Leipsic on all sides, and, after a severe struggle, obtained possession of two gates. To give a faithful picture of the cruel confusion of this retreat, through the city and environs, would be impossible. Every moment increased the disorder of the flying army, and, the only bridge over the Elster having been blown up too soon, the flight was changed into wild desperation. But a short time before, had Napoleon himself, after taking leave of the king of Saxony and his family, reached that important bridge, and marched on the direct route: 15,000 or 20,000 men, in close array, more than 200 pieces of artillery, and an immense quantity of baggage, were left, and increased the trophies of the victors. Poniatowsky's and Macdonald's bands attempted to escape over the narrow bridge of the Pleisse, and, then, hemmed in again by the
ELDITCH, to construct a foot-bridge in the gardens of Heidenharch; but it was not sufficient for the mass which crowded over it. The greater part perished in the waters of the Pleissé or the Elditch, in which Poniatowski found a noble death. The rest fell by the hands of their pursuers. Macdonald escaped. He degrees the resistance slackened; the Badden, troops were unable to hold the interior of the city, and the allied monarchs entered at the head of their soldiers. The loss of the French in prisoners, killed, and wounded, has been rated at 60,000 men. Among them, 3000 officers, 300 pieces of cannon, and several basins, came into the hands of豇国. &c.; but fell into the hands of the allies. The battle of Leiseg is said to have cost the victors 45,000 men (viz. 8000 Austrians, 21,740 Russians, 14,950 Prussians, and 300 Swedes.) With Napoleon's defeat at Leiseg was connected a series of consequences of immense historical importance. See the articles Saxony, and Russian-German War.

LEISEWITZ, JOHN ANTHONY; a German writer, whose tragedy Julius of Tarentum (1776) is esteemed by the Germans one of their best productions, and is still performed. Leisewitz was born 1752, at Hanover, and, at the university, was a friend of Voltaire, Holly, Burger. He died in 1806, at Brunswick. He burnt the manuscript of his history of the thirty years' war. His works appeared at Vienna, in 1816.

LEISTENWEIN. See Francozian Wines.

LEITH; a town of Scotland, in the county of Edinburgh, formerly called Innerleithen, is situated on the banks of the water of Leith, at its confluence with the firth of Forth, about a mile and a half north-east of Edinburgh, and constitutes the port or harbour of that city. It is divided into two districts, called South and North Leith, communicating by two bridges across the firth of Forth. The town is more certain on the south side of the river, and, with the exception of the modern and improved streets, is irregularly built, with narrow streets and lanes, and the houses mostly old-fashioned and inconvenient. In 1800, a magnificent suite of wet docks was planned, and two of these beautiful basins are now opened for shipping. These docks, comprehending nearly eight acres, together with three graving docks, have cost about £285,000. Fortifications were erected by Oliver Cromwell in North Leith, called the citadel, for the purpose of defending the harbour, which was greatly feared demolished. There is a martello tower at Leith parish church. About 1783 a battery of nine guns was erected to the west of the citadel, in consequence of an alarm from the American privateer officer, Paul Jones, who appeared before the town with three armed ships only, and threatened to destroy all the vessels in the road and harbour. The battery has been since enlarged, forming a kind of fort, garrisoned by the royal artillery. Leith carries on an extensive trade with the Baltic, and other places in Europe, such as Holland, France, Spain, Portugal, and the Mediterranean; also with the West Indies and America; besides a great coasting trade to the different parts of England and Scotland. A trade has also commenced with New South Wales, with which distant colony a regular intercourse is maintained. The Greenland fishery is also prosecuted with great activity. This great burden cannot enter the port of Leith, the depth of water at the side of the town, being somewhat less than 20 feet, and only nine feet at the deep. The roads, about a mile from the mouth of the harbour, afford excellent anchoring ground for ships of any size. The number of ships which entered and paid duties in 1824, was 222 British and 46 foreign; and the number of vessels belonging to the port in 1829 was 263, the collective burden of which amounted to 26,362 tons.

Leith has extensive rope-works, glass-works, and various other manufactories. Ship-building is carried on to a considerable extent: and there is a large distillery in the neighbourhood. Population in 1811: North Leith parish, 8492; South Leith parish, 16,779. LEKAIN, HENRY LOUIS; a French tragedian, was born at Paris, in 1728. It was the intention of his father, a goldsmith, to bring him up in the same avocation, in which the boy made such progress, that his work was in request even in his sixteenth year. He enjoyed, at the same time, the benefit of instruction in the university, where the scholars performed a dramatic piece at the close of the academic year. The means of Lekain were inadequate to the expense required of the performers, and he therefore undertook the office of prompter. He rarely had occasion to make use of the book, so deeply were the plays impressed on his memory, as soon as he had heard them a few times. His greatest recreation consisted in attending the French theatre on Sundays. Social amusement having acquired new life in Paris, after the peace in 1748, several private theatres were formed, and Lekain joined with a number of others, who, in order to outstrip the others, surpassed all the others. Lekain was distinguished for his acting, and Arnaud Baculard's comedy Le Mouzais Riche was first performed by this company. Voltaire, Arnaud's patron, was present at the representation, and invited Lekain, who played the part of the lover, to his house. The young actor was embarrassed before this celebrated man, who encouraged him with the words, "Heaven be thanked, I have at last found a person who has moved and touched me, even when reciting bad verses." Voltaire advised him, however, not to become an actor, and, in obedience to this advice, in order to preserve his fortune, he entered as a physician of his trade, offered to advance him 10,000 francs, in order to place him in a more convenient situation. Lekain hesitated, but his propensity for the stage predominated. When Voltaire perceived that the resolution of the young man was invincible, he offered to spare him at least the expense of apprenticeship, and to give him a theatre in his own house, where Lekain could play with his young friends. Lekain now lived with Voltaire, whose two nieces played with him, and the poet himself sometimes undertook a part. The most distinguished men aspired to the honour of attending these performances. The part of Citizen de Morville was represented by Voltaire, with an energy and truth, of which tradition still preserves the memory, and, inspired by such a model, Lekain shone in the character of Titus. During the six months which he spent in the society of Voltaire, his dramatic skill was vastly improved, and, in his Œuvres de H. Lekain, published by his son (Paris, 1801; new edition, Préciés de l'Opéra sur cet Acteur et sur l'Art théâtral, par Talma, Paris, 1825), he says that, at that time, he studied most profoundly the principles of his art. Before departing for Berlin in 1750, Voltaire obtained for his protégé permission to appear on the théâtre Francais. One of his most splendid parts was Mahomet, in Voltaire's play of the same name. Voltaire called him the only truly tragic actor. His last performance, in the character of Vendome, in Voltaire's Adélaïde, was admired above all, and the effect which he made, on this occasion, were the prime cause of his speedy death, the inflammatory fever brought him to the grave in a few days. On the day of his death, Voltaire returned to Paris, after an absence of thirty years, and the first news which he learned was the distressing information of the death of his protégé.

LELAND, John; an English antiquary, born in
LONDON, about the end of the reign of Henry VI. He was educated at St. Paul's school, and Christ's college, Cambridge. He went to Oxford, and then to Paris, for further improvement. Returning home, he took holy orders. Henry VIII. made him his chaplain and librarian, and gave him the title of royal antiquary. In 1533, he was empowered, by a commission under the great seal, to search for objects of antiquity in the archives and libraries of all cathedrals, abbeys, priories, &c.; in consequence of which, he spent six years in travelling over the kingdom, visiting the remains of ancient buildings and monuments, and collecting materials for the illustration of the history and archeology of England and Wales. He retired to his house in London, to arrange and methodize the stores of intelligence which he had collected, but, after about two years, died insane, in 1552, without having completed his undertaking. The great bulk of his collections, after passing through various hands, was placed in the Bodleian library, in an indigested state. Heine printed a considerable part, forming the Itinerary of John Leland (nine vols. 8vo), and Lelandi Antiquarum de Rebus Britannicis Commentaria (six vols. 8vo).

LELY, Sir Peter, a celebrated painter, was born at Soest, in Westphalia, in 1617. His father, a native of Frankfort, whose family name was Vaes, was a captain in the garrison of that town, but, having acquired the nickname of captain L. Lys, or Lely, his son retained it as a proper name. He was first instructed by Peter Grebber, at Haerlem, and, attracted by the encouragement afforded to the arts by Charles L, he went to England, in 1641, and commenced portrait-painter. He has transmitted the features of most of the beauties of the court of Charles II., and is particularly admired for the grace of the heads and the elegance of the draperies. He was in great favour with Charles II., who knighted him. He died in 1680. The "beauties" at Windsor, by him, are much admired. He likewise excelled in crayon painting. His historical pictures are few. At Windsor, there is a Magdalen and a sleeping Venus. The duke of Devonshire has his Jupiter and Europa; Lord Pembroke, his Titian and Iphigenia. See Walpole's Anecdotes of Painting.

LEMAN, or Lac Leman; the name of the former French department, comprehending the republic of Geneva, from Lemania, the ancient name of the lake of Geneva.

LEMBERG, or LEopolis (in Polish, Lwów); capital of the kingdom of Galicia, with 47,500 inhabitants, of whom 15,249 are Jews; next to Brody, the most important commercial place in the circle of the same name. It is the seat of the Austrian provincial government. Lon. 24° 2' 53" E.; lat. 49° 51' 42" N. Lemberg is the see of a Roman Catholic, a Greek Catholic, and an Armenian archbishop, and the seat of the Lutheran superintendent, and of the chief rabbi. It has a university, which was transferred to Cracow, but, in 1817, was re-established (twenty-six professors and 220 students). There are about twenty-two places of worship, most of them belonging to the three churches, &c. The Osolinsky library is public. Lemberg is sixty-eight leagues east of Cracow, is fortified, and carries on considerable trade.

LEMIÈRE, Antoine Marin; a French dramatist, born in 1733, at Paris. He received a good education, but, being deprived of his parents while young, he became assistant sacristain to the church of St. Paul. At his leisure, he composed sermons for sale in manuscript, but he was not known to the abbé D'Olivet, who employed him to correct the proofs of his edition of Cicero. He was then made an under master of rhetoric at the college of Harcourt, in which situation he wrote a tragedy, rejected at the theatre. He afterwards gained six poetical prizes, offered by provincial academies. His tragedy of Hypermenastra was acted with success in 1758. He subsequently obtained a place in the office of a farmer-general, who, perceiving that he was better qualified to make plays than to keep financial accounts, generously bestowed on him a pension, that he might write. If they are disturbed while writing, in 1781, he was chosen a member of the French academy; and he died in 1792. He produced several tragedies, among which the best and most successful were his Widow of Malabar, and William Tell; he also published Les Fêtes, ou les Usages de l'Amour, a poem in six books, as also a collection, entitled Pièces fugitives (1782, 8vo).

LEMMIA, in mathematics, denotes a preliminary proposition, laid down in order to clear the way for some following demonstration, and prefixed either to theorems, or in order to render their demonstration less perplexing, or to solve certain problems, to make their solution more easy and short.

LEMMING (georychus, Illig.). These quadrupeds, which are of the rat kind, are distinguished by the conformation of the fore feet, and the shortness of the tail. The fore feet are adapted for burrowing. The tail is shorter than the body. Among the species, the most interesting are the lemming rat (G. lemmus) and the Hudson's bay lemming (G. Hudsonius). The former of these inhabits the northern parts of Europe, is about the size of the common rat, of tawny colour variegated with black, the sides of the head, and the under parts being white. The legs and tail are grayish, and the under parts of the body of a dull white. The head is large, short, and thick; the eyes small; the limbs stout. They feed entirely on vegetables. They form shallow burrows, in summer time, under the ground, and, in winter, make long passages under the snow in search of food. The most extraneous characteristic of these animals is their migrations, which they undertake at irregular epochs, seeming to be guided by the severity of the approaching winter. In these migrations, they assemble in incredible numbers, and always march in a straight line, nothing seeming to turn them aside. If they are driving over a lake or river, they will not recede, but swim on, and soon re-assume their former order. They chiefly move at night, or early in the morning, and make such a destruction among the herbage, that the surface of the ground over which they have passed appears denuded. Exposed as they are to every attack, and destroyed in attempting to cross rivers and lakes, the diminution of their numbers is very great, so that few return to their native haunts. They never enter dwellings, but keep in the open air. When enraged, they raise themselves on their hind feet, and uter a larking sound. Sometimes they divide into two parties, and attack each other. They breed several times in the year, producing five or six at a birth. Their numbers are so great in particular years, that the common people, in Norway, believe that they descend from the flood. From the devastations which they commit, they have been exorcised by the Roman Catholic clergy. Their flesh is not used as food, nor the skins for the fur.

The Hudson's bay lemming is of an ash colour, *

* The following is the form of the exorcism used:—"Ex
LEMNOS. LEMONTEY.

with a tinge of tawny on the back, having a dusky stripe along its middle, and a pale line on each side. The hair is short, soft, and long. It is not certain that these animals migrate like the foregoing species, though, from the observations of captain Lyon, this appears probable. He says that he observed long ridges of mouse dung, several inches deep, extending for about twenty yards. This was the situation in which none of these animals were then found, and in a kind of soil in which they do not live. He remarks that, from appearances, they seldom stray from their haunts, even in summer, and in winter, are rarely seen on the surface of the snow. This would be very unusual in a species of Lemnos.} Of the Boreal.

It is said to be very inoffensive, and so easily tamed that, if caught, even when full grown, it will become perfectly reconciled to its situation in a day or two, very fond of being handled, and will creep, of its own accord, into its master's bosom.

LEMNOS. 

the most northerly island of the Grecian Archipelago (the Egean sea), between the Hellespont and mount Athos (147 square miles, 8000 inhabitants), abounds in vines, wheat, &c. It formerly contained a volcano, Meschien, which was regarded as the workshop of Vulcan. Mythology assigns this island as the residence of Vulcan (whence he is called Lemnus), after Jupiter had hurled him from Olympus. Various atrocities, perpetrated on this island (see Hypsipyle), gave occasion, in antiquity, to the use of the epithet Lemnian, to designate such acts. Among its curiosities are a labyrinth, and the Lemnian earth (terra sigillata).

LEMOINE, FRANCIS, an historical painter, born at Paris, in 1688, was placed, in his thirteenth year, with the painter Galloche, with whom he remained twelve years, during which time he paid particular attention to the works of Carlo Maratti and Pietro di Cortona. In 1718, he became member of the academy. The king of France, perceiving the talent of young artists at Rome, by the French government, he was obliged to defer the accomplishment of his wish to visit Italy till a rich amateur, of the name of Bergier, took him for his companion, in 1723; but a residence of six months in Italy, at a time when his talents were already developed, could not be so useful to him as the earlier study of the treasures of Roman art might have been. He finished, however, one of his best paintings, a female entering the bath, during his residence in Bologna, Venice, and Rome. On his return, he was appointed professor at the academy, and so soon found an opportunity of displaying his talents in painting the chapel of the Holy Virgin in the church of Sulph, the subject of which is the ascension. The composition of the picture, however, has some fundamental faults. It was restored by Callet in 1780, and cannot therefore be now considered as Lemoine's work. Lemoine subsequently painted the ceiling in the hall of Hercules at Versailles, the largest painting in Europe, being sixty-four feet long and fifty-four broad, without being divided by any architectural interruptions. It contains 124 figures. He had almost finished the work, when he observed that the main group was placed a little too low, and he did not hesitate to raise it, although alterations were thus made in the arrangement of many other figures. His exertions in this work, which cost him the labour of seven years, weakened his health. His domestic misfortunes augmented the natural gloom of his disposition, and his chagrin at the marks of favour conferred on inferior artists combined with these circumstances. Applied with a touch of madness, he put an end to his life, in 1737. On an unprejudiced estimate of his labours, it cannot be denied, that the decline of the French school is principally owing to him. His drawing is incorrect, his forms are disfigured by mannerism, but his colouring is brilliant, though wanting in truth, and his grouping is skilful.

LEMON. The lemon-tree (citrus limonum), was originally brought from the tropical parts of Asia, but is now cultivated very extensively in the southern parts of Europe, especially in Sicily, and the fruit forms an important article of commerce. It is congeneric with the orange and citron, and belongs to the natural family aurantiae. Its stature is that of a large shrub or small tree; the leaves are oval, pointed, twice as long as broad, and, like those of the other species, contain scattered glands which are filled with a volatile oil. The beauty of its smooth evergreen foliage, and the delightful fragrance of the flowers and fruit, have made it a great favourite in all our green-houses. The shape of the fruit is oblong, but its internal structure does not differ from that of the orange. The juice is acid and agreeable; mixed with water and sugar, it forms the well-known refreshing drink called lemonade, which is in general use throughout all parts of the civilized world. Lemon-juice is also employed by calico printers to discharge colours. See Citron.

LEMONADE; a drink made of water, sugar, and the juice of lemons. Prepared in this simple way, it is a very grateful beverage in warm weather, or to relieve the effects of feverish heat. If a little sugar is added to the sugar, and the sugar is rubbed with the peel of the lemon, so as to imbibe the oil contained therein; but the lemonade is thus rendered stimulant rather than cooling, and many persons suffer from head-ache in consequence. In public houses, cream of tartar is frequently used instead of lemon-juice; which may persons can endure without feeling some head-ache. Lemonade was first sold publicly between 1630 and 1633, in Italy, and soon became very common. See Limonade.

LEMONTEY, PETER EDWARD, member of the French academy, jurist and poet, was born at Lyons in 1729, and died at Paris, June 27, 1826. On the convocation of the estates in 1789, he contributed by his essay—whether a Protestant can vote in the election of the Members of the Estates, or be chosen a Member himself—to the restoration of the Protestants, who formed a numerous class of citizens, to their civil rights. Subsequently appointed deputy from the department of the Rhone, he joined the constitutional-monarchical party, and exerted himself to moderate the extravagant measures of the wild demagogues. He succeeded in saving a great number of absent scholars, artists, and travellers from being compelled to leave the country, even the French emigrants, with those who had left their country with the purpose of introducing foreign arms on their native soil. In the deliberations on the fate of Louis XVI, he conducted himself with equal humanity and
courage. During the reign of terror, Lenonseey fled to Switzerland, whence he did not return till after the overthrow of the Mountain party. Deeply affected with the calamity which had involved his native city in ruin (see Lyons), he published his beautifull ode Les Ruines de Lyons. He afterwards travelled through Italy, published several poetical works in Paris, and wrote various operas and romances. In 1804, the government conferred on him, and two other literary men, the censorship of theatrical works—an ungrateful office, which he at first exercised with much discretion, but in which he soon showed so excellent a feeling for the complaints of authors. After the restoration, he received the order of the legion of honour, and the office of the director-general of the book trade. He also succeeded Morellet in the academy. His romance La Famille de Jurc et trouvons à Paris? (written on occasion of Napoleon's accession to the throne), in four months passed through as many editions. His Essai sur l'Etat maritime de Louis XIV. (his master-work, bold and true) was an introduction to his unfinished Histoire de la France depuis la Mort de Louis XIV. Of his operas, Patins, ou le Voyage en Græce, was the last. It was a hit because he boldly attacked in it the Vandalism of those times—the destruction of the French monuments of art, under the name of civicism.

LEMPRIERE, John, D. D., a native of Jersey, was graduated at Oxford as A. M., in 1792. In the same year, he became head-master of Abingdon grammar-school, and afterwards master of the free grammar-school at Exeter. In 1811, he was presented to the rectory of Meeth, Devonshire, which living, together with that of Newton Petrock, in the same county, he held till his death. Doctor Lempriere was the author of an elegant and polished dictionary, and published a Bibliotheca clasica as an assistant in the study of antiquities and mythology. His other writings are the first volume of a translation of Herodotus, with notes, which appeared in 1792: an entire and elegant translation of that historian being given to the world by Mr Beloe, doctor Lempriere desisted from prosecuting his design. A compilation of Universal Biography, first printed in quarto, with an abridgment of the same, in octavo, both in 1808, was his last work. He died of apoplexy, Feb. 1, 1834.

LEMUR. This genus of the monkey tribe (the name Lemur is derived from the Latin word lemur, a dissembler, and signifies a genus of lemurs, or simian genera; as, Lemur, which is distinguished by having six projecting incisors in the lower jaw and four straight ones in the upper. These animals have long tails, and take the place of apes in the island of Madagascar, none of the latter being found there. Indria, having four incisors below and the same number above; no tail; only one species known, which the inhabitants of Madagascar tame and train to the chase, like dogs. Loris, four incisors below, and four above; no tail. Their molar teeth have sharp points instead of tubercles, and they sometimes feed on small birds and quadrupeds. Galago, having six incisors below and four above; tail long and tufted; elongated tarsi to the hind feet, which render them very disproportionate to the superior extremities. Tarsius, four incisors above, two below, and several canine teeth between the incisors and molars; tail being long, they live by night, and their strong limbs are well developed, with the first finger on the hinder feet furnished with a pointed and elevated nail, all those on the other fingers being flat. Their hair is woolly.

LEMURES (varian: lamus, ghosts, spectres), among the ancients Romans; the souls of the dead, which tormented men in the night, whence they were called nocturnai or black. In order to lay them, a ceremony called lemoria, lemuralia, remoria, was observed on the nights of the 9th, 11th, and 13th May. About midnight, when every body was asleep, the head of the family rose, and went, barefooted, softly, and in silence, to a fountain. With a snap of the fingers, still keeping silent, he protected himself from the spectres. Having washed his hands at the fountain, he returned, took some black beans in his mouth, and, without looking around, threw them nine times over his head, repeating, each time, Hecce ego mitto; his fables me mosque redino (These I send; with these beans I redeem me and mine). He then washed his hands again, and, having continued this vessel, saying nine times during the operation, in a supplicating tone, Maxes, exile, paterni (Ye sons of my ancestors, depart). He now looked around, and the ceremony was finished. It was believed that the spirits came and collected the beans.

LENA; a large river of Asiatic Russia, which rises in the mountains near lake Baikal, and empties, after a course of about 2000 miles, through four arms, into the Northern ocean, after having received the Wilime, Olekman, Aibane, and Wilihon. It forms, at its mouth, a large bay, of the same name, containing many islands, of which the largest are very cold and barren, but inhabited by many animals valuable for their furs.

LENCLOS, Anne, called Ninon de, the French Asia, was born at Paris, in 1610, of noble parents. The early death of her parents having left her to follow her inclinations, her character was formed by the bent of her own feelings, and by the study of the works of Montaigne and Charron. Even at an early age, she was distinguished for her wit and acuteness. She played the harpsichord and several other instruments in a masterly style, sang with taste, and danced with grace. At seventeen years of age, she had several lovers and suitors; but her love of independence prevented her from forming a serious connexion. To render herself entirely free, she invested her property in an annuity, on which she lived frugally, but in good style. Her income amounted to 8000 or 10,000 livres. Without making a traffic of her charms, she attached herself to those who pleased her, as long as her inclination continued. Inconstant in love, but true in friendship, equable in her temper, charming in her conversation, capable of forming young men, but also of seducing them, sensible, without making a traffic of her charms, she had a certain charm, which cold and barren, but inhabited by many animals valuable for their furs.
LENNI LENAPE—LENTIL.

bequeathed to Voltaire, then a young man, whose renown she had foreseen, a considerable sum, which he was to expend in books. One of Ninon's sons, named La Boësset, died, in 1732, an only son. The other, Tony, an officer in the navy, was distinguished by a dispute between an officer and cleric, respecting the paternity. As the matter was doubtful, it was decided by lot, and the officer obtained the paternal title. Ninon's second son died a tragic death. He had fallen in love with his own mother, without knowing his relationship to her. She was obliged to reveal the secret to him, to escape his importunities, and he killed himself from despair. This terrible event has been introduced, by Le Sage, into his Gil Blas. Ninon, moreover, confessed herself that she was not happy, and often said that, if she had foreseen her course of life, she would rather have undergone a voluntary death, than have submitted to such a destiny. The Lettres de N. de Lenclos au Marquis de Sévigné are the work of Damours, the author of the life prefixed to the collection. The Correspondence secrète de, &c., edited by Ségur (1789), is also a supposititious work.

LENNI LENAPE. See Indians, and Indian Languages.

LENOTRE, ANDREW; a French architect and ornamental gardener. He was born at Paris, in 1656. He was one of the select gardeners of the gardens of the Tuileries, who, wishing to make him an artist, placed him, as a pupil, with Vouet, the painter. He showed a strong taste for design, particularly in laying out gardens, and arranging their scenery. He first displayed his talents at the château de Vaux; but his plans for the decoration of the park of Versailles contributed principally to establish his reputation. He afterwards embellished the gardens of Clagny, Chantilly, St Cloud, Sceaux, the Tuileries, &c. Louis XIV. richly rewarded the labours of Lenore, and, in 1675, bestowed on him letters of nobility, and the cross of the order of St Michael. He took a journey to Italy in 1678; and, at Rome, he was honourably received by pope Innocent XI. He died, at Paris, in 1700. Delilie has celebrated the talents of Lenore, whose style of ornamental planting was fashionable, not only in France, but in Britain. His modern imitator, which appears to be the most perfect, is Bosc, Kent, Brown, and the modern landscape gardeners.

LENS, in dioptrics, properly signifies a small, roundish glass, of the figure of a lentil, but is extended to any optic glass, not very thick, which either collects the rays of light into a point, in their passage through it, or diverges them, in order to vary the laws of refraction. Lenses have various figures, that is, are terminated by various surfaces, from which they acquire various names. Some are plane on one side, and convex on the other; others convex on both sides, both of which are ordinarily called convex lenses, though, where we speak accurately, the former is called plano convex. Again, some are plane on one side, and concave on the other; and others are concave on both sides; which are both usually ranked among the concave lenses; though, when distinguished, the former is called plano-concave. Others, again, are concave on one side, and convex on the other, which have the name meniscus. In every lens, terminated in any of the fore-mentioned manners, a right line, perpendicular to the two surfaces, is called the axis of the lens, which axis, when both surfaces are parallel, passes through the centres; but if one of them be plane, it falls perpendicularly upon that, and goes through the centre of the other. See Optics.

LENT, a Teutonic word; in German, Lenz (the spring); in Swiss, Glenz; in Dutch, Lent. Several derivations of the word have been proposed. Aber lung thinks that it is probably connected with the German verb leinen (to thaw). In English, Lent means the quadragesimal fast in spring, which, in Italian, is called quaresima; in French, carême, from the Latin quadragesima die (the Forty Days Paschal Fast), the subject of fasting, in general, and the fasts and days of abstinence observed by the Roman church have been treated of. Lent is a fast intended to prepare Christians for the Easter festival. Protestants generally consider Lent not to have been established before the second or third century; but the Catholic church maintains, with St Jerome, St Leo, St Augustine, and the majority of the fathers of the church of the fourth and fifth centuries, that it is of apostolic origin. They reason thus: that which we find universally established in the church, and of which we cannot, nevertheless, find the institution by a council, must have been established by the apostles; and the sixty-ninth apostolical canon, the council of Nice, in 325, that of Laodicea in 363, and the fathers of the second and third centuries, speak of Lent as a usage generally observed by the church. In the Latin church, Lent formerly lasted but thirty-six days; in the fifth century, four days were added, in imitation of the forty days' fast of the Saviour, and this usage became general in the Western church, except in the church of Milan. (See Diocesaire de Théologie, Article Carême.)

The term Lent is considerably older than the word Lentils; the former is used sooner than the Roman Catholics, but they do not fast on Sundays, except in passion-week, though their fasts, generally speaking, are much more strict than those of the Roman Catholics. The Latin monks had formerly three fasts, of forty days each; and the Greeks observed four besides Lent; but they have reduced them to seven days each. Some Oriental sects had still other great fasts. The eighth council of Toledo, in 663, orders that those who break the fast, without necessity, shall eat no meat during the whole year, and shall not partake of the Lord's supper at Easter. The bishop must give the sick and aged permission to eat animal food during Lent. Such permissions are, however, generally put into the hands of physicians, from whom it is not difficult to obtain them. Until the year 1200, but one meal a day was eaten during Lent. The choice of Lent is celebrated in Catholic countries with great magnificence. In Rome, the pizzicaroli, or shops in which hams, sausages, eggs, &c., are sold, are illuminated and ornamented, in the most picturesque manner, the night before, in order to attract buyers. The statue of a saint, made of butter, is often seen. Heaps of eggs are burnt, which are laid on gigantic reflecting mirrors, and the whole scene is quite brilliant and attractive. Milk is allowed during Lent. The English church has retained Lent, and many other fasts, but gives no directions respecting abstinence from food. See Carnival.

LENTIL; a species of ervum. The common lentil comes from France and the Valais. The thin annual root brings forth weak, creeping, hairy, angular stalks, from one to two feet long, divided, from near the bottom, into several branches, and clinging for support to other plants; the pinnate leaves stand alternately; from the axils of the leaves proceed fine stalks, which each have two or three whitish flowers, hanging down. The pods do not contain more than two sound seeds, flat upon both sides. Lentils are
cultivated for the seeds just mentioned. They require a rather sandy, yet strong soil; they are sown somewhat later than peas and vetches, because they cannot endure night frosts; they are to be sowed in drills, and well harrowed. Care is to be taken that the soil is loose and open, and that the young plants are well hoed and well weeded. For the harvest, the time is to be chosen when the leaf pods begin to turn brown, though the plant may be still quite green; and, if possible, it is best to choose the afternoon of a dry, warm day; for if the pods are not quite ripe or are wet with rain at the time of gathering, they easily crack open, and a great loss of seed takes place. Two varieties are cultivated—the large garden lentil, and the common field lentil. The former is distinguished by its size, and the greater quantity of mealy substance which it will afford. The straw of lentils is good feed for cattle and sheep, particularly for calves and lambs. Lentils are also mixed with vetches, and sowed as food, both green and dried, for milch kine. Lentils, when cooked, afford a nutritious food (this should be done in the pod, to preserve their flavour), but, like peas and beans, are indigestible when the digestive powers are weak, particularly if they are not cooked quite soft. They ought to be boiled for two hours and a half. When they are browned, some butter, and a few onions roasted in butter, are added, also salt; they are then boiled half an hour more. A good soup may also be made of them. Some persons soften the lentils, before cooking, in cold water. Purified rain water is best to cook them in. In the Archipelago, they are one of the principal articles of food. To fatten pigs, lentils are excellent, and, given with other food, increase the milk of cows.

LENTO (Italian, slow); a term used in music.

LENTULUS; the name of one of the most illustrious families in Rome, several individuals of which distinguished themselves by their virtues and services; others were conspicuous in other ways. Publius Lentulus Sura, an accomplice of Catiline, was sentenced to death. Lentulus Spinther, one of the most luxurious and ostentatious men of his age, was a partisan of Pompey. Having been pardoned by Caesar, who had made him prisoner, he again joined the former, and was present at the battle of Pharsalus. Cneius Lentulus was put to death, in the reign of Caligula, in consequence of being detected in forming a conspiracy for the destruction of the house of Augustus.

LEO I. (The Great, Sx.) was born, according to some writers, in Rome, and, according to others, in Tuscany. The popes Celestine I. and Sixtus III. employed him in important ecclesiastical affairs, while he was only deacon. On the death of Sixtus III., in 440, Leo was elevated to the papal chair. The Romans were gratified with this choice; but the beginning of his pontificate was marked by an intolerant and impolitic act. He caused processes to be instituted against the Manicheans, who were conciliated in Rome, and gave up those who persisted in their heresy to the secular power, in whose hands he proceeded against the Pelagians, Priscillianists, and Eutychians, whom he exterminated. During the session of the council of Chalcedon, in 451, to which Leo had sent four legates, Attila laid waste the Western empire, and threatened Rome. The emperor Valentinian employed Leo to intercede with that formidable foe on the behalf of his people. To this end, Leo addressed the barbarian with mildness, and, at the same time, with impressiveness; and Attila, induced probably, by other motives, left Italy, and retired beyond the Danube; but, in the year 455, the Vandal Genseric took Rome, which was exposed to pillage for fourteen days. All the favours that Leo could obtain from Attila was, to forbid the murder of the citizens, the burning of the city, and the plunder of the three principal churches in Rome, which contained the rich offerings of Constantine. Leo is the first pope whose writings have been preserved. These writings consist of 96 sermons, 141 letters, and 5 homilies. His most important works are the Gentiles, and the Epistle to Demetriades, have also been ascribed to him. His style is finished and rhetorical, and his periods have a measured rhythm, which is not unpleasant. There have been several editions of his works; one by Quenel, at Paris (1675, two vols., &c.); another by Latouche, at Rome (1700, fol.); a third at Rome, by Caccieri (three vols., fol.); and a fourth at Venice (1757). Father Mainbang has written his life.

LEO X. (Giovanni de' Medici); second son of Lorenzo the Magnificent, born at Florence, in 1475, received the tonsure in his seventh year, and was loaded with benefices. The election of Innocent VIII. to the papal chair, favoured the ambitious views of his father, and, in 1488, Giovanni, then only thirteen years old, was made a cardinal. Lorenzo intrusted his education to the Greek Chalcondylas and the Jesuits. In 1492, Giovanni died, and the grave, took a greater interest in the writings of the ancient philosophers than in those of the fathers of the church; it was, therefore, made a condition of his nomination, that, before he should be invested with the purple, he should study theology three years at Pisa. In 1492, Giovanni took his seat in Rome, as a member of the holy college. His father died soon after, and was succeeded by his son Pietro, at Florence. As the young cardinal had opposed the election of Alexander VI. to the papal see, he exchanged Rome for Florence, where he lived in high estimation, until the unsatisfactory manner of his death. In 1499, he was taken prisoner by the French at Ravenna, in 1512, but soon after regained his freedom, on the dispersion of the victorious army, and returned to Bologna, where he conducted the government aslegate, and, after contributing to the re-establishment of the Medici, remained at Florence until the death of Julius II. recalled him to Rome. The choice very unexpectedly fell upon him, and he ascended the papal chair in 1513, in the thirty-eighth year of his age, under the name of Leo X. He immediately appointed two of the principal writers of his time, Beno and Sadolet, his secretaries. In foreign affairs, he regarded the system of his predecessors, opposing the domination of foreigners in Italy as much as possible. He succeeded in driving out the French, put an end to the divisions in the church, and forced Louis XII. to a formal submission. Having thus restored the public tranquillity, in the first year of his government, he gave all his attention to the plunder of the Church. The whole year 1515 was occupied by the exactions of his finance minister, Carafa, who had been neglected by his predecessors. The university at Rome was restored and endowed, privileges were granted it, and the most distinguished men selected as instructors. He also established a particular society for the publication of Greek authors, under the supervision of John Lascaris, but, however, when he had invited from Venice, and Marcus Mutanesius,
brought over a number of young linguists, whose influence assisted in promoting a taste for classical literature. He requested the possessors of ancient manuscripts, in all countries, to make them known to him, and thus, one of the most brilliant of the works of the Annals of Tacitus, was one of the finest fruits of his efforts. Several private individuals followed the example of the pope; among whom, Chigi, a merchant, was distinguished, who established a collection of works of art, and published an edition of Pindar and Theocritus. To prevent a union of Spain, France, and Austria, Leo favoured a reconciliation between the kings of England and France, and even pretended to favour Louis's plans on Milan. His design of obtaining the kingdom of Naples for one branch of his family, and the Duchies of Ferrara and Urbino for another branch, made the friendship of this monarch necessary, and produced a secret alliance between them; but, when a French army appeared on the frontiers, he was not satisfied with increasing his power, by a purchase of Modena from the emperor Maximilian, but also sold his votes, was insulted to the republic from the French alliance; in which, however, he did not succeed. This artful, varying policy was, at that time, universal, and Leo cannot be especially blamed for it. After the death of Louis XII., Francis I. having ascended the throne, and having published formally the alliance of the emperor, the king of Arragon, the states of Florence, Milan, and Switzerland; but, after the battle of Marignano, he withdrew, and, in 1515, he had an interview with Francis at Bologna, and formed with him a concordate, advantageous to both, but warmly censured by the French nation. In order to increase the power and splendour of his family, after the death of his brother Giuliano, he deposed the duke of Urbino, in 1516, and gave the duchy to his nephew Lorenzo. Leo saw with regret the reconciliation of the belligerent powers, which was effected in the same year. In 1517, the duke of Urbino, who had been deprived of his estates, recovered them by force of arms. Leo, however, collected a powerful army against him, and forced him to renounce his claims on honourable terms. In the same year, a conspiracy against the pope was discovered, the suspect, who professed of being the principal, was hanged, notwithstanding the passport which had been given him. Others, whose guilt was not sufficiently proved, were tortured, deprived of their dignities, and banished. The conduct of the pope, in this instance, was neither magnanimous nor just. Leo's magnificence had exhausted his finances. To procure money, particularly for the completion of St Peter's, he put all Christendom under contribution, by the sale of letters of indulgence. (q.v.) This abuse roused the zeal of Luther, and produced the reformation. Leo, at first placed little regard to the attacks of Luther, and when he could no longer keep silence, was inclined to lenient measures. In compliance with the wishes of Maximilian, he assumed more rigour, and summoned Luther to appear in Rome, but finally agreed that he should defend himself at Augsburg, before the cardinals. Nothing being decided by that means, he issued, in Nov. 1518, the well-known bull, in which he defended the papal authority of dispensing indulgences, and threatened all, who maintained contrary doctrines, with excommunication; on which Luther appealed to a general council. While open war was thus going on in the church, Leo endeavoured to unite all Christian monarchs in a crusade against the Turkish emperor Selim, who had made himself master of Egypt; but their mutual jealousies prevented the execution of his plan. Besides these public disgraces, Leo had great domestic misfortunes to suffer. Lorenzo, who had connected himself with the French court by marriage, having died, and left only a daughter, Leo therefore annexed Urbino to the States of the Church, and the cardinalship of the Temporal Chieftainship. In the government of Florence. Though, in Germany, the reformation continued to gain ground, Italy was not disturbed by foreign wars. This state of things permitted Leo to indulge his taste for splendour, to promote the arts and sciences, and, at the same time, to increase the power of his family. Although in alliance with France, he did not give up his plan of preventing the aggravization of that power in Italy. With this view, he united with the emperor, in 1521, for the re-establishment of the family of Sforza, in Milan, and took Swiss troops into pay. The war was begun successfully; Parma and Piacenza were taken by the papal troops, and annexed to the States of the Church. The allies entered Milan without resistance, and occupied the territory of the duke of Ferrara, whom Leo had excommunicated as an ally of France. While engaged in the concerning, for instance, in the camera, on Dec. 1, 1521. The age of Leo is described in Rosco's Life and Pontificate of Leo X., which has been translated into German, Italian, and French.

LEO XII. (Annibale della Genga), born at Genoa, Aug. 2, 1760, became cardinal March 8, 1816, and pontiff in Feb. 1823, Sept. 28, 1823. He early served the interests of the Roman court as a nuncio in Switzerland, at Dresden, and at other German courts, went on an embassy to Louis XVIII., from pope Pius VII., and was finally created vicar-general of Rome. As pope, he made himself beloved by the people, by the remission of many taxes, by his benevolence, by personally inspecting the public institutions for the poor, the hospitals and the prisons. His firm maintenance of the rights of the court of Rome involved him in disputes with the French and Austrian governments in 1824. On Ascension-day, 1824, he announced the next year as the year of jubilee. His circular epistle to the nations of Christendom, on that occasion, contains a warm attack on Bible societies. May 17, 1824, he gave to the Jesuits and their general, Louis Fortis, the Roman college, which they had possessed until 1768. He dismissed from the service of Ignatius, the opus, the university, the library and the observatory, in order that they might devote themselves entirely to the education of the young. Leo XII. also strengthened the connexion of the apostolic see with the Spanish American republics, particularly with Chile, and, in 1828, with Colombia, by recognizing Bolivar's bishops. He endeavoured to free the States of the Church from robbers and banditti, as well as to suppress the remains of Carabonarism. In 1825, he restored the prisons of the inquisition. His attention was particularly directed to the remedy of numerous abuses in the departments of the Roman government, for instance, in the camera apostolica. Leo died in Feb. 1829, and was succeeded by cardinal Castiglione, who took the name of Pius VIII. Pius died Dec. 1830, and was succeeded by cardinal Cappellari (Gregory XVI.)

LEO VI. emperor of the East, surnamed the Philosopher, was the son of Basil I., whom he succeeded, in 886. He reigned weakly, and the ill success of his generals against the Bulgarians, obliged him to submit to such terms of peace as those barbarians pleased to propose. A total defeat of his fleet, by the Saracens, also took place a short time before his death, which happened in 911, after a reign of twenty-five years. He gave his name to several works, the principal of which are, a Treatise on Tactics; Novella Constitutiones; and Opus Basilianum, a collection of laws, begun by his father. He also
addressed a letter to the caliph Omar on the truth of Christianity.

LEO, LEONARDO, chapel-master in the Conservatorio St. Onofrio, and private composer to the royal chapel at Naples, born in 1694 (according to Piccinii, 1701), at Naples, probably studied under Scarlatti. To him, to Pergolesi, and some other composers of that period, is to be attributed the reputation which the Neapolitan school acquired all over Europe. Among his scholars, Piccinii, Sacchini, Pergolesi, Trametta, are distinguished. He surpassed all his predecessors, and, as he became equally perfect in all the departments of composition, he may be esteemed equal to any of his contemporaries. All his works were studied with veneration by the Italian musicians. Although Leo was very successful in passionate, grand, and elevated compositions, he was not less so in simple, tender, and comic, as his comic opera Il cieo proves. Leo is, besides, the first composer who availed himself of the form of rondeaux in his comic operas. He died in 1742. His best operas are

Sofonisba (1718, according to Burney, his first opera);

Olimpiede; La Clemenza di Tito (1735); Achille in Sciro (1740). He composed two oratorios—Santa Elena al Colvario (to the words of Metastasio), and La morte di Cristo. He also composed his Ave Maria, and a Misericordia alla Capella, are the most remarkable.

LEO, JOHN (surnamed Africanus), a traveller and geographer of the sixteenth century, was born of Moorish parents, at Grenada, in Spain, and, when that city was taken by the Spaniards, in 1492, retired to Africa. He studied at Fez, and afterwards travelled through various parts of the north of Africa. Having been captured by pirates, he was taken to Italy, and presented to pope Leo X., who persuaded him to embrace Christianity, and gave him his own name on his being baptized. At Rome, he acquired a knowledge of the Italian language, into which he translated his Description of Africa, originally written in Arabic. This is a very curious and interesting work, comprising accounts of several countries rarely visited by Europeans. Leo also composed a treatise on the lives of the Arab philosophers. He is supposed to have died soon after 1526.

LEOBEN; a town on the Mur, in the Austrian duchy of Styria, about 1000 feet above the sea, with 2400 inhabitants, famous as the place where the preliminaries of the treaty of Campo-Formio were concluded, between Austria, Naples, and the French republic, August 17, 1797, after Bonaparte's successful campaign of 1796 in Italy, against the archduke Charles. (See Campo-Formio, Peace of.) Here the young French general displayed great talents as a statesman, deriving little aid from the instructions of the directory. See Napoleon, and Italy.

LEON, PONGO DE. See Pooce de Leon.

LEON; one of the great divisions of Spain, usually styled the kingdom of Leon; bounded north by Asturias, east by Old Castle, south by Estremadura, and west by Portugal and Galicia. It was united to Castile in the beginning of the eleventh century. The soil is generally fertile, and produces all the necessaries of life; and the wine is tolerably good. Population, 1,215,551; square miles, 21,000. It is divided into six provinces.

LEON (anciently Legio Septima Gemina); a city of León, capital of a province to which it gives name, at the junction of two rivers, one of which runs into the Esla, ten miles south of the town; 150 miles north-west Madrid; lon. 5° 37' W.; lat. 45° 45' N.; population, 5000. It is a bishop's see. This city is very ancient, and was formerly much more rich and populous than it now is. It was the capital of a kingdom of the same name, and the kings resided in a palace here till the year 1057. It now contains thirteen parish churches, nine convents, and four hospitals. The cathedral is handsome, and abounds in relics. In it are seen the tombs of thirty-seven kings and one emperor.

LEONARDO DA VINCI. See Finck.

LEONIDAS, King of Sparta, son of king Anaxan- drides, ascended the throne 491 B.C. When Xerxes, king of Persia, invaded Greece with an immense army, Athens and Sparta were the only great cities which resolved to resist him. The Spartans gave the chief command of the military force to Leonidas, who marched to Thermopylae, in the year 480 B.C. In the battle of Thermopylae, the Spartans, numbering 3000 men, was, amounting to but 7000 men, including the allies, he stationed it so skilfully, that the Persians, on coming to the narrow pass, became aware of the difficulty of carrying it by force. Xerxes, therefore, attempted to bribe Leonidas, offering him the dominion of all Greece. This proposal being rejected with scorn, the despot sent a herald to order the Greeks to surrender their arms: "Let him come and take them," was the reply of the Spartan king. Thrice did the Persians advance against the pass, in great force; thrice were they repelled, with great loss. Meanwhile, the Greeks assembled a select troop of 10,000 Persians, by a secret path, over the mountain, who, after compelling the few opposing Phocians to take to flight, appeared in the rear of Leonidas. He now saw that all was lost, but resolved to show, by a memorable example, what the Greeks could perform in the cause of their country. He is said, also, to have been influenced by an oracle, which declared that Sparta could be saved only by the death of one of its kings. To avoid useless bloodshed, Leonidas dismissed the greater part of his troops, and retained but 300 Spartans, 100 Thespians, and 400 Thebans; the last, in some measure, as pledges of the fidelity of their countrymen, and the Thespians, because they could not be induced to leave their Spartan allies. As soon as Xerxes had learned the successful passage of the troops led by Ephialtes, he threw himself, with his whole army, into the entrance of the pass, but Leonidas, before daybreak, penetrated into the Persian camp. After a long contest, the hero fell, surrounded by fallen enemies. His men defended his body, till they sank beneath countless assailants. This defence of Thermopylae is one of the most remarkable examples of the spirit of the ancients. The Greeks erected a splendid monument to the fallen, and celebrated, annually, warlike games over their sepulches.

LEONINE VERSE; a kind of Latin verse, in vogue in the middle ages, consisting of hexameters and pentameters, of which the final and middle syllables rhyme; so called from Leoninus, a poet of the twelfth century, who made use of it, or, according to some, from pope Leo I. (A. D. 680). Poems of considerable length were written in this barbarous taste. The following distich may serve as an example:

Damen languebat, monachum tamen velebat;

Ast ubi consuluit, monas ut ante fuit.

Leo versified a great part of the Old Testament in this manner. See Rhyme.

LEONTIUM (Leonitia); a curator, the secretary and mistress of Epicurus. According to some, she was his lawful wife; according to others, the mistress of Menechmus, the son of Epicurus, whom she had possessed distinguished talents, and to have composed an encomium on epicurus replete with acuteness and learning, in a beautiful Attic style, in defence of the doctrines of Epicurus against Theophrastus.

LEONTIODON TARAXACUM, or DANDELION; the name of a plant, indigenous to Europe,
but now also common in America. The leaves are all radical and runcinate, or jagged on the margin, and from this circumstance has been derived its French name—de dent de lior—that of which the English appellation is a corruption. The stems are hollow, and bear single, large, yellow flowers, consisting of a congeries of florets, each of which is succeeded by a tubed seed, bearing, on a long pedicle, a tuft of radiated down. By means of this tuft, the seed, when detached, is kept suspended in the air, and transported, by the winds, to a distance. In this respect, however, it does not differ from most of the grasses, the mature seed being full of a milky and bitter juice; notwithstanding which, it is in common use as an early vegetable. The roots, when roasted, are said to form a good substitute for coffee, and are used for that purpose in some parts of Germany.

LEOPARD (*Felis Leopardo*). This beautiful but savage animal is spread as widely over the countries of the continent as the lion, and, throughout this extent, he varies but little, and that merely in magnitude, in the size and form of his markings, and the intensity of their colouring; but he is every where the same in constitution and structure, as well as in character and disposition. His ground colour is a yellowish fawn, which becomes paler on the sides, and is lost in the pure white of the under part of the body. The back, head, neck, limbs, and under surface of the body, are marked with black spots, of different sizes, and placed in an irregular manner, whilst the sides are covered by numerous distinct roses, formed by the congregation of smaller spots, placed in a circular form. In general appearance, this animal is fierce, and is, in fact, equally savage and dastardly with the rest of the cat kind. His usual rate of speed is about three miles an hour, or quadrupeds. He always avoids man, except when closely pursued, when he offers an obstinate resistance. Occasionally, however, the lone traveller has fallen a victim to these ferocious and saurian animals. When they attack a flock of sheep, the slaughter they commit is almost incredible. Kolbe states that two leopards, a male and a female, and three young ones, entered a sheepfold at the cape of Good Hope; the old animals killed nearly a hundred sheep; when they were situated, they fed their young, and, each seizing a whole carcass, attempted to move off, but were caught, wounded, and killed. The Negroes take them in pitfalls, and throw down the sides of the hurdles, on which a piece of meat is placed as a bait. From the extraordinary facility of the limbs of this animal, he is enabled to ascend trees, in which he usually takes refuge when pursued. When taken young, he can be tamed to a certain degree. According to travellers in Africa, the flesh of the leopard is excellent, resembling veal. The skins are valuable, selling, in Europe, at from £5 to £10.

*Hunting-leopard* (*F. jubatus*), or cheetah, as it is termed in India, is about the size of a greyhound, with a narrow chest and long legs, of a thin make in the body and limbs, apparently calculated rather for speed than strength. In fact, this animal forms a sort of connecting link between the feline and canine groups. He is of a pale yellow colour on the upper part, white underneath, and covered all over with very small, black irregular spots. He has a slight mane, extending along the back, and by means of a tufted hair, when he is released, and the hoods removed. The animal steaks gradually towards his prey, till he has attained a proper distance, when, with five or six surprising bounds, he springs upon it. If, however, he is unsuccessful in his attack, he does not attempt to renew it, but returns with a mortified air, to his keeper.

**LEOPOLD I., German emperor, second son of the emperor Ferdinand III. and Mary Anne of Portugal, born 1642, was chosen, in 1655, king of Hungary; in 1658, king of Bohemia; and, in 1659, emperor of Germany. On ascending the throne, he was obliged to promise to afford Spain no assistance against France. The Turks had then defeated the imperial army, and desolated Moravia, because the emperor had sided with the Austrians. Ragotsky, who had ceased to pay an annual tribute to the Ottoman Porte. Montecuccoli, Leopold's general, supported by 5000 select French troops, under Coligny and Feulliale, defeated the Turks, August 1, at St Gothard ; but, instead of improving this victory, the cabinet of Vienna concluded a truce in this year, and Ragotsky remained tributary to the Porte. Hungary was to be totally subdued; but the nobles of this country attempted to throw off the Austrian supremacy, and to choose a king from their own nation. This undertaking cost Zrínl Frangi-pani, Negri, and others, who sided with the Turks, their lives. Tekeli (see Tekeli) now placed himself at the head of the malcontents, and was chosen king of Hungary by the Turks, for an annual tribute of 40,000 ecusin. Tekeli called the Turks into the German empire; with an army of 200,000 men, they captured the island of Schult, and laid siege to Vienna, in 1653. Just as the city was on the point of surrendering, John Sobiesky hastened to its relief. The Turks were attacked in their intrenchments, and suffered a total defeat. A panic terror seized the grand vizier, Kara Mustapha; he fled, and left his camp to the enemy. This defeat followed others, and the imperialists recovered all the lost cities. Leopold caused the Hungarian insurgents, whom he looked upon as the cause of all the dangers which menaced Germany, to be severely punished. Hungary, which had been an elective monarchy, was declared, at the diet of Presburg, in 1687, hereditary in the Austrian male line, and Joseph, the eldest son of the emperor, was crowned king of Hungary, without any previous election. Transylvania submitted, without reserve, to the Austrian house. Leopold waged three wars with France, which he declared wars of the empire. The first, in 1672, in which he was slightly defeated by the Brandenburgers, and, on the contrary, aided, by the French and British, was unsuccessful on the part of the emperor, and was terminated by the peace of Nimeggen, February 5, 1679. The second war had its origin in the league formed at Augsburg, in 1668, between Holland and Spain against France. In this war, the Palatinate was terribly devastated by the French. The German arms were generally successful, and, by the peace of Ryswick, October 30, 1697, France restored all that it had torn from Germany since 1680, besides relinquishing to Germany, Brisach, Friburg, Kahn, Philipzburg, and several smaller fortresses. The duke of Lorraine, a near relation of the king, recovered his territories, from which his family had been expelled, in 1670, by Louis XIV. The third war was undertaken by Leopold, in 1702, in order to procure the succession to the throne of Spain for his own son, Charles. This war, which formed the course of this war, May 5, 1705. His eldest son, Joseph, already crowned Roman king, in 1690, prosecuted the war with great vigour. (Respecting the great commotions in Hungary, in the beginning of the eighteenth century, see Ragotsky.) As the youngest son of Ferdinand III., Leopold had been educated for the church, and his reign was marked
by attachment to the clergy, irresolution, and indulgence towards his minions, to whom he intrusted the whole management of the government. He was passionately fond of music, and he was himself a composer. After he had uttered his last prayer, on his death-bed, he caused his musicians to enter, and departed to the sound of instruments. He was thenceforward called "Two-sou-army". Joseph I., born in 1678, his successor, and Charles, archduke of Austria, born 1685, who became emperor in 1711.

LEOPOLD II., emperor of Germany, born 1747, on the death of his father, the emperor Francis I. (1765), which is celebrated in Italy as the "Japhet's birthday"; during a reign of twenty-five years, almost regenerated that country. He encouraged commerce, agriculture, and manufactures, improved the roads, established penitentiaries, abolished the inquisition, and proclaimed a new criminal code. His financial administration was admirable, and he was personally simple in his manner of living. He preceded his brother Joseph, emperor of Germany, in measures of ecclesiastical reform, but conducted them with more prudence and caution, yet to the great displeasure of the Roman court. When the death of Joseph II. called him to the empty throne, the rebel monarchical states of Austria were in a critical situation. In pursuance of the terms of the convention of Reichenbach with Prussia (July 27, 1790), he concluded an armistice with Turkey, which was followed by the peace of Sistova, in 1791, surrendering all the Austrian conquests to the Porte. After reducing the revolted Netherlands, by force of arms, he allowed them the enjoyment of their former privileges, and restored many of the ecclesiastical establishments, which had been abolished by Joseph. Quiet was restored in Hungary, the police and the administration of justice were reformed, and public education encouraged. In 1791, he had the celebrated interview with the king of Prussia, at Plinitz, on which occasion the two monarchs declared the situation of the king of France to be a subject of general interest to all the sovereigns of Europe. After having restored many institutions and usages, which Joseph I. had abolished in a passionate spirit, Joseph II. died, March 1, 1792. Leopold was one of the best disposed monarchs who ever sat on a throne, and it is not to be denied that he effected much good; but it was his lot to reign at the time of a great struggle between the principles of faith, which is always difficult, and generally a deplorable situation for a prince, who is plunged into a whirlpool, where all power of self-direction is lost. This should be kept in mind, in judging of the convention of Reichenbach.

LEOPOLD I., prince of Dessau, a Prussian general, born in 1675, early showed a strong inclination for the military service, and, in his twelfth year, received from the emperor Leopold the command of a regiment. After having travelled two years, he made his first campaign on the Rhine, in 1696. In the war of the Spanish succession, he proved himself a brave and skilful general. He had an honourable share in the victory at Blenheim, and fought with distinction in Italy. After having commanded the Prussians in the Netherlands, he was made general-field-marshal in 1712, and Frederic William I., the new king, was so much attached to him, that he kept him at court: in his personal campaigns against the Swedes, he was again victorious. Frederic the Great placed no less confidence in him, and in 1742, he received the chief command in Silesia. In 1745, he gained the bloody battle of Kresseldorf, in consequence of which Dresden was taken by the Prussians, and pertinacity was now connected with the field, he paid great attention to agriculture. He died of apoplexy, in 1747. At the time of his death, he was imperial and Prussian general-field-marshal, and governor of Magdeburg. His manners were rough, often coarse; but he was brave, sincere and honest, and very much beloved by the soldiers. A popular march, still often played in Germany, particularly in the North, is called the Dessau Marsch, because it was prince Leopold's favourite.

LEPANTO, or AINABACHTI; formerly a sanc-
different diseases. The leprosy is sometimes called leprosy of the Arabs. The leprosy of the Jews is distinguished by white, cutaneous spots, composed of smaller spots, which appear sometimes in one place and sometimes in another, and are covered with a rough scaly matter. It appears to have been the cause of the Greek writer. The Greek leprosy is characterized by hard, insensible tubercles, which appear upon the skin, and are accompanied by a progressive insensibility, and the loss of the voice. It is endemic in Egypt, Java, and some parts of Norway and Sweden. The use of unhealthy articles of food seems to be one cause. In France it is most common in the army and the navy. It was introduced into Western Europe in the time of the crusades, but has gradually disappeared. The tubercles which characterize leprosy appear in different parts of the skin: they are hard, rough and numerous, and cause the loss of the hair at the places where they appear. They finally terminate in ulcers, which penetrate even to the bone, producing a caries. They also cause the separation of parts of the body, the toes and fingers, for example, dropping off. These symptoms are accompanied with a languor in the motions, a dulness of the senses, a change of the voice, offensive breath, and leishmania. There are three sorts of leprosy—the squamous, or scaly, the crustaceus, in which the skin is covered with crusts, and the tuberculous. The remedy recommended for this disgusting disease is light food, such as vegetables, soups, milk: sulphur baths, sudorific drinks, mercury, are sometimes prescribed. But all remedies are too frequently unavailing.

In the middle ages, leprosy, under all the forms of disease to which this term has been applied, seems to have been very common and general. It should, however, be observed, that almost all cutaneous disorders were considered as leprosy, and were treated as such. From the sixth to the fifteenth century, these loathsome disorders attracted the attention of lawyers and of the benevolent, and we find numerous ordinances relating to lepers, affecting their civil rights, and great numbers of lazaretto-houses in all the countries of Europe. In the historians of those times, therefore, we are to consider the word leprosy as used indiscriminately of all cutaneous diseases; and we may well be astonished and shocked to find that all such patients were treated somewhat after the manner prescribed in Leviticus for the Jew: leprosy. They were, in fact, treated as civilly dead: their property was confiscated, their names erased, and masses said for the benefit of their souls. Their marriage ties were dissolved, but a leper might enter into a new connexion with a person who was also afflicted with the disease. They were allowed to enter the cities at certain seasons, but were required to give notice of their approach by sounding a rattle. The consequences of such a treatment may be easily imagined. The improved condition of the lower classes, in food, clothing, and manner of living in general, and the advancement of medical science, have contributed to eradicate this loathsome and disgusting malady.

Lerma, Francis de Roxas de Sandoval, duke de, first minister of Philip III. of Spain, was marquis of Denia, when he was appointed equerry to the infant don Philip, over whom he acquired such influence, that, when the prince ascended the throne, in 1605, he included him in his favourite ministers. He concluded peace with Britain and Holland, and endeavoured to relieve the embarrased state of the finances, by encouraging agriculture; but his measures were ill-contrived. After the death of his wife, he took the ecclesiastical habit, and obtained a cardinal's hat, which he conceived would protect him in the possession of his power. But he was deceived; for his own son, the duke D'Uzeda, contrivd to supplant him in the king's favour, and succeeded to his post on his being dismissed, in 1618. He was accused, without any probability, of having employed his secretary, Roderic Calderon, to poison the queen. For this imaginary crime, Calderon was executed in the next reign. The duke of Lerma died in retirement, in 1625.

Lésage, Alain Rene; a celebrated French novelist and dramatic writer. He was born May 8, 1698, at Sarzeau, a small town in Brittany, and was the son of a lawyer, who held an office in the royal court of appeal; and was placed under the guardianship of an uncle, who dispated the fortune of his ward. He studied at the college of the Jesuits, at Vannes, after which he appears to have been employed in his native province for five or six years. In 1698, he went to Paris to study philosophy, and also to solicit some employment. His talents and manners procured him admission into the best society, where his wit and taste for elegant literature rendered his company very acceptable. His first literary undertaking was a translation from the Greek of the Letters of Aristotenus (1695). He was not only an able translator, but also an accomplished scholar, and was admitted an advocate in parliament; and the abbe De Lyonne gave him a pension of 600 livres. He studied the Spanish language, and produced a multitude of translations or imitations of Castilian dramas and romances. Two of his comedies were published in 1700, and a third was acted in 1708; but it was not till 1707, when his Crispin, Rival de son Maitre, appeared, that he established his reputation as a theatrical writer. His success as a novelist has most contributed to make him known to foreigners. Le Double Bouteau, the title of which has been oddly translated, Le Devil upon two Sticks, became extremely popular; and Gil Blas de Santillane (1715) has furnished a model for numberless imitations in various countries and languages. Lésage projected a translation of the Orlando of Ariosto, and published, in 1717—21, Roland l'Amaurose, from Bologna, as an introduction to the former, which was never executed. In 1732, he published Les Aventures de Guzman d'Alfarache (two vols., 12mo); and, the following year, Les Aventures de Robert, dit le Chevalier de Beauchesne (two vols., 12mo), containing the real history of a freebooter, from papers furnished by his widow. In 1734, appeared L'Histoire de l'Estevane de Crespin, the subject of an amusing dialogue, entitled Une Journee des Parques (12mo). The last of his novels was Le Bachelier de Salamanque, which La Harpe considers as inferior to all the preceding. He did not cease writing, but, in 1740, produced a collection of satirical letters, under the title De l'Antaise troueuse; and, in 1743, a volume of anecdotes. In the year last mentioned, he retired to Boulogne, where he died Nov. 17, 1747. Lésage produced a great number of comic pieces for the theatre, seven of which he published in his Théâtre Francais (1739, two vols., 12mo), including Crispin, Rival de son Maître, and Turecquest, intended as a satire on the farmers-general. Notwithstanding his talents, and the success of his numerous compositions, the author of Gil Blas was by no means rich, owing to a carelessness and liberality of disposition, which prevented him from accepting the great for employments, or from steadily accumulating the profits of his talents in literature.

LESBOS (now Metela, from the former capital, Mitylene, once the residence of Aristotle, now a Turkish fortress); a Greek island, 187 miles in circumference, containing 260 square miles, 40,000 inhabitants, formed by the most part Turks, in the northern corner of the Egean sea (the Archipelago), on the
Lesbics—Leslie.

447

Asiatic coast. According to tradition, Lesbos, son of Leptias, and grandson of Αρεώς, by the advice of an oracle in Croesus, was sent by Methymna, daughter of Macareus, and received with her the dominion of half of the island, to which he gave the name of Lesbos, it having been previously called Ias, and Pelagia, from the Pelasgians. The island contained forests of beech, cypress, and fir trees. It yielded marble of aconite quality, and the plains abounded in grain. Warm springs were also found; agates and precious stones. The most profitable production was wine, which was preferred, in many countries, to all the other Greek wines. To the present day, the olive and figs of Lesbos are accounted the best in the Archipelago. The island formerly contained nine cities, for the most part in a flourishing condition; among them, Mitylene, Pyrrha, Methymna, Arisha, Eressus, and Antissa: at present, 180 villages are enumerated. Lesbos was originally inhabited by Αροίλινας, who formed a powerful democracy from an insignificant monarchy. They afterwards made great conquests on the continent and former territory of Troy, and even resisted the Athenians themselves. Lesbos was next disturbed by the Samians, and, afterwards, by the Persians, to whom it submitted, and was allowed to carry on trade after the battle of Mycale, it shook off the Persian yoke, and became the ally of Athens. During the Peloponnesian war, it separated, more than once, from Athens, but was always reduced to obedience. A distinguished citizen of Mitylene, exasperated that several rich inhabitants had refused his sons their daughters in marriage, publicly accused the city of an intention to conclude a league with the Lacedaemonians, by which false accusation he induced the Athenians to send a fleet against Lesbos. The nearest cities, Methymna excepted, armed in defence of their capital, but were overpowered, the walls of Mitylene demolished, and a thousand of the richest inhabitants put to death. The territory of Methymna alone was spared. The island itself was divided into 3000 parts, of which 300 were devoted to the service of the gods, and the rest divided among the Athenians, by whom they were rented to the ancient proprietors. The cities of Lesbos, nevertheless, soon rebelled again. The Lesbians were, moreover, notorious for their dissolute manners, and the whole island was regarded as the abode of pleasure and licentiousness. At the same time, the growth of the reputation of the island, the wealth, and of the most distinguished intellectual cultivation. Poetry and music made great progress there. The Lesbian school of music was celebrated, and is said to have had the following origin: When Orpheus was born to pieces by the Bacchantes, his head and lyre were thrown into the river Hebrus, and both were cast, by the waves, on the shore of Methymna. Meanwhile, harmonious sounds were emitted by the mouth of Orpheus, accompanied by the lyre, which was moved by the breath of the wind. The Methymians therefore buried the head, and suspended the lyre in the temple of Apollo. In return, the talent of music was conferred on them by this deity. In reality, Lesbos produced musicians superior to all the other musicians of Greece. Among these, the most distinguished were Arion of Methymna, and Terpander of Aegina. Arion lived the first of the great lyric poetry. Pittacus (one of the seven wise men), the philosophers Theophrastus and Theophaestus (the bosom friend of the great Pompey), and the historians Hellanecus, Mytilius, &c., were also natives of this island. It was often chosen as a place of residence by distinguished foreigners. Epicurus and Ariosto taught there.

Leslie, Sir John, professor of natural philosophy in the university of Edinburgh, and distinguished by his valuable writings and discoveries, was born at the kirk-town of Largo, in Fife, on the 10th of April, 1766. His father, Robert Leslie, by profession a joiner and cabinet-maker, was a much respected and worthy man, and, seems, in point of education and general attainments, to have been superior to the majority of persons in his situation at that period. When very young, he was sent to a woman's school in the village, but remained only a short time there. Afterwards he was placed under a Mr. Thomson at Lundin Mill, with whom he learned to write; and lastly he went to Leven school, and began to learn Latin; but being a weakly boy, and unable to walk so far, he was obliged after about six weeks to give up attendance. He received, while at home, some lessons in mathematics from his elder brother Alexander, and soon began to show a surprising aptitude for that branch of science; but to Latin he took a strong dislike, and could not be induced to resume the study of it till after his first year at college. His extraordinary proficiency in geometrical exercises, joined to a consideration of the unfavourable circumstances under which he had gained it, brought him at an early period under the notice of his seniors. Dr. Robinson, ex-professor of the university of Edinburgh. He was sent to the university of St Andrews in 1779, and at the first distribution of prizes, attracted some attention by his proficiency, which was the means of introducing him to the patronage of the Earl of Kinnoull. Being destined for the church, he went through the regular routine of instructions for six sessions at St Andrews, and then removed to Edinburgh, in company with James, (now Sir James) Ivory. At the university of Edinburgh Mr Leslie studied three years, of which time he was introduced to Dr Adam Smith, and employed by that eminent man in assisting the studies of his nephew, afterwards lord Reston.

In 1788, he went to Virginia, as tutor to two young college friends; and after spending more than a year in that country, went to London. In January, 1790, he proceeded to London, carrying with him some recommendatory letters from Dr Smith. His first intention was to deliver lectures on natural philosophy; but being disappointed in his views, he found it expedient to commence translating into English the essays and other writing of his famous teacher, for the purpose of obtaining subsistence. About three months after his arrival in London, he made an agreement with Mr Murray, the bookseller, to translate Buffon's Natural History of Birds, which was published in 1793, in nine octavo volumes. The sum he received for it laid the foundation of that pecuniary independence which, unlike many other men of genius, his prudent habits fortunately enabled him early to attain. During the progress of the translation, he fulfilled an engagement with the Messrs Wedgwood of Etruria in Staffordshire, to superintend their studies; he left them in 1792. In 1794, Mr Leslie spent a short time in Holland; and, in 1796, he made the tour of Germany and Switzerland with Mr Thomas Wedgwood. About this period, he stood candidate for a chair at St Andrews, and subsequently at Aberdeen, but without success. He invented that beautiful instrument the Differential Thermometer about the year 1800. The results of his inquiries into the nature and laws of heat, in which he was so much aided by this exquisite instrument, were published in a work in two volumes, entitled "The Nature and Propagation of Heat." The work was honoured, in the following year, by the council of
the Royal Society, with the Rumford Medals. In consequence of the translation of professor Playfair from the chair of mathematics to that of natural philosophy in the university of Edinburgh, the former became vacant, and Mr Leslie appeared as a candidate. A party in the Scottish church, inspired by a jealousy of his liberal principles in politics, accompanied by a desire of advancing one of their own number, opposed his election, on the ground of what they deemed an infidel note in his essay on heat; but after a keen contest, Mr Leslie was successful.

Through the assistance of one of his ingenious contemporaries—his biographer—he arrived in 1810 at the discovery of that singularly beautiful process of artificial conglomeration, which enabled him to convert water and mercury into ice.

In 1800, Mr Leslie published his Elements of Geometry, which immediately became a class-book, and has since gone through four editions. He also published, in 1813, an "Account of Experiments and Instruments depending on the relation of Air to Heat and Moisture." In 1817, he produced his "Philosophy of Arithmetic, exhibiting a Progres-

tive view of the Theory and Progress of Calcula-
tion." In small octavo, and, in 1821, his "Geome-

trical Analysis, and Geometry of Curve Lines, being

voluntary second of a Course of Mathematics, and
designed as an Introduction to the study of Natural Philosophy." In 1822, he published "Elements of

Natural Philosophy," for the use of his class—re-

printed in 1829—and of which only one volume
appeared. "Rudiments of Geometry," a small octavo, published 1828, and designed for popular
use, was his last separate work. Besides these separate works, he wrote many admirable articles in the Edinburgh Review, three profound treatises in Nicholson's Philosophical Journal, a few in the Transactions of the Royal Society of Edinburgh, and several very valuable articles on different branches of physics in the Supplement to the Encyclopaedia Britannica. In 1819, on the death of professor Playfair, whose promotion had formerly made room for him in the chair of mathematics, he was elevated to the professorship of natural philo-

sophy, by which his powers were of course brought into a far wider field of display and of usefulness, than they had been for the preceding fourteen years. Among the preliminary treatises of the seventh edition of the Encyclopaedia Britannica, which began to be published in 1829, and in 1831, his "Dis-

course on the History of Mathematical and Physical Science, during the eighteenth century," which may be described as one of the most agreeable and mas-
terly of all his compositions.

The income enjoyed by Mr Leslie was for many years so much above his necessities, that he was able, by careful management, to realise a fortune not far short of ten thousand pounds. Part of this he expended, in his latter years, upon the purchase and decoration of a mansion called Coates, near his native village, where he spent all the intervals allowed by his college duties. Early in the year 1832, at the recommendation of the lord chancellor (Brougham), he was invested with a knighthood of the Guelphic order, at the same time that Messrs Herschel, C. Bell, Ivory, Brewer, South, and Hargreaves, were admitted a similar honour. Sir John Leslie was not desirous of enjoying the well-merited honour. In the end of October, while superintending some of the improvements about his much-loved place, he incautiously ex-
posed himself to wet, the consequence of which was a serious cold. He neglected his ailment, and was swiftly seized with erysipelas in one of his legs.

On Wednesday, October 31st, he again exposed himself in his grounds, and from that day, the malady advanced very rapidly. On the evening of Saturday, November 3, 1832, he breathed his last.
changed his intention. The little court of Brunswick was then almost the only one in Germany which fostered German literature: the others confined their attention to the French. In 1769, he left Hamburg. In the library of Wolffenbüttel, he discovered the MSS. of the exsustabulator Berengarius, in which his researches led him to the transabilitaator Lauruscus. He also published some theological treatises, under the title of Wolffenbüttel Fragments of an unknown Author, which involved him in a theological war. In 1775, he went to Vienna, having received an invitation to that city, accompanied Prince Leopold of Brunswick to Italy, which he had desirously desired; he left England for Germany in April, but returned the same year; and the theological disputes in which he was involved, now became so acrimonious, that it was proposed, at Wolffenbüttel, to subject his writings to a strict censorship. His Nathan the Wise, from its supposed irreligious tendency, added to the fierceness of the controversy. As a poem, it is, in our opinion, much the finest that he has written. The persecutions which he encountered destroyed his peace, and he died February 15, 1781. His complete works were published at Berlin (1771, et seq.); another edition (Berlin, 1777, 4 vols.) to which must be added his Correspondence, in 2 vols. (Berlin, 1798); a new edition appeared at Berlin (1824), in 34 vols.; a pocket edition has been published at the same place since 1823. Lessing's Thoughts and Opinions, collected and explained from his Writings, by F. Schlegel, appeared at Leipzig (1804, 3 vols.). His brother, K. G. Lessing, published an account of his life (Berlin, 1793, 2 vols.).

LESTOCQ, JOHN HERMANN; a favourite of the Russian empress Elizabeth, twice elevated by fortune to be twice precipitated from his high honours. Lestocq was born in Hanover, in 1692, of French parents, who had fled from the religious persecutions of Louis XIV. He studied surgery under his father, went to Russia, then a good field for men of talents, and entered the service of Peter the Great, as a surgeon, and enjoyed his entire confidence. A sudden change in the emperor's dispositions towards him took place, and Lestocq, without knowing the cause, was banished from the court. He obtained his release after the death of Peter, and gave him the place of surgeon at the court of his daughter Elizabeth. Entirely devoted to the interests of his mistress, he offered her his assistance in gaining possession of the crown, after the death of Peter II., but his daring plans were then rejected. Eleven years later (1740), when the youth of Ivan, and the regency of his mother Anna, again presented an opportunity, his advice was adopted. The active and politic Lestocq guided the daring enterprise, never, even in moments of the greatest danger, losing his presence of mind, and, November 24, 1741, Elizabeth ascended the throne. The new empress made him her privy counsellor, and chief physician, and director-general of medical institutions. The king of Poland created him count, and sent him his miniature to be worn in his button-hole, like an order. In compliance with the wishes of the empress, Lestocq was obliged to interfere in affairs foreign to his profession, and his frankness of character, increased the number of his enemies, who succeeded in exciting the suspicions of the empress. Lestocq was arrested in 1748, and confined in the fortress of St Petersburg for trial. At first, he bore this change of circumstances with cheerful resignation, but when he was to be subjected to the rack, he confessed himself guilty. He was deprived of all his honours and estates, and banished to Uigisch, where he remained three years, and then to Ustjug-Veliki, where he was in prison nine years. His third wife, Maria Aurora, shared the fate of her husband with an exemplary firmness. When Peter III. ascended the throne, Lestocq was restored to his honours. Catharine II. continued his pension without his offices. He died in 1767.

LESTANGE, SIR ROGER, a political partisan and controversialist, was the youngest son of Sir Hammond Lestange, Earl of Regent, of Ireland, and of Dublin, where he was born in 1616. His father, being a zealous royalist, brought up his son in the same principles. At the age of twenty-two, he attended Charles I., in his expedition into Scotland, and laid a plan for surprising Lynn, but being detected with the king's consent, was arrested in his house. He was tried by court martial, as a spy, and condemned. He was, however, reprieved from time to time, until he had lain in prison four years, when, by the connivance of his gaoler, he made his escape to the continent. On the dissolution of the long parliament, he returned home. On the restoration, he was made licenser of the press—a profitable post. In 1663, he set up the Public Intelligencer, which he discontinued on the design, then concerted, of publishing a London Gazette, the first number of which appeared February 4, 1665. In 1679, he set up a paper, called the Observer, in defence of the measures of the court. In 1687, he was obliged to suppress it, and was fined £100, as it could not agree with James, who had knighted him, in the doctrine of toleration, although he had written in favour of the dispensing power. His death took place in 1704, at the age of eighty-eight, his faculties having become impaired some years before. He was the author of a great number of political tracts, full of coarse and virulent abuse, and in a style so rude and vulgar, that he was regarded by Granger as one of the great corrupters of the English language. Lestrange translated Josephus (his best work), Cicero's Offices, Seneca's Morals, Quevedo's Visions, &c.

LESUEUR, ESTACHS, one of the most distinguished French painters, born at Paris, in 1617, was instructed in drawing by his father, a statuary, and was afterwards placed at the school of Simon Vouet, the true founder of the French school of painting. He soon distinguished himself by several pieces in the true Italian style; but his reputation was not completed till he acquired the highest honours for the Carthusian monastery in Paris. In twenty-two pictures, he delineated (1649—1651), the principal scenes in the life of St Bruno, the founder of the order. Lithographic sketches of this work were published at Paris, in 1822 and 23. In 1650, he painted, for the corporation of goldsmiths, the preaching of the apostle Paul at Ephesus. This painting was presented to the church of Notre-Dame, and was exhibited annually on the first of May. His next works were a Magdalen and a St Lawrence, and, in 1651, two scenes from the life of St Martin, &c. Among the most distinguished of his later works are some mythological scenes in the hotel Lambert relating to Cupid and the Muses with Apollo. After completing this work, he died, in the thirty-eighth year of his age. Incessant toil, and the jealousy of his companions in art, brought him to his grave. His contemporaries called him the French Raphael, and it is not to be denied that he had great merit; his conceptions are noble and elevated; his composition is simple, careful, and well arranged; the drawing is correct, in good taste, and proves his diligent study of the antique and of the great Italian masters, particularly of Raphael; his drapery is artfully disposed with great elegance, his figures are full of animation and character; the positions are various, and free from mannerism. He displays great boldness and freedom of pencil; his colouring is delicate and simple, but deficient in truth and
vigor, which sometimes renders his pictures too uniform, and occasionally they have too much ornament. That Lesueur should have reached so great excellence, is the more remarkable, as he had never been out of France, hardly even out of Paris, and had consequently formed himself after the few models of painting which were presented to the Italian, and could not be found there. He had studied Raphael chiefly through the engravings of Mark Antony. Lesueur, from his education, may be considered as the true representative of the French school; for Pousin, who was a superior artist, belongs more to the Italians than to the French. His real ingenuity and laborious compositions were not generally esteemed, although the jealousy of his competitor Lebrun, who tyrannized over the taste and opinions of the day, prevented him from enjoying the reputation which was justly due him in his lifetime.

Lesueur, Jean Baptiste, a musical composer, a descendant of the great painter Lesueur, born in 1763, was placed in the musical school of the cathedral of Amiens, and, after completing his musical studies, was made director of music in the cathedrals at Soissons and Dijon, and, in 1784, in the church of the Innocents, at Paris. In 1786, in opposition to several candidates, he was elected to the places of master in the cathedral of Paris, and his elevated and impressive compositions, no less than the excellent manner in which he led the orchestra, made him a universal favourite. His own inclinations, and the advice of Sacchini, induced him to compose for the theatre. Telemachus was his first opera, which was brought forward with great success at the theatre Feydeau. In 1788, Lesueur resigned his place at Notre-Dame, that he might devote his time to theatrical music, and lived, till 1792, with his friend and patron Bochart de Champeaugny, in whose house he applied himself so laboriously, that his host, anxious for his health, would not allow him lights for more than half the night. Lesueur was at that time engaged in writing his opera La Caverne; one night, his light went out, and, unable to endure any interruption, he lay on the floor before the fire, and continued to write by the feeble light afforded by a few pieces of wood, until he was found in that situation the next morning, by Mr. Duval, and various other musicians. He finally succeeded, in 1793, in introducing this opera on the stage, which met with the most brilliant applause. On Chénier's proposition, he was made professor of music in the national institute, and wrote several pieces of music for festivals, during the time of the revolution; was afterwards displaced by intrigues, but again restored by Bonaparte. In 1795, he composed Paul et Virginie, the Death of Adam, and the Bards. This last and finest work, in which the composer appears to have called up the very spirit of Ossian, delighted Napoleon to such a degree, that he made him chapel-master at the Tuileries, conferred on him the order of the Legion of Honour, and presented him a gold snuff-box, with the inscription—"The emperor of the French to the author of the Bards." Lesueur wrote, in connexion with Cherubini, Méhul, Langlé, and Rigel, the work published by Cetel (1810), Sur les Principes élémentaires de Musique et Essai sur l'opéra de la Mort d'Adam, et sur plusieurs Points d'Utilité relatifs aux Arts et aux Lettres (1801).

Lethargy (lethargus, from ληθή, forgetfulness); a heavy and constant sleep, with scarcely any intervals of waking. When awakened, the dreams answered is, but, ignorant or forgetful of what he said, immediately sinks into the same state of sleep. It is considered as an imperfect apoplexy, and is mostly symptomatic.

LeTIE; a river of the lower regions, celebrated in ancient mythology, whose water had the power of making the souls of the departed, who drank of it, forget all their sufferings on earth. These spirits, in particular, drank of it, who were destined to return to the upper world in new bodies, in order to forget the pleasures enjoyed in Elysium.

Letter. See Types, and Writing.

Letter-Writing. Among the letters celebrated in French literature are those of Madame de Sévigné, Ninon de Lenclos, Babet, Racine, Voltaire, and the collection of Richelet; in English literature, the letters of James Howel, Sir William Temple, Addison, Pope, Swift, Bolingbroke, lady Montague, Chesterfield, Gray, and Cowper, are celebrated; in Italian, those of Manuzio, Ludovico Dolce, cardinal Bembo, and Vespasiano Gonzaga, are collected by Lud. Dolce, and Annibal Caro, those of Pietro Aretino, Algarotti, and Gasparo Gozzii; in German literature, the letters of Lessing, Winckelmans, Klopstock, Wieland, Gellert, Weisse, Jacobi, Garve, Abbt, Sturz, Glein, Burger, Lichtenberg, J. von Muller, Mathieson, &c. Bolingbroke made use of the epistolary form for treating philosophical subjects (for instance, the study of history), and Richardson applied it to novels. The Germans also have didactic letters by Mendelssohn, Jacobi, Herder, J. von Muller, and J. G. Muller. In the French as well as the Italian literature, letters form a very considerable branch, and large collections of them exist, among which are the following: Lettres historiques (14 vols., Hague, 1692–1708, 12mo); Lettres historiques et galantes par Madame de Noyer (6 vols., Utrecht, 1713, 12mo); Lettres édifiantes et curieuses, écrrites des Missions étrangères (34 parts in 32 vols., Paris, 1717–1776, 12mo; new edition, 36 vols., Paris, 1802–1805). Lettres curieuses, 1810–1812, 12mo, and an atlas; Nouvelles Lettres édifs. (6 vols., Paris, 1819); Lettres curieuses et banales (12 vols., Hague, 1729–1740); Lettres Juives (6 vols., Amsterdam, 1736; new edition, 1741); Lettres cabalistiques (6 vols., Hague, 1781); Lettres Chinoises (2 vols., Paris, 1796). Among the Italian collections, are Lettere vulgari di diversi nobilitissimi Hominini e eccellentissimi Ingegni (3 vols., Venice, 1654, also 1657); Lettere d'Ammini illustri, che furono nel Principio del Sec. XVII. (Venice, 1744); Lettere Sanesi sopra le Belle Arti (3 vols., with engravings, Venice and Rome, 1792–1796, 4to).

Lettuca (lactuca sativa); a smooth, herbaeous, annual plant, containing a milky juice, which has been cultivated from remote antiquity, and is in general use as a salad. The original locality is unknown. The stem grows to the height of about two feet, and at maturity the leaves are divided into the inferior leaves are sessile, and undulate on the margin. The young plant only is eaten, as it is narcotic and poisonous when in flower. Twenty species of lactuca are known, from various parts of the globe.

Leucadia (at present, Santa Maria, 112 square miles, 17,500 inhabitants) an island belonging to the republic of the Ionian Islands, on the western coast of Greece. The southern extremity (on which stood a temple of Apollo); at present cape Duccato, in the vicinity of the capital, Leucas (at present, St Maura), was called by the Greeks the Leucadian Rock. It
was famous for the festival annually celebrated there, and the (so called) Leucretian Leap. At every festival, on a certain day, every person that could run into the sacred ground, a sin-offering, loaded, as it were, with all the sins of the people. He wore a dress of feathers, and even living birds were fastened to him, so that he generally fell gently, without much injury, into the deep, whence he was taken out, but was obliged to leave the country for ever. No less remarkable was the leap made when a certain young girl, in order to make a love-offering, broke loose, and, coming down the cliff, produced a rotary motion by means of which, similar particles were associated with similar particles, while the dissimilar were repelled. From the necessary inequality of the velocity of the bodies, the smaller were driven to the outside, and formed, as it were, an envelop around a kernel. The grosser grains of the envelop sank downwards, and, by their mutual collisions, attenuated the envelop. The bodies that sank downwards compose the earth; the envelop itself was finally inflamed, and gave rise to the stars. To fire he ascribed round atoms. The atoms composing the other elements—water, air and earth—were distinguished merely by magnitude. Fire, as the most subtile, the lightest and most fluid element, he made the soul of the world, the principle of life, sensation and thought. These last modifications, however, according to Leucippus, were not always founded in the nature of atoms, but merely in the mode of their aggregation. The intellectual substance (consisting of particles of fire) is diffused through the whole body. Men and animals inhale it with the atmosphere, and hence life comes with the end of respiration. There is nothing said in his system respecting the soul of the universe, a providence, or Deity.

LEUCIPPOΣ. A AMPHIGENE, is a mineral which occurs in little masses, having the appearance of crystals rounded by attrition; also in crystals whose form is that of the trapezohedron, apparently with cleavages parallel to the rhombic dodecahedron and cube, the latter of which, being the most simple of all, has been adopted as the form of the primary crystal. Colour: grayish white, translucent; lustre vitreous; fracture conchoidal; specific gravity 2.37. Before the blow-pipe alone, it is insufusible; with borax, it fuses into a transparent glass. It consists of SiO₂·SiO₂, 24.62% of alumina, and 21.36% of potash. It is found only in volcanic and trap rocks. The lavas of Vesuvius and Etna were, as it is especially abundant between Rome and Frenciati.

LEUCO; two syllables found in many scientific terms or geographical names, derived from the Greek λευκός, white.

LEUCOEIA. See Ino.

LEUCTRA; a village in Boetia (at present, Livadia), famous for the great battle in the year 371 B. C., which the Theban Epaminondas won over the Spartan King Cleombrotus, thus putting an end to the great influence which Sparta had exerted over several centuries over all Greece.

LEUSDEN, Joan; a celebrated biblical critic and theologian, born in 1624, at Utrecht, where he afterwards obtained the professorship of Hebrew, with the reputation of being one of the most erudite scholars and able divines of the age. He published a new edition of the books of the Old Testament, in the original Hebrew (in 5 vols., 1650), and of those of the New, in Greek and Latin (one thick 12mo); a Hebrew and Latin Lexicon; an edition of Pooie's Synopsis (5 vols., folio); Vorsio Septuaginta Interpretum; Clavis Graecor Nori Testamenti; Onomastic Sunon.; Philologia Hebraeae et Philologia Hebraeicon; Clavis Hebraieae et Philologiae Tan. Teat.; a Vocabularius, and Commentaries on the Books of the Prophets Joel, Hosea, and Jonah. Leusden died in his native city, about the close of the seventeenth century.

LEUTHEN; a village in Lower Saxony, west of Brunswick, famous on account of a battle gained near by Frederic the Great, December 5, 1757, over prince Charles of Lorraine. See Seven Years' War.
LEUWENHOEK, Anthony; a celebrated natural philosopher, born at Delft, in Holland, in 1632. His skill in grinding optical glasses led the way to the making of microscopical observations, which procured him no small degree of fame. He began to publish an account of his discoveries in the English Philosophical Transactions, in 1674, and they are continued from No. 94 to No. 380 of that collection. In 1680, he was chosen a fellow of the royal society; and, in 1685, he entertained the earl Peter the Great, then at Delft, with an exhibition of his experiments. He appears to have passed the whole of his life at the microscope, devoting his time to microscopical researches, chiefly relating to anatomy. He died in 1723. A Latin translation of his works in the Dutch language was published between 1695 and 1710 (4 vols., 4to), under the title of *Arcana naturae detecta*, and reprinted at Leyden, in 1722. His industry was great, but preconceived opinions sometimes led him to erroneous conclusions.

LEVALLANT, Francis, a celebrated traveller, born at Paramaribo, in the Dutch colony of Guiana (Surinam), from childhood displayed a passion for the study of natural history, particularly of ornithology. In extending his knowledge he travelled in the most distant lands was increased in Europe. In Amsterdam, he found a patron in the person of Temminck, the great ornithologist, who warmly encouraged his plans, in the hope of obtaining through him, great accessions to his excellent collections in natural history, particularly ornithology—a hope which was not disappointed. Levallant first proceeded to the cape of Good Hope, whence he advanced into the interior of Africa. The specimens which he collected on this occasion were entirely lost. The ship in which they were embarked for Holland was attacked by the British, and burned in the course of the action. Supported by Temminck, Levallant renewed his labours, and, with a tolerably large caravan, directed his course to the countries on the north of the colony. In surmountable obstacles prevented him from pursuing his adventurous researches so far into the interior as he wished. The fruits of his labours were, however, important, and the levée was not less important than the second levée. Levallant died at Paris, November, 1824, aged seventy. It has been objected to his accounts, that they are not always accurate, and that they are often improbable, though this cannot be satisfactorily shown. His readers are interested by his lively descriptions, and by an attractive philosophical originality. His accounts of his first and second levées were published in French, in 1789 and 1796. He also left some works on natural history, and some separate treatises. The most important of these works are *Histoire naturelle des Oiseaux d’Afrique* (1799—1807, in fifty numbers, folio), and *Histoire naturelle des Perrons, du Caire* (1812—1815, 2 vols., folio).

LEVANT (Italian, *il Levante*; French, le Levant; the east). This term is applied, in a general sense, to the countries on the eastern coast of the Mediterranean sea, and, in a more contracted sense, to the Asiatic coasts of the Archipelago, from Constantinople to Alexandria, in Egypt. The most famous of the commercial cities of the Levant, taken in this narrow sense (among the French, *échelles du Levant*), besides Constantinople and Alexandria, are Smyrna, Scamanderoon (Alexandretta), and Aleppo. Smyrna, with 100,000 inhabitants is the principal commercial port of Asia Minor, and the capital of the Asiatic trade. This Levant Proper is under the Turkish dominion, has a very warm climate, many mountains, and very fertile plains, and is inhabited by Turks, Armenians and Greeks. The staples are grain, rice, tobacco, olives, cotton, silk, Angora goat’s hair, safflower, and some minerals. The Levant coffee, as it is called, does not grow in the Levant, but in Arabia, and has this name because it is exported from the ports of the Levant. See Turner’s *Travels in the Levant*, London, 1820, and count Forbès’s *Travels in the Levant*, Paris, 1820.

LEVEE (from the French word *levier*, to rise, and the time of rising) is a word used in high life, or court language, for the ceremonial visits which great personages receive in the morning, as it were at their rising. The levee is distinguished from the drawing-room levee. This last is attended by a general, gentlemen only appear, and at the levee of a lady, only ladies, while, at the drawing-room, ladies and gentlemen both are admitted. At the levees and drawing-rooms of the sovereigns, persons of distinction, or young members of noble families, are introduced. On the first presentation of daughters of dukes, marquises and earls, it is customary for the queen of Britain to kiss them on the cheek. The word levee is also used in the United States of America, for the reception of company by the president.

LEVEE (French): an embarkation on the margin of a river, to confine it within its natural channel. The lower part of Louisiana, which has been formed by encroachments upon the sea, is subject to be inundated by the Mississippi and its various branches, for a distance of more than 300 miles. In order to protect the rich lands on these rivers, mounds are thrown up, of clay, cypress logs, and green turf, sometimes to the height of fifteen feet, with a breadth of thirty feet at the base. These, in the language of that part of the country, are called levées. They extend for hundreds of miles; and, when the rivers are full, cultivated fields, covered with rich crops, and studded with villages are seen lying far below the river courses. The giving way of these levées, sometimes occasioned by a sudden and violent pressure of the water, and sometimes by accidental perforations, is called a creuseau (French, a disruption).

LEVEE-EN-MASSE (universal rising): a military expression for the rising of a whole people, including all classes of men, who, not otherwise engaged, in the regular service. When it is used by patriotic feelings, it is the most formidable obstacle which an enemy can encounter; and it is un conquerable, if favoured by the nature of the ground, because almost every advantage is on the side of the people. They fight on their own soil; they know the ground; they find support and assistance in every house, for every woman and child; they fight for their own hearths; they enclose the enemy on all sides, and can destroy whatever may be useful to him, cut off his communications, pursue, annoy, disturb, assail, harass him incessantly, so that he can effect nothing except getting possession of the strong places. It is called Landsturm (landstorm), in German, in distinction from the Landwehr (militia). This distinction was first made in 1796, when the peasants of Bavaria and Franconia, fell upon the rear of the flying French, under Jourdan, with much success. The Landsturm was yet more effective in 1799, and, in 1813, the governments of all Germany called it forth in every part of the country. It consisted of every male person capable of bearing arms of any sort, whom age or other reasons exempted from the militia service. Orders were issued to turn every thing into weapons, to defend the country by every means, and particularly to increase the government army in all possible ways, by destroying provisions and wells, attacking smugglers, intercepting couriers, and escorting prisoners. The Landsturm was useful at the siege of several fortresses. Its organization was founded on municipal divisions.
Napoleon ordered the levée en-masse, when the allies entered France, and it threatened to become dangerous to them; but the capture of Paris put an end to the war. We all know how effeminate a levée-en-masse was in Spain, where even women took part in it, and in Tyrol, under Hofer. We lately witnessed a levée-en-masse, in Poland. The French national guard, with its different classes, might be considered a levée-en-masse organized on a gigantic plan. The chief difference between a levée-en-masse and a militia is, that the latter is composed not included in the latter; and they do not march far from home; and that their service is more irregular, and even owes its strength, in some measure, to this irregularity.

**LEVEL**, a mathematical instrument used for drawing a line parallel to the horizon, and continuing it at pleasure, and, by this means, for finding the true level, or the difference of ascent or descent between several places, for conveying water, draining fens, placing the surfaces of floors, &c., level, and for various other purposes in architecture, agriculture, hydrostatics, &c. There are in a variety of instruments for this purpose, differently constructed, constituted of different metals, according to the particular purposes to which they are applied; as the carpenter's level, mason's level, balance level, mercurial levels, surveying and spiral levels; but, however, the most exact variety may be referred to the following three classes: 1. Those in which the vertical line is determined by a suspended plumb-line or a balance-weight, and the horizontal position is shown by a line perpendicular to it; 2. those which determine a level line by the surface of a fluid; 3. spirit levels, which point out the horizontal direction by a bubble in air floating in a fluid contained in a glass tube. 1. Those of the first kind, depending upon the plumb-line, are very common, but not very accurate. The simplest form is that of two rulers united in the form of the letter L; they must be exactly perpendicular to each other; then, if a plumb-line is suspended from the top of the vertical ruler, and the edge thereof be made to coincide with the plumb-line, the other ruler must be horizontal. This, when applied to the top of a wall, a beam, or a floor, will show if they are horizontal. This is the kind of level used by artificers; sometimes it is the same as that in former, a person is suspended from the plumb-line being suspended from the vertex, and the two legs set on the surface to be levelled. The line hangs opposite to a mark made on the middle of the cross ruler, when the feet are on the same level. Sometimes the horizontal piece crosses the perpendicular at its foot, and the plumb, suspended from the top of the perpendicular, is received in an opening at their junction. 2. The water level shows the horizontal line by means of a surface of water or other fluid, founded on this principle, that water always places itself horizontally. The most simple kind, made of a long wooden trough, which is filled with water, shows on its surface the line of level. This is the ancient chorobates. The water level is also made with two cups fitted to the two ends of a straight pipe, an inch in diameter, and four feet long. The water communicates from one cup to the other; and this pipe being movable on its stand by a ball and socket, shows on its surface the line of level. This instrument, instead of cups, may also be made with two short cylinders of glass, three or four inches, long, fastened to each extremity of the pipe with wax or mastich. The pipe, filled with coloured water, shows the true horizontal line by the surface of water, their two surfaces mark the line of level. This instrument, instead of cups, may also be made with two short cylinders of glass, three or four inches, long, fastened to each extremity of the pipe with wax or mastich. The pipe, filled with coloured water, shows the true horizontal line by the surface of water, their two surfaces mark the line of level. This instrument, instead of cups, may also be made with two short cylinders of glass, three or four inches, long, fastened to each extremity of the pipe with wax or mastich. The pipe, filled with coloured water, shows the true horizontal line by the surface of water, their two surfaces mark the line of level. This instrument, instead of cups, may also be made with two short cylinders of glass, three or four inches, long, fastened to each extremity of the pipe with wax or mastich. The pipe, filled with coloured water, shows the true horizontal line by the surface of water, their two surfaces mark the line of level. This instrument, instead of cups, may also be made with two short cylinders of glass, three or four inches, long, fastened to each extremity of the pipe with wax or mastich. The pipe, filled with coloured water, shows the true horizontal line by the surface of water, their two surfaces mark the line of level. This instrument, instead of cups, may also be made with two short cylinders of glass, three or four inches, long, fastened to each extremity of the pipe with wax or mastich. The pipe, filled with coloured water, shows the true horizontal line by the surface of water, their two surfaces mark the line of level. This instrument, instead of cups, may also be made with two short cylinders of glass, three or four inches, long, fastened to each extremity of the pipe with wax or mastich. The pipe, filled with coloured water, shows the true horizontal line by the surface of water, their two surfaces mark the line of level. This instrument, instead of cups, may also be made with two short cylinders of glass, three or four inches, long, fastened to each extremity of the pipe with wax or mastich. The pipe, filled with coloured water, shows the true horizontal line by the surface of water, their two surfaces mark the line of level. This instrument, instead of cups, may also be made with two short cylinders of glass, three or four inches, long, fastened to each extremity of the pipe with wax or mastich. The pipe, filled with coloured water, shows the true horizontal line by the surface of water, their two surfaces mark the line of level.
city while they were suffering the consequences of circumcision, to which they had submitted, and murdered all the males. Jacob reproaches them with this act of cruelty, on his death-bed, and threatens them with the dispersion of their descendants. Moses and Aaron were sent apart, by Moses for the service of religion, thus forming a hereditary caste of priests, or religious ministers, who received territories scattered about in the lands of the other tribes. The third book of Moses is called Leviticus, as it relates principally to the organization of the ministry. The Mosaic law is sometimes also called the Levitical law. See Moses.

LEVITAN (Hebrew) is compounded of two words, meaning a great fish, and hastened; hence it probably means a huge fish covered with close scales. The Septhantin renders it ἐλευθαρίας a dragon), and aπεστάλθη (a whale). From the description given of it in the book of Job (xli), it is usually considered to mean the crocodile, though some have supposed it to be the whale. See Harris's Natural History of the Bible.

LEVITICUS. See Levi.

LEWIS. Harris and Lewis is the name bestowed on a river, and most northerly of the Hebrides, the southern part of which is called Harris, and the northern Lewis. Lewis extends south-west and north-east eighty-two miles, and it is from ten to twenty-three miles in breadth, containing an area of 808 square miles, or 451,000 Scots acres. It lies between 58° 40' and 7° 10' W. long., and 57° 54' and 58° 28' N. lat. Lewis belongs to the county of Ross; Harris to Inverness-shire. Lewis is divided into four parishes: Barvas, Latsch, Stornaway, and Uig. Besides some hamlets, there is only one town, viz: Stornaway, which lies on the east side of the island, at the mouth of a bay. The surface of the country is less rugged than that of Harris; the east side of the district is principally pasture land, and the west side is arable. On the coasts are numerous bays and inlets, where great quantities of shellfish are found; and the fisheries of herring and cod are prosecuted with success. The rivers abound with trout, and in the season with salmon. The land animals are horses, black-cattle, deer, sheep, goats, and hogs, all which are of small size. Population of Lewis in 1841, 21,465, inclusive of 4,429, being the entire population of what is denominated Harris.

LEWIS, MATTHEW GREGORY, an English writer, whose life is the depot of the drama, and of romance, obtained at one period, a very considerable share of popularity, though but too frequently disfigured by bad taste, and degraded by licentiousness, was the son of a gentleman of good property, who was under-secretary at war. The subject of this notice was born in the metropolis in 1773, and educated at Westminster; on quitting which he travelled for improvement, especially into Germany, the literature of which country produced a strong impression upon him, and gave that peculiar turn to his compositions, which placed him in the foremost rank among the delineators of the marvelous and terrific, and has since loaded the shelves of circulating libraries with hosts of imitators, most of whom exhibit all the extravagances without the genius of their model. Of his writings, the first and most celebrated was the Monk, a romance, in three vols., 1800, which, although much desired for its licentiousness, ran a good number of editions; Feudal Tyrants, ditto, 4 vols.; Romantic Tales, 4 vols.; Tales of Wonder, in verse, 1 vol., 8vo; Tales of Terror, 1 vol., 8vo; the Castle Spectre, a romantic drama; Adelorn the Outlaw, ditto Venoni, a tragedy; a volume of miscellaneous poetry, and the Bravo of Venice (a translation from the German), 1 vol., 8vo. Mr Lewis had a seat in parliament, but seldom took part in the business of the house. His death took place in 1818, at sea, while on his voyage home from a visit to his West Indian possessions.

LEWIS, MERIWETHER, a celebrated explorer, was born near the town of Charlottesville, in Virginia, August 18, 1774. His father, a man of independent fortune, died when he was yet a child. He very early gave proofs of that bold and enterprising disposition for which he was subsequently so distinguished. At the age of eighteen, he relinquished his academic studies, and engaged as a farmer, with which he continued to occupy himself until he was twenty. General Washington having called out a body of militia, in consequence of the disturbances in the western parts of the country, procured by discontent at the excise taxes, young Lewis enrolled himself in it as a volunteer, and from that situation was removed to the regular service. In 1803, president Jefferson proposed to congress to send some competent person on an exploring expedition to the western part of the continent of North America, who might ascend the Missouri, cross the Rocky mountains, and descend the Columbia, and explore the Pacific. Congress having approved the proposition, and voted a sum of money for carrying it into execution, captain Lewis, who had then been nearly two years with Mr Jefferson as his private secretary, was chosen for that purpose. The following testimony of Mr Jefferson gives an idea of his fitness for the task: "Of course undaunted; possessing a firmness and perseverance of purpose which nothing but impossibilities could divert from its direction; careful as a father of those committed to his charge, yet steady in the maintenance of order and discipline; intimate with the Indian character, customs, and principles; habituated to the hunting life guarded, by exact observation of the vegetables and animals of his own country, against losing time in the description of objects already possessed; honest, disinterested, liberal, of sound understanding, and a fidelity to truth so scrupulous, that whatever he should report would be as certain as if seen by ourselves: with all these qualifications, as if selected and implanted by nature, in one body, for this express purpose, I could have no hesitation in confiding the enterprise to him." That there might be some person with him to assume the conduct of the expedition in case of accident, Mr Jefferson expressed Clarke was appointed, at Lewis's request, to accompany him, and received a commission of captain. (For the particulars of this expedition, see the account which has been published of it—Expedition, &c.—Philadelphia, 1814, 2 vols.). It was highly successful, and occupied three years, the party engaged in it having set out in the summer of 1803, and returned in the autumn of 1806. Lewis was soon afterwards made governor of the territory of Louisiana, and Clarke a general of its militia, and agent of the United States for Indian affairs. On the new governor's arrival at St Louis, the seat of administration, he found the country torn by dissensions; but his moderation, impartiality, and firmness soon brought matters into a regular train. He was subject to constitutional hypochondria, and, while under the influence of a severe attack of this disorder, put an end to his life, in 1809, at the age of thirty-six.

LEXINGTON, one of the principal towns of Kentucky, capital of Fayette county, on a branch of the Elkhorn, 29 miles S. E. of Frankfort, 88 S. of...
LEXINGTON — LEYDEN.

Cincinnati; lon. 84° 18' W.; lat. 38° 6' N. The place derived its name from the circumstance that some hunters were engaged on the spot in laying out a town (1775), when a messenger arrived with the news of the battle of Lexington, and they immediately decided to commemorate that event by giving the name to the place. Population, in 1830, 5989. The staple manufactures of the place are cotton and wool. The city, at Lexington, was incorporated in 1798, and organized anew in 1818. In 1830, it had 143 under-graduates, 62 in the preparatory department, 800 medical students, and 19 law students.

LEXINGTON, a small town in Massachusetts, about twelve miles W. of Boston. The town extends from the south-east of Concord to the Charles river, and six miles to the south-west. It is remarkable, in the history of the American revolution, as the place where the first British blood was shed in armed resistance to the mother country. On the evening of April 18, 1775, a detachment of British troops was sent from Boston, by general Gage, for the purpose of seizing some provincial stores at Concord. Notice of this movement having been communicated to the inhabitants on the route, the militia of Lexington, about seventy men in number, were hastily drawn up on the common, by which the road to Concord passes. The British commander, colonel Smith, having commanded his troops to fire, and ordered his men to fire. Seven Americans were killed, and three wounded, and the company dispersed, several of the militia discharging their muskets as they retreated. The British troops then pushed on to Concord, the Americans retiring beyond the river which flows by the village. One hundred men were detached to destroy the bridge, across which the colonists had retired; they were, however, repulsed by the latter, and, at noon, the whole detachment took up the march for Boston. The militia of the neighbouring towns had meanwhile been collected, and began to hang upon the rear of the British with an irregular but destructive fire from every favourable position. At Lexington, the British were relieved by a reinforcement of 1000 men, but were still pursued in the same gallant manner till their arrival at Charlestown, in the evening. (See Phinney's History of the Battle at Lexington, Boston, United States, 1833.)

LEX LOCI CONTRACTUS (conflict of laws). It is a general doctrine, that every government has jurisdiction over persons within its limits, and also over acts done within them. It follows, that all contracts made, and obligations assumed, have an implied reference to the laws of the place of the transaction, unless it appear otherwise on the face of the contract. Some contracts, however, have reference to different places for their execution, as a bill of lading for a foreign voyage, a foreign bill of exchange, and many others. Such contracts necessarily refer to the laws of other countries than that in which the contract is made, in respect to the acts contemplated to be done abroad. The manner of execution of the contract must, in this respect, be governed by the foreign laws. But, for the purpose of determining the meaning of the parties, regard is necessarily had to the language, laws, and customs of the place where it is made. In neighbouring territories subject to different jurisdictions, where there is much intercourse between the inhabitants of the different territories, as is, or, at least, formerly was the case in the different provinces of Holland and the Netherlands, and the territories bordering upon them, questions frequently arise as to the code of laws which is applicable to particular acts of the parties, or provisions of contracts. Many questions have arisen in those countries, for instance, respecting the obligations and rights arising on the marriage contract, where the parties were married in one province or country, and afterwards removed to another. As to rights of property, consequent immediately upon a marriage, the laws of the place of marriage prevail; but it is well observed that these laws clash with those of the quarter to which the parties remove, and, in such cases, the general rule is, to give the laws of the place of the contract the preference, as far as is practicable. But it will sometimes happen that it is quite impossible to give effect to the laws of either place. The treaty which makes the law of marriage, to many purposes, a pecuniary copartnership, and its provisions and remedies are adapted to this construction, and there is no difficulty in enforcing the rights of the wife under it. But in Britain and the United States, it is quite otherwise, as the wife's personal property, and the use of her real estate, go to the husband, and her legal rights are in a great degree suspended during the marriage. If, therefore, parties, married in France, remove to Britain or the United States, whatever respect might be paid to the French law, and the rights and obligations, as to property, arising on the marriage in France, the laws of Britain or the United States, supply no forms of proceeding, and remedies adapted to such a construction of the contract. As to the acts done and the management of their property after their removal, therefore, they must be governed by the laws of the country of their residence. This question, as to the code of laws which is applicable, arises in relation to the adjustment of general average losses on vessels and their cargoes, it being a rule that such losses are to be adjusted at the port of delivery of the goods; and, where this is a foreign port, the adjustment is necessarily made according to the laws there prevailing. The implied contract between the parties to a bill of lading, to contribute to such average, where the contribution accrues abroad, has reference to the laws of the foreign port as to the proportion of the contribution.

LEY, or LEES; a term usually applied to any alkaline substance made by levigating ashes that contain an alkali. Soaplees is an alkali used by soap-boilers, or potash or soda in solution, and made caustic by lime. Lees of wine are the refuse, or sediment deposited from wine standing quiet.

LEYDEN (Lugdunum Batavorum); a large and populous city; situated on the banks of a branch of the Rhine, 3000 houses and 26,800 inhabitants; lon. 4° 29' E.; lat. 52° 6' N. It has wide streets (the one called Broad Street is among the finest in Europe), and numerous canals. The university of Leyden, formerly very celebrated, was founded in 1575, and is distinguished for its botanical garden, astronomical theses, observatory, and valuable library with 60,000 volumes and 14,000 manuscripts. The number of students, in 1827, was 323. The Annales Acad. Lugd. Bat. are still continued. Cabinets of philosophical, surgical, chemical instruments, and one for natural history, are attached to the university. Among the buildings, the principal are St. Peter's church, with the tombs of Boerhaave, Peter Camper, and Meerema, and the stadhuis, which contains Luke of Leyden's excellent picture of the last judgment. A fine view of the whole city is enjoyed from the ancient castle on the south side of the Conqueror.
trade. The manufacturers have much declined, but the salt-works are important. Leyden suffered much in January, 1807, from the explosion of a ship containing 40,000 pounds of gunpowder. The houses on the quay were overthrown, and many persons killed. Natives of Leyden are John of Leyden (q. v.), known as the leader of the Anabaptists, the celebrated Peter Muschenbroek, Rembraadt, Luke of Leyden, &c. It is connected with Haarlem, Hague, and Delft by canals. Leyden was called by the Romanists Leydeniam Batavorum (see Batavians), from which the present name was formed in the middle ages. Even in Ptolemy’s time, Leyden was a considerable city. It suffered much during the war with Spain (1574).

LEYDEN, JAN or JOHN OF. See John of Leyden.


LEYDEN, JOHN; a poet, antiquary, and Orientalist, was born at Denholm, in Roxburghshire, Scotland, in 1775, of parents in humble circumstances, and bred up to such country labour as suited his condition. In his earliest youth, he displayed the greatest aptness for the acquisition of knowledge, but enjoyed few opportunities of gratifying it. His predominant desire for learning, however, determined his parents to prepare him for the church, and he was entered at the college of Edinburgh, in 1790, for the purpose of commencing his professional studies. Here, besides attending to theology, he cultivated medical studies, and, in addition to the learned languages, acquired French, Spanish, Italian, German, the ancient Hebrew, Arabic, and Persian. After remaining five or six years in Edinburgh, he became private tutor to two young gentlemen, whom he accompanied to St Andrews, and, in 1799, published his travels, entitled Oriental Discoveries, which has since been continued and enlarged by Hugh Murray (3 vols, Svo, 1820). At this time, he was also the author of many poetical effusions in different departments, which appeared in the Edinburgh Magazine, and which, by rendering him known to the lovers of literature, introduced him into the best society in the Scotch capital. In company, he displayed the readiness and independence, which his early life and education were fitted to produce in a man of strong feeling and vigorous genius, united with personal boldness, and much bodily power and activity. In 1800, he began to preach, and, although popular as a pulpit orator, he was not satisfied with his own discourses. In 1801 and 1802 he assisted Sir Walter Scott in procuring materials and illustrations for his Minstrelsy of the Scottish Border, and re-published the Complaynt of Scotland, with a learned preliminary Dissertation, Notes, and a Glossary. Having manifested a strong desire to set out on an expedition to explore the unknown regions of Africa, his friends, to prevent the execution of this project, procured him an appointment in India, which, however, could only be held by a person who had taken a surgical degree, and this he actually obtained, after six months’ unremitting application. While in India, he devoted himself to the study of Oriental literature, but did not long survive the influence of the climate, and his over-exertions in his studies. He died in 1806. His Poetical Remains, with a Memoir of his Life, were published in 1821, and, in 1826, the Commentaries of Baber, translated by him from the Turkish language. An animated sketch of doctor Leyden’s life is to be found among the Miscellaneous prose Works of Sir W. Scott.

LEYDEN PHIAL, in electricity, is a glass phial or jar, coated both within and without with tin-foil, or some other conducting substance, which may be charged, and employed in a variety of useful and entertaining experiments. Glass of any other shape, so coated and used, has also received the same denomination. A vacuum produced in such a jar, &c., has been named the Leyden vacuum. See Electricity, Vacuum.

LI, (called also caser); the common copper coin, in China, with a square hole in the middle, and an inscription on one side. The copper is alloyed with lead, and the coin, which is cast, is very brittle. Ten lbs make one cashsiren, 100 a mass, 1000 a lining or tale, about five shillings.

LIAS, in geology; the name of a peculiar formation, consisting of thick, argillaceous deposits, which constitutes the base on which the oolitic series repose. The word lias is of English origin, and is said to be derived from a provincial pronunciation of the word laver. The upper portion of these deposits, including about two thirds of their total depth, consists of beds of a deep blue marle, containing only a few irregular limestone beds. In the lower portion, the limestone beds increase in frequency, and assume the peculiar aspect which characterizes the lias, presenting a series of thin, stony beds, separated by numerous marly layers; the lower part of this formation is rich in fossils, and is of such a character as to render it suitable for building purposes. In the upper part of this rock, at a distance, assume a striped and riband-like appearance. These limestone beds, when purest, contain ninety per cent. of carbonate of lime; the residue consisting, apparently, of alumine, iron, and silice. In places where these beds are less pure, alumine of course abounds. The blue lias, which contains much, is a kind of a strong lime, distinguished by its property of setting under water. The white lias takes a polish, and may be used for the purposes of lithography. The lias clay often occurs in the form of soft slate or shale, which divides into very thin laminae, and is frequently much impregnated with lime, and presents a series of laminae, of which, when laid in heaps with flags, and once ignited, it will continue to burn slowly until the iron pyrites is wholly decomposed. When it falls in large masses from the cliffs upon the sea-shore, as it often does in England, and becomes moistened by seawater, it ignites spontaneously. The alum-slate of Whitby, in England, is this sort; the lias clay is impregnated with a large dose of common salt, and sulphate of magnesia and soda; in consequence of which, springs of water, rising through it, contain these salts in solution. The Cheltenham and Gloucester springs are in this clay. The lias is remarkable for the number and variety of its organic remains, among which are numerous chambered univalves, bivalves, certain species of fish and vertebral animals, allied to the order of lizards, some of which are of enormous size. The ichthyosaurus, one of these, has the orbit of its eye ten inches long and seven broad; and the plesiosaurus, of which five species have been found, measures twenty feet in length. This rock also embraces, in some instances, bones of the turtle, fossil wood, and jet. The lias crosses England from near Whitby, in Yorkshire, to Lyme, in Dorsetshire. The same formation occurs also in France, and in the Alps and the Jura. The most valuable mineral substances obtained from it are water-setting lime and alum shale.

LIBANUS, MOUNT. See Lebanon.

LIBATION (Latin, libatio, libamentum, from libare, to pour out); properly a drink-offering; but used also for other offerings to the gods, as a meal-cake, or something similar placed on the altar, and a part of which was burned. Libations were also made at domestic meals, some of the food being thrown into the fire on the hearth, in honour of the lares. Of all fruits, a small portion was likewise placed on an altar, table, &c., in honour of the gods, or thrown into the sea, in honour of the sea deities.
The libations to the dead were not performed till the ninth day after the burning or interment, and consisted of milk, wine, or blood, and generally concluded the funeral solemnities. In sacrifices, the priest was first obliged to taste the wine with which he sprinkled the victims, and cause those to do the same who offered the sacrifice. This ceremony was called *libatio*, and was, in the Greeks, the *peristomia*, or λαος ἔχων, was similar to the *libatio* of the Romans.

**LIBEL**, in law, is defined to be the malicious defamation of any person, made public either by writing, printing, or pictures, in order to provoke him to anger, or to expose him to contempt, or ridicule. When defamatory words are merely spoken in conversation, they exist no longer than during the act of giving them utterance, and are heard only by those in whose presence they are used; but, when they are committed to paper, they become permanent in their nature, and are capable of being disseminated far and wide. Words, again, may be spoken in haste, and without thought; but the act of writing necessarily requires time and deliberation. For these reasons, libelling is regarded, by our law, as a more heinous offence than slandering, which is the technical name for spoken defamation; and numberless expressions are libellous, if written and made public, which are not punishable, if they are merely spoken. Thus, unless the slanderous words be such as tend to cause it to be believed, that the person slandered is guilty of some crime punishable by law, as theft or perjury, or that he is infected with some disease which renders him unfit to mix in society; or unless they tend to injure him in the particular trade from which he derives his livelihood; or unless they have actually been productive of some damage to him, they are not actionable, though false. For instance, it is not legal slander to say of a private gentleman, that he is a swindler; if he has received no specific damage therefrom, beyond the mere annoyance of having been subjected to such an imputation. But such accusations as these, and all others which hold up individuals to public hatred, contempt, or ridicule, become libellous when the remembrance of them is deliberately perpetuated by the public by committing to writing. Libellists may be brought to punishment by a prosecution on the part of the government, or be compelled to make reparation by a civil action. The civil action is grounded upon the injury which the libel is supposed to occasion to the individual; the public prosecution upon its tendency to provoke a breach of the peace. If the charges contained in the libel are true, a civil action cannot be maintained, because it is considered that every man must bear the consequences of his own act; and, therefore, if he has laid himself open to accusation, he must endure it as the natural result of his act. But, as the malicious propagation even of that which is true, is calculated to disturb the public peace, the truth of the libellous matter is no defence, by the common law, upon a prosecution by the government, although, without doubt, it will, in many cases entitle the defendant to the merciful consideration of the court, who may refuse the punishment to be awarded. In civil actions, again, it is necessary to prove that the publication of the libel was made to others besides the person at whom it is aimed; for, however false and atrocious it may be, it is evident that the person libelled can derive no injury from it, so long as its very existence is known to himself. Therefore an abusive letter, written by one man to another, is not sufficiently published to support an action, unless the writer shows it to a third person, because the person to whom it was addressed cannot be injured by it, unless he himself chooses to make it public; nevertheless, the author of such a letter may be prosecuted by indictment, for it equally tends to create a breach of the peace. With these distinctions, civil actions and prosecutions for libel stand very much on the same footing. In ordinary cases, it is necessary to prove malice on the part of the libeller; for, even supposing that a libel was published without any malicious design, yet the injury to the individual, and the danger to the public peace, are not the less on that account. But, although the charges contained in a libel are false, yet under the particular circumstances of certain cases, the author is excused, unless it appears that the whole of his having been influenced by hatred or malice. These are called privileged communications. The master who gives a bad character of the servant who has left him, is privileged, if he acts bona fide, and not officiously; but, if, without application being made to him to give a character, he volunteers officially to send one to the person who is about to hire the servant, he is not privileged, and must stand or fall with the truth or falsehood of his charges. So, if a father writes to his son, bona fide, warning him against a person whose character he has reason to suspect, that person is a privileged communication. It is difficult to lay down any general definition, which will embrace all the occasions when communications are privileged; but, perhaps, we shall not be far wrong in saying that, whenever a communication is made bona fide, unofficiously, and without malice, and either the person who makes it, or the person to whom it is made, has a real substantial interest in the subject to which it relates, it is a privileged communication, and the mere fact of its not being true will not render the person who makes it liable, either to a civil action, or to a criminal prosecution. A fair criticism on a public work, or print, &c.; a fair comment on a place of public entertainment; a fair and impartial account of the proceedings in a court of justice, and the like, are not considered libellous, unless the subjects to which they relate are in themselves of such an obscene, blasphemous, or scandalous nature, that a due regard to decency enjoins that they should not be publicly discussed, under which circumstances, even a correct statement of the indictment will be insufficient to exempt the plaintiff from damages, the amount of which is settled by the jury. But, upon an indictment, the jury has merely to acquit the defendant, or to find him guilty, after which the court passes judgment, and awards the punishment, which is generally fine or imprisonment, or both; but, by statute 1 George IV., c. 8, persons convicted a second time of a blasphemous or seditious libel, may be banished for such a term of years as the court thinks fit. The jury decide on the legal innocence or criminality of the alleged libel, without being bound by the direction of the judge.

**LIBEL**, in the ecclesiastical and admiralty courts, is the name given to the formal written statement of the complainant's ground of complaint against the defendant.

**LIBER**; a surname of Bacchus among the Romans, referring to the idea of a deliverer, or liberation. Liber was originally an old Italian god of fertility, whose name was probably derived from the old word *libare* (to pour out, to water). He was worshipped in connexion with Libris (Prosperpine) and Ceres.

**LIBERAL.** In the article *Arts*, the name of liberal arts is said to have been given, originally, to those which were considered most essential. This contradistinction to those which were left to slaves. In modern times, the word liberal has received a peculiar political meaning. The two great parties
LIBERAL ARTS—LIBERIA

throughout Europe, are composed of those who adhere to the ancient régime, and object to the principles of equal rights, and of those who, adhering to the latter, are those called liberal. This struggle is the struggle of the feudal, or aristocratic, and the democratic principle. There exists, of course, a great variety of shades in both parties.

LIBERAL ARTS. See Arts.

LIBERIA; the name which, in 1824, on the motion of general Robert Goodloe Harper, was given to the territory purchased by the American Colonization Society, on the western coast of Africa. The origin and purposes of this association have been already described in the article Colonization Society, as well as the ill success of the first attempt to establish a settlement, in 1820. In the summer of 1821, cape Montserado, or Mesurado, with a large tract of adjoining country, was purchased of the native chiefs, or head-men. The emigrants first established themselves on cape Montserado, under the direction of doctor Ayres, Jan. 7, 1822. Almost immediately after taking possession of the cape, doctor Ayres was, in consequence of severe illness, obliged to return to the United States; but, lamentably, in October, Mr. Jehudi Ashmun arrived, and assumed the superintendence of affairs, Aug. 8. For more than six years, this able man devoted all his powers to the work of establishing, upon broad and sure foundations, this colony, so interesting to the United States, and so full of hope for Africa. His defence of the infant settlement, in December, 1822, against the united forces of the natives, showed great courage and talent. In 1824, the system of government now in operation was adopted, and the benefits which have resulted from it are great. The supreme power resides in the agent of the society, but all the civil and military officers of the colony are appointed by the agent himself, and only elected and removed by him. Through the negotiations of the late Mr. Ashmun, great accessions were made to the original territory of Liberia. Full possession has been obtained of large tracts of country, and a jurisdiction (which excludes all foreign nations from making settlements) acquired over the coast, from cape Mount to Trade Town, a distance of 150 miles. The territory of Liberia is generally low upon the coast, but gradually rises towards the interior, and, at a distance of from twenty to thirty miles from the sea, hills are visible, of considerable elevation. About forty-eight miles due north-west from cape Montserado, is Grand Cape Mount, which is a level plateau, elevated on a base of about four miles in diameter, 900 feet above the sea, which washes it on three sides. This mount, the north-western extremity of Liberia bay, is covered with a deep and unfaiding foliage. Several springs of excellent water descend from it, and the Pissou river (a broad, but irregular and sluggish stream, which has been traced to about a hundred miles from its mouth) empties itself into the ocean on its northern side. The St. Paul's river, which flows into Liberia bay, at the distance of from eight to nine miles north of cape Montserado, is of considerable magnitude, and supposed to admit, above its falls (about twenty miles from its mouth), of boat navigation for 200 or 300 miles. The Monserado river is forty miles long, and enters the sea on the northern side of the cape of the same name. In the Junk district, south-east of cape Montserado forty miles, are two considerable rivers, one descending from the north-west, and the other from east-north-east, and pouring their waters into the ocean at the distance of only two miles from each other. The river St. John's, eighty-one miles south-east from cape Montserado, is larger than any we have mentioned and represented by Mr. Ashmun as majestic, and navigable for vessels of 90 to 100 tons, abounding with fish, and having its course through a fertile, delicious, and salubrious country, of a rich and mel- low soil, famed sixteen hours in every twenty-four, even in the height of the season, the strongest gusts of wind, fanned by the verdure which crowns its banks, rendering the scene one of the most delightful that can be imagined.

Cape Montserado, upon which is situated Monrovia (so called in honour of president Monroe, one of the earliest and most efficient friends of the colonization society), the earliest settlement made in Liberia, is about 6° 27' N. lat., and 10° 40' W. lon. from Greenwich. Cape Montserado is elevated about eighty feet above the ocean, is washed by the water on three sides, and connected with a level tract of land on the fourth. Its length, from north-west to south-east, is three and one third miles; its average width, from north-east to south-west (directly across from the river to the ocean), three fourths of a mile. It comprehends about 1690 acres. From May to October, the wind, on this coast, is uniformly from south-south-west. In November and December, the west-wind and west-north-west wind prevail, and the interior, being land breez to north-east and north, Masters of vessels should remember that this coast may, at all seasons, be descended with little difficulty; but, that the ascent, between January and May, is exceedingly slow, both the current and wind being in opposition. Vessels standing by cape Mount ought to give this cape a breadth of two or three leagues. The anchorage distance, at the distance of one or two miles north-east of cape Montserado, is safe and good.

The American colonization society has transported to Liberia 1408 free persons of colour. Between 180 and 200 slaves, liberated from the grasp of pirates, are annually purchased by the government, and added to the population of the colony. About 300 slaves, taken while about to be brought into the United States contrary to law, have been removed to Liberia by the government of the United States. There are four flourishing settlements within the limits of the colony—Monrovia, Caldwell, the Halfway Farms (or New Georgia), and Midusburg; situated twenty miles in the interior, on the eastern bank of the St. Paul's. One of the native tribes has voluntarily placed itself under the laws of the colony, and others have expressed a desire to follow its example. The natives, in the vicinity of Liberia, may be divided into three great classes—the Deys or Fays, the Deys of the coast, living on the Monserado river to Grand Cape Mount, a distance of fifty miles, and which are estimated by Mr. Ashmun at 1500. Between cape Mount and cape Montserado is the Dey tribe, about half the number of the Deys. South-west of Montserado are the Bassas, extending over various countries. Their number may be estimated at 120,000. The Fays are described as a proud, selfish, deceitful race; the Deys as indolent, pacific, and inoffensive, and the Bassas as industrious, and many of them laborious. It is not to be understood, however, that each of these classes is held together and directed by a single government. They are all of them broken up into small and feebile tribes, utterly incapable of conducting warlike operations in a united and powerful manner. The people farther in the interior are of a more elevated and civilize characteristic, have some knowledge of the Arabic language, and some acquaintance with the more useful arts. The articles to be obtained by trade at Liberia are chiefly ivory, camwood, gold, tortoise shell, hides, the teeth of the sea-horse, and a small quantity of coffee. The country abounds in cattle, goats, swine, and fowls, and in most of the fruits and productions of other tropical climates. Thus far the efforts of the American colonization society have been
attended with great, if not unexampled, success. The men of colour, who have migrated to Liberia, have felt the influence of liberty and freedom, and are proved alike in their condition and character. Those who were slaves have become masters; those who were once dependent have become independent: once the objects of charity they are now benefactors, and the very individuals who, a few years ago, felt their spirits depressed and their American, incapable of high efforts and great achievements, now stand forth conscious of their dignity and power, sharing in all the privileges and honours of a respected, a free, and a Christian people.

LIBERTAS, among the Romans, personified liberty: according to Hyginus, a daughter of Jupiter and Juno. When she is represented on coins, with her head uncovered, she is the Roman Liberty; but, with a diadem and veil, she is the goddess Liberty, in general. Gracchus built a temple to the latter on mount Aventine.

LIBERTINES, or LIBERTINI; a sect of fanatics of the sixteenth century, in Holland and Brabant, who placed religion in a perfect union of the soul with God, which having once taken place, all difference between evil and good, sin and virtue, ceased; so that the individual might give himself up to his appetites and passions, as these were no longer bad. LIBERTINE, a sceptic. LIBERTY TREE. At the time of the disturbances excited in the American colonies by the stamp act, a large American elm was used, in Boston, to hang obnoxious characters in effigy, and to make known the intentions of the sons of liberty (as the patriots were called), who also held their meetings under it. The following inscription was placed upon it: "This tree was planted in the year 1646, and pruned by order of the sons of liberty, February 14, 1766." It was henceforward called the liberty tree, but, in 1774, was cut down by the British troops, by whom the town was occupied. The example was imitated in other parts of the country, most of the towns having their liberty tree; and on the breaking out of the French Revolution (1789), the same emblem was adopted. A liberty tree was planted by the Jacobins in Paris, and many other cities of France followed their example. The same ceremony was practised in the United States by the troops, on the invasion into foreign countries. The Lombardy poplar was first used, but the French name of this tree (peupler), affording matter of derision, oaks or fir-trees were afterwards used.

LIBERTY, CAP OF. The right of covering the head in times of danger, a mark of liberty. Slaves always went bare-headed, and one of the ceremonies of emancipation was the placing a cap on their head, by their former master. Thus the cap (or the hat) became the symbol of liberty, and has played a part in many revolutions. The Swiss owe their liberty to the hat which Greisser ordered to be solved at a mark of submission. The arms of the united Swiss cantons have a round hat for a crest. In England, the cap (blue, with a white border, and the inscription Liberty, in letters of gold), is used as a symbol of the constitutional liberty of the nation, and Britannia sometimes bears it on the point of her spear; more commonly, however, she has the trident of Neptune, without the cap, in her left hand, whilst she offers the olive branch of peace to the world in her right hand. The cap was used in France, as the symbol of liberty, at the beginning of the revolution (1789); and its red color was borrowed from that of the liberated galley-slaves of Marseilles, who went in great numbers to Paris. The Jacobin club, at Paris, afterwards made the red cap a badge of membership, and it was, therefore, afterwards called the Jacobin cap.

LIBRA; the Roman pound unit for weighing. (See Ac.) The ancient Romans reckoned money also by pounds, and a libra of silver was worth above thirty dollars. This word passed over to the various nations of Latin descent or mixture. See Livre.

LIBRARIES. The most ancient library is fabulously ascribed to the Egyptian king Osymundas of Memphis. Pisistratus first founded a library among the Greeks at Athens; Xerxes collected a political one, but Selsecus Nicator caused it to be restored to Athens. The most celebrated library of antiquity was the Alexandrian. (See Alexandria.) Rémiul Paulus and Lucullus brought the first libraries, as the spoils of war, to Rome. Asinus Pollio founded the first public library, which was also taken in war by Julius Caesar established a large library, and intrusted it to the care of the learned Varro. Augustus founded two libraries, one of which was called Palatina, because it was in the temple of Apollo, on mount Palatine; the other was in the portico of Octavia, and was called Octavian. The confiscation of Nero destroyed several libraries, one of which was restored. Trajan founded a very excellent library. Publius Victor mentions twenty-eight public libraries in Rome; there were, besides, extensive private libraries. These treasures were destroyed or dispersed, partly by the ravages of the barbarians, partly by the iconoclasts. In the ninth and tenth centuries the monarchs of the West were powerful. See Library Foundation.

A library of the eighteenth century, it is said, was founded by the haughty emperor of the East, and the learned Comnenian imperial family, made several collections of books, principally in the convents of the Ægean islands and mount Athos. The Arabians had, in Alexandria, a considerable library of Arabian books. Al-Mamoum collected many Greek manuscripts in Bagdad. In the West, libraries were founded in the second half of the eighth century, by the encouragement of Charlemagne. In France, one of the most celebrated was that in the abbey St Germain des Prés, near Paris. In Germany, the libraries of Fulda, Corvey, and, in the eleventh century, that of Hirschau, were valuable. In Spain, in the twelfth century, the Moors had seventy public libraries, of which that of Cordova contained 250,000 volumes. In Britain and Italy, libraries were also founded with great zeal, particularly, in the former country, by Richard Aungerville; in the latter, by Petrarch, Boccaccio, and other learned men. But the richness of the libraries, on the other hand, was not at this time great. Wherever a new library was called for, this was done more easily and at less expense. Nicholas V. founded the Vatican library. Cardinal Bessarion bequeathed his excellent library to the church of St Mark at Venice. See Petit-Nadal's interesting Recherches sur les Bibliothèques anciennes et modernes jusqu'à la Fondation de la Bibliothèque Mazarine (Paris, 1819.).

The principal libraries of modern times are, the royal library at Paris (more than 400,000 printed books, and 80,000 MSS.); the central court library at Munich (more than 400,000 books, and 9000 MSS.); the several libraries at Petersburg (300,000 books, and 11,000 MSS.); the imperial library at Vienna (300,000 books, and 20,000 MSS.); the university library at Gottingen (about 300,000 books); the royal library at Dresden (at least 230,000 printed books, 150,000 pamphlets, dissertations, and small works not included, and 2700 MSS.); the royal library at Copenhagen (stated variously at 130,000, 250,000, and 400,000 volumes; it has 3000 MSS.); the library in the Escurial (130,000 volumes, and excellent Arabian MSS.); the royal library at Berlin (200,000 volumes, and 7000 MSS.); the academical library at Prague (150,000 volumes, and 9000 MSS.); the royal library in Stuttgart (116,000 MSS.); the Vatican library at Rome (360,000 books, and 40,000 MSS.). In Britain, the two largest libraries are the Bodleian in Oxford (stated by some at 600,000, by
LIBRATION OF THE EARTH—LICHENS.

...others at 250,000 volumes, and 30,000 MSS., and the library of the British museum at London (150,000 books, and about 60,000 MSS.). Besides the Biblioteca Ambrosiana of Milan, there are the Biblioteca Universitaria (100,000 printed books, 5000 MSS.), of St Genevieve (110,000 printed books, 2000 MSS.); of the institute (30,000 volumes); of the chamber of deputies (40,000); the Mazarin library (90,000); making in all, 1,290,000 volumes in the public libraries in Paris. In the rest of France, there are 273 public libraries, the principal of which are those of Lyons (containing together 600,000 volumes); Bordeaux (105,000); Aix (73,000), &c. The total number of volumes, in these provincial libraries, is 3,000,000. Access to these great collections is easily obtained, both by foreigners and residents. In Italy, there are a great number of valuable libraries, of which that at Bologna, founded in 1650, contains 150,000 volumes, 9000 MSS.; the Magliabechi library at Florence, 150,000 volumes, 9000 MSS.; the university library at Genoa, 70,000 volumes; the Ambrosian at Milan, 60,000 printed volumes, and, at least, 50,000 MSS.; at Bologna, 140,000 volumes, and 15,000 MSS.; that at Modena, 80,000 volumes, and that of Naples 130,000. The Vatican library is very large and famous, but in much disorder. The number of books in foreign libraries is very difficult to be ascertained with precision, and the estimates differ so much, that the above estimates are, in many cases, little better than approximations. In the United States of America, the principal libraries are that of Harvard college (30,000 volumes); of the Boston Athenaeum (26,000 volumes); of the Philadelphia library (27,000 volumes); of congress (18,000 volumes); of Charleston (15,000).

LIBRATION OF THE EARTH is sometimes used to denote the parallelism of the earth's axis in every part of its revolution round the sun.

LIBRATION OF THE MOON. Very nearly the same face of the moon is always turned towards the earth, it being subject to only a small change within certain limits, the spots near the edge appearing and disappearing by turns; this is called its libration. The moon turns about its axis in the same direction in which it revolves in its orbit. Now, the angular velocity about its axis is uniform, and it turns about its axis in the same time in which it makes a complete revolution in its orbit; if, therefore, the angular velocity of the moon were also the same, the face of the moon would always be turned towards the earth; for, if the moon had no rotation on her axis, when she is on opposite sides of the earth, she would show different faces; but if, after she has made half a revolution in her orbit, she has also turned half round her axis, then the face, which would otherwise have been shown, will be turned behind, and the same face will appear; and thus, if the moon's angular velocity about her axis were always equal to her angular velocity in her orbit about the earth, the same side of the moon would be always turned towards the earth; but as the moon's angular velocity about her axis is uniform, and her angular velocity in her orbit is not uniform, these angular velocities cannot continue always equal, and therefore the moon will sometimes show a little more of her eastern parts, and sometimes a little more of her western parts. This is called a libration in longitude. Also the moon's axis is not perpendicular to the plane of her orbit, and, therefore, for such an orbit, her opposite poles are turned towards the earth; therefore her poles appear and disappear by turns. This is called a libration in latitude. Hence nearly one half of the moon is never visible at the earth; and therefore nearly one half of its inhabitants (if it have any) never see the earth, and nearly the other half never lose sight of it. Also, the time of its rotation about its axis being a month, the length of the lunar days and nights will be about a fortnight longer than in the earth. In this respect, and, it may be added, from this circumstance, that the time of the moon's revolution about her axis should be equal to that in her orbit.

LIBYA, with the ancient geographers; a large part of the north of Africa, west of Egypt, which was divided into Libya exterior and interior; sometimes also into Libya Proper, Libya Lybia, and Lybia Cyrenaica. The Greek authors sometimes comprehended all Africa under this name.

LICENSES, or FREE LETTERS, were instruments used to diminish the effect of the Berlin and Milan decrees of Napoleon, and the British orders in council, which threatened the destruction of European commerce, if some exceptions had not been made by both nations. Britain decreed first, in November, 1808, that vessels of all nations, the French excepted, might be provided with licenses, good for one year, upon condition of importing grain into Britain; but, after 1808, licenses were given only to vessels under the trade of Britain, and licensed for a certain number of voyages or colonial produce. Licenses were also sold by France, especially for the purpose of supplying her navy. False papers for ships were also in common use. At last, it was decided by Britain to grant licenses to all ships not French, even though they carried a French license, upon condition that one third part of the cargo should be British goods, the same portion of French cargo being also allowed. France also gave licenses (to American vessels) to export French goods, and, in return, to import colonial produce. Licenses were granted by Russia for trade with Britain, from 1811, and by Sweden, for the same trade, from 1812; but, at the fall of the famous continental system (see that article), the licenses became useless.

LICENTIATE; an academical dignity between the baccalaureate and the doctorate, and the obtaining of which is a necessary step to taking the doctor's degree. Licentiate also signifies the person who has received the degree. A licentiate in theology has the right of delivering theological lectures, and a licentiate in medicine the right to practise.

LICHENS; a family of plants, belonging to the Lichenaceae, containing about 1200 known species, which are now arranged under several genera, which have the subterranean, membranous, coriaceous, or even corneous, and their form that of a horizontal frond, sinuated, lobed, or divided, bearing scattered tubercles and cup-like warts, or branching and coralloid. They are common every where, adhering to rocks, the trunks of trees, and barren soil. On ascending mountains, they are found flourishing beyond the limit of all other plants, even to the very verge of perpetual snow. Many of them, fixing upon the hardest rocks, by retaining moisture, facilitate their decomposition, and promote the formation of soil. They are generally perennial, and grow by receiving moisture through all parts of their surface. As frequently detached, the least rain restores their freshness. Many of the species appear to be universally distributed, occurring in all parts of the globe; but the lichens of the equatorial regions and southern hemisphere have not, hitherto, been satisfactorily examined. Several of the species are useful for ornament, and others for fire-places, or for instances of the northern regions. The tripe de roche of the Canadians, so often resorted to by the fur traders, is also a lichen, somewhat resembling the substance from which the name is derived. The reindeer moss (Calluna vulgaris) is common, in sterile soil, in many parts of the northern hemisphere; but, in the
arctic regions, it grows in the greatest profusion, often occupying, exclusively, extensive tracts of country, covering the ground to the depth of a foot or more, and leaving the appearance of snow. It is one of the greatest national philosophers, and wisest writers, that Germany has produced, was born in 1742, at Ober-Ramstädt, near Darmstadt, and was the youngest of a family of eighteen children. He received from his father some instruction in physics, and went, after his death, to the academy at Darmstadt. He was strong and well formed till eight years of age; but, at this time, the effects of the carelessness of his nurse became visible, in a distortion of the spine. In 1763, he went to Gottingen, where he applied himself to astronomical observations. He made observations upon the earthquake of 1767, and observed, from Königstein, the transit of Venus on the 31st of May 1761, 1771, 1773, the orbit of which last he described, and presented to the academy of sciences of Gottingen. He also constructed lunar charts, in which the spots are indicated in the order, in which they are successively covered by the earth's shadow. In 1770, he was offered a professorship at Gottingen, which he entered upon in his twenty-eighth year. In this year he went to London. Lichtenberg ascended by observation, in 1772 and 1775, the situations of Hanover, Osnabrück, and Stade. He afterwards undertook to publish, with illustrations, the papers left by Tobias Smélie, and added a lunar chart, with a description of lunar spots; but only one volume appeared. He visited England again in 1774, and wrote upon Garrick and the English stage. He subsequently published an excellent commentary upon Hogarth's engravings. In 1778, he returned to Gottingen. From this time he retained his correspondence. He also published, in several publications, the system of physiognomy to which Lavater had given such currency; but he was subsequently reconciled to Lavater. Other productions, which he thought censurable, felt the lash of his wit. His taste for drawings illustrative of character, made him a great admirer of Hogarth; and he used to relate in the Gottingen Souvenir with miniature drawings of the heads of Hogarth, accompanied by very witty and ingenious observations. The favourable reception of these led to the publication of a Minute Explanation of Hogarth's Fates, with perfect miniature Copper-plates by himself. He published four numbers himself; the seven next to the eleventh were published by Bottiger, and the last by Bonterw. In the last years of his life, Lichten- berg became hypochondriac and misanthropic, so that he shut himself up in his chamber, and would see no one. He died of a pulmonary inflammation, Feb. 24, 1790, aged 57. He was an original think- er, to whom no subject of a scientific character was uninteresting. Scientific spirit and poetic talent were united in him in a singular degree, and produced the most peculiar and striking results; but the effects of his highest talents are the most happiest—nothing divine—was, in his speculative moments, disregarded; and a superstitious belief in dreams, predictions and presentiments, was admitted in its stead.

LICHFIELD, or LITCHFIELD; an ancient city of England, in the county of Stafford, and a county of itself, with particular local jurisdiction, under the government of the bailiffs and magistrates. It stands on a small brook that runs into the Trent. The city is neat and well built, and consists of three or four principal streets, and some smaller ones; and is separated from the Close, which is in the county of Stafford, by a pool of running water. It is the resi- dence of the dignitaries of the church. The cathedr- al is supposed to have been founded about 656, and was afterwards much enlarged and improved. It is one of the most elegant religious edifices in Great Bri- tain, extending 400 feet in length, and 67 in breadth. In the centre rises an elegant steeple, to the height of 286 feet, and two smaller ones, at the west end, 183 feet. The interior is finished with corresponding elegance and splendour. The body of the church is spacious and lofty, supported by pillars formed of clusters of slender columns, with neat filleted capit- ais. It extends 213 feet in length, from the great west door to the choir, and 153 in breadth; the breadth of the side-naves is 66 feet, and the height of the nave 60. Over the great west doors, that open into the nave, is placed a splendid circular window, constructed at the expense of James, duke of York, in the reign of Charles II. A number of interesting monuments are dispersed through the church, among them Chantrey's celebrated group of sleeping children. St Mary's chapel, now thrown open to the choir, is uncommonly beautiful and splendid. Besides the cathedral, the Close contains a variety of buildings, which, except a few houses, belong to the church. The bishop's palace is situ- ated at the north-east corner. It is a spacious building of stone, with the date of 1687, and the arms of the bishopric, in front. Lichfield contains a free gram- mar school, at which were educated Addison, Wol- laston, Ashmole, Garrick, and Johnson. Population, in 1851, 34,141.

LICHTENSTEIN (properly, Liechtenstein), a sovereign principality, the smallest state of the Ger- man confederacy, is situated on the northern declivity of the Rhetian Alps (which here rise to the height of 5600 feet), and on the Rhine. It comprises an area of 53 square miles, with 6800 inhabitants, in 11 villages. Vaduz, a market-town, is the chief place. The prince has declared the Austrian code valid in
LIECHTENSTEIN. The courts of appeal are the Austrian courts. The prince furnishes a contingent of fifty-five men to the army of the confederacy. He has a voice in the sixteenth vote in the diet, and has the twentieth-eighth vote in the general assembly (plennum). Nov. 9, 1818, he granted his princely authority to the constitution, and the election of the German states of Austria. We mention this, on account of the qualifying clauses of the fourth section of this instrument, which would make the electors of Lichtenstein an assembly of patriarchs. It gives the right of voting to every person who pays taxes on an estate valued at 200 florins and has a freehold, and is not an alien ineligible, and disinterested character, and of a peaceable disposition. The prince's income is 17,000 guilders, but he has large districts, with towns and villages, as an Austrian subject, which contain 350,000 inhabitants, and yield a revenue of 1,600,000 guilders. He has also considerable possessions in Bohemia.

LICK, or SALT LICK. A salt spring is called a lick, in the western parts of the United States of America, from the circumstance that the earth about it, which is impregnated with saline particles, is licked by the bison and deer.

LICTORS. In Rome, were the public servants, who attended upon the magistrates, to fulfill their commands. Their name (lictore) was derived from their binding offenders hand and foot, previously to the punishment of scourging. The office was borrowed by Romulus from the Etruscans, whose chief magistrates were attended by servants, bearing axes tied up in bundles of rods, which were called fasses. He was himself always preceded by twelve of them. When the regal dignity was abolished at Rome, the royal pomp was retained; and, on this account, consuls, praetors, and other important officers (except the censors), were all attended by lictors. When a magistrate of high rank appeared in public, the lictors preceded him in a file, following each other. It was their duty to clear the road of the populace, that the consul, or other officer, might not be impeded in his progress; and this was effected by the cry, "The consul (or praetor, &c.) comes," "Make way for the consul!" When he returned to his own house, or entered another, the lictors struck the door with their axes. They also took care that proper respect should be shown to the person; and, if a horseman who met the consul was obliged to dismount. Every one uncovered his head as he passed, left him free passage, &c. The lictors were the executioners of punishments. They were free men, but chosen from among the lowest classes, and were often freed-men of the magistracy whom they attended. The dictators were preceded by twenty-four lictors; the consuls, decemvirs and tribunes of the soldiers, by twelve; the praetors and master of the horse, by six, and the vestal virgins by one, only.

LIECHTENSTEIN. See Lichtenstein.

LIEGE (German, Liütich; Dutch, Looj), formerly a bishopric in the circle of Westphalia, was occupied by the French in 1794, ceded to them by the peace of Lunéville, and formed the department of the Ourthe. By a decree of the congress of Vienna, and a separate treaty of March 25, 1815, this country was given in a personalaguainsttheNetherlands, and formed, until the Belgian revolution of 1830, a province of the kingdom, containing 1,260 square miles, with 354,000 inhabitants, some portions of its territory having been added to other provinces. The Meuse and Ourthe water it. In the southern part, which is a continuation of the Ardenes, the soil is rocky, hilly, and covered with woods. The western part is a fertile plain. Grains is not raised in quantities sufficient to supply the wants of the inhabitants, and has been partly superseded by potatoes. Cattle and sheep are raised in great numbers. The Limburg cheeses, which are made in this part of the province, are celebrated. They are rich in coal, calamine, alum, iron, lime, good marble, flints, whetstone, and building-stone. The cloth and iron manufactories are considerable, and guns and clothes are exported in large quantities. The new troops of Turkey have been chiefly armed from the workshops of Liege.

LIEGE, the capital of the province, lies in a valley on the Meuse, at its confluence with the Ourthe. Liege was formerly fortified. There are seventeen bridges across the river. The population is 47,000, houses, 8000. There are forty churches in the city. Lat. 50° 30' 29" N.; lon. 5° 31' 50" E. The inhabitants are chiefly Walloons who speak a corrupt French, mixed with Spanish and German. Muskets are made from the value of a crown to 500 louis d'or. There are also cannon-founderies, zinc-works, tanneries, &c. Nails are manufactured here in great quantities. A university was founded at Liege (1817), which, previous to the troubles of 1830, had 350 students and several useful institutions connected with it.

LIEGNITZ, capital of the government of the same name, in Silesia, Prussia, at the confluence of the Schwarzwasser and Katzbach, the seat of government, &c., has 9600 inhabitants, institutions for education, linen-bleeathers, &c. Frederick the Great defeated general Laudon near Liegnitz, August 15, 1760. Not far from it lies the village of Wahlstatt, from which Blucher received his title of prince, on account of the battle of the Katzbach (q.v.). The former principality of Liegnitz was a duchy of the Holy Roman Empire, and was ceded to Prussia by the treaty of Tilsit. The town was laid by the Elector Friedrich August of Saxony, 1725. Its present population is about 10,000. It is situated on the left bank of the river Nysse, a branch of the Oder, and was formerly a free city, which, on the death of a burgomaster, was to be governed by a council chosen by the inhabitants. The town was plundered by the Swedes, 1628, and the French, 1742.

L. S. F., in law, in its most usual acceptation, signifies "the right which one person, in certain cases, possesses of detaining property, placed in his possession, belonging to another, until some demand, which the former has, is satisfied." It is, however, not infrequently extended to the case, where the person in whose possession goods, real or personal, is charged with the payment of any debt or duty, every such charge being styled a lien on the property, although the latter be not in the possession of the person to whom the debt or duty is due. This second signification would open too wide a field of discussion. We shall therefore confine ourselves to the explanation of the right of detaining, which is the more technical meaning of the two. Liens are of two kinds: 1. particular liens, that is, where the person in possession of goods may detain them until a claim, which accrues to him from those identical goods, is satisfied; and 2. general liens, that is, where the person in whose possession may detain the goods, not only for his claim accruing from them, but also for the general balance of his account with the owners. Again, some liens are given by the common law, without any agreement between the parties; some are created by express agreement, and some by usage; which latter, indeed, implies an agreement, because, when a man enters into any business, where a particular usage is generally adopted, he is presumed to consent to be bound by that usage, unless, in his dealings with others, he expressly protests against it.
LIEN.—LIFE-BUOY.

1. The common law gives a lien to the person in possession of goods in three instances: 1. When the common law compels the members of any particular trade or business, without any option on their part, to accept employment from every person who is willing to engage. Such existed for the seamen, workmen, tailors, common laborers, common carriers, and carriers are entitled to this species of lien; for instance, the proprietor of a coach need not give up a parcel until the carriage of it be paid for. 2. When goods are delivered to a tradesman, or any other, to expend his labour upon, he is entitled to detain those goods until he is remunerated for the labour which he so expends. Thus a tailor is not obliged to take a customer's cloth and make it into a coat, but, if he consents to make the coat, the customer cannot compel him to deliver it until he is paid for the making. The first kind seems to be included in the second, but they are different in effect. It is said that this first was, at one time, the only species of lien allowed by the common law, and that the second was a subsequent invention, adopted on equitable considerations in limitation of it. 3. When goods have been saved from the perils of the sea, the salver may detain them until his claim for salvage is satisfied; but the finder of goods has in no other case a lien on the goods found, in respect of the trouble and expense to which the finding and preserving of them may have subjected him. All these are particular liens; and, therefore, the coach proprietor may not detain the parcel, nor may the tailor detain the coat, nor the salver the property saved, until payment of the carriage of a former parcel, or of the price of another coat, or of salvage which accrued for saving other goods. Another rule with regard to particular liens is, that they exist only so long as the possession of the goods is retained by the person who has the lien. If he once deliver the goods to the owner, he waives his lien, which is thereby so effectually annihilated, that it will not be revived, even if the same goods should afterwards return into his possession. Thus, if the tailor deliver the coat, and it is afterwards sent to him to be mended, he cannot then detain it as a security for the original price, or in consideration of the work therein. His remedy to recover the price must be by a suit at law; and we may here remark, that a creditor can never prejudice his right of maintaining an action for his demand, by insisting on his right of detaining the goods, for the action and the lien are concurrent rights, and do not interfere with each other.

11. General liens are only created by express agreement, or by usage. It has been determined, that attorneys and solicitors, bankers, factors, and brokers, insurance-brokers, and some others, are, by the custom of their respective trades and professions, entitled to a lien on the property of their respective, brokers, and employers, for the general balance of their accounts. Thus an attorney may detain papers which have been delivered to him to assist in the conducting of one cause, as a security for the costs of another; and, if he return them to his client, and they come again into his possession, his lien revives; for, in this instance, it is for the same cause. It may be decided that the same or different papers are delivered to the person employed, his right of detaining being the same in both instances.

LIEOUI-KIEU. See Loo-Choo.

LIEUTENANT. This word, like captain, and many others, has received gradually a much narrower meaning than it had originally. Its true meaning is a deputy, a substitute, from the French lieu (place, post) and tenant (holder). A lieutenant général du royaume is a person invested with almost all the powers of a lord-lieutenant, and is usually styled lieutenants-generals. (afterwards Charles X.) before Loius XVIII. entered France, in 1814. The duke of Orleans, before he accepted the crown as Louis-Philip, was appointed to the same office by the chamber of deputies. Lieutenants-general were formerly the title of a commanding general, but at present lieutenants-general of the above major-general. Lieutenant-colonel is the officer between the colonel and major. Lieutenant, in military language, signifies the officer next below a captain. There are first lieutenants, and second, or sous-lieutenants, with different pay. A lieutenant in the navy is the second officer next in command to the captain of a ship. According to the new organization of the French navy, of 1831, there are lieutenants de vaisseaux and lieutenants de fregate, formerly called enseigne de vaisseau. The latter can command only in the absence of the former. In Britain, the lord-lieutenant of a county has the authority to call out the military, by act of parliament, and the governor of Ireland is also called lord-lieutenant of Ireland. In some British colonies, jointly under a governor-general, the chief magistrate of each separate colony is called lieutenant-governor.

LIFE. See Physiology.

LIFE-BUOY. The life-buoy, now commonly used in the British navy, is the invention of lieutenant Coote, of the royal navy. It consists of two hollow copper vessels connected together, each about as large as an ordinary sized pillow, and of buoyancy and capacity sufficient to support one man standing upon them. Should there be more than one person requiring support, they can lay hold of rope becketts, fitted to the buoy, and so sustain themselves. Between the two copper vessels, there stands up a hollow pole, or mast, into which is inserted, from below, an iron rod, whose lower extremity is loaded with lead, in such a manner that, when the buoy is let go, the iron slips down to a certain extent, lengthening the lever, and enables the lead at the end to act as lassail. By this means the mast is kept upright, and the buoy prevented from upsetting. The weight at the end of the rod is arranged so as to afford secure footing for two persons, should that number reach it, and there are, also, as was said before, large rope becketts, through which persons can thrust their head and shoulders, till assistance is rendered. At the top of the mast is fixed a port-fire, calculated to burn about twenty minutes, or half an hour: this is ignited, most ingeniously, by the same process which lets the buoy fall into the water; so that a man, falling overboard at night, is directed to the buoy by the blazes on the top of its pole or mast, and the boat sent to rescue him also knows in what direction to pull. The method by which this excellent invention is attached to the ship, and dropped into the water in a single instant, is, perhaps, not the least ingenious part of the whole invention. The vessel is hauled on shore, curving the pole, over the stern, where it is held securely in its place by being strung, or thread, as it were, on two strong perpendicular rods, fixed to the tailer, and inserted in holes piercing the frame work of the buoy. The apparatus is kept in its place by what is called a slip-stopper, a sort of catch-holt, or detent, which can be locked at pleasure or released at pleasure by a trigger; upon withdrawing the stopper, the whole machine slips along the rods, and falls at once into the ship's wake. The trigger, which unlocks the slip-stopper, is furnished with a lanyard, passing through a hole in the stern, and having at its inner.
LIFE-PRESERVERS—LIGHT.

end, a large knob, marked “Life-Boo! this alone is used in the day-time. Close lock, here is another whereby to uncock; “Lock,” fastened to the end of a line fixed to the trigger of a gun-lock primed with powder, and so arranged that, when the line is pulled, the port-fire is instantly ignited; while, at the same moment, the life-buoy descends, and floats merily away, blaving like a light-house. The gunner, whose charge is to fire the life-buoy, is only to look stealthily and carefully primed every evening at quarters, of which he makes a report to the captain. In the morning, the priming is taken out, and the lock uncocked. During the night, a man is always stationed at this part of the ship; and every half hour, when the man calls out “Life-Boo!” to show that he is awake and at his post, exactly in the same manner as the look-out men abaft, on the beam and forward, call out, “Starboard quarter!” “Starboard gangway!” “Starboard bow!” and so on, completely round the ship, to prove that they are not sleeping. Captain Basil Hall’s Fragments of Fugitives; second series.

LIFE-PRESERVERS. The human body is a little lighter than an equal bulk of water, so that it naturally floats in this fluid. The mouth, however, in the case of most men lying motionless in the water, would sink below the surface, if the head were not thrown last. Man is one of the few who sink into still water, and are unable to swim, might be saved, if they had any presence of mind sufficient to preserve a proper position. The specific leviy of the body, in comparison with water, makes it easy to keep the upper part of it considerably elevated above the surface of the water by attaching to the chest some buoyant substance, even though its bulk be not great; and many contrivances, called life-preservers, have been invented with this view. A great portion of them, however, have been found, in practice, of little or no use. One of the latest is the invention of a Mr Scheffer, in England. It consists of a hollow cylinder, formed without a seam, and perfectly air-tight, best when disengaged with air and ready for use: or it is what may be termed a cylindric a ring, without a seam, and without a break. Of this ring, the external diameter is generally about 22\(\frac{2}{4}\) inches, the internal diameter about 12, and the diameter of the cylinder about 5\(\frac{1}{4}\), the dimensions varying, of course, according to the size of the person by whom it is designed to be employed. It contains a small stop-cock, to which an ivory pipe is fixed. Through this pipe the air is injected by the mouth, and retained by the stop-cock; the adjustment and inflation only occupying the short space of one minute. When unexpanded, it folds up into a very small compass, so as to be conveyed in the pocket; and is also very portable, its weight being but twelve ounces. Another life-preserver, invented by a gentleman of Connecticut, America, does not differ essentially from this, except that it is a straight cylinder. It is made of cloth without a seam, and rendered impervious to water by a preparation of caoutchouc; is about two feet, or two and a half feet long, and eight or ten inches in diameter; is filled like the one first described, and secured to the body by means of straps passing over the shoulders. When empty, it occupies but little room, and may even be worn by a man labouring on the deck of a vessel in distress; but when inflated, it in a few moments, when he finds it necessary to trust himself to the waves.

LIGAMENT, in anatomy; a strong, compact substance, serving to join two bones together. A ligament is more flexible than a cartilage, not easily ruptured or torn, and does not yield, or at least yields very little, if at all.

LIGATURE, in surgery, is a cord, band, or string; or the binding any part of the body with a cord, band, fillet, &c., whether of leather, silk, or any other matter, and are used to extend or replace bones that are broken or dislocated; to tie the patients down in lithotomy and amputations; to tie upon the veins in phlebotomy, on the arteries in amputations, or in large wounds; to secure the splints that are applied to fractures; to tie up the processes of the pericardium, with the sperratic ves- sels, in castration; and, lastly, in taking off warts or other excrescences by ligature. Ligature is also used to signify a kind of bandage or fillet, tied round the neck, arm, leg, or other part of the bodies of men or beasts, to divert or drive off some disease, accident, &c.

LIGATURES, are ligatures in general. The old editions of Greek authors are extremely full of ligatures; the ligatures of Stephens are by much the most beautiful.

LIGHT is that which renders objects perceptible to our sense of sight. It is one of the most interesting subjects that fall under the contemplation of the philosopher: at the same time it must be acknowledged to be one that is as little understood, and upon which opinions are as much divided, as any of the most abstruse subjects of philosophical inquiry. Some consider light as a fluid per se; while others consider it merely as a principle, and attribute to it a sort of depression, or vibration propagated from the luminous body through a subtile, ethereal medium. The ancients believed it to be propagated from the sun and other luminous bodies instantaneously; but the observations of the moderns have shown that this was an erroneous hypothesis, and that light, like any other projectile, employs a certain time in passing from one part of space to another, though the velocity of its motion is truly astonishing, as has been manifested in various ways. And first, from the eclipses of Jupi- ter’s satellites; it was observed by Reymar, that the eclipses of those satellites happen sometimes sooner and sometimes later than the times given by the tables of them, and that the observation was before or after the computed times, according as the earth was nearer to or farther from Jupiter than the mean distance. Hence it was concluded that this circumstance de- pended on the distance of Jupiter from the earth; and, that, to account for it, we must suppose that the earth is in a certain orbit at a distance from Jupiter; and that it is this distance which the ancients supposed our earth to be in, at the time of the eclipse. The original observations have received some corrections, and it is now known that, when the earth is exactly between Jupiter and the sun, his satellites are seen eclipsed about eight minutes and a quarter sooner than they could be according to the tables; but when the earth is nearly in the opposite point of its orbit, these eclipses happen about eight minutes and a quarter later than the tables predict them. Hence, then, it is certain that the motion of light is not instantaneous, but that it takes up about 16\(\frac{3}{5}\) minutes of time to pass over a space equal to the diameter of the earth’s orbit, which is nearly 100,000,000 of miles in length, or at the rate of 200,000 miles per second—a conclusion which, it may be added, is placed beyond doubt, by the aber- ration of the stars discovered by the celebrated doctor Bradley.

Upon the subject of the materiality of light, doctor Franklin observes, in expressing his dissent from the doctrine of the absolute materiality of light, that it con- tinually driven off from the sun’s surface, with such enormous swiftness— “Must not the smallest portion conceivable have, with such a motion, a force exceeding that of a twenty-four pounder discharged from a cannon? Must not the sun diminish exceedingly by such a waste of matter, and the planets, instead of drawing nearer to him, as some have feared, recede
to greater distances, through the lessened attraction? Yet these particles, with this amazing motion, will not drive before them or remove the least and slightest dust they meet with, and the sun appears to continue of his ancient dimensions, and his attendants move in their ancient orbits." He therefore conjectures that all the phenomena of light are not more properly solved, by supposing all space filled with a subtle elastic fluid, not visible when at rest, but which, by its vibrations, affects that fine sense in the eye, as those of the air affect the gross organs of the ear; and even that different degrees of vibration of this medium may cause the appearances of different colours. And the celebrated Euler has maintained the same hypothesis, urging some further objections to the materiality of light, besides those of doctor Franklin above alluded to.

Newton first discovered that certain bodies exercise on light a peculiar attractive force. When a ray passes obliquely from air into any transparent liquid or solid surface, it undergoes, at its entrance, an angular flexure, which is called refraction. The variation of this departure from the rectilinear path for any particular substance, depends on the obliquity of the ray to the refracting surface. Newton found that the sine of the angle of refraction is to that of the angle of incidence in a constant ratio. Newton, having found that opaque or inflammable bodies occasioned a greater deviation in the luminous rays than their attractive mass, or density, gave reason to expect, conjectured, that both the diamond and water contained combustible matter—a conjecture which was verified by subsequent discovery. Doctor Wollaston invented a very ingenious apparatus, in which, by means of a rectangular prism of flint glass, the index of refraction of each substance is read off at once by a scale of prisms. He performed the experiment of bending the sun's rays in a small triangle, with a perfect adjustment of the refracting media, and thus obtained a very perfect manner of the operation of reflection in a very compound manner. (Phil. Trans., 1802.) But transparent media occasion not merely a certain flexure of the white sunbeam, called the mean refraction: they likewise decompose it into its constituent colours. This effect is called dispersion. Now, the mean refractive and dispersive powers of bodies are not proportional to each other. In some refracting media, the mean angle of refraction is smaller, whilst the angle of dispersion is larger. From the refractive power of bodies, we may, in many cases, infer their chemical constitution. For discovering this point is one of the most striking instances of Newton Wollaston's instrument is of great utility, on account of the smallness of the quantity requisite for trial. This idea of doctor Wollaston has been happily prosecuted by M. Biot with regard to gaseous compounds; and we now have accurate tables of the refractive power of all transparent gaseous, liquid, and solid bodies. Carburet of sulphur exceeds all fluid substances in refractive power, surpassing even flint glass, topaz, and tourmaline; and in dispersive power, it exceeds every fluid substance, except oil of cassia. Rays of light, in traversing the greater number of crystallized bodies, are commonly split into two pencils; one of which, called the ordinary ray, follows the common laws of refraction, agreeably to the tables adduced to, whilst the other, called the extraordinary ray, obeys very different laws. This phenomenon is produced in all transparent crystals, and in substances which is not regular octahedron. The division of the beam is greater or less, according to the nature of the crystal, and the direction in which it is cut; but, of all known substances, that which produces this phenomenon in the most striking manner, is the crystallized carbonate of lime, called Iceland spar. If the white sunbeam, emitted through a small hole of a window, shutter into a darkened room, be made to pass through a triangular prism of glass, it will be divided into a number of splendid colours, which may be thrown upon a sheet of paper. Newton ascertained that if this coloured image, or spectrum, as it is called, be divided into 360 parts, the red will occupy forty-five, the orange twenty-seven, the yellow forty-eight, the green sixty, the blue sixty, the indigo forty, and the violet eighty. The red rays, being least bent by the prism from the direction of the white beam, are said to be least refracted, or the least refrangible, while the violet rays, being always at the other extremity of the spectrum, are the most refrangible. If these differently coloured rays of light be now concentrated on one spot, by a lens, they will reproduce colourless light. Newton ascribes the different colours of bodies to their power of absorbing all the primitive colours, except the peculiar one which they reflect, and of which colour they therefore appear to our eye. The different coloured rays possess very different powers of illumination. The lightest green, or deepest yellow, which are near the centre, throw more light on a printed page than any of the rays towards either side of them. The earth is but very slowly covered by the sun's rays; for the orbit of one another also in their heating power, as was first noticed by Herschel. In viewing the sun, by means of large telescopes, through differently coloured darkening glasses, he sometimes experienced a strong heat, attended with very little light, and, at other times, he had a strong light with a little heat. This observation led to his well known researches upon this subject, from which he concluded that the maximum heat is just without the spectrum, beyond the red ray. Others have found the greatest heat in the red ray itself; but the recent observations of Brander and Ritter, show that the point of greatest heat was variable, according to the kind of prism which was employed for refracting the rays. When a prism of fine flint glass is used, the greatest heat is constantly beyond the red; when a prism of crown glass, the greatest heat is in the red itself. It has long been known, that the solar light is capable of producing powerful chemical changes. One of the most striking instances of it is its power of darkening the white chloride of silver—an effect which takes place slowly in the diffused light of day, but in the course of two or three minutes by exposure to the sunbeam. This effect was formerly attributed to the atmosphere, with which the light it appears, from the observations of Ritter and Wollaston, that it is owing to the presence of certain rays, that excite neither heat nor light, and which, from their peculiar agency, are termed chemical rays. It is found that the greatest chemical action is excited just beyond the violet ray of the prismatic spectrum, and that the spot next in energy is occupied by the violet ray itself, and that the property gradually diminishes as we advance to the green, beyond which it seems wholly wanting. The sunbeams, in traversing a coloured glass, produce similar effects to those caused by the differently coloured portions of the spectrum. Thus the chloride of silver acquires a black tint behind a blue or violet glass, but does not blacken behind a red or orange glass; on the other hand, it becomes red behind a red glass, and that much more quickly than even in the sunbeam. It is the solvent power of water that can be produced by the prismatic rays, or by olefiant gas, even when concentrated so as to produce a sensible degree of heat, was found, by Mr Brander, to occasion no change in the colour of muriate of silver, nor in mixtures of chlorine and hydrogen; while the light emitted by electrized charcoal slightly affected the muriate, and caused these gases to unite, and sometimes with explosion.
The concentrated light of the moon, like that of the gases, produced no change. The importance of light to plants is well known: deprived of it, they become white, and contain an excess of saccharine and aqueous particles: and flowers owe the variety and grace of their forms to the same source of light, as do the corals of the solar beams. Even animals require the presence of the rays of the sun, and their colours seem materially to depend upon the chemical influence of these rays. A comparison between the polar and tropical animals, and between the parts of their bodies exposed, and those not exposed to light, shows the correctness of this opinion. (For an account of the physical affections, and other chemical effects of light, see Optics, Phosphorescence, and Polarization of Light.) LIGHT, aberration of. See Aberration. LIGHT, Diffusion of. See Divisibility. LIGHT CAVALRY, or HORSE. See Cavalry. LIGHTER; a large, open, flat-bottomed vessel, employed to carry goods to or from a ship. LIGHTFOOT, John, a learned English divine, born in Staffordshire, in 1639, and received his education at Christ Church, Cambridge. He made extraordinary advances in the Greek and Latin languages, and became curate of Norton-under-Hales. Sir Rowland Cotton made Mr Lightfoot his chaplain, and took him into his house, where he applied himself to Hebrew with singular assiduity and success. In 1639, he printed his first work, entitled Tribhun, or Miscellaneous, Christian and Judaical, which he dedicated to Sir Rowland Cotton, who presented him to the vicarage of Ashley, in Staffordshire. Here he resided until his appointment as one of the parliamentary assembly of divines rendered it necessary for him to remove to London. He warmly pressed the speedy settlement of the church in the presbyterian form. In 1655, he became vice-chancellor of Cambridge, and zealously promoted the Polyglot Bible. After the restoration, he was appointed one of the assistants at the Savoy conference, where he, however, attended but once or twice, giving all his attention to the completion of his Harmony. He died Dec. 6, 1675. The works of Dr Lightfoot, who, for rabbinical learning, has had few equals, were printed in 1684, in 2 vols., folio; and again, with additions, at Amsterdam, in 1680; and by Leusden, at Utrecht, 1699, in 3 vols. An excellent edition of his works, in folio, by John Strype, which contains some curious particulars of his private life.

LIGHTHOUSES were in use with the ancients. The towers of Sestos and Abydos, the colourful of Rhodes, the well-known tower on the island of Pharo, off Alexandria, are examples. Suetonius also mentions a lofty tower at Ostia, and another on the coast of Jatavia, erected for the purpose of guiding the mariner by their light. In lighting a great extent of coast, it becomes necessary to provide for the distribution of the lighthouses in such a manner that they may be readily distinguished from each other, and, at the same time, so disposed as not to leave vessels without some point by which to direct their course; and, in constructing each member of the series, care should be taken to provide for a sufficient brilliancy of light, and for means of distributing the light in such a manner as well as from other lights on shore or in ships, or in the heavens. The best constructed lighthouses, in Great Britain, are fitted up with parabolic reflectors, consisting of a circular sheet of copper, plated with silver, in the proportion of six ounces to each pound of reflector. The rays are thus formed into a parabolic curve, by the assistance of a gauge, by a very nice process of hammering. The reflector, thus shaped, is then polished with the hand. An Argand lamp is placed in the focus of the paraboloidal surface, and the oil is supplied by the lamp behind. But the disadvantages of this mode are acknowledged; such as the loss of light, partly from its absorption by the reflector, and partly from the inaccuracy and difficulty of increasing the intensity of the light in dark and hazy weather; the difficulty of forming distinguishing lights, &c. The important invention of the polygonal lenses, in which refraction is employed instead of reflection, seems, therefore, likely to supersede the use of reflectors. This subject is treated by Brewster (Transactions of the Royal Society of Edinburgh, vol. xi.), and by M. Fresnel, in a memoir read before the academy of sciences at Paris—Sur un nouveau Systeme d’Eclairage des Phares (1822)—and the imperfections of the parabolic reflectors, and the superiority of the polygonal lenses over others, are explained. Another important problem is the construction of distinguishing lights, so that the mariner may not be deceived in taking one lighthouse for another. Single and double stationary lights, or lights disposed in different forms, were first employed with good effect, but the adoption, which appeared and disappeared at intervals, and these are sometimes exhibited double or triple. The lights may be so disposed as only to illuminate the safe channel. Difference of colour is sometimes made use of as a distinction. It sometimes becomes desirable, as in hazy weather, to produce a very intense light. A plan was proposed, to effect this object, by lieutenant Drummond (Philosoph. Trans., 1826), by directing upon a ball of chalk, a quarter of an inch in diameter, three alcoholic flames, by means of a stream of oxygen. The employment of gas, in lighthouses, has also been recommended. Flares of white light diffuse in the preceding, by its being erected on board a vessel, which is strongly moored upon a sand or shallow, to warn ships against approaching it.

A select committee of the house of commons was appointed early in the year 1834 to inquire into the present state of British lighthouses; and the following are the views of the directors as stated in their petitions to parliament, and as recorded in the minutes of the committee:—1. That all private concern in lighthouse property should cease. 2. The exclusive appropriation to lighthouse purposes of all funds collected by lighthouse duties. 3. The coast lines to be limited to the amount required for lights. 4. No exemptions from payment of dues by vessels using the lights; and that steamers, coasting and fishing vessels, be taxe at less rates than overseas vessels. 5. Collection of the dues in the hands of government. 6. A consolidation of the boards, and a uniform scale of rates applicable to the whole United Kingdom—and 7. A reduction of expense, and the rates generally. In addition to the above suggestions, the directors recommended the trial of an experiment in the hands of government to prove the merits of the lens system of illuminating lighthouses, as now extensively practised in France, in comparison with that of parabolic reflectors, used hitherto in this country. The experiments at Gulane Point were not such as to put this long disputed matter fully at rest. On these occasions, the lights were illuminated by gas only, without the assisting apparatus of subsidiary lenses and mirrors, as described in the work of M. Fresnel. From a correspondence entered into with scientific men in this country and France, and likewise from the obvious lessons of the different boards to the directors, this subject has been discussed by the expediency of conducting an experiment in the hands of neutral persons; and subsequent compar-
LIGHT INFANTRY—LILBURNE.

Ligouri was, in 1762, appointed bishop of Santa Agata de' Gotici (in the Principato Ultra), by Clement XIII., from which office he was released by Pius VI., in 1775, at his own request, being old, sickly, and so exhausted by fasting and penance, that he was no longer able to perform the duties of his office. He retired to the chief foundation of his order, at Nocera de' Pagani, and died there, Aug. 1, 1787, at the advanced age of ninety years. Since 1816, his name has been enrolled in the Roman calendar of saints. In his writings, which are of an ascetic character, many remarkable saints have appeared, partly at Naples, and partly at Venice.

Liguria, with the Romans, was that portion of the north of Italy, extending along the Mediterranean, from the borders of France to the city of Leghorn, and bounded, on the north, by the river Po. In 1797, the aristocratic republic of Genoa received from Bonaparte a democratic constitution, under the appellation of the Ligurian republic. This republic ceased to exist in 1806, when the emperor incorporated it with France. Since 1814, it has formed part of the kingdom of Italy.

Lilac (syringa). This beautiful and familiar shrub, the ornament of our gardens, is a native of Persia and the surrounding countries. It belongs to the diandria monogeny of Linneus, and to the natural family Jasminaceae, in which are included the oleander, the olive, the haw, and the jasmine. The corolla is funnel-shaped, and divided into four segments; the leaves are opposite; and the flowers are agreeably scented, and disposed in large pyramidal racemes, of a bluish or purplish colour. It is of easy culture. Three other species of syringa are known.

Lilburne (John), a reformer; during the time of Charles I. and Cromwell, was born in 1618, and placed with a clothier in London. Of a bold, unquiet, and forward temper, one of his first exploits was to summon his master before the city chamberlain for ill usage. He employed his leisure in studying the religious systems and controversies of the time; and the Book of Martyrs, in particular, inspired him with an enthusiastic passion for encountering all sorts of danger in the cause of truth. Dr Bastwick, then under star-chamber prosecution, employed him to get anti-episcopal strictures printed in Holland. On his return, he employed himself in similar occupations, but, being betrayed by an associate, he was tried before the star-chamber, where his deportation was so firm that he acquired the appellation of free born John. He was doomed to receive 500 lashes, and stand in the pillory, which sentence was executed, in April, 1638, with great severity. On the meeting of the long parliament, a vote passed by the house of commons, pronouncing the sentence against Mr Lilburne barbarous and illegal, and that reparation should be made to him for his sufferings and losses. He then served in the parliamentary army. Dislike to the measures of Fairfax and Cromwell, induced him soon after to lay down his sword, but it was only to take up the pen against all whose political conduct offended him. Being committed to Newgate for contempt, when brought before the house of lords for a libel on the earl of Manchester, he contrived, while thus immured, to publish pamphlets in rapid succession, in which he virulently assailed his enemies, and even made a charge of high treason against Cromwell and Ireton. For this he was ordered to be tried for seditionary practices; but so active and numerous were his friends among the people, that, in 1648, the house of commons thought fit to discharge him, and make an order for reconvoking the house of commons in which his son-in-law (the Trappists) had been expelled. They subsequently appeared in the Austrian dominions, and even in the capital, where they now have a rich establishment.
appear to Cromwell and his council, that he was again committed for high treason, but, being tried before a special committee, the jury boldly acquitted him, whereupon the Parliament induced that body to pass a heavy fine on him, with an order to quit the country; on which he retired to Holland, until it was dissolved, when he used all his interest to gain a passport, but not succeeding, he ventured home without one. Being apprehended, he was tried at the Old Bailey, and once more tried at the Old Bailey, where he defended himself so ably that he was once more acquitted. He then settled at Eltham, in Kent, became a Quaker, and preached at the meetings of that body at Woolwich, until his death in 1657, at the early age of thirty-nine.

LILLY, COMTE DE; the name which Monsieur (comte de Provence, afterwards Louis XVIII) adopted when he emigrated, during the life of Louis XVI. He was styled thus also by the French imperial government, and in the Moniteur.

LILLO, George, an English tragic poet, born 1693, in London. He was by trade a jeweller, but, notwithstanding his attention to business, he dedicated a considerable portion of his time to the cultivation of the drama. Fielding, the author of Tom Jones, himself a dramatist, and the contemporary of Lillo, bears strong testimony to the integrity of his heart, as well as to the excellence of his social qualities. An edition of his plays was published, in 1775, by Davies, in two volumes, 12mo. The principal are George Barnwell, or the London Prentice, a tragedy founded on an incident in domestic life, said to have taken place at Camberwell (this play, till within these few years, it was always customary to represent on lord mayor’s day); Fatal Curiosity, also, said to be founded in fact; Arden of Faversham, which was certainly so; and Elmeric.

LILLY, John, a dramatic writer, born about 1553, studied at Oxford and Cambridge. He attempted to reform and purify the English language in two fantastic productions entitled Euphues and his England (1589), and Euphues and his Anatomy of Wit (1584), which met with great success. Specimen of Euphuism may be seen in the character of Sir Pierce Saffron, in the Monastery of Sir Walter Scott. Lilly was the founder of Lillo, born 1632, and fathered of Linneaus. Lillo married Miss Margrave, and her partner entertained Pappé with a hatchet, published about 1689, and attributed to Nashe. See Warton’s Hist. of English Poetry; Ellis’s Specimens.

LILLY, William, a famous English astrologer, born at Diss, in Leicestershire, in 1693, went early to London, where his necessities obliged him to article himself as servant to a mantua-maker, in St. Clement Danes. In 1624, he became book-keeper to a tradesman who could not write, on whose death he married his widow, with a fortune of £1000. In 1638, he turned his attention to astrology; and he gave the public a specimen of his skill, by an assurance, in 1638, that the king had chosen an unlucky horse for his coronation in Scotland. About this time, he procured a manuscript copy of a book by Cornelius Agrippa, entitled Ars Notoria, from which he imbibed the doctrine of the magic circle, and innovation of demons. In the same year, 1638, he was allowed, by the dean of Westminster, to assist David Ramsay, the king’s clock-maker, in search of a hidden treasure in Westminster abbey, another associate being found in one John Scott, who pretended to understand the mystery of miners’ divine rings. The three worthies accordingly made the experiment on the night appointed, and, after digging up a coffin to no purpose, they were frightened from the place by a violent storm, which Lilly, in the sequel, attributed to demons, whom he had found means to dismiss. In 1644, he published his Mercurius Anglicus, which he continued, annually, until his death. Having acquired the friendship of Buckingham, which he afterwards forfeited, he had access to the interests of the parliament, although he occasionally varied his predictions, in order the more easily to impose on the credulity of the age. In the year 1648, Lilly and Booker, another astrologer, were sent to the camp at Colchester, to encourage the soldiers by their predictions; and much was his reputation, that he was rewarded for his various services (one of which was obtaining secret intelligence from France) with a pension of £100 per annum. About this time, he read public lectures on astrology, and succeeded so well, that he was enabled to lay out £2000 in fee-farm rents at Horsham. In 1659, such was the spirit of the age, he received the present of a golden chain from the king of Sweden, whom he had mentioned with great respect in his almanac. On the restoration, Lilly was taken into custody by order of parliament, as one of the depositaries of the secrets of the republic; and his valued containing papers, which he beheaded the king, when he declared that he had been informed that comet Joyce acted as the executioner. A short time after, he sued out his pardon under the great seal, and retired to Horsham. In 1666, some of the members, suspecting, from the strenuousness of his predictions, that he might know something of the causes of the great fire which followed its publication, had him sent for to a committee of inquiry, when he asserted that he had certainly foreseen the event, but could say nothing as to the cause. His life, lately republished, is a very entertaining production, as he does, between truth and falsehood, and seldom indulging in more of the latter than is necessary to support his character as an astrologer.

LILY: a magnificent genus of plants belonging to the *heraeria monogynia* of Linnaeus. The root is a scaly bulb; the leaves simple, scattered, or ver- ticillate; the stem herbaceous, simple, and bearing, at the summit, very large, and elegantly formed flowers. The corolla is campanulate, and consists of six petals, which are often reflexed at the extremity. Among the most beautiful of the species, and indeed of all our genus, are the *L. Martagon*, the *L. chalcedonica*, the *L. martagon*, or Turk’s cap; and the *L. tigrinum*—all indigenous to Europe. The finest American species is the *L. superbum*, which grows, in marshes, to the height of six or eight feet, bearing reflexed orange flowers spotted with black, which, when numerous on the same stem, make a splendid appearance.

The lily has always held a prominent place in emblematic language. In the middle ages, and in modern times, the white lily has been the emblem of chastity. Hence the Virgin Mary is often represented with a lily in her hand, or by her side. Garcia, the sixth king of Navarre established an order of the lily in 1498, in honour of the Virgin, because her picture had been found on a lily at Nogera, the royal residence. In the beginning of the fifteenth century, Ferdinand I. of Arragon founded an order of the lily or flower-pots, the knights of which wore a double chain, consisting of flower-pots filled with white lilies. The lily, or, rather, the fleur-de-lis, as is well known, is the emblem of the Bourbon, and of many other families. The form is well known, and there are various opinions respecting the origin of this emblem. Some think that the figure of the lily represented the hands of labourers, which they certainly much resemble. Some take them for the flowers of the iris, which grow on the river Lys. They have even been taken for bees, or for toads. They
were adopted, in 1179, by Louis VII. Phillip-Augus-
tus first used them on the royal seals. The settled
use of three fleurs-de-lis began with Charles VI.
With the duchy of Burgundy, which Charles enter-
ted France, in 1814, the lily became a party
emblem. The adherents of the Bourbons wore a
lily in the button-hole, suspended by a white riband.
The French government subsequently distributed
them with much profusion, on various occasions ; as
soldiers were supplied with them at public examinations.
After the battle of Waterloo, Louis XVII., offered
Blucher to give the lily to every Prussian soldier; but
he declined the honour. During the revolution of
1830, the lily was not attacked, as the memory of
Louis the XVIII., was respected ; but when the Car-
lists publicly celebrated the day of baptism of the
duke of Bourdeaux, the people, indignant at such a
scene, destroyed the lily wherever it could be found.
The government (Casimir Perrier being prime minis-
ter) ordered all the crosses and the lilies to be removed
from the public edifices, &c., though it had just
before been in central palace, in which are introduced the fleurs-
de-lis upon the tricolored banners.

LIMA, the capital of the republic of Peru, for-
merly called Ciudad de los Reyes (city of kings),
is situated on the river Rimac, from which its present
name is derived by a corrupt pronunciation, about ten
English miles from the Pacific Ocean. It is in
12° 2' S.; population, according to Caldeleagne
(Travels in South America), in 1824, 70,000; accord-
ing to Stewart, who visited it in 1829, 50,000.
It is about 700 feet above the level of the sea, and
presents a beautiful appearance from Callao, its port. The
entrance is by a beautiful avenue, or public walk, called
the alameda, at the end of which was a handsome
gate, now in ruins. Pizarro, in laying out the city,
distributed the spaces for the houses into quarters, of
150 varas, or Spanish yards. The streets are broad,
and uniformly intersect each other at right angles,
ranging either from north to south or from east to
west. Small streams of water, conducted from the
river above the town, and arched over, contribute
to its cleanliness. On the opposite side of the river,
connected with the city by a bridge, is the suburb
of St Lazarus. In consequence of the frequency of the
earthquakes by which Lima has suffered, the houses
are built in a quadrangular form, and are generally
commonly built of wood, with flat roofs, from which
construction no inconvenience arises, in a country
where rain is unknown. The houses of the rich
are built in a Moorish style, introduced from Spain.
They consist of a square pile, of the height above
mentioned, enclosing a quadrangular court, which is
surrounded with piazzas, and sometimes contains a
second, or even third inner court. The Plaza, or
great square, in the centre of the city, is surrounded
partly with shops, and partly with public buildings,
among which are the cathedral, and the government,
orce, once central palace, in which are shown the hall
of assassination, where Pizarro was assassinated,
and the hall of independence. The riches which
have been lavished on the cathedral are almost
beyond belief, any where but in a city which once paved
a street with gold and silver, in honour of a new
viceoy. The cabildo, or city-house, built in the
Chinese style, the archiepiscopal palace, the mint,
the palace of the inquisition (part of which is now
occupied as a national museum), and the convent of
the Franciscans, said to cover an eighth of the whole
city, which Mr Stewart found, though not entirely
are worthy of notice. Previously to the late changes,
the number of monks in Lima was reckoned at 1200,
but they are now very few. There are fourteen
convents for women, and a number of coasas de exer-
cicio, into which ladies retire for two or three weeks,
to perform various acts of piouence. A university
was founded at Lima in 1551, which obtained from
the crown of Spain, the same privileges as that of
Salamanca. There are many schools, both public
and private, of which the cleri and young men are
generally well educated, and the women are
celebrated for their vivacit and beauty. Both sexes
smoke; and this practice is excused, under the pre-
tent that it is rendered necessary by the mists
and drizzle (called, by sailors, Peruvian dew), which
prevail at certain seasons. The manners of the people
are so loose as to be proverbial in that part of the
world. Music, bull-fights, and cards are the principal
amusements; dancing, which is a favourite in many of
the southern republics, not being popular with the
Limianns. The Spaniards of Lima are at present
almost all Creoles, the Chapasenes, or European
Spaniards, having left the country during the troubles.
In 1824, there were 15,000 slaves in the city;
but the new Peruvian constitution of 1828 abolished
slavery. Lima has been repeatedly laid in ruins by
earthquakes, more than twenty of which it has
experienced since 1800. The most destructive of
those in 1881, 1890, 1865, 1878, when a great part
of the city was totally destroyed; those in 1857,
1746, when not more than twenty houses out of 3000
were left standing, and of twenty-three ships in
the harbour of Callao, nineteen were sunk; those in
1764, 1782, and 1829, the two latter of which were
very destructive. For the political events of which
Lima has recently been the theatre, see La Mar, and
Peru.

LIMB ; the outermost border, or graduated edge
of a quadrant, astrolobe, or such like mathematical
instruments. The word is also used for the arch of
the primitive circle, in any projection of the sphere
in plano. Limb also signifies the outermost border
or edge of the sun and moon; as the upper limb or
edge, the lower limb, the preceding limb, or side, the
following limb.

LIMBO (from the Latin limbus, edge, border)
signifies, in the Roman Catholic theology, the place
on the borders of hell, where the patriarchs remained,
until the advent of Christ, who, before his resurrec-
tion, appeared to them, and opened the doors of
heaven for them. It is not a dogma of the church,
but is usually adopted by the Roman Catholics.
The word limbus is neither found in the Bible, nor
in the ancient fathers of the church; yet, as St Paul
says that Christ descended to the lower parts of
the earth (Ephes., c. 4, v. 9), it is concluded that
that good and bad were there; and as the parable of
the rich man says, that, between Abraham and Laarsa
and the rich man, a great gulf was fixed, it is concluded
that the good in those regions were not only not
tormented, but were separated from the wicked.
This limbo is called limbus patrum. Some theologians
adopt a limbus infantum, where those infants, who
died without being baptized, go; but those who fol-
low St Augustine do not allow this separation of
them from the damned, though they do not believe
that they are tormented like the latter. It is not
known when the word limbus first came into use;
but, as inferi (hell) seemed to convey the idea of
eternal damnation as a punishment, a milder term
was adopted. Dante, in his great poem, allows
the virtuous heathens to dwell in the limbus: thus he finds
Socrates there.

Limbo, figuratively, means any place of confine
ment or restraint. Milton's limbo—" large and
unknown," —is borrowed from the limbus of the scholastic theologians, and Ariosto's receptacle of lost
things.

LIMBURG; the name of several places and pro-
vinces, of which we shall only mention the province
of the Netherlands, containing 1,600 square miles, and 293,000 inhabitants, chiefly Catholics. The Walloon, Flemish, Dutch, and German languages are spoken. The principal rivers are the Lys and Meuse. Magnesia and limestone constitute the chief limestone. The celebrated Limburg cheese is made at Limburg, a place in the circle of Verviers, province of Liege.

LIME, or LINDEN (tilia). The species of linden are large trees, with alternate, simple, and coriaceous leaves disposed in a common peduncle, which is inserted in the middle of a foliaceous bract. The American lime, or bass-wood, is a large and beautiful tree, inhabiting Canada and the northern parts of the Union, and very abundant on the borders of lakes Erie and Ontario. The leaves are cordate, acuminate, serrate, and smooth. The flowers are yellowish, supported on long, pendulous peduncles, and add much to the beauty of the tree. The wood is white and soft, and is used for a few unimportant purposes. The wood of the European lime, though light and soft, is smooth, close-grained, and much used by carvers and turners. It is in general practice to obtain from it, by means of the chips, and to make excellent charcoal for gunpowder, and for printers. In some countries, the fibrous, inner bark is separated by soaking in water, and manufactured into fishing-nets, mats, shoes, and clothing; and the cordage made from it is said to be remarkably strong and elastic. This wood is sometimes cut into thin strips, and used in the manufacture of chip hats, which resemble those made of straw.

LIME. This earth, well known in its most important properties, from the remotest antiquity, exists in great abundance in nature. In treating of it in the present article, we shall first describe its chemical properties, and afterwards speak of its natural combinations with the acids, or of the minerals to which it gives rise. Lime is obtained with most facility from the native carbonate, from which, by a strong heat, the carbonic acid may be expelled. This process is conducted on a large scale with the different varieties of limestone, which are calcined or burned, in order to obtain the caustic earth, or quick-lime, as it is called. The lime thus obtained, however, is rarely pure enough for chemical purposes. The chemist, therefore, when he would obtain a very perfect article, calcines transparent crystals of carbonic acid, obtained from the following manner. Marble or chalk is dissolved in dilute muriatic acid, leaving an excess of lime undissolved; ammonia is added, which precipitates any alumine or magnesia. The filtered solution is then decomposed by carbonate of potash, and the carbonate of lime, being washed with water and dried, is decomposed by a strong heat. The lime thus obtained is a soft, white substance, of the specific gravity of 2.3. It requires an intense degree of heat for its fusion, which is effected only by the galvanic current, by the compound blowpipe, or by a stream of oxygen gas, directed through the flame of an alcohol lamp. The light it emits, during fusion, is the strongest the chemist can produce; and it has, accordingly, been employed for a signal light, and for facilitating the observation of distant stations, in geodetical operations. Its taste is caustic, astrigent and alkaline. It is soluble in 430 parts of water, according to a formula obtained by the following other chemists. The solubility is not increased by heat. If a little water only be sprinkled on new-burned lime, it is rapidly absorbed, with the evolution of much heat and vapour. This constitutes the phenomenon of slacking. The heat proceeds from the consolidation of the liquid water into the lime, forming a hydrate, as slacked lime is now called. It is a compound of 3·5 parts of lime with 1·25 of water, or very nearly 3 to 1. The water may be expelled by a red heat.

Lime-water is astringent, and somewhat acid to the taste. It is vegetable in its nature, yellow, brown, and resembling to reddened litmus its usual purple colour. When lime-water stands exposed to the air, it gradually attracts carbonic acid, and becomes an insoluble carbonate, while the water remains pure. If lime-water be placed in a capacious bucket, and covered, which is the ordinary practice of the wiper of concentrated sulphuric acid, the water will be gradually withdrawn from the lime, which will continue to small six-sided prisms. Lime, submitted to the action of galvanism, in high intensity, afforded Sir H. Davy satisfactory evidence of its compound nature. It was discovered, in common with the other earths, to consist of a metallic base, which he denominated calcium, and oxygen. The calcium was obtained, in these experiments, in the state of amalgamation with mercury. On exposing the amalgam to the air or to water, oxygen was absorbed, and lime re-produced. In an experiment designed to obtain phosphorus, a piece of lime, containing quicksilver from it, the tube broke while warm, and, at the moment that the air entered, the metal, which had the colour and lustre of silver, took fire, and burned with an intense white light. Lime, it used to be supposed, combined with sulphur and with phosphorus; but rather and almost that it is its base, that unites with these inflammables. The sulphuret of calcium is formed by heating sulphur with lime in a covered crucible. It is of a reddish-yellow colour. When thrown into water, mutual decomposition takes place, and a sulphureted hydro-sulphuret, of a yellow colour, with a fetid odour, is produced. Phosphuret of calcium, or phosphuret of lime, as it has usually been called, is obtained in the following manner: a few pieces of phosphorus are placed at the bottom of a glass tube, which is then filled with small pieces of lime. The part of the tube where the lime is, is heated red-hot; and the phosphorus is then sublimed by heat. Its vapour, passing over the lime, decomposes it, and a reddish coloured phosphuret of calcium is formed. This substance is remarkable for decomposing water, whenever it is dropped into it, causing an immediate production of phosphureted hydrogen, which takes fire at the surface of the water. When lime is heated strongly in a current of carbonic acid, the chlorine is absorbed. For every two parts in volume of chlorine that disappear, one of oxygen is obtained. When liquid muriate of lime is evaporated to dryness, and ignited, it forms the same substance, which is the chloride of calcium. It is a semi-transparent, crystalline substance; fusible at a strong red heat; a non-conductor of electricity; has a very bitter taste; rapidly absorbs water from the atmosphere, and is hence often employed, in chemical experiments, to deprive gases of any hydroscopic vapour existing in them.

Chlorine also combines directly with lime, forming the very important substance used in bleaching, formerly under the name of oxychloride of lime, but at present, and more correctly, called chloric chloride of lime. It is formed by passing chlorine gas over slaked lime. A great variety of apparatus has been, at different times, contrived for favouring the combination of chlorine with lime, or slaked lime. A chlorid of lime is still used in commerce. In the opinion of doctor Ure, who has given particular attention to this manufacture, the following construction for subjecting lime-powder to chlorine is the best: It consists of a large chamber, eight or nine feet high, built of siliceous sandstone, having the walls of the chamber secured with a cement composed of pitch, rosin and dry gypsum, in equal parts. A door is fitted into it at one end,
which can be made air-tight by strips of cloth and clay-lute. A long row of such side enables the operator to judge how the impregnation goes on, by the colour of the air, and also gives light for making the arrangements within at the commencement of the process. As water lutes are incomparably superior to all others, where the pneumatic pressure is small, a large valve, or door, upon this principle, is recommended to be made in the roof, and two tunnels, of considerable width, at the bottom of each side wall. The apartment would thus be ventilated, without the necessity of the workmen approaching the deleterious gas. A great number of wooden shelves, or rather troughs, between the two islands, and one inch deep, are provided to receive the sifted slackled line, containing, generally, about two atoms of lime to three of water. These shelves are piled one over another in the chamber, to the height of five or six feet, cross-bars below each keeping them an inch asunder, that the gas may have free room to circulate over the surface of the powder. The alem- bics for generating the chlorine, which are usually nearly spherical, are, in some cases, made entirely of lead; in others, of two hemispheres, joined together in the middle, the upper hemisphere being lead, the under one of cast iron. The two halves are first of all, entirely enclosed, for two thirds from its bottom, in a leaden or iron case, the interval of two inches between the two being destined to receive steam from an adjoining boiler. Those which consist below of cast-iron have their bottom directly exposed to a very gentle fire. Routed the outer edge of the iron hemisphere a groove is cast, into which the under edge of the leaden hemisphere fits, the joint being rendered air-tight by Roman or patent cement—a mixture of lime, clay and oxide of iron, separately calcined and reduced to a fine powder. It must be kept in close vessels, and mixed with wine in very warm water. In this leaden dome, there are four apertures, each secured by a water-lute. The first opening is about ten or twelve inches square, and is shut with a leaden valve, with incurved edges, that fit in the water channel, at the margin of the hole. It is destined for the admission of a workman to rectify any derangement in the apparatus of rotation, or to detach hard concrections of salt from the bottom. The second aper- ture is in the centre of the top. Here a tube of lead is fixed, which descends nearly to the bottom, and down through which the vertical axis passes, to which the pipes-bars of wrought iron are sheathed with lead, are attached; by whose revolution the materials receive the proper agitation for mixing the dense manganese with the sulphuric acid and salt. The motion is communicated either by the band of a workman, applied from time to time to a wheel at top, or it is given by connecting the axis with wheel-work, impelled by a stream of water or a steam-engine. The third opening admits the siphon- formed funnel, through which the sulphuric acid is introduced; and the fourth is the orifice of the education pipe. The proportion of the materials for generating the chlorine is as follows: 10 cwt. of salt are mixed with from 10 to 14 cwt. of manganese; to which mixture, after its introduction into the alembic, from 12 to 14 of sulphuric acid are added, in successive portions; that quantity of acid must, however, be previously diluted with water, till its specific gravity becomes 1.3, or a little more below. From all the alembics terminate in a leaden chest, or cylinder, with which they are connected by water-lutes, having a hydrostatic pressure of two or three inches. In this general diversorium, the chlorine is washed from adhering muratic acid, by passing through a line of water, and, from the reservoir, the gas is conducted off by one general pipe, and delivered into the top of the chamber containing the lime, where, in consequence of its being set, it diffuses itself evenly over powder spread out upon the shelves. Four days are required for making good marketable bleaching-powder. The manufacturer generally expects from one ton of rock salt, employed as above, a ton and a half of good, bleaching-powder. In using the chloride of lime for bleaching, the coloration of the cloth is first steeped in warm water, to clean it, and it is then repeatedly washed with a solution of cucistic potash, so diluted that it cannot injure the texture of the cloth, and which solution is thrown upon it by a pump. The cloth is then washed and steeped, twice or thrice, in weak acid, and one water-lute of bleaching powder; again washed, acted on by a boiling ley, as before, and again steeped in the solution; and these operations are performed alternately several times. The cloth is, lastly, immersed in very dilute sulphuric acid, which gives it a pure white colour; after which it is washed and dried. The chlorine is known to decompose water, whose hydrogen forms with it muratic acid, which is always found in the solution (after the process) when liquid chlorine is used, and a murate, when a chloride is employed. In a similar manner, it is believed to decompose the colouring matter of paper, and of whose elements is always hydrogen; and, its composition being thus sub- verted, it disappears from the fabric with which it existed. Still more important is the use of the chlori- ride of lime in counteracting contagion, and all noxious effluvia, MM. Ornith, Lescure, Gerdy, and Debaeille, having to examine the body of an individual who was supposed to have been poisoned, and who had been dead for nearly a month, found the smell so insupportable, that they were induced to try the application of the chloride of lime, as recom- mended by M. Labarraque. A solution of this substance was frequently sprinkled over the body, and produced the effect of destroying, after a few aspersions, every unpleasant odour. It was afterwards used in a still more desperate case, in clearing some offensive drums in Paris, with perfect suc- cess. It was also found to be the best and most durable means of disinfecting hospitals, &c. In such cases, the powder is so exposed to the infected region as to offer the greatest amount of surface, in order that the carbonic acid of the contagious atmo- sphere may expel the chlorine from the chloride of line, which it does by combining with it to form carbonates. A method of applying it to ordinary apartments, which are desirous to free from wholesome effluvia, is to diffuse about four ounces of the powder through five gallons of water, and sprinkle it over the floor by means of a water-pot. Lime combines with the acids, neutralising the acid properties. Its salts are, in general, decomposed by potash or soda, which precipitate the line, but not by ammonia. Oxalic acid throws down line from all the other acids; and, this compound being quite insoluble, oxalic acid forms the most delicate test of the presence of lime. Carbonate of line may be formed by adding car- bonic acid to limewater, or by decomposing any of the soluble salts of line by any of the alkaline carbonates. It is very sparingly soluble in water. Hence lime-water is an excellent test of the pres- ence of carbonate of line, if the water be of the softest, that is, only admixed with a small quantity of carbonic acid, carbonate of line is rendered sol- uble. When exposed to heat, it first loses what water it contains, and, if transparent and hard, becomes white, opaque, and friable. If the heat be augmented, the carbonic acid is expelled, and quick- line results. The experiments of Sir J. Hall have proved that if carbonate of line be heated under
LIME.

Strong pressure, so as to prevent the escape of the carbonic acid, it may be melted at a temperature even not higher than 220° of Wedgwood's scale. By this fusion, it acquires considerable hardness and closeness of texture, approaching, in these qualities, as well as in fracture and specific gravity, to the finer kinds of marble. The acids expel the carbonic acid with effervescence but this property in soils of effervescing strongly, on the contact of an acid, affords a discriminating character of this salt. Carbonate of lime abounds in nature.

Nitrate of lime may be formed by dissolving lime, or its carbonate, in dilute nitric acid. The solution, on cooling, deposits minute crystals, insoluble in water, but soluble in less than an equal weight of water, at the temperature of 60°, and in still less of boiling water. On being heated, it becomes phosphorescent, and retains this property when cold, forming Baldwin's solar phosphorus. It forms naturally in the plaster of old buildings.

Sulphate of lime is formed by adding lime to dilute sulphuric acid. It requires about 500 times its weight of water, at 60°, for its solution. At the temperature of 212°, it is more soluble, and this latter solution, on cooling, deposits minute crystals. Exposed to heat, it appears to effervescence, or boil, over, and finally turns into its water; and, at the same time, becomes opaque, and falls into a white powder which, on being diffused in water, speedily consolidates from a species of irregular crystallization. Sulphate of lime is one of the most abundant minerals in nature.

Phosphate of lime may be formed by decomposing the solution of an alkaline phosphate by muriate of lime. It is a white, insoluble powder, which is imperfectly vitrified by a very intense heat. It exists in the mineral kingdom, under different forms, and constitutes eighty-six per cent. of the bones of animals.

Muriate of lime is obtained by dissolving carbonate of lime in muriatic acid. It is extremely soluble in water, the water taking up so much of it as to become of a thick consistence.

Lime in Agriculture. Quicklime, in its pure state, whether in powder, or dissolved in water, is injurious to plants. Grass is killed by watering it with lime-water. But lime, in its state of combination with calcium, produces the most frequent effects of utility. When lime, whether freshly burned or slaked, is mixed with any moist, fibrous, vegetable matter, there is a strong action between the lime and the vegetable matter, and they form a kind of compost together, of which a part is usually soluble in water. By this means, manures, whether animal, vegetable, or mineral, are improved. Also charcoal and oxygen abound in all vegetable matters, the lime becomes converted into a carbonate. Mild lime, powdered limestone, marls, or chalks, have no action of this kind upon vegetable matter; by their action they prevent the too rapid decomposition of substances already dissolved; but they have no tendency to form soluble matter. From these circumstances, it is obvious, that the operation of quicklime and marl or chalk, depends upon principles altogether different. Quicklime, in the act of becoming mild, prepares soluble out of insoluble matter. It is upon this circumstance, that the operation of lime, in the preparation of wheat crops, depends, and its efficacy in fertilizing peats, and in bringing into a state of cultivation all soils abounding in hard roots, or dry fibres, or inert vegetable matter. The solution of the question, whether quicklime ought to be applied to a soil, depends upon the kind of the matter it contains. The solution of the question, whether marl, mild lime, or powdered limestone, ought to be applied, depends upon the quantity of calcareous matter already in the soil. All soils are improved by mild lime, and, ultimately, by quicklime, which do not effervescence with acids; and sands are more benefited by it than clays. When a soil, deficient in calcareous matter, contains much soluble, vegetable manure, the application of quicklime should always be avoided, as it either tends to decompose the soluble matters by uniting to their carbon and oxygen, so as to become mild lime, and combines with the soluble matters, and forms compounds having less attraction for water than the pure vegetable substance. The case is the same with respect to most animal manures; but the operation of the lime is different, in different cases, and depends upon the character of the manure. Whether it is the mixture of insoluble soap with oily matters, and then gradually decomposes them by separating from them oxygen and carbon. It combines, likewise, with the animal acids, and probably assists their decomposition by abstracting carbonateous matter from them, combined with oxygen; and consequently, it must render them less nutritious. It tends to diminish, likewise, the nutritive powers of albumen, from the same causes, and always destroys, to a certain extent, the efficacy of animal manures, either by combining with certain of their elements, or by giving to them new arrangements. Lime should never be applied with animal manures, whether manures, or to soil, for the purpose of preventing noxious effluvia. It is injurious when mixed with any common dung, tending to render the extractive matter insoluble. In those cases in which fermentation is useful to produce nutriment from vegetable substances, lime is always efficacious, as with tanners' bark. (For the use of lime in building, see Mortar.) Lime is much used by tanners, skinners, &c., in the preparation of their leather; by soap-boilers, for dissolving the oil, and facilitating its union with the alkaline salt; and by sugar-bakers, for refining their sugar. It is also of some medicinal use, being applied externally in digestive and epileptic medicines.

Native Salts of LIME, or Carbonate Minerals.—Of these, the first deserving of mention is the carbonate of lime, limestone, or rhomboidal limestone. This species, in mineralogy, is one which, from its wide distribution, and the immense masses in which it occurs, and its various arrangements, and its remarkable deposits, forms a subject of great interest. A single view of the vegetable kingdom, of its distribution, and of the different deposits of lime, must lead the mind to the geological consideration. It is necessary to outline the plan of the crystallographer as the present. To it we owe our first correct ideas of the internal structure of crystals, and the best theory of crystalization which has ever been suggested. Lustre vitreous; perfectly white colour, with different shades of gray, red, green, and yellow, and dark brown, and black colours, from foreign admixtures; streak grayish-white; transparent to translucent; double refraction very considerable and easily observed; brittle; hardness such as to admit of being easily compressed by the thumb; specific gravity, 2.72. Besides occurring in distinct crystals, it exists in stalactitic, botryoidal, and fruticoses shapes, with surfaces uneven, dry, rough or smooth; and composition columnar, more or less distinct, straight, diverging, and of various sizes. Stalactitic and botryoidal varieties are transparent or more or less so; their crystallographic particles, conformably to the surface of the imitative shape, the faces of composition being uneven and rough, or irregularly streaked in a longitudinal direction. It also occurs massive; the composition
being either columnar, in which the individuals are straight, parallel, or diverging, and often of remarkable delicacy; or the composition is granular, the individuals being of various sizes, and even impalpable. The individuals, in these varieties, cohere indissolubly, the cementable, the fracture becomes splintery, uneven, flat, conchoidal, or even; on a large scale, it is sometimes scaly. The fracture is earthy in those varieties in which the individuals cohere but slightly. The breaking up of this species into sub-species and varieties, without reference to the mineralogical peculiarities, has been resorted to by mineralogists, and has left us numerous particular denominations, and no little confusion, requires notice in this place. These distinctions, it will be seen, depended chiefly upon the mode of composition, and upon admixtures and impurities with which the individuals have been affected during their formation. Of these, limestone represents the greater part of the pure varieties of the species. The simple varieties, and those compound ones in which the individuals are of considerable size, and easily cleavable, have been called calcareous spar; compound varieties of granular, still discernible individuals, have been comprehended under the head of foliated limestone. If the granular composition disappear, compact limestone is formed, under which denomination the oolite, or roe-stone, was comprehended. The roundish grains, however, of the latter, consist of columnar individuals, disposed like the radii of a sphere, and frequently showing distinct traces of cleavage. Common fibrous limestone is produced by columnar composition, in massive varieties; the fibrous calcicwinter, by the same, but appearing in various imitative shapes. Peastone, or pisalite, consists of diverging columnar individuals, collected into curved lamellar ones, forming granular masses, which are again agglutinated by a calcareous cement. Each of the globules, generally, contains a fragment of some heterogeneous matter, as quartz, granite, &c. Compact limestone passes into chalk, when the individuals are more loosely connected with each other, so that the whole assumes an earthy appearance; and rock milk, or argoric mineral, is formed, if the mass contains so many interstices that it seems to possess but a small degree of specific gravity. Calcareous tufa, a recent deposit, formed on the surface of the earth, is often cleavable, and thus possesses some of the properties of calcareous spar. Slate spar is produced by a lamellar cement, in massive varieties, and often exhibits a pearly lustre. Stivestone, anthracolite, martz, and bituminous marlite are impure and mixed varieties, partly of calcareous spar, partly of compact limestone. The pure varieties of rhomboidal limestone consist of lime, 55, and carbonic acid, 43. Very often, the varieties contain variable proportions of oxide of iron, silica, magnesia, alumina, carbon, or bitumen. If pure, it is entirely soluble in nitric acid, during which a brisk effervescence takes place. In the common fire, it is infusible, but loses its carbonate, and becomes burned, or quicklime. Limestone rarely enters into the composition of rocks: in most cases, the more considerable masses of it form particular beds in other rocks, or constitute rocks themselves; the latter consist chiefly, though not exclusively, of compact limestone; the former of granular limestone. The simple varieties occur in drusy cavities, more frequently in veins than in beds, accompanied with the varieties of different species. Calcareous tufa and rock-milk, being of a sintery formation, occur upon the surface, and in fissures of limestone rocks. The former is often produced by calcareous springs and other waters. The mixed, or impure varieties occur in particular strata, between those of compound varieties of other species. It very often occurs in petrifications, imbedded in compact varieties of the same species. Rhomboidal limestone, as it has already been remarked, is a species very widely diffused in nature; several of its varieties have been described in the impetuous mass of mountains, in many countries. This is particularly true in Switzerland, Italy, Carniola, Carinthia, Salzburg, Stria, Austria and Bavaria, and in several parts of America. Of crystalized varieties, the most remarkable occur in Derbyshire and Cumberland, in the country of Saxony and Norway, in Austria, in Carinthia, Stria, Hungary and France, and, in the United States, at Lockport in New York, forming geodes in compact limestone. Iceland is the locality of the purest and most transparent varieties, from whence come the best pieces of the doubly-refracting spar. The crystallized sandstone of Fontainebleau, in France, is a variety of rhomboidal limestone, mechanically mixed with sand. Slate-spar occurs in Saxony, Norway and Cornwall. Pisolite is found in Carniola, and at Carlshad in Bohemia. Most of the varieties are so common as to render the mention of their localities unnecessary. Several varieties have been combined in the present species, according to their uses, partly depending upon their mechanical, partly upon their chemical composition. Those used in sculpture and in ornamental architecture, are called marble; the more common or coarse varieties are used for the common purpose of building; a peculiar variety of very fine-grained compact limestone is used for plates in lithography. The best sort is found near Pappenheim and Sohlenhofen, in Bavaria, Quicklime mixed with sand and water forms mortar. Carbonic acid, for chemical purposes, is often obtained from chalk or marble powder. It is also a valuable addition in several processes of melting ores, and in producing certain kinds of glass. There is another species, in mineralogy, called Arragonite, which was formerly confounded with that just described. In composition, it is scarcely distinguished from rhomboidal limestone, the most accurate analysis having been unable to make known more than from 5 to 4:1 of carbonate of stronitites in its composition, besides carbonate of lime. Its crystallization, and other characters, however, sufficiently characterize it as distinct from limestone. It occurs in crystals, which, at first sight, appear to be regular six-sided prisms. These inspections will discover a longitudinal crenwelve down each lateral face, and somewhat similar appearances converging in the centre of the terminal planes. It also occurs in prismatic crystals, of four or six sides, terminated by planes, the prisms often being so short as to impart to the crystal the general form of an octahedron; these are rarely separate, but mostly cross each other at particular angles. Its crystals yield to mechanical division, parallel to the lateral planes of a right rhombic prism of 116° 5' and 63° 55', by measurement taken with the reflective goniometer, on cleavage planes. Lustre vireous, inclining to resinous, upon faces of fracture of a perfect white, sometimes passing into gray, yellow, or mountain green; transparent or translucent; brittle; hardness such as to scratch calcareous spar; specific gravity, 2.93. It is very liable to occur in globular, reniform, and coralloidal shapes, and massive, with a columnar composition. Imbedded crystals, generally twins, or consisting of a greater number of individuals, are found in compound varieties of gypsum, mixed and coloured with oxide of iron, accompanied with crystals of ferruginous quartz. Other varieties occur in beds of pyena, rising in low reliefs, in lavas, also in irregular beds and veins. It is found in beds of iron ores, in those coralloidal
LIME.—LIMERICK.

Varieties which have been called *jussuerris,* also massive and crystallized. The first, though they occur on cavities and fissures, are not products of a stalactitic formation. The most beautiful crystals, well defined and transparent, occur near Bilin, in Bohemia, in a vein traversing basalt, and filled with a massive variety of the same species, consisting of large prismatic blades of *jussuerris.* Variegated varieties imbedded in gypsum have been found in the kingdom of Arragon, in Spain, from whence the name *Arragonite* has been derived. Its chief localities are the iron mines of Stria, Carinthia and Hungary, and the metallic veins of the Pyrenees and Great Britain.

*Salphte of lime*, or gypsum, is a mineral little less extensively diffused than limestone, forming immense beds and veins, in numerous countries. It presents us with a very considerable diversity of crystals, which have, for their primary form, a right-oblique-angled prism, of which the bases are oblique-angled parallelograms of 115° 8' and 65° 52'. The crystals are either prismatic or lens-shaped, in their general aspect. Lustre vitreous, inclining to pearly; colour white, sometimes inclining and passing into small-blue, flesh-red, ochre-yellow, honey-yellow, and several shades of gray; sometimes more dark-red, rose-red, or brownish-red tinges. Translucent or transparent; sectile; specific gravity, 2.31. It occurs massive, in globular masses, in which the individuals are discernible; also granular, passing into impalpable. Those varieties of sulphate of lime which are pure, transparent, and perfectly formed, were formerly called *seulite,* while the more massive and impure varieties were denominated *gypsum.* The latter was again divided into several sub-species, comprehending, almost exclusively, compound varieties, which were easily distinguishable from each other, as their division depended upon the size of the grain, or composition in general. Thus *foliated gypsum* consists of discernible granular particles; *compact gypsum,* of impalpable particles of composition; *sealy foliated gypsum* consists of minute scaly particles; *earthy gypsum,* of a mealy powder; very thin columnar composition produces *fibrous gypsum.* Before this is done, gypsum exfoliates and falls, together with different species of a white encele powder, which, after a short time, falls to powder. In a lower degree of heat, it loses its water, and becomes friable, so as to be easily reduced to an impalpable powder. If mixed with water, this powder becomes warm, and soon hardens into a solid mass. It is composed of lime, 33.0, sulphuric acid, 44.8, and water, 21.0. The massive varieties of this species occur in beds, of a considerable thickness, in secondary districts, in connexion with compact limestone, different kinds of sandstone and clay, in alternating layers, in the latter of which the gypsum sometimes exists imbedded masses, or crystalline groups. It is not rare to find veins of rock-salt in its vicinity; and brine springs very often issue from the contiguous rocks. Of the organic remains found in gypsum, those of extinct species of terrestrial quadrupeds, in the Montmartre, near Paris, are the most remarkable. It occurs in a great many countries, particularly in Germany, Switzerland, Austria, Poland, Britain, France, and Spain; in North America, in the United States, at Niagara falls, Lockport, and particularly in the vicinity of Cayuga lake; and in New Brunswick and Nova Scotia. Gypsum is variously employed in manufacturing artificial marble, stucco-work, mortar, &c.; also for making casts of statues, medals, &c. It is added to the mass of certain kinds of porcelain and glass. In sculpture, it is used under the name of *alabaster.* But next to its use in the formation of elements, is the use which is made of it in agriculture. It appears to have been first used as a manure in Germany, and afterwards in France. It was formerly calcined, but is now ground in mills, after the manner of grain. It is particularly adapted to sandy soils and grass lands. Another species of the same composition with the gypsum, except the water, is called *calcite* (p. r.). It is of comparatively rare occurrence.

*Phosphate of lime,* or *apatite,* is found crystallized in six-sided prisms, terminated by one or more planes, or the prism is terminated by a six-sided pyramid, and the lateral edges are sometimes replaced by numerous steps. It yields with difficulty to cleavage, parallel to the side of a regular six-sided prism, which is therefore considered as its primitive form. Lustre vitreous, inclining to resinous; colour white, passing into blue, green, yellow, red, and brown; translucent or translucent; brittle; hardness above that of fluors; specific gravity, 3.22. It also occurs massive. When in fine powder, it is slowly dissolved in nitric acid, and without effervescence. Some varieties are phosphorescent upon ignited charcoal, and before the blowpipe; others even when rubbed with hard bodies. It does not melt alone, before the blowpipe. It is composed of lime, 55.0, phosphoric acid, 45.0, and phuric acid, 0.4; and the veins of iron and tin ores. Its principal localities are Saxony, Bohemia, Salzburg and Cabo de Gata, in Spain; from which latter place very beautiful, fully crystallized specimens are obtained, and which have received, from their colour, the name of *aspara- gus stone.* It is also found at St Gothard, and in Devonshire and Cornwall.

*Plaste of lime.* See *Flour.*

*Tungstate of lime,* or *tungsten,* occurs massive, and crystallized in the form of an octahedron with a square base. Lustre vitreous, inclining to adamantine; colour generally white, inclining to yellowish-gray; translucent or transparent; brittle; hardness that of fluor; specific gravity, 6; insipid before the blowpipe. It consists of lime, 19.40, oxide of tungsten, 80.42. It is found in Bohemia, Saxony and Cornwall.

*Barate of lime.* See *Borace Acid.*

*Arseniate of lime,* or *pharmaconiata,* is a very rare species, containing a small quantity of arsenic, and no quantity of *Arrasienburg,* in the Hartz, and at one or two other places in Europe. It occurs in minute fibres, or naciclar crystals, which are commonly aggregated into botryoidal or globular masses. Its colour is white, or greyish-white, though often tinged of a violet-red, by arsenic of cobalt, which accompanies it. Specific gravity, 2.9. It consists of lime, 25, arsenic acid, 50.54, and water, 24.46.

LIMERICK; one of the six counties included within the province of Munster, Ireland. It is bounded on the north by the river Shannon; on the south by the county of Cork; on the east by Tipperary, and on the west by Kerry. It is divided into two districts, from north to south, and 32 from east to west. The county raises to a considerable extent wheat, barley, oats, rape, and hemp. Population, in 1841, 281,638.

LIMERICK, the capital of the above county, is situated on the Shannon, 119 miles S.W. of Dublin and 63 N.W. of Cork. The principal public buildings are the custom-house, the cathedral, and the bishop's palace. The cathedral is of great antiquity. There are several charitable establishments; also a good public library, and a theatre. It contains four Protestant churches, and eight chapels for the Roman Catholics. There is also an extensive barracks for foot and four horses of troop. Limerick carries on manufactures of linen, wooden and paper. It was taken by the English in 1474. In 1661, it was taken by Ireton. In 1680, it was
LIMIT—LINCOLNSHIRE.

LIMES, or LIMING, is the use of lime for raising the pH of the soil. It is used in agriculture to improve soil fertility, especially in calcareous soils. Lime is often used in conjunction with other soil amendments to improve plant growth and yield.

LIMIT, in a restrained sense, is used by mathematicians for a determinate quantity, to which a variable one continually approaches; in which sense, the circle may be said to be the limit of its circumscribed and inscribed polygons. In algebra, the term limit is applied to two quantities, one of which is greater, and the other less, than another quantity; and, in this sense, it is used in speaking of the limits of equations, whereby their solution is much facilitated.

LIMING (from enluminer, French, to adorn books with paintings). As these paintings or illuminations were always executed in water-colours, liming properly designates that species of art which is now known by the name of miniature painting, though it is sometimes used to signify the art of painting generally, and particularly portrait painting.

LIMOGES (Augustoritum, or Lemovenium); a city of France, capital of the department of the Haute-Vienne, and formerly of the province of Limousin; lat. 45° 50' N.; lon. 1° 16' E.; episcopal see; 25,612 inhabitants. It is an ancient place, and contains some remains of the Roman city. The abbé de ville, cathedral, and episcopal palace, are the principal public buildings. It is also the seat of several literary establishments, and has woollen, linen and cotton manufactures, with paper works, tanneries and iron forges. Several fairs are held here. Birthplace of the Chancellor D'Aguesseau.

LIMONADE; a place and plantation in Hayti, very rich in sugar. It was elevated to a lordship by king Christophe, and bestowed upon his minister for foreign affairs, whom he made count de Limonade. With the death of Christophe, the count de Limonade returned to obscurity. Though ridiculed by whites, on account of his title, he showed talents in the conduct of his office. It is not true that Christophe killed him in 1817, as has been said.

LIMONADIERS; a very essential personage in a French cafe. See Coffee-Houses, under Coffee.

LIMOUSIN, or LIMOSIN; an ancient province in the centre of France. Limoges was the capital. It forms at present the chief part of the departments of Haute-Vienne and of Corrèze. See Department.

LINDEN, (the Lindum Colonia of the Romans), an ancient and once distinguished city of England, situated 132 miles N. W. from London. It is the capital of the county of Lincoln, and from the level nature of the surrounding country, its buildings, and especially the cathedral church, are advantageously seen in several directions at a considerable distance. Lincoln was at one time a place of great ecclesiastical importance; but of its fifty churches, eleven only, besides the cathedral, remain. The cathedral, a magnificent structure, is still in good preservation; but of the castle, built by William I., only a few ruins remain. Lincoln has an extensive trade in corn and wool. Population in 1831, 11,692; in 1841, 16,172.

LINCOLNSHIRE is a county of England, which extends from the German ocean from the Humber, its northern boundary, to the arm of the sea, called the Wash, that runs up between the coasts of Lincoln and Norfolk. It is bounded on the south by the counties of Cambridge and Northampton, and on the west by those of Rutland, Leicester, Nottingham,

and York. It extends seventy-seven miles from north to south, and about forty-eight from east to west; but is of SKU., a very small portion of whom are Protestants.

LIMIT, in the last sense, comprehends the whole of the county, north of the Fossdyke and the river Witham. Towards the north-east is a large tract of heathy land, called the Wolds, extending from Barton-on-the-Humber to Spilsby, consisting principally of sandy loam and flint; and on the western side the substratum is a sandy rock. Throughout this tract are bred large flocks of sheep, of a kind distinguished for their long thick wool, much used in the manufacture of worsted and coarse woollens. Here also were formerly kept a great number of rabbits, their skins and fur being valuable articles of commerce; but the rabbit-warrens in many places have been destroyed by late years, and the ground broken up for tillage. The north-western part of Lindsey includes the river valley of Axlholme, formed by branches of the Trent, the Dun, and the Idle, a low fertile tract, in which flax is much cultivated, as also hemp, rape, and turnip-seed. The district of Kesteven contains the western part of the county, from near the centre to the southern extremity. Its soil is much more fertile, but though some tracts of heath occur, it is on the whole a fruitful country; the heaths, particularly those of Ancaster and Lincoln, having been enclosed and cultivated. The principal river of Kesteven is the Witham, which rises near Grantham, and flowing north-east to Lincoln, makes a semicircular sweep, and taking its course south-eastward, falls into the German Ocean, below Boston. It is in the former part of its channel a shallow stream, but becomes navigable at Lincoln, where it communicates with the Fossdyke. The jack, or pike, is a fish said to be very abundant in this river. The fens, for which Lincolnshire is noted, are partly in the district of Kesteven, but by far the larger portion of them belongs to the district of Holland, so called from its characteristical feature, being hollow or low land, like the province of the Dutch Netherlands bearing a similar appellation. This part of the county is smaller than either of the two preceding; occupying the south-eastern quarter, bordered on one side by the shallow inlet of the sea, called the Wash. Holland consists of two divisions, upper and lower, both composed of fens and marshes, many of which have been reclaimed, and converted to the purposes of agriculture; it is the most extensive, thick and sandy, and is cultivated chiefly with potatoes and turnips, together with raised causes. The lower, or southern division, is the most watery, and is only protected from the devastating effects of inundations by immense embankments on the sea-coasts and the borders of the rivers. Where the operations of draining have been carried into effect, the air though damp, is not unwholesome, and hence intermittent fevers, rheumatism, and other diseases of marshy countries, have become comparatively unusual. Among the undrained fens are bred vast flocks of geese, which form a considerable source of commerce, on account of their quills and feathers, and also as an article of provision. The principal decoys in England for wild ducks, teal, widgeon, and other water-bird, are in this district; and hence the London markets are chiefly supplied. Wild geese, grebes, godwits, wibrels, coots, and a numerous variety of wildfowl of all kinds, breed in these waters, and obtain a plentiful supply of food from the fishy pools and streams. Stares or starlings resort bither during the winter to roost in their reeds, and in such vast multitudes as to crush the stalks by their weight. Near Spalding is satl to be the greatest heronry in
England, where the herons build their nests like rooks, in clusters, on the tops of lofty trees. The avoset or yelper, distinguished by its bill, which commonly年第is the size of a man's fist, is found in certain parts of the neighbourhood of the Foss-dike; as likewise are those delicacies for the table, knots and dottrels.

Among the agricultural products of Lincolnshire in general, are grain of all sorts in the higher grounds; and in the lower oates, hemp, flax, wood, &c. By his distinguish to the character is that of a growing county, and its pastures are noted for rearing different kinds of stock of the greatest size and weight. Lincolnshire oxen are proverbially remarkable for their immense bulk; and the horses bred here have long been held in high repute, both for the saddle and for harness, while those from the southern part of the county are especially valuable as draught horses. The mineral productions of Lincolnshire are of but little importance in commerce, the only articles deserving of notice being a kind of variegated marble, the ore called the sulphurite of iron, and the sub


LINDSAY, or LYNDSDY, Sir David, an ancient Scottish poet, descended from a noble family, was born about the year 1490. He entered the university of St Andrews in 1505, and, in 1509, became page of honour to James V., then an infant. In 1528, he produced his Dreme, and, in the following year, presented his Complayant to the king. In 1530, he was inaugurated Lyon king-at-arms, and knighted, and, in 1531, sent on a mission to Charles V., on his return from which he married. He soon after occupied himself on a drama, of a singular kind, entitled a Satyre of the Three Estates, which was followed, in 1535, by his Dreme to the King, and his Complayant of Bascha. On the death of Magdalen of France, two months after her marriage with James V., Lindsay's muse produced his Deploration of the Death of Queene Magdalene. During the succeeding regency, he espoused the cause of the reformers, and, in 1546, was sent, in his capacity of Lyon herald, on a mission to Christiern, King of Denmarke. On his return, he published the most pleasing of all his poems, entitled the History and Testament of Squire Meldrum. His last and greatest work, the Monarchie, was finished in 1555. The date of his death is unknown; but the latest authority seems inclined to place it in 1557. Lindsay entered with great zeal into religious disputes, and his satires powerfully assisted to expose the vices of the clergy. As a poet, he is inferior to Dunbar and Gavin Douglas. His Dreme is deemed his most poetical composition. An accurate edition of the works of Lindsay was published by Mr George Chalmers, in 1806.

LINDSEY, Theophilus, a celebrated divine of the Unitarian persuasion, was born at Middlewich, in Cheshire, June 20, 1725. His father was an eminent scholar, and a native of South Africa. A number of his three children, that took that name from his godfather Theophilus, earl of Huntingdon. He received his grammar education at Middlewich and Leeds, and, at the age of eighteen, was admitted a scholar at St John's college, Cambridge. Having taken orders, by the recommendation of the earl of Huntingdon, he was appointed domestic chaplain to the duke of Newcastle, and afterwards tutor to that nobleman's children on the continent. On his return, he married the daugh-

LINSY.—LINEN.

LINE, MATHEMATICAL, is extension in length, without breadth and thickness; it is either straight or curved. In navigation, the equator is called the line; hence the expression "to pass the line." In decimal measures of length, it is the tenth; in duodecimal measures of length, it is the twelfth part of an inch. In the art of war, a series of soldiers or ships, drawn up in order of battle, are called a line; hence the phrase "ships of the line." In genealogy and jurisdiction, it signifies the order of their descent from a certain ancestor.

LINE, TROOPS OF THE, are contradistinguished from the guards and light troops.

LINE, VESSELS OF THE. See Navy, and Ship.

LINEN; a cloth of very extensive use, made of flax, and differing from cloths made of hemp only in fineness. In common linen, the warp and woof cross each other at right angles; if figures are woven in, it is called damask. The species of goods which come under the denomination of linen, are table-cloths, plain and damasked, cambric, lawn, sheeting, sheeting, towels, Silesian, Osnaburg, &c. The chief countries in which linens are manufactured are Russia, Germany, Switzerland, Flanders, Holland, Scotland, and Ireland. Of these, Russia principally manufactures sheeting and sail-cloth; Germany, shirtings, sheeting, and bagging; Switzerland, both fine and coarse goods; Flanders, the finer articles, especially cambric and lawn; Holland, sheeting of the best description; Scotland and Ireland, shirting, damask table-linen, and towelling, of superior quality. immense quantities of linen are annually exported from Ireland to England, and several parts of Europe, and North and South America. In the United States, and in certain parts of Africa. In several parts of Germany, Switzerland, Flanders, and France, linens are frequently embellished with painting; and in England, the produce of the Irish linen manufacture is beautifully printed in the manner of
LINEN.

477
calicoes. The beauty of linen consists in the even-
ness of the thread, its fineness, and durability. The last
of these qualities is most produced by subjecting
it to rollers; hence linen with a round thread is pre-
ferred to that with a flat thread. The warp or woof
is not uniformly made of cotton yarn, which renders
the cloth less durable, and named union cloth.—In
an historical view, linen is interesting, as forming the
dress of the Egyptian priests, who wore it at all their
religious ceremonies; hence they are styled by Ovid
and Juvenal, "linen-wearing." (See also Lev. xvi. 4,
and Spencer On the Laws and Rituals of the Jews.)
From Egypt, linen passed to the Romans, but not
till the later part of their history. The Egyptian priests
also began to wear linen garments at that time.
Linen was also used as a material for writing, though
the expression libri tintei, carabinis, was also applied
to cotton and silk, as well as linen. The Sibylline
books and theummy bandages, covered with hiero-
glyphics, are proofs of this use of linen. In the
middle ages, linen and woollen cloth formed the only
materials for dress; and fine linen was held in very
high estimation; even the writer of the Nibelungen-
lied mentions it. Germany and Brabant then carried
linen manufactures to the greatest perfection. Linen
is yet necessary for the manufacturing of good paper.
Cloth suitable for these purposes, taken from linen for
many purposes, on account of its greater cheapness.
See Cotton, and Byssus.

The linen manufacture has been prosecuted in
England for a very long period; but though its pro-
gress has been considerable, particularly of late years,
it has not been so great as might have been antici-
pated.

In 1698, both houses of parliament addressed his
Majesty (Wm. III.), representing that the progress of
the woollen manufacture of Ireland was such as to
prejudice that of this country; and that it would be for
the public advantage, were the former discouraged, and
the linen manufacture established in its stead; his
majesty granted their request. It is but justice, how-
ever, to the parliament and government of England,
to state that they have never discovered any backward-
ness to promote the linen trade of Ireland; which,
from the year of Wm. III. downwards, has been the
object of regulation and encouragement. Yet it may
be doubted whether the regulations have been always
the most judicious that might have been devised, and
whether Ireland has really gained any thing by the
forced extension of the manufacture. Besides pre-
miums given for the production of various kinds, bounties
were granted on the exportation of linen for a very
long period down to 1830. In 1829, for example,
notwithstanding it had then been very much reduced,
the bounty amounted to about £390,000, or to nearly
one seventh part of the entire real or declared value of
the linen exported that year. These bounties generally
had a very bad effect, toward the latter part of their
existence, on linens produced for ex-
portation. The pieces deteriorated in quality, in con-
sequence of the manufacturer studying rather to
secure the bounty than to produce a superior article.
The result of such a mode of procedure was entirely
overlooked, so long as sales could be effected and the
bounty obtained. No sooner was the bounty with-
drawn, than the manufacturer perceived that the
superiority of his cloth only could enable him suc-
cessfully to compete in a foreign market. Hence,
from the manner in which the bounty has been
bestowed to the strength of material and durability of
texture in this staple branch of our manufacture.
Yet, after all, the business never began to do any real
good, or to take firm root, till the manufacture ceased
to be a domestic one, and was carried on principally
in mills, and by the aid of machinery.—a change which
the old forcing system tended to counteract. The only
real and effective legislation in this manufacture has ever
acted with, has been the reduction of the duties on flax and hemp, and the relinquishing of
the absurd attempts to force their growth at home.

| Table of the Quantity and Value of the Linens Exported from England, to 1825, both inclusively. |
|---|---|---|
| Years. | To Great Britain. | To Foreign Parts. |
| | Yards | Yards | Amount of bounty paid to manufacturers on linen exported to foreign parts. |
| 1760 | 314,770 | 2,405,496 | 31,347,418 |
| 1770 | 374,065 | 2,456,666 | 48,097,066 |
| 1780 | 454,519 | 2,505,496 | 61,919,518 |
| 1790 | 340,494 | 2,456,666 | 59,925,042 |
| 1800 | 486,066 | 2,505,496 | 59,925,042 |
| 1810 | 472,628 | 2,555,097 | 61,919,518 |
| 1820 | 529,586,074 | 2,605,496 | 31,347,418 |
| 1821 | The apprentices to Great Britain. | | |
| 1822 | Textile duties on Great Britain. | 502,848 | 1,581,340 |
| 1823 | Textile duties on Great Britain. | 502,848 | 1,581,340 |
| 1824 | Textile duties on Great Britain. | 502,848 | 1,581,340 |
| 1825 | Textile duties on Great Britain. | 502,848 | 1,581,340 |

Of these exports, more than 12-13ths have been to
Great Britain. The total average export, during the
three years ending with 1825, was 51,347,418 yards,
of which 49,031,073 went to England; the exports to
all other parts being only 2,916,340. Since 1825, the
trade between Ireland and Great Britain has been
placed on the footing of a coasting trade, so that
linens are exported and imported without any specific
entry at the customs-house.

Scotch Linen Manufacture.—In 1727, a board of
trustees was established in Scotland for the superin-
tendence and improvement of the linen manufacture.
It is not easy to suppose that the institution of this
board could of itself have been of any material ser-
vise; but considerable bounties and premiums being
at the same time given on the production and ex-
portation of linen, the manufacture went on increasing.
Still it did not increase so fast as cotton, so that it is
very doubtful whether the influence of the bounty
has been so great as it would at first sight appear to
have been. The regulations as to the manufacture,
after having been long objected to by those concerned,
were abolished in 1822; and the bounties have now
ceased.

Account of the Quantity of the Foreign Linens Retained for Home Consumption in Great Britain, in the Year ended 31st of January, 1831.

| Species of Linen. |
|---|---|
| Lawns, or French. | —— square yards | 2035 |
| Plain Linens and diaper unmanipulated. | —— square yards | 8255 |
| Lawns, no fault, single, double, throw- and diaper, unmanipulated, and manu-
| | faced cloths, of linen, valued at declared value: | 11,871, 17s. 1d. |
| Damasks, and Damask-diaper. | —— square yards | 6255 |
| Drapery, knaps, and twilled linens. | —— square yards | 1255 |
| Satin-cloth. | —— square yards | 2255 |
| Cambric and French hemp plain. | —— square yards | 1255 |
| Silk-cloth. | —— square yards | 2255 |
| Silk. | —— square yards | 4801, 10s. 1d. |

Dundee is the grand seat of the Scotch linen manu-
facture; and its progress there during the last few
years has been extraordinary. The manufacture
appears to have been introduced into Dundee some
time about the beginning of last century. In 1748,
only seventy-four tons of flax were imported, without
any hemp; the shipments of linen cloth during the
same year being estimated at about 1,000,000 yards,
no mention being made either of sail-cloth or bagging.
In 1791, the imports of flax amounted to 2,444 tons,
and those of hemp to 299 tons; the exportation in
the year being 7,842,000 yards linen, 280,000 yards sail-cloth,
and 65,000 do. bagging. From this period the trade
began to extend itself gradually, though not rapidly.
About 1815, in consequence, partly and principally
of the improvement of machinery, and its extensive
introduction into the manufacture, and partly of the
greater regularity with which supplies of the raw material were obtained from the Northern powers, the trade began rapidly to increase, and the imports of flax increased in about 1814, to 15,000 tons in 1830. The exports of manufactured goods have increased in a corresponding proportion. In the year ending the 31st of May, 1833, the imports of flax amounted to 18,777 tons, besides 3,380 tons of hemp.

The shipments of linen, sailcloth, &c., have increased in a corresponding ratio; and were valued, in the year now mentioned, at about £1,000,000, as much as is exported from all Ireland, and has increased at Dundee more rapidly than the cotton manufacture has increased at Manchester.

The entire produce of the manufacture in the United Kingdom may be valued at £7,500,000; and the total number of people employed about 175,000.

An Account of the Quantity of Flax and Tow Imported into and Exported from the United Kingdom, the Quantities entered for Home Consumption, and the Net Produce thereof, in each Year, commencing 5th January, from 1820 to 1831, both inclusive.

<table>
<thead>
<tr>
<th>Year</th>
<th>Imports</th>
<th>Exports</th>
<th>Consumption</th>
<th>Net Produce</th>
</tr>
</thead>
<tbody>
<tr>
<td>1820</td>
<td>305,758</td>
<td>17,955</td>
<td>313,913</td>
<td>7,042</td>
</tr>
<tr>
<td>1821</td>
<td>405,594</td>
<td>8,778</td>
<td>414,372</td>
<td>10,714</td>
</tr>
<tr>
<td>1822</td>
<td>418,700</td>
<td>17,625</td>
<td>436,325</td>
<td>18,063</td>
</tr>
<tr>
<td>1823</td>
<td>509,977</td>
<td>17,921</td>
<td>527,398</td>
<td>22,685</td>
</tr>
<tr>
<td>1824</td>
<td>501,200</td>
<td>14,596</td>
<td>515,796</td>
<td>24,394</td>
</tr>
<tr>
<td>1825</td>
<td>565,089</td>
<td>17,571</td>
<td>582,660</td>
<td>30,845</td>
</tr>
<tr>
<td>1826</td>
<td>651,288</td>
<td>15,723</td>
<td>666,011</td>
<td>31,683</td>
</tr>
<tr>
<td>1827</td>
<td>712,206</td>
<td>15,159</td>
<td>727,365</td>
<td>26,904</td>
</tr>
<tr>
<td>1828</td>
<td>710,529</td>
<td>17,571</td>
<td>728,100</td>
<td>26,514</td>
</tr>
<tr>
<td>1829</td>
<td>749,090</td>
<td>18,558</td>
<td>767,648</td>
<td>26,116</td>
</tr>
<tr>
<td>1830</td>
<td>794,430</td>
<td>19,708</td>
<td>814,138</td>
<td>45,234</td>
</tr>
<tr>
<td>1831</td>
<td>796,411</td>
<td>20,748</td>
<td>817,159</td>
<td>49,930</td>
</tr>
</tbody>
</table>

Manufacture.—The first process that the flax has to undergo, is that of heckling. This operation consists in drawing a handful of the flax, lengthways, over a sort of comb formed of iron or steel teeth, so as to separate the coarse part, or the tow, from the fine fibres, properly called flax. These combs or heckles are of various degrees of fineness, the flax being passed through them in succession, commencing with the coarsest. The heckling is performed either by the hand, or by machinery, according to the particular kind of yarn that is intended to be spun; but, it is probable, that ere long, such improvements will be made in the heckling machine, (which is the part in construction), that heckling by the hand will be entirely done away.

The flax, thus prepared, is taken to the spreading machine, represented in plate 48. figs. 1 and 2. Fig. 1 being a side, and fig. 2, an end view. The process is somewhat similar to the spreading in the cotton manufacture; a description of which has been given under the article Cotton manufacturer. The object of spreading the flax is, to form a sliver of uniform thickness, or such, that a foot in length taken at any one place will be equal to a foot in length, taken at any other place, or as nearly so as possible. A handful of the heckled flax is taken up by the attendant, and laid upon an endless cloth, A a fig. 1, the upper surface of which is kept continually moving towards the body of the machine, by means of the two rollers B B. The attendant, by practice, knows the proper quantity to spread on the cloth in a given time, in order to produce the sliver of the requisite girth. In cotton-spinning, the attendant is not instructed with this, as the cotton is all weighed into proper parcels, before it comes to the spreading frame. The endless cloth, by moving forward, carries the spread flax to the rollers C C, which are called retaining rollers. The underneath of these rollers is polished, so that, on a revolving motion of the wheel-work, the spindle on which it revolves, is being furnished with a pinion on the end, and the upper one receives motion, by being pressed upon the lower one, by means of a lever, which is seen rising above it, the pressure being regulated by a screw at the top. So far the flax-spooling resembles the cotton-spooling, but this is not a mere form of the operation, but also an important part of the process for flax. The flax having passed through the retaining rollers, is led over a series of heckles, seen at D. This heckling department is, perhaps, the most curious part of the machine. It is an endless chain of heckles moving in the same direction as the flax, each of which is furnished with brass links, fashioned so as to be caught by protruberances, or flattened teeth; in the two wiper wheels m m, the one further from the retaining rollers being put in motion by the wheel-work, as may be seen by inspecting fig. 1. The other is a sort of friction roller, and is put in motion by the chain passing over it. Each link of the chain carries a kind of fork, closed at the top, the space between the prongs being designed as a guide to the end of a rod, stretching across the machine, so that the rod may rise or fall. The ends of these rods pass through these fork-formed guides, and pass into a groove g g, cut in a brass rod, the rod-machine. In the under part, it passes in a direct line between the wheels which form the circular foundation of the machine, in which it takes a sudden rise up to the points g g, at a considerable height above, the wheels keeping this elevation from g to g. By this arrangement, it will be seen, that as the endless chain moves along, the gill bars or cross-rods will move with it, being carried along by the forked guides on the links, and at the same time, these gill bars will rise up or down, according to the direction of the groove. Thus, when the gill bars are under the wheels m m, they will be very near to the links of the chain, but when they turn round the wheel m, nearest to the endless cloth, they will begin to rise, and being carried along, at the altitude g g, will fall, when they come near to the other wheel. Now, as these gill bars carry the gills, or heckle teeth, they will of course have a similar motion. Hence, the gills or heckle teeth, do not rise above the forked guides, until they pass through the part where the cloth first comes into contact with the flax. The flax having passed through the chain of heckles, is received by the drawing rollers E E, the lowermost of which is driven by the wheel-work of the machine, and the upper one put in motion by being pressed upon it. From the drawing rollers, the flax is led through the intermediate rollers F F, and from these, it passes through the delivering rollers G G, and thence into a can (not shown in the plate, to save room), in the form of a sliver, or flat band of flax fibres. The machine is put in motion by a band led from a shaft connected with the first mover, the band being passed round the pulleys at H H, one of which is fixed, and the other loose, so that by shifting the belt, the machine may be put either in or out of gear. These pulleys are shown in fig. 2, which is a front elevation of the spreading machine.

The can containing the sliver is now taken from the spreading machine, and carried to the back of the preparing or drawing frame. This frame is represented in plate 49. figs. 3 and 4, fig. 3 being an end elevation, and fig. 4 a ground plan. The principal difference between this machine, and the cotton-drawing frame, consists in the introduction of heckles, fashioned in the same way as those in the flax-spooling frame. The chain, in this case, lying horizontally, instead of obliquely, as may be seen at C, fig. 3. The can H, from the spreading frame, is
placed at the back of the machine, and the sliver A is led from it through the retaining rollers B B B, passing under the first, over the second, and under the third, or it is led over the gills G G G. The sliver then passes through between the drawing rollers D D, which move quicker than the retaining rollers B B B, and the sliver receives a second drawing, the first having been given in the spreading machine. From these drawing rollers the sliver is passed through the delivering rollers, commonly called the delivering ball, and is seen at F, falling into the can G. The increase of the length of the sliver, or the quantity of draught, will, of course, depend on the comparative speed of the drawing and retaining rollers. On inspecting the plan, fig. 4, it will be seen that the drawing frame is put in motion by means of a belt and pulleys.

The drawn sliver is next taken to the roving frame. The use of this roving machine is to give the rove another drawing, also a slight twist, and likewise to wind it upon a bobbin. The machine is somewhat analogous to the fly-frame used in the cotton manufacture, with the exception of the gills, or endless heckle, introduced in this machine as in the two former. The roving frame is represented, in end view, by fig. 3, and in front elevation by fig. 4, plate 48. The construction of the process, the sliver being placed at the back of the roving frame, as seen in the end view. The sliver A is led out of it and passed through the guides a, under the first retaining roller B, over the second B, and under the third B; from whence it is led through the gills in the endless heckle C, then through the drawing rollers D D, which, as they move quicker than the retaining rollers, give another draught to the sliver. From the drawing rollers, which act also as delivering rollers, the sliver passes into the flyer f through the top of the spindle E. The spindle and flyer are kept revolving by means of bands passed round the pulleys g, which bands are led over the revolving cylinder h. The revolution of the spindle and flyer causes the sliver, which is now called rove, to be wound upon the bobbin F, which rests upon the cross rail K.

The bobbin rail is moved up and down alternately by means of the lever H, which is raised and depressed by its connexion with the heart wheel G, as may be seen in fig. 3. The train of wheel work is so obvious in the engraving that description is unnecessary. It is clear that in this, as in the cotton-rovings frame, the rove, by passing through the top of the spindle, receives a third drawing, and is then wound on to a bobbin K.

All the processes we have described are merely preparatory for the spinning of yarn, which last remains now to be considered. Fig. 1, plate 49, is a front elevation, and fig. 2 an end view of the flax spinning frame, which acts on similar principles with the cotton Throttle. A is the bobbin rail on the top of the machine; the rail is furnished with pins projecting from the side, on which the bobbins from the roving frame are placed, lying in a horizontal position, the ends being seen in the front elevation at F. The rove D is led from these bobbins through between the top, or retaining rollers C C, from whence it is passed over grooves formed in the rod D, and subsequently through between the delivering rollers E E, which move at a much quicker rate than the retaining rollers, by which means the rove receives the requisite degree of draught for the yarn intended to be spun. The rove moves through guides, and, passing through the top of the spindles G, and thence through the flyer, then on to the bobbin; the revolution of the spindle giving the thread the proper degree of twist. Weights are seen hanging from the bobbin rail, which are designed to increase the friction of the bottom of the bobbin on the rail, so that it may not be turned too rapidly round by the spindle. The bobbin rail and spindle are put in motion in the same way as they are in the roving frame. The connexion of the wheel work may be seen by inspecting fig. 2.

Such is the construction of the flax-spinning frame in use for yarns of the coarse kind; when fine yarns are to be spun, a modification of the spinning frame becomes necessary. The distance between the drawing and retaining rollers ought to be made much less than the proportion given in the engraving, and the rove, before it passes through the retaining rollers, is led through a trough of water, kept hot by steam. The trough is illustrated about the height B B in the front view, the rove being led through the water by passing under two smooth brass wires, one on the front, and another on the back of the trough. In wet spinning likewise, the bobbins on the rail A are set on upright spindles instead of horizontal pins.

We have now considered the machinery employed in the manufacture of linen yarn with as much minuteness as the nature of this work will admit; but before dismissing the subject, it is necessary that we should show in what manner the tow is treated, which, we stated, was separated from the flax during the first process. The tow being taken from the heckles is carried to the carding engine. In plate 50, fig. 1, is an end view of the wheel gearing; fig. 2, a view of the belting; and fig. 3, a front elevation of the tow carding engine. The tow is laid on the spreading table and made to pass between the feeding rollers A A; the rollers, which turn round the large cylinder O below the back cleaver B, over the top of the worker C, then between the top clearer D and the cylinder, then, being carried round the worker E, it passes between the frizer F and the cylinder. The tow is then carried off by the doffer G, received by the drawing rollers H H, from which it is passed through the delivering rollers I I into a can. The can is now carried to the finisher card, and passed through it, the two cards being exactly similar in construction. By the second carding, the tow is drawn into a much finer sliver than it is in the breaker, or first carding, and is thus prepared for the roving frame.

The tow-roving frame is similar in construction to the flax-rovings frame, with this exception, that the gills, or heckles, are not connected in a chain, but in a cylinder, the gills rising and falling as it revolves, by means of the motion from the ends of the cylinder. The tow-roving frame is shown in end elevation, fig. 4; and front elevation, fig. 5, plate 50.

The spinning of tow is performed in a machine constructed in the same way as the flax-spinning frame, but larger and stronger. A steam engine of twenty horses' power will drive for the flax department.

In the tow department—

1 Teaser, 1 Machines for preparing the tow
2 Shaker, 1 for the carding
3 Breaker cards, 2
4 Finisher cards, 4
500 Silvers of drawing
100 Spindles of roving
500 Spindles of spinning

Each spindle will produce about one half a spindle of yarn per day.

The drawings, from which the plates that accompany this article have been engraved, were kindly furnished to us by P. Borrie, Esq., Tayfoundry, Dun

* See the description of the flyer in page 483, vol. 11., of this Encyclopedia.
Lingua Franca; a corrupt Italian, mixed with other words, the dialect spoken between the inhabitants of the coast of North Africa and the Levant and the Europeans. It is, in fact, the Creole of the Mediterranean, and is extremely useful for a traveller in those countries. It is easily learned by one who knows Italian, and still more easily understood.

LINGUA GERMANICA; a corrupted Portuguese, spoken on the coast of Senegambia.

LINGUET, Simon Nicolas Henry; a French historical and political writer, was born in 1736, at Rheims, where his father, who had been professor at the college of Beauvais, was living in a kind of exile, having been banished by a lettre de cachet, on account of his participation in the Jansenistic controversy. This circumstance was the origin of Linguét's saying: "there was born under the auspices of a lettre de cachet." Having studied law at Paris, in the same college where his father had been professor, and having obtained the three first prizes of the university in 1751, he attracted the notice of the duke of Deux-Ponts, who was at that time in Paris, whom he accompanied on a journey to Poland. Linguet soon returned to his own country, and, on the breaking out of the war between France and Portugal, went to Spain as secretary to the prince of Beauvau. He there made himself acquainted with the Spanish language and literature, and, during his stay at Madrid, he published translations of some of the works of Calderon and Lope de Vega. His first historical attempt, Histoire du Siècle d'Alexandre, which was dedicated to the king Stanislaus Lesczinski, was published immediately after his return to Paris. His brilliant oratorical powers, and his thoroughness as a lawyer, endeared him to his countrymen. He obtained great reputation at the bar, but, at the same time, his severe remarks and bold ideas created him many enemies. His controversy with D'Alembert, who at that time had almost the entire control of the academy, prevented him from becoming a member of that body. But being made a solicitor general, his power, however, increased, and several cases conducted with great ability, such as that of the duke d'Aiguillon against the government, and the criminal case of the count de Morangies, on which he wrote an excellent treatise, raised him to high consideration, but at the same time excited the jealousy of his colleagues, whom he incensed to such a degree, by some of his dissertations published under the name of a publique, that they combined against him, binding themselves not to plead with him. Even the parliament became engaged in these disputes, and Linguét, whose replies and remarks increased in bitterness, was struck from the list of parliamentary advocates. As a political writer, he has succeeded his master. His Helvétisme, commenced in 1777, offended the prime minister Maurepas, and was suppressed. Linguet, thinking his personal freedom endangered, went to Switzerland, Holland, and England. He afterwards resided at Brussels, until M. de Vergennes procured him permission to return to France; but, his adversaries finding some new cause of complaint, he was thrown into the Bastille by means of a lettre de cachet, where he remained above two years, and was then banished to Rethel for a short time (1782). He went again to London, and there published a work against arbitrary power, to which he had himself defended in an earlier work, Théorie des Lois. He afterwards continued his Annales politiques at Brussels, and, after having been pleased with his memoir on the navigation of the Scheidt, that the emperor gave him 1000 ducats, with letters of nobility. But having taken the part of Van der Noot and of the Brabant insurgents, he was ordered by Joseph to leave the Netherlands. In 1791, he again appeared in Paris, and pleaded for the negroes in St Domingo at the bar of the convention. At a later period, he became an object of suspicion to the terrorists, and his attempt to escape having failed, he was arrested, June 27, 1794, and condemned to death by the revolutionary tribunal, for having, according to the sentence, flattered the despoits of Vienna and London. His writings on law are numerous. Of Linguet's works on history, politics, political economy, and the fine arts, we mention only his Histoire des Revolutions de l'Empire Roman, from Augustus to Constantine; Fonction des Philosophes; Théatre Espagnol; Lettres sur la Théorie des Lois; Mémoires pour le Duc d'Aiguillon et le Comte Morangies; De plus hauvres Souverains, pour servir de prolegomenes particuliers; Annales politiques, civiles, et littéraires, du 18 Siècle, which contain much important matter for the political and literary history of the times.

Linlitigow, an ancient royal burgh of Scotland, the capital of Linlitgowshire, is situated six

In the reign of David I., there was a royal castle
and grange at Linlithgow, whence the town originated; and it was the frequent residence of the court in the sixteenth century, when it became the scene of some remarkable events. In St Mary's aisle of the priory, December 1312. In one of the streets one still saw the gallery, whence the Regent Murray was shot at and killed, as he was passing through the town on horseback, by Hamilton of Bothwell-Haugh, in 1570; and at Linlithgow the "solemn League and Covenant" was publicly burned in 1662. Several royal charters were granted to this town. Population of burgh and parish in 1831, 4,674; in 1841, 5,090.

LINLITHGOWSHIRE, or WEST LOTHIAN, a county of Scotland, lying on the south shore of the firth of Forth, having Edinburghshire on the east and south-east, Lanarkshire on the south-west, and Stirling on the west. It is thirty-eight miles in length, and twelve in breadth. The soil of this county is in general a rich and fertile loam. Coal and limestone abound; ironstone is also to be found in some parts of the shire. A vein of lead ore was discovered in the reign of James VI., so richly impregnated with silver, that it was sufficiently profitable to be worked for the sake of the silver which it furnished. Volcanic appearances occur in several places, or at least such an arrangement of rocky strata, as some geologists usually attribute to the action of volcanic heat; thus particularly at Dunlas Hill, in the parish of Dalmeny, there is a bold mass of basaltic rocks, displaying on its surface, in their structure regular basaltic columns. There are many handsome nobleman's and gentlemen's seats in various parts of Linlithgowshire, among which the more distinguished are Hopetoun House, the seat of Sir John Hope, 6th baronet, of Hopetoun's magnificent residence; Barnbogle Castle, belonging to the earl of Rosebery; Calder House, the seat of Lord Torphichen; Craige Hall, and Dunlas Castle. The two royal burghs are Linlithgow and Queensberry; the other principal towns are Borrowstounness, Whithorn, Bathgate, and Kirkliston. Population in 1831, 23,291; in 1841, 26,872.

LINNÉ, JOHN BLAIR, an American poet, was born March 9, 1744, in Philadelphia, Pennsylvania. His poetical talents displayed themselves while he was yet a youth at Columbia college, New York, and, before he had reached his seventeenth year, a volume of his effusions, both in prose and verse, was published. After finishing his collegiate course, he commenced the study of law, at the age of eighteen, with general Hamilton, but continued in his office only about a year, during which time, he brought a tragedy, called Bourville Castle, upon the stage, with success. Having removed to Schenectady, and received strong religious impressions, to which he had always been inclined, he entered upon the study of theology, and, in 1798, he was licensed to preach, and soon became distinguished for pulpit eloquence.

He was installed pastor of the first Presbyterian church in Philadelphia, in June, 1799. The duties of this situation he discharged for the two subsequent years, during which time he wrote with the highest degree of piety and the excellence of his mind. He continued, however, to cultivate his poetical talents. His Powers of Genius, a didactic poem of considerable length, experienced flattering success, and in a few months reached a second edition. In the same volume with it were printed various minor pieces. A controversy which occurred in 1784 on the subject of the degree of B.A. in the University of Hardwicke, engendered by a publication of the latter on the merits of Socrates, which were placed before those of Jesus Christ. The religious feelings of Mr Linné prompted him to answer the doctor's pamphlet, which he did in a manner worthy of his talents and his practice.

Linné, the name which Linné adopted his leisure hours, was a narrative poem, published by his friends, under the title of Valerian, after his death, which took place August 30, 1804.

Linnéan Society; a society in London, instituted in 1788, by Sir J. E. Smith, and incorporated in 1836, for the promotion of the study of natural history.

LINNE, CHARLES, but more generally designated by his Latinized name, Linnaeus, the most celebrated naturalist of his age, was a native of Sweden. He was the son of a clergyman, and was born May 23, 1707, at Roshult, in the province of Smaland. His father was fond of gardening, and his little domain was stocked with plants not commonly cultivated—a circumstance to which the prevailing taste of the son may be fairly attributed. He was sent to the grammar-school, and afterwards to the gymnasium at Upsal, to be educated for the minis-
same year, he went to the university of Harderwyck, in Holland, and took the degree of M. D. He then visited Leyden, where the first sketch of his Systema Naturae was printed in the form of tables, filling twelve folio pages. His graduate, Frederic Gravirius, Boerhaave, and John Burman of Amsterdam; and he then published a work, entitled Fundamenta Botanica, exhibiting the basis of his botanical system. Mr Clifford, a rich merchant of Amsterdam, made him superintendent of his garden at Harrop, where he began his famous botanical garden, which he employed to study the Botanical system of Linne, and drew up a systematic catalogue. In 1736, he made a visit to England. He returned to Holland with many new plants for Mr Clifford's garden, his description of which, entitled Hortus Cliffor- dean, with thirty-seven plates, was now published in a most splendid form. He also published the first edition of his Genera Plantarum. In 1738, he made an excursion to Paris, and, towards the end of that year, returned to his native country, and settled as a physician at Stockholm. At first, he experienced neglect; but, through the influence of Count Tessin, he was appointed physician to the royal family and had a salary for giving public lectures on botany in the summer, and on mineralogy in the winter. The establishment of the royal academy of Stockholm, of which he was one of the first members, contributed to the advancement of his reputation, by the opportunities which it afforded for the display of his abilities. In 1740, he succeeded Roberg in the professorship of medicine at Upsal, to which was added the superintendency of the botanic garden, to the new arrangement and augmentation of which he devoted much of his time and attention. In 1745, appeared his Flora Suecica, and the next year his catalogue of Swedish animals, entitled Rariora Sueciae. He was elected to the post of secretary of the academy of sciences at Upsal. In 1746, an honorary medal of him was struck at the expense of some noblemen; and, in 1747, he was nominated royal archi- theter. Through his influence, many young naturalists were sent to explore various countries; and to his zeal in the cause of science we owe the discoveries in natural history made by Kalm, Osbeck, Hasselquist, and Loe- fling. He was employed by the queen of Sweden to describe her museum at Drottningholm, when he made a new scientific arrangement of the shells contained in it. In 1761, he published his Philo- sophia Botanica, and, in 1763, his Species Plantarum, containing a description of every known plant, arranged according to the sexual system. This work of Linne, which Haller terms his Maximum Opus et Aeberrnum, appeared originally in two volumes 8vo.; but the edition published by Wilkinson at Berlin, 1770-1780, is extended to ten volumes. In 1765, this great naturalist was created a knight of the polar star—an honour never before bestowed on a literary man. In 1761, he was elevated to the rank of nobility. Literary honours were also conferred on him by scientific societies in foreign countries. In 1768, he completed the plan of his Systema Naturae, which, through successive editions, had been enlarged to three octavo volumes. Linne acquired a moderate degree of opulence, sufficient to enable him to purchase an estate and mansion at Hammarby, near Upsal, where he chiefly resided during the last fifteen years of his life. Linne, in his Addresses of natural history, on which he gave lectures, and to which he was constantly making additions, from the contributions of travellers and men of science in various parts of the world. His health, during a great part of his life, enabled him to pursue his researches with vigour and activity, but in May, 1774, he had an apoplectic attack, which obliged him to relinquish the most laborious part of his professorial duties, and close his literary labours. A second attack occurred in 1776, and he afterwards experienced a third; but his death did not take place till January 11, 1788. Besides his works on natural history, he published a very large number of other books; and while a system of botany, entitled Genera Morborum. Few men in the history of science have shown such boldness, zeal, activity, and sagacity as Linne: natural science is under unapproachable obligations to him, though the different systems established by him may be super- seded by more recent. In 1783, a monument was erected to him in his native place. By his wife, the daughter of a physician at Falun, he had a son and four daughters. The former, Charles von Linne, was joint-professor of botany, and afterwards of medicine at Upsal. He was well acquainted with science, but distinguished himself by no discoveries of importance. On his death, without issue, in 1783, the family became extinct.—Elizabeth Christina von Linne, one of the daughters of the great naturalist, studied botany, and became known by her discovery of the luminous pro- pylum, or eye of flies. The discovery of the tube of a fly, which was made up in an oval or orbicular form, is called a pediget; if in a cylindrical form, or in shape of a date or olive stone, it is called a dossile. These different forms of lint are required for many purposes; as, 1. to stop blood in fresh wounds, by filling them up before the application of a bandage; though, if scraped lint be not at hand, a piece of fine linen may be torn into small rags, and applied in the same manner; in very large hemorrhages, the lint or rags should be first dipped in some stypic liquor, as alcohol, or oil of turpentine, or sprinkled with some stypic powder: 2. to agglutinate or heal wounds; to which end lint is very serviceable, if spread with some digestive ointment, balsam, or vulnerary liquor: 3. in drying up wounds and ulcers, and forwarding the formation of a cicatrix: 4. in keeping the lips of wounds at a proper distance, that they may not hastily unite before the bottom is well digested and healed: 5. they are highly recommended for the cure of the second degree of the air.—Surgeons of former ages used compresses of sponge, wool, feathers, or cotton, linen being less plentiful than in later times; but lint is far preferable to all these, and is, at present, universally used.

LINZ, the capital of Upper Austria, is on the Danube, at the influx of the Traun, is well built, with a bridge 400 paces long, and has, exclusive of the garrison, a population of 18,700 inhabitants; houses, 1000. Here is the largest woollen manufac- tory in Austria, in which fine carpets are made. Much gunpowder is also manufactured here. In 1784, Linz was made a bishop's see. In 1674, the lyceum was founded by Leopold, and, in 1824, institu- tions for the deaf and dumb, and one for the blind, were erected. The Northern Institute is a college for the Catholics of the north of Germany. Lon. 14° 16' 45" E; lat. 48° 18' 54" N.

LINUS; the name of a celebrated musician of antiquity. He is mentioned by Plutarch, in his Life of Cicero, quoting Diou- sius of Mytilene, attributes the invention of verse and music into Greece. He was a native of Chalcis, and to him are ascribed a poem on the exploits of Bucichus in India, a treatise on mythology, the addi- tion of a string to the lyre then in use, and the invention of melody and rhythm. Staub also joins in giving him credit for the last-mentioned improve- ments, and calls him the first lyric poet. A few
fragments of poetry, under his name, are to be found in Stobaeus.

LION.

The lion, like all other cats, is armed, in each jaw, with six strong and exceedingly sharp cutting teeth, two formidable canine, and six others, occupying the usual place of the molars, but differing from these by terminating in sharp protuberances. Besides these, there is a small tooth, or tooth-like appendage, of the upper and intermediate row posterior to all the others. The tongue is covered with rough and elevated papille, with their points directed backwards. The claws, which are five in number on the fore feet, and four on the hinder, are of great length, extremely powerful, and much curved; like those of the other cats, they are retractile within a sheath enclosed in the skin covering the paws. The lion is distinguished from his kindred species by the uniformity of his colour, which is pale tawny above, becoming somewhat lighter beneath, and never, except while very young, exhibiting any markings; and also by the long and flowing mane of the old male, gray, with a number of white head, extends backwards over his shoulders. Notwithstanding the praises that have, from time immemorial, been bestowed on this animal, for grateful affection, dauntless courage, and merciful forbearance, he is nothing more, in moral and intellectual faculties, than a very strong brute, and endowed with all the guileful and treacherous qualities of that treacherous tribe. His dauntless courage is a mere consciousness of superiority over the animals by which he is surrounded, and wholly disappears in the neighbourhood of man; his merciful forbearance is nothing more than that he never destroys more than satiates his hunger or revenge; and that, when under the dominion of man, he suffers his keeper to approach him without injury.

The lion is only met with in the warmer regions of the old world, and more particularly of Africa, in whose vast forests and arid deserts he reigns supreme and uncontrollable. He is met with, but rarely, in parts of India, Arabia, and Persia, but his range in these countries is becoming very limited. From Libya, whence the Romans obtained so many, he has almost disappeared; and in classic Greece, where, with the ancients, the writers, and poets, none are to be found. In America, this species never occurred, its place being supplied by the puma. Naturalists have differed greatly as to the longevity of this animal. Buffon stated it to be from twenty to twenty-two years; but it far exceeds this, as is the case in the Tower of London, which died in 1760, lived in captivity above seventy years; and another died in the same place, at the age of sixty-three. The lioness brings forth from three to four at a birth. The cubs, when first born, are about the size of a small pug dog, and continue to suck the mother for about a year. At this time, their colour is a mixture of reddish and gray, with a number of brown bands. The mane of the male begins to make its appearance when the animal is about three to three years and a half old. The male attains maturity in seven, and the female in six years. The strength of the lion is prodigious, a single stroke with his paw being sufficient to destroy most animals. The bone of the fore leg is remarkably fitted to sustain the great muscular strain so powerful an exertion occasions. Its texture is so compact, that it will strike fire with steel. The lurking-place of the lion is generally chosen near a spring, or by the side of a river, where he has an opportunity of surprising such animals as resort to the water to quench their thirst. Here he lies in wait, crouched in some thicket, till his prey approaches, and then, with a prodigious leap, seizes it at the first bound: if, how-
by a lion. Marking the spot whence the alarm took place, about mid-day, when the sun is very powerful, and the object of the draught being carefully examined on the ground, and, if they find him, they lodge a bullet or poisoned arrow in him. Sometimes, however, he is fairly brought to bay in the daytime, by the hunter, as the following account from Pringle testifies. After his retreat is found, 'the approved plan is to torment him with dogs till he abandons his covert, and stands at bay in the open plain. The whole band of hunters then march forward together, and fire deliberately, one by one. If he does not speedily fall, but grows angry and turns upon his enemies, they must then stand close in a circle, and turn their horses' rear outward, some holding them fast by the bridles, while the others kneel to take a steady aim at the lion as he approaches, sometimes up to the very horses' heels, crouching every now and then, as if to measure the distance and strength of his enemies. This is the moment to shoot him fairly in the forehead, or some other mortal part. If they continue to wound him ineffectually, till he becomes furious and desperate, or if the horses, startled by his terrific roar, grow frantic with terror, and burst loose, the business becomes rather serious, and may end in mischief; especially if all the party are not of the same mettle, and can not all stand their ground. Very full accounts of the lion and his habits are to be found in the travels of Sparrman, Barlow, Levallant, Burchell, &c., in Southern Africa, and also in the Library of Entertaining Knowledge, and the Tower Menagerie, from which the above account has been condensed.

LION'S GULF. This is the proper spelling of the gulf generally called Gulf of Lyons. The name is derived from lion, on account of the fierceness of the gales, at some seasons, in this gulf. The proper mode of writing it in French is Gouf du Lion. See Lyons, Gulf of.

LION'S SHARE; the whole, or a disproportionate share of the advantages of a contract, claimed by one of the parties, and supported by the right of the strongest. The phrase is derived from a fable of Aesop.

LIPARI; a cluster of volcanic islands in the Mediterranean, which take their name from the principal one of the group, about twenty-four miles from the north coast of Sicily. Lon. 15° 18' E.; lat. 38° 34' N.; population, about 20,000. These islands were, called by the ancients, Aetolia, Vulcanus, and Insula Liparorvm; and feigned to be the work of Vulcan and Mother Nature; the largest, is populous and well cultivated, producing great quantities of corn and fruit, especially figs and raisins; it likewise produces alum, sulphur, nitre, and cinnamon. It is about fifteen miles in circumference; the air is healthy, and the inhabitants industrious and good seamen. On the eastern coast is situated a town of the same name. In this island were formerly pits, which emitted fire and smoke, but have long ceased to do either. Population, 15,000; square miles, 100. The other islands are Stromboli, Panarea, Vulcanio, Salini, Alicudi, and Policudi, with two or three smaller ones. The volcanic eruptions, formerly frequent in the island of Lipari, ceased in the sixth century, but the whole island is composed of pumice-stone, lava, volcanic glass, and black sand; and the warm baths, and heated vapours of the Stoves (excavations which emit hot water), are much resorted to, and the islands are of the subterranean fires. The celebrated crater of Vulcanio was visited by general Cockburn in 1812 (Voyage to Cadiz); the volcano is probably only slumbering, and not extinct. Stromboli is at present the most remarkable of the islands; its fires are in unremittent activity, the eruptions taking place at regular intervals, varying from three to eight minutes. See the works of Dolomieu, Spallanzani, Bory de St. Vincent, and Cudahy.

LIPPOGRAMMATICA COMPOSITIONES; those in which certain letters are purposely left out. Thus Lope de Vega wrote a novella without l or a. Kotzebue wrote one without r. The word is derived from the Greek λεπτόν (signifying to omit, and used in many compound words), and συγγραμματί (letter).

LIPPE. The ancient principality of Lippe is, at present, divided between two reigning houses: 1. Lippe-Detmold contains about 490 square miles, with 71,500 inhabitants. Detmold, with 2700 inhabitants, is the capital. Public revenue, $400,000. 2. Lippe-Vulcanalia contains 212 square miles, with 29,500 inhabitants; revenue, 215,000 guilders; contingent to the Germanic confederation, 240 men. Buckeburg, the capital, is on the river Au. In 1810, the prince abolished the last traces of bondage, and Jan. 15, 1816, established a constitution.

LIPSIUS there were three Florentine artists of this name. Of these, the eldest, Francesco Filippo, born in 1421, and named the Old, had taken the vows as a Carmelite monk, but afterwards abandoned the church, and underwent many vicissitudes of fortune. On one occasion, he fell into the hands of a Barbary corsair, who sold him to slavery in Africa. The successful exertion of his talents, upon the portrait of his purchaser, was rewarded by his restoration to liberty. On his return to Italy, he was received into the service of the grand duke of Florence. His death took place in 1488; and, although he was then sixty-seven, it is said to have been the result of an intrigue with a female of a respectable family, poison being employed by her relatives for his destruction.

He left one son, Filippo, also a painter of considerable reputation, born in 1460. Many of his works are yet to be found in the city of which he was a native. He died in 1505.

Lorenzo, the third of the name, descended of the same family, united to considerable skill as an historical and portrait painter the arts of poetry and music. He was born in 1506, and is advantageously known by the name of Lorenzo de’ Medici, since he was a member of that illustrious family. He wrote the celebrated work, titoli Racquistato. Of this work there have been three editions; two printed at Florence, in 1688 and 1731, the other, in 1768, at Paris. It appeared originally under the fictitious name of Zipoli. His death took place in 1664.

LIPSUS, JUStus; an acute critic and erudite scholar of the sixteenth century, was born at Overshe, in Brabant, a village situated between Brussels and Louvain, in October, 1547. Martinus Lipsius, the intimate friend of Krasmus, was his uncle. His genius developed itself very early, his memory being considered wonderful. Before he had completed his ninth year, he had written some miscellaneous poetry, much above mediocrity. He was instructed at Brussels, and, subsequently, in the colleges of Eth, Cologne, and Louvain. He removed to Rome in his twentieth year, and, having secured himself in the patronage of several of the greatest ecclesiastics of the time, he included in his treatise Varia Virorum Lectionum, was received into his household, in the nominal capacity of secretary. With this distinguished prelate he remained till 1569, sedulously consulting the treasures of the Vatican, and other principal libraries, especially employing himself in the collation of rare and ancient
manuscripts. On his return to the Netherlands, after a short time spent at Louvain, he visited the capital of the German empire, and then accepted a professorship in the university of Leyden. There he became the victim of an excellent State by the vacillating state of his opinions respecting religious matters, which eventually fixed the imputation of imbecility on a character in other respects estimable, first became apparent. He renounced the Romanish church, and became a Lutheran; but, quitting Leyden, at length, with an avowed intention of spending the remainder of his life in retirement in his native country, he repaired to Oversche, and, soon after, recanted his supposed errors, and became reconciled to the see of Rome. In 1577, however, he again removed to Leyden, where he embraced the doctrines of Calvin, and, during the thirteen years which he spent in that university, gave to the world the most esteemed of his works. In 1590, he returned finally to Louvain, and once more became a Catholic, and that of the most bigoted description. Many tempting and honourable offers were made him by various potentates, to engage him in their service; but he refused them all; and, at length, died at Louvain, in the spring of 1606. Superstition led him, a short time before his death, to dedicate a silver pen, and his fur gown, to the virgin Mary. His principal works are the Vértice Lexicó, a philological dictionary, and an excellent Commentarius on the Works of Tacitus; treatises De Constantia; De Militia Romana; De Amphithetris; De Pronunciatione recta Linguis Latinis; De Cruce; De una Religione; De Bibliothecis; Satira Menippaea; Saturnalia; and an Oration on the Death of the Duke of Saxony. The best edition of them is that printed at Antwerp, in 1637.

LIQUEUR (from the French); a palatable spirituous drink, composed of water, alcohol, sugar, and some aromatic infusion, extracted from fruits, seeds, &c. The great difference in the qualities of the different liqueurs is owing principally to a variation in the proportions of the sugar and alcohol. The French distinguish three qualities: the first are the rotafjas, or simple liqueurs, in which the sugar, the alcohol, and the aromatic substance are in small quantities; such as the rise-water (q. v.), nougin, the apricot, cherry, peach, or orange liqueur; or one or more liqueurs, with more saccharine and spirituous matter; as the anisette, curaçao, &c., which are those commonly found in the cafés. The third are the creams, or superfine liqueurs, such as rosegly, maraschino, Dantiz water, &c. The same aromatic infusion is used with the fruits or flowers, which are of different qualities, in which the materials are the same, but the proportions different: thus one proportion of ingredients gives eau-de-noyau; another crème de noyau, &c.

LIQUIDAMBAR STRYACIFLUA, or SWEET GUM. This tree is widely diffused through America, from lat. 43° to Florida, and along the shores of the gulf into the provinces of Mexico. The leaves, which somewhat resemble those of some maples, are very regularly five-lobed, and the lobes are serrated on the margin. The flowers are small, and acuminous. The fruit consists of a sort of bar, supported on a long pedicle, and is somewhat similar to that of the button-wood, or plane-tree, but is much less even on the surface. It is abundant everywhere throughout the Middle, Southern, and Western States, and sometimes has a trunk five feet in diameter, and being a prolific tree. The usual diameter, however, is from one to three feet. The wood is compact, capable of receiving a fine polish, and has been used for articles of furniture; but, for this purpose, it is inferior to either the wild cherry or black walnut. It is, however, employed for lining mahogany, for bedsteads, and for a variety of purposes in the interior of houses, possessing great strength but requiring protection from the weather. The bark, on being wounded, yields a small quantity of a fragrant resin.

LIQUEUR (Lisbon). A native of Portugal, is a tree, with a trunk of from two to four feet in girth, and possessing plants containing eight species. They have pinned leaves, and small, blue, violet, or white flowers, which are disposed in heads or spikes, and are remarkable for the sweetness of the roots. The common liqueur (G. gallo) grows wild in the south of Europe, and is cultivated in many places even in Britain, for the sake of the root, which is much used in pharmacy, and forms a considerable article of commerce. More than 200 tons of the extract are manufactured annually in Spain, a considerable portion of which is sent to London, and employed in the brewing of porter. It is often administered medicinally, in coughs and pulmonary affections, and the aqueous infusion is used as a refreshing beverage. A deep, light and sandy soil is best adapted to its culture.

LIRODENDRON. See Tulip-Tree.

LISBON (Lisbon), the chief city of Portugal, and the residence of the court, is situated in the province of Estremadura, on the right bank of the Tagus, which is here a mile and a half in width, and not far from the mouth of the river. It is built on three hills, in a level situation, with a picturesque appearance from the harbour. Including the suburbs Junqueira and Alicantara, it is about five miles in length, and a mile and a half in breadth. It contains forty parish churches, seventy-five convents, and a hundred chapels, 44,000 houses, and, before 1807, had 500,000 inhabitants, but, at present, has not more than 200,000; among whom are many foreigners, Negroes, Mulattoes, Creoles, and 30,000 Galicians, who come from Spanish Galicia, and serve as porters and water carriers, and perform other menial occupations. The town is open, without walls or gates. The highest hill only has a castle, now in ruins; but the harbour is beautiful, capacious, and safe, and is defended by four strong forts on the banks of the river (St. Juliana, St. Bugio, the tower of Belem, &c.). Many of the streets are very uneven, on account of the hilly situation of the city. The finest are on the banks of the river. There are no elegant private buildings. The houses of the nobility are distinguished only by their size. The western part has been beautifully rebuilt since the dreadful earthquake (Nov. 1, 1755) which destroyed half of the city, with the loss of 30,000 lives, the streets being straight, and regular, with good houses. The eastern part of the city, which was not affected by the earthquake, has preserved its gloomy aspect—crooked streets and old-fashioned houses, six and seven stories high. Lisbon was formerly known to be extremely filthy and unsafe; but, at present, regulations have been made to provide for the public security, and the streets are well lighted. Among the squares, the principal are the Praça do Commercio and the Rocio. They are connected by handsome, wide, straight streets. The former, on which the royal palace stands, contains, on the left bank of the Tagus, as the landing-place of the harbour, is an oblong square, of 615 paces in length and 550 in breadth, and is surrounded, on three sides, with fine buildings (the fourth is open towards the

* The city then contained about 150,000 inhabitants. The shock was instantly followed by the fall of every church and convent, almost all the large public buildings, and more than one fourth of the houses. In about two hours after the shock, fires broke out in different quarters, and raged with such violence, for the space of nearly three days, that it seemed impossible they could be extinguished. An earthquake of such magnitude had never before been recorded in the annals of the earth. The loss of life and property was enormous, amounting to $1,000,000.
LISLE—LITANY.

In the centre there is a bronze statue of King Joseph I. The Rocío, where the autos de fe were formerly exhibited, is a regular oblong, 1800 feet in length and 1400 in width, with the new palace of the Inquisition on one side. In this square there are the remains of the old cathedral, but, since the church is the finest, and is the most magnificent building erected since the earthquake. The patriarchal church, on an elevated situation, which affords a beautiful view, is magnificent in its interior, and contains rich treasures and many curiosities. The patriarchal church of the Portuguese nation, has a large annual income. The aqueduct, about seven miles in length, is a remarkable construction. The centre is so high, that a ship of the line might pass under it. The water is carried over the valley of Alcantara, on thirty-five marble arches. It withstood the force of the earthquake, although its keystones sank a few inches. The St Joseph’s hospital, where 16,000 sick, and the foundling hospital, where 1600 children, are annually received, deserves to be particularly mentioned. Among the literary institutions are the royal academy of sciences, the foremost of its kind in Europe, and, with other seminaries, a botanical garden, three observatories the royal cabinet of natural curiosities, and several public libraries, among which is the royal library, containing 80,000 volumes. Lisbon is the seat of the supreme authorities, and of the patriarchal see of Portugal, with a numerous clergy. The inhabitants have but few manufactories: there are not even mechanics enough to supply the demands of the city. But Lisbon is the centre of Portuguese commerce, which extends to most of the countries of Europe, to America, and to the Portuguese possessions in other parts of the world. There are about 240 Portuguese and 130 foreign (principally British) merchant houses. From 1700 to 1800 vessels arrive annually at the port (Junquiera). The beautiful environs of the town are embellished by a great number of country seats (quintas). In the vicinity are Belem and the castles Ramalhão and Queçal.

LISLE, or LILLE (Flemish, Ryssel): a large and strong city of France, formerly the capital of French Flanders, and now of the department of the North, situated on the Deule, in a dead flat. The Deule is navigable, and is divided into several branches, part of which supply the moats or great ditches of the castle. It is the source of a small river (the Deule), which flows into the Scheldt; it is about 19 miles long, and is navigable as far as Lille. The city is about 5 miles from the sea. The town is surrounded by a double moat. The trade of Lisle is extensive. Its manufactures are of camlets, serges, and other woollen stuffs, calico, linen, silk, velvet, lace, carpets, soap, starch, tobacco, hemp, glass, and earthenware. The origin of this town is ascribed by tradition to Julius Caesar. Louis XIV. took it from the Spaniards in 1667. It surrendered in 1708, to the duke of Marlborough and prince Eugene. At the peace of Utrecht, 1713, it was restored to France. In 1792, it was bombarded by the Austrians, who were obliged to retire, with the loss of 20,000 men. Population, 69,860; 18 miles east of Tournay; lon. 3° 4’ E.; lat. 50° 37’ 50” N.

LIST; the enclosed ground wherein knights held their jousts and tournaments; so called because encircled with barriers as with a list. Some were double lists. Among the chivalry, so that they could not approach nearer than a spear’s length. Hence to enter the lists is to engage in contest.

LISTEL; a small square moulding, serving to crown or accompany a larger, and to separate the fluting of columns.

L’ESTESSO TEMPO (Italian); a phrase implying that the movement before which it is placed is to be played in the same time as the previous movement.

LITANY (from the Greek λάτανα, supplication, prayer); a form of prayer or song, used on occasions of public calamity, first introduced, according to Zonaras and Nicephorus, by Proclus, about the year 446, at Constantinople, in the reign of Theodosius, according to Paulus Diaconus, under Justinian, at Antioch, in consequence of the following circumstance: An earthquake, says the legend, having driven the people into the fields, a boy was suddenly taken up into the air in the middle of a street; but was again let down unhurt, on the people crying out Kyrie eleison! (O Lord have mercy). The boy related he had heard the songs of the angels, “Holy God! Holy and Mighty, Holy and Immortal! have mercy upon us!” and this gave rise to the Litany. This kind of common prayer was, perhaps, not unusual among the Jews, and the 150th Psalm seems to have been adapted to this purpose. Litanies afterwards became very common, and every saint of the Roman calendar has his Litany. It must be owned, that some of these are very unmeaning, enumerating all the names and miracles attributed to the saint, and, in this respect, not unlike those prayers of the Romans, which consisted merely of a catalogue of the names of the deities addressed, against which St Paul gives a particular warning. Litanies are found in the old hymn-books of the Luthers, but are no longer used by German Protestants. The Catholic litanies are distinguished into the greater and lesser. The latter is said to have been composed by bishop Mamertus, of Vienne (in France), in 446, when that place was visited by repeated calamities; the former by Gregory the Great, during an inundation of the Tiber, and a raging plague. This consisted of a song of seven choirs (hence septifonia), consisting of the clergy, monks, nuns, boys, girls, Roman citizens, and widows and married women. The litany probably consisted, at first, of the words kyrie eleison, but was gradually enlarged. The litany was annually sung on the dies rogationum (days of entreaties). At a later period, the litany was not only addressed to the Holy Trinity, but also, as we have said, to the saints, and sung in processions. This latter kind of litany of course was omitted by the Protestants. The usual answer of the people is, Ora pro nobis (pray for us), if the litany is directed to the Virgin or a saint; or Libera nos (deliver us), if it is addressed to the Deity. Indecent parodies have often been made on litanies, and sung in connexion with other profane songs. In early times, incidents occur of this being done, even by monks. (See the note to the article Fools, Feast of). The following parody is taken from the Cavalier’s Letanie (1647):

From too much keeping an evil decorum, From too much keeping a decorum, From Oliver Cromwell, auz omnium nostrorum, Libera nos.

See the Sacra Litaniae variarum (Antwerp, 1606), and Bingham’s Origins Ecclesiasticæ, for a great variety of litanies.—But this simple form of prayer and response has, at times, been of great advantage to the people, cannot be denied; and, because many litanies
are poor, all ought not to be condemned. See Lit-

RICHFIELD. See Lochfield.

LIT DE JUSTICE was formerly a solemn proceeding in France, in which the king, with the princes of the blood royal, the peers, and the officers of the crown, state and court, proceeded to the parliament, and there, sitting upon the throne (which in the old French language, was called lit, because it consisted of an under cushion, a cushion for the back, and two under the elbows), caused those commands and orders, which the parliament did not approve, to be registered in his presence. The parliament had the right of remonstrating, in behalf of the nation, against the royal commands and orders. If the king, however, did not choose to recede from his measures, he first issued a written command (lettres de fussion) to the parliament; and if this was not obeyed, he held the lit de justice. The parliament was then, indeed, obliged to submit, but it afterwards commonly made a protest against the proceeding. Louis XV. held such a lit de justice, in 1763, in order to introduce certain imposts, but, on account of the firm resistance of the parliament, he was finally obliged to yield. The last lits de justice were held by Louis XVI., in 1787 and 1788.

LIT DE RELIEF is the science whose object is to represent the development or the successive changes of human civilization, as far as these are manifested in writings, as the object of political history is to show the same, manifested in the various political establishments and changes. In a more limited sense, literary history treats of learned writings, their contents, fate, modifications, translations, &c. (which is bibliography, q. v.), of the lives and characters of their authors, the circumstances under which they wrote, &c. (which constitutes literary biography). The latter has also been called external literary history, the former internal literary history, because it aims to show, in a connected view, the development of sciences. From its nature, it is obvious that literary history could not fairly begin until mankind had acquired extensive knowledge of what has been done and written, which required the preparatory study of centuries, as well as a civilized intercourse among the various nations. This science is, indeed, of comparatively recent date, and we have by no means, even yet, a general literary history. What we have is mostly confined to Europe; at least, we are yet too little acquainted with many parts and peoples of the world, whose writings have been given a few times an impulse to the western world, to authorize us to call what has hitherto been done a general literary history. The branch which relates to Greece and Rome must remain of surpassing importance. The ancients did not treat literary history as a distinct department of history. The literature of the Greeks, and, though not in the same degree, that of the Romans, were so intimately connected with their religion and politics, that a separation of literary from general history could not easily take place; besides, the materials were not sufficient to claim a separate consideration. Hence the classics contain only scattered notices and detached materials for a literary history, partly in biographies of poets, philosophers, orators, grammarians, &c.; partly in criticisms and extracts from their writings. Such notices we find in the works of M. Tarentins Verrus, Dionysius of Halicarnassus, Pausianus, Athenaeus, and the biographers Plutarch, Suetonius, Diogenes Laertius, &c. Suidas and Photius likewise contribute names and titles. The middle ages contributed only detached facts to the history of their literature, partly in chronicles, partly in the oracle, but con-
Italian Deninn rivals him in brilliancy of manner, without equalling him in thoroughness and originality of views or in judgment. It began to be more and more clearly felt, that literature, although in its own sphere a branch of history, would remain a mere list of names, titles, and dates, if it were not treated with constant reference to the state of religion, politics, morals, and the arts. Attempts have been made to treat it as a part of the general history of civilization by Inselin, Ferguson, Home, and particularly by Herder. In recent times, the Germans have taken the lead in this science, both in extent of knowledge and comprehensiveness of views. J. G. Eichhorn's, and L. Thaler's work is of high value, as are also those of S. G. Wal, J. G. Menzel, and Fr. Schlegel. It would exceed our limits were we to mention here the different productions upon the literary history of single nations and particular periods. A work on an extensive plan, though not of a general nature, is the great enterprise of the literary society of Gottingen—History of Arts and Sciences in Europe, since the Restoration of the same, until the end of the Eighteenth Century.

Literary history is naturally divided into ancient, middle and modern. The ancient terminates with the retirement of science into the convents, in the sixth century; the middle begins with the downfall of the government of Rome, 500 A. D., and the commencement of literary civilization in the various European nations, without the support of ancient classical civilization (see Berrington's Literary History of the Middle Ages); and the last begins about 1450, when the study of the classics was renewed, and knowledge revived in Europe.

LITERARY PROPERTY. In the whole compass and variety of the products of human labour, no one thing is more exclusively such than intellectual works. In the fabrication and production of almost all other subjects of value and property, the materials are supplied, directly or indirectly, by the earth or the water; and man only co-operates with nature in furnishing the article. But a piece of music, a painting, a poem, an oration, a history, or a treatise of any description, is the offspring of the unaided labour of the mind. It is supplied from abroad, only with the canvas, paper, pencil, or other substance is used for recording the work, and affording the evidence of its accomplishment, but which is no more a part of the thing produced, than a deed conveying an estate, is a part of the thing conveyed. But, though the right to the products of intellectual labour is thus pecuniarily protected in the statute, and the exclusive right of property recognised in a community, since the subject of it, the product itself, is only the result of an advanced state of civilization. Another reason of its not attracting a more early attention, is its abstract, incorporeal nature, and also, in some cases, the difficulty of defining and identifying it, and deciding what is an infringement of this right of property; and again, in some countries, speaking the same language as those bordering upon them, the great difficulty of protecting this kind of property from infringement, though no doubt arises as to the identification of the thing claimed, or in determining what shall be considered to be an infringement.

The question whether an author has, of common right, and independently of any special statute in his favour, a property in the products of the labour of his mind, as unquestionable and absolute as and coeval with them, and in no one subject but his own hands, was very elaborately discussed in the court of King's bench, and in the house of lords, in the time of lord Mansfield, in the celebrated cases of Millar against Taylor, reported in the fourth volume of Harrow's Reports, in relation to the copyright of Thomson's Seasons; and Donaldson against Becket, reported in the same volume. The first of these cases came before the court in 1769. In 1769, the statute (above mentioned) was passed, giving to authors an exclusive copyright for the term of fourteen years, and no longer. Notwithstanding the limitation of the right to that term, by the statute, it had been held, in divers cases, subsequently decided, that the exclusive right of the author, or his representatives or assigns, continued after the expiration of the fourteen years; and, accordingly, in 1739, lord chancellor Hardwicke granted an injunction against a person, other than the proprietors, printing Milton's Paradise Lost, the title to the copyright of which was derived to the proprietor, under an assignment by Milton, seventy-two years before. In the case relating to the copyright of Thomson's Seasons, three of the judges, namely, lord Mansfield, and justices Aston and Willes, were of opinion, that the exclusive right of property continued after the expiration of fourteen years from the first publication, as limited by the statute of Anne, and such was the decision of the court. Mr Justice Yates dissented from that opinion. Five years afterwards, in 1774, the other case came before the house of lords, and, as is usual with that tribunal, the opinion of the judges of the king's bench, was received as the opinion of the court. Lord Mansfield, being a member of the house, did not give an opinion in answer to the questions propounded by the house, with the other judges, but ncted and voted as a member of the body. Of the eleven judges who gave opinions, eight were of opinion that the author had common right—that is, as by the common law, or without any statute to this effect—the exclusive privilege of publishing his own works; and three were of a contrary opinion. Seven, against four to the contrary, were of opinion, that, by publishing his works and vending copies, he did not abandon his exclusive property to the public, or, in other words, that, by making and selling one copy, he did not authorize all other persons to make, and use or sell as many copies as they might choose. This seems to be so plain a point, that, if four respectable judges had not been of a contrary opinion, one would have thought it no wonder that the other seven had not decided another way. A case very analogous, but much stronger in favour of the author's right of property, is stated in the public journals (1831), as having recently been decided in France. An artist had sold a statue or picture, the production of his own chisel or pencil, and he had transferred both the property and the rights in the property to the purchaser; and the purchaser had a right to publish engravings of this original. It was decided, that the artist alone, and not the purchaser, had, in such case, the exclusive right to make and publish engraved copies. But, on the other question, proposed by the house of lords, viz., whether the statute of Anne took away the author's exclusive right to his own property, after the expiration of fourteen years, six of the judges were of opinion in the affirmative, so that the whole twelve judges were equally divided upon this question, lord Mansfield being, upon this and the two other questions, in favour of the author's right. But the house of lords decided that the author had no exclusive right after the expiration of the period limited in the statute, though the reasons given on that side, by the judges who supported it, are very unsatisfactory; and it is not easy to divine the grounds of the decision. Thus, in this last case, the decision of the house of lords, while the labour of the authors was not interfered with, was a blow to the leaders and champions of civilization and intellectual advancement—has been proverbial all the world over, the government has interposed, or is construed to have interposed, with its mighty arm, not for their protection and reward, but to despoil them of their pro-
LITERARY PROPERTY—LITHIC ACID. 459

... the fruits of their own labour, and sequestrate it for the public use. If a man collects the fruit thereof, or fabricates the fruits of his labour, he has an exclusive copyright in his work for twenty-eight years, and, if he is living at the end of that period, it is continued during his life. This act is entitled to the commendation of being less unjust than that of Anne.

On the continent of Europe, the laws are much more favourable, or, rather, much less unfavourable, to authors. In France, they are entitled to an exclusive copyright during their lives, and their heirs or assigns for twenty years afterwards. In many of the German states, the right is perpetual, but it is subject to this disadvantage, that it extends only to the state in which it is granted, and the work may be pirated in the others with impunity. This can be avoided only by procuring a copyright in the different German states, which is attended with much difficulty and expense. The defect of the laws of these German states on this subject, therefore, is not in infringing the author's property, or refusing to recognise his right to it, but in burdening him with heavy expenses in securing its protection. In Russia, the period of the copyright is the same as in France, and it is not liable to be seized and sold for the payment of the author's debts. In the United States of America, the copyright is for fifteen years from the date of its registration, and may be renewed for a like period. Hence, "for limited times, to authors, &c., the exclusive right to their respective writings," &c. Under this provision, a law was passed, in 1790, giving to authors, being citizens of the United States, or being resident therein, the sole right of printing and vending their works for the term of fourteen years from the time of recording the title in the clerk's office; and, if living at the expiration of that period, and then citizens or resident as above, they could have a renewal of the exclusive right for fourteen years longer, on filing a copy of the title again in the clerk's office. This law also required, that, at the commencement of each term, the author should publish the clerk's certificate in some newspaper for four weeks. It also required that a copy should be deposited in the office of the secretary of state. The United States legislative law was passed on this subject in 1831. By this act, the exclusive right is extended to twenty-eight years, with a right of renewal for his life, if the author is living at the expiration of the first copyright. It dispenses with the publication of the clerk's certificate, but requires it to be signed and sealed; if the work itself gives notice that the copyright is secured, a person who pirates it can have no pretence for alleging ignorance of the fact. The act, also, though it requires that the author shall send a copy for the office of the secretary of state, excuses him from the trouble of depositing it there, requiring him only to leave it in the office of the clerk of the district court. See Copyright.

LITERATURE, according to the English dictionaries, means learning. In general use, however, this word, in English, commonly signifies what in other countries would be called elegant literature, excluding works of abstract science, and mere erudition. The meaning of the word, in English, however, is vague. In German and French, the word means distinctly what is here called "literature," though the phrase "literature of the middle ages," or, "medical literature," means the aggregate of works written during the middle ages, or on medicine, &c. Literary is applied to all those branches of reading which come within the scope of a general reader; the phrase "literary gentleman" corresponds pretty nearly to the French homme de lettres. Literary gazette is a journal which treats of works interesting to a general reader. In literary history, the word has a more extensive meaning. See Literary History.

LITHIA; the name applied by Arfwedson to an alkali discovered by him in analyzing the petalite. The name was derived from the Greek λίθος (stone), in allusion to the existence of the earth in a stony mineral. Lithia has since been detected in spodumen, and several kinds of mica. The best process for procuring it is the following: One part of petalite or spodumene, in fine powder, is mixed intimately with two parts of fluorspar, and the mixture is heated with three or four times its weight of sulphuric acid, as long as any acid vapours are distilled. The silica of the mineral is attacked by hydrochloric acid, and dissipated in the form of di- or trisilicic acid gas, while the alumina and lithia unite with sulphuric acid. After dissolving these salts in water, the solution is boiled with pure ammonia to precipitate the alumina; it is filtered, evaporated to dryness, and then heated to redness, to expel the sulphate of ammonia. The residue is pure sulphate of lithia, which is dissolved in water, and decomposed by acetate of barytes; and the acetate of lithia, being heated to redness, is converted into the carbonate of lithia, and, finally, this is decomposed by lime or barytes, which affords pure lithia. Its colour, when pure, is grey; when impure, it is deliquescent; but absorbs carbonic acid from the air; very soluble in water; acrid, caustic, and acts on colours like the other alkalies; heated with platinum, it acts on the metal. It combines with the different acids, and forms salts with them, like potash and soda, though possessed of a higher neutralizing power than these alkalies. Its phosphat and carbonate are sparingly soluble; its chlorides is deliquescent and soluble in alcohol, and this solution burns with a red flame. All its salts give a red colour, when heated on a platinum wire before the blowlamp. The unalloyed nitrate of lithia is deliquescent. The metallic base of lithia was evolved by Sir H. Davy, by galvanism; but it was too rapidly oxidized to be collected: the metal was, however, seen to be white like sodium, and burn ed with bright scintillations.

LITHIC ACID, obtained by steaming in combination with potash, is obtained from human urine. Calculi, by digesting them in caustic lithivum: the lithate of potash gives up the lithic acid, on being mingled with acetic acid. It has the form of white shining plates, which are denser than water; it is without taste or smell, and dissolves in distilled water, forming a clear liquid; it is used in the infusion of litmus. The lithates are all tasteless, and very sparingly soluble in water. Lithic acid, by
LITHOGRAPHY—LITHOCHROMY.

repeated distillations, is resolved into ammonia, nitrogen, and water.

LITHOCHROMICS; the art of painting in oil upon stone, and of taking impressions on canvas. This process, which is designed to multiply the master-pieces of painting, was invented some years ago by Malepeaux, in Paris, who received a patent for his invention, and has an establishment for lithochromatic productions, which have been popular in Paris since 1823. This process is a substitute for the copying of portraits; it also served as a cheap means of ornamenting walls. This art, however, is still in its infancy. The lithochromic printings yet produced are less valuable than the engraving copies.

A similar, but much superior invention has been made by Senefelder, which he calls mosaic impression.

LITHOGRAPHY (from λιθος, stone, and γραφειν, to write).* The art of printing from stone, was invented at Munich, between the years 1795 and 1798, by Alois Senefelder. Peter Senefelder, the father of the inventor, was an actor at the theatre royal in that city, and intending to bring up his son to the law, placed him at the university of Ingolstadt. The dramatic inclination of young Senefelder, however, displayed itself in private theatricals; and, in 1789, he composed and printed a little comedy, called *Die Mischling, kehren*, for which he obtained some applause and profit. This success, and the death of his father, by which he was placed in reduced circumstances, fixed his determination of quitting the university, and attaching himself to the theatres. For two years he seems to have experienced all the miseries of a life of green-room vicissitudes, and then to have taken up the no less uncertain profession of authorship. After a variety of experiments made with the view of carrying this wish into effect, in the course of which Senefelder was compelled to substitute materials less expensive, or to him more manageable, for those commonly used by printers, he accidentally discovered, in the year 1796, a new basis, the composition of which he had passed much time in the printing-office, an anxious and, as it will appear, an inattentive spectator. I thought it so easy," says Senefelder, in his work on Lithography, "that I wished for nothing more than to possess a small printing-press, and thus to be the composer, printer, and publisher of my own productions.

After a variety of experiments made with the view of carrying this wish into effect, in the course of which Senefelder was compelled to substitute materials less expensive, or to him more manageable, for those commonly used by printers, he accidentally discovered, in the year 1796, a new basis, the composition of which he had passed much time in the printing-office, an anxious and, as it will appear, an inattentive spectator. I thought it so easy," says Senefelder, in his work on Lithography, "that I wished for nothing more than to possess a small printing-press, and thus to be the composer, printer, and publisher of my own productions.

* I had just succeeded (the himself says) in my little laboratory in polishing a stone-plate, which I had intended to cover with etching ground, in order to continue my exercises in writing backwards, when my mother entered the room, and desired me to write her a bill for the washer-woman, who was waiting for the linen. I happened not to have even the smallest slip of paper at hand, as my little stock of paper had been entirely exhausted by taking proof impressions from the stones; nor was there even a drop of ink in the inkstand. As the matter would not admit of delay, and there was nobody in the house to send for a supply of the defective want, I resolved to write the list with my ink prepared with wax, soap, and lamp-black, on the stone which I had just polished, and from which I could copy it at leisure. Sometimes after this, I was going to wipe this writing from the stone, when the idea all at once struck me, why would not the effect of such a writing with my prepared ink, if I were to bite in the stone with aqua fortis; and whether, perhaps, it might not be possible to apply printing ink to it, in the same way as to wood engravings, and so take impressions from it."

The result of the subsequent experiments was the art of painting from stone, the principle of which it may be here necessary briefly to explain. Its foundation is the fact known to every one, that grease will readily adhere to grease, and be repelled by water.

The lines required to be printed are drawn on stone with a greasy composition formed of tallow, bees' wax, shell-lac, and common soap, in equal parts, which will not unite with or be affected by water: previously to printing, the surface of the stone is wetted, and it is, therefore, prevented by the moisture from receiving the printing ink when applied, except on those places covered with the greasy composition. A roller charged with printing ink (which it need hardly be stated is greasy) being passed over the stone, the printing ink readily adheres to the greasy lines of the drawing, but does not adhere to the other parts of the stone, where the wax has been removed. When the print is obtained by pressure, which removes the printing ink from the lines of the drawing; and between each impression the operation of wetting the stone with a sponge, and applying the roller charged with printing ink is repeated. Such is a broad outline of the process of lithographic printing, but like every other art, simple as the general principle appears, a knowledge of the numerous details necessary to make a skilful practitioner can only be acquired by experience, and must be gained by manual execution.

Used as was from the want of pecuniary resources, to pursue his discovery, or obtain any advantage from it, Senefelder, tempted by a bounty of two hundred florins, determined to enlist as a private soldier in the artillery, with the enthusiastic expectation that this small sum might ultimately enable him to bring his invention into practice, and secure to himself an honourable competency and reputation. The feelings of an ingenuous mind under the circumstances of Senefelder must be interesting; but his situation, at this time, was one rather of romance than of ordinary life, and cannot be better told than in his own words, nor will any one who reads the plain and manly narrative which follow be satisfied with this uncoloured truth of the relation."

"I was quickly resolved, and on the third day after forming my resolution, I went to Ingolstadt with a party of recruits to join my regiment. It was not without some feelings of mortification and humbled pride that I entered this city, in which I had formerly led the independent life of a student, but the consciousness of my own dignity, and enthusiasm for my new invention, greatly contributed to restore my spirits. I slept in the barracks, where I was not a little disgusted by the prevailing filth and vulgar jests of a corporal. The next morning I was to enlist, but to my great disappointment the commander of the regiment discovered that I was not a native of Bavaria; and, therefore, according to a recent order of the Elector, could not serve in the army without obtaining a special license. Thus my last hope failed me, and I left Ingolstadt in a state of mind bordering on despair. As I passed the great bridge over the Danube, and looked at the majestic river in which I had been twice nearly drowned while bathing, I could not suppress the wish that I had not been then saved, as mistrust seemed to persecute me with the utmost rigour, and to deny me even the last prospect..."
of gaining an honest subsistence in the military

On Senefelder's return to Munich, chance threw in his way Mr Gleissner, a musician of the Elector's band, to whom he had formerly been known, and who was about to publish some music. Senefelder communicated to him his invention of printing from stone, and it was soon determined that by this new method Gleissner's music should be given to the world. The composing, writing on stone, and printing of twelve songs was accomplished in less than a fortnight, and one hundred and twenty copies taken at the expense of about thirty florins. In a short time the entire invention was sold for one hundred florins, thus leaving a profit of seventy florins, or rather more than two hundred per cent.

In addition to this prosperous commencement, count Torring having laid a copy of the work before the Elector Charles Theodore, Mr Gleissner received a present of one hundred florins, with the promise of an exclusive privilege for this method of printing. Two or three other publications, one of which was Cannabick's "Ode on the death of Mozart," respectively yielded some profit, and Senefelder saw his invention established with every appearance of success. At the same time, he was conscious that his ardour seems to have been damped at the reception of a communication which he made to the Electoral Academy of Sciences, explanatory of his mode of printing from stone. In this he stated his peculiar advantages, and dwelt at some length on the cheapness of the means by which it was performed, and instanced his own printing-press which had not cost more than six florins. Von Vachery, the vice-president, presented him with twelve florins, intimating that his "Memoir" had been very favourably received; and adding, that as the expenses of the press, according to his own statement, did not exceed six, he hoped that a double compensation would satisfy his expectations. "I, indeed," says Senefelder, "expected a very different treatment from the guardians of science and art, whose duty it is to investigate the value of every new invention, and if approved to submit it to the notice of their government."

This was in 1796. As employment increased, Senefelder set himself to work to construct an improved press; but a defect, apparently of the most obvious kind, occasioned a variety of embarrassments. A clumsy manual operation was substituted for a practicable one; and Senefelder hoped to be able to fulfil the engagements which he and Mr Gleissner were under.

Mr Falter, a music-seller at Munich, employed Senefelder to write and superintend the printing from stone an arrangement of Mozart's "Zauberflaute," but this effort was unfortunate.

It would be tedious to follow the various struggles of the ingenious Senefelder, or to enumerate his lithographic labours; so far, his personal history is that of an art, which having made certain advances, was of too much importance to continue long a secret. In 1798, when Senefelder received from the King of Bavaria an exclusive privilege to practise his new art for fifteen years, his two brothers were employed by him, as well as two apprentices; and on this act of justice, he no longer made a mystery of the process. In 1800, a circumstantial description of it was lodged at the patent-office in London, and in 1803 with the government of Lower Austria.

Amongst the strangers, who from motives of curiosity visited Senefelder's establishment, was Mr André, an extensive music publisher; he admired the facility of lithographic printing; and being instructed in the invention induced him to make Senefelder the offer of 2000 florins for an unreserved communication of all the particulars of his art, and the establishment of a press at Offenbach. If André's views had no more effect upon him than his expectations of the value of lithography would probably have been realized, but feeling a confidence in the vast power of the art, his views became ambitious; he proposed obtaining patents for the exclusive exercise of it in Vienna, London, Paris, and Berlin, simultaneously; he came over to England on the speculation of its application to cotton printing, without much previous knowledge of either art; and to this point the attention of Senefelder was, in consequence, for a considerable time, almost exclusively devoted.

On the return of Mr André to Germany, he prevailed on Senefelder to visit London, for the purpose of superintending the formation of a lithographic establishment. After nearly a year's absence, Senefelder arrived at Offenbach, where he found his family involved in a fierce dispute with Mr André respecting their claim to the exclusive right of practising his invention, and this led to a separation between Senefelder and André. His next patron (if indeed the name of patron can be applied to a connexion avowedly formed on mercenary motives) was Mr Von Hartl, a Munich merchant. But after a short time, it appears also to have entertained sanguine expectations from the application of lithography to cotton printing. During the next three or four years various partnerships were formed, and successively broken up, whenever it was discovered that immediate and extensive profits did not follow their formation.

But the art was no longer a secret, and in defiance of Senefelder's privilege, it was practised by several individuals and public establishments. "I rather suspect," says Senefelder, "that the opinion of my art having been long kept secret, arose from the circumstance that several of my former workmen or other persons who had by accident heard something of lithography, treated it as a great secret, in order to obtain greater consequence; some of them even went so far as to travel about and to sell their secrets and prescriptions to credulous persons, in some cases, for considerable sums."

In 1809 there were, besides Senefelder's, six lithographic printing-houses at Munich; and several amateurs and artists had pressess erected for their own use. To trace further the gradual diffusion of lithography in Germany is unnecessary, and would be tedious; but the following note may be of some use, in respect to its introduction into Britain and France.

Senefelder, about the year 1802, as has been stated, joined Mr Philip H. André in London, where his art was announced, under the name Polyniography. A caveat had been entered in the patent-office to secure, if necessary, the exclusive exercise of the invention in England; but we believe no patent for it was ever taken out, although the specimens published by André in 1803, bear the legend "By his majesty's royal letters patent." Senefelder complains of the exclusion in which Mr Philip André kept him, under the idea that he might divulge the process; but in justice to Mr André it must be mentioned, whatever his conduct towards Senefelder may have been, that he not only readily communicated the general principles of lithography to several artists in London, but admitted them freely from his printing-room. This safe method of multiplying drawings from the hand of the original designer alarmed the engravers, who, on the supposition that their craft was in danger, exerted themselves to cause lithography to be received as a whimsical invention, of no real importance, and one which could but lead to indelicacy and corruption. The artists also, at this period, after one or two careless trial sketches, and without due attention
LITHOGRAPHY.

to its capabilities, fell readily into the same opinion; inscribing as inherent defects of the invention what once appeared peculiar to their own inexperience; for it was unfair to expect that any of them, however eminent in their peculiar practice, should with a single effort obtain a perfect result. As a body, the British artists appear to have resigned lithography to its fate, with the feeling that it would never satisfy the requirements which it was intended to excite.

The first effort, therefore, to introduce the art into Britain by André completely failed, and he left the country. Lithography was next practised in London by two Germans, named Volweiller and Kernengerad; but they were equally unfortunate with André, and lithography would have been a second time driven out of Britain, had not the late Colonel Brown (assistant quartermaster-general) met with specimens, which convinced him that at least it was peculiarly well adapted for military and official purposes.

The quartermaster-general authorized the purchase for a hundred pounds of the secret (as it was then called) of stone printing, with the materials from Volweiller, who, with his partner, returned to Germany in 1807. Owing to Colonel Brown having misunderstood or forgotten part of the process, and perhaps also from the natural timidity attendant on a first essay in an occult art, the attempts made by him at printing produced no success, and the practice in Britain must have been abandoned, had not Lieutenant Pawley accidentally discovered the man whom both André and Volweiller had employed to prepare the stones and assist in working the press. This person, whose name is Redman, had acquired a knowledge, or rather had picked up a smattering of the general process, and with his aid the experiments at the Horse Guards became tolerably successful. The first map (a sketch of Bantry bay) was produced in the beginning of the year 1808; but previously to the appointment of Sir Willoughby Gordon as quartermaster-general, in 1811, the art was only used as an auxiliary to the military depot. From that date, lithography became of importance in the hands of the British government; and on a representation to the secretary at war, it was applied to printing the circulars of his office. At the present time the quartermaster-general's department executes lithographic printing for the treasurer, the commander-in-chief's, adjutant-general's and army pay offices; the home department, military asylum, commissariat, army medical department, office for military boards, recruiting department, &c. Plans and maps to a very large number have also been drawn and printed occasionally for both houses of parliament, with several laborious surveys relating to the new lines of roads through England, for the general post office.

Lithography is now, even in the hands of an inferior printer, no longer an imperfect art, as the supposed impossibility of repairing an injury, or correcting a fault, after impressions have been taken, is obliterated by an important discovery made by Mr. Cointet, the head partner of the house of Engelmann, who, in 1827, opened a lithographic establishment in London. This gentleman, acting on some experiments made at Mulhausen, was enabled, after a great deal of difficulty, to give to artists the power of retouching their drawings, after they had been etched. Several British artists have employed this method of retouching with success, some, indeed, in changing the composition of their drawings; others in altering the effect.

In France lithography was first introduced about the year 1807, by M. André, who disposed of "the secret" to whoever was willing to purchase it, for such sums as he could obtain.

In 1810, the French government refused M. Man-
LITHOGRAPHY.

press A A A, consists of four stout legs, firmly fixed to the floor, and spread out like the feet of a desk stool, as is seen in the figure, in order to insure stability. The upper ends of these feet are connected by four strong bars forming the support of the press. Two uprights rise from this frame, one on each side of the press; the one next the eye being shown at B. Each of these uprights has a smooth cylindrical rod, which serves as a guide to the platten or scraper box C, so that it may move easily up or down in a direction perpendicular to the table of the press, which is shown at D. This table moves on rails, in a manner similar to the table in the press of our Stanhope (See Printing Press in this work), and on the table the stone is put from which the impression is to be taken. The platten, or scraper box, is pressed down by means of the lever E, which is brought down in the direction of the table rail, and its lower extremity being formed like a wiper, or having a curved shape, drives down a spindle in the centre of the platten, and presses it on to the table.

There is a spring fastened to the middle of the spindle, and fixed to the side uprights, which causes the scraper box to rise so soon as the lever E is allowed to rise to the position represented in the engraving. There is a roller crossing the press, and on a level with the top of the frame, which is turned by the handle G, and so situated that when turned, it causes the table to move under the scraper box. F represents the tympan, a rectangular iron frame, moveable on a joint at the bottom, which frame is covered with parchment similar to the tympan in the press for type printing. The scraper is a wedge-formed plate of steel, fixed into the bottom of the platten with its edge downward, and nicely adjusted by screws so that it may lie parallel with the face of the stone lying on the table of the press. The operation of the press is simply this: the stone being prepared with the drawing in a manner that will afterwards be described, is laid on the table, the paper is laid over it, and the tympan brought down. The table is then moved forward to the scraper, the long lever is brought down, and the handle G is turned so as to draw the stone under the scraper, which is kept pressing upon the tympan; the pressure is then taken off, and the stone moved back to its former position by turning the handle G.

The manner of preparing the stone depends upon the kind of work to be executed. To prepare them for printing chalk drawings, two stones of the requisite dimensions are selected, one of which is placed in the table formerly described, with a little finely powdered quartz or hard sand (silver sand is the best that can be procured in this country). A little water is then put on the stone, and the other stone, being placed upon it, they are ground by giving the upper stone small circular sweeps in various directions. Sand and water being constantly added, the grinding is continued until the surfaces of the stones are quite level. The sand must be passed through a sieve, in order to obtain it of equal grain. When ground, the stone should be carefully washed. When the stone is in shape optics have a uniform colour, and be perfectly free of scratches. M. Jodard, a lithographer, in Paris, has lately discovered an improved method of grinding, which consists in using a spoonful of starch along with the sand. The greatest care is necessary in cleaning the stone of both starch and sand, by means of a brush and water.

When the stone is to be prepared for ink drawings or writings, it must be polished. The grinding process, already described, is first pursued, and the polish is then given in the following manner. The circular motion is continued, and water but no more sand is added, until no grains appear, the polishing being given by the sort of paste formed by the water and the attenuated sand. The stone is now washed, and the same process is continued with powdered pumice stone. A first polish is thus obtained; but the finishing is effected by polishing the stone with a large piece of pumice stone until the polish is equal to that commonly given to marble, i.e., until objects are seen reflected from the surface when the eye is placed near it.

When a drawing or stone has been used, it must be carefully taken out by rubbing two stones together with water, and then immediately after coming from the press. Ink drawings are much more difficult to efface than chalk ones. When all traces are effaced, the stone must be washed with dilute nitric acid, the acid being five per cent. the bulk of the water.

Ink for this kind of drawing should be insoluble in water, flow easily from the pen, but not liable to spread on the paper or stone, to which last it should adhere firmly, have great solidity on being treated with the acid solution, and, lastly, a good body of colour. An ink having these properties is formed by a composition, the parts being taken by weight:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Parts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dried tallow soap</td>
<td>30</td>
</tr>
<tr>
<td>Mastic in drops</td>
<td>30</td>
</tr>
<tr>
<td>Subcarbonate of potash</td>
<td>30</td>
</tr>
<tr>
<td>Chinese or table varnish</td>
<td>150</td>
</tr>
<tr>
<td>Lamp black</td>
<td>12</td>
</tr>
</tbody>
</table>

The tallow being well dried, the whole of the materials are put into a clean copper vessel, which is placed on a brisk fire. Keep stirring until the melting and mixing is completed, when they are to be poured into a mould of metal that has been heated to a considerable degree. The metal is heated so as to prevent the composition from cooling too rapidly, in order that it may the more easily be cut into regular strips. Such is the mode of preparing the ink for the stone. When the drawing or writing is to be done on paper, and from thence transferred to the stone, ink of a tougher nature is required, which may be composed as follows:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Parts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry soap</td>
<td>100</td>
</tr>
<tr>
<td>White wax, without tallow</td>
<td>100</td>
</tr>
<tr>
<td>Sheep's fat</td>
<td>50</td>
</tr>
<tr>
<td>Gum lac</td>
<td>50</td>
</tr>
<tr>
<td>Mastic</td>
<td>50</td>
</tr>
<tr>
<td>Lamp black</td>
<td>30</td>
</tr>
</tbody>
</table>

Transfer or autograph paper is prepared thus: take common-sized paper and lay a coat of

*A* An inferior kind of ink is given in some works, consisting of equal parts of candle tallow, virgin wax, shell lac, common soap, and one twentieth part of the whole weight of lamp black.
LITHOGRAPHY.

The process of lithography involves the use of a greasy substance applied to a polished stone, which is then brought into contact with a damp sheet of paper, allowing ink to be transferred from the stone to the paper. The ink is transferred to the paper because the greasy substance on the stone repels water, allowing the ink to adhere only to the greasy areas.

Much of the beauty of chalk prints will depend upon the quality of the chalk pencils or crayons. The following composition has been found to answer the purpose admirably:—

**Flour starch, 120 parts.**
**Gun Arabic, 40 parts.**

The paper may be tinted by adding a small quantity of gautobo or Avignone seed. The composition must be laid on while hot, and the paper must be afterwards smoothed by being passed through the press. The lithographers in Paris employ rice paper for transferring sketches; the paper being, of course, covered by a thin coating of the starch composition.

The first two of these ingredients are mixed and melted in a copper vessel over a brisk fire; they are constantly stirred, the lamp black being added by little and little. The compound, while hot, is poured into the brass crayon mould, of which we have already spoken, the mould having been previously oiled to prevent the crayons from adhering.

The lithographic printing ink, is prepared in a similar manner to the ink employed by the letterpress printers. A quantity of linseed oil is boiled in a copper or brass vessel, until it burns when set fire to by a lighted paper, being kept burning till it is reduced in volume, by losing from one fourth to one half of its original bulk. The oil requires to be stronger for working crayon, than for working lithographic ink drawings. Regarding the thickness of the ink, experience alone can be the guide.

The lamp black used, should be that produced by the burning of rosin, when the ink is intended to be black. If the ink is intended to be blue, then Prussian blue or indigo is used, if red, vermilion and other colouring matters may be used, some of which must be mixed with oil of turpentine before they combine with the boiler.

There is a kind of ink used for preserving the drawing or writing upon the stone when the working is to be suspended for eight or ten days—it is called *preserving ink*. An excellent preserving ink is composed of:

- **Boiled oil, very thick** 11 parts.
- **Sheep's fat** 4 parts.
- **White wax** 1 part.
- **Oil of turpentine** 5 parts.
- **Lamp black** 4 parts.

The first three ingredients are brought to boil in a vessel over the fire, the turpentine is then added, and the lamp black by little and little, the mixture being constantly stirred. A table and roller must be kept for this kind of oil.

When the paper to be used in printing is sized, it must be dampened the night before use, in the same manner as is done by the letterpress printers, one sheet is passed through water and laid upon a table, ten or twelve dry sheets are laid above it, another wet sheet is laid above these, then dry ones, &c., the whole being pressed down by a board, and weights for two or three hours. But it is better that the paper should contain little or no size, in which case it does not require to be dampened. The greatest care should be taken not to use paper made from rags that have been bleached with chloride of lime.

By the use of such paper, the drawing will be inevitably spoiled. Chinese paper, which is impregnated with alum, has a like effect.

In order to place a chalk drawing on the stone, the outline may be traced upon it with a black lead pencil, or what is still better with red chalk, taking care to lean very lightly. A still better method is to trace the outline with red chalk on a piece of paper: the stone is rubbed with a little turpentine, the paper laid on it wetted a little, and covered with a second sheet; the tympan is brought down upon it, and it is passed twice or thrice through the press, and the outline is transferred from the paper to the stone. Another method is to place a bit of rice paper on the stone, the paper having been previously rubbed with red lead. On this the drawing is laid, and the outline traced with a steel point. In filling in the outline and forming the shades, the artist proceeds with his crayon in the same way as he would upon paper. There is, however, much greater difficulty in keeping a point in the lithographic drawing, and considerable practice is necessary to attain a sufficient freedom of hand. The proper depth of stroke should be given at first, as it is not easy to deepen it by retouching. When putting in the light tint, the chalk must be fixed with a light reed, the malachite-crayon being too heavy, and it is very difficult to bring the finer tints off well in the impression. A wedge shape is better than the point for the crayon, being less liable to break; when pieces do break off, they must be carefully brushed away. As the chalk softens by the warmth of the hand, several pieces must be had in readiness to be used in succession.

In drawing with ink, the fine steel pen is used. The ink which has been cut into sticks, is now placed in a cup that has been previously warmed, hot water is poured upon it, and it is melted to such a degree of fluidity that it will enable it to flow easily from the pen; but the dilution must not be carried further, as the lines laid on by the pen must be sound. The only way of varying the depth of shade or tint, is by drawing the lines of different degrees of thickness, or by regulating their distance from one another.

In drawing on the stone, either with crayons or ink, the greatest attention must be paid to keep the stone clean; it must not be touched by the draughtsman's hand, nor should he even breathe upon it.

The next mode we shall notice, of placing the writing of figures to be printed upon the stone, is by the transfer paper. When the transfer paper has been formerly covered, as was stated with the starch composition, is commonly rubbed over with a little powdered gum sandarac, after which the writing or drawing is executed with an ink of greater thickness than that used in writing upon the stone. When the transfer paper has been prepared, the stone is heated to a temperaure of somewhat above 100° and laid on the table of the press. The paper is dampened, and ere the stone is cold, it is laid on it, and passed several times through the press, by which means the writing is transferred.

The drawing being by any of these means put upon the stone, it is placed obliquely over a tank, and a weak solution of nitric acid poured upon it. The stone is re-erected, that is, the under edge is next placed uppermost and the dilute acid is again poured upon it. From the nature of the stone, this solution will cause it to effervesce: the strength of the solution should be such as to cause the stone to effervesce to one hundred of water. The stone is now washed with rain water, after which gum water is poured upon it. The roller well charged with printing ink, is now passed over it in various directions until the drawing is completely inked, after which the stone is laid over with a solution of gum arabic of about the consistence of oil. Great care is required in this pro-
cess, which is called etching; the strength of the solution will depend upon the nature of the stone, as likewise on the nature of the drawing. A strong etching fluid destroys the finest tint, but weakens the deeper shades; the strength of the acid solution must also diminish with the softness of the stone.

Woodcut engravings can be very well imitated in lithography, by covering the stone with ink, and taking out the light part by means of a steel point, the finer lines being put in with a hair pencil. When the drawing is finished, the stone is treated with the acidiplates water as described above.

Copperplate prints may be very well imitated by engravings on stone. Take a well polished stone, and treat it with a solution of nitric acid, so that slight effervescences ensue. Wash the stone, and then cover it with a mixture of gum arabic and honey, and then spread over it a little lamp black when half dry; when dry, etch as in copperplate engravings, taking care not to make the lines very deep, fill in the hollow parts with linseed oil, which after a little must be taken out by pressing a blotting paper on it. The lines are then to be filled with a mixture of linseed oil and tallow in equal quantities, with a little lamp black. In two or three hours the stone is washed clean, and is then ready for use.

Engravings upon copper may be taken from the plate by means of a square stone nearly 400, and then taken from it immediately upon the stone.

When the drawing or writing is placed upon the stone, it is prepared for printing. The stone is placed on the table of the press, and a proper sized scraper is placed in the scraper box, being adjusted with nicety by screws to touch the surface of the stone. The stone is gently washed with rain water, and ink taken upon the roller from off the ink table, and distributed upon the stone, in the same manner as in letterpress printing. The drawing receives the ink with difficulty at first, and two or three of the first proofs are commonly bad. The stone should be kept just wet enough to prevent the ink from going on any place but the drawing, and a very little gum is allowed to remain on the stone during the whole process. Should the ink go on any part where it ought not, it must be taken out by the application of a square stone nearly 400, and the lines are redressed by the press work, especially the tempering of the ink, which need not be specified here, as they can only be learned by practice.

When during the process of printing any error is found, and erasure becomes necessary, the following solution is employed: Take two parts of caustic potash, in 126 parts of pure water. The liquid must remain a few minutes on the stone before it be washed off, when the drawing will be effaced. Another method is to wash with oil of turpentine, then come over it with vinegar of the ordinary strength.

LITHOTOMY is the name given to the operation for extracting the stone from the bladder. See Stone.

LITHOTRITY is a surgical operation, by which the stone in the bladder is crushed. It is the instrument invented and first applied by doctor Civiale, of Paris, in 1826. He has written on the subject.

LITHUANIA (in the language of the country, Litven; in German, Lithauen); an extensive country, formerly an independent grand duchy, containing 126,000 square miles, and divided into two parts by the Dnieper river, which separates it from Poland. Since the dismemberment of that kingdom in 1773, 1793, and 1795, the greater portion of it has been united to Russia, and forms the governments of Mohilow, Witpeek, Minsk, Wilna and Grodno. The climate is temperate and healthy, and the face of the country nearly a level, interrupted only by a few insignificant hills. The soil is in some parts sandy; in others marshy, or covered with woods; but, wherever it is cultivated, very productive; the principal crops are the flax, or Dwina, the Dnieper, the Niemen, the Przypieck, Grodna, and Bug. There are also many lakes and morasses. Lithuania raises considerable numbers of cattle, and produces abundance of corn, flax, hemp, wood, honey, and wax. The mineral kingdom yields iron and turf. The forests are full of game; amongst the wild animals are the ursus, lynx, elk, beaver, &c. Corn, wax, honey, wolf and bear skins, leather, wool, and small but good horses, are exported. The manufactures are iron, glass, lether, and there are numerous distilleries. The Lithuanians, who are of the Lithish origin (see Littornia), were in the eleventh century tributary to Russia. They made themselves independent when Russia was divided by the troubles under the successors of Wladimir, and soon became formidable to their neighbours. Rinigold, in 1535, bore the title of grand duke, and, under his successors, the whole of Russian Lithuania was separated from Russia. Gedemin conquered Kiev; Wladislaus Yagello was baptized in 1386, and, by his marriage with the Polish queen Hedwig, united Lithuania and the conquered Russian provinces with Poland. A portion of Lithuania, 662 square miles, nearly 400,000, is an eastern part of the province of East Prussia, and is fertile and well cultivated. See Russia, and Poland.

LITIMUS; a blue paste or pigment obtained from the lichen purpurarius. It is brought from Holland at a cheap rate, but is not much used in painting, for the least acid reddens it; but the colour is again restored by the application of an alkali. On this account, it is a very valuable test to the chemist for detecting the presence both of an acid and alkali. It is employed also for staining marble, and by silk dyers for giving a gloss to more permanent colours. Considerable quantities of the lichen are collected in the northern parts of Great Britain.

LITRE. See France, division Decimal Measure.

LITTERN; a sort of vehicular bed; a couch or chair wherein the Roman patricians were borne by their servants, particularly on public processions, such as triumphal processions or religious ceremonies. These litters were mostly provided with an awning or canopy, to preserve their occupants at once from the heat of the sun and from the general glare.

LITTLETON, or LYTTLETON, THOMAS, a celebrated English judge and law authority, born at the beginning of the fifteenth century, at Frankley, having been educated at one of the universities, was removed to the Inner Temple, where he studied the law, and became very eminent in his profession. In 1445, he went the northern circuit as judge of assize, and was continued in the same post by Edward IV., who also, in 1466, appointed him one of the judges of the common pleas. In 1475, he was created a knight of the Bath, and continued to enjoy the esteem of his sovereign and the nation until his death, at an advanced age, in 1481. The memory of judge Littleton is preserved by his work on Tenures, which has passed through a very great number of editions, those from 1539 to 1639, alone amounting to twenty-four. This work is esteemed the primary authority for the law of real property in England, while the commentary of Sir E. Coke is the repository of his learning on the subjects treated.

LITTORALE; an Italian word signifying the sea coast, applied particularly to the Hungarian province on the coast of the Adriatic, comprising the three towns Fiume, Bucari and Porte-Re with
their territories, on the northern coast of Dalmatia. It formerly belonged to the military district of Croatia. The emperor Joseph II. annexed it to Hungary in 1776, and gave it a civil government for the encouragement of Hungarian commerce. The district had, in 1787, 19,098 inhabitants upon 140 square miles. From 1809 to 1814, it formed part of the Illyrian provinces of France. In 1814, it was restored to the Austrian empire, and, in 1822, was reunited with the provinces of the crown of Hungary. The seat of government is at Fiume. (q. v.)

LITURGIA (Greek, λειτουργία): the office of the λειτουργος. These were persons in Athens, of considerable estates, who were ordered by their own tribe, or by the whole people, to perform some public duty, or supply the commonwealth with necessaries at their own expense. This institution indicates the rudeness of an age in which political science had made but little progress. These λειτουργοι were of divers sorts, all elected out of 1200 of the richest citizens, who were appointed by the people to undertake, when required, all the burdensome and chargeable offices of the commonwealth, every tribe having its share of their charge. Their 1200 were divided into two parts, according to their wealth. Of the wealthiest half, were appointed 300 of the richest citizens, who, upon all exigencies, were to furnish the commonwealth with necessary supplies of money, and, with the rest of the 1200, were to perform all extraordinary duties in turn. If any person, appointed to undergo one of the duties, could find another person more wealthy than himself, and free from all the duties, the informer was excused. This obnoxious institution was abolished on the proposition of Demosthenes. (See WAp, 15.)

LITURGY (Greek, λειτουργία, from λειτω, public, and γενεσθαι, to work; a precomposed form of public worship. It is merely our intention here to mention some of the most important liturgies, without entering into all the discussion of the primitive forms of worship in the Christian church. There are three liturgies used in the Greek church—those of Basil, of Chrysostom, and of the Presanctified. They were used in all the Greek churches subject to the patriarch of Constantinople; also in the countries originally converted by the Greeks, as Russia, Georgia, Mingrelia, and by the Melchite patriarchs of Alexandria, Antioch, and Jerusalem. (King, Rites of the Greek Church.) There are various liturgical books in use in the Roman Catholic church, the greater part of which are common to all the members in communion with the church, while others are only permitted to be used in particular places, or by particular monasteries. The Breviary contains the masses, lauds, &c., with the variations made therein according to the several days, canonical hours, and the like. There are various breviaries appropriated only to certain places; as the Ambrosian breviary used in Milan, the Gallican, by the church of France, and those of different monastic orders; but the Roman breviary is the basis of the services of matins, lauds, prime, third, sixth, none, complines, or the post-communion, that is, of the seven hours, on account of the saying of David, "Seven times a day do I praise thee." It is recited in Latin. The Missal, or volume employed in celebrating mass, contains the calendar, the general rubrics, or rites of the mass, and, besides such parts as are invariably the same, the
LIVADIA.—LIVERPOOL.

To farther in the a to for

"he (see impressive stituting, extent, Liturgies."

Hercules Livadia, formerly Lebadia, at the foot of mount Helicon, near which are the cave of Trophonius, and the fountains of Mnemosyne (memory) and Lethe (oblivion). Not far off are Leucra and Platea, and the ruins of Thespian, whose inhabitants were selected by Hercules to die for their country, with the 300 Spartans. Tanagra, on the Æsopus, was the birth-place of the celebrated Corinna. Mount Citharon divides Boeotia from Attica and from Megaris. See Greece.

LIVE OAK. See Oak.

LIVER (fœur, heper); a large gland which occupies a considerable portion of the cavity of the belly, and which secretes the bile. It is a single organ, of an irregular shape, brownish-red colour, and, in general, is smaller in proportion as the individual is more healthy. It occupies the right hypochondrium, or space of the right side of the epigastic region, and lies immediately under the diaphragm (midriff), above the stomach, the transverse colon, and right kidney; in front of the vertebral column, the norta and the inferior vena cava, and behind the cartilaginous edge of the chest. The right false ribs are on its right, and the spleen on its left. The superior surface is convex, and the inferior is irregularly convex and concave, which has given rise to the division into the right, or large, and the small, or inferior. The right extremity of the liver is lower than the left, and is the most prominent part of the organ. The pressure of the surrounding organs, and certain folds of peritoneum, called its ligaments, which connect it with the diaphragm, retain the liver in its place, leaving it, at the same time, a considerable power of changing its relative position. The organization of the liver is very complicated. Besides its peculiar tissue, or parenchyma, the texture of which is unknown, it receives a larger number of vessels than any other gland. A peculiar venous system—that of the vena portorum—is distributed in it. To this must be added the ramifications of the veins and of the small veins, the vasa recta, which are small, the lymphatic vessels, the excretory tubes, and a peculiar tissue, enclosed by a double membrane, a serous or peritoneal, and a cellular one. The excretory apparatus of the bile is composed of the hepatic duct, which, rising immediately from the liver, unites with the cystic duct, which terminates in the gall-bladder. The choleodochal duct is formed by the union of the two preceding, and terminates in the duodenum. See Gall-Bladder, and Bile.

LIVERPOOL; a borough town of England, in Lancashire (next to London) the principal seaport in the British dominions: 204 miles from London: 36 from Manchester: lon. 2° 59' W., int. 53° 25' N. It extends along the eastern bank of the Mersey, about three miles, and, at an average, about a mile inland. On the west side of it, and forming a remarkable feature in the town, lie the docks, which, with the wharfs, warehouses, &c., extend in an immense range along the bank of the river. On the other side, the town is prolonged into numerous suburbs, consisting of villas and country houses, the residence or retreat of its wealthy citizens.

The etymology of the name of Liverpool has been a matter of much conjecture. In the charter granted by king John, it is called Lyr-puli, meaning the harbour of the Mersey, derived from the Gaelic Lyr.
LIVERPOOL.

the sea. Dr Easfield wishes to consider Liverpool as the true orthography, and some suppose that it was thus derived from the family of Lever, of ancient standing in the county. Others would con-

clude that the Cymrouant in its corporation seal, by the heraldic artist, is the correct form of its appellation; but the cost of arms is evidently a rebus from the name of the town. Others imagine that it is derived from the abundance of liverwort growing on the shore, but unluckily the liverworts are not marine plants, and the various species of Ulva that grow there are called Ulva instead of Liver. It cannot have been the origin of the name, which it seems more safe to consider as a corruption from the original British Lyrpal.

The early history of Liverpool is extremely meagre. Originally a fishing village, belonging to the parish of Walton, it is not mentioned in Dooms-
day Book. It fell with the rest of the country between the Ribble and Mersey to the share of Roger of Picton, who it is supposed built a castle here about the year 1076, on the site of what is now St George's church, which thus became the nucleus of a town. Liverpool is said to have received a charter from Henry I in 1199, another from Henry II, soon after his conquest of Ireland; but both these charters are of very doubtful authenticity, if not confessedly spurious. The earliest really authentic document is a charter from king John, dated 1207, still preserved amongst the records of the town. So few incidents occur, in the lapse of five centuries, that the history of Liverpool may be summed up in relating that the Molinieux family remained during this long period wardens of the castle; that in the thirteenth century a building was erected called the tower, at the bottom of Water street, as a lookout to keep watch for the safety of the castle, and that about the year 1260 it became vested in the Stanley family, by the marriage of Sir John Stanley with the heiress of Lathom. This building was occasionally the residence of the earls of Derby, and afterwards became a prison; its remains were replaced by warehouses in 1810. Between the Stanleys and the crown, in the fourteenth century, a feud so violent took place, in the reign of Henry VI, that government was obliged to interferere. At this period, and for many ages after, the knightly family of More, of Bank Hall, held large possessions and had a mansion in Liverpool. In the reign of Charles II a great fire destroyed half the town and the buildings were in a flourishing condition:—"Lyrpole, alias Liver-

poole, a paviown town, hath but a chapel, Walton a 6ii miles of, not far from the Se is parochie church, the king has a castelet there, and the earls of Darbe hath a stone house there. Irish marchaunts cum much thither as to a good haven; after that Mersey water cumming up to Runconre in Cheshire, liesed among the commone people the name, and is Lyr-

pole. At Lyrpole is smaule custume payed that causith marchaunts to resorte. Good marchaunds at Lyrpole, and meoch Yris yarn that Manchestere men do buy ther." After this period the town seems to have fallen somewhat into decay, as in the year 1565 a town record states that the number of householders was only 138, and in a petition to queen Elizabeth, in 1571, it is styled her majesty's poor decayed town of Liverpool; but at the latter end of this reign it appears to have somewhat recovered itself, as Census returns of its population in the latter part of the last century show. The sugar trade of the town, which had been, since the time of Leland's; but even at the period of the civil wars its relative inferiority to Bristol may be inferred from the former city being rated at £1,000 for the illegal exaction of ship money, whilst Liverpool was required to furnish only £25. In the year 1644 the town was defended by colonel More against the army of prince Rupert for three weeks, at the expiration of which it was taken by storm, but the royal cause being soon after utterly ruined, at the battle of Mar-

ston Moor, Liverpool again fell into the hands of the parliament. In 1660 king William embarked at this place for Ireland, three days before the battle at Boyne, which fixed the crown upon his head, and established the security of the protestant faith and the liberties of England. It was honoured, in 1806, by another royal visit, in the person of the prince of Wales, accompanied by the duke of Clarence, his Indian governor. Liverpool was created a city in the reign of the rebellion, in 1715 and 1745. Its history subse-

quent to the Restoration is the detail of its increasing commercial prosperity, one principle of which seems to have been that by Leland, in "the smaule custume payed." At the time of its erection into a separate parish, 1839, Liverpool appears to have contained a population of about 5000 persons; its great increase and prosperity have been occasioned by the enter-

prise and skill of its inhabitants, by its local advanta-
eges, commanding the trade of Ireland and America, and by the enlarged wisdom of the corporation, in abolishing all exclusive laws, and encouraging by an enterprising policy for every species of industry and com-

mercial talent.

The streets of Liverpool are mostly spacious, airy, some of them elegant, and the greater part of them lighted with coal gas. The older and more confined parts of the town are in a state of improvement. The public buildings are elegant. The principal of these are the town hall, exchange buildings, corn exchange, lyceum, atheistsum, Wellington rooms, infirmary, workhouse, blue-coat school, dispensary, and asylum for the blind. There are at present about twenty churches belonging to the establish-

ment, many of them of much architectural beauty; a greater number of chapels belonging to various denominations of dissenters; with four Roman Catholic chapels, a meeting-house for Quakers, and a Jews' synagogue. The charitable institutions are numerous and well conducted. About 1500 patients are admitted annually into the infirmary. The blue-

coat school was founded in 1508, and contains about 200 boys and girls. The school for the blind is on a most extensive scale. A handsome and spacious theatre, and a circus, are open during great part of the year. At the royal Liverpool institution, public lectures are given; and attached to it is a philosophical lyceum, and a corporation botanical garden was also established in 1801, at an expense of about £10,000. The lyceum and the atheenuum consist each of a news-room and library. There are also the Union news-room, the music-hall, the Wellington rooms, opened in 1816, for balls, con-

ceris, &c., the town hall, the exchange buildings, erected in 1803—9 for commercial purposes. The area enclosed by the fronts of these buildings and the town hall, is 197 feet by 178. In the centre of the area is erected a superb group of bronze statues, supposed to be the largest in the kingdom, to com-

memorate the death of lord Nelson.

But the peculiar feature of Liverpool consists in its extensive docks, which have been both the cause and effect of its prosperity. The area of these excavations, including the various basins, graveling and dry docks, embraces a space little short of 100 acres. From the flatness of the shore, shipping must always have been difficult; for vessels were obliged to ride as in a road rather than a har-

bour, exposed to sudden gales and hurricanes, which even at present cause much damage. The act of parliament for excavating the old dock was obtained in 1710; its surface was 35 acres, but it is now filled up, and the new custom house built on its site.
The Salt House Dock was constructed by virtue of an act 10, George II.; it is the receptacle of ships in the Levant and Irish trade. In the third of George III., a much larger dock, St. George's Dock, was begun; this was followed by the King's Dock, opened in 1788, in which only the Virginia vessels laden with tobacco, and vessels from the East Indies, are allowed to discharge their cargoes. Soon after Queen's Dock, of still greater magnitude, was completed in 1796; it is frequented by timber ships from the Baltic and from America; Prince's Dock, 500 yards in length, was opened in 1821. This dock is enclosed by a wall, between which and the river is a spacious parade, commanding a delightful view of the opposite coast, and of the exhilarating scene presented by the continual bustle on the Mersey, constantly alive with steam vessels, which were first introduced in 1815. To the north of Prince's Dock, and communicating with it, is the new North Dock, and a large graving dock; also Clarence dock appropriated to steam vessels. To the south of the Queen's Dock is the Brunswick Dock, which is appropriated for vessels laden with timber. In addition to these works the duke of Bridgewater's estate has a small dock for the use of the flats navigating his canal; and there are various dry or graving docks, basins, and communicating slip ways: all these docks are considered as a monument of human ingenuity and perseverance. The great advantages which they afford are obvious, when the ease and convenience of transacting business at Liverpool is compared with the hanged and delay of most other ports, not even excepting the metropolis.

The exports of Liverpool consist chiefly in the manufactured goods of England, such as eatenware, cutlery, hardware, cotton, and woollen goods, much salt, and some coal; the imports in the produce of Ireland, such as butter, bacon, tea, potatoes, hides, corn, linen, spirits, and wool; and the produce of the Africa, the East Indies, and North and South America, viz. palm oil, red wood, ivory, tea, bark, coffee, flour, hides, indigo, pimento, rice, rum, sugar, tallow, tobacco, woods, and cotton wool; for which latter article, Liverpool is the great depot of the produce of the kingdom. In 1830, of 793,005 miles of cotton imported into England, 703,200 were carried into Liverpool. In 1824, the whole amount imported into Liverpool was 578,329 bales, of which 413,724 were from the United States of America. In 1848, the amount of exports Liverpool was £259,000,000 sterling; the number of vessels belonging to the port in 1829, was 805, of 161,750 tons.

Statement of the Amount of Dock Duties Received at the Port of Liverpool, in each Year, ending 31st June, from 1812 to 1835, inclusive.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Vessels</th>
<th>Tonnage</th>
<th>Amount of Dock Duties</th>
<th>Duties on Goods</th>
<th>Total Amount of Dock Duties</th>
</tr>
</thead>
<tbody>
<tr>
<td>1812</td>
<td>4,599</td>
<td>416,260</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1813</td>
<td>5,061</td>
<td>524,930</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1814</td>
<td>5,156</td>
<td>596,580</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1815</td>
<td>5,180</td>
<td>579,200</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1816</td>
<td>4,819</td>
<td>491,850</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1817</td>
<td>4,612</td>
<td>341,400</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1818</td>
<td>5,104</td>
<td>579,200</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1819</td>
<td>6,022</td>
<td>680,300</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1820</td>
<td>6,704</td>
<td>807,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1821</td>
<td>6,209</td>
<td>735,100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1822</td>
<td>7,490</td>
<td>892,300</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1823</td>
<td>8,040</td>
<td>968,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1824</td>
<td>8,460</td>
<td>1,004,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1825</td>
<td>7,180</td>
<td>819,400</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1826</td>
<td>9,300</td>
<td>1,045,300</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1827</td>
<td>11,920</td>
<td>1,421,200</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1828</td>
<td>14,902</td>
<td>1,661,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1829</td>
<td>12,916</td>
<td>1,416,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1830</td>
<td>15,816</td>
<td>1,650,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1831</td>
<td>15,200</td>
<td>1,500,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1832</td>
<td>14,500</td>
<td>1,400,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1833</td>
<td>13,066</td>
<td>1,260,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1834</td>
<td>12,080</td>
<td>1,170,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1835</td>
<td>12,600</td>
<td>1,290,000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Statement of the Gross and Net Receipt of the Customer Duties at the Port of Liverpool, at different Periods of the last and present Century, as far as the same can be made up from existing Documents.

<table>
<thead>
<tr>
<th>Years</th>
<th>Customers' Receipt for the last and present Century.</th>
<th>Net Reimbursements to the Receiver General, for Payment into the Exchequer.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1823</td>
<td>62,956</td>
<td>18,196</td>
</tr>
<tr>
<td>1824</td>
<td>102,160</td>
<td>28,540</td>
</tr>
<tr>
<td>1825</td>
<td>125,011</td>
<td>34,027</td>
</tr>
<tr>
<td>1826</td>
<td>132,285</td>
<td>35,930</td>
</tr>
<tr>
<td>1827</td>
<td>146,312</td>
<td>39,530</td>
</tr>
<tr>
<td>1828</td>
<td>150,243</td>
<td>41,450</td>
</tr>
<tr>
<td>1829</td>
<td>155,262</td>
<td>44,150</td>
</tr>
<tr>
<td>1830</td>
<td>161,294</td>
<td>48,260</td>
</tr>
<tr>
<td>1831</td>
<td>161,140</td>
<td>48,550</td>
</tr>
<tr>
<td>1832</td>
<td>165,500</td>
<td>50,105</td>
</tr>
<tr>
<td>1833</td>
<td>168,000</td>
<td>51,200</td>
</tr>
<tr>
<td>1834</td>
<td>165,000</td>
<td>51,200</td>
</tr>
<tr>
<td>1835</td>
<td>165,000</td>
<td>51,200</td>
</tr>
</tbody>
</table>

See the article Ireland for a statement of the quantity and value of the agricultural produce imported into Liverpool from Ireland.

Liverpool has extended the system of canal navigation, which has grown up with its increasing trade, and by which it has a water communication with the North sea. The manufactures are chiefly those connected with shipping, or the consumption of the inhabitants. There are extensive iron and brass foundries, breweries, soap-works, and sugar-houses. In the vicinity are many windmills for grinding corn, which have a very striking appearance; also a large tide-mill, and another worked by steam. A great number of men are employed in building, repairing and fitting out vessels. Of the finer manufactures, the watch-movement and tool business is carried on extensively, and almost exclusively here; and in the neighbourhood there is a china manufactury, where beautiful specimens of porcelain are produced.

The Liverpool and Manchester rail road commences with a tunnel, twenty-two feet high, sixteen broad, 6750 long. The thickness from the roof to the surface of the ground, varies from nine feet to seventy. About two thirds of it is cut through solid rock. The rail road is continued through the remaining distance of thirty miles, with embankments, viaducts and excavations. It is traversed by locomotive steam carriages, running at the rate of about twenty miles an hour. Two additional tunnels connected with the rail road, have been recently formed, under the town of Liverpool; one terminating at the docks and the other at the Haymarket. The quantity of merchandise conveyed between Liverpool and Manchester, has lately been estimated at 1500 tons a day, the number of passengers at 1300; and 100 horses is required to pull that train, and was made under-secretary of state. In 1760, he was
LIVERPOOL—LIVINGSTON.

named a lord of the admiralty, from which board he subsequently removed to that of the treasury. In 1772 he was appointed vice-treasurer of Ireland, and was rewarded with the sinecure of the clerkship of the Rolls, published annually. In 1782 he was under-secretary at war, and, on the dissolution of the administration of lord North, joined that portion of it which supported Mr Pitt, under whose auspices he became president of the board of trade, which office he held in conjunction with the chancellorship of the duchy of Lancaster, given him by lord Fitzwilliam. In the same year 1789, he was also elevated to the peerage, by the title of baron Hawkesbury, of Hawkesbury, in the county of Gloucester, and in 1796, he was created earl of Liverpool. He remained president of the board of trade, until 1801, and chancellor of the duchy of Lancaster until 1803. His death took place on the 7th December 1808, at which time he held the sinecure of collector of the customs inwards of the port of London, and clerk of the Rolls in Ireland. The earl of Liverpool for a long time shared in all the obloquy attached to the confidential friends of the late administration, and, in particular, of his brother, who was appointed, was in favourable and confidence of George III., of whom it was usual to regard him as the secret adviser. The earl of Liverpool was the author of the following works:—

A Discourse on the Establishment of a Constitutional Government in England (1756); a Discourse on the Constitution of the different Empires of the Eastern Nations, during the present War (1758); a Collection of Treaties, from 1640 to 1753 (5 vols., 8vo, 1785); A Treatise on the Coins of the Realm, in a Letter to the King (1805).

LIVERPOOL, ROBERT BANKS JENKINSON, earl of; son of the preceding; born in 1770, and died in 1858; known in public life, from 1797 to 1808, as lord Hawkesbury; from 1812 to 1827, first lord of the treasury. He was educated at the Charter-house; on leaving which, he was entered of Christ church, Oxford. His father directed his reading and studies in political economy, and other branches of political science at this time; and, on leaving the university, Mr Jenkinson set out on his travels. He was in Paris at the outbreak of the French revolution, and, in 1791, took his seat in the house of commons, in which he distinguished himself as a debater and an efficient member of the house. In 1801, he was appointed secretary of state for foreign affairs, and two years later, was called to the house of peers as baron Hawkesbury. On the death of Pitt (1806), the premiership was offered him, but declined; and, after the short administration of Fox, his former office was conferred on him, in the Percival ministry. After the assassination of Mr Perceval, lord Liverpool (as he had become, on the death of his father, in 1806) accepted (1812), though reluctantly, the post of premier. His administration was marked by great moderation and prudence at home, but the foreign department bore the different impress of lord Liverpool and Canning. Lord Liverpool lost popularity by the trial of the queen, which was closed, as is well known, by the abandonment of the bill of pains and penalties, on the part of the ministers. It was on this occasion, that earl Grey demanded of him "how he dared, upon such evidence, to bring forward a bill of degradation, the discussion of which had commenced inquiring into one end to the other, and might have been fatal to her independent existence." A paralytic stroke, in the beginning of 1827, having rendered him incapable of attending to business, Mr Canning succeeded him in the premiership.

LIVERWORT. The plant so called is the kepa tus trioba of Pursh. Like many other supposed remedies, it has lend a temporary reputation for the cure of pulmonary consumption. It is a pretty little plant, flowering very early in spring, and is common to the United States and Europe. There are two varieties, one with obtuse, and the other with acuminate, leaves.

LIVERY (liv'ery). At the plenary courts in France, under the sovereigns of the second and third races, the king delivered to his servants, and also to those of the queen and the princes, particular clothes. These were called livrées, because they were given by the king or queen. The expense of these donations, together with that of the table, the equipages, the presents for the nobles and the people, amounted to an immense sum. A prudent economy afterwards suppressed these plenary courts, but the livery of the servants still remained. In London, by livery or livery men, are meant those freemen of the city who belong to the ninety-one city companies, which embrace the various trades of the metropolis; they had the exclusive privilege of voting at the election of members of parliament and of the lord mayor. Out of this body, the common officers are appointed, by his officers for the government of the city, are elected.

LIVIA DRUSILLA; wife of the emperor Augustus, daughter of Livius Drusus Claudians, who lost his life in the battle of Philippi, on the side of Brutus and Cassius. She was first married to Tiberius Claudius Cneus Caesar Germanicus, and afterwards to Drusus and Tiberius. When she fled with her husband to Italy, before the triumvir Octavius, she narrowly escaped being made prisoner by him, who afterwards became her husband. From that place, she went with her son to Antony, in Aeaclis, and when her husband was reconciled to Augustus, returned to Rome. Here her personal and mental charms made such an impression on the triumvir, that he repudiated his wife, Scribonia, in order to marry her, and, in the 715th year of Rome, bore her, though pregnant, from her husband. Livia knew how to use her power over the heart of Augustus, for the attainment of her ambitious purposes, and effected the adoption of one of her sons as successor to the throne. At her instigation, Julia, the only daughter of Augustus, was banished. Ancient writers, too, almost universally ascribe to her the deaths of the young Marcellus, of Lucius Cesar, and the banishment of their brothers. The reason of her having no longer any near relatives, yielded to her requests in favour of Tiberius. In the emperor's will, Livia was constituted the first heiress, was received into the Julian family, and honoured with the name of Augusta. She was also made chief priestess in the temple of the deified Augustus, and many coins were struck in her honour. But Tiberius proved himself very ungrateful to his mother, to whom he was indebted for everything, and would not allow the senate to bestow upon her any further marks of respect. He did not, however, treat her in public with disrespect; but, when he left Rome, in order to gratify his bias in an uninterrupted solitude, he fell into a violent dispute with her, did not visit her in her last sickness, would not see her body after her death, and forbade divine honours to be paid to her memory.

LIVINGSTON, LEWIS, judge of the supreme court of the United States, was the son of William Livingston, governor of New Jersey, and was born in the city of New York, November 25, 1757. He entered Princeton college, but, in 1776, left it for the field, and became one of the family of general Schuyler, commander of the northern army. He was afterwards attached to the suite of general Arnold, with the rank of major, and shared in the honour of the conquest of Burgoyne.
LIVINGSTON—LIVONIA.

LIVIUS, Titus, born at Padua, in the year of Rome 655 (59 B. C.), came from the place of his birth to Rome, where he attracted the notice of Augustus, after whose death he returned to his native town. In 18 B. C. he died at Athens, and soon raised himself to notice, and, ultimately, to eminence. He was called to the bench of the supreme court of the state of New York, January 8, 1802, and, in November, 1806, was transferred to that of the supreme court of the United States. In the disposition he discharged, with distinguished faithfulness and ability, until his death, which took place during the sittings of the court at Washington, March 18, 1823, in the sixty-sixth year of his age. He possessed a mind of uncommon acuteness and energy, and enjoyed the reputation of an accomplished scholar, and an able pleader and jurist, an upright judge, and a liberal patron of learning.

LIVINGSTON, Robert R., an eminent American politician, was born in the city of New York, November 27, 1746. He was educated at King's college, and graduated in 1765. He studied and practised law in that city with great success. Near the commencement of the American revolution, he lost the office of recorder, on account of his attachment to liberty, and was elected to the first general congress of the colonies; was one of the committee appointed to draft the Declaration of Indepen-
dence; in 1780, was appointed secretary of foreign affairs, and, throughout the war of the revolution, signalized himself by his zeal and efficiency in the revolutionary cause. (See his letters, in the Diplomatic Correspondence of the Revolution.) At the adoption of the constitution of the United States, he was appointed chancellor of that state, which office he held until he went, in 1801, to France, as minister plenipotentiary, appointed by president Jefferson. He was received by Napoleon Bonaparte, then first consul, with marked respect and cordiality, and, during a residence of several years in the French capital, the chancellor appeared to be the favourite foreign envoy. He conducted, with the aid of Mr Monroe, the negotiation which ended in the cession of Louisiana to the United States, took leave of the first consul (1804), and made an extensive tour on the continent, returning thence to France, and enjoying the patronage of his monarch. Napoleon, then emperor, presented to him a splendid snuff-box, with a miniature likeness of him- self (Napoleon), painted by the celebrated Isabey. It was in Paris that he formed a friendship and close personal intimacy with Robert Fulton, whom he materially assisted with counsel and money, to mature his plans of steam navigation. (See Fulton, and Steam-Boat.) In 1805, Mr Livingston returned to the United States, and thenceforward employed himself in promoting the arts and agriculture. He introduced into the state of New York the use of yam-
sum and the Merino race of sheep. He was president of the New York academy of fine arts, of which he was a chief founder, and also of the society for the promotion of agriculture. He died March 26, 1813, with the reputation of an able statesman, a learned lawyer, and an able agriculturist.

LIVIUS, Andronicus, the father of Roman poetry, by birth a Greek of Tarentum, first went to Rome at the commencement of the sixth century from the foundation of the city, as instructor to the children of Livius Salinarus. He introduced upon the Roman stage, drama, which hitherto had not existed, and, besides several epic poems, wrote a translation of the Odyssey, in the old Saturnine verse. We have only a few fragments of his writings, which may be found in the Comici Latin, and the Corpus Picturatum. See Fabricius, Bibli. Lat. v. i; Tit. Livii, Hist. v. ii. 2.

LIVONIA. The Russian provinces upon the Baltic, viz. Livonia, Estonia, Courland, and Semi-
gallia, early belonged to the Russian states, as tributaries, while they retained their own institutions, and were never protected by the Russians from hostile invasions. During the period when the Russian empire was in a state of confusion, they became independent, but were again reduced to subjection by Peter the Great. Livonia was in the year 1762 transferred to the rest of Europe till 1158, when some merci-
cants of Bremen, on their way to Wisby, in Goth-
land, in search of new sources of commerce, were thrown upon the coasts of Livonia. The country was afterwards frequently visited by the poets of Rhine-
land. An Augustine friar, Meinhard, with other Germans, emigrated thither about twenty-eight years after. He converted the inhabitants to Christianity, and was their first bishop. The third bishop after him, by name Albert, who advanced as far as the Dwina, first firmly established the foundations of the spiri-
LIVRE—LLAMA.

Second Order of REPTILIA, or SAURIENS.

FAMILY 1. STELLARIA. Linn. 1758.

GENUS 1. STELLARIA. Linn. 1758.

Species 1. S. stellaria, Linn. 1758.

FAMILY 2. DECTOTIEN. Linn. 1758.

GENUS 1. DECTOTA. Linn. 1758.

Species 1. D. grimmii, Linn. 1758.

FAMILY 3. CHAM. L. 1758.

GENUS 1. LAMONITIS. Linn. 1758.

Species 1. L. livoniae, Linn. 1758.

LIVONIA:—

LIVONIA, in whilst there was an independent authority. He built the city of Riga, in the year 1200, and made it the see of the bishopric. At the close of this century, the Danish king Canute VI., made himself master of these provinces, which were, however, speedily given back by his successor, Wulfric III., for a sum of money, to the Teutonic knights, with whom the order of Brethren of the Sword, founded by Albert, in 1201, had been united, so that the dominion of the Teutonic order comprehended all the four provinces above mentioned. They were, however, too weak to hold them against the Russian czar, John II. Wazilwitch, who was then upon uniting them with the Russian empire, and the state was dissolved. Estonia then placed itself under the protection of Sweden; Livonia was united to Poland; and Courland, with Semigallia, became a duchy, under Polish protection, which the last grand master of the Teutonic order held as a Polish fief. From this time, Livonia became a source of discord between Russia, Sweden and Poland, for near a century, from 1601 to 1690. At the peace of Oliva, in 1660, this province was ceded to Sweden by Poland, and it was again united to the province of Estonia. By the peace of Nystadt, in 1721, both provinces were again united to the Russian empire. Livonia is bounded east by Ingria, south by Lithuania and Samogitia, west by the Baltic, and north by the gulf of Finland. It is productive of grain and currants, and divided into five provinces, Estonia and Livonia, of which the first lies upon the gulf of Finland, the last upon the borders of Courland and Poland. The Livonians, like the Lithuanians, are a branch of the Finns; and are, for the most part, in a state of servitude; but the grievous oppression, under which they were held by their tyrants, the nobility, has been much lightened by an imperial decree of 1804. Besides the original inhabitants, there are, in the country, many Russians, Germans, and Swedes. The greater part are Lutherans; but Calvinists, Catholics, and the Greek church, enjoy liberty of worship. In 1783, the country was newly organized, and Livonia became the government of Riga, and Estonia that of Revel. The name of Livonia was, however, restored by the emperor Paul, in 1797. It is, at present, divided into five circles. It comprises an area of 21,000 square miles level, marshy country, abounding with lakes. Riga, situated on the west coast, a little from the bay of the Baltic, is the chief place of commerce. The merchants there are mostly British. Population of the town about 36,000. The only other town of note is Dorpat, situated on the Embach, the seat of a university, established in 1828, and of a great annual fair. The government of Riga contains 980,000 inhabitants. See the Essai sur l'Histoire de la Livonie, by count de Bray (Dorpat, 1817, 3 vols.); and Granville's Journey to St. Petersburg. (1828).

LIVRE: an ancient French coin. The word is derived from the Latin libra, a pound. It appears as early as 810 B. C. At first, the livre was divided into twenty solidos; afterwards into ten sous; in Italy, into twenty soldi; in Spain, into twenty sueldos, as the old German pound into twenty schilling, and the English into twenty shillings. The livre was, at first, of high value. The revolution changed the name into franc. See Franc, and Coin.

LIVY. See Livius.

LIZARD. All reptiles having a naked body, four feet and a tail, are vulgarly known under the name of Lizards. Linnaeus himself only constituted two genera of this name, and the genus Lacerta—lacerta; but more modern naturalists have greatly increased the number of genera. The following is the arrangement followed by Cuvier in the last edition of his Regne animal:
and when they are wearied, no blows will compel them to proceed. In fact, one of their great faults is that they will not pass over long distances even when pressed, they have no other mode of avenging themselves than by spitting, which faculty they possess in an extraordinary degree, being capable of ejecting their saliva to a distance of several yards. This is of a corroding quality, causing some degree of irritation and itching, if it falls on the naked skin. Besides their services as beasts of burden, the llamas afford various articles of no small utility to human life. The flesh is considered very wholesome and savoury, especially from the young animal. Their wool, though of a strong, disagreeable smell, is in great request, especially among the native Indians. As a general rule, the manufacture of stuffs, ropes, bags, and hats. Their skins are of a very close texture, and were formerly employed by the Peruvians for soles of shoes, and are much prized by the Spaniards for harness. The female llama goes five or six months with young, and produces one at a birth. The growth of the young is very rapid; being capable of producing at three years of age, and beginning to decay at about twelve. The llama is four feet and a half high, and not more than six in length. He has a bunch on his breast, which constantly exudes a yellowish oil which is used as a medicine for various complaints; various shades of white, brown, &c. The tail is rather short, curved downwards. The hoofs are divided; or, rather, the toes are elongated forwards, and terminated by small horny appendages, surrounding the last phalanx only, rounded above, and on either side somewhat curved. There are several specimens of the llama in the different menageries in Europe, where they appear to thrive very well.

LLANEROS (from llano, plain); the inhabitants of the plains, or Llanos (q. v.). In this article we speak more particularly of those in Venezuela. The immense plains of Venezuela, which afford excellent pasture for all kinds of flocks and herds, are generally inhabited by converted Indians or descendants of Indians and whites, who are distinguished for activity, ferocity, ignorance and semi-barbarous habits, and are called Llaneros. From childhood they are accustomed to catch and mount wild horses, which roam by hundreds over the savannahs. At war, they are generally armed with a long lance, and often have neither swords nor pistols. Uniform is unknown among them; a few rags cover the upper part of their body; their pantaloons are broad and full, somewhat in the fashion of the <i>camisetas</i> (unas, pantalones, &c.), as is the case with most Indians in habits of intercourse with whites; many of them have ham-mocks. They are brave in defending their plains. Their manner of fighting is much like that of the Cossacks; they never attack in regular files, but disperse themselves in every direction, rushing onward, flying, repeatedly attacking and constantly harassing the enemy. Paez, who was born and bred among them, and is in manners, language and ferocity, a complete Llanero, commanded them during the war of Colombian independence, and is idolized by them. They choose their own officers, and discipline them at pleasure. They suffer no foreigners among them. As they have played a conspicuous part in the revolutions of Colombia, we subjoin the description of them by colonel Hipplesey, which is corroborated by that of his Majesty's Memoirs of Simon Bolivar. "Sedeno's cavalry (Llaneros)," says colonel Hipplesey, "were composed of all sorts and sizes, some with saddles, very many of them without; some with bits, leather head-stalls and reins; others with rope lines, with a bit of the rope placed over the tongue of the horse as a bit; some with old pistols hung over the saddle bow, either in-

cessed in tiger-skin, or ox hide holster-pipes, or hanging by a thong of hide, one on each side. As for the troopers, they can be distinguished by the extreme age, a majority of them being about fifty to sixty years of age, of black, brown, sallow complexion, according to the castes of their parents. The adults wore coarse, large mustachios, and short hair, either woolly or black, according to their climate or descent. They had a ferocious, savage look. They were mounted on miserable, half-starved, jaded beasts, horses or mules; some without Trowsers, small clothes, or any covering, except a bandage of blue cloth or cotton round their loins, the end of which, passing between their legs, was fastened to the girdle, round the waist; others with trowsers, but without shirt, tunic, shirts, breeches, or alaband; and in the latter case gracefully grazing the heel of one side; and some wearing a kind of sandal made of hide, with the hair side outward. In their left hand they hold their reins, and in their right a pole, from eight to ten feet in length, with an iron head, very sharp at the point and sides, and rather flat; in shape like our sergeant's halbert. A blanket of about a yard square, with a hole, or rather a slit, cut in the centre, through which the wearer thrusts his head, falls on each side of his shoulders, thus covering his body, and leaving his bare arms at perfect liberty to manage his horse, or, should the necessity arise, his sword. Sometimes, instead of a barrel which has been shortened twelve inches, forms his carbine, and a large sabre or hanger, or cut and thrust, or even a small sword, hangs by a leather thong to his side. A flat hat, a tiger skin or high cap, covers his head, with a white feather or a white rag stuck into it." This picture will remind the reader of some of the cavalry which Russia marched from her Asiatic dominions against France in the final struggle with Napoleon.

LLANOS; the name given in the northern part of South America, particularly in Colombia, to vast plains, almost entirely level, and interrupted only by detached elevations, called in Spanish, mesetas. The superficial area of the llanos is estimated at 206,500 square miles; they extend from the coast of Caracaz to Guiana, and from Merida to the mouth of the Orinoco and the Amazons. A large portion of them is sandy and without much vegetation, except on the banks of the rivers and during inundations: some fan-palms are found. When the inundations occur, the beasts take refuge upon the mesetas. The llanos have been supposed by some to have formerly been the bottom of the sea. They are distinguished into the (a) Llanos de Colombia (llanos del Meta), the mountains of Carazas to the mouth of the Orinoco, and to the mountains of St Pe, and containing several mesetas (de Amama, de Guinipa, de Paja, fifty to sixty-five feet in height), which, in the rainy season, are covered with rich verdure, and inhabited by herds and flocks of all descriptions. (b) Llanos de Can- nare: a continuation of the former, between the Orinoco, Meta and Sinarucua. (c) Llanos de S. Juan; very fertile, woody, often so thickly overgrown, that it can only be penetrated by means of the numerous rivers; lies on the southern bank of the Meta, reaching to the Amazons, and was discovered in 1841 by Gonzalo Ximenes Quesada. (d) Llanos of the Am- azons, or the Maranon; on both sides of the river, extending from the Andes to the mouth of the Maranon, over 2100 miles; it is also wooded, and rich in grass, excepting where it is invaded by many thousands of animals. The inhabitants of these plains are called Llaneros (q. v.). Farther to the south, such plains are called pampas (q. v.).

LLORENTE, DON JUAN ANTONIO, author of the first history of the Spanish inquisition, drawn from its own records, was born in 1756, near Calahorra, in Arragon. He received his education at Tarra-
LLORENTE—LLOYD.

gons, entered the clerical order in 1776, got a benefice at Calahorra, and, in 1779, by means of a dispensation (as he was hardly twenty-three years old), was consecrated a priest. This, however, did not prevent him, as judge, from applying to the canon law, while he devoted his leisure to the muses. At Madrid, he was attracted by the theatre, and composed a sort of melo-drama, the Recruit of Galicia. A tragedy, entitled Eric, the King of the Goths, was not represented, as it contained allusions to existing difficulties at the court of Madrid. In 1789, he was made chief secretary to the inquisition. Here he had an opportunity to learn from the archives of the tribunal the history of its shameful and barbarous proceedings. In 1791, he was sent back to his parish, on suspicion of being attached to the principles of the French revolution, and in spite of the protection of the minister Florida Blanca, who was an enlightened statesman. Here he occupied himself actively in the support of emigrant French priests; and many of these unfortunate men were indebted to him alone for their subsistence. The misunderstanding, which sprang from the when Joseph of the French priesthood, founded upon the knowledge obtained from these acquaintances, and written in 1793, was lost by the fault of the censors of the press. In the mean time, don Manuel Abad la Sierra, an enlightened man, was made grand inquisitor, who, in order to avoid the admission of this tribunal, employed Llorente to prepare a plan for the purpose. But, before it was completed, the removal of Abad la Sierra was obtained by his enemies. Some time after, the design was taken up again at Madrid, and Llorente repaired thither to submit the plan which he had prepared in conjunction with the bishop of Calahorra. Jovellanos (q. v.), minister of justice, supported them. It was proposed to make the proceedings of the tribunal of the inquisition public. All depended upon their obtaining the assistance of the prince of peace, the favourite of the queen. But Jovellanos was suddenly removed from office, and the inquisition remained as it was.* (See Inquisition.) Llorente soon felt its arm himself. His correspondence was seized; the most innocent expressions were misinterpreted; he was sentenced to a month's confinement in a monastery, and to pay a fine of 100 ducats, and was deprived of the appointments which he held in the Holy Office. He lived in disgrace till 1802, when his reputation caused him to be called to Madrid to investigate some dark points of history. He was then appointed a canon of the cathedral of Toledo in 1806, and, in 1807, after he had proved himself of noble descent, he was made a knight of the order of don Carlos. In the next year, when Napoleon undertook to regulate the affairs of Spain, Llorente repaired to Bayonne, at Murià's request, and took part in organizing the new Institutions of his country, which, however, could not take permanent root, as the clergy saw in them the destruction of their authority. Besides this, while Napoleon was still in Spain, he charged Llorente to take possession of the papers of the inquisition, and of the buildings and archives which were under the superintendence of the general commandant of the place. In 1812, Llorente published an historical memoir on the inquisition, with the view of freeing the Spanish nation from the charge of having ever been attached to this institution, and to the autos del fe. Llorente was almoner of King Joseph, who made him, successor to his father, of the office of the royal order of Spain, commissionner-general of the Cruzada. He followed Joseph to Paris after the disastrous campaign of the French in Russia, and in 1815 had the intimation of accompanying him to the United States; but, remaining to take leave of his faithful countrymen, he was induced to give up the plan. In 1817, he published his history of the inquisition in Spain, in French—a work which was soon translated into most European languages, and which has become an historical source. An abridgment has been published by Leonard Gaillot. When the old authorities were restored, he was obliged to flee. Banished from his country, deprived of his property and of his fine library, Llorente lived in France, after the downfall of the French party in Spain, in indigence. But the hatred of the libellous party arose, at last, to such a height, that the university of Paris forbade him from teaching in its faculties, and even from entering its schools, which had been his only means of support. The rage of his enemies was raised to the highest pitch by the publication of his Portraits politiques des Papes, and the old man was ordered, in the middle of the winter of 1822, to leave Paris in three days, but, being allowed to go to Bayonne, he was not allowed to rest one day, and died exhausted, a victim to the persecutions of the nineteenth century, a few days after his arrival in Madrid (Feb. 5, 1823). During his residence in France, he published his Mémoires pour sérvice à l'Histoire de la Révolution et d'Espagne, revised and published in two volumes (Paris, 1815)—a work of value, as illustrative of the events of 1808, in Spain. He also wrote a biographical account of himself (Noticia biográfica de Don J. A. Llorente, Paris 1818), and Aforismos Políticos. The Discourse sur une Constitution religieuse was actually written by an American, but arranged and edited by Llorente. He also superintended an edition of Oeuvres complètes de Barthélémy de las Casas, Paris, 1822.

LLOYD, Henry, a military officer and eminent writer on military subjects, was born in 1752, son of a clergyman, who instructed him in the mathematics and classical literature. At the age of seventeen he went abroad, and was present at the battle of Fontenoy. He afterwards travelled in Germany; and having resided some years in Austria, he was appointed aide-de-camp to marshal Lacy. He was gradually promoted, till, in 1769, he was intrusted with the command of a large detachment of cavalry and infantry, destined to observe the movements of the Prussians. Lloyd executed this service with great success; but soon after resigned his commission in disgust. He was then employed by the king of the Hague in the capacity of aide-de-camp to prince Ferdinand of Brunswick. After the peace of Hubertusburg, he travelled, till the occurrence of hostilities between Russia and Turkey, when he offered his services to Catherine II., who made him a major-general himself in 1774, at the siege of Silistria; and subsequently, he had the command of 30,000 men, in the war with Sweden. At length, he left Russia, and travelled in Italy, Spain, and Portugal. He visited general Elliott, at Gibraltar, whence he proceeded to England. Having made a survey of the country, he wrote up a Memoir on the Invasion and Defence of Great Britain, which was published in 1798. He retired, at length, to Huy, in the Netherlands, where he died, June 19, 1793.
the memoir, he was the author of an Introduction to the History of the War in Germany, between the King of Prussia and the Emperor of Russia (London, 1751, 2 vols.; 4to); and a Treatise on the Composition of different Armies, ancient and modern. These works have been translated into French and German, and Dornini made use of the Introduction for his Traité des Grandes Opérations Militaires. Other works of Lloyd's are said to have been bought up and suppressed by the British government, and many of his papers are said to have been taken possession of, at his death, by a person supposed to be an emissary of the British ministry, among which were the Contingent Books of this Sea and Military affairs, and a History of the Wars in Flanders. The truth, however, of these statements seems doubtful.

LLOYD'S COFFEE-HOUSE, London, on the northern side of the royal exchange, has long been celebrated as the resort of eminent merchants, under-writers, insurance brokers, &c. As Lloyd's is one of the most extensive and best known insurance offices, the estimate of a vessel at Lloyd's tends much to determine her character among merchants. The books kept here contain an account of the arrival and sailing of vessels, and are remarkable for their care and accuracy.

LLOYD'S LIST, a publication in which the shipping news received at Lloyd's coffee-house is published. On account of the extensive information which it contains, it is of great importance to merchants.

LOADSTONE. See Magnet.

LOAN, Public, is the name given to money borrowed by the state. There may occur cases which require expenses for which the ordinary revenue of the state is not sufficient. If, in such cases, it is not possible to increase the usual revenue by augmenting the taxes, without great inconvenience to the nation, the state will find it advisable to borrow, and to pay interest till it can discharge the principal. If such loans are appropriated to objects by which the means of production are augmented, the state strengthened, and industry increased, they answer the same purpose as those which an industrious tradesman makes in order to enlarge and improve his business. If he is successful, he will increase his property, and the loan itself will afford the means for repaying it. This will be the case also with the state, when it employs the borrowed capital to open to the nation increased means of profitable industry, by facilitating its operations, giving it security to its commerce, and increasing its means of production. But if the loans are expended in useless or unfortunate wars, or in other unprofitable ways, they diminish the means of labour or enjoyment, and burden the nation with taxes to pay the interest and discharge the capital. The capitalists who aid in producing, when they lend their capital to men of business, and receive their interest from the proceeds of their capitals, become unproductive subjects as soon as they lend it to the state which expends it uselessly, for now they live on the products of the capitals of others, when before they lived on the products of their own. As loans, however, may become necessary to the state, the only question is, What is the most advantageous method of making them? A chief distinction among loans is this—that the government only can issue a capital, but a merchant or capitalist can only borrow a capital at a particular time, until which it pays interest, or reserves the liberty to retain the capital, according to its own pleasure, only paying interest regularly. The first kind is liable to occasional trouble to the state, because the payment may often fall at an inconvenient time. The second, on the contrary, in a particular period, has this disadvantage, that the nation, when the payment is to be made, becomes destitute of ready money. Therefore large loans are usually contracted in such a way that the payment is made, successively, or in parts, at different times, as the credit of the state is unfledged, and also that large capitals should have been accumulated in the hands of many rich people, who find their greatest advantage in disposing of them in loans. Where there is a well founded system of credit, statesmen think it most advantageous to secure only the regular payment of the stipulated interest, but to leave the payment of the capital at the pleasure of the state. This is called the funding system, as far as fixed funds are concerned. A sinking fund is established, together with the fund appropriated to the payment of the annuities. This is procured by means of a tax large enough to pay the annuity as long as it lasts, and to redeem, annually, a part of the capital debt. This sinking fund is increased every year, if the annuities, annually redeemed are added to it. See Funding System. According to this system, the state cannot be said, properly, to borrow capital; it sells annuities, and taxes, at the rate, at which they may be redeemed. They are commonly estimated at so much per cent. The government says—I offer you an annuity of three, four, five, &c. per cent., redeemable at my pleasure. How much will you give me for it? According to the market rate of interest, and the degree of credit which the state enjoys, the capitalists offer fifty, sixty, seventy, eighty, ninety, &c., per cent. The sinking fund aims to discharge the debt, gradually, by redeeming, annually, part of the annuities, at the market price. If the latter exceeds the price for which it had sold its annuities, it will be obliged to redeem them with loss; but if it is less, it can redeem them with gain. Another kind of loan is, when the capitalists pay 100 per cent., at a fixed rate of interest, the government reserving the right to pay the capital at any convenient time. Suppose that the state, when it wishes to borrow, is obliged to pay eight per cent., and that these stocks, in the course of three years, should rise in the market 100 per cent. above par; the state would easily find capitalists, who would lend at the rate of four per cent., and be given eight per cent. to redeem the eight per cent. stocks. If, therefore, the state has reason to expect that the price of the stocks will rise, its best plan is to receive a fixed capital sum at such a rate of interest as it is obliged to give. But if it fears that the interests or the prices of the stocks will fall, it is for its advantage to procure the necessary money by the sale of stocks at the market price, because it may hope to redeem them at a reduced rate. Sometimes premiums, or the chances of a lottery, are employed to stimulate reluctant capitalists, and sometimes even force. If a government must have recourse to other means than those arising from the annuity or interest offered, it is a certain sign that it enjoys but a feeble credit, or that there is a want of capital. How fertile modern history is in loans of every kind, and into what an unhappy situation many of the most ancient capitals of the world are fallen, is well known. In Austria, the proprietors of the stocks have been forced, several times, to advance further sums, to avoid losing what they had already lent. See National Debt.
8° 55' S.; population, stated by Clarke at 5,000; by
Hassel at 18,000. It is pleasantly situated on the
declivity of a hill, near the mouth of the street
channel. It covers a large extent of
ground, but is neither walled nor fortified. It is
the seat of a bishop, and contains three convents.
The port is safe and spacious; the country around plea-
sant and fertile, abounding in cattle, corn, and fruits;
but the sea fish plentiful and cheap; but the water bad,
and must be brought from a neighbouring river, on
an island opposite. The houses belonging to the
Portuguese are built of stone; the houses of the
natives are more numerous, but mean. The Jesuits
officiate as priests, and preside over the schools.
LOANGO; a country of Western Africa, of limits
somewhat vague. The country subject to the king
of Loango extends from the Zaire or Congo, on the
south, to Cape St. Catharina, a coast of upwards of
400 miles; but Loango proper occupies only the
middle part, excluding Mayombta on one side, and
Malemba on the other. The climate is described as
fine; rain of rare occurrence, and never violent, but
dews abundant; the soil a red, stiff clay, and very
fertile, but little cultivated; the grains are manioc,
maize, and a species of pulse, called nsangan; the
sugar-cane grows to a great size; palm-trees are
abundant; also potatoes and yams, and the finest
fruits of the northern hemisphere. The mountains
are covered with the vegetation of the Mediterranean,
hyacinths, hares, and antelopes. The country is thinly
inhabited; the population is estimated by
De Grandpré at 600,000. The inhabitants are very
indolent, and live in the most simple manner.
Their houses are formed of straw and junk, roofed with palm
leaves and rushes. The government is despotic, and the dig-
nity is transmitted only in the female line.
Almost the only object for which European resort to
this coast is the trade in slaves. While Loango was in
the height of its power, its port was almost the
exclusive theatre of this trade. The trade has of
late much diminished. See Tuckey's Expedition to the
Congo.

LOANGO; a city, and the capital of Loango, on
a river which forms a bay at its mouth, about six
miles from the Atlantic; longitude, according to
captain Tuckey, 12° 30' E; latitude 4° 40' N. It is
also called by the French, and variously called in
enclosures, in each of which there is a number of
cottages; and the inhabitants are computed at
15,000. The land in the vicinity is very fertile,
and the water excellent. The entrance of the bay is
attended with some danger. The town is called
Loango, Luangingo, and Buut; by the
natives, Bora, or Bori.

LOBAU, GEORGE MONTON, count, lieutenant-
general, and, in 1830, commander of the national
guards of Paris, one of the pupils of the French revolu-
tion of 1789, and a distinguished actor in that of
July, 1830, was born in 1770, and designed for
commercial pursuits. On the invasion of France,
in 1792, he entered the military service, and obtained
his first promotion on the Rhine. Having served
with distinction in Italy, where he was dangerously
wounded, he was created, by the first consul, Bonap-
ante, general of brigade, and afterwards accompa-
nied the emperor in all his campaigns, in the capa-
city of aid. In 1807, he was wounded at Frieiland,
and promoted to the rank of general of division.
His brilliant services in Spain, in 1808, and in Ger-
many, obtained him the title of count. (See Asperr.)
Afterwards serving in the Russian campaign, he
was made prisoner in Dresden in 1813, but set at
liberty after the abdication of Napoleon. He
rejoined the emperor during the hundred days, was
named peer of France, received the command of a
division, and distinguished himself at Waterloo.

On the second restoration of the Bourbon, count Lobau
was banished from the kingdom (see Louis XVI),
and had resided in Belgium till 1815, when he was
allowed to return to France. During the revolution
of 1830, he took an active part on the popular side,
and, when Lafayette resigned the command of the
national guards, was appointed (December 26) com-
mander of those of Paris.
before casting its shell, the limb becomes contracted to such a degree as to be capable of being withdrawn through the joints and narrow passage near the body. Like all other crustacean animals, they only increase in size whilst in a soft state. The circumstance of lobsters losing their claws on occasion of thunderclaps, or the sound of cannon, is well authenticated. The restoration of claws lost thus, or from their frequent contests with each other, in which the vanquished party generally leaves one of his limbs in his adversary's grasp, may be readily observed, as in the new limb seldom, if ever, attains the size of the former. These animals are very sensible to the shock communicated to the fluid in which they live, by the firing of cannon. In the water, they are very rapid in their motions, and, when suddenly alarmed, can spring to a great distance. They attain their retreat in a rock with surprising dexterity, throwing themselves into a passage barely sufficient to permit their bodies to pass. They are extremely prolific: Dr. Baster says that he counted 12,444 eggs under the tail of a female lobster, besides those that remained in the body unprotracted. The female deposits these eggs in the sand, where they are soon hatchet.

LOCH; the Scottish for lake. LOCH KATRINE, or CATHARINE; a small lake of Scotland, in the county of Perth. Its greatest length is celebrated for the picturesque beauty of its shores. It has become famous as the scene of the Lady of the Lake. Bordering on it are the mountains called the Trosachs, full of wildness and rude grandeur. The access to the lake is through a narrow pass, about half a mile in length, "the Trosachs' rugged jaws." LOCH LEVEN. See Leven. LOCH LOMOND; a lake of Scotland, lying betwixt Dumbartonshire and Stirlingshire, and nearly equally belonging to both. It is about twenty-three miles in length from north to south, and its greatest breadth is five miles. It contains nearly thirty islands of different sizes. It communicates with the Clyde by a river, which joins the Clyde at Dumbarton. (See Leven.) This beautiful lake is surround- ed by hills and mountains, and is celebrated for the greatest and most picturesque scenery of its shores. Its depth is various, in some parts 100 fathoms. It abounds in trout.

LOCK; a well known instrument, used for fastening doors, chests, &c., generally opened by a key. The lock is reckoned the masterpiece in smithery, a great deal of art and delicacy being required in constructing and varying the wards, springs, bolts, &c., and adjusting them to the places where they are to be used, and to the several occasions of using them. The principle on which all locks depend, is the application of a lever to an interior bolt, by means of a communication from without; so that, by means of the latter, the lever acts upon the bolt, and moves it in such a manner as to secure the lid or door from being opened by any pull or push from without. The security of locks, in general, therefore, depends on the interference of impediments we can introduce between the lever (the key) and the bolt which secures the door; and these impediments are well known by the name of wards, the number and intricacy of which are supposed to distinguish a good lock from a bad one. If these wards, however, do not, in an effectual manner, preclude the access of all other impediments besides the proper key, it is still possible for a mechanic, of equal skill with the lockmaker, to open it without the key, and thus to clude the labour of the other. Various complicated and difficult locks have been constructed by Messrs Draemel, Taylor, Spears, and others. In a very ingenious lock, invented by Mr. Perkins, twenty-four small blocks of metal, of different sizes, are introduced, corresponding, to the letters of the alphabet. Out of these, an indefinite number of combinations may be made. The lockmaker can require as many blocks as necessary to spell a particular word, known only to himself, and no other person, even if in possession of the key, can open the door, without a knowledge of the same word.

LOCKS. When a canal varies from one level to ano- ther, different elevating places where the change of level takes place, is commanded by a lock. Locks are tight, oblong enclosures, in the bed of the canal, furnished with gates at each end, which separate the higher from the lower parts of the canal. When a boat passes up the canal, the lower gates are opened, and the boat glides into the lock, after which the lower gates are shut. A sluice, communicating with the upper part of the canal, is then opened, and the lock rapidly fills with water, elevating the boat on its surface. When the lock is filled to the highest water level, the upper gates are opened, and the boat, being now on the level of the upper part of the canal, can proceed on its way. The reverse of this process is performed when the boat is descending the canal. Locks are made of stone or brick, sometimes of wood. The gates are commonly double, resembling folding doors. They meet in the middle, in the horizontal axis at some angle, and the pressure of the water serves to keep them firmly in contact. Cast iron gates are some- times used in England, curved in the form of a horizontal arch, with their convex side opposed to the water. In China, inclined planes are said to be used instead of locks, along which the boats are drawn up or let down. They have also been used in Europe, and on the Morris canal, in New Jersey, America. LOCKE, John, one of the most eminent philoso- phers and valuable writers of his age and country was born at Wrington, in Somersetshire, Aug. 29, 1632. His father, who had been bred to the law, acted in the capacity of steward, or court-keeper, to colonel Alexander Popham, by whose interest, on the breaking out of the civil war, he became a captain in the service of parliament. The subject of this article was sent, at a proper age, to Westminster school, where he afterwards went to Magdalen college, Oxford. Here he distinguished himself much by his application and proficiency; and, having taken the degree of B. A. in 1655, and of M. A. in 1658, he applied himself to the study of physic. In the year 1664, he accepted an offer to go abroad, in the capacity of secretary to Sir William Swan, envoy from Charles II. to the elector of Brandenburg, and other German princes; but he returned, in the course of a year, and resumed his studies with renewed ardour. In 1666, he was introduced to lord Ashley, afterwards the celebrated earl of Shaftesbury, to whom he became essentially serviceable in his medical capacity, and who formed so high an opinion of his general powers, that he prevailed upon him to take up his residence in his house, and urged him to apply his studies to politics and philosophy. By his ac- quaintance with this nobleman, Mr. Locke was introduced to the duke of Buckingham, the earl of Halifax, and others of the most eminent persons of their day. In 1669, at the request of the earl and countess of Northumberland, he accompanied them in a tour to France, and, on his return, was employed by lord Ashley, then chancellor of the exchequer, in draw- ing up the Fundamental Constitutions of Carolina. He also superintended the education of that nobleman's son. In 1670, he began to form the plan of his Essay on the Human Understanding, and, about the same time, was made a fellow of the royal society. In 1672, lord Ashley, having been created earl of
Shafestbury, and chancellor, appointed Mr Locke secretary of presentations, which office, however, he lost when the earl was obliged to resign the seals. Being still president of the board of trade, that nobleman then made Mr Locke secretary to the same; but, the commission being dissolved in 1674, he lost that appointment also. In the following year, he graduated at Oxford, and, being apprehensive of a consumption, travelled into France, and resided some time at Montpellier. In 1679, he returned to England, at the request of the earl of Shafestbury, then again restored to power; and, in 1682, when that nobleman was obliged to retire to Holland, he accompanied him in his exile. On the death of his patron, he was removed from his place; and, much as he was disliked by the predominant arbitrary faction at home, he chose to remain abroad; and, in consequence, accused of being the author of certain tracts against the British government; and, although these were afterwards discovered to be the work of another person, he was arbitrarily ejected from his studentship of Christ church, by the king's command. Thus assailed, he continued abroad, nobly refusing to accept a pardon, which the celebrated William Penn undertook to procure for him, expressing himself, like the chancellor L'Hospital, in similar circumstances, ignorant of the crimes of which he had been accused. In 1685, when Mommouth undertook his ill-considered enterprise, the English envoy at the Hague demanded the person of Mr Locke, and several others, which demand obliged him to conceal himself for nearly a year; but, in 1686, he again appeared in public, and formed a literary society at Amsterdam, in conjunction with Limborch, Leclerc, and others. During the time of his concealment, he also wrote his first Letter concerning Toleration, which was printed at Gouda, in 1689, under the title of Epistola de Tolerantia, and was rapidly translated into Dutch, French, and English. At the revolution, he returned to England, in the fleet which conveyed the princes of Orange, and, being deemed a sufferer for the principles on which it was established, he was made a commissioner of appeals, and was soon after gratified by the establishment of toleration by law. In 1690, he published his celebrated Essay concerning Human Understanding, in which he had written in Holland. It was instantly attacked by various writers. It was even proposed, at a meeting of the heads of houses of the university of Oxford, to formally censure and discourage it; but nothing was finally resolved upon, but that each man should judge for himself what he pleased to think. Neither this, however, nor any other opposition, availed; the reputation, both of the work and of the author, increased throughout Europe; and, besides being translated into French and Latin, it had reached a fourth English edition, in 1700. In 1693, Locke published his second Letter on Toleration; and, in the same year, appeared his two Treatises on Government, in opposition to the principles of Sir Robert Filmer, and of the whole passive-obedience school. He next wrote a pamphlet entitled Some Considerations of the Consequences of lowering the Interest and Value of Money (1694, 8vo), which was followed by other smaller pieces on the same subject. In 1692, he published a third Letter on Toleration, and, the following year, his Thoughts concerning Education. In 1695, he was made a commissioner of trade and plantations; and, in the same year, published his Ressemonsences of Christianity, as delivered in the Scriptures, which being warmly attacked by doctor Edwards, in his Socinianism Unmasked, Locke followed with a first and second Vindication, in which he defended himself in a masterly manner. The use made by Toland, and other latitudinarian writers, of the precepts laid down in the Essay on the Human Understanding, at length produced an open altercation in the celebrated bishop Stillingsfield, who, in his Defence of the Doctrine of the Trinity, censured some passages in Locke's Essay; and a controversy arose, in which the great reading and proficiency in ecclesiastical antiquities the prelate yielded, in his pamphlet, put Locke to contest, to the remaining powers of the philosopher. With his publications in this controversy, which were distinguished by mildness and urbanity, Locke retired from the press, and his ashamatic complaint increasing, he resigned his post of commissioner of trade and plantations, observing that he could not, in conscience, live in such a situation, to which a considerable salary was attached, without performing the duties of it. From this time, he lived wholly in retirement, where he applied himself to the study of Scripture; while the sufferings incidental to his disorders were materially alleviated by the kind attentions and agreeable conversation of lady Masham, who was the daughter of the learned doctor Cudworth, and, for many years, his intimate friend. Locke continued nearly two years in a declining state, and at length expired in a manner correspondent with his piety, equanimity, and rectitude, October 28, 1704. He was buried at Oatlands, where there is a neat monument erected to his memory, with a modest Latin inscription indited by himself.

The moral, social, and political character of this eminent man, is sufficiently illustrated by the foregoing brief account of his life and labours; and the effect of his writings upon the opinions and even fortunes of mankind, is the best eulogium on his mental superiority. In the opinion of doctor Reed, he gave the first example in the English language, of writing on abstract subjects with simplicity and perspicuity. No author has more successfully pointed out the danger of ambiguous words, and of having indistinct notions on subjects of judgment and reasoning; while his observations on the various powers of the human understanding, on the use and abuse of words, and on the extent and limits of human knowledge, are drawn from an attentive reflection on the operations of his own mind. In order to study the human soul, he went neither among the ancients, nor modern philosophers for advice, but, like Malbranche, he turned within himself, and, after having long contemplated his own mind, he gave his reflections to the world. Locke was a very acute thinker, and his labours will always be acknowledged with gratitude, in his theory of philosophy. But at the same time, it must be remembered, that, in attempting to analyze the human soul, as an anatomist proceeds in investigating a body, piece by piece, and to derive ideas from experience, he has unintentionally supported materialism. His declaration, that God, by his omnipotence, may make matter capable of thinking, has been considered dangerous in a religious point of view. Locke's great work, his Essay on the Human Understanding, which he was nineteen years in preparing, owes its existence to a dispute, at which he was present, and which he perceived to rest on a verbal misunderstanding; and, considering this to be a common source of error, he was led to study the origin of ideas, &c. The influence of this work has rendered the empirical philosophy general, in Britain and France, though in both countries, philosophers of a different school have appeared. (See Cousin.) Henry Lee and Norris (1713) were among his ablest opponents. In France, Jean Leclerc (Clericus) distinguished himself particularly as a partisan of Locke; and 'Gravesande spread his philosophy, by commentaries, in Holland. Amidst the improvements in metaphysical studies
to which the Essay itself has mainly conducted, it will ever prove a valuable guide in the acquirement of the science of the human mind. His next great work, his two Treatises on Government, was opposed by the theorists of divine right and passive obedience (see Legitimacy), and by writers of Jacobitical tendencies; but it upholds the great principles, which may be deemed the constitutional doctrine of his country. It was a favourite work with the statesmen of the American revolution, by whom it is constantly appealed to in their constitutional arguments. His Reasonableness of Christianity maintains, that there is nothing contained in revealed religion inconsistent with reason, and that only moderate belief that Jesus is the Messiah. His posthumous works, also, have caused him to be considered, by some, as a Socinian. Besides the works already mentioned, Locke left several MSS. behind him, from which his executors, Sir Peter King and Mr Anthony Collins, published, in 1706, his Paraphrase and Notes upon St Paul's Epistles to the Galatians, Corinthians, Romans, and Ephesians, with an Essay prefixed for the Understanding of St Paul's Epistles, by a reference to St Paul himself. In 1706, the same parties published Posthumous Works of Mr Locke (8vo), comprising a Treatise on the Conduct of the Understanding, and Examen Malebranche's Opinion of seeing all Things in God. His works have been collected together, and frequently printed in 3 vols. folio, 4 vols. quarto, and, more lately, in ten vols. 8vo, with a life prefixed, by Law, bishop of Carlisle. Some unpublished MSS. yet remain in possession of lord King, who has given to the public some valuable materials in his Life and Correspondence of John Locke (London, 1829).—See, also, Stewart's Philosophical Essays.

LOCKER; a kind of box, or chest, made along the side of a ship, to put stow or put anything in.

Shut-lockers; strong frames of plank near the pump-well in the hold, in which the shot is put.

LOCKMAN. See Lokman, and Fable.

LOCOMOTION. The arts of locomotion are very well described in Bigelow's Technology (Boston, 1839), and the few remarks that follow are abridged from the first part of the article. From chief obstacles which oppose locomotion, or change of place, are gravity and friction, the last of which, is, in most cases, a consequence of the first. Gravity confines all terrestrial bodies against the surface of the earth, with a force proportionate to the quantity of matter in them, and the kinds of mechanism, both natural and artificial, which assist locomotion, are arrangements for obviating the effects of gravity and friction. Animals that walk, obviate friction by substituting points of their bodies instead of large surfaces, and upon these points they turn, as upon centres, for the length of each step, raising themselves wholly or partly from the ground in successive arcs, instead of drawing themselves along the surface. As the feet move in separate lines, the body has also a lateral, vibratory motion. A man, in walking, puts down one foot before the other is raised, but not in running. Quadrupeds, in walking, have three feet upon the ground for most of the time; in trotting, only two. Animals which walk against gravity, as the common fly, the tree-toad, &c., support themselves by suction, using cavities on the under side of their feet, which they enlarge, at pleasure, till the pressure of the atmosphere drives them to adhere. In other respects their locomotion is effected like that of other walking animals. Birds perform the motion of flying by striking the air with the broad surface of their wings in a downward and backward direction, thus propelling the body upward and forward. After each stroke, the wings are contracted, or slightly turned, to lessen the resistance to the atmosphere, then raised, and spread anew. Thus moving, and also, being more slender than the upward, is more resisted by the atmosphere. The tail of birds serves as a rudder to direct the course upward or downward. When a bird sails in the air without moving the wings, it is done in some cases by the velocity previously acquired, and an oblique direction of the wings upward; in others, by a gradual descent, with the wings slightly turned, in an oblique direction, downward. Fishes, in swimming forward, are propelled chiefly by strokes of the tail, the extremity of which being bent in an oblique position, propels the body forward and laterally at the same time. The lateral motion is corrected by the next stroke, in the opposite direction, while the forward course continues. The fin serves partly to assist in swimming, but chiefly to balance the body, or keep it upright; for, the centre of gravity being nearest the back, a fish turns over, when it is dead or disabled. Some other aquatic animals, as leeches, swim with a sinuous or undulating motion of the body, in which several parts at once are made to act obliquely against the water. Serpents, in like manner, move the parts of their bodies in the same time direction which they give to their bodies, by which a succession of oblique forces are brought to act against the ground. Sir Everard Home is of opinion that serpents use their ribs in the manner of legs, and propel the body forwards by bringing the plates on the under surface of the body to act, successively, like feet against the ground. This he deduces from the anatomy of the animal, and from the movements which he perceived in suffering a large coluber to crawl over his hand. Some worms and larvae of slow motion, extend a part of their body forwards, and draw up the rest to overtake it, some performing this motion in a direct line, others in curves. When land animals swim in water, they are supported, because their whole weight, with the lungs expanded with air, is less than that of an equal bulk of water. The head, however, or a part of it, must be kept above water, to enable the animal to breathe; and to effect this, and also to make progress in the water, the limbs are exerted, in successive impulses, against the fluid. Quadrupeds and birds swim with less effort than man, because the weight of the head, which is carried above the water, is, in them, a smaller proportional part of the weight of their bodies. It is proved, by nature, with organs of locomotion best adapted to their structure and situation; and it is probable that no animal, man not being excepted, can exert his strength more advantageously than any other than the natural mode, in moving himself over the common surface of the ground. Thus walking on land, or swimming in water, cars, velocipedes, &c., although they may enable a man to increase his velocity, in favourable situations, for a short time, yet they actually require an increased expenditure of power, for the purpose of transporting the machine made use of, in addition to the weight of the animal. When, however, a great additional load is to be transported with the body, a man, or animal, may derive much assistance from mechanical arrangements. For moving weights over the common ground, with its ordinary asperities and inequalities, the swimming-bladder, which exists in most fishes, though not in all, is supposed to have an agency in adapting the specific gravity of the fish to the particular depth of the water in which it is. The power to rise or sink, by altering the dimensions of this organ, has been, with some reason, disputed.

* The swimming-bladder, which exists in most fishes, though not in all, is supposed to have an agency in adapting the specific gravity of the fish to the particular depth of the water in which it is. The power to rise or sink, by altering the dimensions of this organ, has been, with some reason, disputed.
LOCOMOTIVE ENGINE.

qualities of substance and structure, no piece of inert mechanism is so forcibly adapted as the wheel-carriage. It was introduced into use in very early ages. Wheels diminish friction, and also surmount obstacles or inequalities of the road, with more advantage than bodies of any other form, in their place, could do. The friction is diminished by transferring it from the surface of the ground to the centre of the wheel, or, rather, to the place of contact between the axle-tree and the box of the wheel; so that it is lessened by the mechanical advantage of the lever, in the proportion which the diameter of the axle-tree bears to the diameter of the wheel. Machines, polished, and smeared with some unctionous substance, are in the best possible condition to resist friction. In like manner, the common obstacles that present themselves in the public roads, are surmounted by a wheel with peculiar facility. As soon as the wheel strikes against a stone or similar hard body, it is converted into a lever for lifting the load over the resisting object. If an obstacle eight or ten inches in height were presented to the body of a carriage unprovided with wheels, it would stop its progress, or subject it to such violence as would compel the heavy effort of the advantage of a wheel, the load is lifted, and its centre of gravity passes over in the direction of an easy arc, the obstacle furnishing the fulcrum on which the lever acts. Rollers placed under a heavy body diminish the friction in a greater degree than wheels, provided they are true spheres or cylinders, without any axis on which they are constrained to move; but a cylin-
derical roller occasions friction, whenever its path deviates in the least from a straight line. The mechanical advantages of a wheel are proportionate to its size, and the larger it is, the more effectually does it diminish the ordinary resistances. A large wheel will surmount stones and similar obstacles better than a small one, since the arm of the lever on which the force acts is longer, and the curve described by the centre of the load is the arc of a larger circle, and, of course, the ascent is more gradual and easy. In passing over holes, ruts, or excavations, a large wheel, which is a small one, and consequently occasion less jolting and expenditure of power. The wear also of large wheels is less than that of small ones, for if we suppose a wheel to be three feet in diameter, it will turn round twice, while one of six feet in diameter turns round once; so that its tire will come twice over the road with the same wheel, and its spokes will twice as often have to support the weight of the load. In practice, however, it is found necessary to confine the size of wheels within certain limits, partly because the materials used would make wheels of great size heavy and cumbersome, since the separate parts would necessarily be of large proportions to have the requisite strength, and partly because they would be disproportioned to the size of the animals employed in draught, and compel them to pull obliquely downwards, and therefore to expend a part of their force in acting against the ground.

The Locomotive Engine is that which is calculated to produce locomotion, or motion from place to place.

In this article, it is our intention to give an historical and descriptive account of locomotive engines, and to reserve the consideration of their effects upon railways, until we come to treat of railways, (q. v.) Dr Robinson, while a student at Glasgow College in 1759, seems to have been the first who suggested the application of steam power to the propelling of carriages. Oliver Evans, an ingenious American, thought of the same thing twenty-three years after words, but it does not appear that any thing more than a good idea of pressure fixed engine was the result of his labours. In 1784, James Watt took out a patent for the application of his steam engine to move carriages, and three years afterwards, Mr William Symington exhibited a model of a steam carriage of his own invention at Edinburgh, the engine being moved by pressure in a cylinder; the carriage on four wheels, was erected by Mr Richard Trevithick, having a high pressure engine and boiler contained in the carriage. The great defect of Trevithick's carriage, consisted in the slipping of the wheels, which Mr Blinkensop endeavoured to obviate in 1788; by the introduction of a large toothed wheel was to work. In the year following, Messrs Chapman brought forward a steam carriage, in which the weight was distributed over a larger surface, and consequently less injury done to the rail. About the same time, Mr Bruntion of Batterly, contrived a carriage to be propelled by levers, acting like horse's feet. A railway carriage invented by M George Stevenson in July, 1814, was reckoned the most perfect for many years. That gentleman employed two cylinders, and increased the efficacy of the machine, by distributing the friction over four wheels, instead of over two, as in Trevithick's machine. In 1839, steam carriages of a still better construction, were started upon the Liverpool and Manchester railway. The carriages tried were the Sanspareil by Mr Hawksworth, the Novelty by Messrs Braithwaite and Ericson, and the Rocket by Mr Stevenson: after a fair trial, the Rocket obtained the reward. Mr Stevenson has, how-
ever, made further improvements upon his steam carriage, which we shall now proceed to describe.

Various views of this railway steam carriage are given in plates 51. No. 1, and 51. No. 2. A side elevation is shown in fig. 1, plate 51. No. 1; figs. 2 and 3 are end elevations, the former showing the back, and the latter the front elevation, fig. 4, is an end view of the boiler. Fig. 1, plate 51. No. 2, is a ground plan, and fig. 2 a section and a side view, with some parts taken away, in order to show the more concealed portions of the machinery. The same let-
ters of reference are used than in the former section.

Our attention must in the first place, be directed to the boiler, an end view of which is represented in fig. 4, plate 51. No. 1. It consists of a metallic cylinder, having two flat ends, the cylinder being commonly about six feet in length. The under half of this cylinder is occupied by eighty 100 copper tubes traveling the whole length, and each of about 1 1/2 inches diameter. These tubes are so many flues being open at both ends, the one end communicating with the fire box, or furnace, and the other opening into the chimney, thus affording a passage for the smoke and hot air. These pipes being heated, they communicate their calorics to the water which sur-
rounds them, the boiler or cylinder being filled with water to such a height as to cover the tubes. The boiler lies lengthwise in the carriage, as may be seen at A A' in the longitudinal section, fig. 2, plate 51. No. 2. One end of the boiler, as was before observed, opens into a fire-box or furnace, seen at b b in a. A horizontal section of the boiler, and in fact forms part of it. Therefore when water is poured into the boiler it flows into the space between the casings round the fire-box, and as the boiler is con-
stantly kept about half filled with water, the space is always full.
Above the fire-box, and communicating with the upper part of the boiler, there is a sort of bell-shaped receiver covered at the top, and opening into the chimney of the engine. From it, by a pipe, it is carried into this receiver by a knee joint, traverses horizontally along the whole length of the upper part of the boiler. At its further extremity, it opens into two pipes of smaller bore, one of which is seen at g, the other being hid in the section. These pipes are bent downwards, in order to supply the cylinders, one of which is seen at R.

The hot air and smoke, as before stated, pass along the horizontal tubes in the boiler, rise up through the chimney A', and escape into the air. F is the safety-valve, being of the steel yard kind, but instead of the pressure being regulated by a movable weight, it is regulated by a spiral steel spring, whose elastic force is measured by a graduated scale. F is another safety-valve, wrought in a similar way, but confined within a pipe, so that the workmen cannot get at it, in order that should the other valve be too much loaded, the valve F will still act, and prevent accidents when the force of the steam is greater than it should be. E is the man hole, which is uncovered when the boiler requires to be cleaned. The engine, which is of the high pressure kind, is seen at R; the cylinders, two in number, lie nearly in a horizontal plane, the ends of the pipes in the boiler being a little inclined upwards towards the fire-box, or back of the carriage.

The alternate motion of the piston rod, gives motion to a crank on the axle of the back wheels, and thus the carriage is propelled. The valves in the nozzles are wrought by the eccentrics V V, fig. 1, plate 51. No. 2. The levers for putting off or on the steam, as also for working the eccentrics that cause the carriage to move either backwards or forwards, are seen at h and Z at the end of the fire-box. D is the hot water pump, which may be connected with the water butt at pleasure, by a handle y, at the command of the engine man, who stands within the hall at the back of the carriage. The whole is suspended on springs, which may be seen at N, in fig. 1, plate 51. No. 1.

For a description of the most approved methods of constructing the carriages for locomotive engines, and with remarks regarding them, see the article Railways. A description of engines and apparatus for aquatic locomotion, will be found under the head Steam Engine.

With regard to locomotive engines for moving on common roads, it is unnecessary to say much. Various means have been tried to put this object in practice, but it is not yet at all probable that engines suitable to this purpose will ever be made by Mr Gurney, Messrs Heaton, Mr Russell, and other ingenious engineers; but although very great mechanical skill has been displayed in these inventions, none of them have succeeded to satisfaction. From the rapid improvements in the various departments of machinery, it is highly probable that engines suitable for carriages will be made to ply on our turnpike roads with safety and expedition.

LOCRI was a country of Middle Greece, whose inhabitants, the Locrians, were among the oldest Greek people. There were four branches of them—the Epicemiditan, the Opuntian, Ossolian, and Epizephyrian Locrians. The last were a colony from the Ossolian stock, and lived in Lower Italy. Their capital, Locri, was one of the most powerful, splendid, and wealthy cities of Magna Graecia.

LOCUST. The misapplication of popular appellation to the genus Locusta, has given rise to much confusion in regard to the scientific names of many insects. The American cicadae are popularly known in the United States both by the names of harvest-fly and locust; the latter term, however, is incorrectly applied. Under the generic name locusta is included, by several modern entomologists, the devouring locusts and the common grasshopper. These entomologists use the term in nearly the same sense as Linnaeus, who applied it to a group of his great genus gryllus, which constitutes the genus gryllus proper of Fabricius. The grasshopper may be thus characterized. The wings and wing-cases are applied obliquely to the sides of the body in the resting position, and are slender, and taper towards the ends; the feet have only three joints; and the tail is not furnished with a projecting ovipositor, or piercer, for the deposition of the eggs. These insects have the hind leg formed for leaping, and the males produce a stridulous sound, by scraping these legs against their wing-cases. The female deposits her eggs in the earth, and the young survive the winter in the larval state, concealed among the decayed vegetation of the surface. They pass through an imperfect metamorphosis, for both larva and pupa resemble, somewhat, the perfect insects in form, are active, and take food in the same way, but are destitute of wings. In all stages, they are herbivorous and sometimes do immense injury to vegetation.

The salt marshes of North America harbour an innumerable host, which not unfrequently strips them of every blade of grass; or, when a scanty crop is gathered into the barn, the hay is so filled with the greyish green cysts of locusts, or locusts, as to be highly offensive, and totally unfit for forage. In some sections of that country, they occasionally appear in such numbers as to fill the air in clouds, and wherever they alight they devour every green thing in their path. It is stated, on good authority, that, more than once when they visited some parts of New England, they not only ate up all the grass in the fields, but actually attacked clothing and fences to appease their insatiable hunger. Some workmen, employed in raising the steeple of a church, in Williamstown, Massachusetts, were, while standing near the vase, covered by them, and saw, at the same time, vast swarms flying at a great height far above their heads. These swarms are said to return after a short migration, and perish on the very grounds they have ravaged. (See Dwight's Travels.) Many of these insects are ornamented with various beautiful colours, particularly on the wings, which, however, in repose, are not visible, being folded like a fan, and covered by the long, narrow wing-cases. One of the largest and most common American species is the locusta Caro-linae of Linnaeus. It is about one inch and three quarters in length, and the wings are of a deep brownish colour, surrounded with a broad yellow border. The most celebrated species of grasshopper is the gryllus migratorius (migratory locust). Of all animals capable of adding to the calamities of mankind, by destroying the vegetable products of the earth, the migratory locusts would seem to possess the most formidable powers of destruction. In Syria, Egypt, and almost all the south of Asia, these insects make their appearance in legions, and carry desolation with them, in a few hours changing the most fertile provinces into barren deserts, and darkening the air by their numbers. Appolly for mankind, this calamity is not frequently repeated, for it is the inevitable precursor of famine, and its horrible consequences. The annals of most of the southern Asiatic climates are filled with the accounts of the devastations produced by locusts. They seldom visit Europe; but, should they be introduced, they would be formidable to the agriculturist. Even when dead, they are still productive of evil consequences, since the purefication which arises from their inconceivable number, is so great, that it is justly regarded as the cause of some of those desolating pestilences
LOCUST.

which almost deplete whole districts of country.
When locusts thus make their appearance, they are said to have a leader, whose flight they observe, and to whose motions they pay a strict regard. We are told, however, that their course is determined by what they touch, as by what they devour. Their bite is thought to contaminate the plants, and either to destroy or greatly weaken their vegetation. Of the innumerable multitudes in which they occur, scarcely an adequate conception can be formed.

Barlow (Transact. Soc. for the encouragement of Sci.) states that, in Southern Africa, the whole surface of the ground literally be said to be covered with them for an area of 2000 square miles. The water of a very wide river was scarcely visible on account of the dead carcasses that floated on the surface. When the larvae (for these are much more voracious than the perfect insects) are on a march during the day, it is utterly impossible to turn the direction of the troop, which is generally with the wind. In some parts of the world, these insects are used for food. For this purpose, they are caught in nets, and, when a sufficient number has been gathered, they are carried into the country; or, in certain cases, into an earthen vessel, till the wings and legs drop off; when thus prepared, they are said to taste like craw-fish.

Mr Adanson (Voyage to Senegal) says, however, that he would willingly resign whole armies of locusts for the meanest fish. Thelocusts constituted a common food among the Jews, and Moses has specified the different kinds which they were permitted to eat. "Even these thou mayest eat; the locust after his kind; the boll locust after his kind; the beetle after his kind; and the grasshopper after his kind." Levit. xi. 20.

The popular term grasshopper is also applied, and with more propriety, to insects in another group of the Gryllidae—tettigonias of Linnæus (locusta of Fabricius). They are distinguished from the locusts of the preceding section, by their very long, bristle-shaped, or tapering antennæ, and by having four joints to their feelers, and an exserted oviscut. The latter instrument often has the form of a curved sword or sickle, and is used in preparing a hole, and in conveying the eggs to their appropriate nidus beneath the soil. These insects have long, slender hind legs, formed for leaping; but the males do not place them in the same manner. A production of sounds. Their musical organs consist of a pair of frames, within each of which is stretched a transparent membrane. These tabourets are affixed to that part of the base of each wing-case which lags on the top of the back, and one lies directly over and in contact with the other; so that, whenever the wing-cases are opened and shut, the frames grate together, and, as often as the shuffling motion is repeated, a grating sound is produced. These musical grasshoppers are usually of a green colour, and are nocturnal in their habits. During the daytime, they conceal themselves in the grass or the foliage of trees; but at night, they quit their lurking places, and the joyous male commences the song of love with which he recites his silent partner. It would be well to restrict the popular appellation grasshoppers to these insects, which have been distributed into several modern genera. Two only need here be mentioned, viz., conchopterus (Thunberg), (neola, Kirby), including the species whose head terminates in front in a conical projection, and pterophylla (Kirby), whose head is oblong, and not produced in front. The latter genus contains the well-known insect, tettigonia concava (locusta concava, Say). Its large, oblong-oval, concave wing-cases, inwarp the abdomen, and meet at their edges above and below, somewhat like the two sides or valves of a pea-pod. Perched on the topmost twig of a tree, the insect begins its nocturnal call by separating, closing, and re-opening its wing-cases. The friction of the tabouret-frames upon each other, thence, produces three distinct notes, which is inspired. The breath is then taken in at what they touch, as by what they devour. Their bite is thought to contaminate the plants, and either to destroy or greatly weaken their vegetation. Of the innumerable multitudes in which they occur, scarcely an adequate conception can be formed. Barlow (Transact. Soc. for the encouragement of Sci.) states that, in Southern Africa, the whole surface of the ground literally be said to be covered with them for an area of 2000 square miles. The water of a very wide river was scarcely visible on account of the dead carcasses that floated on the surface. When the larvae (for these are much more voracious than the perfect insects) are on a march during the day, it is utterly impossible to turn the direction of the troop, which is generally with the wind. In some parts of the world, these insects are used for food. For this purpose, they are caught in nets, and, when a sufficient number has been gathered, they are carried into the country; or, in certain cases, into an earthen vessel, till the wings and legs drop off; when thus prepared, they are said to taste like craw-fish.

Mr Adanson (Voyage to Senegal) says, however, that he would willingly resign whole armies of locusts for the meanest fish. The locusts constituted a common food among the Jews, and Moses has specified the different kinds which they were permitted to eat. "Even these thou mayest eat; the locust after his kind; the boll locust after his kind; the beetle after his kind; and the grasshopper after his kind." Levit. xi. 20.

The popular term grasshopper is also applied, and with more propriety, to insects in another group of the Gryllidae—tettigonias of Linnæus (locusta of Fabricius). They are distinguished from the locusts of the preceding section, by their very long, bristle-shaped, or tapering antennæ, and by having four joints to their feelers, and an exserted oviscut. The latter instrument often has the form of a curved sword or sickle, and is used in preparing a hole, and in conveying the eggs to their appropriate nidus beneath the soil. These insects have long, slender hind legs, formed for leaping; but the males do not place them in the same manner. A production of sounds. Their musical organs consist of a pair of frames, within each of which is stretched a transparent membrane. These tabourets are affixed to that part of the base of each wing-case which lags on the top of the back, and one lies directly over and in contact with the other; so that, whenever the wing-cases are opened and shut, the frames grate together, and, as often as the shuffling motion is repeated, a grating sound is produced. These musical grasshoppers are usually of a green colour, and are nocturnal in their habits. During the daytime, they conceal themselves in the grass or the foliage of trees; but at night, they quit their lurking places, and the joyous male commences the song of love with which he recites his silent partner. It would be well to restrict the popular appellation grasshoppers to these insects, which have been distributed into several modern genera. Two only need here be mentioned, viz., conchopterus (Thunberg), (neola, Kirby), including the species whose head terminates in front in a conical projection, and pterophylla (Kirby), whose head is oblong, and not produced in front. The latter genus contains the well-known insect, tettigonia concava (locusta concava, Say). Its large, oblong-oval, concave wing-cases, inwarp the abdomen, and meet at their edges above and below, somewhat like the two sides or valves of a pea-pod. Perched on the topmost twig of a tree, the insect begins its nocturnal call by separating, closing, and re-opening its wing-cases. The friction of the tabouret-frames upon each other, thence, produces three distinct notes, which is inspired. The breath is then taken in at
heard at the distance of half a mile. The most remarkable species is the seventeen years' locust (C. sep tentdecinia), so common, in particular seasons, in some parts of the United States. These insects emerge from the ground towards the end of April, and always during the night. On their first coming out, they are in the pupa state; but the back soon bursts, and the perfect fly appears. They begin to lay eggs all through the month of May. These eggs are deposited in close lines of two inches long, in the tender twigs of trees. As soon as the young attain their growth, in the grub state, they fall to the ground, and make their way two or three feet underneath the surface, in order to undergo their change into the pupa form. Soon after attaining their last transformation, they are found in great numbers over large districts of country. They appear about every seventeen years, though it is highly probable, that the periods of their return vary, according to the heat of the climate, and other circumstances. These insects have been known to make their appearance in the cities of Philadelphia, and great myriads, penetrating from their subterranean residence, between the bricks of a pavement. Notwithstanding the usual idea, they are in no way injurious to vegetation, except from the damage done by the female in depositing her eggs. This insect is the favourite food of various species of cattle, and numbers of destructive hogs, by the hog, before they emerge from the ground; they are also, when in their perfect state, eagerly devoured by squirrels. Some of the larger birds are also fond of them. The Indians likewise consider them as a delicate food when fried. In New Jersey, they have been converted into soap. It is stated, on good authority, that they never light on the pine, nor does the female deposit her eggs in this tribe of trees.

LOCUST (robinia pseudacacia.) This valuable and ornamental tree, which is so frequently cultivated in the Atlantic States of America, and highly prized in Europe, grows wild in great profusion among the Alleghany mountains, and throughout the Western States, even to the borders of the sandy plains which skirt the base of the Rocky mountains. When in bloom, the large, pendulous racemes of fragrant, white flowers, which, in union with the large, yellowish, viscosa, produce a fine effect, and give this tree a rank among the most ornamental. The leaves are pinnate, and the leaflets very thin and smooth. The flowers, resembling in form those of the pea, diffuse a delicious perfume, and are succeeded by a flat pod. The branches are unarmed with thorns. The wood is compact, hard, capable of receiving a fine polish, and has the valuable property of resisting decay longer than almost any other. The colour is greenish-yellow, with brown streaks. Locust-posts are consumed in enormous quantities, and are every where preferred, when they can be obtained. This wood is very much employed in ship-building, in the upper and lower parts of the frame, together with the white and live oaks and red cedar; but it is difficult, in the Atlantic ports, to procure stocks of sufficient dimensions. For tree-nails, it is preferred to all other kinds of wood, as it acquires extraordinary hardness with age, and considerable quantities of these are annually exported to Great Britain. It is also employed by turners, and, from its fine grain and lustre, forms a very good substitute for box. The locust grows very rapidly, but, when cultivated in the Atlantic states, it is found to be exceedingly liable to the distemper of an insect, which, by boring into the wood in various directions, weakens the tree so much, that it is easily broken by the wind. In various parts of Europe, great attention has been paid to the propagation of this tree, for ornament as well as for its useful properties, and its cultivation is further encouraged by the absence of the destructive insect above-mentioned. The usual stature of the locust is about forty-five feet, but, in the fertile regions of the south-west, it attains much greater dimensions, sometimes reaching to the height of eighty feet, with a trunk four feet in diameter. The R. viscosa, a smaller tree than the locust, from which it is distinguished by its rose-coloured flowers, and by having the young branches covered with a viscid substance, is, in its natural state, confined to the south-western parts of the Alleghany mountains. It usually does not exceed forty feet in height, with a trunk twelve inches in diameter, and is a mere ornamental tree even the preceding. The properties of the wood are very similar to those of the common species, and it will bear cultivation in the same climates. The R. hispida is also a native of the south-west ranges of the Alleghanies. It is a shrub with very hirsute branches, often cultivated in gardens on account of its very large and beautiful rose-coloured flowers, which, however, like those of the R. viscosa, are inodorous.

A fourth species of robinia is said to exist within or near the basin of the Red river, but, with respect to its character, botanists are, at present, entirely un instructed. This genus is thus peculiar to North America.

LODGE. This word, with several symbols and ceremonies, was taken from the corporations of stone-cutters and masons, by the freemasons. The former called the place where they assembled a lodge; and, in freemasonry, lodge signifies the place of meeting; and hence that body of masons, with necessary officers, &c., who meet at such place. Each lodge is distinguished by its particular name, with the addition of the name of the place where it holds its meetings.

For further information, see Masonry.

LODI, a well-built town, since 1814 the chief town of the province of Lodii in the government of Lombardy, in the Lombardo-Venetian kingdom, lies on the Adda, in a fertile territory; lon. 9° 31' E.; lat. 45° 19' N.; population, 17,800. The bishropic is subject to the archbishop of Milan. The town contains a strong citadel. The celebrated Parmesan cheese is made, not at Parma, but at and about the town of Lodii alone, and is considered the best in Italy. The manufactures of earthen ware are also celebrated. It was at this place that general Bonaparte gained the famous victory, May 5, 1796, over the Austrian army. Beyoncé, who had passed the Adda, evacuated Lodii, and taken a very strong position, defended by thirty pieces of cannon which could be approached only by a narrow bridge over the Adda. Bonaparte formed a part of his forces into a close column, brought his whole artillery into play, and charged at a quick step; the slaughter was dreadful, as the Austrian artillery swept down whole ranks at once on the bridge. The French venerated; but, at this critical moment, the French generals Berthier, Masséna, Cervoni, Lannes, &c., placed themselves at the head of the column, forced their way over the bridge, and took the Austrian batteries. The Austrians fought bravely; both armies struggled with the greatest obstinacy, and victory long remained in suspense, till the division of Augereau came up, and decided the fate of the battle. The Austrians, driven from their post, lost a part of their artillery not under 5000 men; but they were not less animated by the presence of the Austrians than by a retreat conducted with coolness. The French loss was not less. If they did not lose 4000 men, as the Austrians stated, they certainly lost more than 2000, which was their own account. Men of science have
censured both generally,—Bonaparte, is taking a part with an immense sacrifice, of which, said he, he might have availed himself, in twenty-four hours more, with comparative ease; and Beaulieu, for having evacuated the town of Lod in such haste, as to neglect breaking down the bridge, by which alone the enemy could approach his position; but it is idle to dispute with Napoleon about personages. Lod remains one of the most striking examples of military achievements of Napoleon; not merely from the personal courage which he displayed, but from the boldness with which the action was planned, and the energy with which it was executed. At Lod, Bonaparte received the title of petit caporal (little corporal). See Thiéry’s Histoire de la Révolution Française (vol. 8th); Botta’s Histoire de l’Italie de 1780 à 1814.

LOG; a machine used to measure the rate of a ship’s velocity through the water. For this purpose, there are several inventions, but the one most generally used is the following, called the common log. It is a piece of thin board, forming the quadrant of a circle of about six inches radius, and balanced by a small plate of lead, nailed on the circular part, so as to swim perpendicularly in the water; with the greater part immersed. The log-line is fastened to the log by means of two legs, one of which is knotted, through a hole at one corner, while the other is attached to a reel on the deck of the ship, so as to draw out occasionally. The log-line, being divided into certain spaces, which are in proportion to an equal number of geographical miles, as a half or quarter minute is to an hour of time, is wound about a reel. The whole is employed to measure the ship’s head-way in the following manner: The reel being held by one man, and the half-minute glass by another, the mate of the watch fixes the pin, and throws the log over the stern, which, swimming perpendicularly, feels an immediate resistance, and is considered as fixed, the line being slackened over the stern, to prevent the pin coming out. The knots are measured from a mark on the line, at the distance of twelve or fifteen fathoms from the log. The glass is therefore turned at the instant that the mark passes over the stern; and, as soon as the sand in the glass has run out, the line is stopped. The water, then being on the log, dislodges the pin, so that the line will serve for any water, as long as it is easily drawn aboard. The number of knots and fathoms which had run off at the expiration of the glass, determines the ship’s velocity. The half-minute glass, and divisions on the line, should be frequently measured, to determine any variation in either of them, and to make allowance accordingly. If the glass runs thirty seconds, the distance between the knots should be fifty feet. When it runs more or less, it should therefore be corrected by the following analogy: As thirty is to fifty, so is the number of seconds of the glass to the distance between the knots upon the line. As the heat or moisture of the weather has often a considerable effect on the glass, so as to make it run slower or faster, it should be frequently tried by the vibration of a pendulum. As many accidents attend a ship during a day’s sailing, such as the variability of winds, the different quantity of sail carried, &c., it will be necessary to heave the log of the wind, as often as the variation of the weather or the wind is considerable, as well as at the beginning of the watch, for the sake of comparison. The alteration of the wind should be perceptible, yet it ought to be constantly heaved.

The inventor of this simple but valuable device is not known, and no mention of it occurs till the year 1607, in an East India voyage, published by Purchas.

LOG-BOARD; two boards shutting together like doors, and fastened into several columns, containing the hours of the day and night and the direction of the winds, and the course of the ship, with all the material occurrences that happen during the twenty-four hours, or from noon to noon, together with the latitude by observation. From this table, the officers work the ship’s course, and compile their journals. The whole, being written with chalk, is rubbed out every day at noon.

LOG-BOOK; a book into which the contents of the log-board are daily transcribed at noon, together with the latitude and longitude, with every circumstance, deserving notice, that may happen either to the ship herself, or any vessel within her sight, at sea, or in a harbour, &c. The intermediate divisions or watches of a log-book, containing four hours each, are usually signed by the commanding officer thereof, in ships of war or East Indiamen.

LOG-LINE; the line which is fastened to the log (q.v.).

LOGAN, James; born at Lurgan, in Ireland, Oct. 20, 1674, of Scottish parents. At the age of thirteen years, having learned Latin, Greek, and some Hebrew, he was put apprentice to a linen-draper in Dublin; but, the country being involved in much confusion by the war of the revolution (1688), he returned to his parents, at Bristol, in England, where he devoted all the time which he could command to the improvement of his mind. In his sixteenth year, having happily met with a small book on mathematics, he made himself master of it without any manner of instruction. Having, also, further improved his own knowledge of the French, Italian, and Spanish languages. He was engaged in a trade between Dublin and Bristol, when William Penn made proposals to him to accompany him to Pennsylvania, as his secretary, which he accepted, and landed, with the proprietor, in Philadelphia, in the beginning of December, 1699. In less than two years, William Penn returned to England, and left his secretary invested with many important offices, which he discharged with fidelity and judgment. He filled the offices of provincial secretary, commissioner of property, chief justice, and, upon the demise of governor Gordon, governed the province for two years as president of the council. He had, for a long time, earnestly solicited from the proprietary family a release from the fattiging care of their business; but, even after this release, he was constantly consulted and appealed to in difficulty. Both the quiet and good government of the province, his familiarity with the leading men of the country, and his valuable experience. He lived about twenty years at Stenton, enjoying literary leisure, corresponding with eminent men in various countries, and engaged in collecting that library which he bequeathed to the public. He was also the author of several learned works. His Experimenta Medetematu de Plantarum Generatione entitles its author to be ranked among the earliest improvers of botany. It was written in 1730. He corresponded with the great Swedish botanist. Mr Logan died at Stenton, near Philadelphia, Oct. 31st, 1754, having just completed his seventy-seventh year.

LOGAN, REV. John, an ingenious poet and sermon writer, was born in the parish of Fala, Mid Lothian, in 1748, and educated for the church, at Edinburgh. Having been ordained, he became minister of South Leith in 1773, previously to which he had published a collection of poems, some of his own composition, others selected, together with a collection of sermons, written by a friend, Michael Bruce. He afterwards produced a tragedy, entitled "Runnmede," which was acted at Edinburgh, but with no great success. In 1786, he removed to London, and became a writer in the English Review. He died in 1788. His sermons, which were published after his death, are much admired.

LOGARITHM (from the Greek λόγος, proportion, and αριθμός, number). "The logarithms of numbers
are the exponents of the different powers to which a constant number must be raised, in order to be equal to those numbers; the principles, therefore, which apply to exponents in general, apply to logarithms. To constitute a logarithm, it is necessary that the exponent should refer to a system or series. These exponents, therefore, constitute a series of numbers in arithmetical progression, corresponding to it as many others in geometrical progression. Take, for instance, the series, $10 = 10^1$, $100 = 10^2$, $1000 = 10^3$, $10,000 = 10^4$, &c. Perhaps the definition of a logarithm under this peculiarity of expression the name logarithm is a mathematical term for a number by which the magnitude of a certain numerical ratio is expressed in reference to a fundamental ratio. The value of a ratio becomes known to us by the comparison of two numbers, and is expressed by a number called the quotient of the ratio; for instance, $12:4$ is expressed by $3$, or $18:9$ by $2$; and $2$ being called the quotients of the two proportions, $12:4$ and $18:9$. If we now imagine a series of proportions, which have all the same value or quotient, as, for instance, $1$ to $3$, $3$ to $9$, $9$ to $27$, $27$ to $81$, &c. (in which $9$ and $3$ are the quotients) as in the series $1, 3, 9, 27, 81, &c.$, and if we at the same time adopt the ratio $3:1$ as the fundamental ratio (or the unit of these ratios), then $9$ to $1$ is the double of this ratio, $27$ to $1$ the triple, $81$ to $1$ the quadruple, and so on. The numbers $1, 3, 9, 27, 81, &c.$, which indicate the value of such ratios, in respect to the fundamental ratio, are called logarithms.

If, therefore, in this case, $1$ is the logarithm of $3$, $2$ must be the logarithm of $9$, $3$ of $27$, $4$ of $81$, &c. If we adopt, however, the ratio of $4:1$ as the fundamental one, and hence 1 as the logarithm of 4, then 2 would be the logarithm of $16$, $3$ of $64$, &c. The logarithms of the numbers which lie between, must be fractions, and are to be calculated and put in a table. A table of logarithms, made according to an assumed basis or fundamental ratio, of all numbers, to a certain limit, is called a logarithmic system. The most common, at present, is that of Briggs, in which the fundamental basis is $10$ to $1$; hence $1$ is the logarithm of $10$, $2$ of $100$, $3$ of $1000$, &c. It is evident that all logarithms of numbers between $1$ and $10$ must be more than $0$, yet less than $1$, i.e. a fraction; thus the logarithm of $6$ is $0.778153$. In the same way, the logarithms of the numbers between $10$ and $100$ must be more than $1$, yet less than $2$, and so on. Thus the logarithm of $100$ is $2$. All the logarithms of the numbers between $0$, $10$, $100$, &c., are arranged in tables, the use of which, particularly in calculations with large numbers, is very great. The process is simple and easy. If there are numbers to be multiplied, we only have to add the logarithms; if the numbers are to be divided, the logarithms are merely to be subtracted; if numbers are to be raised to powers, their logarithms are multiplied; if roots are to be extracted, the logarithms are merely to be divided by the exponent of the root. In a table of logarithms, the integer figure is called the index or characteristic. The decimals are called, by the Germans and Italians, the mantissa. In general, the logarithms of the system in which 1 indicates 10, are called common or Briggs's logarithms. The use of logarithms in trigonometry was discovered by John Napier, (q. v.) a Scottish baron, and made known by him in a work published at Edinburgh, in 1614. Logarithmic tables are of great value, not only to mathematicians, but to all who have to make calculations with large numbers. The best logarithmic tables are those of Vega and of Callet. The former are calculated with ten decimals. Logarithms are of incalculable importance in trigonometry and in astronomy.

Vega's edition of Viluc's tables contains a trigonometrical table of the common logarithms of the radius or \( \log \sin \, \text{tot.}=100000000 \), which gives the logarithms of sines, arcs, co-sines, tangents, and co-tangents for each second of the two first and two last degrees, and for each tenth of the rest of the quadrant. Under Napier's direction, B. Ursinus first gave the logarithm of the sines of the angles from $10$ to $10$ seconds, the logarithm of the tangents, which are the differences of the logarithms of each sine and co-sine, together with the natural sine for a radius of $100,0000$ parts. Kepler turned his attention upon logarithms, and gave a new theory of calculation. Briggs was also conspicuous in the construction of tables. Mercator shows a new way for calculating the logarithms easily and accurately. Newton, Leibnitz, Halley, Euler, L'Huillier, and others, perfected the system much, by applying it to the binomial theorem and differential calculus. The names of Vlacq, Sherwin, Gardiner, Hutton, Taylor, Callet, and others, deserve to be honourably mentions. The edition of Vlacq, within a few years, by Vega, is particularly valuable. During the French revolution, when all mathematical works were condemned to be destroyed, and the tables of the trigonometrical lines and their logarithms became necessary. The director of the \emph{bureau du cadastre}, M. Prony, was ordered, by government, to have tables calculated, which were to be not only extremely accurate, but to exceed all other tables in magnitude. This colossal work, for which the first mathematicians supplied the formulas and the methods for using the differences in the calculations, was executed, but the depreciation of the paper money prevented its publication. The tables would have occupied 1200 folio pages. (\textit{Notices sur les grandes Tables Logarithmiques et Trigonométriques, calculées au Bureau du Cadastre à Paris, au IX.})

\textbf{LOGAU, FRÉDÉRIK, baron of ;} an epigrammatist, born in Silesia, 1604, and died in 1655. He early showed poetical talents, but, at a later period, his avocations appear to have prevented him from attempting any large poems, and his poetical productions contain but few pieces. He published a selection of 200 epigrams, which were so well received, as to induce him (probably in 1654) to publish a new collection of 3000. A contemporary of Opits, he followed in the steps of his great predecessor, and often expresses himself with as much vigour, and justly ranks as one of the grand benefactors of German poetry. His poems, which are very numerous, and are the more striking as this department has been little cultivated by German writers. Logau is particularly original in the gnomes, and truly poetical in a form which is now become foreign to poetry. Ramler and Lessing, who edited a collection of his epigrams in 1759, revived his reputation. After Lessing's death, Ramler republished the collection, in 1791. Select poems of Logau are contained in W. Müller's \textit{Bibliothek Deutscher Dichter des 17. Jahrhunderts}, (Library of the German Poets of the seventeenth Century, volume vi. Leipzig, 1824).

\textbf{LOGGE DI RAFFAELLO ;} part of the Vatican, and one of those beautiful scenes to be found nowhere but in Rome. Leo X. had these logge or arcades built under the direction of the immortal Raphael. There are three stories which enclose a court called il Cortile di S. Damiano. The middle story is the most celebrated. It is formed by thirteen arches, and the wall of each contains a lunette, and in fresco, representing scenes from the Old Testament, and executed by Ginoio Romanu, Pirerin dal Vaga, Pellegrino da Modena, Polidoro, and Maturino da Caravaggio, and others, after cartoons prepared by the great Raphael himself. The number of these 2 x 2

515
exquisite pictures isilly-two; the arches and pilasters are adorned with grotesque paintings, executed by Giotto himself. The great hall in this branch, also under the direction of Raphael.

LOGIC (λογική, i. e. νοημα); the science of the laws of thought, and the correct connexion of ideas. It is not certain, however, whether the name was derived originally from thought or from language, because both may be designated by λογος, i. e. reason and word. In German, this science has also been called Denk-Lehre, or Verstand-Lehre (rule of thinking, or rule of understanding), because logic strives to represent, in a scientific way, those laws which the understanding is bound to follow in thinking, and without the observance of which, no correct conclusions are possible. Logic is valuable, not only as affording rules for the practical use of the understanding, but also as a science preparatory to all other sciences, particularly mental philosophy, as it affords the rules for giving scientific connexion to all knowledge, the laws of thinking determining the character of scientific arrangement. But, inasmuch as the laws of logic can only determine the form of our knowledge, but can by no means teach us how to obtain the materials of knowledge, and gain a clear insight into things (which is the business of mental philosophy, properly so called), in so far logic has been, of late, separated from intellectual philosophy. But it is the common rule, as truly as it is the case, that the sciences are divided into the historical (those which proceed from experience, as history, natural philosophy, medicine, &c.) and the philosophical (the subjects of which do not fall within the domain of experience), logic is a philosophical science, because the laws of the connexion of thoughts and ideas are founded in reason itself, and not in experience, and the subjects of logic are, therefore, capable of a demonstrative certainty beyond those of any other philosophical science. Logic has not unfrequently been over-valued, particularly by the ancient philosophers. It should always be kept in mind, that the most systematic order, alone, does not render assertions truth. The province of logic has been enlarged or restricted by different philosophers. Among the ancients, logic was made to include the deeper philosophical investigation of the general characteristics of truth, or the essential conditions of the truth of our knowledge. In the 3d and 4th centuries A. D. we have traced the former of the general laws and operations of thought (conceiving, judging, concluding), and their products (notion, judgment, conclusion). Applied logic treats of thought under particular and special relations, which are to be taken into consideration in applying the general laws of thought, viz. the connexions of thought with other operations of the mind, and the impediments and limitations which it thereby experiences, as, also, the means of counteracting them. For the first scientific treatment of logic, we are to look to the G-Elen, so famous in Greece, and the father of logic and dialectics; but it was then treated with particular reference to the art of disputation, and soon degenerated into the minister of sophistry. The sophists and the Megarean school (founded by Euclid of Megara) greatly developed this art. The latter, therefore, became known under the name of the sophists. The word organon, however, is derived from the invention of several sophists. The first attempt to represent the forms of thinking, in abstracto, on a wide scale, and in a purely scientific manner, was made by Aristotle. His logical writings were called by later ages, organon, and for almost two thousand years have maintained their authority in the schools of the philosophers. His investigations were directed, at the same time, to the criterion of truth, in which path Epicurus, Zeno, the founder of the stoic school, Chrysippus, and others fell asunder. Indeed, dialectics, enjoyed great esteem in later times, particularly in the middle ages, so that it was considered almost as the spring of all science, and was taught as a liberal art from the eighth century. The triumph of logic was the scholastic philosophy (which was but a new form of the ancient sophistry), and theology, particularly, became filled with verbal subtilities. Raymundus Lullius strove to give logic another form. The scholastics were attacked by Campeniana, Gasendi, Peter Ramus (Pierre de la Ramée), Bacon and others, with well-founded objections. Descartes and Malebranche again confounded logic and metaphysics.

Locke, Leibnitz, and Wolf, Thoibrlhausen, Thomasius, Crusius, Plouquet, Lambert (in his New Organon), Reimarus, and others, have rendered great service to modern logic. Kant, Fichte, Schelling, Hegel, have maintained very various opinions on the subject. Whatteley's Treatise on Logic, first published in the Encyclopaedia Metropolitana, and since in a separate volume, is one of the best treatises, in English, on the subject.

LOGOS (Greek, λόγος, from λαμψα, to speak) has a great variety of meanings: 1. language, speech in general; hence, 2. every manifestation of the reason and understanding by language, so that it has the meaning of our ideas, conceptions, demonstration, explanation, condition, and relation, nay, even wisdom and logic. Thus logos has the meaning both of ratio and oratio. In Christian theology, the word λόγος, as used in certain passages of the Scriptures, has been the source of continual disputes ever since the third century of our era. The passage in the Bible which gives rise to this discussion, is the opening of the gospel of St. John:—"In the beginning was the Word, and the Word was with God, and the Word was God. The same was in the beginning with God. But all things were made by him, and without him was not anything that was made." And in the Greek language λόγος does not simply mean a word (le verbe, das werk, &c.), the Greek word for it, λόγος (λέγω), means what is to be understood by λόγος, what is its essential character, whether it is a person of the Deity or not, the creative intellect of God, or the Son, through whom he created, or the divine truth which was to be revealed, &c.—this work is not the proper place to examine, nor will our limits permit us even to enumerate the different opinions which have been entertained on this interesting point of Christian metaphysics. We can refer the reader to a better source of information than the General History of Christianity and the Church (in German), by Augustinus Neumann, and others, 1827, 4 vols., a work of distinguished research and impartiality. The Roman Catholic doctrine of the λόγος (verbum) makes it a person, and not a mere name, and maintains that the Word is called God, not by catachresis, but in the strict and rigorous meaning of the term; that the most ancient fathers of the church always taught the divinity of the Word, and that they derived the doctrine from the Holy Scriptures alone, and not from the

A slight study of cultivated languages will show how generally the word signify means, or some word derived from it, and from which, in the Latin, has acquired its present signification; as the Latin res, from the Greek, to speak, λόγος from λαμψα, Euler and Deber, signifying word, are the most generic terms in the Oriental languages.
Platonic philosophy, as many have asserted, for a view of the Catholic doctrine, we must refer our readers to the Catholic Dictionnaire de Théologie (Text). The first volume, vii. i. of the commentary, particularly devoted to this subject. Some of the opinions of modern theologians on the meaning of the _logos_ are as follows:—It is necessary, some say, in order to understand the true meaning of _logos_, to begin with the examination of _σωφία_, which was previously used, (comp. modern Proverbs, vii. i. of seq., and the book of Wisdom, vii. 22, et seq.) The poetical author of the Proverbs does not imagine a person separate from God, but only an interior power of God, because, in his time, there could be no idea of a being proceeding from God, the Jews having borrowed this notion at a later period from the Oriental doctrine of emanations. The author of the book of Sirach (xxiv. 3) first uses _λογος_ του Θεου, as equivalent to _σωφία_, to signify the almighty power of God. The Word being an act of wisdom, gave rise to the symbol. John speaks of the _logos_ in the beginning of all things (comp. Proverbs, vii. 22; Sirach, xxiv. 9); (b) from the beginning with God (comp. Sir. i. 1, 11; Sir. xxiv. 9); (c) was created (Prov. Sol. viii. 31; Sir. xxiv. 9); (d) in the person of Christ, the _logos_ was manifested as a man to the world (Wis. Sol. x. 16; ii 14; Sir. xxiv. 12). St John, therefore, says those who thus interpret him, had the same idea of the _logos_ as the apocryphal writers; for the circumstance that the latter ascribe to the _logos_ the creation of all things, while St John leaves this point undecided in his _σωφία_ του, does not amount to a contradiction. Others, particularly the earlier commentators, understand _logos_, the Deity himself, that is, the second person of the deity (according to St John vii. 58). But those who adhere to the former opinion maintain that this is in contradiction to John xiv. 28; xii. 49—50; v. 19—20; and that he understood by _logos_, only a power of God, which was communicated to Jesus, on account of which he could claim divine attributes, and yet call the Father, as the source of this power, greater than himself. Others, as Hef- der, Paulus, Eckerman, understand by _logos_, the Word of God (Ἰησοῦς Χριστός), which, in the Old Testament, as the expression of the will of God, is the symbol of his creative power (Gen. i. et seq.). The latter Jews represented the divine omnipotence by the word of God. But it is maintained, on the other hand, from the manner in which John speaks of the _logos_, that he did not understand by it merely the divine omnipotence. A similar account is given of the creation by the Word, in the religion of Zoroas-

ster. According to Richter (Das Christenthum und die gnostischen Mystereen), the _logos_ corresponds with the Indian Om, the Persian Hanover, the Egyptian Kneph. Others, following the fathers of the church, particularly Eusebius, understand by _λογος_ an independent substance, external from God, like the _νοος_ of Plato. But this, again, it is said, involves an error, because Plato means by _νοος_ only a power of God. Still others, as Mosleim, Schlegel, Jerusalem, declare with Irenæus, the _logos_ of St John to be identical with the _logos_ of the Gnostics; but it is objected, that John did not conceive of a plurality, like that in the doctrine of deons. Lange considered _logos_ equivalent to the _σωφία_ of the Old Testament, and to the _logos_ of Philo, and as an distinct person from God; but, say the others, _σωφία_ is not something distinct from God. Paulus, in his Commentary, also identifies the _logos_ of Philo, with

that of St John. But it is said, on the other hand, that John cannot be supposed to have been acquainted with Philo's notion, as it was not an opinion commonly known. The _logos_ of the apocryphal writers is more similar to his; moreover, that if St John meant anything more than an original, eternal power in God, his _σωφία_ would imply dualism. Others have attempted grammatical explanations. Doderlein and Storr translated the word _σωφία_ by _περίβλησις_, the abstract being put for the concrete, doctrine for teacher, as in Gen. xliii. 32; 2 Sam. xxii. 23; Luke iv. 36. According to others, _λογος_ means _λογία_, (the promised); but history makes no mention of Christians who still expected a Messiah. The ancient philosophers often distinguish two _logi_ of an interior in God or man, which merely thinks (λογος νους), and an exterior or uttered (λογος ἀνωτέρως).*

LOGTHING; the legislative portion of the Norwegi

an storting, or diet. As soon as the king or his representative has opened the session, the stortingchooses its president, the abstinent being put for the logthing. The remaining three-fourths constitute the odelsingthing, or representatives of the landed property. These bodies conduct their deliberations separately, and each chooses its own president, and secretary. Every law is first proposed in the odelingthing, either by its own members or by the government, and the proposal or statute, if the proposition is then accepted, it is then sent to the logthing, who either accept or reject it, at pleasure, in the latter case giving their reasons. These are considered by the odelingthing, who either abandon the proposed measure, or send it again, either with or without alteration, to the logthing. If the proposition is twice sent down by the odelingthing to the other house, and is, by them, once rejected, the whole storting then assemble together, and the question is decided by a vote of two-thirds of all the members. At least three days must elapse between each of the considerations. When a measure proposed by the odelingthing, has received the assent of the other division of the assembly, or of the whole storting, a deputation from both branches of the storting is sent to the king, or, in his absence, to the vicerey or regency, to obtain the royal sanction for the measure. The royal assent is necessary to constitute a law in all cases where the punishment is death. See Ster-

thing.

LOGWOOD. This important article of commerce is the wood of the _haematoxylon Campchel-

num_, a small straggling tree, belonging to the family _leguminosee_, which grows wild; in most places, along the western shores of the gulf of Mexico.

* Goethe, in his celebrated Faustus, makes use of this passage of St John to plunge Faustus deeper into his dependence. He endeavours to translate λογός by word, mind, power; nothing will do: at last he chooses _decid_, and is satisfied. Though this agrees well enough with the hero, the poet ought to have considered that if Faustus understood Greek, he must have known that λογία never means _decid_ or any manifestation of reason by ac-

tion.
From its abundance in some parts of the bay of Campeachy, it is sometimes called Campeachy-wood. The leaves are with the flowers, and disposed in axillary racemes at the extremity of the usually spiny branches. The wood is red, tinged with orange and black, so heavy as to sink in water, and susceptible of receiving a good polish; but it is chiefly employed in dyeing. The black and purple flowers are very much valued, but they are not so permanent as some obtained from other substances. Though cultivated to some extent in Jamaica, the logwood of commerce is chiefly obtained from Honduras, where the cutting of it forms an extensive, but unhealthy, branch of business.

LOHENSTEIN, DANIELL, CASPAR VON, a German poet of the Silesian school, was born 1635, in Silesia, and died 1683, at Breslau. He wrote a great deal, particularly tragedies and comedies; and we mention him merely as a model of bad taste. His bombast is pushed to the utmost extravagance, and as an instance of aberration from taste, is not uninteresting in the history of the human mind. His dramatic extravaganzas are collected in his Trauer-und-Lustgicchte (Breslau, 1680, 1689; Leipzig, 1733).

LOIR-AND-CHER; a department of France, so called from the two rivers which cross it: the former in the south part, and the other in the north. See Department.

LOIRE, Liger, the largest river of France, rises in the Cevennes, in the department of the Ardèche, and empties into the Atlantic ocean below Nantes in Bretagne. Its length is about 520 miles. It is shallow in many places, but is navigable for large merchant ships to Nantes, for smaller ones to Beira, and for boats to Bonne. The levee upon the Loire is one of the most stupendous works in France. It extends from Angers to Orleans, and was constructed to confine the river within its banks, and to exclude the waters from a tract of country which is said formerly to have been a morass one hundred miles in length, and thirty or forty in breadth. Its base is about forty feet wide, and its elevation nearly twenty-five from the adjoining level; and its upper surface, which is paved with large stones, is just capacious enough to admit three carriages abreast. By the new division of France, since the revolution, the river received by the Loire—three provinces, including the river—the Loire, and the Upper, and Lower Loire. In 1815, the river became of historical importance. The French army, which, after the battle of Waterloo, had fallen back to the walls of Paris, having, by the terms of capitulation made by the provisional government, retired without further hostilities, under the command of Davoust, beyond the Loire, it was called the army of the Loire.

LOIRE, LOIRE UPPER, and LOIRE LOWER; three French departments. See Department.

LOIRET; a French department. See Department.

LOIZEROLLES, M. de, was a barrister at the time of the French revolution, and was arrested, with his father, in 1793, on suspicion, and conveyed with him to the prison of St Lazare. On the 7th of Thermidor, two days before the fall of Robespierre, the messengers of the revolutionary tribunal arrived at the prison with a list of the prisoners who were to be tried. The father of Loizerolles, who was son. The young man was asleep, but the father, with a heroic wish to sacrifice his life for the preservation of his son, allowed himself to be taken to the Conciergerie, and appeared before the judges. The clerk, perceiving the error in point of age, substituted the name of Francois for Joel, the Loizerolles, in his roll. He was sentenced to death. The father was led to the scaffold, though no charge or crime was alleged against him! M. Loizerolles, junior, has since celebrated this act of paternal affection in a poem, in three cantos with hisaviour 1780, 1812).

LOK. See Northern Mythology.

LOKMAN is a name that figures in the proverb and traditions of the Arabs. The period at which he lived is very differently stated, so that it is even doubtful if there were not two of the same name and period, or tradition. Lokman was a scribe from the stock of Ad, and was once sent, with a caravan, from Ethiopia to Mecca, to pray for rain in a time of great drought. But God's anger destroyed the whole family of Ad, except Lokman, the only righteous one; whereupon the Creator of the world gave him his choice, to remain as long as the dung of seven gazelles, which lay in an inaccessible hole in a mountain, should last, or for a period equal to the lives of seven successive victuators. Lokman chose the last, and lived for an almost incalculable length of time. There is also in the Koran an account of a Lokman, surnamed the wise; some times, also, called Abu-Anan, or the father of the Anana. This one, whether identical with the former or not, is not for us to determine, lived in David's time, and is represented as similar in many respects to the Phrygian Isop; and the Arabs have a great variety of fables by him, which, however, are formed upon the model of those of the Hebrews, of which the whole style and appearance are such, that they cannot be referred to so early a date as the first century of the Hegira. This person had, also, a life of remarkable duration (according to some 300, according to others 1000 years), which coincidence in the accounts of them affords good grounds for the conjecture, that the Lokman of the Koran, and the one whom tradition ascribes to the race of Ad, are one and the same person, whose history, in the course of ages, has been thus fancifully adorned. The fables of Lokman were, for the first time, made known to Europe through the press, by Erpenius, in 1615. They were first published in Arabic, with a Latin translation, were afterwards appended to an Arabic grammar, published by Erpenius, at Leyden, and have since gone through many editions, none of which, however, are free from errors. Among the Oriental nations, these fables, owing to their laconic and concise form, have greatly affected the minds of the people, and, on the whole, are not worthy of the reputation which they have, for a long time, sustained with us. In 1799, during the occupation of Egypt by the French, Marcel superintended an edition of Fables de Lokman, at Cairo, which was republished in Paris in 1803; but the best is that prepared by Causin, in 1818, for the use of the pupils at the collège royale. The editor of Galland's translation of the Homonnounamesh, or Fables of Bidpai, is mistaken in ascribing these Indian fables to Lokman as well as Bidpai. The most complete manuscript of the fables of Lokman is in the library of the Vatican, in Persian.

LOLARDES. See Beguines, Fraternities, and Oldcoste.

LOLLI, ANTONIO; a celebrated violinist, born 1728, or according to some, 1740, at Bergamo, in the Venetian territory. In 1762—73, he was in the service of the duke of Wurtzberg. He afterwards went to Russia, and his performance pleased the Czar to such a degree, that he connived at all, so much, that she presented him with a bow, on which she had herself written the words, "This bow, made by Catharine, with her own hands, is intended for the unequalled Lollil. In 1775, he travelled in England, France and Spain. In Madrid, besides other perquisites, he was presented with the powers of the conductor of the theatre for each concert. In 1789, he returned to Italy, and died at Naples, in 1794. Lollil endeavoured to unite the excellencies of
The schools of Nandini and Ferrari. He had acquired an astonished facility on his instrument. He was called the musicus rope-dancer. None of his predecessors had attained such perfection on the fingerboard; but, at the same time, he lost himself in wild and irregular pianissatas, in which he often neglected all time, so that the most practised player could not accompany him.

LÔMÉ, Dr. See De Lôme.

LÔMBARD HOUSE, LÔMBARD (mons pietatis, mont de piété); a public institution, at which every person, but especially the poor, may obtain money for a short time, at a moderate rate of interest, on depositing sufficient pledges (pawns), and more than funded from the necessity of having recourse to usurers.

The chief difference between Lombards and pawnhouses is, that the former are established by public authority, for the relief of the poor, while the latter are established by private individuals, for their own profit. After a given time, the pawns, if not redeemed, are sold by public auction, and the surplus, after deducting interest and costs, is given to the former owner; or, if he cannot be found, retained for him one year. If he does not then appear, the sum is given to charitable institutions. The Lombard gives a certificate, stating the time of deposit, the sum received, the name of the pawnee, the article pawned, the page of the book in which it is entered. The bearer of this certificate may redeem the articles within the time fixed, unless the owner has apprized the Lombard that it was lost, &c.

The origin of these establishments has been, with much probability, referred, by Dorotheus Asciounius (i. e. Matthew Zimmermann, who died in 1639, and who was superintendent in Meissen*), to the time of pope Pius II. or Paul II. (1464—1471). Barnabas Interamnensis, however, a Minorite friar, established the first Lombard house in Perugia, in the States of the Church, before 1461, or in that year, though it did not receive pope Paul II.'s confirmation before 1467. A lawyer in Perugia, Fortunatus de Copolis, rendered much assistance in the execution of the plan. Another Lombard was soon after erected in Orvieto. In 1472, Sixtus IV. confirmed one, established at Viterbo, in 1482, a Minorite, named in the Chartularies of Viterbo, and, in 1479, another at Savona, his native place. Lombards were thus gradually established in almost all Italian cities during the sixteenth and seventeenth centuries. (See Beckmann's History of Inventions, vol. iii, 3d part.)

The first Lombard in Germany was established at Mainz, in 1404, by a German prince, for the relief of the poor. In 1458, further establishment of Lombards, by the influence of the capital, gave twenty francs, twenty centimes, or omitting the fraction, twenty francs for each inhabitant. In a family composed of four persons, the average will be nearly eighty francs—and an immense sum for a family which can with difficulty procure daily necessaries!

LÔMBARD SCHOOL. See Italian Art, in the article Italy, and Painting, History of.

LÔMBARD STREET, a well-known spot in the gigantic metropolis of the British empire, is situated in the city, and received its name from having been the residence of the Lombards, the money-lenders of former times, whose usurious transactions caused their expulsion from the kingdom in the reign of Elizabeth. It is now chiefly occupied by bankers, and is a place of much importance in the London commercial world.

LÔMBARDS, LONGOBARDI, or LANGO BARDI. Some derive the name from the long bards or spears, by which this nation is said to have been distinguished from the other northern tribes; others from the long strips of land (börde) which they inhabited, on both sides of the Elbe, from Luneburg to Magdeburg. They are generally considered as a German people (d'origine alsacienne), from the name of the tribes of the Huns, or Suevi, which dwelt below the Istevones. Their most ancient seats were on the east side of the Elbe, in the eastern parts of the principality of Luneburg and in the Almark, or the Bardengau, so called, which, most probably, takes its name from them. Here Tiberius found them, on his expedition to the Elbe, and fought a battle with them. Strabo narrates that Tiberius drove them beyond the Elbe, but Velius Paterculus, who himself accompanied the expedition, makes no mention of it. The Lombards afterwards appear in the Marcomanic league, under Marobodus, with whose despotism being dissatisfied, they concluded a league with the Cheruscis. They appear, at this time, to have left their settlements on the Elbe, and to have approached nearer the Cheruscis. The latter tribe, having been weakened by a series of expulsions from the Lombards, had the opportunity to spread themselves farther, and to the Huns, or Suevi, took possession of all their settlements north of the Harza mountains, and became the most powerful of the nations there. According to the accounts of Ptolemies, they now spread between the Weser and the Rhine, in the territories of the

* A superintendent, in the north of Germany, is a superior Protestant minister.

to 21,569,437 francs; so that 75,883 remained at the mont de piété; and there was in its hands the sum of 2,951,720 francs. As it is the principle of the mons de piété not to lend more than about a quarter of the value upon articles pledged,—though the law for its formation, dated in 1777, directs that the borrower shall receive two-thirds of the value of his pledge,—we may estimate the value of the 75,883 unredeemed pledges, upon which nearly 3,000,000 of francs were lent, at 12,000,000. Supposing the sale of these articles to be effected, and all the reductions of excise, registry, &c., made, there would be returned to the proprietors of them the half of these pledges; it would result, that 6,000,000 at least, are thus annually levied upon the least affluent class of society—that which approaches the nearest to the description of persons for whom the dépôts for mendicity were created. Independently of these 6,000,000, inevitably lost to the unfortunate borrowers, we must add the interest of twelve per cent. per annum, taken upon the 24,521,137 francs lent by the mont de piété; that is to say, 2,942,536 francs, adding nearly 3,000,000, which, with the 6,000,000 already spoken of, constitute a total of 9,000,000. 9,000,000, divided among 437,500 inhabitants, half of whom comprised the income of the capital, give twenty francs, twenty centimes, or omitting the fraction, twenty francs for each inhabitant. In a family composed of four persons, the average will be nearly eighty francs—an immense sum for a family which can with difficulty procure daily necessaries!
former Angirvari, Tubantes, Marsi, and Cheruesi. They maintained themselves in these territories till the new Frankish confederacy, formed of the ancient Cherusci, had established itself. The Lombards, gathered together at Cusumano in the territory of the ancient Cherusci, and, in all probability, drove the Lombards back to their ancient seats on the Elbe. For 200 years, we hear nothing more of them, till, at the close of the fifth century, they appeared again on the north side of the Danube, and, after having obtained a part of Pannonia from the Greek emperor Justinian II., aided by the Avari, put an end, under their king Alboin, in 566, to the empire of the Gepide, in Transylvania. Meeting with little resistance, they conquered, two years after, under the same king, in connexion with 20,000 emigrant Saxons, all Upper Italy (which was called the kingdom of the Lombards, subsequently Lombardy), together with a great part of Middle Italy. Their king, Liptprand, an able sovereign, from 713 to 726, extended the Lombard dominion in Middle Italy. But, having become too formidable to the popes, the latter solicited the aid of the Frankish king Louis the Pious, (774–840); and the latter sent King Desiderius into the territory of the Lombards, in 774, after a six months' siege, in Pavia, and destroyed the Lombard Kingdom. (See Henry Leo's History of Italy, vol. i. (from A. D. 568 to 1126), in the Geschichte der Europaischen Staaten, by Heeren and Ueckert (Hamburg, 1829).) A political history of Italy, and of the social condition of the people under the dominion of the Lombards, by C. Troya, of Naples, has been announced.

LOMBARDY, in the sixth century, when the Lombards had conquered a great part of Italy, comprehended the whole of Upper Italy. At a later period, the Austrian provinces in Italy (the dukies of Milan and Mantua) have been called Austrian Lombardy. These, with other countries, were formed by Bonaparte into the Cisalpine, then into the Italian republic, and, lastly, in 1805, into the kingdom of Italy, and the name of Lombardy ceased to be used. By the peace of Paris, in 1814, Austria came into possession of much of that part of Upper Italy which had constituted the Kingdom of Italy, and in 1815, it formed of its Italian provinces a Lombardo-Venetian Kingdom. In this are comprehended the territories of the former republic of Venice (with the exception of Istria, and the canton of Cividale, which are in Austria), comprehending the Austrian portion of the duchy of Milan, Mantua, a small part of Parma, Placentia, and the papal territories, and those formerly belonging to Switzerland, viz. the Valteline, Bormio, and Chiavenna. It is bounded by Switzerland, Germany, the Adriatic sea, the Papal States, Modena, Parma, and Sardinia. It contains 17,600 square miles, and 4,176,000 inhabitants, among whom are 66,500 Germans, 5600 Jews, and some Greeks. It is watered by the Tagliamento, the Piave, the Brenta, the Adige, the Po, Ticino, Mincio, and Adda. The principal lakes are those of Como, the Lago Maggiore, and the lakes of Iseo and Garda. The Principal rivers are also numerous. The country is, for the most part, level, but towards the north, it is broken by spurs of the Alps, and to the west of Padua, lie the Euganean mountains, mostly volcanic origin, and from 1700 to 1800 feet in height. This province is, in most parts, well cultivated, and resembles a garden. The climate is cool in the northern part of the Alps, being warmed against the cold winds coming from the remaining parts, warm, mild, and healthy, although not free from frosts in winter; and, on this account, it sometimes happens that the olive, orange, citron, and other tender plants, as well as the vineyards, are injured by the cold, and the rivers frozen. Even the lagoons at Venice are sometimes frozen so hard, that you may walk a considerable distance, or even drive carriages upon them. The animals of the country are neat cattle, tolerable horses, sheep with coarse wool, and, in some districts, camels; and, in the province of Lombardy, they are also raised. Agriculture is the chief dependence of the inhabitants. The soil is fertile, and very productive in maize, and other species of grain, leguminous plants, garden fruits, flax, &c. Lands that are swampy are devoted to the cultivation of rice, of which part is consumed in the country, and part exported to Germany. The production of oil and wine is also much attended to. Besides the fruits above-named, chestnuts, almonds, figs, and many other fruits grow here. A considerable trade is carried on in figs, oranges, and citrons. The mineral kingdom produces iron, copper, marble, salt. There are some mineral waters. Manufactures no longer sustain the rank which they once held; the principal are those of glass, silk, and iron. The production and manufacture of silk are attended to throughout the country. All kinds of silk stuffs, ribbons, hose, and sewing-silk are exported. The manufacture of silk in Mantua is most important, and their mirrors much celebrated; and, even now, artificial pearls, and glass works of all kinds, are executed in great perfection. The manufactories of steel and iron are chiefly to be found at Brescia, where many fire-arms, sabres, knives, &c. are made. The manufacture of woolens has much declined. The gold and silver works at Venice and Milan are celebrated; porcelain, pottery, carpets paper, many articles of luxury, as masks, artificial flowers, pomatum, confectionary, perfumes, sausages, candied fruits, vermicelli, and parmesan cheese, are also produced. Cremona is noted for violins, lutes, &c. The exports exceed the imports in value. This country is dependent upon the Austrian government, but, in April, 1815, the emperor gave it a constitution. (See article Constitution.) It is governed by a viceroy, who resides at Milan, and is divided into the governments of Lombardy and Venice. The administration of each is in the hands of a govern and a council, dependent upon the highest authorities at Vienna. The government of Lombardy contains nearly 2,500,000 inhabitants, on 8270 square miles of territory, and its capital is Milan. Venice is the capital of the government of the same name, which contains 2,000,000 inhabitants, upon 9330 square miles of territory.

With the authorities are connected permanent colleges, composed of individuals from various classes.

LOMENIE DE BRIENNE, STEPHEN CHARLES, cardinal, archbishop, and minister of state in France, born at Paris, in 1727, embraced the clerical profession, in which his active spirit, and the powerful influence of his connexions, enabled him to rise rapidly, although his connexion with the freethinkers of the age (D'Alembert, Morellet, &c.) could not have been very agreeable to the court and the clergy. In 1754, he published, with Turgot, Le Conciliateur, ou Lettres d'un Ecclésiastique à un Magistrate, which was intended to quiet the difficulties existing between the parliament and clergy, and which was afterwards several times republished by Condorcet, Dupont de Nemours, and others. In 1758, he was at Rome, in the capacity of conclave of cardinal de Luyes, in the conclave which raised Clement XIII. to the papal throne. In 1769, he was appointed to the see of Annecy, by the archbishop of Toulouse, in which situation he obtained the praise of those who were opposed to the old hierarchical and monkish establishments. While he attempted to reduce the power and wealth of the monasteries, he was liberal in assisting all who were in need; he caused the Gareme to be united with
the canals of Caraman, by a lateral canal, which still bears his name; he established institutions for education, also hospitals, and several scholarships at the military school at Toulouse. In 1779, he was made a member of the French Academy, and in 1782 the archbishop of Paris, died, he would have obtained that elevated situation, but for his attempts at a general reform of the monasteries, which the bigotry at court could not forgive. At the first breaking out of the discontent in France, Brienne was among the most active advocates of the first piece against the administration of Calonne; and, after the dismissal of that minister, the partisans of Brienne induced Louis XVI. to place him, as his successor, at the head of the finances. His brother, the count de Brienne, was, at the same time, (1787), appointed minister of war. The new finances shortly fell short of the most moderate expectations; and, if some excuse is found for him in the almost inextricable confusion which reigned in the affairs of France at this period, still his warmest defenders must allow that for once, at least, they were deceived in him. The minister of his father, in puppet form, whose ambition had raised him to the rank of prime minister, at this stormy period, showed himself destitute of ability and resources. Complaints were soon raised against him on all sides, and, in August, 1788, the king found himself compelled to dismiss him, and to appoint him, April 3, 1789, to his old seat. But, however, well known, was himself unable to quell the storm. Brienne had previously been nominated archbishop of Sens, in place of the cardinal De Launes, and, to console him for the loss of his place as minister, Louis gave him some abbey, and obtained for him, from Pius VI., a cardinal's hat. Brienne also took a journey to Italy, but without visiting Rome, and returned, in 1790, to France, to make arrangements for the settlement of his debts, which, notwithstanding his immense income, were so considerable as to compel him to dispose of a portion of his valuable library. The cardinal de Lomenie, as he was now called, took the oath prescribed to the clergy by the constitution, and, in March, 1801, he asked his dismissal from the college of cardinals—a favour which Pius willingly granted. Brienne had hoped, by this step, to save himself from the persecutions of the revolutionary party; but he was arrested at Sens, in November, 1790, and set at liberty only a few weeks afterwards, and, upon the morning of Feb. 16, 1794, was found dead in his prison. The ill treatment and abuse which he had suffered from his brutal guards, together with an indigestion, had brought on an apoplexy, of which he died, in the sixty-seventh year of his age. The minister of war, Athanasius Louis Marie de Lomenie, count de Brienne,—whose successor in the ministry was De la Tour du Pin,—fell, the same year, beneath the axe of the executioner. There is an Oraison funèbre du Dauphin (Paris, 1760), by the cardinal de Brienne.

LONDON, NICHOLAS, MICHAEL KAELLWITZ; the creator of the modern poetical language of his country, and the father of Russian literature; born in 1711, near Cholmogory, in the government of Archangel, in the village of Denisowskaia, where a monument was erected to his memory, in 1823, through the influence of Neophytus, bishop of Archangel. His father, a Menites, who, when he assisted in his labours for the support of the family. In winter a clergyman taught him to read. A poetical spirit and a love of knowledge were awakened in the boy by the singing of the psalms at church, and the reading of the Bible. Without having received any instruction, he conceived the plan of celebrating the wonders of creation and the great deeds of Peter I., in songs similar to those of David. But, hearing that there was a school at Moscow, in which scholars were instructed in Greek, Latin, German, and French, he secretly left his father's house, and went to the capital to seek that instruction which his inquisitive spirit desired him to obtain. On his journey to Brunswick, he was seized by Russian recruiting officers, and obliged to enter the service; but, having made his escape, he returned, by the way of Holland, to St Petersburg (1741), where he received a situation in the academy, and was made director of the mineralogical cabinet. Soon after, he published his first celebrated ode (on the Turkish war and the victory of Putawa). The empress Elizabeth made him professor of chemistry (1746), and, in 1752, he received the privilege of establishing a manufactury for coloured glass beads, &c. As he had been the first to write a Russian grammar, he was, in 1776, sent to Russia, the government confided to him the direction of two large pictures in mosaic, intended to commemorate the deeds of Peter I. In 1760, the gymnasium and the university were put under his inspection; and, in 1764, he was made councillor of state. Feb. 4, 1787, Caraman II. caused his remains to be deposited with great pomp in the monastic church of saint Alexander Newski. Besides odes and other lyric pieces, he wrote Petreide, a heroic poem on Peter I., in two cantos, which is the best work of the kind that Russia has yet produced. Lomonosoff also wrote a Russian grammar, and several works on mineralogy, metallurgy, and chemistry. His Grammar, and his Sketch of Russian History, have been translated into German and French. The Russian academy published his works in 6 vols., 4to. (2d edit., 1804, 3 vols.). Admiral Tschitschagoff has written a Life of Lomonosoff. See Dowling's Russian Anthology.

LOMUS, in Indian mythology; the first being created by Branna, which, to give itself up entirely to the contemplation of divine things, buried itself in the earth, and whose life will last longer even than that of Branna. In order to indicate the enormous duration of his life, it is measured by years, the Indian measure of time. Lomus has a body more than ninety miles long, covered with hair. Each time that a Branna dies, who lives 360 days, each day being equal to 4320 human years, Lomus pulls out a single hair from his body; and when at last, all the hairs are gone, and even Vishnu and Mahadeva have ceased to live, then the whole universe is dissolved, and all returns to chaos, so that nothing remains but the eternal, original being; because with the last hair Lomus also dies. LON, or LUN; a Gothic word, signifying wood. London has been derived from it.

LONDON, the metropolis of the British empire, stands in lat. 51° 31' N., and lon. 5° 37" W., from the observatory at Greenwich. It is situated in the counties of Middlesex and Surrey, about sixty miles west from the sea, on the banks of the Thames, the mean width of which, at London, is about a quarter of a mile, and its average depth about twelve feet. The northern and eastern shore is low and flat, the south and western shore, steep. The soil is chiefly gravel and clay, with a mixture of loam and sand. On the southern or Surrey side, the surface is almost uniformly flat. The buildings on the northern, or Middlesex shore, follow the natural bend of the river, and rise somewhat amphitheatrically, from east to west, stretching northward, on an average length, to three miles from the river; and those on the southern or Surrey side, forming the
LONDON (HISTORICAL SKETCH).

The origin of London is involved in deep obscurity; but it certainly was a strong-hold of the Britons before the Roman invasion. The name is variously traced; the most probable position deriving it from two British words, *lym* and *din*, signifying the town on the lake. Its Roman designation, *Augusta*, marks it as the capital of a province; and Tacitus speaks of *Londinium* or *Colonia Augusta*, as a commercial mart of considerable celebrity in the year 61. It was subsequently noted as a large and wealthy city, in the time of the emperor Severus, and regarded as the metropolis of Great Britain. A few vestiges of the original walls are still discoverable in London wall, in the courts between Ludgate hill and the Broad-wards, and in the Cripplegate quarter. It had four principal gates, opening to the four great military roads, and others were subsequently formed, but their names alone commemorate their existence. After the Roman forces had been withdrawn from Britain, in the fifth century, London fell subject to the domination of the Britons, Saxons, and Danes. It was nominated a bishop's see, on the conversion of the Saxons to Christianity, in 604, and a cathedral church was erected in 610, where St. Paul's now stands. Its importance in the year 883, appears from a *Witenagemot* having been held here; and under the reign of Alfred, who possessed it in 884, its municipal government was planned, which has since been gradually moulded into the form described in a preceding part of this notice. Its wealth seems to have rapidly increased during the reign of Edward the Confessor, and, on the conquest by William I., in 1066, it assumed that station which it has ever since retained, as the metropolis of the kingdom, having received from that monarch a charter, still preserved in the city archives, and beautifully written in Saxon characters. The latter was granted by the king, extended by a charter of Henry I. in 1100; and, early in the reign of Richard I. the title of mayor was substituted for that of *Bailiff*, which had previously designated the chief magistrate of London. In the reign of Edward III. (1348), it was ravaged by a pestilence, during which 50,000 bodies were interred in the ground now forming the precincts of the Charter house. The year 1380 was marked by the insurrection headed by Wat Tyler, and suppressed by the courage of Sir William Walworth, mayor of London. A similar, but equally unsuccessful attempt, threatened the safety of the metropolis in the year 1450, and was followed by much distress and suffering.

The progress of London is essentially connected with the growth of trade and manufactures. It is rapidly being depopulated; as the chief traders and merchants occupy merely counting-houses and warehouses in the city, and, in proportion as wealth accumulates, flow towards the western regions of fashion. In the East end are found the docks and warehouses connected with ship-building and commerce, and the centres of all kinds of manufactures. Southwark, or the Borough, on the southern bank of the Thames, the trans *Tiberium* of London, abounds with huge manufactories, breweries, ironfounderies, glass-houses, &c. It is the abode chiefly of workmen, labourers, and the lower classes of society, amongst whom are to be found considerable numbers of charitable institutions, including buildings, hospitals, prisons, and charitable foundations. The city of Westminster, including the houses of lords and commons, the law courts, royal palaces, and many government offices, may be designated as the Court End of London. The remaining portion can hardly be classified, or specifically denominated. It is a non-scriptural and miscellaneous collage of streets, crescents, polygons, terraces and squares, occupying the northern portion of the metropolis, along the line of the new road.

**Historical Sketch.** Many of the important events that have occurred in London belong rather to the history of the country than to the city, and will accordingly be found narrated in the historical portions of the articles *England* and *Britain*. This place, it is only necessary to take a brief view of its rise and progress, and of such incidents as have more particularly marked its history as a city.

The origin of London is involved in deep obscurity; but it certainly was a strong-hold of the Britons before the Roman invasion. The name is variously traced; the most probable position deriving it from two British words, *lym* and *din*, signifying the town on the lake. Its Roman designation, *Augusta*, marks it as the capital of a province; and Tacitus speaks of *Londinium* or *Colonia Augusta*, as a commercial mart of considerable celebrity in the year 61. It was subsequently noted as a large and wealthy city, in the time of the emperor Severus, and regarded as the metropolis of Great Britain. A few vestiges of the original walls are still discoverable in London wall, in the courts between Ludgate hill and the Broad-wards, and in the Cripplegate quarter. It had four principal gates, opening to the four great military roads, and others were subsequently formed, but their names alone commemorate their existence. After the Roman forces had been withdrawn from Britain, in the fifth century, London fell subject to the domination of the Britons, Saxons, and Danes. It was nominated a bishop's see, on the conversion of the Saxons to Christianity, in 604, and a cathedral church was erected in 610, where St. Paul's now stands. Its importance in the year 883, appears from a *Witenagemot* having been held here; and under the reign of Alfred, who possessed it in 884, its municipal government was planned, which has since been gradually moulded into the form described in a preceding part of this notice. Its wealth seems to have rapidly increased during the reign of Edward the Confessor, and, on the conquest by William I., in 1066, it assumed that station which it has ever since retained, as the metropolis of the kingdom, having received from that monarch a charter, still preserved in the city archives, and beautifully written in Saxon characters. The latter was granted by the king, extended by a charter of Henry I. in 1100; and, early in the reign of Richard I. the title of mayor was substituted for that of *Bailiff*, which had previously designated the chief magistrate of London. In the reign of Edward III. (1348), it was ravaged by a pestilence, during which 50,000 bodies were interred in the ground now forming the precincts of the Charter house. The year 1380 was marked by the insurrection headed by Wat Tyler, and suppressed by the courage of Sir William Walworth, mayor of London. A similar, but equally unsuccessful attempt, threatened the safety of the metropolis in the year 1450, and was followed by much distress and suffering.
thousands of the citizens assembled daily as to a fair. The reign of George III. witnessed a great extension of the retail trade, and a wide increase in the social life in London. The north of the metropolis became covered with spacious streets, squares, churches and public edifices. The thoroughfares were rendered safe and clean; the enormous signs and protruding incumbrances of the shops were removed. Blackfriars, Southwark, Rochester, Manchester, and other squares, at the West End, were erected, and the vast parish of Marylebone almost covered with buildings. In 1780, an insurrection, headed by Lord George Gordon, but composed of the lowest rabble, threatened very alarming consequences to the peace of the city. The insurrection arose from a petition of the Protestant Association against the Roman Catholics. The prisons of Newgate, the King's bench, and the Fleet, besides some Catholic chapels, were burned, and military interference was necessary to quell the disturbances. In 1794, a dreadful fire broke out in Ratcliffe highway, and consumed 700 houses. The Jubilee of George III.'s accession was commemorated on the 25th Oct. 1809, and the grand civic festival to the emperor of Russia, king of Prussia, and other distinguished foreigners, was given, by the corporation of London, in Guildhall, at an expense of £20,000, in the year 1814, the third of which was memorable for a front of six week's continuance and extreme intensity. During the regency and reign of George IV., the grand avenue of Regent Street, the unfinished palace of Buckingham house, the splendid terraces on the site of Carlton gardens, the widenings of Charing cross, Pall Mall, and the Strand, wrought a great change in the West End of the metropolis. Much curious information regarding London will be found in the works of Stowe and Maitland, in Pennant's "Some Account of London," and in the work of Brayley, Brewster, and Nightingale, entitled "London, Westminster and Middlesex described." See also the Supplement to Leigh Hunt's "London Journal," for very interesting literary details regarding the streets of the metropolis.

General Description—London is intersected by two grand lines which cross each other near the spot which seems to have been regarded as the centre, from this point, the standard in Cornwall, the distant point of the Grand St. Tr. IV., the centre of these lines of streets extends from Stoke Newington and Kingsland, on the north, through Shoreditch, Norton Folgate, Bishopsgate Street, Gracechurch Street, Fish Street Hill, High Street, Southwark, and Blackman Street, to Newington Butts, Walworth, and Camberwell on the south; and the other from Mile End on the east, through Whitechapel, Aldgate, Leadenhall Street, Cornhill, the Poultry, to the west end of Cheapside, where the line diverges into two branches, one proceeding on the north, through Newgate Street, Skinner Street, Holborn, High Street St. Giles, and then down The streets of the city are rich in the Uxbridge Road; and that on the south passing by St Paul's Churchyard, Ludgate Street, Fleet Street, the Strand, Pall Mall East, the Haymarket, and Piccadilly, towards Knightsbridge, and Kensington, on the grand western road. The streets eastward of the city require no particular notice; but the Commercial Road, in the vicinity of Blackwall, is a very remarkable street, at no distant period become a very handsome and extensive street. The principal or more remarkable streets in the city, besides those mentioned above, are Thames Street, Fenchurch Street, Eastcheap, and Watling Street, the two last chiefly on account of the residence of most of the bankers in the vicinity of them. Lombard Street, formerly the principal residence of goldsmiths and now of bankers, Broad Street, Al- dersgate Street, Bridge Street, Blackfriars, and Farringdon Street. Northward of the city are several good streets, among which the Charing Cross, and Finsbury Square. In that district which has been termed the northern suburb, between Gray's Inn Lane and Tottenham Court Road, are various handsome modern streets and squares; among the latter are Bloomsbury Square, and Russell Square. At the west end of the metropolis, between the rivers, are splendid ranges of buildings, reaching from Waterloo Place, Pall Mall, to Langham Place, north of Oxford Street, whence it is continued by Portland Place to Park Crescent, on the south side of the Regent's Park. In this part of the metropolis also are Pall Mall, St James's Street, Arlington Street, Albemarle Street, Bond Street, Harley Street, Wimpole Street, Stratford Place, Baker Street, Gloucester Place, and Connaught Place, with several noble squares, among which are Hanover Square, Grosvenor Square, Cavendish Square, and Portman Square. There are also some handsome ranges of buildings on both sides of the New Road from Islington to Paddington; and on the north of that road is the Regent's Park, so named in honour of the Prince Regent, afterwards George IV. It is tastefully laid out, with a canal, plantations, and roads, and comprises, besides detached villas and other edifices, various magnificent ranges of buildings, denominated from the titles of the members of the royal family, as the terraces of Ulster, York, Cornwall, Clarence, Hanover, Chester, Cumberland, and Cambridge, and Sussex Place. Hyde Park, extending from the western border of the metropolis to Kensington Gardens, is a noble enclosure, which became the property of the crown in the reign of Henry VIII.; it has a canal, called the Serpentine River, formed by order of Queen Caroline, in 1730; and great improvements have recently been made in it, by the erection of a bridge over this piece of water, by the substitution of iron rails for the dead wall by which the park was partly encompassed, and by building handsome lodges at the entrances. The Green Park, on the south side of Piccadilly, is bordered on the east by several noble mansions. St James's Park, communicating with the preceding, was enclosed and planted by Henry VIII., but greatly improved in the reign of Charles II., when the trees were planted, which form the grand avenues on each side of the canal; and the Grand St. Tr. IV. nearly all of these were formed by Mr Nash. London contains about 9000 streets, lanes, terraces, &c.; eighty squares, twenty-four market-places, and more than 180,000 houses. The buildings were formerly composed chiefly of wood-work and plaster; a mode of construction still observable in a few ancient houses remaining in some of the suburbs, and which must, when generally practised, have contributed in no small degree to occasion those destructive fires which are recorded in the annals of the metropolis. Such disasters have given rise to legislative enactments for the preservation of their property, and standing all precautions, fires are of by no means unfrequent occurrence, and sometimes cause extensive damage. The buildings of London are now principally of brick, often, however, ornamented with stuccoed fronts, in imitation of stone. Hence there is much more apparent solidly than real strength in these structures, and those built of woodwork, being generally erected on ground taken on building leases for terms varying from sixty to ninety-nine years, and
the edifices are therefore constructed in such a manner as to become ruinous about the period of the expiration of the lease. Such motives do not exist in the case of public buildings, which, whether of brick or stone, are seldom deficient in strength and durability.

All the streets of London are paved with great regularity. The carriage-road is either laid with cubes of granite, accurately jointed and embedded in clay, or else Macadamized. Macadamizing is greatly in vogue in the squares and wider outlets of the West End, but it seems to have failed in the narrower and more cart-trodden streets of the city. The number, variety and magnificence of the squares in London deserve a cursory notice. The largest square in London is Lincoln's Inn Fields, its area being computed equal to 770 square feet; but, the tide of fashion having set westward, this square is chiefly occupied by members of the legal profession. The college of surgeons forms a prominent object on the southern side, and the eastern is adorned (with the intervention of a garden) by the range called *stone buildings*, part of Lincoln's Inn. Russell square is nearly equalateral, each side being about 670 feet long. The houses are large. It communicates with Bloomsbury square by a street, at the northern extremity of which is a colossal bronze statue of the late duke of Bedford, by Westmacott, opposite to which, at the southern end, is a similar statue of Charles James Fox, by the same artist. Belgrave square, begun on the estate of lord Grosve- nor, at Belgravia, in 1825, is one of the most splendid in architectural decoration. The squares chiefly distinguished by residences of the nobility are Berkley, Cavendish, Grosvenor, Hanover, St James, Manchester, and Portman squares.

Within the last twenty years, the use of coal gas, instead of oil, in lighting the streets and public edifices of London, has become almost universal. The consumption of coal, by three of the gas companies, amounts to 32,700 chaldrons per annum, and their length of main pipe extends nearly 200 miles, communicating with more than 40,000 lamps. There is not a street, lane or alley, in this vast metropolis, which is not supplied, and even to the most splendid arches excavations. Every house communicates, by one or more drains, with the main sewers, which again empty themselves into larger tunnels, and ultimately into the Thames. London is plentiful, though not very pure, supplied with water. The New River company was incorporated under James I., in 1619. Mr Hugh Middleton, a goldsmith and citizen of London, after many obstructions, succeeded in conveying a stream from a spring at Chadwell, near Ware, twenty miles from London, by a devisious course of forty miles in length, terminating in two capacious basins, which cover five acres, and average ten feet in depth. These reservoirs are eighty-five feet above low-water mark; but, by means of siphons and steam-engines, water can be raised sixty feet above that level. It is chiefly conveyed by main and branch pipes of cast metal, which communicate with the houses by leaden pipes of an inch diameter. The total supply to 177,100 houses, is 28,774,000 gallons per day. M. Dupin observes, that the water distributed by one of these companies (the New River company) costs the consumer about 2d for every 6000 pints; and that the system of pipes, for water and gas lighting jointly, stretches out in a line exceeding 400 leagues in extent, beneath the pavement of London. Fuel is sufficiently abundant, but extravagantly dear in London. Since the great fire of 1667, a duty was imposed on coal, in order to assist the rebuilding of public edifices, and has ever since continued, to enable the corporation to execute improvements in the city. The government duty, however, upon all sea-borne coal was repealed in 1830. The average price of coal in London, winter and summer, is, to the consumers, about 30s per chaldron of 284 cubic feet. 2,000,000 chaldrons per annum are consumed in Middlesex and Surrey. Considering the vast supplies required for the steam-engines and manufactures of London, perhaps nearly two thirds of that quantity are devoted to the metropolis alone. The coal brought to the London market are chiefly from Newcastle, in Northumberland, in coasting vessels, in the number of 200,000 tons. The average consumption of the principal articles of food, in London, has been calculated as below:

| Item       | Quantity
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxen</td>
<td>160,000</td>
</tr>
<tr>
<td>Sheep</td>
<td>1,500,000</td>
</tr>
<tr>
<td>Cattle</td>
<td>21,000</td>
</tr>
<tr>
<td>Hogs</td>
<td>29,000</td>
</tr>
<tr>
<td>Milk</td>
<td>5,000,000</td>
</tr>
<tr>
<td>Butter</td>
<td>11,000</td>
</tr>
<tr>
<td>Cheese</td>
<td>12,000</td>
</tr>
<tr>
<td>Wheat</td>
<td>1,000,000</td>
</tr>
</tbody>
</table>

By a return from the corn exchange, it appears that the quantity of British and foreign flour in bond, on the first June, 1830, was as follows:

| Item       | Quantity
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat</td>
<td>205,107</td>
</tr>
<tr>
<td>Oats</td>
<td>430,392</td>
</tr>
<tr>
<td>Flour</td>
<td>173,059</td>
</tr>
<tr>
<td>Foreign</td>
<td></td>
</tr>
<tr>
<td>Wheat</td>
<td>91,129</td>
</tr>
<tr>
<td>Oats</td>
<td>13,283</td>
</tr>
</tbody>
</table>

The value of poultry, annually consumed, amounts to nearly £60,000, exclusive of game, the supply of which is variable. The principal market for live cattle is at Smithfield, held every Monday and Thursday. The markets for country-killed cattle, pigs and poultry, are Leadenhall (where skins and leather, also, are exclusively sold); Newgate, on Mondays, and Wednesdays, and Fridays; and Fleet (now Farring- don) market rebuilt on a large scale, and opened in 1829. The supply of fruit and vegetables is equally abundant. The chief mart is Covent garden, where ranges of handsome shops have lately been erected on the estate of the duke of Bedford. There are at least 2000 acres, in the immediate vicinity of London, which have been continued, under splendid arches, fruit-yards; which by judicious management, yield an in-terminable succession of valuable esculents. It has been calculated, that the cost of fruit and vegetables consumed annually in London, exceeds £1,000,000 sterling. The fruit-yards, exclusive of those belonging to private residences, are computed to occupy about 3000 acres, chiefly on the banks of the Thames in Surrey and Middlesex. Few cities are more abundantly supplied with fish of every description and quality. Turbot and brill of the finest quality are procured from the coast of Holland; salmon in profusion from the great rivers of Scotland and Ireland, and, occasionally, from the Thames; mackerel, codfish, lobsters, and oysters, from the river mouth. A calculation makes the supply of fish at Billingsgate, in the year 1828, as follows:

| Item       | Quantity
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh salmon</td>
<td>45,410</td>
</tr>
<tr>
<td>Place, skate, &amp;c.</td>
<td>50,757 bushels.</td>
</tr>
<tr>
<td>Twine</td>
<td>87,908</td>
</tr>
<tr>
<td>Cod (fresh)</td>
<td>447,120</td>
</tr>
<tr>
<td>Herrings</td>
<td>3,356,407</td>
</tr>
<tr>
<td>Haddock</td>
<td>482,493</td>
</tr>
<tr>
<td>Mackerel</td>
<td>3,076,700</td>
</tr>
<tr>
<td>Lobsters</td>
<td>1,905,000</td>
</tr>
</tbody>
</table>

And the number of fishing-vessels engaged in furnishing the London market was registered, in the same year, at 3897. The consumption of ale and porter may be estimated from the following facts: It appears by the annual statement of the London brewers, for the year ending July 5, 1850, that the quantity of porter brewed by the ten principal houses, amounted
to 1,077,285 barrels. The ale annually brewed, by the six principal ale-brewers, amounts to about 80,000 barrels. In 1857, the quantity brewed, by the ten principal brewers, was 1,129,772 barrels. The decrease within these years is owing, perhaps, partly to the deteriorated quality; for it appears, that, while the quantity actually brewed throughout England amounted, during the last ten years, to 6,107,000 barrels, the quantity used in London decreased annually in a remarkable degree. But, besides this, the comparative cheapness, and more rapid excitation produced by ardent spirits, especially that delirious compound called *English gin*, has induced the most destructive habits of intemperance among the lower classes. It is stated that there are about 11,000 public houses, i.e. houses for the sale of beer and spirituous liquors, in London alone. The total consumption of gin, in London, is about 24,000,000 gallons.

**Public Buildings.** The public buildings of London are numerous, but many of them being erected by houses, or not maintained, they do not form a prominent feature of the metropolis. St James's palace, at the west end of Pall Mall, the principal town residence of royalty, is an irregular brick building, with nothing attractive in its exterior, but very magnificently decorated within. In the Henry VIII. Banqueting Hall of Whitehall Palace (being all that remains of that palace, which was destroyed by fire in 1698), is an elegant structure, designed by Inigo Jones. It consists chiefly of one room, of an oblong form, forty feet high, which has been converted into a chapel, where divine service is regularly performed by the royal chaplains. The ceiling is decorated with paintings by Rubens. Buckingham-house, in St James's Park, was erected in 1703, but, between 1825 and 1830, the whole of the building was remodelled at an immense expense, and is now called the King's Palace in St James's Park. Besides these, there are Kensington Palace, the residence of the duchess of Kent, and Lambeth Palace, the residence of the archbishop of Canterbury. Among the town mansions of the nobility are Northumberland House, in the Strand, erected chiefly from the designs of James I.; Burlington House, Piccadilly; Uxbridge House, Berkeley Place; Cleveland House, St James's Place; Devonshire House, Piccadilly; Apsey House, Hyde Park Corner, the town residence of the duke of Wellington; and Grosvenor House, Park Lane. Public structures, purely ornamental, are extremely rare in this metropolis. The Monument, on Fish Street Hill, is the only work of architecture deserving notice, strictly appertaining to this class. It was erected by Sir Christopher Wren, between the years 1671 and 1677, in commemoration of the great fire of London, on the site of the ancient church of St Margaret, destroyed in that conflagration. It consists of a noble Doric column, 202 feet in height, surmounted by a balcony, in the centre of which rises a flaming vase of gilt bronze; and the sides of the pedestal of the columns display emblematic sculpture and various inscriptions. The other principal detached public monuments are the fine equestrian statue of Charles I., at Claring Cross, cast in bronze by Hubert le Sueur, in 1633, and placed in its present situation in 1678; and the colossal statue of Achilles, in Hyde Park, cast by R. Westmacott, R.A., erected in 1822, in honour of the duke of Wellington and his companions in arms by their countrymen. The ancestor gateways were entirely removed in 1760. Temple Bar was erected by Sir Christopher Wren, in 1671, to mark the boundary between London and Westminster. On the east side are niches, containing the statues of queen Elizabeth and James I.; and on the west, others with the statues of Charles I. and Charles II. The only remaining gateway is St John's Gate, west Smithfield, a relic of the priory of the Knights Hospitalers of St John of Jerusalem. Buckingham Stairs water-gate is a deservedly-admired production of Inigo Jones. The beautiful gate at Hyde Park Corner, ornamented with Ionic columns and sculpture on the quadrate, is connected with the richly decorated iron railing in front of Apsey House, was recently erected from the designs of Decimus Burton, Esq. On the opposite side of the road is a noble gateway, or triumphal arch, leading into the grounds belonging to the new mansion of Buckingham Palace at Hyde Park Corner; this contains appropriate architectural decorations, and richly ornamented bronze gates. For the bridges, see Bridge.

The Tower of London is situated at the southeastern angle of the city, and the oldest part, called the White Tower, is supposed to have been built in the reign of William I., by Gundolph, bishop of Rochester, a distinguished Norman architect, but it was renovated or rebuilt in 1638, and various additional structures and fortifications have been erected at different periods. The present extent of ground within the walls is more than twelve acres, and the circumference outside the ditch 1532 feet. This fortress was used by the sovereigns of the kings of England; but it has long been used as a state prison; and it also includes a menagerie of wild beasts and an armoury. Within its walls likewise is the church of St Peter in Vinculis, a Gothic structure, founded by Edward I. The Mint, Tower Hill, for the coinage of the United Kingdom, is a large and handsome building, erected partly from the designs of R. Smirke, R.A. The Trinity House, Tower Hill, originally founded at Deptford, as the office of a corporation for the management of certain naval affairs, was built under the direction of Samuel Wyatt, Esq., and opened in 1755. The Guildhall, or City Hall of the Corporation, King Street, Cheapside, was founded in the reign of Henry IV.; the interior was destroyed by the fire in 1660; and the ancient front was rebuilt in 1789, by George Dance, Esq. In the Great Hall are sculptural monuments in honour of William Pitt, earl of Chatham, and William Pitt, the son of that nobleman, admiral Lord Nelson; and William Beckford, lord mayor in 1762 and 1769. In the Council Chamber and other apartments, there are a considerable number of historical paintings and portraits. Near Guildhall, on the site of Blackwell Hall is the office of the commissioners of Bankrupts, erected in 1830; to the south of which stands a range of building comprising the London Land-tax Office, the Irish Chamber, and the City Court of Requests. The mansion house of the lord mayor, near the west end of Lombard street, is a spacious structure, with a Corinthian portico in front, built between 1759 and 1763, from the designs of George Dance, sen. Somerset House, so called from a palace erected by the Protector Somerset, the uncle of Edward VI., was rebuilt in 1775, under the authority of an act of parliament, from the designs of Sir William Chambers, the front facing the Strand being ornamented with Corinthian columns and various sculptures. The interior includes several government offices, and apartments appropriated to the use of the Royal Academy of Arts and the Royal Antiquarian Societies. Part of the new university called King's College forms the eastern wing of Somerset House. The Duchy of Lancaster Office, on the western side of Wellington street, in the Strand, is a handsome and extensive modern edifice, for the transaction of the affairs of that duchy. The Admiralty Office, Whitehall, has in front a handsome
LONDON (CIVIL GOVERNMENT)

screen of Portland stone, designed by Robert Adam. The War Office, usually called the Horse Guards, is a substantial structure, built by W. Kent, about 1730. The Horse Guards, with the offices, forms a range of buildings with an ornamented front opposite Privy Gardens, designed by John Sonne, R.A., Westminster Hall, between the Abbey and the Thames, was built by William Rufus, and was altered and enlarged, if not rebuilt, in the reign of Richard II.; it was also completely repaired, and the front was renovated in 1822. Parliament was formerly held in this hall, and it is still appropriated for coronation feasts. On the western side of the hall, and communicating with it, are the new Courts of Chancery, King's Bench, Common Pleas, and Exchequer, erected by Mr. Soane. The House of Lords, Old Palace Yard, and House of Commons, adjoining, were burned in 1834. In the Old Bailey is the sessions' house for the city of London; on the south side of Clerkenwell Green stands the County Hall, or sessions' house for Middlesex, a spacious detached edifice; and in Portugal Street, Lincoln's Inn Fields, is the Court of Debt, a commodiously arranged modern structure. In connexion with the buildings for the use of the legislature and the administration of the laws, may be mentioned the Inns of Court, designed for the education of lawyers. The Temple, consisting of a number of quadrangles, passages, and buildings, on the south side of Fleet Street and the Strident, is divided into two establishments, the Inner Temple, and the Middle Temple, under the government of their respective societies, the principal officer, being a dean, called the master of the Temple. These buildings, comprising the Temple Church, were anciently the residence of the Knights Templars, and in 1324, were transferred to the students of the common law. Lincoln's Inn, on the west side of Chancery Lane, stands on the site of a mansion anciently belonging to the Lecceys, Earls of Lincoln; its buildings include a spacious hall, and a chapel, designed by Inigo Jones; it is governed by a society established in 1310. Gray's Inn, on the north side of Holborn, is so called, because it anciently belonged to the noble family of Grey of Gray's Inn, and in 1541 Henry VIII. granted it to the students of law. There are other Inns of Court in the vicinity of the preceding, as Sergeant's Inn, Clement's Inn, Staple Inn, Middle Temple, Middle Temple, and Gray's Inn. The Inns of Court were originally founded for the congress of merchants, by Sir Thomas Gresham in 1567, and having been burned down in 1666, it was rebuilt probably from the designs of Sir Christopher Wren, at the expense of nearly £100,000, and opened in 1699. The present tower is of recent erection, and consists of a spacious quadrangle, encompassed by a colonnade, above which, arranged in niches, are statues of the kings of England from Edward I. to George III.; on a pedestal in the central area is a statue of Charles II., and under the piazza or colonade are those of Sir T. Gresham, and Sir John Barnard. The Bank of England, Threadneedle Street, belonged to a chartered company, established in 1693, under the management of a governor, a deputy-governor, and twenty directors, was built in 1732, its concerns having been previously transacted at Grocery's Hall, in the Poultry. The East India House, Leadenhall Street, was built in 1726, and enlarged in 1770. The Restoration of the British East India Company was in 1835. The Auction Mart, Batholomew Lane, is a spacious and commodious building, erected in 1810. The Commercial hall, Mincing Lane, for the sale of colonial produce, was built in 1811. The Corn Exchange, Mark Lane, is a handsome edifice, erected in 1827. The Custom House, Lower Thames Street, was originally founded in the reign of queen Elizabeth, and having been repeatedly destroyed by fire, was rebuilt on a most extensive scale, in 1814; but the new building, which was completed in 1829, was burnt next the Thames has been since rebuilt. The Excise Office, Broad Street, is a spacious structure, erected in 1768, on the site of Gresham College. The General Post Office, the business of which was formerly carried on in Lombard Street, is a noble structure, the design of which, completed in 1829, and the front next the river has been since rebuilt. The Bank of England, Cornhill, is a building of great extent, consisting of a central portico of fluted columns of the Ionic order. It was erected in 1828.

Civil government.—The chief civic officer of London is the lord mayor, annually elected from among the aldermen on the 29th September. The powers and privileges of this officer are very extensive. The court of aldermen consists of twenty-six members. They are chosen for life by the householders of the twenty-six wards into which the city is divided, each being the representative of a several ward. They are properly the subordinate governors of their respective wards, and are divided into seven courts, and preside in the courts of Wardmote for the redress of minor grievances, removing nuisances, &c., assisted by one or more deputies, nominated by them from the common council of the respective wards. Such as have filled the office of lord mayor, become justices of the quorum, and all others are justices of the peace within the city. The sheriffs, two in number, are annually chosen by the livery, or general assembly of the freemen of London. When once elected, they are compelled to serve, under a penalty of £400. The common council is a court consisting of 240 representatives, returned by twenty-five of the wards, in proportion to their relative value; the twenty-sixth ward, the Ward of St. Aldate Without, belongs to the sheriff elected by an alderman. The general business of this court is to legislate for the internal government of the city, its police, revenues, &c. It is convened only on summons from the lord mayor, who is an integral member of the court, as are the aldermen also. The decisions are, as in other assemblies, dependent on a majority of voices. The recorder is generally a barrister of eminence, appointed, for life, by the lord mayor and aldermen, as principal assistant and adviser to the civic magistracy, and one of the justices of Oyer and Terminer, for which services he is remunerated with a salary of £2000 per annum from the city rates. The mayor, as head of the executive authority of the city, is annually chosen by the burgesses, town clerk, common sergeant, city remembrancer, sword-bearer, &c. The livery of London is the aggregate of the members of the several city companies, of which there are ninety-one, embracing the various trades of the metropolis. They constituted the elective body, in whom resided the election, not only of all the civil officers, but also of the four members who represented the city in parliament. The local jurisdiction of Westminster is partly vested in civil, partly in ecclesiastical officers. The high steward has an under-steward, who officiates for him. Next in dignity and office are the high bailiff and the deputy bailiff, whose authority resembles that of a sheriff, in summoning juries and acting as returning officers at the election of members of parliament, of whom the city of Westminster returns two. These officers are chosen by the dean and chapter of Westminster, and appointed for life. The borough of Southwark is one of the city wards, and is represented by two members of the Municipal Reform Bill, recently passed, has caused an entire revolution in the constitutions of the English boroughs. In that bill boroughs, London, as it is called, is subject to the special measure. Meanwhile, therefore, we can only give the civil government of the metropolis as it has existed and still exists.

* The Municipal Reform Bill, recently passed, has caused an entire revolution in the constitutions of the English boroughs. In that bill boroughs, London, as it is called, is subject to the special measure. Meanwhile, therefore, we can only give the civil government of the metropolis as it has existed and still exists.
Bridge Ward Without. It is subject to the jurisdiction of the lord mayor. It returns two members to parliament. The managers of the poor have power to commit, two regiments of militia, amounting to 2200 men, whom the city is authorised to raise by ballot; the officers being appointed by the commissioners of the king’s lieutenancy for the city of London, according to a parliamentary act in 1794. The year 1829 witnessed the almost entire reorganisation of the ancient system of police and nightly watch. These latter guardians of the public were heretofore appointed by the several wards in the city district, and by the parochial authorities in other parts of the metropolis. But a recent act of parliament established a body of metropolitan police, disciplined somewhat like the gens d'arme of France, and subjected to the control of a board, consisting of three commissioners, who superintend and are responsible for all acts of their inferiors. The metropolis being subdivided into sections, each has a station or watch-house, and a company of police, consisting of trained men, disciplined as men, and guaranteed in their knowledge of their business by the examination of their inspectors. The sixteen sergeants, and 144 police constables. They are dressed in a blue semi-military uniform, and are on duty at all hours, night and day. This new police commenced its duties, in several of the parishes of Westminster, on September 29, 1829. But larger parishes have special magistrates appointed under the control of its own magistracy. It comprises marshalsmen, day and night patrols, constables, watchmen, and streetkeepers, altogether amounting to 800 or 900 men, appointed by the several wards. The principal city police offices are at the Mansion-house and Guildhall, where aldermen preside in rotation. In the districts not within the city jurisdiction, there are eight different offices, presided over by twenty-seven magistrates, usually selected from among the barristers. They are also one hundred foot-patrul, and, in winter, fifty-four horse-patrul, the former continually, the latter only by night, protecting the streets and environs of the metropolis. Independent of these is the Thames police, established in 1798, for the protection of persons and property connected with the shipping, from Vauxhall bridge to Woolwich. The chief office is at Wapping, and the importance of such an establishment may be gathered by the fact that, besides, there are upwards of 13,000 vessels of various sizes engaged on this river, annually discharging and receiving more than 3,000,000 packages of goods of every description. The chief prison for criminals is Newgate in the Old Bailey. It is the common gaol for London and Middlesex. The number of its inmates varies from 900 to 350. The Compter is situated in Giltspur street, close to Newgate, and destined for the reception of vagrants and persons committed previous to examination, or as a house of correction for the confinement of persons sentenced to hard labour or imprisonment. Clerkenwell prison in Spitalfields, receives prisoners of every description, for the county of Middlesex. Its average number of inmates is about 200. The Fleet prison, in what was lately Fleet market, is a receptacle for debtors and persons guilty of what is technically called contempt of the court of chancery. It is intended to remove this nuisance, and to build a substitute in St George's fields, in the Borough. The prison usually contains 250 indwellers, and keeps ward of about sixty out-patients, i.e. prisoners privileged to live within the rules. The King's Bench prison is a spacious gaol for debtors and minor criminals, with about 200 separate apartments. The other prisons of note are in Southwark, viz. Horsemonger lane or the Surrey county gaol, appropriated to felons and debtors; the Borough Com- ter, for various classes of offenders; the New Bridewell, erected in 1829, near Bethlem hospital, as a house of correction, in which the prisoners are chiefly employed at the tread-mill; and the Marshal- sen prison in Blackman street, for persons committed by the Marshaless court. The principal houses of correction are the Bridewell hospital, Cold Bath fields, and the penitentiary at Milbank. London Churches. The ecclesiastical division of London comprises ninety-seven parishes within the walls, seventeen without, ten in Westminster, besides twenty-nine out-parishes in Middlesex and Surrey. It contains one cathedral (St Paul's), one collegiate church (Westminster abbey), 150 parish churches, and seventy-one Episcopal chapels; nearly 200 places of worship belonging to Protestant Dissenters; eighteen churches or chapels of foreign Protestants, viz. one Armenian, one Dutch, two Danish, five French, seven German, one Swiss, and one Swedish; six meeting-houses of the Friends (or Quakers); ten British Roman Catholic churches; five ditto for foreigners of that persuasion, viz. one Bavarian, one French, one German, one Sardinian, one Spanish; and six Jewish synagogues, one of which is for Portuguese, and another for German Jews. (Westminster abbey and St Paul’s cathedral are described in separate articles.) London owes not only its historical monuments, but its eight great churches, the latter three other churches, to Sir Christopher Wren. The multiplication of churches has nearly kept pace with the rapid extension of the metropolis. The commissioners, appointed for the purpose, are gradually removing the stigma upon an opulent church establishment, that religious accommodation was unprovided for the poor. Many of the churches possess much architectural beauty. There are, in London, forty-five free schools, endowed in perpetuity, for educating and maintaining nearly 4000 children, seventeen for pauper or detached children, and about 240 parish schools, in which clothing and education are supplied to about 12,000 children. The chief public endowments, of the first description, are, St Paul’s school, Christ’s hospital, Westminster school, Merchant Tailors’ school, and the Charter house. St Paul’s school, founded in 1509, bestows a classical education upon 125 pupils. Christ’s hospital, founded by Edward VI., in 1541, is supported by an endowment of 1100 children of both sexes, who are clothed, boarded, and educated for seven years. Some of the boys are prepared for the university, most of them for commerce. Westminster school, founded in 1560 by queen Elizabeth, receives a large number of pupils of high rank and respectability. Merchant Tailors’ school, founded by the company of merchant tailors in 1561, educates about 300 pupils at a very low rate of payment. The company nominate to forty-six fellowships in St John’s college, Oxford. The Charter house endowed in 1611, supports and educates scholars for the university (where they receive a liberal annuity), or for commerce, besides instructing about 150 other pupils. Many other charitable institutions for education are supported by voluntary contribution, as are also, the parochial schools, which usually provide clothing and elementary instruction for the poor children of the respective parishes. The children of these schools are annually assembled in the vast area of St Paul’s on the first Thursday in June. The central national school, with its forty subsidiary schools in London, educates there about 20,000 children. The British and foreign school, society, at its central and subsidiary schools, which are there, in London, forty-three, educates about 12,000 children. The Sunday schools, taught by about 5000 gratuitous teachers, instruct between 60,000 and 70,000 children. The foundling hospital is capable of
receiving about 200 children. There are also orphan asylums, an asylum for the deaf and dumb, one for the indigent blind, and many others. Alms-houses are numerous; and there are small debtors' and mendicity societies, a philanthropic society for giving employment to the industrious poor, a prison discipline society, &c. There are also various hospitals; St Thomas's, with 490 beds; St Bartholomew's, capable of accommodating between 400 and 500 patients; Guy's hospital, with 600 beds; St George's, with 350; Middlesex hospital, able to contain 500 patients; the London hospital; small-pox hospital; various lying-in hospitals, &c. The Bethlehem hospital, and St Luke's hospital receive insane patients. The humane society has eighteen receiving-houses in different parts of London, with apparatus for restoring suspended animation. Dispensaries relieve more than 50,000 patients annually. There are at least thirty of them, besides twelve for the sole purpose of vaccination. The college of physicians and the college of surgeons examine candidates for the professions of physic and surgery, in the metropolis and the suburbs. A museum of the latter contains part of the collections of the celebrated John Hunter, amounting to 20,000 specimens and anatomical preparations. The British museum is a spacious brick structure, in the French style of architecture. It was originally, the palace of the first duke of Montagu, but its dimensions, 200 feet in length, by 70 feet in depth, and 57 feet in height. The ground floor is appropriated solely to the reception of the library of printed books. The principal or upper floor contains the miscellaneous articles of curiosity for public inspection; such as collections of minerals, laves, volcanic productions, shells, fossils, and zoological specimens, British and foreign, and also various articles from the South sea islands, and North and Western America, &c. The ground floor is connected with a more modern building, called the gallery of antiquities, divided into fifteen apartments, in which are distributed nearly 1000 pieces of sculpture, Greek and Roman, a fine collection of terracottas, Roman sepulchral urns, cippus, areopaghi, &c. In a temporary room are deposited the Elgin marbles, purchased by government for £25,000. The upper floor of this gallery contains the collections of Herculanum and Pompeian antiquities made by Sir William Hamilton, cabinets of coins and medals, and a number of engravings of portraits by the most eminent artists. The present building is destined to be razed to the ground as soon as a splendid edifice, now constructing, is completed. There are various other public libraries. King's college (q. v.) was founded in 1528. The London university, founded in 1828, is not a chartered institution. Its course of instruction comprehends languages, mathematics, physics, ethics, law, history, political economy, and medical science, communicated in public lectures, examinations by the professors, &c. The front, to Gower-street, is a handsome façade, adorned with the noblest portico in London, of twelve Corinthian columns, surmounted by a flight of steps, surmounted by a dome and lantern. On the principal floor is a spacious examination hall, a museum of natural history, a museum of anatomy, professors' apartments, a grand library, 120 feet by 50, and a smaller library, 41 feet by 22; and at each end is a semicircular theatre for lectures, 65 feet in diameter, with eleven theatres above it, sixteen picture-rooms, cloisters, two theatres, chemical laboratories, museum, offices, and council-room. The number of students, in this university, in the year 1829, was 650. The royal society of literature was instituted in 1823; the royal society for improving natural knowledge, in 1803; the society of anti- quiries, in 1572; the royal institution, in 1800, for diffusing mechanical knowledge, and the application of science to the various purposes of life; the society of arts, manufactures, and commerce, for the advancement of useful inventions and discoveries; the royal academy, in 1768, for the promotion of the fine arts. It provides students with busts, statues, pictures, and living models, and has professors of painting, architecture, anatomy, perspective, and sculpture. Their annual exhibition of new paintings, drawings, sketches, sculptures, &c., the admission to which one shilling per head, averages £6000 per annum, and supports all the expenses of the establishment. There are several other societies for the promotion of the fine arts, and the private collections of works of art are numerous and splendid. The number of theatres and amphitheatres is twelve, of which the principal are, the King's theatre or Italian opera-house, Drury lane and Covent garden theatres. Vauxhall gardens are a favourite place of summer resort for the lovers of music, dancing, and fireworks. The principal promenades are St James's public park, Green park, Regent's park, and St James's gardens (which contains nearly 400 acres), Kensington gardens, and the Regent's park, which is laid out in shrubberies and rich plantations, adorned by a fine piece of water, studded with islands, and intersected by rides and promenades. The Zoological gardens, in this garden, contain many different sorts of animals, in paddocks, dens, or aviaries.

Manufactures. London may be considered as more a commercial than manufacturing city. Its manufactures are of a very miscellaneous description. The chief is the Spitalfields silk manufacture, which is not, however, in a flourishing condition. In household furniture, especially cabinet work, the artisans of London greatly excel. Among other businesses prosecuted to a great extent may be mentioned clock and watch making, with their subsidiary trades and operations; engraving in all its branches; printing, bookbinding, type founding, and other arts connected with literature; carving and gilding, and the manufacture of picture-frames and looking-glasses; embossing, chasing, making gold and silver plate, and the works of the lapidary and jeweller; coach and carriage building, &c.; the manufacture of all kinds of musical instruments; and ship-building and equipping and storing vessels for the sea-service. A great deal of engraving is done in the city, but very few are prosecuted on an extensive scale, or distinguished for their importance or ingenuity. The number of the public breweries in London, in 1829, was eighty-four; of the retail breweries, eighty-five; of the intermediate breweries, eight; and there were 4461 licensed victuallers, of whom seventeen only brewed their own beer. There are likewise various iron and brass founders and bell founders, distilleries, drug-mills, oil-mills, sugar-refineries, glass-houses, saw-mills, shot-manufactories, establishments for refining saltpetre, and for making vinegar and acetic acid, aquafortis, and oil of vitriol. In London are made agricultural machines to award premiums in the agricultural museum; ground-instruments, artificial hands, legs, and eyes, steam-engines, copying-machines and pentagraphs, needles, for the manufacture of which Whitechapel was formerly noted, fishing-tackle, guns and pistols, works in ivory, tortoishell, and mother of pearl. The English scagliola and ornamental stone-work, distinct flowers, and flowers, are used in various instruments, optical and mathematical instruments, &c.

Commerce. The commerce of London can be traced back to a very early period. Tacitus speaks of it as the nobile emporium of his time, the great resort of merchants, and, although not a colony at that period, yet as a city celebrated for its con-
mercinal intercourse. After this, little is known of its trade, until the close of the second century, when it is again mentioned as having become "a great and wealthy city." In 359, it is said of England, that its commerce was so extended, that 800 vessels were employed in the port of London for exportation of wool and woollen stuffs, and that the vessels traded in "an emporium for many nations repairing to it by land and sea." Fitz-Stephen, who lived in the reign of Henry II., says, "that no city in the world exports its merchandise to such a distance as London." He does not, however, inform us what goods were exported, or how many vessels of 20,000载 capacity were carried. But among the imports, he mentions gold, spices, and frankincense, from Arabia; precious stones from Indi, and palm-oil from Bagdad. In 1260, the company of Merchant adventurers was first incorporated by Edward I. The Hanse merchants also received considerable privileges about the same time.

It was not, however, till the reign of Elizabeth that England began to feel her true weight in the scale of commerce. She then planned some settlements in America, particularly in Virginia. About this period the civil dissections in Flanders caused unemployment of a large part of the Flanders, and those families fled to London, and to bring with them their trades and their riches. This great addition to the population of the city, and the consequent increase of its commerce, led to the erection of the Royal Exchange, by Sir Thomas Gresham. In 1579, the Levant or Turkey company, and also the Eastland company, were established. On the 31st December, the queen granted the first patent to the East India company. The first adventure proving successful, the company continued its exertions, and hence has arisen the most splendid and powerful mercantile association that probably ever existed in the world. Assurance and insurance companies were now established in London; and the company of Spanish merchants was likewise incorporated. In the reign of James I., the foreign trade rapidly increased. Many of the patents granted by Elizabeth were annulled, and the trade thrown open. Among the circumstances which caused this vast increase of trade during this reign, may be reckoned the colonization of America and the West India islands. The new discoveries, likewise, which were every day made in different quarters of the world, had a powerful effect in stimulating numbers of speculative persons to commercial exertion and adventure.

During the peaceful part of Charles I.'s reign, the commerce of the metropolis still continued to make rapid progress. The augmented commerce of its port may in some measure be estimated by the quantum of ship money, which this monarch imposed on the city in 1634. About this time Prices current were first printed; and in 1635, an order was issued by the king in council to "the post-master of England for foreign parts," requiring him to open a regular communication, by running posts, between the metropolis and Edinburgh, Ireland, and a variety of other places. Previous to 1640, it was usual for the merchants to deposit their money in the Tower mint. But this deposit lost all its credit by the ill- advised measure of a forced loan, which the king thought proper to make. The merchants, in consequence, were obliged to trust their money to their apprentices and servants, and of the time passed and opportunity holding forth great inducements to frauds, many masters lost at once both their servants and their money. Some remedy became necessary. Merchants now began to lodge cash in the lands of the goldsmiths, whom they commissioned also to receive and pay for them. Thus originated the practice of Banking; for the goldsmiths soon perceived the advantage that might be derived from possessing disposable capital, and began to allow a regular interest for all sums committed to their care; and at the same time they commenced the discounting of merchants' bills, at an interest superior to that which the sugar trade allowed. In 1658, however, the act was passed, the provisions of which greatly contributed to promote the naval and commercial greatness of Britain. This year coffee was introduced into London by a Turkish merchant named Edwards. The sugar trade was now likewise established, and upwards of 20,000 tons of sugar were sent from the Levant to Turkey, in return for the commodities of that country. The plague, in 1665, almost wholly suspended the commerce of London, so that scarcely a single foreign vessel entered the port for the space of three years. The great fire also occasioned incalculable loss to many of the most opulent merchants. Notwithstanding these disastrous events, the spirit of the survivors was roused to uncommon exertions, and in the course of a few years the city rose from its ashes with greater magnificence and splendour. Indian muslins were first worn in 1670, and soon became prevalent. In this year the Fishmongers' company was established, with very extensive powers to carry on the cod-fishery. The inland fishing company was incorporated in 1693, and the institution of the Bank of England rendered the following year justly memorable in the commercial annals of the metropolis. The great progress that commerce made in a few years may be inferred from the following statement:—the number of vessels belonging to the port of London in 1701, amounted to 560, carrying 8,488 tons, and 10,065 men. In 1710, the customs of this city are stated at £2,268,095, and those of all the out-ports only at £346,081.

During the reign of George I., the trade of London made little, if any, progress, owing to the South Sea scheme, the rebellion of 1715, and the Spanish war. But in 1732, commerce began to revive: its advances, however, were comparatively slow, till the peace of Aix-la-Chapelle in 1748, after which it extended with uncommon rapidity. The next check which it sustained was occasioned by the American war. But no sooner was peace signed, than it proceeded with renewed vigour; for so early as 1784, the value of exports to America only had increased to £3,397,500, considerably above the greatest amount in any year before the war. The net sum of duties levied in the port of London, and paid into the exchequer, therefore rose to £10,367,104, an increase of £4,472,901. From this period to 1790, the commerce of London continued uniformly increasing. In that year, however, in consequence of the commencement of the war, the value of exports was upwards of £23,000,000 less than the preceding year, though the imports scarcely suffered any diminution. Numerous bankruptcies consequently took place, but the timely interference of the legislature, and the voting of the exchequer bills to the amount of £5,000,000, for the use of such persons as could give sufficient security, soon checked the growing distress. In the course of three succeeding years, the appearance of things was entirely changed. In 1796, the exports of London amounted in value to £18,410,499, and the imports to £14,719,466. The number of British ships that entered the port amounted to 2007, carrying 436,843 tons; and 2169 foreign vessels carrying in total, 287,142 tons, the total, ending confidence, was 11,176, including repeated voyages which brought a tonnage of 1,069,915. The following year, some alarm was spread among the merchants, by the stoppage of bank-payments in specie; but, through the intervention of parliament, confidence was soon restored. The net amount of the customs was
LONDON (POPULATION).

£3,950,000. In 1798, the importations of sugar and rum far exceeded those of any preceding year, as did likewise the revenue of the customs, which amounted to the sum of £6,381,187; in 1799, it had increased to £7,226,353, West India 4½ per cent, duty included; but next year it fell to £6,458,655. The official value of the imports in 1800, was £16,843,172, and of the exports £35,429,022, of which £13,972,494 was in British merchandise. Their real value exceeded £68,000,000, nearly two-thirds of the value of the trade of the whole kingdom. The number of vessels belonging to the port in that year was 2666, carrying 568,288 tons, and 41,402 men. Comparing this number with the number returned in the beginning of the last century, the increase is truly astonishing.

A RETURN of the NUMBER and Tonnage of Ships that have Entered the Port of London with Cargoes from Foreign Parts, distinguishing the Countries whence they have arrived, during the Years 1830, 1831, and 1832.

<table>
<thead>
<tr>
<th>COUNTRIES</th>
<th>1830.</th>
<th>1831.</th>
<th>1832.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russia</td>
<td>479</td>
<td>105,290</td>
<td>9</td>
</tr>
<tr>
<td>Sweden</td>
<td>19</td>
<td>3,865</td>
<td>62</td>
</tr>
<tr>
<td>Norway</td>
<td>2</td>
<td>377</td>
<td>89</td>
</tr>
<tr>
<td>Denmark</td>
<td>64</td>
<td>4,744</td>
<td>147</td>
</tr>
<tr>
<td>Prussia</td>
<td>237</td>
<td>33,369</td>
<td>253</td>
</tr>
<tr>
<td>German States</td>
<td>286</td>
<td>46,648</td>
<td>185</td>
</tr>
<tr>
<td>Netherlands</td>
<td>242</td>
<td>45,022</td>
<td>223</td>
</tr>
<tr>
<td>France</td>
<td>103</td>
<td>20,066</td>
<td>66</td>
</tr>
<tr>
<td>Portugal</td>
<td>273</td>
<td>94,477</td>
<td>925</td>
</tr>
<tr>
<td>Spain and Canaries</td>
<td>241</td>
<td>27,075</td>
<td>29</td>
</tr>
<tr>
<td>Italian States</td>
<td>127</td>
<td>18,069</td>
<td>5</td>
</tr>
<tr>
<td>Turkish and Continental Greece</td>
<td>33</td>
<td>6,807</td>
<td></td>
</tr>
<tr>
<td>Mores and Greek Islands</td>
<td>2</td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>Egypt</td>
<td>47</td>
<td>6,781</td>
<td></td>
</tr>
<tr>
<td>Tripoli, Barbary, and Morocco</td>
<td>6</td>
<td>5,069</td>
<td></td>
</tr>
<tr>
<td>Foreign Possessions in Africa</td>
<td>7</td>
<td>957</td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>11</td>
<td>1,016</td>
<td></td>
</tr>
<tr>
<td>United States of America</td>
<td>22</td>
<td>27,700</td>
<td></td>
</tr>
<tr>
<td>Foreign Possessions in Asia</td>
<td>22</td>
<td>27,762</td>
<td></td>
</tr>
<tr>
<td>United States of America</td>
<td>19</td>
<td>1,015</td>
<td></td>
</tr>
<tr>
<td>Foreign Possessions in Asia</td>
<td>29</td>
<td>7,676</td>
<td></td>
</tr>
<tr>
<td>Foreign Continental Colonies</td>
<td>83</td>
<td>15,544</td>
<td></td>
</tr>
<tr>
<td>America</td>
<td>130,527,000</td>
<td>1,297</td>
<td>206,255</td>
</tr>
</tbody>
</table>

The port of London extends from London Bridge to Deptford, a distance of four miles. The West India Docks, stretching across the isthmus forming the Isle of Dogs to the Middlesex side of the river, were opened in 1802. They consisted originally of an import and an export dock, the former containing about thirty and the other about twenty-five acres of water, exclusive of basins. To these have recently been added the South Dock, formerly the City Canal. The warehouses at the West India Docks are of vast extent. The London Docks, also of very great extent, are situated at Wapping. The tobacco warehouse belonging to them, covers a space of nearly five acres. There are also the St Katharine's Docks, adjoining the tower; the East India Docks, at Blackwall; and the Commercial Docks, on the Surrey side of the river. Owing to the competition of the different companies, all sorts of dock charges are now reduced to the lowest level, and hardly one of the concerns can be said to be profitable. The dividend on London Dock stock in 1833 was only 2½ per cent.

Population.—The population of London, in general, has for a long period been rapidly augmenting; but that of the city, separately taken, and especially in the parishes within the walls, has greatly decreased since the beginning of the last century, owing to the widening of the streets and the erection of public buildings and warehouses, instead of dwellings. In 1700, the city of London, within the walls, contained 139,300 inhabitants; in 1801, it contained no more than 78,000, and the number has since diminished.

The health of the metropolis is said to have been in a gradual state of improvement since the middle of the seventeenth century. It is now more than a century and a half since the plague has shown itself in London; and three diseases which used to be epidemic there—the bloody flux, ague, and securary—have ceased for above a century to be so. The cholera was less fatal in its ravages in London than in many places of the British empire. In 1750, the average rate of mortality in London was 1 in 21; in 1821, according to Dr Birkbeck, it was not more than 1 in 40. The christenings and burials in London during the year 1834, are reported to have been as follows:

|  | Males | 13,001 | Buried Males | 10,811 |
|  | Females | 13,015 | Buried Females | 10,968 |
|  | Total | 28,216 | Total | 21,679 |

The following table exhibits a view of the population of the metropolis in 1811, 1821, 1831, and 1841, with the increase or decrease for the last ten years, according to the government schedule.
### POPULATION OF THE CITY OF LONDON

<table>
<thead>
<tr>
<th></th>
<th>1811</th>
<th>1821</th>
<th>1831</th>
<th>1841</th>
<th>Increase last 10Yrs.</th>
<th>Decrease last 10Yrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>London (within the Walls)</td>
<td>54444</td>
<td>56174</td>
<td>57055</td>
<td>54696</td>
<td>37105</td>
<td>37540</td>
</tr>
<tr>
<td>London (without the Walls, with the Inns of Court)</td>
<td>66145</td>
<td>69650</td>
<td>67828</td>
<td>70832</td>
<td>65047</td>
<td>50057</td>
</tr>
<tr>
<td>Westminster (St Stephen’s, Westminster)</td>
<td>18293</td>
<td>19879</td>
<td>20535</td>
<td>19503</td>
<td>29092</td>
<td>55000</td>
</tr>
<tr>
<td>Southwark (Borough)</td>
<td>72119</td>
<td>85505</td>
<td>91001</td>
<td>89698</td>
<td>5625</td>
<td>6544</td>
</tr>
<tr>
<td>Out-Parishes, in Middlesex and Surrey, within the Bills of Mortality</td>
<td>23972</td>
<td>26549</td>
<td>2334</td>
<td>29335</td>
<td>20447</td>
<td></td>
</tr>
<tr>
<td>Artillery Ground (St John’s)</td>
<td>1365</td>
<td>1448</td>
<td>1431</td>
<td>1417</td>
<td>167</td>
<td></td>
</tr>
<tr>
<td>Bermondsey (St Mary Magdalen, St James)</td>
<td>13530</td>
<td>13255</td>
<td>12741</td>
<td>34247</td>
<td>5405</td>
<td>5006</td>
</tr>
<tr>
<td>Bethnal-green (St Matthew)</td>
<td>26310</td>
<td>45276</td>
<td>32018</td>
<td>74088</td>
<td>12705</td>
<td></td>
</tr>
<tr>
<td>Bishopsgate (St John)</td>
<td>6305</td>
<td>6429</td>
<td>3455</td>
<td>2027</td>
<td>1474</td>
<td></td>
</tr>
<tr>
<td>Catherine (St) Aldgate, near the Tower</td>
<td>2706</td>
<td>2824</td>
<td>72</td>
<td>96</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Chester House</td>
<td>164</td>
<td>164</td>
<td>163</td>
<td>163</td>
<td>163</td>
<td></td>
</tr>
<tr>
<td>Christ-church, Spitalfields</td>
<td>16300</td>
<td>18500</td>
<td>17294</td>
<td>2136</td>
<td>2457</td>
<td></td>
</tr>
<tr>
<td>Clent (St) Danes, part of</td>
<td>30910</td>
<td>40910</td>
<td>38814</td>
<td>3877</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Creekswell (St James)</td>
<td>30297</td>
<td>30755</td>
<td>47394</td>
<td>37766</td>
<td>9662</td>
<td></td>
</tr>
<tr>
<td>Ely Place in oct. 1841, cliued with Saffron Hill, &amp;c.</td>
<td>274</td>
<td>268</td>
<td>216</td>
<td>216</td>
<td></td>
<td></td>
</tr>
<tr>
<td>George’s (St) in the East</td>
<td>26317</td>
<td>25228</td>
<td>38805</td>
<td>41230</td>
<td>2985</td>
<td></td>
</tr>
<tr>
<td>Giles’ (St) in the Fields, and St George’s, Bloomsbury</td>
<td>48530</td>
<td>51753</td>
<td>52907</td>
<td>54392</td>
<td>1335</td>
<td></td>
</tr>
<tr>
<td>Glasshouse-yard</td>
<td>1343</td>
<td>1338</td>
<td>1312</td>
<td>1415</td>
<td>103</td>
<td></td>
</tr>
<tr>
<td>Hackney (St John)</td>
<td>16771</td>
<td>22481</td>
<td>31047</td>
<td>3777</td>
<td>6734</td>
<td></td>
</tr>
<tr>
<td>Islington (St Mary)</td>
<td>13695</td>
<td>22417</td>
<td>37316</td>
<td>3550</td>
<td>18371</td>
<td></td>
</tr>
<tr>
<td>Lambeth (St Mary)</td>
<td>41144</td>
<td>58708</td>
<td>67856</td>
<td>15688</td>
<td>20392</td>
<td></td>
</tr>
<tr>
<td>Limehouse (St Ann)</td>
<td>7395</td>
<td>9605</td>
<td>10805</td>
<td>2121</td>
<td>512</td>
<td></td>
</tr>
<tr>
<td>Luke’s (St) Middlesex</td>
<td>32445</td>
<td>48977</td>
<td>46292</td>
<td>48829</td>
<td>3187</td>
<td></td>
</tr>
<tr>
<td>Newington Butts (St Mary), Norton Folgate Libert;</td>
<td>23872</td>
<td>30592</td>
<td>44526</td>
<td>62286</td>
<td>11534</td>
<td></td>
</tr>
<tr>
<td>Rolls Liberty</td>
<td>3920</td>
<td>2737</td>
<td>562</td>
<td>256</td>
<td>117</td>
<td></td>
</tr>
<tr>
<td>Rotherhithe (St Mary)</td>
<td>12114</td>
<td>13553</td>
<td>12973</td>
<td>12017</td>
<td>1042</td>
<td></td>
</tr>
<tr>
<td>Sadler-hill, Hatton Garden, and Ely Place</td>
<td>2698</td>
<td>5066</td>
<td>5629</td>
<td>9435</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td>St Sepulchre, part of Savoy St John Baptist</td>
<td>4244</td>
<td>4769</td>
<td>4125</td>
<td>446</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoreditch (St Paul)</td>
<td>3485</td>
<td>3188</td>
<td>10680</td>
<td>10936</td>
<td>456</td>
<td></td>
</tr>
<tr>
<td>Shoreditch (St Leonard)</td>
<td>43590</td>
<td>39215</td>
<td>85390</td>
<td>83434</td>
<td>1458</td>
<td></td>
</tr>
<tr>
<td>Stepney, Mile End, New Town, Old Town, Poplar, &amp; Ratcliffe</td>
<td>36199</td>
<td>49613</td>
<td>67872</td>
<td>84055</td>
<td>16153</td>
<td></td>
</tr>
<tr>
<td>Tower and Precincts</td>
<td>1192</td>
<td>641</td>
<td>713</td>
<td>1417</td>
<td>704</td>
<td></td>
</tr>
<tr>
<td>Wapping (St)</td>
<td>3313</td>
<td>3907</td>
<td>3364</td>
<td>4168</td>
<td>544</td>
<td></td>
</tr>
<tr>
<td>Whitechapel (St Mary)</td>
<td>27573</td>
<td>29407</td>
<td>30723</td>
<td>3553</td>
<td>5320</td>
<td></td>
</tr>
<tr>
<td>Fairs</td>
<td>16880</td>
<td>14483</td>
<td>20562</td>
<td>29534</td>
<td>5524</td>
<td></td>
</tr>
<tr>
<td>not within the</td>
<td>16880</td>
<td>14483</td>
<td>20562</td>
<td>29534</td>
<td>5524</td>
<td></td>
</tr>
<tr>
<td>London Butts Paddling</td>
<td>4900</td>
<td>6749</td>
<td>14540</td>
<td>25173</td>
<td>10633</td>
<td></td>
</tr>
<tr>
<td>of St Mary-le-bone</td>
<td>37924</td>
<td>3964</td>
<td>12328</td>
<td>13904</td>
<td>15688</td>
<td></td>
</tr>
<tr>
<td>Mortality, St Pancras</td>
<td>46333</td>
<td>71838</td>
<td>103448</td>
<td>129763</td>
<td>26215</td>
<td></td>
</tr>
</tbody>
</table>

The following Fairs, not included in the census of 1831, were discontinued in 1841, viz.: St. John’s, 4626; Bromley, St Leonard, 6148; Camberwell, St Giles 39908; Deptford and Hackney 29617; Fulham 5952; Greenwich 12405; Hammonsewell, St Peter 14453; Stoke Newington 4915; Woolwich 35785; Police on duty 9685, making an addition of 103545

| TOTAL OF THE METROPOLIS (as per Government Returns) | 1299049 | 1474009 | 1875008 | 212315 |

**Contents of the article London.**

| Historical Sketch | 129 |
| General Description | 123 |
| Public Buildings | 215 |
| Civil Government | 532 |
| Churches, Charities, Societies, &c. | 327 |
| Manufacturers | 299 |
| Commerce | 10 |
| Population | 330 |

**LONDON**; one of the nine counties of Ulster, Ireland, is bounded on the north by the Atlantic Ocean, on the west by Lough Foyle and the county Donegal, on the south by Tyrone county, and on the east by Lough Neagh, the river Bann, and part of the county of Antrim. It forms an irregular triangle, including an area of 765 square miles, about a fourth part of which is occupied with bleak downs, from 1200 to 1600 feet in elevation, running southward from the coast through the whole country. Some fertile plains are interspersed between the hills. The principal rivers are the Foyle or Green River, and the Bann, or White River. The city of Londonderry or Derry, and Coleraine are the only places of consideration in the county. All the rest are small.

**LONDONDERY,** or **DERRY,** a city and county of itself in Ulster, situated 150 miles N. b. W. from Dublin, and about four miles south of Culmore Point, which latter is at the entrance of that river into the great estuary called Lough Foyle. It stands upon a high conical hill, crowned by the cathedral. It is a place of ancient foundation, an abbey having been erected here in 546, by St Columb. It was plundered by the Danes, and reduced to ashes by those barbarians about the year 783; and it was erected into an episcopal see in 1158. Upon the plantation of Ulster, in the reign of James I., this city and liberties, with other estates, were granted to the twelve corporations of London, who may be said to have built the greatest part, and given to the whole the premonies of London. The old city is enclosed by fortifications, consisting of a thick earthen rampart, faced with limestone, and flanked with bastions, placed at short intervals. They afford, at the present day, an agreeable promenade to the inhabitants, and command extensive and beautiful views. The most conspicuous event in the history of this place, is that commonly called "the siege of Derry:" a memorable occasion, when the citizens sustained a close siege from the month of December, 1688, to August, 1689, from the whole force of the Irish army, in the interest of king James II. The besieged had to contend, not merely with fatigue and famine, but with discord and treachery within their walls. This duplicity manifested itself in the person of their governor, Lumley, whom they forbad to receive, and substituted for him the famous George Walker, a dissenting minister, and Major Baker. Under the heroic guidance of these two persons, they held out until the breaking of the boom across the Foyle, and arrival of a British vessel with provisions and relief.

Londonderry is an episcopal see, and one of the deaneries, best built, and most beautifully situated towns in Ireland. It carries on a considerable trade with Scotland, the West Indies, and America. Population in 1841, 20,576.
LONDONDERRY, Robert Stewart, marquis of, the second son of the first marquis, was born in the north of Ireland, June 18, 1769, and was educated at Armagh, after which he became a commoner of St. John's college, Cambridge. On leaving the university, he made the tour of Europe, and, on his return, was chosen a member of the Irish parliament. He joined the opposition, in the first place, and declared himself an advocate for parliamentary reform; but, on obtaining a seat in the British parliament, he took his station on the ministerial benches. In 1797, having then become lord Castleragh, he returned to the Irish parliament, and, a year later, attained the place known as the privy seal for that kingdom, and was soon after appointed one of the lords of the treasury. The next year, he was nominated secretary to the lord-lieutenant, and, by his strenuous exertions, and abilities in the art of removing opposition, the union with Ireland was greatly facilitated. In the united parliament, he sat as member for the county of Down, and, in 1802, was made president of the board of control. In 1805, he was appointed secretary of war and the colonies; but, on the death of Mr Pitt, he retired, until the dissolution of the brief administration of 1806 restored him to the same situation in 1807; and he held it until his illness, the peculiar situation of Walcheren, and his duel with his colleague, Mr Canning, produced his resignation. In 1812, he succeeded the marquis of Wellesley as foreign secretary, and the following year proceeded to the continent, to assist the coalesced powers in the great cause of freedom. His services after the capture of Napoleon, and in the general pacification and arrangements which have been usually designated by the phrase the settlement of Europe, form a part of his history. It is sufficient to notice here, that he received the public thanks of parliament, and was honoured with the order of the garter. On the death of his father, in April, 1821, he succeeded him in the Irish marquisate of Londonderry, but still retained his seat in the British house of commons, where he acted as leader. After the arduous session of 1822, in which his labour was unremitting, his mind was observed to be much saddened; but, unhappily, although his physician was apprised of it, he was surprised on the morning of the 5th of November, at his seat in Kent, where, in August, 1822, he terminated his life by inflicting a wound in his neck, with a penknife, of which he died almost instantly. This statesman has been censured for a severe, rigid, and persecuting domestic government, and for an undue countenance of despotic encroachment and arrangement as regards the social progress of Europe. His party and supporters, in answer to these strictures, for the most part, plead political necessity and expediency, while no small portion of them defend his views on the ground of principle. He was an active man of business, and a ready, although not an elegant orator. His remain were interred, in Westminster abbey, with great solemnity, without an exhibition of popular ill-will. (See Mem. of the late Marquis of Londonderry, London, 1829.) He was succeeded in his title by his half-brother, lieutenant-colonel lord Stewart, who was for some time ambassador to Prussia, and afterwards to Vienna. His lordship wrote a Narrative of the Peninsular War (second edition, London, 1828), and a Narrative of the War in Germany and France, in 1813 and 1814, and is a member of the British house of peers.

LONGCHAMP; a promenade of the Parisian fashionable, on the right-bank of the Seine, about four miles below the capital. It was once a convent, founded by Isabella, sister of St Louis, where she spent her last years, and terminated her life, Feb. 22, 1269. The convent was then called the Abbaye de l'Humilité de Notre Dame, and the credulity of the times ascribed to the bones of Isabella, who was buried there, such miraculous powers, that Leo X. canonized her in 1521. 116 years after, the bones of Isabella, with the permission of Urban VIII., were collected in the presence of the archbishop of Paris, and, like other relics, set in gold and silver. Two other princesses of France also died there—Blanche, daughter of Philip the Long, who likewise ended his life at this place, Jan. 3, 1321, and Jeanne of Navarre. Previous to the revolution, Longchamp was a place of pleasure and of the hunting of the English. It is still related, that on those days when it was a part of bon ton to repair thither (Wednesday, Thursday and Friday of Passion week), some of the English carried their luxury so far, as to make the shoes of their horses and the tires of their coach wheels of silver, on these promenades. In the beginning of the revolution, when the abbey of Longchamp, like the monasteries of France, in general, was abolished, and the buildings partially demolished, the splendor of this place was destroyed; but under the consulate, when wealth again dared to display itself openly, Longchamp recovered its ancient brilliancy, and became the retreat of the ladies of the empire, and place of exhibiting their charms. Tallien and Remarcer were the stars in this firmament of fashion and beauty. Under the imperial government, the splendour of Longchamp was somewhat diminished, owing partly to Napoleon's contempt for frivolous exhibitions, partly to the continued wars, which withdrew great numbers of rich young men from the capital. After the restoration, the promenade of Longchamp was almost wholly neglected. But more recently, it has again recovered some of its former splendour.

LONGEVITY. The extreme limit of human life, and the means of attaining it, have been a subject of general interest, both in ancient and modern times, and the physiologist and political economist are alike attracted by the inquiry. It is for the student of biblical antiquities to decide in what sense we are to understand the word year in the scriptural accounts of the antediluvians; whether it signifies a revolution of the solar year, or the mean tropical year of 365 3/4 days. Extreme longevity is only the creation of tradition. In the sense which we now give to the word year, the accounts would make the constitution of men at the period referred to, very different from what it is at present, or has been, at any period from which observations on the duration of human life have been transmitted to us. The results of all these observations, in regard to the length of life in given circumstances, do not essentially differ. Pliiny affords some valuable statistical information, if accurate, regarding the period at which he lived, obtained from an official, and, apparently, authentic source—the census, directed by the emperor Vespasian, in the year 70 after the death of Christ. From this we learn that, at the time of the computation, there were, in the part of Italy comprised between the Apennines and the Po, 124 individuals aged 100 years and upwards, viz. 54 of 100 years, 57 of 110, 2 of 125, 4 of 130, 4 of 135 to 137, and 3 of 140. At Parma, a man was living who had been born in the 4th year of Augustus; and at Milan, there was a female aged 132; and at a small town near Placentia, called Velleiaclium, lived 6 persons aged 110 years each, and 4 of 120. These estimates, however, do not accord with those of Ulpius, who seems to have taken special care to become acquainted with the facts of the case. His researches show, that the expectation of life in Rome, at that time, was much less than it now is in London, or in any of our cities. Hufeland, indeed, in his Macrobeioticis, asserts that the
tables of Ulpian agree perfectly with those afforded by the great cities of Europe, and that they exhibit the probabilities of life in ancient Rome to have been the same as those of modern London. But doctor F. Bisset Hawkins, in his Elements of Medical Statistics (London, 1829), says that the tables, kept by the censors for 1000 years, and constituting registers of population, sex, age, disease, &c., according to Ulpian (who was a lawyer, and a minister of Alexander Severus), refer only to free citizens, and that, to draw a just comparison between Rome and London, it would be necessary to take, among the inhabitants of the latter city, only those who were similarly circumstanced, viz., those whose condition is easy; in which case, the balance would be greatly in favour of modern times. Mr Finlayson has ascertained, from very extensive observation on the decrease of life prevailing among the nominees of the Tontines, and other life annuities, granted by the authority of parliament, during the last 40 years, that the expectation of life is above 50 years for persons thus situated which affords the easy classes of Britain, an average of 20 years about the easy classes among the Romans. The mean term of life among the easy classes of Paris is, at present, 42 years, which gives them an advantage of 12 years above the Romans. In the third century of the Christian era, the expectation of life in Rome was as follows:—From birth to 20, there was a probability of 30 years; from 20 to 55, of 28 years; from 25 to 30, 25 years; from 30 to 35, 22 years; from 35 to 40, 20 years; from 40 to 45, 18 years; from 45 to 50, 13 years; from 50 to 55, 9 years; from 55 to 60, 7 years; from 60 to 65, 5 years. Farther than this the computation did not extend. The census taken from time to time in Britain affords us information of an unquestionable character. The first actual enumeration of the inhabitants was made in 1801, and gave an annual mortality of 1 in 448. In France, the annual deaths were, in 1781, 1 in 29; in 1802, 1 in 30; in 1823, 1 in 40. In the Pays de Vaud, the mortality is 1 in 49; in Sweden and Holland, 1 in 48; in Russia, 1 in 41; in Austria, 1 in 38. Wherever records have been kept, we find that mortality has decreased with civilization. Perhaps a few more persons reach extreme old age among nations in a state of little cultivation; but it is certain that more civilisation than the duration of life, in general, is much less. In Geneva, records of mortality have been kept since 1890, which show that a child born there has, at present, five times greater expectation of life than one born three centuries ago. A like improvement has taken place in the salubrity of large towns. The annual mortality of London, in 1700, was 1 in 25; in 1751, 1 in 21; in 1801, and the four years preceding, 1 in 35; in 1811, 1 in 38; and in 1821, 1 in 40; the value of life having thus doubled, in London, within the last 90 years. In Paris, about the middle of the last century, the mortality was 1 in 25; at present, it is about 1 in 32; and it has been calculated that, in the fourteenth century, it was one in 16 or 17. The annual mortality in Berlin has decreased during the last 50 or 60 years, from 1 in 28 to 1 in 34. The mortality in Manchester was, about the middle of the last century, 1 in 25; in 1770, 1 in 28; 40 years afterwards, in 1811, the annual deaths were diminished to 1 in 44, and, in 1821, they seem to have been still fewer. In the middle of the last century, the mortality of Vienna was 1 in 20; it has not, however, improved in the same proportion as some of the other European cities. According to recent calculation, it is, even now, 1 in 22, or about twice the proportion of that of Manchester, or Glasgow. Many years ago, Mr Finlayson drew up the following table, to exhibit the difference in the value of life, at two periods of the seventeenth and eighteenth centuries. Had it been calculated for 1850, the results would have been still more remarkable.

<table>
<thead>
<tr>
<th>Ages</th>
<th>Mean Duration of Life, reckoning from</th>
<th>So that the Increase of Vitality is in the</th>
<th>Rate of 102 to</th>
<th>1802.</th>
<th>1790.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years</td>
<td>Years.</td>
<td>Years.</td>
<td>1823</td>
<td>1811</td>
<td>1801</td>
</tr>
<tr>
<td>10</td>
<td>41.05</td>
<td>51.20</td>
<td>183</td>
<td>182</td>
<td>181</td>
</tr>
<tr>
<td>20</td>
<td>41.91</td>
<td>51.50</td>
<td>190</td>
<td>188</td>
<td>186</td>
</tr>
<tr>
<td>30</td>
<td>42.57</td>
<td>51.80</td>
<td>191</td>
<td>189</td>
<td>187</td>
</tr>
<tr>
<td>40</td>
<td>45.07</td>
<td>52.20</td>
<td>188</td>
<td>187</td>
<td>186</td>
</tr>
<tr>
<td>50</td>
<td>17.31</td>
<td>52.70</td>
<td>184</td>
<td>183</td>
<td>182</td>
</tr>
<tr>
<td>60</td>
<td>14.30</td>
<td>53.20</td>
<td>180</td>
<td>179</td>
<td>178</td>
</tr>
<tr>
<td>70</td>
<td>7.44</td>
<td>53.30</td>
<td>176</td>
<td>175</td>
<td>174</td>
</tr>
</tbody>
</table>

The following is the annual mortality of some of the chief cities of Europe and North America:—

<table>
<thead>
<tr>
<th>City</th>
<th>1823</th>
<th>1811</th>
<th>1801</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philadelphia</td>
<td>1 in 45.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glasgow</td>
<td>1 in 44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manchester</td>
<td>1 in 44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geneva</td>
<td>1 in 43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boston</td>
<td>1 in 41.26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>London</td>
<td>1 in 40.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New York</td>
<td>1 in 37.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. Petersburg</td>
<td>1 in 37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charleston</td>
<td>1 in 36.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baltimore</td>
<td>1 in 35.41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leghorn</td>
<td>1 in 35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Berlin</td>
<td>1 in 34</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paris, Lyons, Barcelona, and Strasburg</td>
<td>1 in 32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nice and Palermo</td>
<td>1 in 31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Madrid</td>
<td>1 in 20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Naples</td>
<td>1 in 28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brussels</td>
<td>1 in 26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rome</td>
<td>1 in 25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amsterdam</td>
<td>1 in 24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vienna</td>
<td>1 in 22.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From Dec. 12, 1828, to Dec. 15, 1829, in London, the whole number of deaths was 23,625. The proportion of deaths, in different ages, was as follows:—

| Under two years of age | 67.10 |
| Two, three, and five | 23.47 |
| Five and ten | 10.19 |
| Ten and twenty | 9.49 |
| Twenty and thirty | 1.65 |
| Thirty and forty | 1.02 |
| Forty and fifty | 0.84 |
| Fifty and sixty | 0.68 |
| Sixty and seventy | 0.57 |
| Seventy and eighty | 0.45 |
| Eighty and ninety | 0.34 |
| Ninety and one hundred | 0.25 |
| One hundred and one | 0.13 |
| One hundred and eight | 0.02 |

On the average of eight years, from 1807 to 1814 inclusive, there died annually within the city of Philadelphia and the liberties, the following proportion of persons, of different ages, compared with the total number of deaths:—

| Under one year | Per Cent. | From one to two years | 10.71 |
| Two to ten | 5.87 |
| Ten to twenty | 3.60 |
| Twenty to thirty | 3.80 |
| Thirty to forty | 7.03 |
| Forty to fifty | 5.96 |
| Fifty to sixty | 6.99 |
| Sixty to seventy | 4.29 |
| Seventy to eighty | 3.77 |
| Eighty and ninety | 1.60 |
| Ninety and one hundred | 0.06 |
| One hundred and one hundred and ten | 0.009 |

Another question of interest is the inquiry in what degree the various trades and professions are favourable to human life, or the contrary. Several statements have lately been published respecting this subject, but further and more copious observations are required, to afford satisfactory results. * Literary

* The Literary Gazette gives in a tabular form, the results of a work on this subject, from the pen of Mr Thackrah.
occupations do not appear to be more injurious to
long life than many others. Many of the first
literati, most distinguished for application throughout life,
have attained old age, both in modern and ancient
universities. In the following instances, the particulars
of this kind are recorded, many of which may be
found collected in the work of Hufeland, alluded to
There are several essential circumstances which
can be given to the present age of the mind to their
immediate reception. Thus, a deformed person can
have a long life, as well as born healthy; while an
unhealthy parents; neither can a person inhabiting
an unhealthy city or district, expect to escape the
The air, even though exposed to an excess of cold and
avoid any injury from the dust, especially from the
who complain of the dust, and live to a good age.
Milliners, and dress-makers and spinners and house-ma
are unhealthy and short-lived. Spinners, cloth-dressers, weavers,
are more or less healthy, according to the less or
less exercises to the air. Those exposed to inhale imperceptible
particles of dressings, &c., such as furnaces, suffer from disease,
and are soon cut off. Shoemakers are placed in a bad posi-
tion, from exertion and circulation are so much impaired, the
constancy marks a shoemaker almost as well as a tailor.
We suppose that, from the reduction of perspiration, and other
evacuations, in this and similar employments, the blood is
impaired, and, consequently, the complexion darkened.
The secretions from the lungs, are less abundant, and the
respirations of the body are facilitated, and therefore,
such persons are exposed to more disease than those in
various trades. In-door occupations. Tailors, notwithstanding their
customary posture, are exposed, according to the laws of
the atmosphere, to suffer much, by the violent excitement
of the temperature. Printers, who work at the press, are,
and are often injured by the exposures of their lungs, being
exposed to the volatile oxide of lead, which rises during the
process of working the press. Founders of cast iron and
enamel manufacture are particularly exposed to the
volatile metal. In the founding of yellow brass, in
particular, the exhalation of oxide of zinc is great. They
seldom reach the age of fifty.

Employments producing exhalations or excessive
injuries, if they arise from animal substances, or from the
exhalation of the brass, &c., are more or less injurious to
effects of certain academic associations. These
exhalations, however, appear to be annoying, rather than
injuries, as the men are tolerably healthy, and live to a consi-
erable age. Tinners also, are subject to temporary
injuries, are exposed to the volatile oxide of lead, and
exposed to the volatile oxide of lead, and this
 exposure to the volatile oxide of lead, which rises during the
process of working the press. Founders of cast iron and
enamel manufacture are particularly exposed to the
volatile metal. In the founding of yellow brass, in
particular, the exhalation of oxide of zinc is great. They
seldom reach the age of fifty. Copper-smiths are considerably
affected by the fine scales which rise from the imperfectly
volatilized metal, and by the fumes of the spelter, or solder of
brass. The men are generally unhealthy, suffering from dis-
orders similar to those of the brass-founders. Tin-platers
are subject to fumes from fumes of ammonia, and
subphoraceous exhalations from the coke which they burn.

These exhalations, however, appear to be annoying, rather than
injuries, as the men are tolerably healthy, and live to a consider-
sable age. Tinners also, are subject to temporary
injuries, are exposed to the volatile oxide of lead, and
exposed to the volatile oxide of lead, which rises during the
process of working the press. Founders of cast iron and
enamel manufacture are particularly exposed to the
volatile metal. In the founding of yellow brass, in
particular, the exhalation of oxide of zinc is great. They
seldom reach the age of fifty. Copper-smiths are considerably
affected by the fine scales which rise from the imperfectly
volatilized metal, and by the fumes of the spelter, or solder of
brass. The men are generally unhealthy, suffering from dis-
orders similar to those of the brass-founders. Tin-platers
are subject to fumes from fumes of ammonia, and
subphoraceous exhalations from the coke which they burn.

These exhalations, however, appear to be annoying, rather than
injuries, as the men are tolerably healthy, and live to a consider-
sable age. Tinners also, are subject to temporary
injuries, are exposed to the volatile oxide of lead, and
exposed to the volatile oxide of lead, which rises during the
process of working the press. Founders of cast iron and
enamel manufacture are particularly exposed to the
volatile metal. In the founding of yellow brass, in
particular, the exhalation of oxide of zinc is great. They
seldom reach the age of fifty. Copper-smiths are considerably
affected by the fine scales which rise from the imperfectly
volatilized metal, and by the fumes of the spelter, or solder of
brass. The men are generally unhealthy, suffering from dis-
orders similar to those of the brass-founders. Tin-platers
are subject to fumes from fumes of ammonia, and
subphoraceous exhalations from the coke which they burn.

These exhalations, however, appear to be annoying, rather than
injuries, as the men are tolerably healthy, and live to a consider-
sable age. Tinners also, are subject to temporary
injuries, are exposed to the volatile oxide of lead, and
exposed to the volatile oxide of lead, which rises during the
process of working the press. Founders of cast iron and
enamel manufacture are particularly exposed to the
volatile metal. In the founding of yellow brass, in
particular, the exhalation of oxide of zinc is great. They
seldom reach the age of fifty. Copper-smiths are considerably
affected by the fine scales which rise from the imperfectly
volatilized metal, and by the fumes of the spelter, or solder of
brass. The men are generally unhealthy, suffering from dis-
orders similar to those of the brass-founders. Tin-platers
are subject to fumes from fumes of ammonia, and
subphoraceous exhalations from the coke which they burn.

These exhalations, however, appear to be annoying, rather than
injuries, as the men are tolerably healthy, and live to a consider-
sable age. Tinners also, are subject to temporary
injuries, are exposed to the volatile oxide of lead, and
exposed to the volatile oxide of lead, which rises during the
process of working the press. Founders of cast iron and
enamel manufacture are particularly exposed to the
volatile metal. In the founding of yellow brass, in
particular, the exhalation of oxide of zinc is great. They
seldom reach the age of fifty. Copper-smiths are considerably
affected by the fine scales which rise from the imperfectly
volatilized metal, and by the fumes of the spelter, or solder of
brass. The men are generally unhealthy, suffering from dis-
orders similar to those of the brass-founders. Tin-platers
are subject to fumes from fumes of ammonia, and
subphoraceous exhalations from the coke which they burn.
LONGEVITY.

535

does not seem so well calculated for giving the neces-
sary degree of strength and elasticity to the fibre; for
although in warm countries more children live to be men and women, yet, as the age of puberty
comes on very early, they seldom exceed sixty years.
This fact was ascertained, in China, in 1784, when
Kemp was obliged all the children to be examined
be brought before him, when, out of a population
of two hundred millions, only four persons could be
found, whose ages exceeded a hundred; whereas, in
Russia, Norway, and other cold countries, instances
of longevity are frequent. Thus, in Norway, in
1761, out of 300, who died, 03 were 100 years old and
in Russia, in 1801, of 726,278 persons, who
died, 216 were 100 years old, and 220 had exceeded
that age; and, one, indeed, was more than 130.
The districts of Arcadia, Ætolia, and other parts of
Greece, were formerly celebrated for instances of
long life; and many of the most distinguished Greeks,
such as Pythagoras, Plato, Sophocles, Pindar, &c.,
attracted to a very advanced period of life.
In Italy, when a general census of the inhabitants
was made in the year 79, by order of the emperor
Vespasian, lord Bacon says there were then living,
between the river Po and the Apennines,

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Place</th>
<th>Date</th>
<th>Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peter Totten</td>
<td>185</td>
<td>Temeswar, Hungary</td>
<td>1724</td>
<td>Kittle's Port of Old Age</td>
</tr>
<tr>
<td>Gilbert M'Craw</td>
<td>180</td>
<td>Isle of Jurn</td>
<td>1780</td>
<td>Martin's Des. Western Islands</td>
</tr>
<tr>
<td>Louise Truxo, a negro</td>
<td>175</td>
<td>Tuscan, South America</td>
<td>1870</td>
<td>Do.</td>
</tr>
<tr>
<td>Henry Jenkins</td>
<td>169</td>
<td>Yorkshire</td>
<td>1757</td>
<td>Do.</td>
</tr>
<tr>
<td>Thomas Purr</td>
<td>152</td>
<td>Shropshire</td>
<td>1780</td>
<td>Do.</td>
</tr>
<tr>
<td>Charles Bowles</td>
<td>152</td>
<td>Killingworth, Warwick</td>
<td>1835</td>
<td>Do.</td>
</tr>
<tr>
<td>Marcus Aponius</td>
<td>150</td>
<td>Rimini</td>
<td>79</td>
<td>Do.</td>
</tr>
<tr>
<td>Marc Alboni</td>
<td>140</td>
<td>Ethiopia</td>
<td>1799</td>
<td>Fuller's Worthies</td>
</tr>
<tr>
<td>Titus Pallioni</td>
<td>140</td>
<td>Bosnia</td>
<td>1813</td>
<td>Do.</td>
</tr>
<tr>
<td>Francis Carehill</td>
<td>140</td>
<td>France</td>
<td>1813</td>
<td>Do.</td>
</tr>
<tr>
<td>Colonel Thomas Winslow</td>
<td>140</td>
<td>Jamaica</td>
<td>1813</td>
<td>Do.</td>
</tr>
<tr>
<td>C. J. Dakenberg</td>
<td>130</td>
<td>Ireland</td>
<td>1774</td>
<td>Do.</td>
</tr>
<tr>
<td>Anne Wignell</td>
<td>129</td>
<td>Charles, S. C.</td>
<td>1774</td>
<td>Do.</td>
</tr>
<tr>
<td>Evan Williams</td>
<td>128</td>
<td>Trieria</td>
<td>1774</td>
<td>Do.</td>
</tr>
<tr>
<td>Catherine of Eccleston</td>
<td>128</td>
<td>Staffordshire</td>
<td>1774</td>
<td>Do.</td>
</tr>
<tr>
<td>Abrahm Pabla</td>
<td>128</td>
<td>Ireland</td>
<td>1774</td>
<td>Do.</td>
</tr>
<tr>
<td>Simon Jack</td>
<td>125</td>
<td>South Germany</td>
<td>1813</td>
<td>Do.</td>
</tr>
<tr>
<td>James Sands</td>
<td>124</td>
<td>Transylvania</td>
<td>1813</td>
<td>Do.</td>
</tr>
<tr>
<td>Captain Desmond</td>
<td>123</td>
<td>France</td>
<td>1799</td>
<td>Annual Register</td>
</tr>
<tr>
<td>M. Laurence</td>
<td>120</td>
<td>Lochwinnoeli, Ayshire</td>
<td>1774</td>
<td>Do.</td>
</tr>
<tr>
<td>Duinburt Rayley</td>
<td>114</td>
<td>Cambierland</td>
<td>1777</td>
<td>General Gazetteer</td>
</tr>
<tr>
<td>Will, Gulstone</td>
<td>113</td>
<td>Scotland</td>
<td>1777</td>
<td>Fuller's Worthies</td>
</tr>
<tr>
<td>John Galbrauch</td>
<td>113</td>
<td>Devonshire</td>
<td>1777</td>
<td>Fuller's Worthies</td>
</tr>
<tr>
<td>Richard Lloyd</td>
<td>113</td>
<td>Montgomery</td>
<td>1782</td>
<td>Fuller's Worthies</td>
</tr>
<tr>
<td>Jane Losen</td>
<td>113</td>
<td>London</td>
<td>1782</td>
<td>Fuller's Worthies</td>
</tr>
<tr>
<td>Lucy, Stewart</td>
<td>113</td>
<td>Kingston, Jamaica</td>
<td>1812</td>
<td>Do.</td>
</tr>
<tr>
<td>Will, Ellis</td>
<td>112</td>
<td>Isle of Skye</td>
<td>1813</td>
<td>Do.</td>
</tr>
<tr>
<td>Ermine Diamond</td>
<td>112</td>
<td>Shropshire</td>
<td>1817</td>
<td>Do.</td>
</tr>
<tr>
<td>Mary Yates</td>
<td>112</td>
<td>Yorkshire</td>
<td>1817</td>
<td>Do.</td>
</tr>
<tr>
<td>Mary Innes</td>
<td>112</td>
<td>Northampton</td>
<td>1817</td>
<td>Do.</td>
</tr>
<tr>
<td>Robert Montgomery</td>
<td>112</td>
<td>Dalkeith</td>
<td>1818</td>
<td>Do.</td>
</tr>
<tr>
<td>John Bales</td>
<td>112</td>
<td>Auchinleck</td>
<td>1818</td>
<td>Do.</td>
</tr>
<tr>
<td>John Pico</td>
<td>112</td>
<td>Taylorstown, Wexford</td>
<td>1819</td>
<td>Do.</td>
</tr>
<tr>
<td>Margaret Scott</td>
<td>112</td>
<td>France</td>
<td>1819</td>
<td>Do.</td>
</tr>
<tr>
<td>David Ferguson</td>
<td>112</td>
<td></td>
<td>1819</td>
<td>Do.</td>
</tr>
<tr>
<td>Matthew Tait</td>
<td>111</td>
<td></td>
<td>1819</td>
<td>Do.</td>
</tr>
<tr>
<td>Edward Connor</td>
<td>111</td>
<td></td>
<td>1819</td>
<td>Do.</td>
</tr>
<tr>
<td>Francis Roos</td>
<td>110</td>
<td></td>
<td>1819</td>
<td>Do.</td>
</tr>
</tbody>
</table>

The climate of the British islands is very friendly, in
general, to the human body; and, in proportion to
their size and population, show almost more instances
of long life than any other country. Carew, the
historian of Cornwall, says, that in that country its
inhabitants frequently reach 90 with unimpaired
strength of body and mind; but these are the farmers;
for the miners seldom live more than forty years,
the fumes of the sulphur, copper, and arsenic, and the
damp, killing them all of consumption. But Brown, the Cornish beggar, lived to be 120; and a
man, called Polenow, to 130. In Scotland, old age
is common; 12 persons, in the lower parts of Gili-
loway, were living 3, from 100 to 115 years of age.
Old William Marshall, a tinker, walked through that county, at 118, with all his faculties perfect.
In Montrose, too, in 1812, there were five persons alive from 100 to 110. Small islands and peninsulas, if quite free from marshes, are generally very favourable to long life, and in all
latitudes. In the Bermuda islands, many natives
reach 100 and more; and in the hurricane at Barba-
does, in 1780, four people were killed who were
above 100, and one of 115. Madeira has always
been noted for its healthy climate; and a new born
infant’s chance of life, is there about thirty-nine
years, or about a third more than that of one in Lon-
don. Martin, in his description of the Western
islands, speaks of a person in the island of South
Uist, aged 130, retaining his appetite and understand-
ing; and also of one Gilbert M'Craw, in the island
of Jura, who spent 180 Christmasses in his
own house.

Here follows a list of the names of some of the
best known instances, with the domiciles, and authori-
ties annexed.
<table>
<thead>
<tr>
<th>NAME</th>
<th>AGE</th>
<th>PLACE</th>
<th>DATE</th>
<th>AUTHORITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>John Jacob</td>
<td>161</td>
<td>Mount Jura</td>
<td>1760</td>
<td>All the public prints</td>
</tr>
<tr>
<td>Mrs Sands</td>
<td>120</td>
<td>Staffordshire</td>
<td>1667</td>
<td>Fuller's Worships</td>
</tr>
<tr>
<td>Mr Durante</td>
<td>120</td>
<td>Arvon, Galway</td>
<td>1717</td>
<td>Blackwood's Magazine</td>
</tr>
<tr>
<td>—— Brown</td>
<td>120</td>
<td>Cornwall</td>
<td>1717</td>
<td>Carew's Cornwall</td>
</tr>
<tr>
<td>Will Portell</td>
<td>118</td>
<td>France</td>
<td>1717</td>
<td>Bacon's History</td>
</tr>
<tr>
<td>Will Marshall</td>
<td>118</td>
<td>Galloway</td>
<td>1717</td>
<td>Statistical Account</td>
</tr>
<tr>
<td>Cath. McKinnal</td>
<td>117</td>
<td>Fowls, Ross</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Coras. Muson</td>
<td>117</td>
<td>Hats, Ireland</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>—— Carrol</td>
<td>117</td>
<td>Kilkeeny</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>John Ursulach</td>
<td>116</td>
<td>Lemberg</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>John Wilson</td>
<td>116</td>
<td>Suffolk</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Will Ruthven</td>
<td>116</td>
<td>Avondale</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Christ. Robertson</td>
<td>115</td>
<td>Bexids</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Sal. Wian</td>
<td>115</td>
<td>L⼽urby</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Belinda Crawford</td>
<td>115</td>
<td>Galway</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Robert Blakenceny, Esq</td>
<td>115</td>
<td>Arnaagh</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Isabella Sharpe</td>
<td>114</td>
<td>Gateshead</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Ann Hudeck</td>
<td>114</td>
<td>Cornwall</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Mary Haney</td>
<td>114</td>
<td>New Paltmouth</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>J. Sagar</td>
<td>113</td>
<td>Lancashire</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>James Kayley</td>
<td>112</td>
<td>Middlesex</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Will Walker</td>
<td>112</td>
<td>England</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>James Beatty</td>
<td>112</td>
<td>Moor</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Thos. Gaughan</td>
<td>111</td>
<td>Mayo</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Mrs King</td>
<td>111</td>
<td>Den, Yorkshire</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Card. De Gardis</td>
<td>111</td>
<td>Seville, Spain</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Thos. O'Brien</td>
<td>111</td>
<td>Limerick</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>John Garrow</td>
<td>110</td>
<td>Northumberland</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Edward O'Caigen</td>
<td>110</td>
<td>Hereford</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>M. Charlotte Carlo</td>
<td>109</td>
<td>Hosp. Namur</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Morgan Crassey</td>
<td>109</td>
<td>Glamorganshire</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Democritus</td>
<td>109</td>
<td>Aberdery</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Janet Taylor</td>
<td>108</td>
<td>Fintry</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Charles Craig</td>
<td>108</td>
<td>Dunoon</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Janet Mulley</td>
<td>108</td>
<td>Crinan</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Catherine Prescott</td>
<td>108</td>
<td>Manchester</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Will Gillie</td>
<td>108</td>
<td>Ruthwell</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Thomas Garrick</td>
<td>108</td>
<td>Fifehire</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Christians Howell</td>
<td>107</td>
<td>England</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>J. Brown, Esq.</td>
<td>107</td>
<td>York</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Margaret of Winchester</td>
<td>106</td>
<td>Norfolk</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>C. F. Gordon</td>
<td>106</td>
<td>Buckingham, Hants.</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Mrs Ann Eason</td>
<td>106</td>
<td>Eason, Lode, England</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>James Carrol</td>
<td>106</td>
<td>Kilkeeny</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Margaret Alyton</td>
<td>106</td>
<td>Edinburgh</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Will. Wilson</td>
<td>106</td>
<td>Edinburgh</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Agnes Milbourne</td>
<td>106</td>
<td>St Luke's Workhouse</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Eliz. Bell</td>
<td>105</td>
<td>Whitehaven</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>M. E. Jeffs</td>
<td>105</td>
<td>Grec, Worcestershire</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Helen Gray</td>
<td>105</td>
<td>Fifehire</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Dr Gen. Mickrey</td>
<td>105</td>
<td>Warsawia</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Jane Robertson</td>
<td>105</td>
<td>Alesia</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Ann Cockholt</td>
<td>105</td>
<td>Thorntone, Yorkshire</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>J. Montgomery</td>
<td>105</td>
<td>Northampton</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>J. Bright</td>
<td>105</td>
<td>Killen</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Owen O'Toole</td>
<td>105</td>
<td>Lains</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Sarah Codenham</td>
<td>105</td>
<td>Northumberland</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Mrs Elizabeth Taylor</td>
<td>105</td>
<td>Norfolk</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Barbary Dodgson</td>
<td>105</td>
<td>Northumberland</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Donald M'Leod</td>
<td>104</td>
<td>Westmore</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Alexander Ewart</td>
<td>104</td>
<td>Clun</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>John Reid</td>
<td>104</td>
<td>Nairn</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Henry Cohen</td>
<td>104</td>
<td>New, Do.</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>James Magee</td>
<td>104</td>
<td>Do.</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Hippocrates</td>
<td>104</td>
<td>His Memoirs</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Lachlan M'Quarrie</td>
<td>104</td>
<td>Do.</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Jane Reeves</td>
<td>104</td>
<td>Do.</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Lech L'Inn</td>
<td>104</td>
<td>Do.</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>J. Fraser</td>
<td>102</td>
<td>Do.</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Sarah Foster</td>
<td>102</td>
<td>Do.</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Cath. Richard</td>
<td>102</td>
<td>Do.</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Janet M'Furline</td>
<td>102</td>
<td>Do.</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Jane Thompson</td>
<td>102</td>
<td>Do.</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>John M'ain</td>
<td>101</td>
<td>Do.</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Anne Dinsdale</td>
<td>100</td>
<td>Do.</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Lewis Cornaro</td>
<td>100</td>
<td>Do.</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Susan Hillar</td>
<td>100</td>
<td>Do.</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Kenneth M'go</td>
<td>100</td>
<td>Do.</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Countess Louden</td>
<td>100</td>
<td>Do.</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>Margaret Neil</td>
<td>100</td>
<td>Do.</td>
<td>1717</td>
<td></td>
</tr>
<tr>
<td>John Williams</td>
<td>100</td>
<td>Do.</td>
<td>1717</td>
<td></td>
</tr>
</tbody>
</table>

LONGIMETRY; the measuring of lengths or distances, both accessible and inaccessible. Accessible distances are measured by the application of some measure a certain number of times, as a foot, chain, &c. And inaccessible distances are measured by taking angles, &c., by means of proper instruments, as the circumferentor, quadrant, theodolite, &c. This embraces a great number of cases, according to the situation of the object and observer.

LONGINUS, CASSIUS; a Platonist philosopher and celebrated orator of the middle of the third century, A.D. According to some accounts, he was born at Eumes, in Syria; according to Ruhnken, Athens was his birth-place. Greek literature was the principal subject of his studies. At Alexandria, Athens, etc., he attended the lectures of the most distinguished scholars. He studied the Stoic and Peripatetic systems of philosophy, but subsequently became an ardent adherent of the Platonic, and annually celebrated the birthday of its founder, by a
LONG ISLAND—LONGITUDE.

baquet. His principal attention was directed, however, to the study of grammar, criticism, eloquence, and antiquities. At the invitation of queen Zenobia, he went to Palmyra to instruct her in Greek learning and to educate her children. He was little benefited by her instruction, for he remained in the state, by which means he was involved in the fate of this queen. For when Zenobia was taken prisoner by the emperor Aurelian, and could save her life only by betraying her counsellors, Longinus, as the chief of them, was seized and beheaded, A. D. 267. He died with all the firmness of a philosopher. Of his works, none, or rather, none philosophical ones, one is extant, except the treatise On the Sublime, which goes under his name, and this is in a state of mutilation. It illustrates, with great acuteness and taste, the nature of the sublime in thought and style, by rules and examples. The best editions are those of Pearce (1724), of Toum and Runken (Oxford, 1778). Benj. Weiske's edition appeared at Leipsic, 1809. There is an English translation of it by Wm. Smith. Longinus is usually called Dionysius, but this has arisen from the negligence of editors. The manuscript copy of the treatise On the Sublime, which appears in the ancient writings, bears the inscription in Greek, By Dionysius or Longinus, which appeared in the first printed copies as Dionysius Longinus. The Florence manuscript bears the inscription Anonymous. Some critics have ascribed the work to Dionysius of Halicarnassus, others to another Longinus, while others confess that the author is uncertain.

LONG ISLAND, or NASSAU ISLAND; an island belonging to the state of New York, extending 120 miles in length, and varying from ten to twenty miles in breadth. On the west, it is divided from Staten Island by the Narrows, and from Manhattan Island by the East river. On the north, East river and Long Island sound separate it from the mainland. Its eastern extremity is Montauk point. On the south, it is washed by the ocean. Lon. 71° 47' to 73° 57' W.; lat. 40° 34' to 41° 10' N. Like other insular positions, its climate is more mild than that of the adjacent continent. The island is divided into three parts—King's, Queen's, and Suffolk. Sag Harbour is the principal port. The south side of the island is flat land, of a light, sandy soil, bordered, on the sea coast with large tracts of salt meadow. The soil, however, is well calculated for raising grain, especially Indian corn. The north side of the island is hilly, and a strong soil, adapted to the culture of grain, hay, and fruits; and the eastern part is remarkably adapted to the growth of wood, and supplies, in great part, the city of New York with this article. This ridge forms Brooklyn and other heights, known in the revolutionary war. The principal towns and villages on the island are: Brooklyn, Jamaica, Sag Harbour, Flatbush, Flushing, Satauket and Huntington.

LONG ISLAND SOUND; a bay, from three to twenty-five miles broad, and about 120 long, extending the whole length of Long Island, and dividing it from Connecticut. It communicates with the ocean at New London, and, one in the condition from New York on the west to Fisher's Island on the east. On its northern shore are the towns of Greenwich, Stamford, Fairfield, Bridgeport, Milford, New Haven, Saybrook, New London, Stonington, &c. It receives the Connecticut, Husatonic, Thames, and Avery rivers.

LONGITUDE, geographical; the distance measured, according to degrees, minutes, seconds, &c., on the equator, or a parallel circle, from one meridian to another, which is called the first, or prime meridian. Longitude is divided into eastern and western. It is altogether indifferent through what point we draw the first meridian, but it must be settled what point we adopt. In Germany, the island of Ferro (q. v.) is generally adopted; in France, the observatory at Paris; in Britain, that of Greenwich; in Berlin, that of Berlin; in the United States, the meridian of Washington, which is sometimes taken as a first meridian. Some geographers reckon from the first meridian 180 degrees west, and the same number east; others, on the contrary, reckon the longitude from the west to the east, the whole length of the equator, to 360 degrees. The longitude of any place, together with the latitude, is requisite for the determination of the true situation of the place upon the earth. From the form of our earth, it follows that the degrees of longitude must always decrease towards the poles. The degrees of latitude, on the contrary, are all taken as equal to each other, and each amounts to sixty geographical miles. The measure of a degree of longitude upon any parallel of latitude is found by multiplying the length of a degree on the equator by the cos-sine (taking radius equal to 1) of the latitude of the parallel. The longitude shows the difference of time between any place and the first meridian. The sun performing his apparent revolution every 24 hours, or 360 degrees, lies fifteen degrees farther to the west than another, will have noon one hour later. Places whose difference of longitude amounts to 180° have opposite seasons of the day, since in the one place it is mid-day, and in the other, at the distance of 180°, it is midnight at the same moment. The difference in longitude of any two places may be also determined by observations of the time of certain celestial phenomena, taken at both places, such as eclipses of the moon, occultations of fixed stars, and, in particular, the eclipses of Jupiter's satellites; and, vice versa, we can, from the difference of longitude of two places, accurately ascertain the difference of their time. 15° upon the parallel circle corresponding to one hour, 1° gives 4 of time, 15' gives 1' of time, 15'' give 1'' of time, &c. The difference of longitude between Boston and London may serve as an example. This difference is 71° 4', 5'"; consequently, noon at London is four hours forty-four minutes and six seconds earlier than at Boston. The determination of longitude at sea, at any moment, is highly difficult and important. The British parliament, in 1714, offered a reward of £20,000 for an accurate method of finding the longitude at sea, within one half of a degree; but no adequate method of making a watch which should preserve a uniform motion, was the most suitable means that could be afforded to the navigator, who might, from the difference of the time of noon on board the ship, and the time by the watch immediately determine the difference between the longitude of the place for which the watch was regulated, and that wherein the ship then was. Harrison was the first who invented a chronometer of the requisite accuracy. Upon the first voyage, it deviated only two minutes in four months. Other artists followed, namely, Kendall, Mudge, Berthoud, Le Roy, &c. and Arnold and Emery have lately prepared such accurate chronometers, that they have been used for the determination of longitude upon land, as well as at sea, with great success. Nevertheless, astronomical observations furnish the most exact methods of determining longitude. As eclipses and occultations are comparatively rare, and are somewhat difficult to calculate; the calculation of the position of the moon from the sun or some of the fixed stars has been adopted for the calculation of longitude, because these can be measured almost every night, and an accurate knowledge of the moon's orbit is the only thing requisite thereto.
LONGITS, the

islands, the

of

arms, of

Villoison's

unwilling

London,

been

but,

ment

in

Aries,

diving

533

Longitude in the heavens, as that of a star, &c., is an arc of the ecliptic comprehended between the first of Aries, and a circle perpendicular to the ecliptic, passing through the place of the star. The computation is made according to the signs of the ecliptic. The longitude of a star is found by the means of its right ascension and declination. It changes in account of the precession of the equinoxes. See Equinox, and

Procession.

LONGUS, author of a Greek pastoral romance, the subject of which is the loves of Daphnis and Chloe probably lived in the time of Theodosius the Great. Nothing is known of the circumstances of his life, nor is he mentioned by any of the ancients. His work is interesting by its poetical spirit, graphic description, and style. The earlier editions, of which Villoisnon's is the best, do not contain the work in so complete a state as that of Courrier (Paris, 1610). He supplied, from a Florentine manuscript, an important chasm, but, having taken a copy of it, was careless or mean enough to render the page of the manuscript which contained that narration, illegible by an enormous ink-spot. This spot, the librarian, Del Furia, justly indignant, has laid before the eyes of the public in an engraving, with an account of the whole affair.

LONGWOOD. See St Helenan.

LOO-CHOO, or LIEOU-KIEOU, or LEW-CHEW; a group of islands in the Pacific ocean to the south of Japan and east of China, to which they are tributary. Lat. 20° to 27° 40' N.; lon. 127° 10 to 129° E. But little was known to us of these islands until they were visited by Maxwell and Hall, on their return from the embassy to China. (See Hall's Voyage to Corea and Loo-Choo.) They are represented as having a mild climate and an excellent soil, abounding in fruits and vegetables. The voyagers who have touched have been allowed to land only under the most jealous precautions, and have never been permitted to enter the country. In other respects, they have been kindly treated and supplied with provisions, for which the islanders have uniformly refused to receive pay. Captain Hall paints the islands as a new Arcadia, in which the use of arms, money, and punishments is unknown. It is manifest that Captain Hall's account of these islands is based on his interviews with the native inhabitants, who were ignorant of the language of the Loo-Choans, and whose intercourse with them was evidently subject to all the restrictions of a most vigilant and despotic police. In fact, the statements of Captain Hall on several points have been contradicted by the last voyager who has visited these islands (Beechey, Voyage in the Pacific, London, 1831), who asserts that the Loo-Choans have arms and money, and inflict the most severe and cruel punishments. As for the supplies, they appear to have been furnished by authority, and not by individuals, and the refusal to receive compensation is easily accounted for, on the ground that the government which shows such an unnatural interest in the welfare of its subjects, is unwilling to suffer any traffic between them and its subjects. They were for some time subject to Japan, but, in 1872, were conquered by China.

LOOK-OUT; a cape on the coast of North Carolina, in lat. 34° 34' N.; N. E. of Cape Fear, and S. W. of Cape Hatteras.

LOON (colymbius); large aquatic birds, common to both Europe and America. They seldom visit Britain, but are met with in the north of Europe and Asia. In America, they are most numerous about Hudson's bay, but are also found farther south. In Pennsylvania, they are migratory, making their appearance in the spring, and are commonly seen in pairs, and procure their food, which is fish, by diving and continuing under water for a length of time. They are very wary, and are seldom killed, eluding their pursuers by their great dexterity in plunging beneath the water. They are very restless before a storm, always uttering loud cries on the approach of a tempest. They do not eat, the flesh being rank and fishy. Some of the tribes in the Russian province of Ounamulga wear a scalp of this fowl, and form dresses, &c. of it, which are very warm, and imitate no moisture. The Greenlanders also make the same use of them. Theloon measures two feet ten inches from the tip of the bill to the end of the tail, and four feet six inches in breadth. The bill is colored a glossy black, and four inches and three quarters long. The corners of the mouth. The head and half of the length of the neck are of a deep black, with a green gloss, and purple reflections; this is succeeded by a band consisting of interrupted white and black lateral stripes, which encircles the neck, and tapers to a point on its fore part, without joining; below this is a broad band of dark glossy green and violet, which is blended behind with the plumage of the back; the whole of the upper parts are of a deep black, slightly glossed with green, and thickly spotted with white, in regular transverse or semicircular rows, two spots on the neck, and one on the breast; the under parts are pure white, with a slight dusky line across the vent. The outside of the legs and feet is black, the inside lead colour. The leg is four inches in length; both legs and feet are marked with five-sided polygons; weight about eight to ten pounds. The female is somewhat smaller than the male, and differs in her colours. The young do not attain their perfect plumage until the second or third year. It should be mentioned, however, that Temminck and the prince of Musignano state that the two sexes are alike in plumage; sportsmen who reside on the coast where these birds are plenty, insist, on the contrary, that the adults of both sexes may always be distinguished by their plumage. The female lays two large brownish eggs, and generally builds at the edge of small islands or the margins of lakes and ponds. In swimming and diving, the legs only are used, and not the wings, as in the guillemot and auk tribes; and, from their being situated far behind, and their slight deviation from the line of the body, the web of the foot enables them to propel itself through the water with great velocity.

LOOS, DÉNIEL FREDERIC, a distinguished die-sinker, was born at Altenburg, in Saxony, in 1735. Stieler, the royal die-cutter, took him as an apprentice, but kept him back from jealousy. Loos, however, finally went to Dresden, where he worked at the mint, but his merits were here also kept secret by his employer. After many vicissitudes, Loos was employed in the Prussian service at Magdeburg, but was unable to maintain his family, and lived for some time in poverty, in Berlin. His merit was at last acknowledged. In 1787, he became member of the academy of fine arts, and produced a great number of medals. Purity of style and drawing were not so much required in medals as at present in Germany, but his successors have hardly surpassed him in technical skill. Loos died in 1818. His son is one of the chief officers of the Berlin mint.

LOPE DE VEGA (Don Lope de Vega Carpio; Frey, as he is often called, signifiez frère), a celebrated dramatic poet, was born at Madrid, September 25, 1569. While a child, he displayed a lively taste for poetry, made verses before he knew how to write, and, as he himself avers, had composed several theatrical pieces, when scarcely twelve years of age. At an early age, he was acquainted with the Prince, for the purpose of seeing the world, but was stopped in Astorga and sent back, by the authorities of the place, to Madrid. Lope early lost
his parents, but was enabled, by the assistance of Avila, bishop of Alcala, to complete his studies. He affiliated with their Descalzos, speak the language of Amadis, and discuss questions of theology, grammar, rhetoric, arithmetic, geometry, music, and poetry. Inscriptions are also introduced upon the pedestals of the statues of distinguished men in a saloon, in which a part of the action takes place. This work proved the various acquisitions of the author: Concepts and quibbles are frequent in this, in Lope's other writings. In general, he is one of those writers who set a dangerous example of that false wit, a taste for which extended almost all over Europe. Marino particularly introduced it into Italy, and acknowledged, with lively expressions of admiration, his talent. Scarcely a month had passed before the publication of his Aredita, Lope married him. He appears, however, to have cultivated the poetical art with increasing zeal. A nobleman of rank having made himself merry at Lope's expense, the poet revenged himself upon this critic, and exposed him to the charge of having challenged him, and was dangerously wounded in the encounter, and Lope was obliged to flee to Valencia. After his return to Madrid, the loss of his wife rendered a residence in that place unprofitable to him. In 1588, therefore, he served in the invincible armada, the fate of which is well known. During this expedition he wrote La Hermosura de Angelica (the Beauty of Angelica), a poem in twenty cantos, which continues the history of this princess from the time in which Ariosto left it. By this work he hoped to do honour to his country, in which, as he learned in Turpin, the succeeding adventures of the heroine occurred. In addition to the peril of rivalry with Ariosto, the difficulty of success was increased by the appearance of a poem upon the same subject, by Luis Borbono de Solo, under the title Los Lagrzymas de Angelica, which passed for one of the best poems in the Spanish language. Having obtained this prize, Lope, after some hesitation, published a poem on the subject of Mary Stuart, viz. Corona trágica (the Tragic Crown), and dedicated it to pope Urban VIII., who had also commemorated the death of this queen. The pope wrote an answer to the poet with his own hand, and conferred on him the title of doctor of theology; he also sent him the cross of the order of Malta—marks of honour which, at the same time, rewarded his zeal for strict Catholicism, on which account he was also made a familiar of the inquisition. All this contributed to support the enthusiasm of the Spaniards for this "wonder of literature." The people for whom he wrote were without regard to criticism (for he says in his strange poem, Arte de hacer Comedias, that the people pay for the comedies, and, consequently, he who serves them should consult their pleasure), ran after him whenever he made his appearance in the street, to gaze upon this prodigy of nature (monstruo de naturaleza), as Cervantes called him. The directors of the theatre paid him so liberally, that at one time, he is said to have possessed property to the amount of more than 100,000 ducats; but he was himself so generous and charitable, that he left but little. The spiritual college in Madrid, into which he had been admitted, shared this wealth. It was a thing not worthy of the least one of his pupils, that Lope's last works are not entirely exempt from it. Another yet more distinguished assailant was Cervantes, who, publicly advised him, in a sonnet, to leave the epic poem, upon which he was then engaged—\textit{Jerusalén conquistada}—unfinished. Lope parodied this sonnet, and called it his poem, the weakest of his performances. He accompanied it with many remarks, which are all found in the last edition of 1777. Cervantes acknowledged his merits, however, in the following verses:

\begin{quote}
\textit{Poeta instigue, à cuyo verso a prose}
\textit{Nuestros los movimientos et lego.}
\end{quote}

(A distinguished poet, whom no one, in verse or prose, surpasses or equals.) Cervantes died soon after (1616), in poverty, in the very city in which his rival lived in splendour and luxury, and in the possession of the public admiration. How differently has posterity judged of the two poets! For 500 years, the fame of Cervantes has been increasing, while Lope is neglected in his own country. About the time of Cervantes' death, the enthusiasm of the Spaniards for Lope approached to idolatry, and he himself was not wise enough to reject it. The number of his poetical productions is extraordinary. It is said that he did not write a poem, and, in general, scarcely a month, any, scarcely a week, in which he did not produce a piece for the theatre. A pastoral, in prose and verse, in which he celebrates the birth of Christ, established his supremacy in this branch; and many other sacred verses and odes were imitated by his imitators, which, even to his zeal for the new calling to which he had devoted himself. Philip IV., who greatly favoured the Spanish theatre, when he ascended the throne, in 1621, found Lope in possession of the stage, and of an unlimited authority over poets, actors, and the public. He immediately loaded him with new marks of honour and favour. At this time Lope published \textit{Los Triunpos de la Fé; Las Fortunas de Diana}, novels in prose, imitations of those of Cervantes; \textit{Circe}, an epic poem, and \textit{Philemon}, an allegory, in which, under the character of the nightingale, he seeks to revenge himself upon certain critics, whom he represents under that of the thrush. His celebrity increased so much that, suspicious with respect to the enthusiasm which had been shown for him, he printed the work \textit{Sotillogia à Dios}, under the assumed name, N. P. Gabriel de Fadecopeo (an anagram of Lope de Vega de Carpio), which likewise aroused the admiration of the reader. In 1590, he published a poem on the subject of Mary Stuart, viz. \textit{Corona trágica} (the Tragic Crown), and dedicated it to pope Urban VIII., who had also commemorated the death of this queen. The pope wrote an answer to the poet with his own hand, and conferred on him the title of doctor of theology; he also sent him the cross of the order of Malta—marks of honour which, at the same time, rewarded his zeal for strict Catholicism, on which account he was also made a familiar of the inquisition. All this contributed to support the enthusiasm of the Spaniards for this "wonder of literature." The people for whom he wrote were without regard to criticism (for he says in his strange poem, \textit{Arte de hacer Comedias}, that the people pay for the comedies, and, consequently, he who serves them should consult their pleasure), ran after him whenever he made his appearance in the street, to gaze upon this prodigy of nature (\textit{monstruo de naturaleza}), as Cervantes called him. The directors of the theatre paid him so liberally, that at one time, he is said to have possessed property to the amount of more than 100,000 ducats; but he was himself so generous and charitable, that he left but little. The spiritual college in Madrid, into which he had been admitted, shared this wealth. It was a thing not worthy of the least one of his pupils, that Lope's last works are not entirely exempt from it. Another yet more distinguished assailant was Cervantes, who, publicly advised him, in a sonnet, to
plays. At this period, however, he occupied himself with religious thoughts, and devoted himself strictly to the contemplation of foreign and native poets to bewail his death, and to celebrate his fame, presented an example altogether unique in the history of literature. The splendid exequies continued for three days, and ceremonies in honour of the Spanish Phoenix were performed upon the Spanish stages with great solemnity.

The number of Lope's compositions is astonishing. It is said that he printed more than 21,300,000 lines, and that 800 of his pieces have appeared upon the stage. In one of his last works, he affirmed that the printed portion of them was less than those which were ready for the press. The Castilian language is, indeed, very rich, the Spanish verses are often very shrewd, and the French are not much worse. We may, however, doubt the pretended number of Lope's works, or we must admit, that, if he began to compose when thirteen years of age, he must have written about 900 verses daily, which, if we consider his employments, and the interruptions to which, as a soldier, a secretary, a father of a family, an uncle, a priest, he must have been subject, appears inconceivable. What we possess of his works amounts to only about a fourth of this quantity. This, however, is sufficient to excite astonishment at his fertility. He himself informs us that he had more than a hundred times composed a piece and brought it on the stage within twenty-four hours. Perez de Montalvan asserts that Lope composed as rapidly in poetry as in prose, and that he made verses faster than his amanuensis could write them. He estimates Lope's plays at 1800, and his sacramental pieces (Ados sacramentales) at 400.

Of his writings, his dramatic works are the most celebrated. The plots of those that approach nearest to the character of tragedy, are usually so extensive, that other poets would have made, at least, four pieces of them. Such, for instance, is the exuberance found in La Fuerza lastimosa, which obtained the distinction of being represented in the seraglio at Constantinople, in fertility of dramatic invention, and for the utility of his plots, both in public and private life. Lope stands alone. The execution and the connexion of his pieces are often slight and loose. He is also accused of making too frequent and uniform a use of duels and disguises (which fault, however, his successors committed still more frequently), and of freedom in his delineations of manners. Some (Lord Holland, for instance) have attributed to him also the introduction of the character termed gracio, upon the Spanish stage. In those irregular pieces which Lope composed for the popular taste, we find such bombast of language and thought, that we are often tempted to conclude that he intended to make sport of his subject and his hearers. The merit of the elaborate parts of his tragedies consists particularly in the rich exuberance of his figures, and, according to the Spanish critics, the purity of his language. In judging of his boldness in treating religious affairs, we must take into consideration the character of the nation, and the latitude of the Spanish stage. Many foreign dramatic authors, we maintain, employed in their works, which are the loftiest and most exalted, sometimes too much undervalued, appears in the most favourable light in his plays; the theatre was the best school for the correction of his three capital faults, viz., defective dramatic invention, manner of life, and of death, and in usefulness of learning." In some of his pieces, especially the historical, which were founded upon old romances and traditions, a certain rudeness of manner predominates, which is by no means destitute of character, and seems manifestly to have been chosen for the subjects. Others, which delineate the manners of the time, display a cultivated tone. They all contain much humour and interesting situations, and probably there are few which, with some alterations, would not be well received, even at the present day. Their general faults are the same—carelessness of plot and negligent execution. They are also deficient in depth, and in those fine qualities which constitute the mysteries of the art. A Collection de las Obras sueltas assi in Prosa como en Verso de D. Lope, &c., appeared at Madrid, 1776, seq. (21 vols., 4to.) This does not contain his plays, however, which were published at an earlier date, in 25 vols., 4to. Concerning his life (of which his poem Dorothea gives a very short and imperfect account), if we consult his writings, consult the work of lord Holland—Some Account of the Life and Writings of Lope Felix de Vega Carpio (London, 1817, 2 vols., 2d edition. LORD; of uncertain etymology; a title of honour or dignity, used in different senses. In the feudal times, lord (seigneur) originally was the title of the person who retained the dominion or ultimate property of the feudal or fee, the use only being granted to the tenant. A person who has the fee of a manor, and consequently the homage of his tenants, is called the lord of the manor. In these cases, the lordship or barony was connected with the seigneurial rights of jurisdiction. The superior lord was styled lord paramount, and if his tenants again grant a portion of land to other persons, they being tenants in reference to the lord paramount, and lords in reference to their own tenants, are called seigne or mean, i.e. middle lords. Lord is also a mere title of dignity, attached to certain official stations, which are sometimes hereditary, but sometimes only official or personal. All who are noble by birth or creation, that is the peers of Britain, are called lords; the five orders of nobility constitute the lords temporal, in contradistinction from the prelates of the church, or lords spiritual, both of whom sit together in the house of lords. See Peers. It is sometimes only an official title, thus lord Mayor &c. It is also applied, but only by courtesy, to the sons of dukes and marquises, and to the eldest sons of earls. In Scripture, the word Lord, when printed in capitals, in the Old Testament, is a translation of the Hebrew Adonai, which the Jews were accustomed to substitute in reading, and even in writing, for the inef
dah name Jehovah (q. v.); In the New Testament, it is applied to Jesus Christ, the term, in the original Greek, being xogos (owner, master). LORDS, HOUSE OF. See Parliament in the article Britain.

LORD'S SUPPER; a ceremony among Christians, by which they commemorate the death of the founder of their religion, and make, at the same time, a profession of their faith. Jesus Christ instituted the rite when he took his last meal with his disciples. The bread, which he broke after the Oriental manner, was a fitting symbol of his body, which was soon to be broken; and the red wine (for, probably, Christ used the blood of wine, which is the most common in Palestine) was a significant symbol of his blood. In all the churches founded by the apostles, this usage was introduced. In the first and second century, this rite was celebrated in connexion with the agape (q. v.) or love-feast. After the third century
when the congregations became more numerous, the unagapes censelled, and the Lord's supper was from thence on in the hands of the divines and of the service in the churches, in such a way that all present could partake, with the exception of catechumens (i.e., Christians not yet baptized), and of unbelievers. These were obliged to withdraw when the celebration of the Lord's supper commenced, because communion was considered as a mysterious act, which was to be withheld from profane eyes. Christians soon began to ascribe supernatural power to the rite, and to take the consecrated bread and wine for more than bread and wine, and to maintain that the body and blood of our Saviour were united with them. From this arose the doctrine of transubstantiation, which was started by Pachyiasius Radbertus in the ninth century. Though this doctrine was at first opposed (see Berengarius), it was yet so generally received, and in 1215, solemnly confirmed by pope Innocent III., in the fourth Lateran council. From the new doctrine sprang the adoration of the host (in which God was present, according to the new belief), as well as the custom of refusing the cup in the communion to the laity, because it was supposed, that, where the body of Christ was, his blood must be too (Concomitance), whence the use of the wine was not necessary to the efficacy of the rite. This refusal was, also, partly owing to a desire of avoiding every occasion whereby the blood of Christ might be incautiously spilled, and become profaned; and partly to the efforts of the clergy to establish a distinction in their own favour. Even before the origin of the doctrine of transubstantiation, the Lord's supper had begun to be represented as a sacrifice. From this sprung the private mass. (See Mass.) After the notion of purgatory had become prevalent, this doctrine was connected with the above-mentioned conception of the communion as a sacrifice, and now masses were said chiefly for the purpose of delivering the souls of the deceased from purgatory. As early as the seventh century, private masses were celebrated in various places; after the ninth century, they were in use everywhere. Thus the Lord's supper had become, in the course of time, something quite different from the design of its founder. This had been contended previous to the reformation, by some parties dissatisfied with the ruling church, especially by the Hussites (see Husaite, in article Husa), in the fifteenth century, to whom indeed the council of Bale was obliged to allow the use of the cup in the communion. The reformers renewed the complaint against the innovation of the Lord's supper, from the purpose of Christ, and the example of the apostolic age, and both the German and Swiss reformers agreed in rejecting the doctrine of transubstantiation, and the mass, and maintaining, that the Lord's supper ought to be celebrated before the whole congregation, and with the administration of both bread and wine. In explaining the words by which the supper was instituted, Luther and Zuinglius differed, and their different opinions on this subject formed the principal subject of the unhappy division between the Lutheran and Calvinistic churches. Luther took the words, "This is my body," &c., in their literal sense, and thought that the body and blood of Jesus Christ were united, in a mysterious way, with the bread and the wine, so that the communicant receives, with and under (cum et sub) the bread and wine, the real body and real blood of the Redeemer in the supper; while, on the other side, understood the words in a figurative sense, and supposed that Jesus Christ meant to say, "The bread and the wine represent my body and my blood," and maintained, therefore, that the bread and wine were mere signs of the body and the blood of Christ. From this difference of opinion arose a violent dispute between Luther and Zuinglius, which, in later times, has been between the divines and the Crypto-Calvinistic divines. The opinion advanced by Calvin, in which a spiritual representation of the body and blood of Christ is supposed in the communion, though it came nearer to the Lutheran doctrine than that of Zuinglius did, yet was essentially different, and, therefore, also met with a strong opposition from the strict adherents of Luther. Melanchthon inclined to the Calvinistic notion, and so did many other Lutheran divines, who were called by the opposite party Philippians and Crypto-Calvinists. The formula concordis, or articles of religious peace, suppressed the Crypto-Calvinistic doctrine, and made the communion a Catholic act in a church, and established the idea of Luther. In recent times, many Lutheran divines have inclined to the Calvinistic doctrine. The Greek church has not adopted the doctrine of transubstantiation in its whole extent; yet her doctrine comes nearer to this dogma than to that of the reformed church. The Oriental Christians differ also from the Western, in using leavened bread in the Lord's supper, and in administering it to children. See Greek Church.

The doctrine of the Lord's supper has given rise to such long and bitter contention between Catholics and Protestants, that the following remarks may be written not by a Catholic, and giving the Catholic views on this subject, may not be interesting to our readers.

The Catholic doctrine of communion (says the writer) cannot be understood without a clear insight into the fundamental views of the Catholic church on all sacred things. He, to whom Christianity is not an external revelation of the Deity, to whom Jesus is not the incarnate God, and his doctrine not divine truth higher than all human conceptions, who regards not the church as a divine institution, and her traditions as indispensably true, cannot enter into the Catholic views on the communion. It must be particularly considered, that Catholic Christianity is of a truly mystic nature. By mystics we mean not the capricious imaginations of each individual, but the universal mystical belief of the church. Of these mysteries the sacrificial communion is the highest, and is the central point of all the institutions of the Catholic church. In all religions, we find the idea of a sacrifice, which man offers to the Deity, by which he acknowledges a relation between himself and the Deity, and endeavours to represent the devout spirit of religion by an act of external worship. The purer this idea of a sacrifice, the purer is the religion. It was represented in the Catholic church to give it its highest reality and greatest purity. In the prophecies relating to the Messiah, it is said, that he shall be a priest after the order of Melchisedek (Psalm cx. 4); but this Melchisedek was a priest of the Most High, who offered bread and wine, (Gen. xiv.) How then was this prophecy fulfilled? Malachi predicted that the sacrifices of the ancient law were to be abolished, and supplied by a pure meat-offering. (Malachi i. 11.) The incarnate God walked in the flesh among mortals, teaching and working miracles. After having performed the miracle of multiplying the loaves, he delivered a part of his mysteries (John vi. 48—56; 1 Corinth. xix. 16; Luke xxii. 19, 20; Mark xiv. 22—29; Math. xxvi. 26—28.) It is easily perceived that this rite must have been coeval with the foundation of his religion, and that the apostles everywhere introduced it, and made it known its signification. Before the apostles have introduced and preached we learn only by tradition. This tradition, however, tells us that the ordinance of Christ was meant literally. The Lord (proceeds the writer) remained in his church: in the congregations of the Christians, the
body and the blood of the Saviour were offered and tasted in the shape of bread and wine. This was the basis from which all the later discussions derived, and it cannot be shown that it commenced at any particular time, or supplanted another doctrine. The clearest proof of this, that a similar doctrine, even if it be not the same doctrine of transubstantiation, is to be found in all the churches, which long since separated from the Catholic. This doctrine is in remembrance of the death and the resurrection of Jesus. But how (says the writer) can we sin against the body and the blood of Jesus? How can we take it at all unworthily, if the whole ceremony is a mere act of commemoration? To what purpose would be the admonition, "This do in remembrance of me," if there was no meaning attached to it but that of a participation in the fruits of Jesus' death by an act of commemoration? The memory of Jesus is essentially connected with all the benefits of his religion. Further, as soon as we admit of a real presence of Jesus in the eucharist, we must be ready to concede, also that the bread and wine cease to exist in reality, though they remain still in appearance. That which really exists, is the sacramentally (not visible) present body and blood of Christ. By a miracle of the Omnipotent, a change is effected, and this we call transubstantiation. It has been proved already by Leibnitz, that there is no philosophical contradiction in the opinion of most philosophers, that in the principal eucharistic school, the sceptics, to dispute the real existence of appearances. Even the oldest Christian fathers, not only in sermons, but in passages explanatory of their doctrines, and destined for the instruction of the catechumens, expressed themselves in such a way as to show us that the first Christians were not only convinced of Christ's being present through our belief, but also that the bread or wine no longer existed. Justin Martyr, endeavouring to give the emperor a notion of the religion of the Christians, after describing the ceremony of consecration, says, "We eat this not as common bread, and drink this not as common wine; but as Jesus Christ, after having been made man by the word of God, had flesh and blood, so we believe also, that the food consecrated by his words, has become the flesh and blood of the man Jesus." (Acts 1.) We know also, the Christians were accused, by the pagans, of having their sacred meals in a new sense of an infallible notion which certainly took its rise from their doctrine of the Lord's supper, of which the former might have heard some obscure account. The Christians, in general (continues the writer), kept this doctrine very secret (disciplina aevi). If they believed that they received Christ only through faith, it is not easy to see why they made such a mystery of it. But this they did, and instructed their catechumens in this doctrine but a short time before their baptism. The dogma of transubstantiation is as old as the communion itself, and was by no means first set up by Eleutherius Raubertus in the eleventh century, as is commonly asserted by the Protestants. There is no reason why that real presence should be limited to the time when the Christian receives the eucharist; for Christ distinctly says, "This is my body," and tenders it, on that account, to his disciples. And how could it be decided at what moment his presence commences, and when it ceases? This is, of course, substantially, no more decided among the different sects. They regarded the consecrated host with feelings of adoration; they partook of it with the utmost awe, and carried it with them in times of persecution, to encourage themselves with the enjoyment of it. Origen, a writer of the third century, says, "The bread and wine are made the substance of the holy mysteries, you know how to keep the body of the Lord you receive, with all caution and reverence (the Christians received it formerly with their hands), lest anyuid mistake it. In the same way, you believe justly that you bring guilt upon yourselves when, by negligence, you drop any part of it." Equally strong terms are to be found in Cyril's instructions to the new converts, as well as in the liturgy of all the Oriental and Western churches, the testimony of which is of the greater importance, as it is not that of a few of a few, but the public profession of entire churches. As from the first times, the presbyter of the congregation performed the consecration, the peculiar view of the Catholic church, which considers the spiritual guide of a congregation as a sacrificing priest, is explained. The mass is nothing but this sacrifice, and, so far, as old in its essential character as the Lord's supper, though it first received its external additions and form under Gregory the Great. The Lord's supper is a sacrament, which by an external symbol, sanctifies the internal man. The Catholic view of communion pervades the whole Catholic religious and ecclesiastical system. This creed of the whole Christian church, the Greek not excepted, as it is represented here, remained uncontroversied until the eleventh century, when the controversy between the Greek and the Latin churches broke out, respecting the bread to be used in the communion—whether it ought or might be the unleavened bread. By the doctrine of the supper, there arose no dispute till the beginning of the thirteenth century, when the priest Berengarius of Tours denied the doctrine of transubstantiation, but not that of the substantial presence of Christ. The whole church was surprised at this innovation. This gave occasion, in the fourth Lateran council, to a solemn proclamation of the old creed of the church on transubstantiation. This creed continued in full authority, and even Huss did not impeach it; nay, Huss and his adherents were filled with reverence towards the sacrament, and claimed even the cup. It had become customary at later times, from fear of spilling some part of the blood, to give only the body to the laity, since in the body the blood was contained (doctrine of concomitance). The Hussites, however, believed that the cup was a constituent part of the sacrament, without which the sacrament would not be complete. The pope, in the name of the church, sent for the council of Constance, in 1415. By the reformation of the sixteenth century, the whole Catholic system was attacked, as the reformers, rejecting the traditions of the church, took the Bible alone for their guide in matters of belief, and departed, at the same time, from the Catholic theory of communion. If they had left the Catholic doctrine on communion, the priesthood and mass would necessarily have remained too. By what means could the priests of the new sect obtain their consecration? It was therefore necessary to establish a new theory of communion; or, rather, it was the natural consequence of this new communion of bread and wine, that the scripture was to be searched, must needs lose a sense of the Catholic mysteries. In the council of Trent, session 13, are pronounced the following canons, which represent the creed of the church:—1. If any one denies that there is contained in the most holy sacrament of the altar, truly, properly, and essentially, under the name and dignity of the Lord Jesus Christ, in that substance of the bread and wine, together with the life and the blood of
our Lord Jesus Christ, and if he denies that wonderful and miraculous transformation of the whole substance of the bread into the body, and the whole substance of the wine into the blood, which the Church were to be, which they remain only the shape (species) of the bread and the wine, which transformation is termed, by the Catholic church, transubstantiation—*anathema* sit. 3. If there be any one who denies that there is contained in the venerable sacrament of the altar, under both sorts, and after division has been performed under the single parts of both sorts, the whole Christ—*anathema* sit. 4. If any one says, that after consecration has been performed, the body and the blood of Christ is not in the miraculous sacrament of the altar, but that this is only during the tastic, neither before nor afterwards, and that there is not in the consecrated host or the particles, preserved or remaining after the celebration of the Lord's supper, the true body of the Lord—*anathema* sit. 5. If any one says, either that remission of sins is the principal effect of the sacrament of the altar, or that no other results, but the general and spiritual effects, which the Church, of which the doctrine of the Jordan, and of the people, were, and still are; or he who adores them—*anathema* sit. 7. If any one says, it is not permitted to keep the holy eucharist in the piz, but that it must be distributed immediately after the consecration to the bystanders, or that it is not permitted to bear it reverentially to the sick—*anathema* sit. 8. If any one says, that the Christs offered in the eucharist is tasted only spiritually, and not sacramentally and really—*anathema* sit. 9. If any one denies that all Christian believers of either sex, as soon as they are arrived at the years of discretion, are bound, after the command of the holy Catholic church, to communicate, at least, at Easter every year—*anathema* sit. 10. If any one says, that it is not permitted to the officiating priest to administer the sacrament to himself—*anathema* sit. 11. If any one says, that faith alone is a sufficient preparation for the enjoyment of the holy sacrament—*anathema* sit. The Catholics have still the present seat to which a priest that the Lord remains with their church. See Corpus Christi.

LORENZO DE MEDICI. See Medeci.

LORETTO ; a small town in the States of the Church, about three miles from the sea, in the Marc of Ancona, with a bishop, who is also bishop of Recanati, and 5000 inhabitants, who are principally supported by the resort of pilgrims. Pilgrimages are made to the casa santo—the holy house in the cathedral of Loretto, which is supposed to have been the house of the virgin Mary, and which was carried by the angels (1294) from Gallilee to Dalmatia, and thence, in 1294, to Italy, near Recanati, and, finally (1295), to the spot where it now remains. This holy house, which is in the centre of the church, is covered, externally, with marble, and is built of ebony and brick. It is thirty feet long, fifteen wide, and eighteen feet high, and richly ornamented. It has also been imitated at other places (for instance, at Prague). Loretto formerly contained great treasures, collected from the pilgrims. The income of this house once amounted to 30,000 scudi, besides the presents received annually. The pilgrims were estimated at 100,000 yearly. Amongst other curiosities, a window is shown in the holy house, through which the face of Gabriel appeared to Mary, and then he announced the birth of the Saviour. Raphael's painting of the virgin throwing a veil over the infant is beautiful. The treasures were in part, expended in paying the contributions imposed by the French (1798); the rest was taken possession of by them. They carried the image of the virgin to Paris, but it was restored in 1802.

L'Orient : a fortified and regularly built seaport of France, department of the Morbihan, on the bay of Port Louis, at the influx of the small river Scorc. The harbour is large and secure, and of easy access. It has still some trade, particularly with the French colonies, and is a place of importance. The account of its magazines for the use of the royal navy. The principal manufacture is of salt. Population, 17,115; 340 miles W. by S. of Paris; Int. 47° 45' N.; lon. 6° 9' W.

LORME, MARY DE. See DeLorme.

LORRaine, Claude. See Claude Lorraine. Lorraine (Lotharingia; in German, Lothringen), so called from Lothaire II., to whom this part of the country fell in the division of the empire between him and his brothers, Louis II. and Charles (843), had previously belonged to the kingdom of Austrasia. It was divided between Germany and Lorraine; the former including all the country between the Rhine, the Meuse, and the Scheldt, to the sea; the latter, the countries between the Rhine and the Moselle, to the Meuse. Lorraine, at a later period, was bounded by Alsace, Franche-Comté, Champagne, and Burgundy. The bishopric of screened the vince of the Lower Rhine, and the Bavarian circle of the Rhine, containing 10,150 square miles, and at present forming the French departments of the Meuse, the Voges, the Moselle, and the Meurthe, with a population of 1,500,000 inhabitants. Its forests and mountains, among which the principal is the Moselle, are adapted for the raising of cattle, and contain much game; they also yield copper, salt, iron, tin, and some silver. Salt springs and lakes, abounding with fish, are also to be found. The soil is, for the most part, poor, and not adapted for tilage. The vine is cultivated to a considerable extent. The French and German languages are spoken. The people are of German origin. Lorraine was for centuries a subject of dispute between France and Germany. It was, for a long time, a fief of the German empire. On the death of Charles the Bold, duke of Lorraine, in 1431, without male heirs, the province passed to the French crown, in the person of the two grandsons of her son-in-law Frederick—Antony and Claude—founded, in 1508, the principal and collateral Lorraine lines, the latter of which spread in France (the dukes de Guise, d'Aumale, d'Elbeuf, d'Harceur, belonging to it). From that time forward (1540), France took a decided part in all disputes relating to Lorraine. Charles of Lorraine was driven out during the thirty years' war, on account of his connexion with Austria. He was restored in 1659, under severe conditions, and, in 1662, he consented that Lorraine should go to France on his death, the house of Lorraine being recognised as princes of the blood. He was, however, again deposed, and died in the Austrian service. His brother's grandson Leopold was recognised as duke of Lorraine by the peace of Ryswick (1697). France finally succeeded in her intentions, when Stanislaus, father-in-law of Louis XV., and the dethroned King of Poland, by the peace of Vienna (November 8, 1738), received the dukedom of Lorraine and Bar (with the exception of the county of Falkenstein), which, after his death (1766), were united with France. By the second peace of Paris (1815), a small part, with the fortress Sarlous, was ceded to Prussia, and the rest, including the province of the Lower Rhine. Besides the principal town, Nancy, Lunéville has been distinguished by the peace of 1801. Charles Eugene, duke of Lor-
The Lot

Lory, born September 25, 1731, at the commencement of the French revolution, commanded the regiment royal Allemand, under the title of prince Lory, and afterwards the Austrian service, and died at Vienna, November 21, 1825. He was the last of the younger line. The elder line now rules in Austria, Tuscany, and Modena. See Edeline's Résumé de l'Histoire de Lorraine (Paris, 1825). See also Hapsburg.

The name has been given to some of the parrot tribe, from their frequently repeating the word. They have, however, no distinct characters of sufficient importance to separate them from the great genus psittacus. They are very active and gey, even in captivity. They are found, for the most part, in the Moluccas, and are held in great estimation in some parts of the East. The most prized is the scarlet lory, which was for a long time unknown in Europe, as the Dutch were at first wholly unsuccessful in transporting it thither; the birds generally died on the voyage. They are now, however, brought across the ocean without much difficulty, and are marked by their beauty, tamelessness and attachment to their masters. The Javanese appear to have a great predilection for them, and raise them in great numbers. But the most valuable of these birds is the yellow-collared, which is of a deep red colour, with a circle of yellow around its neck. It is principally found in New Guinea. It is very docile and familiar, and has great aptness in learning to speak; this, added to its beauty, and its extreme delicacy, as well as the difficulty of rearing it, renders it very highly esteemed. A single bird has been sold in London as high as twenty guineas.

LOT; a river of France, which rises in the department of Loire, and joins the Garonne, near Aiguillon; length, 150 miles. It gives name to a department. See Department.

LOT; according to the Hebrew history, a nephew of Abraham, who, to avoid dissensions between his followers and those of Abraham, went east into the plain of Jordan, towards Sodom, while his uncle dwelt in Canaan. Having been taken captive by some marauding chiefs, Lot was delivered by Abraham from their hands. Having received two angels into his house in Sodom, an attack was made upon it by night, by the inhabitants, who were struck blind, and the impending destruction of the city was announced. Lot fled with his relatives and his property, and took refuge in Zoar. His wife, however, returning for a few moments to look at her home, was turned into a pillar of salt, which Josephus, and Benjamin of Tudela, declared existed in their times, and, according to some late travellers, was to be seen not long ago. The text is, by some, understood merely to signify, that she was rendered a statue, but, to being incrustated with salt. Lot afterwards became the father of Moab and Ammon, by his two daughters.

LOT; often finds it extremely difficult to choose between two measures, things, persons, &c. In such cases, he often allows himself to be determined by the number of persons present; and, in part, the reason why men appeal to lot. The predominating motive, however, in very many cases, is a superstitious belief of the direct interference of the Divinity in determining the result. Hence we find the lot most frequently resorted to in ages and nations little advance in civilization, and less guided by reason than by the influence of the supernatural. Hence, too, the religious ceremonies with which the appeal to lot is often accompanied in such a state of society. (See Divination.) It would be endless to enumerate the different modes of determination by lot, and the various cases in which men have resorted to this mode of resolving doubts. The Hebrews used to draw lots before undertaking any important enterprise; also in criminal trials, to determine the question of guilt or innocence; and at the election of officers. Such dice were found in many temples, and one at Prænesta was famous on that account.—

The northern nations—Russians, Germans, Swedes, &c.—all had their ways of prying into the future by lot. The Moravian Brethren have re-introduced the appeal to lot; they used it in the case of marriages and appointments, in their community, though it must be observed that they are not determined solely by it.

LOT-AND-GARONNE; a department of France. See Department.

LOT; a German weight, the half of an ounce, or the thirty-second part of a pound avoirdupois.

LOT; the leading branch of mathematics and mechanics is also called Leda in German.

LOTTHIAN, EAST. See Haddingtonshire.

LOTTHIAN, MID. See Edinburghshire.

LOTTHIAN, WEST. See Linlithgowshire.

LOTICHUS, Peter (called Secundus, to distinguish him from St. Peter), born at Smyrna, in Asia, 128, studied philosophy, the ancient languages, rhetoric, and poetry under Melissus, Camerarius, and Melan/chthon; served in the forces of the Smalcaelic league; travelled in France and Italy, as the tutor to some rich young men; during this time, studied medicine at the most famous universities of both countries, and afterwards received a doctorate at Padua. He died very young, while professor of medicine at Heidelberg, 1500, as it is said, in consequence of a love potion, which was given him in Bologna. His Latin poetry, particularly his elegies, give him a place among the first modern Latin poets. There are editions of his Poemata, by P. Burmann (Amsterdam, 1764, 2 vols., 4to), and by Kretschmar, (Dresden, 1773.)

LOTION, in medicine and pharmacy, is a wash for beautifying the skin, by clearing it of the deformities occasioned by a preternatural secretion. Almost all the lotions advertised for sale, contain much deleterious matter, and therefore ought never to be had recourse to.

LOTTERY (from lot); a scheme for the distribution of prizes by chance. Lotteries, like every other species of gambling, no doubt have a pernicious influence upon the character of those concerned in them. Though this influence is not so direct, and the immediate consequences are not so disastrous, as those of some other species of gambling, which call into exercise the violent passions, and stave the gambler's whole fortune upon a single chance or exertion of skill,—still, as this kind can be carried on secretly, and the temptations are thrown in the way of both sexes, all ages, and all descriptions of persons, it spreads more widely in a community, and may thus silently infect the sober, economical, and industrious habits of a people more extensively and deeply, than those species of gambling which are attended with greater turbulence, and a train of other vices.

Lotteries are of different kinds; 1. Numerical lotteries, or lots (lotto in Italian) instituted by the Genoese. At the elections of the counsellors, the names of the candidates were cut into a vase, and then into a wheel-of-fortune, when wagers were laid upon the event of the elections; the state finally undertook the Superintendence of the bank. It is said that Bene detto Gentile, a counsellor, first introduced this lottery in
LOTTERY.

545

1693; and, because the name Gentile, by chance, had never been drawn, the popular belief prevailed, that the devil had carried him off, together with his name, to punish him for this unlucky invention. Numbers were afterwards substituted instead of the names of eligible noblemen, and hence the lotto assumed its present form. The numbers from one to ninety are used; from these, on the day of drawing, five numbers are always drawn. Out of the ninety numbers, each adventurer chooses for himself such and as many numbers as he likes, and specifies with what sum and upon what kind of chance he will back each selected number, because he receives a ticket. In this lottery, there are four kinds of chances: 1. An estrado, so called, which requires only one number among the five that are drawn, and in which the successful adventurers receive fourteen times the stake. By this the lotto gains sixteen per cent., because there are seventeen blanks to one prize. 2. The wager, in which a man lays a wager, as it were, with the lotto, that one of the selected numbers will have the first, second, third, fourth or fifth place in the order of drawing. Should this event happen in the drawing, the better obtains sixty-seven times the amount by which the lotto gains about twenty-five per cent. — 3. The third is an ambo, in which, of the numbers drawn, there are two which the adventurer has pitched upon. He receives from the lotto 240 times the stake. In this case, the lotto gains thirty-seven per cent., there being 399 blanks to one prize.— 4. The last is a terno, by which the lotto gains fifty-four per cent., there being 11,347 blanks to one prize. It requires the adventurer to pitch upon three of the five numbers drawn, in which case he wins 4800 times the amount of the stake.

The quoternes and quinternes are a later invention, and have been applied to both public and private lotteries. In the former, the lotto thereby gains eighty-eight per cent., and more.

The lotto was every where patronized by the multitude, with an interest increasing almost to madness. Wise governments soon saw into the destructive tendency of the lotto, and put an end to it, or prohibited adventuring in it under a severe penalty. Though the profit of the lotto banks was evident, yet fortunate, by means of ternes and quinternes, brought many of them to ruin, or, at least, to its very verge, and hence, if numbers were backed too frequently, the conductors took the precaution to secure themselves, by declaring beforehand that nobody, who in any way, whatever, had bet and they could receive no further stake upon them. Frauds, also, were practised, by means of violent riding and carrier-pigeons, on those lottoes, the under offices of which, being placed at a distance, were accustomed to sell tickets, after the drawing in the principal offices had commenced.

1f. The proper lottery, called also class lottery, when divided into classes. Its origin is more ancient than that of the lotto. It has been referred to the Roman Congiaria. It is more probable that it originated from the transfer of merchandise by lot, of which method the Italian merchants made use in the middle ages, and of which we also find traces in Germany; for as early as 1591, the council at Osnaburg is said to have established lotteries for merchandise. So also in France, under Francis I., similar lotteries for merchandise were permitted to the merchants, under the inspection of government, in which the merchants themselves did the drawing, and lotteries were established at Florence, in 1530. In 1571, there appears to have been a public officer in Venice for the inspection of the lottery. From Italy, lotteries passed into France, under the name of blanche (from the Italian bianco), because most of the tickets were white. Among white paper, order was made in 1659, and 1658, Louis de Gonzaga established such a

blanche in Paris, for providing poor girls of his estates with dowries; and, in 1666, Lawrence Tonti (from whom the Tontines derive their name) sought to establish a large blanche royale, which was first accomplished in 1690. Since this time there have been in France only loteries royales, the income of which is commonly applied to government; and this inquisitive traffic has been revived of late, in France, on a much larger and more destructive scale than it has attained in any other country. In 1810—and we have no reason to believe any decrease has since taken place—lotteries were drawn twice a week in Paris, and so of other French cities. The lotto was drawn in Osnaburg, as to afford one every other day. 12,000,000 francs were yearly produced to government by this public gambling; and it has been estimated, that at Paris, the result has been more than 100 suicides annually. In England, the first lottery occurs in 1567—1608, a printed plan of which, as distributed, belongs to the antiquarian society in London. In 1612, a lottery was granted in behalf of the Virginia company, and, in 1680, one also in behalf of the undertaker of an aqueduct to furnish London with water. In 1799, the rage for private, and, in many instances, fraudulent lotteries, was so great in England, and shop-keepers, of all descriptions, disposed of their goods in this way, the price of tickets being as low as half-a-crown, a shilling, or even sixpence. Towards the close of the year, an existing act of parliament was put in force for their suppression, and another to the same purpose was passed in the tenth of queen Anne. The first parliamentary lottery was instituted in 1709, and, from that time till 1824, no session passed without a lottery bill. In October, 1826, the last British lottery was drawn. They are now abolished in Britain. As early as 1612, a lottery was drawn in Amsterdam, to procure money for the erection of the tower of a church, and, in 1653, one at Delft. In 1653, one was established at Hamburg, according to the Dutch method, and, in 1699, the first class lottery, at Nuremberg, and, in 1740, the first one was drawn in Berlin. Most of the late German lotteries are drawn in classes, in order to facilitate the sale of tickets. The great lottery of Hamburg goes upon the plan of one drawing. Latterly, lotteries for merchandise of all kinds, under the inspection of government, have been frequent in Germany. The managers of the principal cities sell blanks only, and either, however, divide them into halves, quarters, eighths, and even sixteenths, in order to facilitate their sale. In some places, they even let out tickets and parts of tickets, upon a particular number of drawings; in which case they are not obliged to pay the prize which may fall to the ticket, unless it be drawn within the stipulated number of drawings. If the principal prizes remain for a long time in the lottery, so that the probability of being able to obtain them increases at each successive drawing, then a great profit is made in buying and selling tickets, and there are cases in which, in the last drawing, ten or even twenty times the original price of the ticket has been demanded. Very lately, in the Austrian monarchiy, in the kingdom of Bavaria, and in the duchy of Mecklenburg, estate lotteries have been got up, and manufacturies, the estates of noblemen, and even whole lordships, have been disposed of by lottery, under partial and conditional guarantees, and for the security of important mercantile houses, which undertook the disposal of the property, in order to settle the debts of the owners. A money lottery has ordinarily been combined with them.

Latterly, lotteries have been combined with state loans. When the credit of the state is low, or when the rate of interest is high, efforts have been made to
induce capitalists to put their money into the hands of the state, by means of a lottery, which gives them the expectation of a premium above the customary interest of the country. For example: If a government is uncertain of obtaining, or cannot obtain, money at five per cent., it may increase the interest, by dividing the object by offering four per cent., for a loan, and dividing the remaining three per cent. among the lenders by means of a lottery; for the hope of winning the great prizes in the lottery, in addition to the certainty of disposing of their capital at four per cent., has been shown to many to be sufficient to compensate them of seven per cent. interest. In this way, loans have been raised in Austria, Denmark, Baden and other states, and also in Prussia, in 1821. By this means, in Prussia, stocks to the amount of 30,000,000 were sold at their full nominal value, which, in the market, were current only at seventy per cent.

In most, if not all of the United States of America, lotteries, not specially authorized by the legislatures of the states, are prohibited, and the persons concerned in establishing them are subject to a heavy penalty. In some of the states, lotteries have been very extensively carried on is the case in the Southern States—Virginia, Maryland, and particularly Tennessee. They have also been numerous in New York. The object for which they have been granted has been generally the assistance of literary or benevolent institutions—colleges, academies, hospitals, asylums, or of public works—as roads, bridges, the improvement of the navigation of rivers, &c. Their pernicious effects have induced the legislatures of some of the United States to decline granting them in any case.

LOTUS. This name has been applied very vaguely to various species of plants which have been celebrated in mythology and fabulous traditions. In the ancient Hindoo and Egyptian mythological representations of nature, the lotus (nelumbo speciosum, Lin.), an aquatic plant, was the emblem of the great generative and creative powers of the world. Several varieties are found in India under the names of paduna, tamarua, and casuala. When Vishnu, says the Hindoo fable, was about to create the world, the god, swimming in the ocean of milk, produced the lotus from his navel. It unfolded its flower, and displayed Brama, the first result of the creative energy. As an aquatic plant, the lotus was the symbol of the gods, the goddesses of the Ganges. In Egypt, it was consecrated to Isis and Osiris, and was an emblem of the creation of the world from water. It was also the symbol of the rise of the Nile and the return of the sun. It is found in bass-reliefs and paintings on the Egyptian temples, in all representations of sacrifices, religious ceremonies, &c., and is to this day, and whatever is connected with death or another life. With both of these nations, it was regarded with religious veneration, and the precept of Pythagoras to abstain from beans, has been supposed to refer to the fruit of the lotus-plant. The rhodium lotus is a shrub, the fruit of which is a small purplish berry, of a delicious taste, which is used by the natives of Africa to make a sweet cake. This shrub is found on the northern coast of Africa, and is probably the food of the lodophagi of antiquity. The fables of the ancients concerning them are well known. They were fooded as a mild, harmless plant, to which no harm was done, either on the lotus berry (hence their name Sávers and payam, to eat), which had the power of making strangers who ate it, forget their native country.

LOUDON, or LAUDON, GIDEON E R E N S T, baron of, one of the most distinguished generals of Austria in the eighteenth century, was born at Tootzen, in Livonia, in 1716, and was a descendant of an old Scottish family, a branch of which had emigrated thither in the fourteenth century. In 1731, he entered the Russian service, and rose to the rank of lieutenant, under Munich, in the campaign against the Turks. In 1739, he was discharged, in consequence of other engagements, and entered the Austrian service, went by the way of Berlin, where, by the advice of some of his former comrades, he attempted to obtain admission into the Prussian service. After being kept in suspense for a long time, he became so poor, that he was obliged to accept the offer of a commission of the rank of colonel of an infantry, and was allowed him to be presented, he turned from him, with the words La physiognomie de cet homme ne me ressent pas. Loudon then proceeded to Vienna, and, in 1742, was made captain in the corps of Pandours, under the partisan chief Trenk. In the battle of Saverne, he was wounded and taken prisoner, but was exchanged, and served against Frederic the Great, in the second Silesian war. Trenk intimated to Loudon the outrages and cruelties which he had himself committed, but the latter defended himself from the charge, and Trenk was sentenced to imprisonment for twenty-five years. Perfecting himself for peace, Loudon again lost his employment, and lived in great poverty. He was at length appointed major in a regiment stationed on the Turkish frontier, where he married, and embrace the Catholic religion. Five years afterwards, the seven years' war broke out, and Loudon's name was largely struck from the list of officers desired for service. This was done by his general, who commanded in Croatia, a man who hated talent; upon which he went to Vienna to complain, but found the authorities prejudiced against him, and was about to be sent back to the frontiers, when a friend succeeded in getting him appointed lieutenant-colonel of a corps of light-infantry. Loudon soon distinguished himself, and was appointed, under the prince of Hildburghhausen, commander of the imperial forces which were united with the French under Soubrane. Thus Loudon was obliged to witness the surprise of Gotha by the Prussian general Seelitz, and the defeat at Rossbach. At this time, Frederic the Great sent him a flattering letter, with the commission of general, which his hussars had taken from an Austrian courier. In 1758, Loudon was made lieutenant-field-marshal. He decided the victory of Caporetto, and, in 1762, his share in the destruction of the Prussian monarchy, and was appointed general of artillery, with the command of 30,000 men. In 1760, he gained the battle of Landshut, and covered the retreat of the army of Daun, after the battle of Liegnitz, in so masterly a manner, that Frederic exclaimed—"We must learn how to retreat from Loudon: he leaves the field like a conqueror." In 1761, without any previous investment, he took Schweidnitz, which was well provisioned and strongly fortified, by assault—an achievement for which he was on the point of being called to account before the council of war at Vienna. At the breaking out of the Bavarian war of succession, he was appointed commander-in-chief and field-marshal. After the conclusion of peace, he studied diligently during nine years. When the war with Turkey broke out, Joseph II. thought, at first, that he could conduct the campaign without him. It was Loudon himself obliged to resort to the aged general, and victory returned to the Austrian banners. For the conquest of Belgrade, Loudon received the star of the order of Maria Theresia, which was composed of brilliants, and kept in the treasury of the imperial family, and which properly belonged only to the emperor as grand master. After Loudon's death,
the emperor Leopold gave his widow 50,000 florins for it. London also received the unlimited command of the English church, which had not been conferred on any one since Eugene. He died July 14, 1790, at his head-quarters at New Tisitsche, Moravia. London continued to study, even in advanced age, and his military boldness seemed rather to increase with his years. In his private life, he was extremely cunning, and always avoided quarrels, which were answered by Aremberg, in reply to the question of the empress, at a court party, Where is Louis? answered—"Le voilà comme toujours derrière la porte, tout honteux d'oeuvrer tant de mérite."

LOUIS IX. (St.), king of France, eldest son of Louis VIII. and Blanche of Castile, born 1214, and baptised at Poissy (for which reason he sometimes wrote himself Louis of Poissy), came into possession of the government in 1226, and remained under the guardianship of his mother, who was at the same time regent of France. This is the first instance of the guardianship and regency being united in one person. The queen, and, with the assistance of the pope, brought into subjection the independent barons, who, always at war with each other, disturbed the tranquillity of the kingdom. Louis successfully pursued the enterprise of his mother, summoned to his council of most able and virtuous men, and to the abuse of the ecclesiastical jurisdiction, composed the disturbances in Brittany, preserved a wise neutrality in the quarrels of Gregory IX. and Frederic II., and was always intent upon promoting the happiness of his subjects. The wise management of his states enabled him to levy a powerful army against Henry III. of England, with whom the great men of the kingdom had united themselves. Louis had the good fortune, in 1241, to defeat his adversary twice in the course of six days, and to force him to a disadvantageous peace. In the year 1244, when sick of a dangerous disorder, he made a vow to undertake a crusade to Palestine; and neither his mother nor wife was able, four years after, to prevent him from fulfilling this vow. He embarked with his wife, his brothers, and the French chivalry, landed at Damietta, and, in 1249, conquered this city. He afterwards twice defeated the sultan of Egypt, to whom Palestine was subject. He himself performed prodigies of valour, particularly in the battle of Massura (1250). But famine and contagious disorders soon compelled him to retreat; his army was almost entirely destroyed by the Saracens, and himself and his followers carried into captivity. The sultan demanded for the ransom of Louis and his lords the restoration of Damietta and 1,000,000 gold Byzantines. But Louis answered—"A king of France cannot allow himself to be bartered for gold." He offered, however, to restore Damietta, as the ransom of his own person, and to pay the sum demanded for his followers. The sultan was so well pleased with this answer, that he contented himself with 800,000 Byzantines (about 100,000 marks of silver, and concluded a truce of ten years. (In Napoleon's Mémoires, Notes, et Mélanges (vol. i.) is found a comparison between the campaign of Bonaparte in Egypt and that of St. Louis.) It was not till the year 1254, that Louis returned to France, and, in the interval, queen Blanche, who had ruled the kingdom in an exemplary manner, had died. Louis again turned his attention to the administration of the laws, which, until this time, had been left entirely to the caprice of the barons. The death of their lords to four royal tribunals, and learned men were introduced into the parliaments, whose members had till now been composed of barons frequently so ignorant as to be unable to write. Louis likewise diminished the taxes, which had exhausted the wealth of the subjects. In 1269, he drew up a paragmatic sanction, which secured their rights to the chief or ordinary of the church, which had not been pressed, when occasion required, the arrogant pretensions of the clergy. The high character which Louis IX. bore among his contemporaries may be seen from this circumstance, that Henry III. and his nobles, in 1268, selected him for the arbiter of their disputes. Louis was elected, and united to his dominions several French provinces which had hitherto been under the dominion of England, he determined, in 1270, to undertake another crusade. He sailed to Africa, besieged Tunis, and took its citadel. But a contagious disorder broke out, to which he himself (Aug. 24, 1270), together with a great part of those persons who live at a period when old principles are giving way to new, and whose life, therefore, becomes an epoch. But Louis XI. is a subject of great interest, not only as a representative of his age, but in his individual character. A person more ready for crime, if conducive to his ends, or a greater devotee, not for the purpose of deceiving others, but to quiet himself, is not to be found among monarchs. The life of such a sovereign can hardly be treated satisfactorily, within the limits to which we are confined, because it is not particular events, but the policy of his government, and the character of his measures, which render him remarkable. A full view of his life would be a history of France during the fifteenth century; we can give only the outlines. Louis XI. was the son of Charles VII., and was born at Bourges, July 3, 1423. He was educated in a simple manner, under the eyes of his mother, Mary of Anjou, one of the most virtuous women of her time. At the age of five years, he married Margaret of Scotland, who died seven years afterwards. Active, bold, and cunning, he was the reverse of his well-disposed but imbecile father, of whose ministers and mistress, Agnes Sorel, he soon showed himself a decided enemy. In 1440, he left the court of his father, became the head of an insurrection at Niort, known under the name of la Praguerie. Charles debated the rebels, executed some, but pardoned his son, whom he even trusted, in 1442 and 1443, with the command against the English and Swiss. Louis conducted himself with valour and prudence, and his father became entirely reconciled to him; but, having soon entered into new conspiracies, Louis was obliged to flee to Dauphiné, which Charles left at his disposal. Contrary to the will of his father, he married the daughter of the duke of Savoy, and entertained a reasonable correspondence with the king's court; he is even said to have been necessary to the death of Agnes Sorel. His father, however, obliged him to flee to Burgundy, and he lived five years at Grenep, in Hainault, in a dependent condition. He repeatedly appeared disposed to return, when the king's death seemed to open a favourable period, and, with the residue of his father's health, always declined so doing. Charles VII. died in 1461, having, from fear of being poisoned by his son, hardly ventured to eat any thing, and thus lost his life by excessive care of it. Louis now hastened to Rheims to be crowned. He promised pardon..."
to all who had used force against him in the service of his father, excepting seven, whom he did not name. He was to be lodged in the castle of the Isle of Wight. He immediately broke his oath. The ministers of his father were dismissed, and men of the lower orders—barbers, tailors, &c.—assumed their places. Insurrections broke out at Rheims, Alençon, &c., in consequence of his imposition of new taxes, in violation of his oath; but they were soon quelled, and followed by many executions. Louis now made a tour through the south of his dominions, supported the king of Arragon in his usurpation of Navarre, and obtained the cession of Roussillon and Cerdagne. His policy became more and more evident. Whilst he pretended to reconcile contending parties, he secretly instigated them against each other; and, whenever he had a meeting with a foreign prince, he corrupted his courtiers by bribes, and established secret correspondences with them: instances of this are to be found in his conduct as arbitrator between Castile and Arragon (1463), at his meeting with Henry IV. of Castile, on the Bidassos, and, at an earlier period, at the court of Henry II. of Burgundy, he even forced the by-law of seizing the duke of Burgundy and the count of Charleroi. His vassals rebelled against him on account of his treatment of Francis II., duke of Brittany, whom he attempted to deprive of his rights. The duke, being taken by surprise, had promised to recognize him as monarch of Burgundy, but encouraged the dukes of Lorraine, Bourbon, and Burgundy, and the king's brother, the duke of Berri, to conclude the ligne du bien public, which, in 1465, began open hostilities. The Burgundians besieged Paris, and the king could force his way to his capital only by means of the battle of Mouthié. But Louis extricated himself, on this as on other occasions, by artful treaties, which he never observed longer than he was compelled to. He consented to yield Normandy to his brother, part of Picardy to Burgundy, &c.; but, no sooner was the league dissolved, than he declared that Normandy could not be severed from France, and forced his brother to seek refuge in Brittany. The duke, however, was too weak singly to maintain the struggle against the king, and signed a sort of capitulation just as Charles the Bold, the young duke of Burgundy, approached with an army to his relief. Louis, who might have risked a battle with Charles, preferred negotiation, which, however, proceeding slowly, he requested a passport into one of his four towns, and acted in good faith. He then repaired to him at Lorraine. He had, just before, secretly instigated the people of Lige to rise, and promised them aid. Charles, having discovered this act of treachery, was furious with rage, and hesitated three days (during which he kept the king in prison) as to what course he should adopt. Nothing but the aversion of Charles to take the life of a king, and the greatest presence of mind on the part of the latter, who asserted his innocence under the most solemn oaths, saved him.* He was obliged to accompany Charles to Lige, and to witness the pilage and slaughter of which he had been the cause. A peace was concluded on favourable terms for Charles and his allies; but, when Louis returned to Paris, he used every artifice to evade its fulfilment. He had promised to cede Champagne to his brother, but persuaded him to take Guienne instead. The duke of Burgundy, irritated at this conduct, secretly concluded an alliance with England and Brittany. Meanwhile, Louis XI. had become the father of a prince (afterwards Charles VIII.), and the duke of Guienne had lost all hope of ascending the throne of France. He, therefore, renewed his connexions with Burgundy. Louis obtained information of these proceedings, and soon after, the duke of Berri died of poison administered in an ambrosial draught which had been given as a sleeping draught. He was the perpetrator of the crime, though he ordered masses to be said for the deceased. The duke of Burgundy openly accused him of the murder of his brother, and also of an attempt on his life, whilst Louis charged Charles with a design of assassinating him. The struggle was renewed between them with renewed fury, but an armistice was soon after concluded, in which the duke of Brittany was included. The king of Arragon, who had also waged war against Louis, was not a party to this treaty, and the French king now turned his arms against that prince, from whom he rested a large extent of territory. He sent the cardinal Joffrouil against the count of Armagnac, who atoned for his constant rebellions by a terrible death. During the armistice, Charles had attacked Neuss, with great loss. Louis united with the emperor Frederic III. and the Swiss, and attacked Burgundy, in 1475. He concluded another armistice (Dec. 23) with that of England, and helped to assist Charles, by the promise of a sum of money and a pension, and of marrying the dauphin to an English princess. Burgundy and Brittany soon after concluded another armistice with him, by which St. Quentin was ceded to Louis, and the count of Neuchâtel, and the count of St. Pol, was given up to him. After the death of Charles the Bold (q.v.), before Nancy, in 1477, Louis took possession by force, of a considerable part of his dominions, as vacant fiefs of France, and rejected the proposed marriage of the daughter of Charles, then twenty years old, with the dauphin, who was but ten years of age. Maximilian, son of the emperor Frederic III., obtained the hand of that princess, with a part of her dominions, and defeated the forces of Louis at Guinegate in 1478. After protracted negotiations, peace was finally concluded, Dec. 23, 1482, Mary being then dead, and the city of Ghent remaining faithful to her heirs, Margaret and Philip. It was agreed that the dauphin should marry Margaret, and receive the counties of Artois and Burgundy, &c., and that Philip should receive the remaining territories. In 1481, Louis, who had been twice affected by apoplexy, haunted by the fear of death, shut himself up in his castle of Plessis-le-Touquet. He was taken by a stroke of apoplexy, and actually died at his chamber, but was not dead when they came to him. His body, when taken, was deposited in the church of Nevers, and actually loaded himself more than ever with images of saints and relics, continued to commit crimes and ask pardon for them from son brave dame, sa petite mariezse (the virgin) and died at last, Aug. 31, 1483. The great object of Louis was the consolidation of France, the establishment of the royal power, and the overthrow of that of the great vassals. He has often been blamed for neglecting to marry the dauphin to Mary of Burgundy, and allowing her to be united to an Austrian prince; also for not taking the opportunity to marry the dauphin to Joanna, daughter of Ferdinand and Isabella, which would have made Charles VIII. heir of Spain and America. But Chateaubriand says, that mere increase of territorial dominion was never the policy of Louis. He refused the investiture of Naples, and, when the Genoese offered to take him for their sovereign, he answered, "The Genoese give themselves to me, and I give them to the devil." His great object was to overthrow the spirit of aristocracy and absolutism in France, to make the country itself absolute; and he neglected no opportunity and spared no crime to effect his purpose. The chronicles of the time enumerate four thousand people who perished on the scaffold, or by the gibbet, during his reign. Tristan, his chief hangman, was his favourite. His ministers and companions were of the lowest.

* Our readers are acquainted with the fine representation of this verse by Sir Walter Scott, in his Quentin Durward.
Louis XII.

549

classes. His cruelties were often studied. The children of the duke of Nevers were placed under the scaffold, in such a manner that their father's blood flowed upon them; they were then thrown into dungeons, where they were exposed to great suffering, and their teeth were pulled out at intervals. There was no great man in his reign, as if he had no other feeling than that of his strength. The people were as submissive as galley slaves. On the other hand, he encouraged commerce as much as the ignorance of his times allowed, and was extremely active, and attended to everything. The contradictory traits of his character occasioned a singular opposition in his conduct,

and his misfortunes he was, at the same time, confusing and suspicious, avaricious and lavish, audacious and timid, mild and cruel. "Towards the end of his life," says Chateauneuf, "Louis XI. shut himself up in Plessis-les-Tours, devoured by fear and ennui. He dragged himself from one end of a long gallery to the other, surrounded by grates, chains, and avenues of gibbets leading to the castle. The only man who was seen in these avenues was Tristan, chief hangman, and the companion of Louis. Fights between cats and rats, and dances of young peasant boys and girls, served to amuse the tyrant. It is said that he drank the blood of his vassals, and that the fumes of these liquids were inhaled by him, and felt in the strength. De terribles et de merveilleuses médecines, say the chronicles, were compounded for him. Yet his efforts could not avert death. Louis XI. was the first French monarch who had the title of most Christian king." The principal counsellors of this prince were Philip de Comines, and John du Lude, called, by his master, Jean des Habillets.

LOUIS XII., king of France from 1498 to 1515, called by his subjects le père du peuple, was born in 1462. Before his accession to the throne, which took place after the death of Charles VIII., he was duke of Orleans, and first prince of the blood. The lessons of his German mother, Mary of Cleves, and the misfortunes which he underwent at a later period, corrected the faults of his education, which had been purposely neglected, in compliance with the will of Louis XI., (q.v.) On ascending the throne, he pardoned the wrongs which he had suffered before his accession. "The king," he said, "must not reinjure the injuries done to the duke of Orleans." He showed himself grateful towards his friends. The ambitious Georges d'Amboise, his minister, archbishop of Rouen, and cardinal Legate, enjoyed his full confidence. After the death of this minister, Louis XII. took the reins himself. He re-established discipline in the army, and brought the turbulent students of Paris to order—a task which was not without difficulty, on account of their great number, and the privileges which they enjoyed. He much improved the administration of justice, lessened the taxes, and would never consent to increase them, though he was engaged in many wars. The expense of these he supplied by making a number of offices venal, and selling some crown estates. He united the duchy of Brittany for ever with the crown, by marrying, in 1499, the widow of Charles VIII., the beautiful Anne, duchess of Brittany, the object of his love even before his separation from the excellent, but extremely plain Jeanne, daughter of Louis XI., whom he had been forced to marry, and who had born him no children. In order to enforce the rights which he inherited from his grandmother, Valentina Visconti, to the duchy of Milan, called Visca, or Sforza, called Moro (for Sforza), he sent, in 1499, an army over the Alps, which conquered the duchy of Milan within twelve days; after which Genoa also surrendered to him. In vain did Louis Moro attempt to maintain himself by the assistance of the Swiss; he was taken prisoner, in 1500, at Novara, and died, in 1510, in confinement at Luches in France. In 1500, Louis XII. concluded a treaty with Ferdinand the Catholic, by which the kingdom of Naples was divided between them. King Frederic of Naples proceeded to France, where Louis gave him a considerable annuity. But Louis XII. possessed himself of the whole kingdom of Naples, and retained it by the treaty of 1505. Louis had promised to marry his daughter Claude to the grandson of the German emperor, Charles of Luxemburg, afterwards Charles V., and to give her Brittany, Burgundy, and Milan as a dowry. In 1511, Louis was summoned to the snakes, begged on their knees the father of his people, as they called him, to marry his daughter to Francis, count of Angoulême, of the family of Valois. Louis consented; the estates declared the first contract of marriage void, and contrary to the fundamental laws of the realm, and Francis married Claude. Louis now devoted himself particularly to the education of this prince, who was to succeed him (see Francis I.), but at first with so little success, that on one occasion he sorrowfully exclaimed, "Nous travaillons en vain; ce gros garçon gèle tout." The league of Cambrai (see League), established by pope Julius II., against France, in 1511, caused a new war. Louis now commanded the army in person, and was victorious over the Venetians, at Agnadello, in 1509, where he fought with great bravery. Julius II., however, fearing the power of France in Italy, concluded the holy league (see League) with Venice, Switzerland, Spain, and England, against Louis XII., in 1510. In vain did the king, in conjunction with the emperor Maximilian, assemble, in 1511, a council at Pisa, in order to reform the church, in its head and members, and to depose Julius II.; the pope laid an interdict on France, in 1512, and declared Louis XII. to have forfeited his crown. The French armies could not maintain themselves after the death of their general, Gaston de Foix; they were beaten by the Swiss at Novara, in 1513, and retreated over the Alps; after which Maximilian, son of Louis Moro, took possession of Milan, and Genoa made herself independent of France. The Swiss, at the same time, extended their influence to the Rhine, and Henry VIII. of England defeated the French, in 1513, at Guinegate (Journée des Espérons, because the French made more use of their spears in flight, than of their swords in flight). Ferdinand the Catholic, also, in 1512, had taken Upper Navarre, which, until then, belonged, together with Lower Navarre, to France, to the house of Alberis. Louis XII., now renounced the provinces on the other side of the Alps and the Pyrenees, became reconciled with Leo X., the successor of Julius II., and concluded, in 1514, a general peace with Henry VIII., whose sister Mary he married, after the death of Anne, after which he united his second daughter, Barbara, to the archduke Charles (Charles V.) From love to his beautiful wife (only sixteen years old), Louis (then fifty-three years of age), changed his whole mode of life, to the injury of his health, and thus accelerated his death. He died January 1, 1515. Louis XII. possessed many of the qualities of a good ruler. He was open, honest, economical, just, kind hearted, and magnanimous; he was a friend of science, and attracted learned men to his country, particularly from Italy; and France owes to him its first scientific collections. He loved to read Cicero's De Officiis, De Senectute, and De Amicitia. Trajan was his model. France enjoyed, under him, a degree of prosperity and security which it had never possessed before. In regard to the foreign relations of the country, Louis had not sufficient talent to oppose the crafty Julius II. Ferdinand the Catholic,
and cardinal Wolsey. His general, Trivulce, De la Tremouille, Gaston de Foix (nephew of Louis XII.), Bayard, and others, maintained, even in misfortune, the glory of the French arms.—See P. L. Roederer's Louis XII. et Francois I., ou Memoires pour servir a une nouvelle Histoire du Regne de Louis XII. et de Francois I., 2 vols.

LOUIS XIII., summoned the Just, in the early part of his reign, from what cause is not known, was born in 1601, the son of Henry IV. and Maria de' Medici. He ascended the throne May 14, 1610, after the murder of his father. Maria de'Medici, which gave her son the early reign of her French regency, and the kingdom, squandered the treasures of the crown, squandered the crown, in forming a party for herself, and departed from the principle of her husband, especially by forming a close alliance with Spain. The troops were dismissed, and Sully was obliged to retire from the court. The princes of the blood and the nobles took advantage of the weakness of the kingdom occasioned by these measures; they rose in rebellion, with the marshal Bouillon at their head. The government was compelled to yield to their demands, and these concessions led to still greater encroachments upon the rights of the crown and people. France became the victim of the civil wars and civil wars, which, with the Florentine Concili, marshal D'Ancre, prime minister at that time, was utterly unable to suppress. The disturbances rose to the highest, when the king, in 1615, married a Spanish princess. Henry II., prince of Condé, abandoned the royal party, and took up arms in conjunction with the Huguenots. The king, too weak to oppose this attack, made peace with the prince, but sent him to the Bastile some time after, whereby another civil war was kindled, in which, however, the insurgents had no success, and the marshal D'Ancre, whom the young king hated, being murdered with his connivance, (1617), tranquillity appeared to be again restored. (See Liguern.) But when the king, soon after, banished his mother to Blois, new disturbances arose; for the people, who had hated Maria for her tyranny, now took compulsion upon her, in her misfortune. The king was obliged to reconcile her, and a formal peace was arranged between the contending parties. But it was hardly signed, when it was again broken. Maria, at the instigation of the bishop of Lugo, again took up arms against her son. A new reconciliation took place, only to be followed by new dissensions. During these disturbances, the Huguenots rose in arms, with Rohan and Soubise at their head; and a great part of the kingdom rebelled against the king, who now delivered himself up to the guidance of the cardinal Richelieu. After victory had inclined, sometimes to one side, sometimes to the other, and both parties felt deeply the necessity of repose, peace was again concluded between the king and the Huguenots (1623). This also continued no longer than the preceding. Rochelle, the head-quarters of the Huguenots, revolted, and was supported by England. The king drove the English to the sea, conquered the island of Ré, and at last (Oct. 28, 1628), Rochelle taken, the armed forces of the mother of the duke of Rohan, had defended itself for more than a year, and contended with all the horrors of a siege. This siege cost the crown 40 million livres. Afterwards a war arose with the emperor, who had refused to the duke of Nevers the investiture of Maine. The united forces of the emperor, Spanish, and Savoy, attacked in 1625, the town of Frenchet at Vegliano (1630), and the duke of Mantua confirmed in his possessions by the peace of Chiersanco (1630). The only brother of the king, Gaston of Orleans, now revolted against him, in conjunction with the queen mother. The insurgents were, nevertheless, defeated; the duke of Montmorency, in alliance with Gaston, was vanquished in the battle of Castelnaudary, Sept. 1, 1632, taken prisoner, and executed at Toulouse, October 30, of the same year. Gaston received a pardon. In the succeeding war with Spain, the French won twenty victories, during thirteen of which it was waged in Germany, success inclined sometimes to one side, sometimes to the other; yet the king was at last enabled (1636) to expel from the French dominions the Spaniards, who had landed in Provence, and the imperial troops of the territories which had been ceded to them were expelled. The events of the following year were yet more favourable to France; but the exhausted state of the finances opposed an insuperable obstacle to the progress of the French arms. In this state of misfortune, Louis XIII. died, May 4, 1643. During this war, Louis had (Aug. 15, 1639) put his person, his crown, and kingdom, under the protection of the holy virgin; a day which was long regarded as a festival in France. His equestrian statue, in bronze, erected 1639, was destroyed by the people in 1792.

LOUIS XIV., king of France and Navarre, was born Sept. 5, 1638, after a barrenness of twenty-two years (1614-1638); thus a prodigy was considered a particular gift of Heaven, he was called Due à Donné. He came into the world with several teeth, on which subject Grotius has some jests in his letters. He died Sept. 1, 1715. He married, in 1660, Marigna Theressa, daughter of king Philip IV., who died July 29, 1683. In the same year he secretly married Françoise d' Aubigné, widow of Scarron (madame de Maintenon, who died April 15, 1719). His principal mistresses were Francoise, duchess de la Vallière (see Vallière), the marchioness of Montespan, mother of the duke of Maine and of the count of Toulouse (see Rochechouart), and Maria Angelica d'Escorailles, duchess of Fontanges, who died in 1681.

Louis XIV. was five years of age when his father, Louis XIII., died. His mother caused herself to be declared regent and guardian. To Mazarin was intrusted the superintendence of the education of the king, a task which was very difficult. But, although Louis learned nothing from his teacher, the archbishop Péreix, he observed much. A deep impression was made on him, during his minority, by the compositions of the Fronde (see Fronde and Rejet), which set so many different characters in action. Sept. 7, 1651, Louis proclaimed his majesty; but Mazarin continued at the head of the government till his death, March 9, 1661. From this time, Louis reigned fifty-four years, without any prime minister, in complete accordance with his own words—L'Etat, c'est moi! From Mazarin he had learned an ambitious policy, and a contempt of the parliament. On one occasion, when Mazarin could not effect his purpose, the young king, seventeen years of age, entered the hall of the parliament of Paris, booted and spurred, with his whip in his hand, and commanded an edict to be registered. Every thing united to surround him with splendour. However, on one occasion, when Mazarin could not effect his purpose, the young king, seventeen years of age, entered the hall of the parliament of Paris, booted and spurred, with his whip in his hand, and commanded an edict to be registered. Every thing united to surround him with splendour. However, he even gave this inclination a permanent direction. His reign was adorned by great statesmen and generals, ecclesiastics, and men of literature. The civil wars, the tries to maintain the French arms, the greater part of which he conducted himself, the revolution afterwards produced, of calling forth men of talent and energy, who made the national glory and the splendour of the king the object of their exertions. Louis himself had a taste for a kind
of greatness. "This was," as John Muller says of his, "the source of all the benefits which he rendered to the arts and sciences, of the disturbances of Europe, of the violation of all treaties, in short, of the remarkable character of his reign." The king was unfortunately ignorant, and destitute of settled principles. Il aim, la gloire et la religion, says Montesquieu, toutes l'empereur n'aime que l'une ni l'autre. His person was vigorous and noble. With handsome features and a tall form he united a peculiar dignity of language and manner. The noble and charming tone of his voice won the heart; but the loftiness of his whole demeanour inspired respect. His kindness never passed into familiarity. One look of his kept the willing in check. The Spanish gravity, which he inherited from his mother, was tempered by the graces of French politeness. Naturally so grave, that even the oldest courtiers never recollected to have heard more than one jest from his mouth, he loved, nevertheless, gaiety in others, applauded Molière's comedies, and laughed at the witty sallies of madame de Montespan. At his court, which became a model for all the others of Europe, every thing had reference to the king, and tended to augment his dignity. The nearer you approached his person, the higher rose your emotion to a reverence and veneration, which was paid to the throne, the person of the king, and the pride of the nation. On the whole, to use an expression of Bolingbroke's, hardly ever has a king played his part better. But a theatrical representation he always would maintain, even in trifles; for example, in his latter years, he never appeared in the presence of any one without his great periuk. But he possessed, nevertheless, qualities which are requisite for playing well the part of a monarch. "The qualities of his mind," says Grouvelle, "were justness, solidity, constancy, and application. He united therewith habitual discretion and the seriousness which conceals deficiencies. He was naturally silent, and inclined to observation. Louis had nothing of the hero, but he possessed the art of ruling those who surrounded him. He was no general, but was able to appropriate to himself the reputation of his generals. Resoluteness and energy elated him, at the same time, by the restrictions of proper etiquette. Early in life, he danced in the ballrooms. But hearing at the theatre, when Britannicus was performed, the verse in which it is said of Nero, as a reproach, Il excelî à se donner lui-même en spectacle aux Romains, he never again danced in public. The manners of his time favored his natural disposition to gallantry. He loved with enthusiasm, and expressed his feelings with dignity and tenderness. With an excellent memory, his judgment was sound; he knew how to say what was suitable at the right time, and with dignity and delicacy; he understood how to punish and reward with words. Thus, when the poet of Avon, supported by many friends, had solicited in vain, for several years, her husband's pension of 1500 livres, he gave her a pension of 2000 livres, with the words, Madame, je vous ai fait attendre long temps, mais vous avez tant d'amis, que j'ai voulu avoir seul ce crédit auprès de vous. It was a measure of credit, and generosity, he had a dash of ostentation. The marquis of Uxelles, having been compelled to surrender Mayence, thirty-two days after the opening of the trenches, threw himself at the feet of the king, whose displeasure he feared, while he related the reasons of the surrender. "Rise, marquis," said the king; "you have defended the fortress like a man of spirit, and expatuated like a man of sense." He intimated to the aged Boileau, who had retired to his country, and appeared at court, that when his health permitted him to come to Versailles, he would always have a half an hour for him. Louis was above the praise of trifles. When De Grammont found fault with a madrigal of the king's, Louis was pleased, that the courtier, being ignorant of the author, had spoken so freely. Boileau was ordered to blame some verses which met the king's approbation, and Louis was by no means displeased. "He understands such things; it is his business," was his remark. Low flattery he repelled; thus he rejected the pré-question of the French academy—"Which of the virtues of the king deserves the preference?" By the esteem which he manifested for Boileau, Molière, Bossuet, Massillon, &c., he contributed to inspire the higher classes with a respect for the arts and sciences, and a taste for the society of men of learning and genius. But this was only meant to give splendour to his reign. Corneille and Lafontaine, and the meritorious scholars of the Port Royal, remained unnoticed by him. The great Arnaud, doctor of the Sorbonne, was compelled to live almost entirely concealed, from 1641, and died in exile. Louis was twenty years of age, and devoted to the pleasures of the court. When Duke of Mazarin died. "To whom shall we now apply?" asked his secretaries of state: "To me," he replied with dignity; and the handsomest man of the kingdom, who had grown up in perfect ignorance, with his heart full of romantic gallantry, devoted himself sedulously to business and the acquisition of information. In the first half of his reign, he laboured daily eight hours. But his natural pride often degenerated into haughtiness, his love of splendour into useless extravagance, his firmness into despotism. Determined no longer to tolerate Calvinism in France, he said—"My grandfather loved the Huguenots without fearing them; my father feared, without loving them; I neither fear nor love them." He evinced his severity, also, in the case of Fouquet superintendent of finance, from whom he accepted a fee, when he was on the point of condoning him to perpetual imprisonment, in 1661; with equal cruelty he decreed the perpetual imprisonment of the pope, in 1662. He was, as may be seen from his Instructions pour le Dauphin, a despot from religious conviction. As an absolute sovereign, he regarded himself as the proprietor of all the possessions of his subjects, but deemed himself bound to make a wise use of his power. He rarely, however, mistook the extraordinary men who signaled his age and France. He manifested an interest in the advancement of his nation; but, deceived by self-love, he submitted to the influence of others. While he believed himself free and independent, madame de Maintenon exercised the strongest power over him by her talents, piety, and virtue. His credulity went so far, that he assured the nuncio, in 1685, that whole cities, such as Uxès, Nismes, Montpellier, &c., had been converted! While the Protestants were robbed of their property and freedom, he was engaged in splendid hunting expeditions. Two meritorious naval officers, who had taken the liberty to offer some modest suggestions respecting a naval school, were imprisoned for a year, and cashiered. The reputation of Louis is the work of his ministers and generals. (See Turenne, Condé, Luxembourg, Caillot, and Villars.) Feuquières raised the art of war into a science. Louvois introduced discipline into the army. Vauban greatly improved the art of fortification. Men like Estrades and D'Avaux, made diplomacy at home in France. Louis himself was capable of negotiating immediately with ambas-
LOUIS XIV.

norers on matters of state. The splendour of the French court, the boldness displayed in the cabinet and the field, the fame of the nation in arms and arts, introduced the French language into the courts of Europe, and from the peace of Nimeggen, in 1678, it gradually supplanted Latin, as the official language of states. But Colbert was the chief source of the greatness of Louis and France. That ordering, creating, and sagacious spirit originated the great standing armies of Louis, and imposed this burden on all the governments of Europe; at the same time, he maintained 100 ships of the line, and encouraged manufactures, navigation, and commerce; and the first French settlement in the East Indies was founded at Pondicherry. Colbert developed the astonishing resources of France, in population, natural riches, and national spirit. But, after his death, in 1683, Louvois and Louis plucked the fruit, while they killed the tree. The pride of the king, and the vanity of the nation, seconded the ambition of the despotic minister of war. Notwithstanding all this oppression, disaffection never found a rallying point of resistance. Such gratification did the nation experience in the splendour of a cruel and prodigious reign! Five wars, the revocation of the edict of Nantes (which—Benjamin Constant has well termed l'erreur de Louis XIV., et le crime de son conseil), the death of the king of Navarre, the battle of the Hogue, the battle of La Hogue, and the deep policy of William III. of England, overthrew the power of Louis in the Spanish war of succession. Favourable circumstances, the opinion of the age, and the consciousness of strength on the part of a people not yet corrupted, were all that preserved from downfall the tottering throne of the failing king. Death rapidly snatched away those who stood nearest him; first his only son, then his grandson, with his grandson's wife and eldest son, the hopes of France. The court intrigues, satiety, devotion, and the religious preoccupation of Maintenon, together with the influence of his confessor, La Chaise, and his far worse successor, Tellier, from 1700, made the heart of the aged king indifferent to the state of his dominions. The proud Louis, who imagined himself competent to every thing, who, after the death of his great minister, selected young men, whom he could guide at his pleasure, and so led as his successor, Tellier, that he caused the constitution Unigenitus, drawn up according to Tellier's plan, by three Jesuits, to be issued as a bull, in 1713, by pope Clement XI., who was equally deceived, thus giving the Jesuit party the triumph over their opponents; and, at the same time, producing commotions, which continued for forty years to agitate the church and state. Louis manifested, however, a strength of mind and firmness in death, as well as in the misfortunes which, in his last years, shook his throne and house; for Heinieus, Eugene and Marlborough humbled the pride of France before the Spanish throne was secured to them, successfully established the dynasty of Joseph I., and the victory of Villars at Demain. He submitted to all conditions, unless they were dishonourable, but such he rejected with scorn. When Philip was finally established on the throne at Madrid, the partition wall of the Pyrenees was not destroyed, as Louis proposed; when, he said to his grandson, on his departure, Il faut bien que la France et la maison de France, be burdened with a debt of 2,500,000,000 livres. The plan of attacking Spain to France, in order to counteract the connection of Britain and Holland (which threatened the French commerce, navigation, and colonies), exhausted France, and laid the foundation of the next war. Colbert had cleared the nation of those enemies; Louis XIV. was therefore, of him, with justice—"We may allow him good qualities, but not virtues. The misfortunes of succeeding reigns were, in part, his work, and he has hardly influenced posterity, except for its ruin." The same judgment is passed by madame de Stael, in her Reflections on the French Revolution. What is called the age of Louis XIV., as compared with Pericles, Augustus, and the Medici, was a result of the impulse which ambition encouraged in the national genius. Louis, who was not himself possessed of a great comprehensive mind, and who was much and laboriously occupied on trifles, patronized genius only as a necessary instrument for his purposes. At Colbert's suggestion, he founded the academy of sciences and that of inscriptions; he improved the French academy, encouraged able writers to raise his reputation and the French language above the hatred of nations, and the sphere of its influence was wider than that of his armies. His nation gave laws to Europe, in matters of taste. The tone of French society was a model for the German courts, and corrupted the spirit of the nobility, while it destroyed morals. It is not, however, to be forgotten, that the expulsion of the Huguenots from France also promoted the diffusion of the French language and manners. The great art of pleasing was the soul of all the other arts in France; it even opened to science itself the avenue to the circles of the politest of the Parisians. It awakened the taste and delicacy, the sublime Bossuet, and Fenelon, splendid in his humility, the great Corneille, who boldly took his flight above the surrounding barbarism, the unique Molière, the inimitable Fontaine, and the calm thinker and spirited satirist, Boileau, the friend of the classical Racine, kindled the blaze of light and philosophy in France. "Their electrical shock roused," as John von Muller, expresses himself, "the north from the monotonous studies of its universities." The fine arts were not neglected. Of Lebrun's epoch of art under Louis XIV., we are reminded by thirty-four paintings by this master in the museum of the Louvre. The Flemish school, particularly Teuniers, did not please the king. Le Sueur, Poussin and Mignard were the ornaments of the French school. Girardon was distinguished among the sculptors. Lenotre laid out the splendid gardens of Versailles; Perron built the colonnade of the Louvre, Harcourt, the gardens at the Tuileries. Lulli was the creator of French music. A large proportion of the great monuments of France, which excite the astonishment of the traveller, had their origin in the reign of Louis. He constructed the wonderful harbours, shipyards and fortifications at Brest, Rochefort, L'Orient, Havre, Dunkirk, Cotte and Toulon. At his bidding, the canal of Languedoc united the Mediterranean with the ocean.

See Voltaire's Siècle de Louis XIV., the duke of St Simon's Oeuvres complètes pour servir à l'Histoire des Cours de Louis XIV., de la Régence et de Louis XV.; and the Mémoires de Dangeau, as well as those of his admirer, the abbe Lebrun, published by Lemoyne (Paris, 1818), in his Essai sur l'Etablissement monarchique de Louis XIV., the Oeuvres de Louis XIV. (vol. i.—vi., Paris, 1800), published by the diplomatist Grouvelle and the count Grimouard, and the Considerations sur Louis XIV., by Grouvelle, contained in this collection, which, with the long and excellent introduction to the history of this monarch, The Instructions pour le Dauphin, of 1661—1668, comprised in that work, are supposed to have been taken down by Pelisson, from the mouth of the king. But Louis himself did not practise his laws. He was warned by the influence of his favourites, and still more of the love of the female sex, which tends to divert the mind from business.
These writings, besides other historical matter, contain information respecting the system of corruption practised by Louis XIV., even at German courts, e. g. at Berlin. The Mémoires and Pièces militaires, which constitute the third and fourth volumes of the work, relate to the campaigns of 1672—1678, and that of 1692. In Grimond's preface, they are said to be a faithful copy of the best history of the war. The letters of Louis, in the two last volumes of this work, are mostly of little consequence. The politeness and dignity with which this proud king writes to his ministers and generals are remarkable. This delicate tone was then general, and gave to language and manners that agreeable refinement which made Paris so attractive.

Political Occurrences during this Reign.

The most splendid period of the reign of Louis XIV. extended from the peace of the Pyrenees, concluded by Mazarin, in 1659, to the death of the great Colbert, in 1683. That peace, however, lasted only till 1665, when Louis, on the death of his father-in-law, Philip IV., king of Spain, laid claim to the Spanish Netherlands, by virtue of the right of deposition, as it was called (which was a private law in part of the Netherlands, but could by no means be considered the rule of succession to the government of these states). Holland, therefore, concluded, in 1668, a triple alliance, to ensure the preservation of the Spanish Netherlands, of which alliance, although Louis was victorious in two campaigns, the peace of Aix-la-Chapelle was the result. Louis retained, indeed, the conquered places in the Netherlands, but was compelled to abandon his intentions on the country at large, and, as he attributed this to the triple alliance, he resolved on a retaliatory war against Holland, having previously succeeded in separating Britain and Sweden from their connexion with the republic, and uniting them with himself. This war, undertaken without regard to the commerce of France, to which it was very detrimental, and in which Spain, the German emperor and Brandenburg also engaged against France, continued from 1672 till the peace of Nimeguen, concluded 1678 and 1679, in which Holland lost nothing, while Louis XIV. received from Spain, Burgundy (the Franche Comté), which the king of Spain had previously held, as compensation for the cession of the sovereignty of the German empire, and sixteen places in the Netherlands. Louis lost, in this war, his two greatest generals, Turenne and Condé; the former fell at Sассbach, in 1675; the latter retired in 1676, on account of his feeble health. Louis, however, still had Catinat, Cregui, Luxembourg, Schomburg, and Vaulain. After the peace of Nimeguen, it would have been politic for Louis to have ceased prosecuting, for a while, his plans of aggrandizement; but he renewed, immediately after, the réunions, as they were called. In the three treaties of peace, a number of places, with all their appurtenances, had been ceded to France; but that was far from satisfying what really did pertain to them. Louis, therefore, established, in 1680, chambers of réunions at Metz and Brisach, whose office it was to accord him, under the form of right, every thing that could be considered in any way as belonging to those places. France, in this manner, added several places of the north of the Netherlands and of Germany. Louis would also gladly have obtained Strasburg, all the places reunited prior to August 1, 1681. Meanwhile, Colbert had died, in 1683. From this time, France declined with the same rapidity that it had risen under his administration. The first blow it received, was the revocation of the edict of Nantes, October 22, 1685, after several years' oppressions of the Protestant party, by which measure the kingdom lost 70,000 of its free members. To this measure the king was led by the united exertions of the two parties of the court, in other respects opposed to each other—the parties of the minister Louvois and of Maintenon, who co-operated with the generally benevolent confessor of the king, Lachaise. Colbert, to his death, had opposed the abolition of the violent measures, which might induce the Protestants to emigrate. France was, soon after, involved in a new war. Several circumstances gave Louis XIV. and Louvois opportunity, in spite of the twenty years' truce, to enter the field anew. The war which Louis now waged from 1688 to 1697, against Germany, Holland, Spain, Savoy, and Britain, was terminated by the peace of Ryswick, in which Louis resigned all the réunions, and in addition, ceded to Germany, Brisach, Fribourg, Kehl, and Philippsburg, besides all the smaller fortresses erected by France on the German side of the Rhine. Although, throughout the war, Louis was conqueror rather than conqueror, as he extended the dominion of his kingdom, and especially the fear that a continuance of the war might frustrate his views on the Spanish succession, compelled him to yield. The death of Charles II., king of Spain, to which Louis had long looked forward, took place at the end of 1700. Louis had already concluded treaties of partition, with respect to the Spanish succession, with Britain and Holland; but Charles II., by a secret testament, had designated the grandson of Louis, Philip of Anjou, as heir of the whole monarchy, to the disadvantage of the house of Austria, in which the inheritance was legitimately vested. On the enforcement of this testament Louis insisted, after the death of Charles, and was thus involved in the Spanish war of succession, 1702—13, which he precipitated by acknowledging the British pretender (son of James II.), in violation of the peace of Ryswick. The finances of Louis were in great disorder; he had also lost many of his great men in the cabinet, and his public council was broken by numerous enemies—Britain, Holland, the emperor and the German empire, Prussia, Portugal, and Spain—could oppose to him two of the greatest generals Eugene and Marlborough. France suffered greatly by this war, which was terminated by the treaty of Utrecht, in 1713, and those of Rastatt and Baden, in 1714, brought about by the concurrence of several circumstances favourable to France, especially by the change that took place in the political system of Britain, in 1710, after Louis had several times proffered peace, without success, on account of the hard terms insisted on by his enemies. Louis made, indeed, concessions to Britain and Savoy, but saw his grandson acknowledged as king of Spain, under the name of Philip V. This, however, was connected with the condition of a renunciation, which should prevent the possibility of any future union of the Spanish and French crowns. The internal power of the United States was ruined by this war, of which the expenses, in the year 1712 alone, amounted to 525,000,000 livres. The great army which he kept on foot, was what chiefly excited and nourished in Louis the love of conquest. He maintained a larger standing army than any other prince of his time. It rose from 140,000 to 300,000 men. The respect in which Louis XIV. the following is the language of Flasman—"The cabinet of Louis XIV., notwithstanding the
diversity of talents of his ministers, exhibits, in its most important negotiations with foreign powers, almost always the same character of lofty pretension. The spirit of innovation may be traced in the manner in which he insisted on interpreting the treaties of Munster, of the Pyrenees, and of Nine- 
guen, and the reunion of queen Maria Theresa. The means of impairing validity to such arbitrary explanations, were, force of arms, artful diplomacy, expensive and corruption. The king expended great sums in securing the favour of sovereigns— 
Charles II., for example, in Britain—their ministers and mistresses. Against his enemies, he employed, even in times of war, clandestine popular excitements; he encouraged the commotions in Catalonia, Sicily, Britain, Portugal, and Hungary. More than any 
king before him, he enlarged the boundaries of the kingdom, especially towards the north; by which means, he secured the capital against the accidents of 
war. Till the battle of La Hogue, May 29, 1692, in which the combined British and Dutch fleet, under 
admiral Russell, overcame the French admirals Tour- 
ville, and the French fleet, the enemy's flag was made to 
raise the masts of Barbary, and by the most powerful maritime states. On the 
continent, he held a decided predominance till the 
peace of Nimegue, so that he had no reason to fear any coalition of the other powers. To this his 
connexion with Sweden and some of the northern 
principalties mainly contributed. He subsequently fell somewhat from this high elevation, but continued to be the first sovereign of Europe, even after his 
defeats in the Spanish war of succession; for, after he 
had severed the league formed against him by the 
peace with Britain, neither Austria nor the German 
electorates could form an effective resistance. To this foreign 
policy, favoured by the weakness and political errors 
of his neighbours, was added an arbitrary internal 
admission. The system of police, organized by 
D'Argenson, in the last years of the reign of Louis 
was, in its effects, as formidable as an inquisition. 

LOUIS XV., the great grandson of Louis XIV., and son of that excellent duke of Burgundy who 
was educated by Fénelon, was born February 15, 1710, 
commenced his reign in 1715, and died May 10, 1774. He married, in 1725, Maria, the daughter 
of Stanislaus Leczynski (she died in 1768). The 
History of Louis XV., by Antoine Fantin Desodors (Paris, 1821, six vols.), and the History of Louis 
XV., by Arnaud Laffrey, published by Maton (Paris, 
1796, two vols.), do not correspond to what might 
be expected from French writers, after Voltaire's 
work on the reign of this king. The memoirs of 
Duclas, St Simon and others, the History of France 
in the eighteenth century, by LaCretelle (Paris, 
1811, six vols.), and the well-known work La Vie 
Privee de Louis XV. (4 vols.), contain important 
materials for the history of this unworthy and de 
graded king, who, by his licentiousness, bigotry, 
prodigality, and despotism, rendered the evils of the 
state incurable. The age which educated and cor 
ruputed him, and on which he and his court reacted in 
a not less injurious manner, explains not only the 
origin, but also the spirit and malignity of the revo 
lation. A great part, however, of this fault, falls on 
the regency, administered by Philip, duke of Or 
leans, and the cardinal Dubois, till 1723. See 
Orleans, Philip of. 

Influenced by the age of Louis XIV. on the 
religious and political notions of the cultivated 
classes, and especially the increasing power of 
public opinion in France during the reign of Louis 
XV., are conspicuous. The characteristic of the 
age of Louis XV. consists in the intellectual de 
velopment of the nation, in the splendour and boldness 
of new philosophic views, which had so strong an 
influence on society. From them proceeded a fear 
ful separation of reason from morality, of the pas 
sions in life from the sober and laudable virtues, nor 
the forms of church and state. The immoderate love 
of pleasure, which, from the higher, descended into 
the lower classes, and was defended or excused by 
the philosophy of the day, was united with an avari 
cious selfishness, which was awakened by the rash 
financial schemes of Louis and his regent, and con 
nected with fraud, despair, and the bankruptcy of 
500,000 citizens. From this love of pleasure and self 
fishness, proceeded most of the faults and vices of the 
contemporaries of Louis XV. The moral infection 
spread farther and farther, and ate deeper and deeper 
into the roots of public spirit and every civil virtue. 

Louis XIV. left his great grandson and successor 
with the words, "I have, against my inclination, 
placed great burdens on my subjects; but have 
been compelled to do it by the long wars which 
I have been obliged to maintain. Love peace, and 
undertake no war, except when the good of the state 
requires it," and he died February 17, 1715. A 
heavier impression should have been made on 
the mind of the royal child, by the conduct of 
the people who accompanied the heir to the 
king with insults and the grossest expressions of joy. 
But what an idea must the boy of six years have 
formed of the idea of justice (the strongest exertion 
of despotism, held by the regent, to confirm his 
regency! How different were the views of his father, 
the noble duke of Burgundy, who intended, in case 
he ascended the throne, to restore to the people 
their lost rights! In his seventh year, Louis was 
first placed under the care of men. But his tutor, 
the marshal Villeroi, was no Montesquieu, Beaum 
lvilliers, or Fénélon. On one occasion, when Louis 
was recovered from a violent sickness, his subjects 
manifested their satisfaction by repeated rejoicings. 
The court and gardens of the Tuileries were full of 
men. Villeroi carried the king from one window to 

another. "See them, my king! your people: all 
this people belongs to you; all that you see is your 
property; you are lord and master of it." The 
instructor of the young king, the prudent and modest 
Fleury, won the confidence of his pupil in a noble 
manner. A third, who had, however, less influence 
on the young king, was his confessor, the Jesuit 
Limbrey, who, when the duke of Burgundy had effected his ap 
pointment to this important office, said to him, 
"We will do everything to make you love French 
and the advice of cardinal Nolilles. Fleury, 
however, acquired the entire confidence of Louis, 
who, after the death of the regent, in 1724, by 
the advice of his instructor, appointed the duke of Bour 
bon chief minister of state, who could undertake 
nothing, however, without the knowledge and con 
sent of the prelate, then seventy-three years old. 
Till now, the king, who entered upon the govern 
ment himself in 1723, but had hitherto intrusted the 
management of affairs to the former regent, as first 
minister of state, had shown no will of his own. A 
Spanish princess of six years had been destined for 
his wife, and had been subsequently sent back to her 
parents; the marshal Villeroi had been banished from 
the court, and the king had married Maria 
Leczynski, the daughter of Stanislaus, the dethroned 
king of Poland, indiffident and submissive in all 
these proceedings. But when the party of the duke 
attempted to get rid of the prelate, and Fleury 
had retired to his country seat, the king 
insisted on his return with such firmness, that the 
duke found himself obliged to apply to the prelate, 
and solicit his return. Soon after, in 1726, Fleury 
was placed at the head of the administration. He 
declined the title of first minister, but was, in fact,
Louis XV.

555

such till his death, in 1743. His habit of dissimulation extended itself to the king, in whose private life a great change now took place, probably favoured by the peace of Fontainebleau, which stopped the King's application and some generous expressions he had manifested, was stilled in sensual pleasures and the luxury of a court life. The peaceful Fleury, who endeavoured to restore order and economy, now gave the energized monarchy a seven years' tranquillity; but he was not sufficiently enlightened to comprehend the controvérsy respecting the bull Unigenitus. He soon saw himself, contrary to his will, involved in a war. After the death of Augustus II., king of Poland, in 1733, Louis wished to see his father-in-law chosen successor of Augustus, and declared that the freedom of election should be interrupted by no foreign power; but the emperor Charles VI., having concluded an alliance with the elector of Saxony, and supported his election as king of Poland, Louis's plan was frustrated, and a war broke out. After two campaigns, France acquired for Stanislas, who had died, the province of Silesia; he regained the duchy of Lorraine, which he had lost from Bohemia and Bavaria over the Rhine. Still greater were the losses of France by sea; for Fleury had neglected the marine. After his death, in 1743, the victories of count Maurice of Saxony (see Maurice) gave new splendour to the French arms; and, by the peace of Aix-la-Chapelle, in 1748, France regained her lost colonies. But the state was, more than ever, exhausted by an unjust and impolitic war. Louis had himself taken a part in several campaigns, and, when he was attacked at Meta by a severe malady, received the appellation of the well-beloved (le bien-aimé). The affection felt for the young and charming prince constituted his fortune; for Louis became, from this time, more and more unworthy of the public respect, sinking into the grossest indolence and sensuality, and abandoning the management of state affairs to the marchioness of Pompodour. (See Pompodour.) She was, in reality, the ruler, the monarch being absorbed in his orgies, or childish amusements and despotical fears. He showed himself, without dignity, the sport of petty passions, and the instrument of external influences. The nation, on which so powerless a government could have no effect, followed entirely its restless caprices. Commerce, the foundation of life, bold hopes, and new systems, amused and engaged all classes of society. Every one longed for a new and better state; obedience became more and more lax, the wish of change more decided; a few steps more would lead to insurrection. The sensuality of the King put him entirely in the power of the ambitious Pompodour. While she made him lead the shameless life of an Eastern monarch, she sacrificed, according to the caprice of the moment, the honour, wealth, and the prosperity of the state, to those who were able to gain access to her by their attractive qualities, which she was always ready to compromise, or her complaisant, or warrants for payment, which exhausted the treasury, and introduced confusion into the accounts. The cost of the percez-cerfs, as it was called,—the most abominable instrument of the king's voluptuousness,—was defrayed by such acquits, which, according to Laclercet, amounted, eventually, to 100,000,000fr. Louis also loved to see played different parts, which he appropriated to himself, the losses of which he supplied from the public chest. Those who lost to him were indemnified by lucrative public offices. In order to increase this fund, he engaged in stock-jobbing and in speculations in grain. The rise and fall of the stocks, and the price of corn, interested him. In a distant and entirely unbecoming a king. He appropriated a capital of ten millions, from his private trousseau, to this disgraceful traffic, and even allowed the name of M. Mieavand to be introduced into the state almanack of 1774, among the officers of finances, as trésorier des grains pour le compte de S. M. To relieve his ennui, he printed several books, and was even pleased with the celebrated physiocratie system of his physician Quesnay. He called him his thinker (penseur), listened with satisfaction when he censured the policy of his ministers, but never troubled him. By his indulgence, the duke de Choiseul and women he conducted himself, in public, with the courtesanous of a French chevalier, mingled in their petty quarrels, and played the part of a confidant. He was inquisitive about the intrigues of all the courts of Europe, and, to inform himself respecting them, maintained secret correspondents in his ministerial cases, knew nothing. The dignified, manly conduct of the dauphin, the virtues of the dauphiness, made no permanent impression on him. He sometimes, however, seemed to feel remorse, especially after the death of the queen. But he soon sought and found solace in his old pleasures. From the year 1760, he was governed by Du Barry (see Barry), who is said to have cost the royal treasury, in five years, 180 million livres. As Louis became older, his bigotry and apathy increased, while he sank deeper in sensuality. His secret debaucheries dishonoured innocence, and poisoned the domestic happiness of his subjects. The public contempt was expressed in satires, caricatures, and songs, to which the people had already become accustomed under the regency. The hatred of the people gave credence to the most exaggerated accusations, and Louis, from fear and aversion, took refuge in the arms of his wife. He was deserted by his former friends, and his carelessness and apathy of the king, the French levity increased continually; every one was engaged with trifles and selfish plans; the most important affairs of state, on the contrary, were neglected. France, at the same time, saw itself involved, in 1754, in a maritime war with Great Britain, on account of the forts on the Ohio, and, as if this contest was of no importance, rashly took the side of Austria against Prussia, in 1756. The shrewd Kaunitz had gained the favour of the vain Pompodour, who was offended by the sarcasms of Frederic II. By his influence, the duke de Choiseul was appointed first minister, in the stead of the abbe Bernis, and, May 1, 1756, a new alliance was concluded with Austria, at Versailles, which was unique in history. The French suffered great losses by sea and land; even their military reputation had declined since the battle of Rossbach, Nov. 5, 1757; and, after seven unhappy years, they had reason to congratulate themselves, when Choiseul concluded a peace with Great Britain at Fontainebleau, in 1763, and the definitive treaty was settled at Paris, in 1763, although France had to relinquish to Great Britain, Canada, as far as the river Granville, Cape Breton, Prince Edward, Grenada, Tobago, St Vincen, and Dominica, together with Minorca. Louis remained indifferent to all these events. The first time that he saw marshal Richelieu after the conquest of Mahon, in 1756, he
turned to that general, who was adored by the whole nation, with the question, "How did you like the Mirach fges?" The famous family compact of the Bourbons, by which Choiseul hoped, in the course of the former, to secure the latter, for even Mme. du Barry, in connexion with the chancellor, Maupéon, effected the overthrow of the duke de Choiseul, and elevated to his post the duke of Aiguillon. The quarrel of the latter with the parliament at Rennes, which had written against him in a violent tone, as former governor of Bretagne, and the refractoriness of all the parliaments, especially with respect to the new oppressive financial edicts, induced the king, in 1771, to banish the members of the parliament from Paris, and, soon after, to abolish the parliaments entirely, which were first re-established under Louis XVI., in 1774, with certain limitations. The notorious edict which the chancellor had issued, was followed, next year, by a thing of greater magnitude, the absolute and supreme legislator of his kingdom, who permitted parliament, indeed, to protest against a new law, but, after two considerations, might demand unconditional obedience. Thus Maupéon made the absolute will of the monarch a constitutional law! A worthy counterpart of Maupéon was the comptroller-general of finances, the able Terri, who impoverished the country, while he received an income of 1,200,000 livres. In proportion as the king was despised at home, the authority of France was lessened abroad. The partition of Poland took place in 1773, without the knowledge of France. After having sunk into a complete nullity, the king, whom no domestic misfortunes, not even his own attempted assassination, in 1757, by a fanatic, Damieux (see Damieux), nor the public misery, could restore to consciousness, died of the small-pox, caught of a young girl, by whom the countess Du Barry wished to dispel his melancholy, leaving a debt of 4,000,000,000 livres.

Age of Louis XV.—In proportion as the reign of Louis was weak and pernicious to the state, the spirit of the nation rose, awakened by the times of Louis XIV., and by distinguished men in the arts and sciences. In Paris, public institutions arose; palaces and churches were built (for example, the church of St. Sulpice, by the great Duck; the church of the Jacobins, of Paris, and the Champs Élysées, were laid out in 1751, by the minister of war, count D'Argenson; the intendant, Trudaine, prosecuted, with success, the construction of roads. The commerce of Lyons, and Bourdeaux adorned these cities with regal splendour. Stanislas Leczynski, who died in 1778, restored the public prosperity in Lorraine, and Pigal executed a splendid monument, which was erected in Strasburg, to the marshal Saxe, who died in 1750. Of the numerous painters of this period, the best were Le Moine and Vernet. But taste degenerated under the influence of a voluptuous court, and art paid homage to luxury. It delighted in夸张, but, at the same time, carried manufactures to perfection. The ingenious Vaunacq applied his talents to the improvement of the Gobelins manufactory. (See Gobelin.) Louis XV. himself took an interest in the porcelain manufactory established at Sevres, by the advice of Madame de Pompadour. At the same time, he is said to have been saved from the possession of the French nation, which would have been more formidable than the Greek fire; but this is not historically proved. Enterprising and intelligent men, like La Bourdonnaye, founder of the colonies of the Isle de France and Bourbon, and even his calumniator, Duplex, extended the commerce of France. Louisiana, Canada, especially St Domingo and the Lesser Antilles, the colony on the Senegal, and the ports of the Levant, employed the French man of war on the high seas. But, by the unmeasured excesses of La Bourdonnaye, the state deprived itself of the advantages acquired in the East Indies over Great Britain; and, while France lost Canada and several islands by the manner in which it carried on the war (from 1762—1763), it profited by the British policy in Louisiana, which estate, however, gradually acquired, by its wealth and intellectual advancement, consequence and influence. Public opinion assumed, in the age of Louis XV., the character of levity, frivolity, and boldness, which was afterwards so strongly developed in the revolution. Striking events, such as the trial of the unfortunate John Calas (q. v.), and the execution of the young chevalier De Labarre (q. v.), for sacrilege, brought new opinions into general circulation. But the evil genius of France willed that the decline of morals and religion, contemporary with the abuses of arbitrary power, with prevalent prejudices and the spirit of levity, of truth, just springing up in France, into a destroying fire, and the defensive weapon of knowledge into a two-edged sword; that the egoism of sensuality should gain possession of the territory of reason, and that brilliant wit should be more esteemed than a serious purpose and a solid character. This unhappy concurrence of the public misery with sexual licentiousness, stilled those improved views, and that scientific cultivation, which Montesquieu and others, to whom France was indebted for its intellectual influence on the higher classes of society, in a great part of Europe, exerted themselves to disseminate. The ignorant, stupid Louis had in all intellectual cultivation. He feared talented writers, and frequently said of them, that they would be the cause of ruin to the monarchy. He, nevertheless, followed, in the first part of his reign, the advice of cardinal Fleury, who highly esteemed the sciences, and subsequently yielded to the opinion of the court, and especially of Pompadour, who took a pleasure in being denounced the patron of genius, and a judge of the excellent. The most powerful and permanent influence on the spirit of the nation was exerted by Voltaire, who commenced his splendid career, in 1716, with the tragedy of Odipus. Louis had an aversion to him, but the marchioness induced him to appoint him to the post of king's coachman; and the chambers. Meanwhile, the preference visibly manifested by the court towards the poet Crebillon, inspired the author of the Henriade with a disgust at residing in Paris. Simultaneously with him, the immortal Montesquieu awoke the powers of reflection and of wit in the nation. His Lettres Persanes (1721) kindled the spirit of public criticism, and his work Sur les Causes de la Grandeur et de la Décadence des Romains (1734), like his Esprit des Lois (1734), became a classic manual for the study of politics. About this time, the interest universally felt in scientific subjects, induced cardinal Fleury and count Maupéon to persuade the king to ascertain the truth of Newton's opinion respecting the form of the earth by the measurement of a degree in a high northern latitude and under the equator which was undertaken in 1735 and 1736, and to patronize Cassini's map of France. After 1749, J. J. Rousseau, Diderot, D'Alembert, D'Aubignac, and Helvétius entered in the ranks of the great writers of France. The greatest agitation in public opinion was caused by the Dictionnaire Encyclopédique of Diderot and D'Alembert, against which the clergy, particularly the Jesuits, and the ministers,
LOUIS XVI.

Roses en masse. No less attention was excited by the work of Helvetius, De l'Esprit. Even the ladies took a very active part in the contest of philosophy. Bureau d'esprit were formed, and from the philosophic circles, of the house of Holbech and Helvetius, there proceeded several works in support of materialism and atheism, especially from 1758 to 1770. The most famous of them is the Système de la Nature, of which the baron of Holbech is regarded as the author. Religion was shamelessly assailed by La Mettrie, and in 1750 the king, who had banished from France, sought refuge with Frederick II., but whose opinions found reception in France. Condemnation by the Sorbonne only excited opposition, and the boldness of the age loved to defend rash and splendid errors, if they afforded opportunity for the exhibition of acuteness. No work was more destructive of public morals than Voltaire's Pucelle—a talented poem, which the licentious spirit of the times of the regency alone could have inspired. But better men, such as Turgot and Malesheres, labour ed, not without the approbation of the better part of the public, to correct this pestilence, and saved the humour of sound reason. Such, for instance, is Duclos's Considerations sur les Mœurs, of which Louis XV. himself said, "It is the work of a man of honour." Thomas Marmontel, and Laharpe renon strated loudly against atheism. Voltaire's wit was particularly directed against the Christian religion, after the death of the dauphin, in order to have all the voices against the Jesuits for himself, undertook the protection of the philosophers and of the author of the Dictionnaire Philosophique (Voltaire). Rousseau roused the most violent anger of the antiphilosophers, by his Emile. Jesuits and Jansenists united against him, and, notwithstanding the general admiration which he received, he was obliged to leave France. Such was the revolutionary spirit of the age of Louis XV. The contempt for the court and royalty produced by his reign, the exhaustion of the state caused by his extravagance, the rise of a critical and liberal spirit, and the corruption of state and church, gave birth to the revolution, and the debased state of the public morals, poisoned by the example of the court, stained it with hideous excesses.

LOUIS XVI., who was destined to ascend the throne of France on the eve of a great political con vulsion, and to atom with his life for the faults and follies of his predecessors, was the dauphin of Louis XV., and the second son of the dauphin, by his second wife, Maria Josephine, daughter of Frederic Augustus, king of Poland and elector of Saxony. Louis was born Aug. 22, 1754, and, in 1770, married Marie Antoinette of Austria. The comtesse Marsan, of the royal family, had a large share in his education, and even after he became king, Louis listened to her representations, of which the abbé Georgel relates a remarkable instance in his memoirs. With the best intentions, but entirely inexperienced in matters of government, this unfortunate prince ascended the throne in 1774, at the age of hardly twenty years. He modestly declined the title of le Desiré, given him by the nation, which he excused from the tax usual on the occasion. After the death of the dauphin, in 1763, his grandfather had intentionally kept him from acquiring the knowledge necessary to the conduct of state. Louis, the comtesse de Bry, having sought to revenge herself for the contempt exhibited towards her by the serious, strictly moral prince, who dearly loved his wife, whom she hated, by making him ridiculas in the eyes of the king. The ministers, also, secretly spread the opinion that the prince was severe, and far removed from the indulgent kindness of his grandfather. He was retir ing, silent, and reserved, and did not dare to express his benevolent feelings. His reserve passed for distrust. He felt himself a stranger at a court where he was surrounded by vice under a thousand glittering forms. As he needed not flattery, he was indifferent to the courtiers to the duke Choiseul therefore said, that, on the most desirable throne, the French had was the only king who not only had no flatterers, but who never experienced the least justice from the world. In his countenance, which was not destitute of dignity, were delineated the prominent features of his character—gravity, indirection, and weakness. He was injured, however, by a certain address of demeanour, repulsive to the communications of friendship. His manners had nothing of the grace possessed by almost all the princes of the blood. In confidential intercourse alone, he frequently expressed himself sensibly and ingeniously, but blushed if his observations were reported. Facility of comprehension, industry, and an extraordinary memory, made him successful in his studies; but, unhappily, they had no immediate relation to the duties and knowledge of a prince. He employed himself too assiduously in unimportant particulars. Thus he printed, which was held up to ridicule by foreign observers, the Maximes morales et politiques, tirées de Télémaque, imprimées by Louis-Auguste, Dauphin. Veritables, de l'imprimerie de Monseigneur le Dauphin. He had himself collected these maxims from Fénelon's work. He was familiar with geographical and chronological details; but the practical lessons which kings should derive from history, were unknown to him, although, while dauphin, he had read several good historical works. A translation, by him, of some parts of Gibbon's History, appeared under the name of Le Clerc de Sept Cent ans, his reader. Upright, pious, and indulgent, he was philanthropically disposed, both towards his nation and towards individuals. The virtues of his father, the quiet, domestic life of his mother, had deeply impressed upon him a moral, religious feeling. But his example was destined to show how insufficient, on a throne, are the virtues of a private man. He chose count Maurepas his minister of state, a man of talent and experience; but of little solidity of character, and desires of shining in epigrams. In the room of the infamous abbé Terrail, he committed the financial department to the enlightened, able, and upright Turgot, who resolved to remedy the abuses of the state by thorough and resolute measures. In this spirit he was unfaltering in the execution of his duties, and formed the most exact and detailed investigations, in all the departments of the state. The king was severe, and castigated faults; but his severity was calculated, and always kept in the bounds of reason. He regulated the state, and was not a despot. His attribute to his grandson, was to instruct and govern him, and to his minister to give the means of doing his work. He governed, and at the same time he instructed. The king is a controller of the finances, and Turgot controlled them. He was the best minister of state.
and the people, which was on his side, could not, without representatives, afford any assistance against such a league. The foes of the minister stirred up the populace, and, on occasion of an edict declaring general freedom of conscience, agitated them into a ferment, which subsequently marked the revolution. The timid and inexperienced Louis believed himself hated by the nation, and was insensible towards the seditions; finally, by the advice of Turgot and Muy, he acted with vigour, and the disturbances, called, in Paris, tumults, riots, brawls, were quieted after the appearance of May 17, 1777. The resignation of the king, 11th June, 1775, was followed by the appointment of the virtuous Malesherbes as minister. He was the friend of Turgot. Their united influence might, perhaps, have done much towards reforming the old abuses, but, unhappily, the new minister of war, the count of St Germain, was too violent in his innovations. The corps that were disbanded or diminished, and the offended military nobility, loudly expressed their dissatisfaction at the system of innovation, which was disliked, moreover, by the higher classes. "The state will perish," was the general cry, and the parliament refused to register five edicts of the king, which were revoked, and the state maintained its authority, by a lit de justice, March 12, 1776; but the queen, a princess who was equally superior to her husband in vivacity of understanding and in wit, and loved splendour and pleasure, supported the opposition together with Maurepas, who was Turgot's secret enemy. Her the king could not resist. He hesitated: the deficit produced by the payment of debts and the expenses of the coronation, in 1775, inspired him with distrust of Turgot's philosophical views. Malesherbes gave in his resignation. Turgot was obliged to follow his example. The privileged party was victorious, but the hatred of the third estate, and the desire of all enlightened and well-disposed persons for a thorough reform, was increased. They did not wish to overthrow the whole system, until the North American revolution threw a fire-brand into this inflammable mass. The day on which Louis concluded the treaty with the United States, Feb. 6, 1778, decided his fate; for the war to which it gave rise has been called, "la guerre des farines," war against France, according to Aulonlin, 1,400,000,000 livres, accustomed the nation and army to republican ideas, and produced a creedless deficit; this, a meeting of the states-general, and this, the fall of the monarch and monarchy. Louis himself was averse to engaging in a war of this character; the council of state, the ministers hoping to establish French commerce on the overthrow of the British.

After Turgot's removal, the extravagance of the court increased: while Louis refused himself any great expenditures he yielded too easily to the tastes of the queen and the princes of the blood. Luxury and splendour made the expenses of the court very great; they played high; they built; they exhibited races; they gratified every whim; and Louis's dissatisfaction, which often withdrew him from these entertainments, was regarded as the indication of an ordinary mind. The regularity of his manner of life, in which study and domestic pleasures were intermingled with business, made no impression on the gay spendthrifts. Louis did not possess the art of inspiring the court and princes with respect. He paid the debts of count Artois. The queen, also, gave herself up to her love of gayety. Taste and love of the arts, clothed in all the humours of the fashion, rivalled theittel, or, van Deersch, the little court of the French spirit. Maurepas either did not see whither all this must lead, or, with his characteristic levity, yielded to necessity. Pleasure was his element. He remained the directing minister till his death, Nov. 21, 1781.
had stated at 112,000,000, but which was estimated at more than 140,000,000, rendered Calonne's plans suspected. An opposition was formed, and Calonne received his dismissal. (Parlement revolted against the imposition of two new taxes, which would have been burdensome to the large landed proprietors, and demanded the convocation of the estates. The nation heard the proposition with exultation; the court trembled. Louis ventured on a lit de justice; but the deputies declared that violence toward the nobility, and especially toward La Fayette, a caubourg was the spark which kindled the mine that overthrew the throne, while the mass of the nation, excited by opinions and passions, exasperated by hatred and contempt, reduced to desperation by the sight of multiplied wants, and inspired, by the example of America, with the love of freedom, became incapable of restraint or moderation. The king banished the parliament to Troyes. Thus war was declared between the throne and nation. The government, moreover, had acted without dignity in regard to the contest of the Dutch patriots with the hereditary stadtholder, in 1757, and then against every thing which had been done.)

The king himself manifested a good nature, bordering on weakness, to his nearest connexions, who, like the duke de Coigny, consented only with the greatest reluctance to the restrictions of the royal household. A negotiation was finally commenced with the parliament; the discontent was broken upon all sides, and became more violent; the rebellion broke out in Brittany, in June, 1788; the nobility and the officers of the regiment Vassigny, then, for the first time, dared to carry arms against the commands of the king. Even the clergy loudly demanded the convocation of the estates. (Respecting the pernicious artifices of the royalists, in general, much information is contained in Basenval's and Molleville's Memoirs.) The weak prime minister Brienne (see Loménie), opposed in all his projects, resigned, and Necker entered the council, in 1788, as minister of finances. Louis convened a second time the notables, to settle the form of the estates, and the manner of voting. May 5, 1789, the states-general met. Amidst the conflicts of the privileged orders, and the new opinions, the king remained gentle and timid, deserted and alone. "God forbid," said he to the nobility, who would not unite with the third estate. "I am now separated from all the world."

His sole object, which he pursued with earnestness of purpose, was the common weal; but around him every thing vacillated; how could he show firmness? The democrats hated him as a king; the emigrants and the aristocrats, who remained in France, deemed him incapable of governing. He himself made the greatest sacrifices to the state, even such as endangered his personal security, for instance, the disbanding of his body guard. He could not, nevertheless, escape the most envenomed calumny. Among other things, it was reported that, by a secret act, he had sold the church property, and that he was extorted from him in limitation of the ancient royal prerogatives. Meanwhile, even amidst the grossest calumnies, a flattering word was sometimes heard. When Louis XVI. attended the national assembly, (February 4, 1790), the national guard of Versailles caused a gold medal to be struck, on which was represented a pelican feeding its young with its blood. The device was, Français, sous cet emblème aurez votre roi! The 12th, 13th, and 14th of July, 1789; the night of August 4; the horrors of the 5th and 6th of October; the flight of the king, June 21, 1791; his hospital at Varennes, sixty leagues from Paris, when Louis, from his hesitation to use force, prevented the success of Bouillé's plan for his escape, and, at the same time, excited public opinion against himself by the declaration which he left behind (see the statement of M. de Valory, in the Minerve, November, 1815, and the Memoirs of the French Legation at Versailles, for the proclamation of September 14, 1791, which declared his person inviolable; the attack of the populace of Paris on the royal palace, June 20, 1792, when Louis, with equal firmness and dignity, rejected the demands of the insurgents, and, on the 22d, openly declared war against all foreign powers.)

The king was thus, to all intents, left to himself; the duke de Broglie, coadjutor of the king, succeeded in the absence of Louis, and became head of the national government. From every thing that he was accused of by the democrats, he would not even consent to what he considered hurtful to the general welfare; the catastrophe of August 10, to which Louis submitted, because he had not the courage to overcome the danger; his arrest in the national assembly, to which he had fled for refuge; finally, his trial before the convention, where he replied to the charges with dignity and presence of mind;—these were the most important events in the history of the king. (See France, from 1789 to 1814.) He exhibited, under these circumstances, the courage of innocence, and a strength of mind before unknown in him. As a prisoner of the municipality of Paris, in the Temple, he was defended, till shortly before his death, pen, ink, and paper. (See the Journal de ce qui s'est passé à la Tour du Temple pendant la Captivités de Louis XVI., by Cléry, the faithful servant of the king; and a work on the same subject by Hue, who followed Louis to the Temple.) His usual employment was to read, every day, portions of Tacitus, Livy, Seneca, Horace, and Terence; in his native language, chiefly travels. On the evening before his death, he found that he had read 157 volumes, in the five months and seven days of his imprisonment. He refused himself a loving husband and an affectionate father. In his private capacity, no candid man can withhold from him his esteem. January 15, 1793, Louis was declared guilty of a conspiracy against the freedom of the nation, and of an attack on the general security, by a vote of 590 out of 719; on the 7th Jan., he was condemned to death, the law requiring for condemnation two-thirds of the votes, having been repealed on the 16th, during the trial, and a bare majority declared sufficient. After repeated countings, it was found that 560 votes were given for death, making, consequently, a majority of five in 727. Jan. 21, 1793, he was guillotined. (In 1820, on his anniversary, in his thirty-ninth year, the appeal to the nation, proposed by his advocates, Malesherbes, Tronchet, and Deseze, having been rejected, on the 19th, by 380 votes out of 690. He died with the courage of Christian faith. His last words, which asserted his innocence and forgave his judges, were drowned in the rolling of drums and in the cry Vive la république! See the Memoirs of the Abbé Edgeworth (the priest who prepared him for death), containing his narrative of the last hours of Louis XVI. (London 1816.)

Even in his youth, Louis manifested a sensibility unusual in the higher classes. He needed not the sight of misery; when he heard it spoken of, he shed tears, and hastened to relieve it. Unknown, he alleviated misfortune in the cottage and garret. When he was first saluted at court, as dauphin, after the death of his father, the duke of Burgundy, he could not restrain his tears. Still greater was his grief at the death of Louis XV. "O God," he cried, "shall I have the misfortune to be king?" His favourite maxim was, "Kings exist only to make nations happy by their government, and virtuous by their example." The establishment of the journées de péché, the cause d'enceinte, the abolition of feudal services, of torture, and of slavery in the Jura, are only some of his beneficent measures. He caused
LOUIS XVII.—LOUIS XVIII.

the state prisons to be examined, and liberated the unhappy victims of despotism. Louis declared that he would never sign, beforehand, a lettre de cachet. His great object was the happiness and love of his people. On his journey to Cherbourg, in 1786, when he was the biggest king in the celebrated harbour, in 1784, to which he had appropriated 37,000,000 livres, he received the most unequivocal marks of the love of the French. He wrote, at the time, to the queen, "The love of my people has touched me to the heart: think you not that he is the biggest king in the world?" And in reference to the will of Dec, 22, 1792, he says, "I forgive, from my whole heart, those who have behaved towards me as enemies, without my giving them the least cause, and I pray God to forgive them. And I exhort my son, if he should ever have the misfortune to reign, to forget all hatred and all enmity, and especially my misfortunes and sufferings. I recommend to him always to consider that it is the duty of man to devote himself entirely to the happiness of his fellow men; that he will promote the happiness of his subjects only when he governs according to the laws; and that the king can make the laws respected, and attain his object, only when he performs the necessary duties of his state. The same spirit has inspired Monsieur (Louis XVIII.): "I submit to Providence and necessity, in laying my innocent head on the scaffold. By my death, the burden of the royal dignity devolves upon my son. Be his father, and rule the state so as to transmit it to him tranquil and prosperous. My desire is, that you assume the title of a regent of the kingdom; my brother, Charles Louis, will take that of lieutenant-general. But less by the force of arms than by the assurance of a wise freedom and good laws, restore to my son his dominions, usurped by rebels. Your brother requests it of you, and your king commands it. Given in the tower of the Temple, Jan. 20, 1793." Louis was buried in the Magdalene churchyard, Paris, between the graves of those who were crushed to death, in the crowd, at the Louvre, on the anniversary of his marriage, in 1774, and the graves of the Swiss, who fell on the 10th August, 1792, in his defence. Desaule's work on the history of this prince of little war is entitled Le Siecle de Louis XV. (Seconde partie, 1784–1793.)

The Fies privée et politique de Louis XVI., with a Précis historique sur Marie Antoinette, Mme. Elizabeth, etc., par M. A., contains little that is not to be found elsewhere. More important are the abbe George's Mémoires pour servir à l'Histoire des Événements depuis 1789, jusqu'en 1800–1810, published by the nephew of the author after his death (Paris, 1817, 2 vols.), and Madame Campan's Memoirs of the Private Life of the Queen, with anecdotes of the Times of Louis XIV., XV., XVI. (Paris, 1822, 3 vols.); and the abbé de Montgualin's Histoire de France depuis la fin du Règne de Louis XIV., etc. (Paris, 1827, 4 vols., to 1793.)

LOUIS XVIII., the son of Louis XVI., and of Marie Antoinette, was born at Versailles, March 27, 1785, and, in 1789, after the death of his elder brother, received the title of dauphin. He was four years old when his mother presented him to the seditions populace of Paris, and carried him to the crowd on her lap and 6th October. Conceived with his parents and his aunt Elizabeth in the Temple, his innocent gaiety and affectionate disposition were the chief solace of the unhappy prisoners. On the death of Louis XVI., he was proclaimed king by the royalists, and his uncle (afterwards Louis XVIII.) declared his son king of the state. Louis, immediately, was said to have been in the Temple, his innocent gaiety and affectionate disposition were the chief solace of the unhappy prisoners. On the death of Louis XVI., he was proclaimed king by the royalists, and his uncle (afterwards Louis XVIII.) declared his son king. He was soon after separated from his mother, sister, and aunt, and delivered (1793) to a shoemaker by the name of Simon, a fierce Jacobin, of a gross and ferocious dis-
July 16, with his two sons. He was followed by the princes of Condé and Conti, and the dukes of Bourbon, Enghien and Luxembourg. Monsieur remained. As the people were clamorous for the execution of the marquis of Favras, who had sought means for the escape of the king, and had attempted a counter revolution, in which the count of Provence had taken part, the latter went to París de ville, in Paris, the day after the arrest of the marquis (December 26, 1789), to defend himself in person.

He asserted that the only connexion he had ever had with the marquis, was, that he had bargained with him for 2,000,000 of livres, wherewith to pay his debts. Arrested and taken to prison, it was to have been appropriated to the levying of troops.

The marquis was condemned to death, by the châtelet, and hanged February 19. At last, the violence of the factions in Paris induced the king, June 21, 1791, to attempt to escape to the frontiers of the kingdom. Louis took the road to Marseilles, and the count of Provence that of Mons. The former was arrested at Varennes; the latter reached Brussels in safety. From Coblenz, he protested against the decrees of the national assembly, and the restrictions put upon the freedom of the king. When the king, October 30 and 31, 1791, called upon him to renounce his Russian connexion, a decree was sent at the same time by the convention to tell the king what it regarded the constitution as the work of rebels, and that the king held the throne merely in trust, and was obliged to leave it to his posterity as he had received it. January 16, 1792, the legislative assembly, therefore, declared the count of Provence to have forfeited his right to the succession. The two brothers of the king, at the head of 6000 cavalry, now joined the Russian army.

After the death of Louis XVI. Monsieur, who had previously been residing at Hamm, in Westphalia, lived at Verona, under the name of count of Lille. In 1795, he was here proclaimed, by the emigrants, king of France and of Navarre. The calamities which afterwards befell him he bore with dignity and resolution.

In the following year, when the Venetian senate, through fear of Bonaparte, obliged him to leave Verona, he declared himself ready to do so, but required that the names of six princes of his house should be made the heads of the government of the republic, and that the armour, which his ancestor, Henry IV., had given it, should be restored. He now led a wandering life, supported by foreign courts, especially the British, and by some friends of the house of Bourbon. He first went to the army of Condé, but, when seen as a volunteer, he was afterwards obliged to leave it, and went to Dil-lingen, in Swabia. July 19, 1796, at 10 o'clock in the evening, as he was standing at a window, with the dukes of Grammont and Fleury, a musket ball was fired at him, which grazed his temple. "Never mind it," said he immediately to the alarmed dukes; "when the heat is past, it does not bring a man down, nothing." When the count D’Avaray explained, "If the ball had struck a line deeper—" Louis replied, "then the king of France would have been called Charles X." From thence he went to Blackenburg, a small town in the Hartz, where he lived under the protection of the duke of Brunswick, and carried on a correspondence with his friends in France, especially with Pickegrn. After the peace of 1797, he went to Mittau, where he celebrated the marriage of the duke of Angoulême with the daugh- ter of Louis XVI. When Paul I, refused to permit him to publish willing to publish a paper, the Russian government allowed him to remain in Warsaw. While here, Bonaparte, in 1803, attempted to induce him to renounce his claims to the throne. But he answered to the messenger of the first consil, February 28, "I do not confound M. Bonaparte with his predecessors; I esteem his valour and his military talents, and thank him for all the good he has done my people. But, faithful to the rank in which I was born, I shall never give up my rights. Though in chains, I shall still esteem myself the descendant of St Louis. As suc- cessor of Francis the first, I will at least say like him—" We have all except our honour." April 23, the princes concurred in the answer of the king.

In 1805, Louis, with the consent of the emperor Alexander, returned to Mittau; but the peace of Tilsit obliged him to leave the continent, and he, at last, took refuge in England, in 1807. His chief of Artizans, viz., Council of Artois, went to Britain, principally in Edinburgh, from 1796. Louis had taken several steps to procure the restoration of his family in France. With this view, he had written to Pickegrn, and given him full powers. His letter of May 24, 1796, is a proof of the great confidence which he had in this "brave, disinterested, and modest," general, to whom, as he then thought, "was reserved the glory of restoring the French monarchy." When the army of the prince of Condé, in which, since 1798, the duke of Berri had commanded a cavalry regiment of nobles, first in Russia, and afterwards in British pay, had been by a series of clumsy failures driven into the arms of the enemy, the Russian emperor the liberty of residing in Volhynia, the princes of the Bourbon family ceased to take an active part in the operations of the war. Louis XVIII., until the conclusion of the great struggle, remained in England, where he lived at Harwell, in Buckinghamshire, in a very simple manner, occupying himself partly with the Roman classics, especially Horace, of whom he translated much, and retained in memory a large part, and partly with political studies. That he resembled in character his unfortunate brother, we know from several examples of his kind feelings. Soon after the disastrous expedition of the French to Russia, he wrote to the emperor Alexander a letter, recommending the French prisoners of war, as his children, to the magnanimity of that monarch, and he refused to join in the rejoicings in England, for he could not but mourn the death of so many Frenchmen. When the news of Napoleon invaded Artois went to Bath, February 2, 1814. His eldest son, the duke of Angoulême, had gone to join Well-lington. They published a proclamation from Louis XVIII. to the French, dated Hartwell-house, 1st February, 1814, which induced a party, first in Bourdeaux, and afterwards in England, for the support of the Bourbons. The king promised entire oblivion of the past, the support of the administrative and judicial authorities, the preservation of the new code, with the exception of those laws which interfered with religious doctrines; security to the new proprie- tors against legal processes; to the army, all its rights; to the universities, its independence, its political rights; the abolition of the conscription; and, for himself and his family, every sacrifice which could contribute to the tranquillity of France. Soon after the dissolution of the congress of Châtillon, the count of Artois entered Nancy, March 19. But the duke of Angoulême first saw the allies of the Bourbons planted on French ground at Bourdeaux, March 12.

The restoration of the Bourbons was a subject first brought strongly home to the French, at the time of the entrance of the allies into Paris, by the declara- tion of the emperor Alexander, March 31, that they would not sit together with a member of his family. Talleyrand, Jancourt, the duke of Dalberg, Louis, and De Pradt contributed not a little to this in an interview with Alexander, the king of Prussia, Schwartzzenberg, Nesselrode, Pozzo
LOUIS XVIII.

di Borgo, and Liechtenstein, March 31, by the assurance that the restoration of the latter was the wish of a large majority of the nation. (See De Pradt's Récit historique sur la Restauration de la Monarchie en France, le 31 Mars, 1814.) The Senate now appointed a provisional government under the presidency of Talleyrand, which, April 3, gave the authority of a law to the resolution of the Senate of April 2, for the deposition of Napoleon, and publicly declared in the Moniteur the project of the constitution of April 5, according to which the Bourbons were to be recalled to the throne. A decree of April 4, also intrusted the government to the count of Artois, until the moment when Louis, called to the throne of France, should accept the constitution drawn up for the kingdom. Louis XVIII. now left Hartwell, and reached London, April 20, whence the prince regent (George IV.) accompanied him to Dover. From Dover, the duke of Clarence (now William IV.), April 24, conducted him to Calais. With Louis landed also the duchess of Angoulême, the prince of Condé, and his son, the duke of Bourbon. Upon landing, he pressed the duchess of Angoulême to his heart, and said, "I hold again the crown of my ancestors; if it were of roses, I would place it on your head; as it is of thorns, it is for me to wear it." The memory of his landing upon French ground, is perpetuated by the installation of the Dessauer monument at Calais, and the trace of his first step is carefully preserved in brass. The king remained some days in Compiègne, where, as at St Ouen, he received députations from the authorities at Paris. He was welcomed at St Ouen by the emperor of Austria, and at Compiègne by the emperor of Russia. From St Ouen, May 2, he issued that remarkable proclamation, by which he accepted the most essential part of the constitution of the senate (April 5), in twelve articles, but submitted the whole, as being too hastily drawn up, to the revision of a committee of the senate and legislative body.

May 3, Louis made his entrance into Paris. The hopes of all now rested upon him. In compliance with the will of his unhappy brother, who had commanded forgiveness, he solemnly declared "that all examinations into opinions and votes, until the time of the restoration, are forbidden. The same oblivion is to be observed to the persons and estates of the citizens." He formed his ministry of members of the former provisional government, and of zealous royalists, such as the chancellor D'Ambray. One of his first ordinances related to the continuance of the oppressive taxes (droits réunis), which the state of the kingdom rendered necessary. It had been promised that they should be abolished, but it was only possible to ameliorate the mode of their collection. He afterwards concluded peace with Austria, Russia, Britain, Prussia, Spain, Portugal, and Sweden, at Paris, May 30, 1814, and caused a constitution to be drawn up. Although his ministry too little understood the spirit of public opinion, yet, by presence and firmness, it was able to restrain the disaffected. It inclined to the old prejudices, and fulfilled none of the just expectations of the nation, with regard to the freedom of the press, and the prevalence of liberal ideas. The old royalists, as well as the partisans of the present government, in politics, were in the power of the pride and covetousness. The former thirsted for revenge, and aspired to regain their lost advantages. The latter, including the soldiers of Napoleon, 100,000 of whom had returned from captivity, were insistent at the disgrace of the French arms. After the proclamation of peace, Louis caused his chancellor, D'Ambray, in his presence before the legislative body and the senators the constitution of the Kingdom (la charte constitutionnelle), June 4, it having been already approved by nine senators and nine deputies, after it had been drawn up by the three ministers, D'Ambray, D'Artois, and talking about the new constitution, he added a section in which the king referred to the constitution of the Kingdom of France (see above). The constitution was framed in a manner as to secure the privileges of the throne, and to limit the power of the crown. It was signed by the king; others were excluded, as Caumalaincourt, Fesch, Fouché, Grégoire, Roederer, Sièyes. They retained, however, their property, and the widows of those who had died received pensions. It was not to be expected, that men who had voted for the death of Louis XVI. could now be peers of France. The king gave his full confidence to his minister, Blacas, and the chancellor D'Ambray. The latter and the five secretaries of state, the minister of foreign affairs—Talleyrand—of the interior, of war, of the finances, of the navy), and the directors-general of the police and the post-office, together with the state council, were excluded from the king's council, to which were admitted distinguished men of the old and new nobility, and the former state officials, together with some whose only claim was, that they had shared the sufferings of Louis. The new relations with foreign powers were regulated by Talleyrand with his usual ability, and not without dignity and a proper regard to the pride of the nation. His diplomacy now professed great magnanimity and respect for the rights of the people. On the other hand, the minister of the interior, abbé Monteszque, did not succeed in gaining the public opinion in favour of the Bourbons. Still less did the minister of war, general count Dupont, succeed in gaining the favour of the army, which hated him. His successor, Soult, contributed much, by his severe measures, to excite the anger of the army against the king.

The personal mildness of Louis XVIII., and his love of justice, were often betrayed, in spite of the judgment which he frequently showed, into imprudent and inconsistent measures. He was accused of surrounding himself with the leaders of the Chouans, and with emigrants, and admitting them, in preference to all others, into the royal guard. The army was exasperated by the diminution of the pensions of the members of the legion of honour, and the severity which had placed so many officers upon half pay. The chamber of peers, composed mostly of the old nobility, and attached to their old prejudices, often thwarted the better views of the chamber of deputies. The chancellor D'Ambray showed great weakness in favouring the privileged classes, and was careless in the duties of his office. The count Blacas, little acquainted with France, was hated by all parties. The censorship of the ministers limited the freedom of the press, while libels were promulgated against men who had dispensed the government. Merely political transactions in consequence, the privileged classes, of the. The change was strikingly noticeable was from the list of members of the national institute. Hired or fanatical writers maintained that the sale of the national domains was invalid, and that the crimes of the revolution were not to be pardoned. The restoration of the titles and the old nobility displeased in the country. The ordinance of Blacas with regard to the Sunday police excited so much ill feeling in Paris, that it was found necessary to repeal it. The pro-
hibition of masked balls during Lent, caused still greater dissatisfaction; and the obstinacy of the curate of St Roch, who opposed the burial of a celebrated actress in consecrated ground, exasperated the people against the priests. In short, every thing appeared to presage a revolution. Ministers of all kinds were in haste to resign. — "But one more act of madness was wanting to France; and that we now have; we see the throne of the king shaken by his friends." Against the pure, or, as they were afterwards called, ultra royalists, were united the republicans and the military, and with them the democrats and terrorists. At the midst of all this, Napoleon returned from Elba.

To understand the events of March, 1815, it is necessary to call to mind what the majority of the nation expected of Louis XVIII. (See Comte and Dunoyer's Censeur ou Examen des Actes et des Ouvrages qui tendent à détruire ou à consolider la Constitution de l'Etat; and the Examen rapide du Gouvernement des Bourbons en France, depuis le Mois d'Août, 1814, jusqu'au Mois de Mars, 1815.)

The nation wished, 1. to have its political liberties secured, or the right of being represented by deputies, chosen by the people; 2. the personal liberty of all, or security for persons and properties from imaginary crimes, or contrary to the legal forms; 3. the equality of citizens in the eye of the law, and the rights of all to obtain any civil and military dignity, by merit and talents; 4. the abolition of feudal services; 5. the right, in criminal accusations, to be judged by a jury; 6. the independence of the judiciary upon every other power in the state; 7. the right of levying taxes by their representatives, and on all in proportion to their property; 8. the right of every individual to exercise any means of gaining a living which did not interfere with the rights of other citizens; 9. the right of every one to communicate his thoughts to his fellow-citizens, by public writings, being responsible only to the law; and, 10. the right of every one to perform divine worship in his own way, without molestation. But instead of satisfying the demands of the nation, the Bourbons, it was maintained by the parties above mentioned, had sought to destroy public opinion, and had thus lost the attachment of the French. The following grievances were particularly complained of: 1. the abolition of the national colours; 2. the surrender of all the fortresses beyond the ancient frontiers of France, to the allies, by Monsieur, as lieutenant-general, April 23, 1814, viz.: the fortresses of Ostend, Calais, Boulogne, Narbonne, Narbonne-Plage, 

The city and the people were devoted to her, but the troops favoured the advance of general Clausel, and the duchess was obliged to embark for England, April 2. Besides the ministers and several officers, marshals Berthier, Suchet, and the Duke of Berry, were among the 15,000 men who left France at the dictation of the king. The number of his followers amounted at last to a thousand. While in Ghent, he issued an official paper, the Journal Universel, which contained several pieces by Chateaubriand. In the meanwhile, Talleyrand, at Vienna, was actively engaged in the cause of the king, and Louis was included in the league of March 25, against Napoleon. When the allies invaded France, Louis XVIII. returned and went to Cambray. He here proclaimed a general amnesty, with the exception of traitors, and promised to avoid all the faults he had committed in 1814, from ignorance of the new spirit of the nation, and to dismiss Bona. In the meantime, the members, convoked by Napoleon, had appointed an executive commission under the presidency of Fouché, and deputies who were to negotiate with the allies upon the basis of their independent right to choose a form of government; but the allies would not consent to this. Fouché, at that moment, on the subject of the deputies, was in the chamber of peers; 9. the libels against those who had taken part in the revolution, although these were forbidden by the constitution; 10. the exclusive appointment of the old nobility to embassies; 11. arbitrary taxes, imposed without the consent of the legislature; 12. the great influence of priests, &c. It ought to be observed, however, on the other hand, that Louis XVIII. had provided for the personal security of the subject by the independence of the tribunals, and the responsibility of the ministers. But the latter point had not yet gone into effect when the revolution of March 22 began. But the ministers should have forgotten their old ideas, and ruled in a popular manner. Henry IV. had, when he ascended the throne, changed his religion, and thus obtained the love of his people.

Napoleon at Elba was fully informed of the troubles in France, and the divisions at the congress. His appearance in France, March 1, 1815, was like a thunderbolt to the army and the nation. The state of popular feeling was entirely unknown to Louis. Those who surrounded him, as ignorant as himself, still deceived him with accounts of the devotion of the army, and of desertion among the soldiers of Napoleon. The defection of Labédoyère and Ney finally opened the eyes of the king, but it was too late. He was obliged to flee from Paris, in the night of March 20, after having dissolved the two chambers. But on the evening of March 22, he reached Lille, whence he issued several decrees, forbidding all levies and contributions for Napoleon, and disbanding the rebellious army. Twenty-four hours after, he was obliged to leave Lille, to avoid falling into the hands of his enemies, and went by Ostend to Ghent. The duke and duchess of Orleans, the old prince of Condé, the count of Artois, and the duke of Berry, hastily left Paris. The duke of Bourbon remained in Vendée, and the duke and duchess of Angouleme in the south of France. Their object was to awaken a popular sympathy in favour of the king. An army was, indeed, formed in Vendée, and the duke of Angouleme levied troops; but, deserted by a part of them, and surrounded by the generals of Napoleon, he was obliged to conclude the capitulation of Port d'Espirt, April 8, in consequence of which he embarked, April 15, at Cette for Barcelona. The duchess of Angouleme, whose fortitude had been the subject of admiration, showed at Bourdeaux the courage of a heroine. The city and the people were devoted to her, but the troops favoured the advance of general Clausel, and the duchess was obliged to embark for England, April 2. Besides the ministers and several officers, marshals Berthier, Suchet, and the Duke of Berry, were among the 15,000 men who left France at the dictation of the king. The number of his followers amounted at last to a thousand. While in Ghent, he issued an official paper, the Journal Universel, which contained several pieces by Chateaubriand. In the meanwhile, Talleyrand, at Vienna, was actively engaged in the cause of the king, and Louis was included in the league of March 25, against Napoleon. When the allies invaded France, Louis XVIII. returned and went to Cambray. He here proclaimed a general amnesty, with the exception of traitors, and promised to avoid all the faults he had committed in 1814, from ignorance of the new spirit of the nation, and to dismiss Bona. In the meantime, the members, convoked by Napoleon, had appointed an executive commission under the presidency of Fouché, and deputies who were to negotiate with the allies upon the basis of their independent right to choose a form of government; but the allies would not consent to this. Fouché, at that moment, on the subject of the deputies, was in the chamber of peers; 9. the libels against those who had taken part in the revolution, although these were forbidden by the constitution; 10. the exclusive appointment of the old nobility to embassies; 11. arbitrary taxes, imposed without the
of the 4th, Louis followed, under the protection of Wellington. The king immediately appointed his new ministry, at the head of which was Talleyrand, and in which Fouche was minister of police. The most declared partisans of Napoleon were lost their place. On July 13, the former chamber of deputies was dissolved, and a new one summoned. See Chamber Intovable.

Among the most decided measures by which the king sought to support his throne, was the ordinance of July 16, dismissing the army, according to the wishes of his allies; which Macdonald effected with great prudence. To form a new army, 4000 officers were appointed, in part of those who had escaped the conscription; and according to the edict of May 20, 1818, of the half-pay officers of the army of 1815, only those were appointed who had served for fifteen years or more, and, consequently all French soldiers, since 1803, were made incapable of service. Yet the constitution of 1814 had secured to all officers the preservation of their rank and their pensions. An ordinance of July 24, 1815, designated the rebels who were excluded from the amnesty. According to this, nineteen generals and officers, Ney, Labèdoyère, the brothers Lallemand, Erlon, Lefèvre, Desnouettes, Lavalette, Carbonnière, Amélie, de Dampierre, Mouton-Duvernet, Grouchy, Clanzel, Laborde, Debeille, Bertrand, Cambronne, Lavalette and Savary, were to be arrested and brought before a court-martial. Thirty-eight others were exiled, according to a resolution of the chambers, including Soul, Carnot, Exelmans, Bossano, Vaudanne, Lamarque, Lobau, Barrère, Arrighi, Renaut, de L'Isle, Jean d'Angely, Real, Meun- lin de Douny, Hulin, the poet Arnaud, colonel Bory de St Vincent, Mellinet and others. Twenty-nine were degraded from the peerage, as Lefèvre, Souchet, Angerau, Mortier, Cadore, Placenza, &c. A few excused themselves by proving that they had not received from Napoleon a seat in the new chambers. Of the rebels, towards whom many circumstances recommended mercy, Labèdoyère was shot August 19; Ney, December 7, 1815; and Mouton Duvernet, July 26, 1816. Lavalette escaped from prison, December 21, 1815; Drouot and Cambronne were released; the greater number took refuge in flight; some, like Ke Manville, as Douron, Jean the son, Laurence, Gamon, Alquier, Dubois- dubiand and Grandpré received, in 1818, permission to return. In the mean while, the royalists, who called themselves rectilignes, obtained greater influence. The princes were dissatisfied with Fouche's appointment to the ministry. At the same time, he made himself obnoxious to the allies by his reports to the king on the new state of France. Talleyrand and Fouche, though devoted to the cause of the king, were looked upon by the royalists as men who ought not to be admitted to authority in the new system of things. Thus a change in the ministry took place, September 25, 1815. Fouche was dismissed, and, in order to please Russia, the duke of Richelieu was made minister of foreign affairs in his place. Decazes became minister of police, Corvello, of the finances, and Clarke, duke of Feltre, minister of war, &c.

The ultramontane royalists now raised their heads. The state of things before 1789, alone appeared legitimate in their eyes. The election of the deputies was made accordingly, and many of those elected were but twenty-five years old, though forty was the legal age. A change of the constitution was openly talked of. On the other hand, the partisans of the fallen government, by buying the votes of the troops, bunched to form conspiracies; but for their speedy punishment previal courts were introduced, which, however, were abolished in 1818. Decazes discovered several con-

spiracies, among which, however, that under Dider alone broke out, in May, 1816, in the vicinity of Grenoble. The numerous arrests attracted attention, and several foreigners, as the British who had favoured Lavalette's escape, lord Kinmard (in his letter to the judges), and of Polish to the Siegeskowki, complained of the arbitrary conduct of the French police. It excited great dissatisfaction that the duke of Richelieu, as minister, in the trial of Ney, had availed himself of the extreme rigour of the law in procuring his condemnation. Among the princes, the duke of Orleans (Louis Philip) alone used a milder tone. When an address of the king, written by Chateaubriand, was read in the house of peers, the duke proposed to change the passage in which traitors were given up to the justice of the king, so as to recommend the persons there named to the mercy of the king. The censors of the press would not allow his speech to be printed; and the duke, for whom a party was already forming, though without his own consent, soon after (October, 1815) came to England. Richelieu now concluded with the allied powers the treaty of November 20, 1815 (see France), which embarrassed the finances of the king, since, from December 1, 1815, France was bound to pay 144,000,000Fr. yearly, for 700 years, which had been the expenses of the war, with 130,000,000Fr. for the support of the army of occupation. A violent dispute soon after arose in the chambers on the subject of the law of amnesty. The ultra royalists, January 6, 1816, proposed some changes, which extended and rendered more severe the first propositions of the king. All the relations of Napoleon were, under pain of death, banished from France; they lost the property conferred upon them, and were obliged to sell what they had bought. Those, also, who had voted for the death of the king (régicide), and those who, in 1815, had received offices or honours from the sauver, or had acknowledged the Additional Act to the constitution, were banished from the kingdom, and forfeited all their civil rights, and the titles, estates and pensions, which had been conferred on them. Of 366 who had voted for the king's death, 163, who were still living, were banished from France. Three only—Tallien, Mil- bon and a layman, as Duport, and Jean the son, Laurence, Gamon, Alquier, Dubois-dubiand and Grandpré received, in 1818, permission to return. In the mean while, the royalists, who called themselves rectilignes, obtained greater influence. The princes were dissatisfied with Fouche's appointment to the ministry. At the same time, he made himself obnoxious to the allies by his reports to the king on the new state of France. Talleyrand and Fouche, though devoted to the cause of the king, were looked upon by the royalists as men who ought not to be admitted to authority in the new system of things. Thus a change in the ministry took place, September 25, 1815. Fouche was dismissed, and, in order to please Russia, the duke of Richelieu was made minister of foreign affairs in his place. Decazes became minister of police, Corvello, of the finances, and Clarke, duke of Feltre, minister of war, &c.

The ultramontane royalists now raised their heads. The state of things before 1789, alone appeared legitimate in their eyes. The election of the deputies was made accordingly, and many of those elected were but twenty-five years old, though forty was the legal age. A change of the constitution was openly talked of. On the other hand, the partisans of the fallen government, by buying the votes of the troops, bunched to form conspiracies; but for their speedy punishment previal courts were introduced, which, however, were abolished in 1818. Decazes discovered several con-
of the Russian ambassador, Pozzo di Borgo, and of Wellington, succeeded in obtaining from the king the ordinance of September 5, 1816, by which he dissolved the chamber of deputies, and ordered that the new members should all be of the lawful age of forty. At the same time, he declared that the constitution should be subjected to no alteration. This victory of the constitutional party gave a check, for a time, to the ultra royalists, to whom Louis XVIII. himself did not appear to be enough of a royalist; and silenced, for some time, their Vive le roi, quand même!—The aim of that party, Chateaubriand, in his work De la Monarchie selon la Charte, reproached the government with having taken away personal liberty and the liberty of the press. He was even bold enough to maintain, that that ordinance was contrary to the wishes of the king. The elections for the new chambers were such that the constitutionalists could raise their voices. They spoke in vain, though with great talent and boldness, for the freedom of the press and a jury. The law of censorship of November 9, remained in force. The state of the people, in the general dearth of all articles, and the weight of the taxes, used every possible alleviation, and the king's special orders of public offices, to the same end. From 1814 to 1816, the arrears amounted to more than 83,000,000 francs, which had increased the budget of expenses for 1817 to 1,088,000,294 being 699,000 more than in 1816; while the revenue for 1817 could not be estimated higher than 774,000,000, so that a deficit of 314,000,000 was to be covered. Recourse was had to loans; the same thing took place in 1818. The diminution of the standing army, and its entire dissolution in consequence of the congress of Aix, were, therefore, fortunate events. Among the events of the administration of Louis XVIII., it must, however, be remarked, that the national institute was restored in 1816, with its former four academies, although the best institutions, as that of the decennial prizes, were not retained. The attempt to bring Hayti to submission, by the offer of favourable conditions, utterly failed, and the concordate was not effected with the pope.

Louis was himself inclined to use mild measures. On the day of St. Louis, therefore, August 25, 1818, when the bronze statue of Henry IV. was erected in Paris, which had been paid for by private subscription, several persons arrested for political offences were pardoned. He allowed, also, some of the exiles who had been suspected of being political enemies were permitted to manifest their feelings by deeds. An instance of this kind was the punishment of the deputy Kochlin. By the change in the law of elections, in June, 1820, the system of the strict royalists was triumphed; Villèle was placed at the head of the ministry. But the strength of the king, who had, for several years, been unable to walk, now entirely failed him. His last triumph was the campaign in Spain in 1823. In August, 1824, it became evident that his disease was mortal. Until the day of his death, September 16, 1824, he gave proofs of firmness and resignation. "Un roi doit mourir," said he, qualitatively, "mais ne doit jamais abandonner son peuple." He retained much intellectual cultivation and sagacity, but, enfeebled by disease, he had not sufficient strength of character to restrain the ultra, nor did he understand new France.—He had one remarkable maxim—L'ex

actus est politesse des rois.

LOUIS III., (called, in German history, the Child), born in 895, succeeded his father, the emperor Arnulf, when six years old. In his minority, archbishop Hatto, of Mentz, administered the government, and carried the monarch with him, wherever the affairs of the empire required the presence of the regent. During the course of his reign, Germany was desolated by the Hungarians, and torn asunder by civil discord. He assumed the imperial title in 908, but was never crowned. He died in 911, or 912, and with him ended the royal line of Charlemagne.

LOUIS IV., the Bavarian, emperor of Germany, son of Louis the Severe, duke of Bavaria, was born in 1886. On the death of Henry VII. (q. v.), five electors were in favour of Louis, while the others supported Frederick, duke of Austria. The two rivals being both crowned, a war ensued, and Frederick was made prisoner, in the battle of Muhlbrunn, in 1222. (See Bavaria; and Germany, History of.)
In 1315, Louis had expelled his brother, Rudolph, who opposed his election from the Palatinate, but, after the death of the latter, had formed a convention with his sons, by virtue of which their patrimony was restored to them, and the electoral dignity was to be held by the eldest among them. The vacant Mark of Brandenburg he conferred, in 1322, on his eldest son. In his disputes with pope John XXI., against whom he was joined by the Viscontis party in Italy, he maintained the dignity of the German crown, and set up the antipope Nicholas V. In 1346, Constance VI. excommunicated him, and succeeded in calling late electors for Charles of Luxembourg, king of Bohemia, on the imperial throne. In the midst of this dispute, Louis died (1347). See Manner's Louis IV., or the Bavarian, in German, 1812.

LOUISA, AUGUSTA WILHELMINA AMALIA, queen of Prussia, daughter of Charles, duke of Mecklenburg-Strelitz, was born March 10, 1776, at Hanover, where her father was commandant. When six years old, she lost her mother; and her grandmother, at Darmstadt, took charge of her education. In 1793, the king of Prussia, then prince royal, saw her at Frankfurt, when she and her sister were presented to the prince. The prince was immediately struck with her uncommon beauty, and was soon after betrothed to her. Prince Louis, of Prussia, was betrothed, on the same day, to her sister, the present duchess of Cumberland. Dec. 24, 1793, the princess Louisa was married to the crown-prince at Berlin, and, when her husband ascended the throne, Nov. 16, 1797, she became, in her exalted station, the model of a wife, a mother, and a queen, who alleviated misery wherever she could, and promoted merit. In 1806, when Prussia was suffering severely under the burdens of war, this princess became still more popular: indeed, her beauty and grace, her benevolent and pure character, her sufferings and her fortitude, rendered her an object almost of adoration. She died in 1810.

LOUISBURG; capital of Cape Breton; situated on a point of land on the south-east side of the island: lon. 59° 56' W.; lat. 45° 54' N. Its streets are regular and broad, consisting, for the most part, of sand; it possesses a railway, a parade at a little distance from the citadel, the inside of which is a fine square, nearly 200 feet every way. The town is half an English mile in length, and two in circuit. The harbour is excellent, and is more than half an English mile in breadth in the narrowest part; and six miles in length from north-east to south-west. The principal trade of Louisburg is the cod fishery. It was taken from the French by the British fleet, under Sir Peter Warren, and the American forces, commanded by Sir William Pepperell, in the year 1745; but afterwards restored to France, by the treaty of Aix-in-Chapelle, in 1748. It was again taken by the British, under the command of Admiral Ramsay and lieutenants-general Amherst, in July, 1768, and its fortifications have been since demolished.

LOUIS D'OR; a French gold coin, which received its name from Louis XIII., who first coined it in 1641. (See the article Coins.) The value of the Louis is about eighteen shillings. Louis XIII., coined, likewise, a piece of silver money, called Louis blanc, also ecus, and, among us, French crowns.

LOUISIANA TERRITORY. The French, when in possession of a great portion of the continent of North America, seem to have applied this name, in various manners and times, to a region which they considered or imagined to be included in the islands south and west of Canada. In this sense, it must be considered as coextensive with the valley of the Mississippi, bounded on the east by the Alleghanies, and stretching westerly an unknown and indefinite extent to the Spanish dominions and the then unexplored wilds of the interior. By the treaty of 1763, which made the Mississippi the boundary between the British and French colonies, the name was limited to that portion of the valley west of the river, which had been settled by an unsettled region westward. This region was purchased of France by the United States, by which it has been explored, and formed into the states of Louisiana and Missouri, and the territories of Arkansas and Missouri. We shall here give a general account of the progress of discovery, exploration, and settlement of the Great region, from the first touching of the coast, to the separate heads above mentioned. The Spaniards were the first to colonize, if not to discover, Florida, the western limits of which were by no means accurately fixed; and De Soto was probably the first white man who saw the Mississippi, which he crossed in one of his expeditions, not far from the mouth of the Red river. In 1673, a French missionary, Marquette, with Jolliet, a citizen of Quebec, crossed the country from lake Michigan to the Mississippi, which they descended to the mouth of the Arkansas.—See Recueil des Voyages (Paris, 1861), published by Thévenot, as a supplement to his Discovery of Louisiana. Six years later, De La Salle, commander of a fort on lake Ontario, set out to explore the country, having in company father Hennepin. They passed the winter on the Illinois, and La Salle returned to Canada to procure supplies, leaving the missionary with orders to ascend the Mississippi to its sources. In the spring of 1680, Hennepin accordingly descended to the mouth of the river, followed up its course to the falls of St Anthony, and, on his return to France, published an account of his travels, in which he called the region Louisiana, in honour of Louis XIV. See Hennepin.

The first attempts at the colonization of this region were not made till 1680, when an expedition sailed from Rochefort, under the command of Lemoine d'Iberville, a Canadian naval officer of reputation, who was the first to enter the Mississippi by sea, and who laid the foundation of the first colony at Biloxi. The Spaniards, who had not long before established a settlement at Pensacola, protested against the occupation of the country. Thirty years later, the Mississippi commercial company obtained a grant of the country, principally on the river and to the east of it. In 1713, a census of the latter colony gave a population of 400. In the year 1718, Antoine de Crozat, who had amassed a fortune of 40,000,000 livres in the Indian trade, purchased a grant of this country, with the exclusive right of commerce for sixteen years. Disappointed in his speculations, he gave up the grant in 1717, and the Mississippi commercial company obtained it. A new government was formed, consisting of a governor, intendant, and royal council; and grants of land were made to individuals. New Orleans was founded, the cultivation of tobacco was introduced, and miners were sent to work the mines. A French vessel, La Louis; but, in 1731, the company gave up the country to the crown.

The early hostilities of the French with the Spanish and British colonists, and with the different native tribes, it is not our intention to relate. (See Natchez.) The struggle of the French with the British continued until 1754, is a subject of more interest. The French had scattered themselves over the more central parts of the beautiful valley of the Mississippi. Kaskaskia, Cahokia, Vincennes, St
Genevieve, the post of Arkansas, Nachitoches on Red river, Natchez on the Mississippi, were rallying points of the rural population in this immense region, who had adopted, as a common measure, the plan of moving from the mouth of the Mississippi, while New Orleans and Mobile had become places of considerable commerce. The French claimed all the country west of the Alleghanies, and had established a chain of communication from New Orleans to Quebec, which they mediated to strengthen by a line of fortified posts. The British, with the consent of Louisiana, Lewis, St. Lawrence, found themselves thus exposed to be shut up, upon the eastern slope of the Alleghanies. The French occupied and fortified the important post at the head of the Ohio, to which they gave the name of fort du Quesne. The British general Braddock failed in his attack on this post, but the war terminated in the complete humiliation of France, who, by the peace of 1763, was obliged to cede Canada, and all her possessions east of the Mississippi, to Britain. The preceding year (November, 1762), she had ceded all her possessions west of the Mississippi, with the island of Orleans, to Spain, and the occupation of Louisiana was thereby limited to this part of the valley. In the war of the American revolution, Spain conquered Florida from the British, and, by the peace of 1783, that province was ceded to the Spaniards, while all the country between Florida and the St. Lawrence, and the ocean and the Mississippi, was acknowledged as an independent state. (See United States, Kentucky, Tennessee, Ohio, &c.) The navigation of the Mississipi soon became a source of difficulty between Spain and the United States. After much delay, the treaty of 1795 was concluded between the two powers, by which a line of boundary was agreed on, and the free navigation of the river secured to the United States. In 1798, the Spanish posts, to the north of 31°, were evacuated, but Spanish ships committed depredations on the American commerce, and refused to allow the navigation of the Mississippi, and the right of deposit at New Orleans, which had been secured by treaties. A force was accordingly prepared on the Ohio, by the government of the United States, in 1799, intended to descend the Mississippi, and seize New Orleans. A change of administration was followed by the disbanding of these troops, but representations were made to Spain against the violation of the treaty, with a demand of redress of injury. The action of the Spaniards showed Louisiana had been ceded to France. The French force destined for the occupation of the country was blockaded in the Dutch ports by the British, and the first consul ceded Louisiana to the United States for the sum of 15,000,000 dollars, or about £3,875,000, by a treaty dated April 13, 1803. (See the secret history of this treaty in the Histoire de la Louisiana, by Barbé-Marbois, Paris, 1829.) The country passed peaceably into the possession of the United States, and measures were immediately taken for organizing its government, and examining its unknown regions. It was divided into territorial governments of Orleans, which, in 1812, was admitted into the union as an independent state under the name of Louisiana (see Louisiana, State of), and of Louisiana, afterwards changed to Missouri. See Missouri State, and Missouri Territory.

The first national expedition was planned by president Jefferson, and conducted under the command of Captain Lewis, and lieutenant Clarke (afterwards governor of Missouri), with instructions to ascend the Missouri, cross the rocky mountains, and descend, by the Columbia, to the Pacific ocean. They began the longest river voyage since the time of Orellan, May 14, 1804. Having wintered at Fort Mandan, they continued their voyage next spring, and, after a course of 3600 miles arrived at the fountain-head of the Missouri. Fifty days were occupied in crossing the Rocky mountains, and more easy passages have since been discovered. Descending the Columbia to its mouth, they reached the Pacific ocean, at a distance of 4134 miles from their starting-point. They returned by a somewhat shorter route of 3550 miles, having been the first who had crossed the Rocky mountains, and the first to see the Pacific. (See Lewis and Clarke's Expedition to the Sources of the Missouri, Philadelphia, 1814.) About the same time, lieutenant (afterwards major) Pike was sent to explore the Mississippi, and, on his return from that expedition, to survey the country lying between the Rocky mountains and the Mississippi, and examine the sources of the Arkansas, and Red rivers. Having arrived at the head of the former, and suffered much from cold and hunger, on account of the elevated situation of the country, he reached a large river, which he supposed to be the Red river, but which proved to be the Del Norte or Arkansas. He subsequently entered the Spanish territories with his party, when they were arrested by Spanish soldiers, and carried almost without clothing, to Santa Fé, but were afterwards set at liberty, and returned to Nachitoches. (See Pike's Expedition to the Sources of the Mississippi, Philadelphia, 1810.) In 1819, the federal government organized a new expedition, of a military and scientific nature, to examine more carefully, with a view to colonization and defensive establishments, the country east of the Rocky mountains. It was commanded by major Long, and a narrative of it has been written by doctor James, botanist to the expedition. The party embarked at Pittsburgh, in a steam-boat, and ascended the Missouri, the whole distance of 1000 miles, without accident. In the month of September, they arrived at the mouth of the Mississippi, and crossed the great sandy desert which extends, in a gentle slope, nearly 400 miles to the base of the Rocky mountains, and nearly 500 miles from north to south. Its surface is furrowed by ravines, several hundred feet deep, in which are a few stunted trees. On the elevated surface of the desert, not a tree is to be seen; but it is thickly set with the spiny cactus, or prickly pear. Proceeding southward, they descended the Arkansas, and returned with large collections of skins of rare animals, some thousands of specimens of flowers, and more than 500 new plants. (See Account of an Expedition to the Rocky Mountains, Philadelphia, 1828.) Another expedition, under general (now governor) Cass, proceeded to explore the British frontiers about the sources of the Mississippi. Schoolcraft was the historian of this expedition. (Travels to the Sources of Mississippi, in 1820, Albany, 1821.) To complete the survey of the frontier, major Long was sent, in 1823, with Mr. Kenting to ascend the St. Peter's, a considerable river which falls into the Mississippi. They traced the river to its source (575 miles), and, proceeding northward, reached the Red river, which flows into Lake Winnipe. (See Narrative of the Second Expedition to St. Peter's River, Lake Winnipe, &c., by William H. Kenting.) This completed the general survey of this immense region. Its northern boundary was settled by the convention of 1818 with Great Britain, on a line drawn from 59° N., to the Rocky mountains: the southern, by the treaty of 1819 with Spain, is from the Sabine river, in 32° N., to the Red river; then along that river to 100° W., thence directly north to the Arkansas, which it follows to 42° N., and thence, in that parallel, to the South sea. The states of Louisiana and Missouri,
and the territory of the Arkansas have already been set off, and are occupied with a thin, but active and rapidly increasing population. The great mineral and vegetable wealth of this vast region, and its almost unappropriated natural facilities of communication, open a wide prospect to the prosperous, free, and happy communities that are springing up in its bosom. The territory west of the Rocky mountains, which seems to belong to the United States rather by priority of discovery than as a part of the Louisiana purchase, will be described under the head of Oregon. Beside the works already mentioned, Chupreux has given a Description de la Nouvelle France; Jefferson's Account of Louisiana; Stoddard's Sketches of Louisiana; and Flint's interesting work, Geography and History of the Mississippi Valley (Cincinnati, 1828.)

LOUISIANA; one of the U. S. States of America, formed in 1812. It is bounded north by Arkansas territory, east by the state of Mississippi and the gulf of Mexico. The eastern boundary line is formed by the river Mississippi, from lat. 33° to 31° N.; thence, by the parallel of 31°, to Pearl river; thence by that stream to its mouth. The gulf of Mexico forms the southern boundary, and Sabine river the western, from lat. 30° N.; thence the boundary line proceeds north to lat. 33°, thence due east to the Mississippi; lon. 89° to 94° 5' W.; lat. 29° to 33° N.; 240 miles long, from north to south, and 210 broad; square miles, 48,220, or 31,463,000 acres; population, in 1829, 15,349; slaves, 60,064: in 1830, 214,603. The principal rivers are the Mississippi, Red, Ouachita, Black, Tensas, Sabine, Calcasieu, Mermentau, Vermilion, Atchafalaya, Teche, Pearl, Amite, and Iberville. The largest lakes are Pontchartrain, Maurepas, Borgne, Chetimaches, Mermentau, Calcasieu, Sabine, Bistineau, Bolduc, and Ocatahoola. All the southern part of this state is a vast alluvial tract of low champaign country, extending from lake Borgne to Sabine river, and from the gulf of Mexico to Baton Rouge and Red river; about 250 miles long, and from 70 to 140 wide. This extensive tract is intersected by numerous rivers, bays, creeks, and lakes, dividing the country into a great number of islands. The Biloxi is one continued swamp, destitute of trees, and covered with a species of coarse reeds, from four to five feet high. Nothing can be more dreary than a prospect from a ship's mast, while passing this immense waste. A large extent of country in this state is annually overflowed by the Mississippi. According to a report of the revenue, the lands above Red river, from lat. 31° to 33° N., may be assumed at 20 miles, equal to 2770 square miles. Below lat. 31° to the efflux of the Lafourche, about 80 miles in extent, the inundation is about 40 miles in width, equal to 3200 square miles. All the country below the efflux of the Lafourche is liable to be inundated, equal to 2570 square miles. From this calculation, it appears that 8340 square miles are liable to be inundated by the overflowing of the Mississippi; and if to this be added 2550 square miles for the inundated lands on Red river, the whole surface of the state liable to inundation, will amount to 10,800 square miles. Of this extent, not one half is actually covered annually with water. The immediate banks of all the streams are seldom, and many of them never, inundated; and they afford strips of rich, tillable land, from a mile to a mile and a half wide. The country between the Mississippi, Iberville, and Peoria rivers is one of the finest in the state; the southern half is a level country, yet highly productive in cotton, sugar, rice, corn, and indigo. The northern part presents an undulating surface, covered with a heavy growth of timber, consisting of white, red, and yellow oak, hickory, black walnut, sassafras, magnolia, and poplar. The district of New Feliciana has been considered, by some, as the garden of Louisiana. The south-western part of the state, comprising the districts of Opelousas and Attakapas, consists mostly of extensive prairies. Some of these prairies are so detached, coupled, or surrounded, by swamps, that the surface is generally very narrow, and they may be considered as forming one immense meadow. A large portion of these tracts are barren, but some parts, particularly that bordering on the Teche, are very fertile, and contain flourishing settlements. It has been estimated that the territory in this part of the state is covered by swamps along the gulf of Mexico, constitute one-fifth of its whole surface. The country on both sides of Red river, from its mouth to the limits of the state, is intersected with lakes, which are more than forty in number, and all communicate with the river. The bottoms on the river are from one to ten miles wide, and of a very fertile soil. The timber on the bottoms is willow, cotton wood, honey-locust, pawpaw, and buckeye; on the rich uplands, elm, cucumber, ash, hickory, mulberry, black walnut, with abundance of grape vines; upon the second-rate, or sandy uplands, white, pitch, and yellow pines, and various kinds of oak.

The climate of Louisiana is as cold as that of the Atlantic states about two degrees further north. The orange ceases at about 30°, and the sugar-cane at 31°. Sugar and rice are the staples of the state in general south of 30°, and cotton north of that parallel; the latter, however, is extensively cultivated in every part of the state. Among the fruits are the apple in the northern parts, the peach, and several species of fig, the orange, the pomegranate, and grape. The olive-tree is found, and the Provençals, who were settled in Louisiana, affirmed that the oil was as good as that of their native country. Indigo was formerly much cultivated, but has been, of late, in a great measure abandoned. The rice is remarkably good, and yields abundantly. Some attention has lately been paid to the cultivation of the tea plant; and the finest tobacco is raised, but is not so profitable as sugar and cotton. The kinds of cotton cultivated are Louisiana, the finest, and recently, Mexican cotton. The amount of sugar made in 1828 was 87,065 hhds.; of molasses, 39,574 hhds.; in 1829, the sugar made was 48,238 hhds.; and as there are 40 gallons of molasses to each hogshead of sugar, the hogsheads of molasses must have been somewhat less than half as numerous. The tobacco produced in 1829 was 6,857,209 hhds.; for the first 12 months, 35,111 hhds.; for the second, 25,491; for the third, 28,082. The bales of cotton which were exported in the same periods were 304,814, 267,949, 351,899. The total exports in 1829, were 12,386,000 dollars, or nearly 23,000,000. The value of imports, for the same time, was 6,857,209 dollars, or about half that sum; amount of tonnage, 51,903, of which 17,000 was steam-boat tonnage. The arrivals at the port of New Orleans, from Oct. 1, 1829, to Oct. 1, 1830, were 286 ships, 445 brigs, 166 schooners, 33 sloops, 778 steam-boats,—total, 3998. The United States granted the state 46,080 acres of land for a college, and 873,000 acres, for schools. There are colleges at New Orleans and Jackson. In 1827, the legislature made a grant to each parish of 2 dollars 62 ½ cents to every voter, to be applied to the education of the poor; in consequence of which the Latin schools have been regularly applied, and are at present, to that purpose. The Catholic is the predominant religion of Louisiana: there are a few Baptists and Methodists. According to returns for 1828, the militia amounted to 12,274 men. The principal towns in the state are New Orleans, Donaldson or
Donaldsonville (the seat of government), Nachteches, Alexandra, Baton Rouge, Opelousas, Galvez-town, &c. The constitution differs little from those of any other states except that as the common law is not the common law which prevails in the rest of the country, except so far as its provisions have been introduced by statute. The civil law, which prevailed under the French dominion, has been retained in its principal features. (See, below, Louisiana, Code.)

The civil law, so-called, Spanish is the law of the territory of Orleans, and the civil law of Louisiana are descendants of the Spaniards, French, and Anglo-Americans, or emigrants from the other states, or from the Spanish colonies. The character of such a mixed population, scattered over a great extent of country, must, of course, be various. The English language and the Anglo-American institutions are, however, assuming the predominance. The early history of the state will be found in the preceding article. In 1812, the territory of Orleans, having been found to contain the requisite number of inhabitants, was admitted into the Union, under the name of Louisiana. Jan 8, 1816, the attack of the British on New Orleans was repulsed by general Jackson. See New Orleans.

Louisiana, Code of. Most of the United States, even those which were formerly colonies of France and Spain, have adopted the common law of England, as the basis of their municipal law. The state of Louisiana, however, has steadily retained the civil law of jurisdiction which it derived from the continent of Europe, though, in criminal matters, the English jurisprudence has been followed. The custom of Paris, which the colonists brought with them, as the law of the new colony, was first reduced to writing in France in 1510, and enlarged and amended in 1820. The deficiencies of the customary law, both in the mother country and the colony, were supplied by reference to the Roman jurisprudence. Louisiana was ceded by France to Spain in 1702, and was taken possession of by this latter power in 1763, when the Spanish law was introduced. The great body of this law, called the Siete Partidas, was compiled as early as 1260. The Recopilacion de Castilla, published in 1567, was intended to clear up the confusion of the previous codes, but it leaves the authority of the Partidas generally unimpaired. The cession of Louisiana to the United States necessarily introduced the trial by jury in a modified form, and the writ of habeas corpus, which were unknown to the pre-existing laws. The legislative council of the territory of Orleans borrowed largely from the common law, but principally those forms of proceedings necessary to confer efficient powers on the courts organized under the authority of the Union. But, in the adjudication of suits between individuals, the Spanish jurisprudence was the sole guide, except in commercial questions. In 1806, the legislative council ordered two able jurists to prepare a civil code for the use of the territory, on the groundwork of the civil laws which governed the territory. It was reported in 1809, and adopted, but was not allowed to supersede the Partidas, because it was declared by the legislature that those laws were inconsistent with its provisions.* The Digest of the Civil Code now in force in the Territory of Orleans, as it was called, though termed a code, is, in fact, little more than a synopsis of the jurisprudence of Spain. It continued in operation for four years, 1819, and was found to possess every defect of the original code, and the legislature of 1822, Messrs Derbigny, Livingston, and Moreau Lislet were selected by the legislature to revise and amend the civil code, and to add to it such of the laws still in force as were not included therein. They were authorized to add a system of commercial law, and a code of practice. The code which they prepared, having been adopted, became law on Jan 1, 1824, under the title of the "Civil Code of the State of Louisiana," and the legislature resolved, that, "from and after the promulgation of this code, the Spanish, Roman, and French laws, which were in force when Louisiana was ceded to the United States, and the civil law of the territory of Orleans, and of the legislature of the state of Louisiana, be, and hereby are, repealed in every case for which it has been specially provided in this code." It would seem that where the code is silent on any subject, any pre-existing law on that subject, whether of French or Spanish origin, or of native growth, would be considered as still in force. The new code, independently of the great changes which it has introduced, is much more full and explicit in the doctrinal parts than the former digest. The theory of obligations, particularly, deserves to be mentioned, as comprising, in a condensed and even elementary form, the most essential principles of general principles. The jurisconsults appear to have profited much by the great work of Toullier, entitled Le Droit civil Francai.s. The code contains 3572 articles, numbered from the beginning for convenience of reference. The most striking and material changes introduced by the new code relate to the rules of succession, and the enlarged liberty of disposing of property by last will, by curtailing the portions which must be reserved for forced heirs. The next order of succession conforms to that established in France by the Code Napoleon, and will be found to be copied almost precisely from the 11th book of Justinian, from which the Spanish rules of descent had deviated in some essential particulars.—The legislature of Louisiana provided also for the formation of a penal code, by an act passed in 1820, and intrusted the charge of preparing it to Mr Edward Livingston. A plan of a penal code was accordingly drawn up by him, and presented to the legislature in 1822. The manuscript copy of the part of the code which had been prepared, was destroyed by fire in 1824, and Mr Livingston has been since engaged in repairing the loss, and completing the code.

LOUISVILLE; a city of Kentucky, on the Ohio, opposite to the rapids or falls of that river, on a plain elevated above the city by a gentle ascent from the river; lon. 85° 30' W.; lat. 38° 3' N. The soil is rather sandy, with a substratum of rich clay, from which very good bricks are made. The town is regularly laid out: eight broad and straight streets, parallel with the river, are intersected by eighteen others, at right angles, running from the river to the southern boundary of the city, which is about three miles long, with an average width of upwards of one mile. The population, by the census of 1830, was estimated at about 10,500: a most rapid increase has since taken place. The public buildings in Louisville are the county-hall, jail, ten houses of public worship, a poor-houses, city court-house, and the December market, a fair held from 1st to 5th; exports tobacco, whisky, cotton bagging and burling, hemp, flour, pork, bacon, lard, and many other productions of the country. Its imports are various and extensive, the easy circumstances of the people whom it supplies creating a large demand for foreign articles of comfort and luxury. The commerce is carried on by upwards of 300 steam-boats, measuring from 50

* In 1819, a law was passed to encourage and authorize the translation of such parts of the Partidas as were not perceived to have the force of law in the state, and such a translation was made
LOUE—LOUVEL.

to 500 lous each, some of which are daily arriving from, or departing for all parts of the immense valley of the Mississippi. The arrivals during 1832 exceeded 1500, and the departures were about the same for many articles of trade. Great bodies of emigrants from the east and north pass through it; and it is not uncommon, in the autumn, to see the streets filled for days together, with continued processes of movers, as they are called, going to the "great west." In former years, Louisville had the character of being unhealthy; but, since the introduction of steam-boat navigation, and the improved methods of living, no town of its size in the United States has been more healthy: the year 1822, so fatal to the health of the whole valley of the Mississippi, is the last in which anything like general sickness has been known in this city.

The Louse (pediculus). These disagreeable and unsightly insects belong to the order Parasita (Latr.), and are characterized by having six feet formed for walking, a mouth furnished with a proboscis, antenna as long as the thorax, and the abdomen depressed, and formed of several segments. Almost every species of animal is frequented by its peculiar louse, sometimes by several kinds: even man is subjected to their attacks. Their numbers increase rapidly, several generations occurring in a short period. Certain circumstances appear to be exceedingly favourable to their increase; as infancy, and that state of the system giving rise to phthisis, or the lousy disease. The human race is infested by several species, among which are the P. homunus corporis, or body louse, principally occurring in adults who neglect cleanliness; and the P. homunus capitis, or common louse, most frequent in children. Cleanness is the best antidote against these disgusting intruders. The lousy disease, though now of very rare occurrence, appears to have been by no means unfrequent amongst the ancients. Among others, Sulla, and many others, are said to have perished from this disorder. Some nations consider them as a gastronomic luxury, and, at one time, they were used in medicine. Those of our readers who wish for full information on these disagreeable parasites, will find ample details respecting them in the works of Rhedi, Swammerdam, and Buonanni, who seem to have studied their habits and manners with great assiduity.

LOUTH, the smallest county of Ireland, is situated in the province of Leinster, and extends from N. to S. 27 miles, from E. to W. 18. The soil is in general fertile, and is almost wholly devoted to corn. The principal towns are Dundalk (the capital), Collon, Ardee, Dunle, Carlingford, and Castle Belingham. The chief manufactures of Louth are bowls, sheetings, and cambric. See Ireland.

LOUTHERBOURG, or LUTHERBURG, Philip James; a landscape painter of eminence, born at Strasbourg, in 1740. He studied under Tischeli, and afterwards under Casanova, and displayed great talents in the delineation of battles, hunting-pieces, &c. After having been admitted a member of the academy of painting at Paris, where he was first settled, he removed, in 1771, to London, where he was employed in the decorations of the opera-house, and also at the play-house. He subsequently contrived an exhibition, called the Eidophusikon, somewhat on the plan of the Diaruma, which, however, did not prove a very profitable speculation. In 1782, he was nominated a royal academician; and, as a landscape painter he possessed deserved celebrity. He also painted some historical pictures, as the Victory of Lord Howe, and the Siege of Valenciennes. His character was eccentric, and he was so far infatuated with the theories of animal magnetism, as to have accompanied the impostor Cadet-Guillaume to Switzerland. He returned to England, and died near London, in 1812.

LOUVAIN (Dutch, Loewen, Loewen); formerly the capital of one of the four districts of the duchy of Brabant; more lately of a circle in the province of South Brabant, kingdom of the Netherlands, and now belonging to Belgium. Louvain is situated on the river Dyle, and a canal leading from this river to the Rupel, five leagues E. N. E. from Brussels; lat. 50° 53' 26" N.; lon. 4° 41' 54" E. There are seven churches, five convents, a magnificent hospital, 4000 houses, and 25,400 inhabitants. John IV., duke of Brabant, founded the university in 1425, to which belonged four colleges, a considerable library, a botanical garden, and an anatomical theatre. In the sixteenth century, it contained 6000 students. Having become extinct during the French revolution, it was restored as a lyceum, and, Oct. 6, 1817, again founded by the league established. Louvain has greatly contributed to nourish that spirit of opposition which the Catholic Belgians have manifested towards the government of Belgium, and of which the separation of Belgium has been the consequence. In the beginning of the fourteenth century, when the city had 200,000 inhabitants, the woolen manufactures supported 100,000 workmen, many of whom, after the insurrection of 1378, emigrated to England, and founded the English woolen manufactories. The most important article of industry is beer, of which 150,000 casks are exported annually. There are from ten to twelve lace manufactories. The community, a prince of husbandry, hopes to recover the late revolution, the inhabitants embraced with ardour the cause of independence, and repelled with courage (Oct. 23, 1830) the attacks of the Dutch.

LOUVEL, Pierre Louis, the assassin of the duke of Berry, was born at Versailles in 1783, and served as a soldier in the royal stables. From his youth upwards, he was of a gloomy and reserved disposition, and impatient of contradiction, but industrious and temperate. He often changed his master, and often his residence. From all circumstances, it is evident that he was fanatical and eccentric. He hated the Bourbons, and wished to exterminate the family; the duke of Berry in particular, because he was expected to continue the line. Feb. 13, 1820, at eleven o'clock in the evening, when the prince was conducting his wife from the opera to the carriage, Louvel pressed towards him, seized him by the left shoulder, and stabbed him with a knife in his right side. Upon the first cry of the prince, the soldiers of the guard pursued the murderer, who was apprehended and conducted into the guard-room of the opera-house. He was examined in the presence of the minister Decazes, and immediately avowed, that, six years previous, he had formed the resolution of delivering France from the Bourbons, whom he considered the worst enemies of the country; that while serving under Berry, he had intended to murder the rest, and, finally, the king. His trial was conducted by the chamber of peers. The investigations continued three months, and 1200 witnesses were examined, in
order to discover accomplices. At length Bellart, the attorney-general, declared in the indictment (May 12), that none had been discovered. June 5, Louvois, having been two days in prison, was at the bar of the chamber of peers, sitting as a court of justice. The chancellor D'Ambray, president of the chamber, examined him. Louvois declared that no personal offence had induced him to commit the murder, but only an exasperation, created by the presence of the foreign minister. In this order to distract his thoughts, he had travelled, and visited the island of Elba, but, in that place had no conference with Napoleon or his attendants; that, after Napoleon's return from Elba, he was taken into service as saddler in the imperial stables, and, hence, had obtained this station in the royal stables. No political party, no individual, had persuaded him to commit this act. He had read no newspapers nor pamphlets. He admitted that his deed was a horrible crime; but stated that he had determined to sacrifice himself for France. Louvois's defenders alleged a monomania, or an insanity consisting in a fixed and invariable opinion. Louvois was sent to the prison of the pardon of his murderer. Louvois then read his defence. The high court of justice condemned him to death. After a long delay he admitted the visit of a clergyman, but, on the day of his execution (July 7, 1820), paid no attention to his wishes. He had been over to this witness his execution in silence. — See Maurice Méjans's Historie du Procès de Louvois, assassin, &c. (2 vols., Paris, 1820).

LOUVET DE COUVRAY, JOHN BAPTIST; a French advocate, distinguished as an actor in the revolution. At the commencement of the political commotions, he joined the popular party, and displayed a decided aversion to royalty and nobility. He published a romance, entitled Émile de Varamont, ou le Divorce nécessaire (1791), in support of the prevalent opinions relative to marriage, and spoke at the bar of the national assembly in favour of a decree of accusation against the emigrant princes. In 1792, he was chosen a deputy to the convention, when he attached himself to the party of the Girondists, and voted for the death of Louis XVI., with a proviso, that execution should be delayed till after the acceptance of the constitution by the people. He was afterwards one of the heads of the jury of the Great Treason, and was arrested in order of arrest June 2, 1794. Having escaped from the capital, he retired to Caen, with several of his colleagues, and employed himself in writing against the Jacobins. He was declared an outlaw; on which he fled to Brittany, and thence to the department of the Garonne. At length he separated from his companions, and returned to Paris, where he kept himself concealed till after the fall of Robespierre. He subsequently published an account of his adventures during the time of his proscription, entitled Notices sur l'Histoire et le Récit de mes Péripé— a work written in a romantic style, which has been translated into English and other languages. Louvet recovered his seat in the convention in March 1795, and he occupied the presidency in June following. He was afterwards a member of the council of five hundred, which he quit in May, 1797, and died at Paris, August 25, of that year. He is chiefly known in literature as the author of a pleasant novel— La Fête du Chevalier Fauclus.

LOUVOIS, FRANÇOIS MICHEL LETELLIER, marquis of, minister of war to Louis XIV., son of the chancellor Letellier, born at Paris in 1614, was early made a royal counsellor through the influence of his father, who displayed so much of that ability, that so great a love of pleasure, that his father threatened to deprive him of the reversion of the secretari-
replied, that, to spare his majesty's conscience, he had already despatched a courier with orders to that effect. Louis, filled with indignation, was prevented from doing this minister only by the influence of Madame de Maintenon. Soon after, on presenting himself at the royal council, he discovered, or fancied he discovered, in the countenance and words of the king, marks of severity, and was obliged by faintness to retire to his hotel, where he died within half an hour. Whether this may be our feelings at the arrogance, cruelty, and despotism of Louis, we cannot deny him the merit of having organized the brilliant victories of the reign of Louis.

LOUVRE; the old royal palace at Paris, on the north bank of the Seine, a splendid quadrangular edifice, with a court in the centre, completed by Napoleon. The origin of its name, and the time of the erection of the oldest part of it, are unknown. We only know that Philip Augustus, in 1214, built a fort and a state prison in this place; that Charles V., during the years 1364—80, added some embellishments to the building, and brought his library and the treasures of the imperial crown and robes in 1382. Louis XI. erected that part of the palace which is now called the old Louvre. Henry IV. laid the foundation of the splendid gallery which connects the Louvre, on the south side, with the Tuileries; Louis XIII. erected the centre; and Louis XIV., according to the plan of the physician Ferraull, the elegant façade towards the east, together with the colonnade of the Louvre, which, even now, is the most perfect work of architecture in France. At a later period, Louis XIV. chose the palace built by him at Versailles for his residence. After Napoleon had taken possession of the Tuileries, he began a second gallery, opposite to the former, and a wall, and the Palace of Justice was erected that part of the palace which is now called the new Louvre. In 1607, Scotland, was a province of the crown, and in 1609, was a province of France. Sully in 1618, built a palace of the Louvre. It was said, that the Medici, in 1625, were to have taken possession of the Louvre. He expanded the whole of his estate in the support of the royal cause, and, after entering into the French service, in 1648, returned to England, and was imprisoned until the king's death, when he was set at liberty. His condition was, at this time, very destitute, and he was contrasted with Anthony Wood's gay description of his handsome person and splendid appearance in the outset of life. He died in great poverty, in an obscure alley, in 1658. His poems, which are light and elegant, but occasionally involved and fantastic, are published under the title of Lucasta, under which name he complimented Miss Lucy Sacheverell, a young lady to whom he was attached, who, on a false report of his death, married another person. Colonel Lovelace, who, for spirit and gallantry, has been compared to Sir Philip Sidney, also wrote two plays, the Scholar, a comedy, and the Soldier, a tragedy.

LOVE-FEAST. A test; the name of a cliff 44 feet high, in the island of Leucadia (q. v.).

LOW COUNTRIES. See Netherlands.

LOW DUTCH, and HIGH DUTCH; used improperly for Dutch and German. The two languages are quite distinct, so that a German and a Dutchman cannot understand each other any better than a Frenchman and a German. In fact, the Dutch language resembles the English more than it does the German, so that a German understands it much easier, if he has a knowledge of English. The reason is, that both, Dutch and English, are mainly derived from the Low German. The frequent confusion of the terms Dutch and German probably arises from the circumstance, that the proper name of German is Deutsch, and that of Germany, Deutschland, and that the Germans and Dutch were originally considered as one nation by the inhabitants of Britain. See Dutch, and Low German.

LOW WATER; the lowest point to which the tide ebbs. See the article Tide.

LOWELL; an American town, situated twenty-five miles N. W. from Boston; noted for the extent of its water power, its manufacturing establishments, and the rapidity of its growth. It was incorporated in 1826, and named from Francis C. Lowell, of Boston, who was distinguished by his success in introducing the cotton manufacture into the United States. The hydraulic power of Lowell is produced by a canal, completed in 1823, one mile and a half in length, sixty feet wide, and carrying eight feet in depth of water. A portion of the waters of the Merrimack is forced through this canal by a dam at the head, and the water is sent forth in large streams in various directions, by channels branching off from the main canal, and discharging into the Concord and Merrimack rivers. The entire fall is 30 feet, and the volume of water which the canal is capable of carrying, is estimated at 1250 cubic feet per second, furnishing 500 mill powers of 55 cubic feet per second.
LOWENDAL—LOW GERMAN.

per second each. In some instances, the whole power is used at one operation, applied to wheels of 30 feet diameter; but more frequently the power is divided into two distinct falls of 13 and 17 feet each, and greater power is held and disposed of by a company.

The quantity of cotton manufactured at Lowell, in 1831, is estimated at 17,000 bales, of 300 pounds each. Population, by the census of 1830, 6477.

LOWENDAL, Ulrich Frederic Wolfendar, cousin of Lowender, of Freudenreich, King of Denmark, born 1700, at Hamburg, began his military career in Poland (1713), became captain in 1714, and entered the Danish service, as a volunteer, during the war with Sweden. In 1716, he served in Hungary, and distinguished himself at the battle of Peterwardein, and at the sieges of Terneswar and Belgrade. He next took part in the wars in Sardinia and Sicily, and was present at all the battles from 1718 to 1721. During the peace, he studied gunnery and engineering, and was made field-marshal and inspector-general of the Saxon infantry, the service of Augustus, king of Poland. The death of this prince (1733), gave an opportunity of distinguishing himself by his valiant defence of Cracow. Having entered the service of the empress of Russia, she was so well satisfied with his conduct in the Crimean and Ukraine, that she appointed him commander of her forces. In 1743, he was made lieutenant-general in the French service, and, at the sieges of Menin, Ypres, and Friburg, was conspicuous for his courage and skill. In 1745, he commanded the corps of reserve at the battle of Fontenoy, in which he took an honourable share. After having taken many strong places in Flanders, he obtained possession of Bergen-op-Zoom, by storm, September 16, 1747. This place, till then, had been considered impregnable, and was occupied by a strong garrison, and covered by a formidable army. The following day, he received the staff of marshal. He died 1755. Lowendal was thoroughly acquainted with mathematics, geography, and tactics, and spoke Latin, German, English, Italian, Russian, and French, with fluency. With these accomplishments, he combined modesty and amiableness of disposition, though a devotee of pleasure, like the marshal Saxe, his most intimate friend, whom he also resembled in his application to military studies.

LOWER EMPIRE (Bas Empire): a term applied to the Roman empire during the period of its decline. From the establishment of the seat of government at Byzantium (Constantinople), and the division of the empire into the Eastern and Western, the former is often called the Byzantine empire, and, after the restoration of the Western or Latin empire, under Charlemagne, the Greek empire. Lebeau's Histoire du Bas Empire begins with the reign of Constantine. Gibbon's Decline and Fall of the Roman Empire embraces the whole period.

LOW GERMAN (in German, Plattdeutsch, Niederdeutsch, Niedersächsisch; since the sixteenth century, also Sasisch) is that softer German dialect, which was formerly spoken over a great part of Germany, and even now is the language of the common people in most parts of North or Lower Germany, and many of the educated rank it use when they wish to be very familiar, or when they adopt the language of the lower classes. It was the language of the poetische, and has maintained itself; thus the Hamburg oath of citizenship is in Low German. Recently, more attention has been directed to this interesting dialect. It is not, as sometimes supposed, a corrupted language, but a distinct dialect, as much so as the high German, though circumstances have caused the latter to become the language of literature and the educated classes. (See the division German Language, in the article Germany; also Dialect.) It is difficult to decide which of the two dialects, High and Low, is the more ancient. Probably, in very remote times, soon after the first Asiatic tribes had entered Germany, two chief dialects were formed—a softer and a harsher—whilst one of the Asiatic nomadic tribes went northward, and the other inclined to the south, along the Danube. The Dacians, Dinarics, a term which embraces the people of the rough and woody mountains of the south of Germany, and the warlike occupations of the dwellers on the banks of the Danube, gave roughness and sharpness to the speech of this region, whilst the open and plain country of the north produced mild manners and a softer language. Yet an entire separation of these two dialects could not take place as long as the tribes speaking them led a nomadic life; and, even after they had formed permanent settlements, much similarity must have remained for a considerable time. Hence we find, in the myths and songs, of the German language, a constant mixture of both the chief dialects. (See the article Anglo-Saxon.)

The time of their separation is not to be fixed with certainty. So much, however, is clear, that both dialects, for a long time, were mixed, and, after their total separation, existed for a long time independently of each other—the harsher dialect in the southern part of Germany, in Austria, Bavaria, Franconia, Sabaia, on the Upper Rhine, and in part of Upper Saxony; the smoother in the north of Germany, Lower Saxony, Westphalia, on the Lower Rhine, and in all Belgium.

The long and extended dominion of the Low German dialect is proved by the number of idioms derived from it. Of these the most important are, 1. the Anglo-Saxon (q. v.); 2. the Norman; 3. the Dutch, so called since the thirteenth century; 4. the Icelandic; 5. the Norwegian; 6. the Swedish; 7. the Low Saxon, as spoken at present. That the High German attained, nevertheless, at an early period, a somewhat superior standing, was chiefly owing to the circumstance, that the higher intellectual cultivation of Germany must be dated from the period of the Hohenstaufen or Swabian emperors, and when the latter frequently, in their capacity of emperors, went as the agents of the pope on his campaigns to the East. When, on the other hand, in the latter part of the twelfth century, at the time of the emigration from Holland into Germany, the Low German had become enriched from the Belgian dialect of the emigrants, and the Hansa produced so much activity in the North, Low German also became, for some time, a literary language, and afforded works of much repute, particularly the incomparable Rentard the Fox. But Luther's translation of the Bible gave predominance to the High German, and a natural consequence was, that, whilst this became the exclusive language of literature, Low German was checked in its development, and was obliged to give way to its rival in courts, churches, schools, and the circles of the well educated. In a few parts of the country only, it maintained its ground in works both of a spiritual and secular character, down to the beginning of the sixteenth century, as in Pomerania, Mecklenburg, and Westphalia, the name of the old Low German still exists, but in a great number of different dialects, which, in several respects, differ considerably. A supercilious disparagement of this dialect, as if it were a mere corruption of the High German, has led many German scholars to neglect it entirely; and they
LOWLANDS—LOYOLA.

have thus fallen etymologically and other mistakes, from ignorance of this essential branch of their language. Leibnitz recommended the study of it as numerous of arching, correcting, and explaining the High German, and, of late, the scholars of Germany have begun to turn their attention to this idiom. The study of it is essential even to the English etymologist, to enable him properly to understand his own language, as far as it is of Teutonic origin. J. H. Voss made the attempt to revive this dialect, by several excellent poetical compositions in it. The most has been done, however, by Charles F. A. Scheller, who has lately published a series of Low German works, or such as are conducive to a knowledge of Low German literature; among them an edition of Conrad the Fox; also the Stigt-Buch der Stadt Braunsch., as a supplement to G. G. Leibnitz Scriptores Literar Braunsgevintum (Brunswick, 1829); Der Latein Doctrinal (Brunswick, 1825); Bücherkunde der Sassi Hicks-Niederdeutschen Sprache (Literature of the Sassi Low-German Language) Brunswick, 1890. In the preface to the Latein Doctrinal, Mr Scheller speaks of having made use of nearly 2000 Sassi writings, for the instruction of his project, which was prepared by him. The Versuch eines Bremsche-Niederdeutschen Wörterbuch (5 vols., Bremen, 1771); the Holstein Idiomeon of Schütter; the Geschichte der Nieder-Sächsischen Sprache von Johann Friedrich August Kindelung (Magdeburg, 1800); the Versuch einer Plattdeutschen Sprechlehre mit besonderer Berück- sichtigung der Inlanderschen Mundart von J. Muszyn (New Strelitz and New Brandenburg, 1829), deserve mention.

LOWLANDS; a term applied to the southern parts of Scotland, in contradistinction to the Highlands, which comprise the northern and western parts. See Islands, and Scotland.

LOWRY, Wilson, F. R. S., a modern English engraver of eminence, was born at Whitehaven, in January, 1769. After studying medicine for some years, he devoted himself to engraving. He is the inventor of a ruling machine, possessing the property of ruling successive lines, either equidistant or in any other proportion, with the greatest accuracy, and the nearest possible approximation; also of one capable of drawing lines to a point, and of forming concentric circles. In 1798, he first introduced the use of diamond points for etching—an invention highly important, on account of the equality of tone produced by them, as well as of their durability. Many other useful improvements in engraving were also discovered by him, and he was the first person who succeeded in what is technically termed "biting steel in" well. Messrs Longman's edition of doctor Rees's Cyclopaedia, which commenced in 1800, for nearly twenty years occupied a considerable portion of his time. He also laboured for Wilkins' Etymology, and Magna Gratia, Nicholson's Architectural Dictionary, and, lastly, the Encyclopaedia Metropolitana, on which he was employed till his last illness. He died June 23, 1824. His chef d'œuvre is considered to be an engraving from the Doric portico at Athens, in Nicholson's Architecture. He was elected a fellow of the royal society in 1794.

LOYTH, Robert, a distinguished English playwright, was born at Burton, in 1710. He received his education at Winchester school, whence he was elected, in 1730, to New college, Oxford, of which he was chosen a fellow in 1734, and, in 1741, was elected professor of poetry in the university of Oxford. In 1753, he published his De Sacra Poesi Hebraeorum Praelectiones Academicae (4to), which has been translated into English, French, and German. The best edition is that of Leijis, 1815, with notes by Michaelis, Rosenmüller, &c. In 1754, he received the degree of D. D. from the university of Oxford, by diploma, and, in 1755, went to Ireland, as chaplain to the marquis of Angleton, appointed lord lieutenant, who nominated him bishop of Limerick, which preferment he exchanged for a prebend of Durham, and the rectory of Sedgefield. In 1758, was published his Life of William of Wykeham (5vo), which, in 1762, was followed by a Short Introduction to the English Grammar. In 1766, a misprint took place between doctors Lowth and Warburton, the latter of whom took offence at certain passages in the Praelectiones, concerning the book of Job, which he believed to be aimed at the theory of his Divine Legation of Moses. Warburton, in an Appendix concerning the book of Job, added to the second edition of this Divine Legation, indulged in the acerbity by which he was distinguished, and thereby produced a reply from doctor Lowth, in a Letter to the Right Reverend the Author of the Divine Legation of Moses, which has become memorable at once for the ability and severity of its criticism. The ultimate silence of the Warburtonians showed they gave the victory to their antagonist. In 1766, doctor Lowth was appointed bishop of St David's, whence, in a few months afterwards, he was translated to the see of Oxford. In 1777, he succeeded to the diocese of London, and the next year published the last of his literary labours—Isaiah, A New Translation, with a preliminary dissertation and notes. Rosenmüller says he understands and expresses the Hebrew poet better than any other writer. On the death of archbishop Cornwallis, the primacy was offered to Dr Lowth, but he declined that dignity, in consequence of his age and family afflictions. He died November 3, 1787, aged seventy-seven years.

LOXODROMIC CURVE, or SPIRAL; the path of a ship, when her course is directed constantly towards the same point of the compass, thereby cutting all the meridians at the same angle. See Rhumb Line.

LOYOLA, Ignatius (or, in Spanish, Inigo), b. a saint of the Roman Catholic church, founder of the society of Jesuits, was born in 1491, in the castle of Loyola, in the Spanish province of Guipuscoa, the youngest of the eleven children of a Spanish nobleman. Ignatius spent his youth at the court of Ferdinand V. (surnamed the Catholic), king of Aragon. Till his 29th year, he served in the army, was distinguished for bravery, gallantry, and vanity, and made indifferent verses. At the siege of Pamplona by the French, he was wounded in both legs, one of which, being crooked after the cure, he caused it to be broken again, for the purpose of having it made straight. During the siege, he had shown great valour and firmness, and, when the commander wished to surrender, in consequence of want of provisions, he alone opposed it. As soon as the soldiers saw him fall, they surrendered. During his sickness, Ignatius beguiled his time with books, and, as there were no romances in the house, he read a Spanish translation of the life of the Saviour, by Landolphus, a Carthusian, and a volume of the Lives of the Saints. His imagination was highly excited by these books. What others had done, as was recorded in those biographies, he thought he might do also, as he afterwards said himself. He determined to live a life of abstinence, penitence, and holiness. The Virgin, he thought, appeared to him, with the holy Infancy in arms, and with books of benigne complacency and encouragement. His brother Martin Garcia observed the change which had taken place in him, and endeared...
voured to dissuade him from his purpose, entreating him to remember his illustrious birth, and the reputation which he had already obtained; but Ignatius was firm. Leaving his brother at a sister's house, to-day he set out, and to-night he arrived. He had executed some debts, and, having paid his servants and all his creditors, gave the rest for the restoration of the picture of the Virgin, and proceeded alone, upon his mule, to Montserrat. A Moor overtook him, who, in their conversation, uttered an opinion respecting the Virgin, which appeared to Ignatius implausi-
ble, and, while the Moor, luckily for himself, pricked forward, Loyola deliberated whether it was not his duty to follow and stab him. The Moor had gone to a village off the road, and Ignatius let his mule choose his own way, with the intention of killing the infidel, if the mule should carry him to the village; but it was not so ordered, and he arrived at Montserrat. Here he consecrated his arms to the Virgin, declared himself her knight, and proceeded to the hospital at Manresa, a small place not far from Montserrat, where he fasted rigorously, scourged himself, neither cut his hair nor beard, so that his habit of the hours a day. He begged his bread, bread and water being his only food, and, eating very sparingly, he gave what remained to others. In the condition to which he was thus reduced, visions haunted him, and tempted him. Recollections arose of his birth and manners; at times, his former habits of life,—these compared with his present situation, in an hospital, in filth and in rags, the companion of beggars! This temptation he at once quelled and putished, by drawing closer to the beggar at his side, and courting more familiarity with him. He then shrank from the prospect of living in this painful, and, as he could not but feel it to be, bony life, till the threescore and ten years of mortal existence should be numbered: Could he bear this? The question, he thought, came from Satan. To Satan he replied triumphantly, by asking him if it was in his power to insure life to him for a single hour; and he comforted and strengthened himself by comparing the longest span of human life to eternity. It is affirmed that, at this time, he was entranced from one Sunday to another, lying, all that while, so apparently lifeless, that certain pious persons would have had him buried, if others had not thought it necessary first to ascertain whether he was dead, and Ignatius felt a faint pulsation at the heart. He awoke from this ecstasy, as from a sweet sleep, sighting forth the name of Jesus. Orlandini says it is a pious and probable conjecture, that, as great mysteries were revealed to Paul, when he was draped into the third heaven, so, during these seven days, the formal and constitution of the society, which he was to found, were manifested to Ignatius. It is pretended that he retired from Manresa to a cave in a rock, not far from that city. The cave was dark, and not unlike a sepulchre, but, for this incommodiousness, as well as for its solitude, and the beauty of the narrow vale, where thorns and brushwood concealed it, the more agreeable to him. Having remained some ten months at Manresa, a city which, his biographers say, he undoubtedly regarded with peculiar favour in heaven, as the cradle of his Christian infancy, and the school of his first evangelical discipline, he determined whether, when the capital, andIgnatius perceived, seeing those places which had been hallowed by the presence of our Lord than in the hope of converting some of the infidels, who were masters of the holy land, or of gaining the palm of martyrdom in the attempt, for of this he was most ambitious. A dangerous passage of five days brought him to Gaeta, from whence he proceeded to Rome on foot. This was a painful and perilous journey. It was seldom

that he was admitted into a town, or under a roof, for fear of the plague, his appearance being that of a man who, if not stricken with the disease, had recently recovered from it; and, for the most part, he was forced to lie down on the ground, till on the morrow the cross received them, and when they had the first sight of the holy city, all were sensible of what they deemed an emotion of supernatural delight. He now began his return to Spain, more unprovided even than he had left it. No difficulty occurred in re-crossing to Cyprus. He had obtained a good character from his fellow-pilgrims, and they, having taken their passage on board a large galley, procured the captain to give him a passage, as one for whose holy conversation they could vouch. The Venetian captain was no believer in such holiness, and he replied that a saint could not possibly want a ship to convey him across the sea, when he might walk upon the water, as so many others did. The captain, as commander of a smaller vessel was more compassionate; and this, though so much less sea-worthy than the other that none of the other pilgrims embarked in her, reached Italy safely, after a perilous voyage, while the other was wrecked. He had been warned of the danger to which he would be exposed, in travelling from Ferra to Genoa, where the French and Spanish armies were in the field, by both which he must pass, with the likelihood of being apprehended as a spy by both. Some Spanish soldiers, into whose company he fell, pointed out another route. But Ignatius liked to put himself in the way of tribulation; the more suffering, the greater merit, and, consequently, the more contentment; and he was contented accordingly, when, upon attempting to enter a walled town, which was in possession of the Spaniards, he was seized and searched as a spy. The journey to Jeru-

salem, notwithstanding all the hardships which he endured, and the great fatigue which he felt in the way, he thought the relaxation of austerity in his course of life, which had been enjoined him as a duty, had ceased to be allowable, having now ceased to be necessary. He did not, indeed, resume his former mode of apparel, in its full wretchedness; but he clad him-
self as meanly as he could, and of the soles of his shoes in such a manner as to let the gravel in, and also to prepare for himself a further refinement of discomfort, for the fragments of sole which he had left, were soon worn away, while the upper-leather remained, and thus he contrived to walk, in winter, with his bare feet on the earth, and yet no one suspected that he was thus meritoriously afflicting himself.

In 1524, he returned to Barcelona, and began to study grammar. After a residence of two years he went to the university of Alcalá, where he found some adherents; but the inquisition imprisoned him for his conversation with his children, and accused him of witchcraft. He was not delivered from the prison of the holy office until 1528, when he went to Paris to continue his studies, the subjects of which, indeed, were only works of an ascetic charac-
ter. Here he became acquainted with several Span-
iards and Frenchmen, who were afterwards noted as his followers; as Laines, Salmeron, Bovadilla, Rodriguez, Pierre Favre, and others. (See Laines,
LUBBER—LUCANUS.

and Jesusita.) They conceived the plan of an order for the conversion of heathens and sinners, and, on Ascension day, in 1534, they unveiled this great work of Christ, in the church of the Holy Cross, Montmartre. Some of these men had not yet finished their theological studies, and, until this should take place, Ignatius returned to Spain. They then met again in 1536, at Venice, whence they proceeded to Rome, and received the confirmation of their society from pope Paul III. They took the triple vow of chastity, obedience and poverty, in the presence of the papal nuncio Veralli at Venice. (For the history of the order, and its final abolition in most countries, see article Jesusita.) The account of the origin of its name, given by Lainez, adopted by the society, and recorded by them upon a marble tablet, is, that Ignatius, losing his bodily senses, saw himself surrounded with the full splendour of heaven; saw the Father beholding him with an aspect full of love, the Son bearing his cross, and pointing to the marks of his passion; heard the Father earnestly recommend him to the Son, and heard these words from the lips of the Son, Ego nobis Romam Jugulitica coe. Therefore it was, according to Lainez, that he gave his order the name of the Society of Jesus. In 1541, Ignatius was chosen general of the society; but Lainez, his successor, must be considered, even from the commencement, as the person who gave to the order the organization, by which it has astonished the world, though Ignatius, by his ardent zeal, may have given it a great impulse. Ignatius continued his abstinence and penances during life. Even when general, he used to perform the meanest labours in his church in Rome, instructed little children, though not master of the Italian, and collected aims for the Jews and public women, for whose conversion he displayed great zeal. His daily dose of cold water and fatigues. Forty-three years after, he was declared beatys by Paul V., and Gregory XV. canonized him. His feast in the Catholic church falls upon July 31. There are two works of Loyola, his Constitution of the Order, in Spanish, praised by cardinal Richelieu as a masterpiece; and his Spiritual Exercises, also in Spanish (Rome, 1548)—a work, the first plan of which was drawn up in the hospital at Manresa. It has been often translated. Among his biographers, we may mention Maffei, Bonhouts and Ribadeirena. Of the miracles attributed to him, at a later period, his contemporary Ribadeirena says nothing, as Barrillon remarked. A complete treatise of this life will be found in the Foreign Review, vol. v. No. 10.

LUBBER, a contemptuous name, given by sailors to those who know not the duty of a seaman.

Lubber's Hole is the vacant space between the head of a lower mast and the edge of the top. It is so termed from a supposition that a lubber, not caring to trust himself up the fattock shrouds, will prefer that way of getting into the top.

LUBECK, formerly the chief of the Hanseatic towns, at present one of the four free cities of the German confederacy, officially styled the "republic and free Hanseatic city of Lubeck," was founded by Adolphus II., count of Holstein-Salenburg, in 1144, who, ten years afterwards, ceded it to Henry the Lion, duke of Saxony. Henry made it a free port for the northern nations, granted it municipal privileges, which were confirmed by several emperors, and gave it the celebrated Lubeck code, which was afterwards adopted by many German towns. In 1286, it became a free city of the empire, and was afterwards at the head of the Hanseatic union (see Hanse); its fleet commanded the Baltic; Gustavus Vasa found refuge within its walls from Christian II.; and its voice decided the affairs of the kingdoms of the North. Lubeck contains 22,000 inhabitants, and is beautifully situated on an island between the Trave and the Wackenitz, on a slight elevation. The ramparts and gateways, and several ancient buildings are substantially built, of stone, but old-fashioned. Since 1530, the Lutheran doctrines have prevailed. Lubeck was formerly a bishop's see, and the cathedral contains many tombs and monuments of antiquity. The church of St Mary is remarkable for its beautiful altar by Quelline, for its astronomical clock, and the allegorical paintings, called the Dance of Death. There are also a Calvinistic and a Catholic church. The charitable institutions are in excellent condition, as is also the gymnasium of seven classes. A drawing-school for mechanics, a commercial institute, a society for the promotion of industry, and other societies and institutions, prove the public spirit of the citizens. Lubeck, which, by its situation, is connected with the North sea and the Baltic, has an important carrying trade between Germany and the countries on the Baltic, and carries on a considerable commerce in wine, leather, flax, and corn. It maintains important belong to connections with Hamburg, Rostock, Copenhagen and Petersburg. There are also two insurance companies and an exchange; and about 70-80 ships are owned by the citizens. In 1817, above 900 ships arrived at Lubeck; yet commerce and business have much declined. By the Stecknia, which falls into the Trave above the town, and which is connected, by the Dollenau, with the Elbe, the latter river is accessible from Lubeck, and much of the merchandise from the Baltic passes by Lubeck for Hamburg. Lubeck has sugar refineries, tobacco, leather, starch-work, gold and silver lace, hat, cotton and woolen manufactures, &c. The territory of the town, consisting of Bergedorf and the city, is 202 square miles, of which 50 (common with Hamburg), is 116 miles square, with 18,000 inhabitants. To this territory belong the small town of Travemunde, situated at the mouth of the Trave, with a harbour and baths. When the constitution of the empire was abolished, in 1806, Lubeck, though disconnected from the rest of Germany, remained a free Hanseatic city. After the battle of Lubeck (Nov. 6, 1806), Blucher finished his retreat by the capitulation of Ratkau. 9500 Prussians and 1500 Swedes were taken prisoners, and Lubeck was pillaged. In 1810, it formed a part of the French department of the mouths of the Elbe. By the treaty of Vienna, it returned to Germany as a free city. The government consists of four burgomasters and sixteen counsellors. The body of citizens is divided into twelve guilds, each of which has one vote. The revenue is about 400,000 guilders; the debt, 3,000,000. In the German diet, Lubeck has one vote, with the three other free cities; and in the plebium, one vote. The contingent is 406 men. Lubeck is the seat of the supreme court of appeal of the four free cities.

L. CAI GIORDANO (also called Luca Pa Presto).

See Giordano.

LUCANUS, Marcus Annicetus; a Roman poet, born at Corduba, in Spain, about A.D. 38. His father, a Roman knight, was the youngest brother of the philosopher Seneca. Lucan went to Rome when a child, where he was instructed by the ablest masters in philosophy, grammar, and rhetoric. Seneca introduced him into public life. He obtained the dignity of a questor before he was of lawful age, and entered the college of augurs. Having obtained some celebrity by several poems, he excited the jestousy of Nero, who aspired to the reputation of a great poet. The latter, on a certain occasion, had recited a poem upon the history of Niobe, before a numerous assembly, and obtained great applause,
when Lucay ventured to enter the lists as his rival, with a poem upon Orpheus, and the auditors adjuged him the superiority. From that time, Nero looked upon Lucay with hatred, forbade him to make his appearance in public, and even ordered him to be murdered with dreadful Torment. This induced Lucay to conspire against him, with several distinguished persons, of whom Piso was the head. The plot was discovered, and Lucay, who, according to the assertion of an old grammarian, was so unnatural as to inform against his own accomplices, was put to death. He chose the death of his uncle, and had his veins opened. He died in the twenty-seventh year of his age. Of his poems, only his Pharsalia has come down to us, in which he narrates the events of the civil war between Caesar and Pompey. The poem is unfinished, and is frequently disfigured with harshness and obscurity in the expression, rhetorical bombast, and exaggerated figures; but these defects are, at least in part, compensated by a nobleness of sentiment, and a love of freedom, which run through the whole work, and some passages are truly poetical. The best editions are the Variorum (Leiden, 1694, 4 vols.), Oudemans's (Leiden, 1728, 2 vols., 4to), Burman's (Leiden, 1740, 4to), and Weder's, with the notes of Bentley and Grotius (Leipzig, 1819, 2 vols.). Lucay has been translated into English by Rowe.

LUCAYAS. See Bahamas.

LUCCA; a city and duchy in Italy, originally a colony of the Romans, which, on the fall of the Lombard kingdom (774), was added by Charlemagne to his territories, and annexed by Otho I. (the Great) to his German dominions. During the middle ages, it was repeatedly sold by its masters, on account of the liberty it enjoyed, and it was annexed to the Austrian empire in 1797, after the fall of Napoleon, to France, and in 1815, to Austria. The city is situated on the Po, about 10 miles from its mouth. It is famous for its palaces, churches, and public buildings. The principal palaces are the Palazzo del Buonconsiglio, the Palazzo della Signoria, the Palazzo Vecchio, and the Palazzo del Comune. The churches are the Duomo, the Palazzo Vecchio, and the Palazzo della Signoria. The city is also famous for its manufacturing industry, especially its silk and woolen goods. Lucca is the seat of the archbishop of Lucca.

Lucay, the capital, and ducal residence (with 18,000 inhabitants, on the river Serchio, in a fertile valley, enclosed by hills, with olive, chestnut, and cypress woods, and, at the summits, with oak and fir trees), is surrounded with ramparts planted with trees, and forming a beautiful wall. The streets are generally crooked and narrow; the churches and public buildings plain. The cathedral is large, but in a bad state; the palace of the dukes is one of the finest in Italy. The Academia degli Ospedali, founded in 1584, was reorganized in 1805, under the title Accademia Lucchese di Scienze, Lettere ed Arti, by prince Bacciocchi. Here is also a university with an observatory. It is the see of an archbishop, and contains two large woolen and considerable silk manufactories. The inhabitants carry on a trade in oil and silk, and are actively engaged in agriculture. The beautiful environs of the town are adorned with country seats. In the vicinity are a mineral bath and the harbour of Viareggio.

LUCCHESINI, GIROLAMO, marquis of, formerly Prussian minister of state, descended from a patrician family of Lucca, where he was born in 1752, was introduced by the abbé Fontana to Frederic II., about 1778, who took him into his service as librarian, with the title of a chamberlain. Lucchesini, the literary friend of Frederic II., first received a diplomatic appointment under his successor, being sent to Warsaw, where, at the opening of the council of state, in 1788, he exerted himself with great activity, encouraged the advocates of independence against Russia, and, in March, 1790, brought about an alliance between Prussia and Poland. In 1791, he was present at the congress of Heinichen, in the capacity of a plenipotentiary, for effecting, in conjunction with the British and Dutch ministers, a peace between the Turks and the emperor. In July, 1792, he went once more to Warsaw, where he was compelled, by existing circumstances, to break the alliance that he himself had signed. In January, 1793, the king appointed him his ambassador to Vienna; he, however, accompanied the king during the greater part of that campaign. In March, 1797, he was recalled from Vienna, and, in September, 1802, was sent as ambassador extraordinary to Paris, and afterwards visited Napoleon at Malmaison. His intention of the war was rescinded by Prussia and France, in October, 1806, was unjustly ascribed to his instigation. He accompanied the king to the battle of Jena, then signed an armistice with Napoleon at Charlotteburg, of which, however, the king did not approve; in consequence of which, as he believed himself to have lost the favour of the king, he took his resignation, in order to return to Lucca. He was afterwards chamberlain to Napoleon's sister, the princess of Lucca, and accompanied her to Paris on the occasion of her brother's second marriage. Count Ségur, in his Tableau historique et politique de l'Europe, places the following judgment on his Polish mission: "No man was better adapted for the post than he. His activity left no opportunity unimproved. Vigilant in accomplishing his object, and rapid in choosing the best means, the marquis of Lucchesini combined the qualities of an experienced courtier with the practical knowledge of a soldier. While he was in France, the King of Prussia, under his advice, and with the aid of his great memory supplied him with useful facts for the purposes of business, as well as interesting anecdotes for conversation. His intimacy with Frederic II. procured him a great influence; his powers of insinuation enabled him to penetrate into the interior of all characters; his sagacity easily removed the veil from all mysteries; and his zeal and activity, which gave him an open and frank appearance, con-
cealed his real views, and persuaded the Poles that he was ardently engaged for the promotion of their welfare as his own." His work concerning the confedery of the Rhine, Sulle Cause e gli Effetti della Confederazione (Italy, 1610), was published at Rome, and in a German translation also, by Von Halem, at Leipsic (3 vols, 1821). In the "Atti della R. Accad. Luccesi, di Scienze, Lettere ed Arti." (Lucca, 1821), he contributed a paper on the history of Frederic II. He died at Florence, October 19, 1825. He must not be confounded with the marquis Cesare Luschenzi, counsellor of state in Lucina, whose Illustrazione delle Lingue antiche e moderne e principali dell' Italiana, procurata nel Secolo XVIII, dagli Italiani (Lucca, 1819, 2 vols), is a continuation of the work of Denian. He has also published Fragments for the Literary History of Lucina.

LUCERNE (Lucerna) ; a canton of Switzerland, bounded N. by Aarau and Zug; E. by Switzerland, and S. and W. by Berne; superficial area, 800 square miles; population, 10,560 Catholics. The elevation of the country is great, but it contains no very lofty summits; mount Pila, 7,100 feet high, is the principal. The soil is generally fruitful, and more corn is produced than is consumed in the canton. Great numbers of cattle are raised, and cheese is therefore among the chief exports. The people are of German origin, and in a very comfortable condition. Lucerne joined the Swiss confedery in 1332, its constitution is representative, but founded on aristocratic principles. The sovereign power resides in the hundred, a senate elected for life by the richer citizens. Two presidents (Schatthausen) exercise the executive power alternately for a year. Lucerne was one of the eleven cantons in which fundamental changes in the cantonal constitutions were demanded by the people in October, 1830. An account of the movements at that time will be found in the article Switzerland.

Lucerne, the capital, is on the lake of Lucerne, and the river Reuss. It contains 6,700 inhabitants, and is, alternately with Berne and Zurich, the seat of a papal nuncio. The cathedral contains one of the finest organs. General D'Abbeville's topographical model of a large part of Switzerland, in relief, is to be seen here; and in the vicinity is a lion, sculptured in relief on a rock (1829), to commemorate the massacre of the Swiss guards in the Tuileries. The lake of Lucerne is a portion of the large lake of Vierwaldtschaf.

LUCIA, Sr, or ST ALOUSIE ; one of the Caribbean islands, in the West Indies, belonging to Great Britain; twenty-seven miles long, and twelve broad; seven leagues south of Martinico; lon. 61° W.; lat. 13° 57' N. This island exhibits a variety of hills, and, among others, two that are remarkably round and high, said to be volcanoes. At the bottom of these are plains finely watered with rivers, and very fertile. The air, by the disposition of the hills, which admit the trade-winds into the island, is very healthy. The soil produces timber, cocoa, and sugar, and is well adapted for the cultivation of sugar and coffee. It is provided with many bays and harbours, the chief of which, called Little Careyage, is accounted the best in all the Caribbees. Population in 1853, 16,640; whites, 1,290; people of colour, 1,690; slaves, 13,690 ; in 1810, 20,000. The town of Careyage contains 5,000 or 6,000 inhabitants, and 5,000 or 6,000.

LUCIAN, a Greek author, distinguished for his ingenuity and wit, was born in Samosata, the capital of Comagene, on the Euphrates, during the reign of Trajan. He was of humble origin, and was placed, while young, with his uncle, to study astronomy; but being unsuccessful in his first attempts, he went to Antioch, and devoted himself to literature and forensic rhetoric. He soon, however, confined himself to the latter, and travelled in several countries (among others, Greece, Italy, Spain, and Gaul) as a rhetorician. After his death, he was accused as procurator of the province of Egypt, and died in the reign of Commodus, eighty or ninety years old. The works of Lucian, of which many have come down to us, are narratue, rhetorical, critical, satirical, mostly in the form of dialogues. The most popular are those in which he ridicules with great wit the popular mythology and the philosophical sects, particularly his Dialogues of the Gods, and of the Dead. They have given him the character of being the Wittiest of ancient writers. He seems not to belong to any system himself, but he attacks imposture and superstition freely and boldly wherever he finds them. The Epicureans, who, in this respect, agree with him, are therefore treated with more forbearance. The Christian religion, of which, however, he knew little, and that only through the medium of mysticism, was an object of his ridicule. In his sarcasm, he not unfrequently oversteps the bounds of truth. The chief of his satirical characters, and occasionally, according to the notions of our time, offends against decency, though, in general, he shows himself a friend of morality. The best editions of his works are by Bourdolet (Paris, 1615, folio), by Hemsterhuis and Reita (Amsterdam, 1743, 4 vols, 4to), and the Bipont (10 vols, 8vo). Among the English translations are those of Spencer, Hickes, and Franklin.

LUCIFER (light-beaver; with the Greeks phos- phorus); a son of Jupiter and Aurora. As leader of the stars, his office, in common with the Hours, was to take care of the steeds and chariot of the sun; and he is represented riding on a white horse, as the precursor of his mother; therefore the morning star. He is also the evening star (Hesperus), and in this character has a dark-coloured horse. For this reason riding horses (desuitori) were consecrated to him, and the Romans gave him the name Desuitor. It has long been known, that the evening and morning stars are the same, viz. the beautiful and bright planet Venus.

The name of Lucifer is also given to the prince of darkness, an allegorical explanation of the fathers of the church making a passage of Isaiah (ix, 22), in which the king of Babylon is compared with the morning star, and to the evil spirit (LUCRE

LUCILIUS, CAES EINNUS, a Roman knight, grand uncle to Pompey the Great, on the maternal side, born at Suessa (B. C. 149), served his first campaign against Numantia, under Scipio Afinius, with whom he was very intimate. He is considered the inventor of the Roman satire, because he first gave it the form under which this kind of poetry was carried to perfection by Persius, Horace, and Juvenal. His satires were superior. indeed, to the rude productions of an Eunius and Pacuvius, but he, in turn, was surpassed by those who followed him. Horace compares him to a river which carries along precious stones against stones against elevated satires which he wrote, only some fragments have been preserved in various editions, of which those of Dousa (Leiden, 1597, 4to; Amsterdam, 1661, 4to; and Padua, 1735) are esteemed the best. In his lifetime, these satires had an uncommon popularity. He died in B.C. 105.

There was also another Lucilius, who wrote a didactic poem, Eluna, edited by Corallus (Le Clerc), Amsterdam, 1803.

LUCINA, a surname of Juno (according to some, of Diana; according to others, the name of a daugh-
LUCKNOW.—LUCELLUS. 579.

ter of Jupiter and Juno), is derived either from lueus (grove, because her temple stood in a grove), or lux (light, because children are brought to light at birth), or from lueco (I shine, as denoting the moon). Her festival was celebrated March 1, on which occasion the Brahmans fired the temple with flowers, and inspired a happy and brave posterity, fecundity and an easy delivery. See Hmtihia.

LUCKNOW; a city of Bengal, capital of a circar of the same name, in Oude, situated on the Goomty; 95 miles N. W. of Allahabad, and 215 S. E. of Delhi. It is 30° 55' E. by ancient historians, and in 1800, estimated at upwards of 300,000; since that time it is thought to have diminished; it was formerly estimated as high as 500,000. It is a very ancient city, and the residence of the governors or nabobs of Oude. It is by no means a handsome town, the streets being very irregular and narrow; some of the houses of brick, but most of them mud walls, covered with tiles. The situation is bad, and the soil is a white sand, which, in hot weather, is driven about by the wind, and pervades everything. The gilded domes of the mosques and the mausoleum of Aqush ud Dowlah, the sultan, are the only remains of old architecture. In the vicinity of the city stand the houses of the British resident and other European inhabitants. The Goomty is navigable for middling-sized vessels at all seasons.

LUCON, or LUCASIA; the principal of the Philippine islands, in the Eastern seas belonging to Spain, sometimes called Mausilia, from its capital; between lat. 15° and 19° N.; lon. 120° to 124° E.; about 400 miles from north to south, and from 90 to 120 in breadth; square miles, about 68,000. The country is generally mountainous, an elevated ridge extending the whole length. There are several volcanoes, and earthquakes are frequent, and sometimes destructive; those of 1650, 1754, and 1824, are still remembered with terror. The climate is moist, but temperate for the latitude, and the soil fertile. Cotton, indigo, sugar, tobacco, coffee, and other tropical produce, grow in great abundance; also the richest fruits of the East and West Indies. There are forty different sorts of palm-trees, excellent coconuts and cassia, wild cinnamon, wild nutmegs, ebony, sandalwood, and excellent timber for ship-building. Gold is found upon the mountains, and is washed down by rains. Cattle abound; civet cats are common, and ambergis is thrown upon the coasts in great quantities. The commerce is considerable; the principal exports are indigo, coffee, pepper, rice, sugar, and pearls. In 1827, of eighty-one vessels engaged in this trade, twenty-nine were Spanish and twenty-one American. The population is 1,375,000, and is composed of Spaniards, who are few, aboriginal blacks, Malays, Moors, and Creoles. The negroes are chiefly in the interior, and are in a very barbarous state. The Malays, among whom the principal tribe is the Tagals, are in part independent, and in part subject to the Spaniards. Brave, active, gay, and industrious, when not ruined by the tyranny of the Europeans, they are reunited by oppression cruel and rapacious. Lupon was discovered by Magellan, in 1511, and conquered by the Spaniards in 1571. See Philip- pines.

LUCRETIA; a Roman lady of distinguished virtue, whose ill treatment by Sextus Tarquin led to the downfall of the king and his family and the establishment of the republic of Rome. She was the wife of Collatinus, a near relation of Tarquin, king of Rome. Sextus Tarquinius, who contrived to become a guest in the absence of his husband, whose kinsman he was, found means to reach her chamber in the middle of the night, and threatened, unless she gratified his desires, to stab her, kill a slave, and place him by her side, and then swear that he had slain them both in the act of adultery. The fear of infamy succeeded. She afterwards summoned her husband, father, and kindred, and, after acquainting them with the whole transaction, drew a dagger and stabbed herself to the heart. See Sextus Tarquinius.

LUCRETIUS, Titus Carus, a Roman knight, probably born 92 B. C., is supposed to have studied the Epicurean philosophy at Athens. He is said to have been made insane by a philistre, and, in his lucid intervals, to have produced several works, but to have committed suicide in his youth. He is supposed, of his composition, a didactic poem, in six books, De Rerum Natura, in which he exhibits the principles of the Epicurean philosophy with an original imagination, and in forcible language. The unpoetical subject of the poem must, of itself, make it, on the whole, a failure; but parts, notwithstanding, such as the description of human misery, the force of the passions, the terrible pestilence of Greece, &c., demonstrate that Lucretius was possessed of great poetical talents. By reason of his antiquated terms, and the new meanings which he gave to words, Quintilian, in his Ancient Censors, says, "It is not to be understood. The principal editions are those of Creech (Oxford, 1695; London, 1717; Basle, 1770, &c.), of Havercamp, (Leyden, 1725, 2 vols., 4to), and of Wakefield (London, 1796, 3 vols. 4to). A masterly German translation, in the metre of the original, has been executed by Knebel (Leipsic, 1821, 4to). The Italian version by Marchetti, and the French by Pongerville, are also good. The poem has also been translated into English by Creech, by Busby, and by Good. Good's translation is accompanied by the text of Wakefield, and by elaborate annotations.

LUCELLUS, Lucius Lucinius; the conqueror of Mithridates. Being chosen adiitum curulis, at the same time with his brother Marcus Lucinius, he manifested in the Marsian war, ability and courage. In the civil wars of Sulla and Marius, he sided with the former. In the year of the city 679, he was appointed consul and commander of the army which was to proceed to Cicilia against Mithridates. Having already served against Mithridates with an inferior command during his quiescence, he was acquainted with this country. He first sought to restore the ancient discipline, which the Roman soldiers had forgotten among the voluptuous Asiatics. Mithridates had already the advantage in the beginning of the campaign; but when, by a naval battle with the consuls Aurelius Cotta, the colleague of Lucullus, Lucullus was therefore compelled to hasten the attack of his land forces. But when he approached the army of Mithridates, and ascertained its strength, he deemed it judicious to avoid a decisive battle, and contented himself with cutting off the king's communications. Mithridates now advanced with a considerable force to besiege the city of Cyzicum, the key of Asia, then in the possession of the Romans. Lucullus, however, defeated his rearguard on their march thither, and compelled the king to give up his attempt. Lucullus now advanced to the coasts of the Hellespont, prepared a fleet, and vanquished the squadron of Mithridates near the island of Lemnos. This victory enabled him to drive all the other squadrons of Mithridates from the Archipelago. The generals of Lucullus subdued, meanwhile, the Persians, and obtained the alliance of the republic of Rome. She was the wife of Collatinus, a Roman lady of distinguished virtue, whose ill treatment by Sextus Tarquin led to the downfall of the king and his family and the establishment of the republic of Rome. Sextus Tarquinius, who contrived to become a guest in the absence of his husband, whose kinsman he was, found means to reach her chamber in the middle of the night, and threatened, unless she gratified his desires, to stab her, kill a slave, and place him by her side, and then swear that he had slain them both in the act of adultery. The fear of infamy succeeded. She afterwards summoned her husband, father, and kindred, and, after acquainting them with the whole transaction, drew a dagger and stabbed herself to the heart. See Sextus Tarquinius.

LUCELLUS, Lucius Lucinius; the conqueror of Mithridates. Being chosen adiitum curulis, at the same time with his brother Marcus Lucinius, he manifested in the Marsian war, ability and courage. In the civil wars of Sulla and Marius, he sided with the former. In the year of the city 679, he was appointed consul and commander of the army which was to proceed to Cicilia against Mithridates. Having already served against Mithridates with an inferior command during his quiescence, he was acquainted with this country. He first sought to restore the ancient discipline, which the Roman soldiers had forgotten among the voluptuous Asiatics. Mithridates had already the advantage in the beginning of the campaign; but when, by a naval battle with the consuls Aurelius Cotta, the colleague of Lucullus, Lucullus was therefore compelled to hasten the attack of his land forces. But when he approached the army of Mithridates, and ascertained its strength, he deemed it judicious to avoid a decisive battle, and contented himself with cutting off the king's communications. Mithridates now advanced with a considerable force to besiege the city of Cyzicum, the key of Asia, then in the possession of the Romans. Lucullus, however, defeated his rearguard on their march thither, and compelled the king to give up his attempt. Lucullus now advanced to the coasts of the Hellespont, prepared a fleet, and vanquished the squadron of Mithridates near the island of Lemnos. This victory enabled him to drive all the other squadrons of Mithridates from the Archipelago. The generals of Lucullus subdued, meanwhile, the Persians, and obtained the alliance of the republic of Rome. She was the wife of Collatinus, a near relation of Tarquin, king of Rome. Sextus Tarquinius, who contrived to become a guest in the absence of his husband, whose kinsman he was, found means to reach her chamber in the middle of the night, and threatened, unless she gratified his desires, to stab her, kill a slave, and place him by her side, and then swear that he had slain them both in the act of adultery. The fear of infamy succeeded. She afterwards summoned her husband, father, and kindred, and, after acquainting them with the whole transaction, drew a dagger and stabbed herself to the heart. See Sextus Tarquinius.
LUCULLUS. Lucullus marched against Armenia, and vanquished Tigranes. Mithridates, however, contended with various fortune, till Lucullus was prevented from continuing the war against him effectually, by the mutiny of his soldiers, who accused him, perhaps not without reason, of violence and covetousness. In Rome, the dissatisfaction of the soldiers towards Lucullus was found well-grounded; he was deprived of the chief command, and recalled. He was received, however, by the patricians, with every mark of respect, and obtained a splendid triumph. From this time, he lived in private life, spending in profuse voluptuousness the immense riches which he had brought with him from Asia, without, however, abandoning the more noble and serious occupations of a cultivated mind. During his residence as questor in Macedonia, and as general in the Mithridatic wars, he had become intimate with the most distinguished philosophers. His principal instructor was the academican Antiochus, who accompanied him in some of his campaigns. Lucullus was therefore most interested in the Platonic system. After his return, he pursued the study of philosophy, induced many scholars to come to Rome, and allowed them the use of his house. He also founded, by means of Tyrannion, whom he had taken prisoner in the Mithridatic war, an extensive library, which was free to every one, and of which Cicero made diligent use. His example, also, induced other distinguished Romans to draw learned men to Rome at their expense. At last, he is said to have lost his reason in consequence of a philtre, administered by his freedman Callisthenes, so that it was necessary to place him under the guardianship of his brother. He soon after died, in his sixty-sixth or sixty-eighth year. Lucullus first transplanted the cherry-tree from Rome to Cerasus, in Poitou, 680 years after the building of the city.

LUDLIT E S; a name given, some years since, in England, to the rioters who destroyed the machinery in the manufacturing towns. They were so called from one of their leaders, named Ludd.

LUDLOW, EDMUND, a distinguished leader of the republican party in the civil wars of Charles I., the eldest son of Sir William Ludlow, knighted at 1602, at Maiden Bradley, in the county of Wilts, and received his education at Oxford, whence he removed to the Temple, in order to study the law. He served with distinction in the parliamentary army, and when "the self-denying ordinance" took place, he remained out of any ostensible situation, until chosen member for Wiltshire, in the place of his father. At this time, the machinations of Cromwell becoming visible, he was opposed by Ludlow with firmness and openness. With a view of establishing a republic, he joined the army against the parliament, when the latter voted the king's concessions a basis for treaty, and was also one of Charles's judges. With a view of removing him, Cromwell caused him to be nominated general of horse in Ireland, where he joined the army under Ireton, and acted with great vigour and ability. When Cromwell was declared protector, Ludlow used all his influence with the army against him, on which account he was recalled, and put under arrest. Although he refused to enter into any engagement not to act against the government, he was at length allowed to go to London, where, in a conversation with Cromwell himself, he avowed his republican principles, and, refusing all security or engagement for submission, he retired, and remained there until the death of the protector. When Richard Cromwell succeeded, he joined the army party at Wallingford-house, and was instrumental in the restoration of the long parliament, in which he took his seat. The restoration was now rapidly approaching, and, finding the republicans unable to resist it, he quitted the country, and proceeded to Geneva, whence he afterwards, with many more fugitives of the party, took refuge in the Prussey. For his unpopularity, was driven by a motion in parliament, and for his apprehension, by Sir Edward Seymour, the leader of the tory party. He closed his life in exile, in 1603, being then in his seventy-third year. Ludlow was one of the purest and most honourable characters on the republican side, without any fanaticalism or hypocrisy. His Memoirs contain many particulars in relation to the general history of the times: they are written in a manly, unaffected style, and are replete with valuable matter.

LUFF; the order of the helmsman to put the tiller towards the lee-side of the ship, in order to make the sail fill nearer the direction of the wind.

LUGDUNUM, the capital of several cities: 1. a colony of the Romans, also called Lugdunus, the present Lyons (q.v.), though not on precisely the same spot. 2. Lugdunam Batavorum (Lugd. Bat.); a city in Gallia Belgica, at a later period, in the middle ages, called Leithis; at present, Leyden (q.v.); hence, on the title page of classics, Lugdunensis Batavorum, many of which are very fine editions. 3. Lugdunum; a city of the Convena, in Gallia Aquitania, most probably the present St Bertrand. 4. Lugdunensis (Gallia) was the name given, in the time of Augustus, to a part of Caesar's Gallia Celtica. There were Lugdunensis Prima, afterwards Lyonensis; Lugdunensis Secunda, afterwards Normandy; Lugdunensis Tertia, afterwards Touraine, Maine, Anjou, and Brittany; Lugdunensis Quartia, or Senonia, comprising part of Champagne, south of the Marne, the southern part of Isle de France, Chartres, Perche, and Orléanais.

LUGGER; a vessel carrying three masts, with a running bowsprit, and the sets lug-sails, and sometimes has top-sails adapted to them.

LUG-SAIL; a quadrilateral sail bent upon a yard, which hangs obliquely to the mast, at one third of its length. These are more particularly used in the barcolargus, navigated by the Spaniards in the Mediterranean.

LUKE; author of one of the Gospels, which is distinguished for fulness, accuracy, and traces of extensive information; also of the Acts of the Apostles, in which he gives a methodical account of the origin of the Christian church, and, particularly, of the travels of the apostle Paul. Though these two books were designed merely for his friend Theophilus, they soon attained a canonical authority, and were publicly read in the churches. Concerning the circumstances of the life of this evangelist, nothing certain is known, except that he was a Jew by birth, was a contemporary of the apostles, and could have heard accounts of the life of Jesus from the months of eye-witnesses, and was for several years a companion of the apostle Paul, in his travels; so that, in the Acts of the Apostles, he relates what he himself had seen and participated in. The conjecture that he was a physician is more probable than the tradition which makes him a painter, and which attributes to him an old picture of Christ, preserved at Rome. On account of this latter tradition, however, he is the patron saint of painters, and a celebrated academy of these artists, at Rome bears his name.
LUKE OF LEYDEN—LUMP-FISH.

LUKE OF LEYDEN, one of the founders of modern painting in the North, stands by the side of Durer, Holbein, and Cranach, at the head of the old German school, though, strictly, he does not belong to it. In water-colours, St. Hubert, in his life, the instruction of his father, Hugo Jacob, and afterwards that of Cornelius Engelbrechta, an eminent painter, and scholar of Van Eyck. At the early age of nine, he began to engrave, and, in his twelfth year, astonished all judges, by a painting, in water-colours, of St. Hubert. In his fifteenth year, he produced several pieces, composed and engraved by himself, among which the Trial of St. Anthoy, and the Conversion of St. Paul, in regard to composition, characteristic expression, drapery, and management of the graver, are models. After this, he executed many paintings in oil, water-colours, and on glass; likewise a multitude of engravings, which spread his fame widely. He formed, a friendly intimacy with the celebrated John of Malabuse and Albert Durer, who visited him in Leyden. His uneducated application injured his health; and his anxiety to acquire the art, made him travel through the Netherlands. But his hypochondria was not removed. He imagined himself poisoned by anxious viewers, and hardly left his bed for almost six years; during which time he laboured uninterruptedly, and rose to the highest rank in his art. He died in 1539, in his fortieth year, which is excelled in almost all parts of his art, though he could not entirely divest himself of the taste which characterized the childishness of his figures. His designs are striking, ingenious, and varied; his grouping judicious and natural; character appears in all his figures, particularly in the hands, though this character is not so much called noble. The situations and attitudes of his figures are very various, which is the more remarkable, from the great number of persons often found in his paintings. His drawing is correct, yet not ideal, but fashioned after the models of the country in which he lived. His drapery is, indeed, mostly arranged with truth, but without taste, heavy, and deformed by many small folds. His colouring is pleasing and natural, but the aerial perspective is neglected; and there is a certain harshness, not to be mistaken, peculiar to that period of the art. Notwithstanding his high finish, he painted easily. His engravings and wood-cuts bear evidence of a most careful and attentive management of the graver. They are very rare, and highly prized, particularly those in which he selected the same subject with Albert Durer, in order to compete with him. The friends often shared their ideas and compositions; but Luke ranks below Durer. The fullest and most correct, so far as the engraver is concerned, is in the library at Vienna. His paintings are scattered about in many galleries; the principal in Leyden, Vienna, Dresden, Munich, and in the Tribune at Florence.

LUMP-FISH (Cyclopterus, Lin.). These fish are very remarkable for the manner in which their ventral fins are arranged. They are united by a membrane so as to form a kind of oval and concave disk. By means of this apparatus, these fish are enabled to adhere with great force to any substance to which they apply themselves. This has been proved by placing one of them in a bucket of water, when it fixed itself so firmly, that, on taking the fish by the tail, the whole vessel and its contents were lifted up from the bottom of the tub, although it was 25 inches in depth (Brit. Zoology). The largest of the genus is the C. lumpus: this is about nine inches long, and sometimes weighs seven pounds. The back is arched and sharp, of a blackish colour, variegated with brown. The body is covered with sharp, black tubercles; and on each side, there are three rows of large, bony scales, and another on the back. The great resort of this species is in the northern seas, about the coast of Greenland. Great numbers of them are decoyed by the seals, who swallow all but the skins, quantities of which, thus emptied, are seen floating about in the spring seas. They are then driven, in this state, upon the land for the purpose of spawning. It is said that the spots are so used on the land, and in the coast, that in the prices they carry on their depredations can be readily distinguished by the smoothness of the water.
Crants says that the inhabitants of the barren tracts of Greenland, who are obliged to depend, for the greatest part of their subsistence, on fish, eagerly avail themselves of the unveiling of this speculation, from the first, it forms an exceedingly gross and oily food, of which the Greenlanders are very fond. The flesh is soft and insipid.

LUMPEE. See Coccus, end of the article.

LUNA (the moon), among the Greeks, Λυσσα, was the daughter of Argos and the wife of the Titan Cal. The name is the same, according to some mythologists, as Diana. She was worshipped by the ancient inhabitants of the earth with many superstitious forms and ceremonies. It was supposed that magicians and enchanters, particularly those of Thessaly, had an uncontrollable power over the moon, and that they could draw her down from heaven at pleasure, by the mere force of their incantations. Her eclipses, according to their opinions, proceeded from thence, and, on that account, it was usual to beat drums and cymbals, to ease her labours, and to render the power of man effective. See Helios.

LUNAR CAUSTIC. See Nitrate of silver.

LUNAR YEAR. See Year.

LUNATICS, in medicine. See Mental Derangement.

Lunatics, in law. See Non Compos.

LUND, or LUNDE; a town in Sweden, province of Skane, and government of Malmoehus, five miles from the Baltic; lon. 15° 3' E.; lat. 55° 44' N.; population, 3,224. It is a bishop's seat, and contains a university, founded in 1660, by Charles IX., which has fifteen professors, a botanic garden, an anatomical theatre, a cabinet of curiosities, an observatory, and a library, of 40,000 vol. The number of students, in 1879, was 631.

LUNEBURG; formerly a principality of Lower Saxony, at present, a province of Hanover, with 4325 square miles, and 264,000 inhabitants. The Elbe forms its boundary on the north and north-east. Luneburg is a vast plain of sand, interrupted here and there by deep moors and forests of pine. The marshes on the rivers are, however, wonderfully productive, but are better fitted for pasture, and the cultivation of garden vegetables, than for tillage. The rivers of the province flow into the Elbe or the Weser, the high land which divides the basins of those two rivers, being the great Luneburg heath. The dykes, which protect the country from the inundations of the Elbe, are enormously expensive. About seven tenths of the whole province are incapable of cultivation, and corn is not produced in quantities sufficient to supply the inhabitants. Flax is extensively raised, and the cattle are numerous and of a good description. Bees are kept on the heaths, and the fisheries in the rivers are important. Salt, wool, linen, bees-wax, and wooden-wares, are the chief exports.

The great commercial road from Hamburg to Hanover and Brunswick, runs through the province, and the towns of Luneburg and Celle carry on a considerable trade. The possession of Celle was originally an alodial estate of the house of Brunswick, and gave its name to one of the branches of the family. See Brunswick.

Luneburg, the capital of the province, is an old town, with about 11,500 inhabitants, situated on the Elbe, and capable to this place for small vessels. The Kalkberg is a curious gneissous rock, 118 feet high, on which are remains of ancient fortifications, and in the quarries of which is found the rare mineral boracite. The salt springs are capable of yielding 2000 tons of salt a week. The transit trade between Hanover and Brunswick is extensive, a large number of horses being brought to Luneburg annually, and is estimated at 15,000,000 rix dollars.

LUNETTE, in the art of fortification; a very vague expression, and is in its original signification, probably derived from every detached work built in the form of an angle, and consisting of but two faces. It was afterwards used in a more limited sense, to denote, 1. Small, generally irregular, works, with or without flanks, that are placed in the principal ditch, before the ravelins, or other out-works, for the purpose of covering such places of the chief rampart, as may be seen from the open field, or of defending from the side such points as, through a mistake in the original plan of the fortifications, were left unprotected, the guns from the bastions not being able to reach them. 2. Advanced works on or before the glacis, sometimes constructed in the form of an angle, sometimes in the form of the bastion. This kind of lunettes, skilfully disposed on the weak fronts of a place, and arranged, in one or two lines, so as to flank one another, may check the approach of the enemy for a considerable time, by obliging him to make at each a greater distance than he would otherwise have done, and subjecting him to losses in the capture of each lunette. Particular attention must be paid to dispose them in such a manner as to render it impossible for the enemy to attack two lunettes at the same time.

LUNEVILLE; an open city on the Lorraine, department of the Meurthe, in a fruitful plain, with a castle, three churches, and 12,378 inhabitants. In 1775, Stanislaus Leczynski, king of Poland, to whom Lorraine and Bar had been granted, resided here. Lat. 48° 39' N.; lon. 6° 30' E.

Luneville, Peace of; concluded Feb. 9, 1801, between Austria (also in the name of the German empire) and the French republic, upon the basis of the peace of Campo-Formio. Belgium and the left bank of the Rhine were ceded to France; Milan and Mantu to the Cisalpine republic; Venice, and the country as far as the Adige, Istria, and Dalmatia, to Austria. The princes on the left bank of the Rhine were to be indemnified by territories within the empire. Austria ceded the Frickthal, and the strip of land between Basle and Zurzach, to France, who, in 1802, gave them to Switzerland. Austria ceded Brisigau to the duke of Modena, and consented to the erection of the kingdom of Etruria, for which the land-grand-duke of Tuscany was to pay 150,000 florins to Germany. The valley of the Rhine formed the boundary of France. The navigation of the river was declared free, and remained so until 1804, when toll was imposed for the complete indemnification of several members of the empire.

LUNS; the organs of respiration in the mammalia (man, quadrupeds, and the cetaceous animals), birds, and reptiles. The lungs are situated in the chest, and are divided into two parts, called lobes. They are enveloped in a delicate and transparent membrane, derived from the pleura, through which they have the appearance of net-work, and are connected with the spine by the pleura, and the neck by the wind-pipe, and with the heart by the roots of the pulmonary artery and veins. In their specific gravity, they are the lightest of all the animal organs, even when exhausted of air; hence their name of lights. To the touch, they are soft, spongy, and elastic. In their internal structure, they are composed of a number of membranous, celled blood-vessels, nerves and lymphatics, all connected by cellular substance. The cells communicate with each other, but have no communication with the cellular substance: small tubes arise from them, which are finally united into one large tube from each lobe; and these two length join to form the wind-pipe. The blood-vessels
LUPERCALIA—LUSITANIA.

553

called the *pulmonary* vessels are destined to distribute the blood through the cells, for the purpose of subjecting it to the action of the air (see Blood, and Heart); while the bronchial vessels are intended to supply the lungs with air, in the act of breathing. The action of these organs in respiration, see Respiration.)

The cecae (whales, seals, &c.) breathe by lungs, and are therefore obliged to ascend, at intervals, to the surface of the water, to obtain a supply of atmospheric air. The respiratory orifice, in these animals, is at the hinder end of the body between the pectoral fins, but on the top of the head. In birds, the lungs are smaller than in quadrupeds, but they have air distributed throughout their muscular system and in the cavities of the bones.

The lungs afford a means of ascertaining whether a new-born child, which is found dead, was or was not living, when born,—a question often of great importance in forensic medicine. The lungs of the infant are placed in water, to see whether they will swim or sink. Before birth, the lungs are dark red, contracted into a small place within the cavity of the breast, and, specifically heavier than water. They soon sink into the water, where they remain entire, or cut into pieces; and when cut, no air-bubbles come forth, either in or out of the water, nor does much blood appear. But if the babe has lived after birth, and therefore breathed, air has entered the lungs, that has thus enlarged the cavity of the chest, and the lungs themselves are expanded, appear of a loose, spongy texture, of a pale red colour, cover the heart, and fill the chest. They then swim in water, as well in connexion with the heart as without it, as well entire as in pieces. If cut, a peculiar sound is audible; air proceeds from them, and rises, if they are pressed under water, in small bubbles. From the incisions in the lungs, red, and generally bloody blood issues. Against this test, it has been objected,—1. that air may be found in the lungs, though the infant never breathed. This could happen, however, only (a) from air having been blown into them; but, in this case, the chest of the infant is not arched, very little blood is to be found in the lungs, and it is not bright red nor foamy: (b) from putrefaction; but, in this case, the other parts of the body would also be affected by putrefaction; the lungs are not expanded, pale-red air-bubbles show themselves only on the surface, and not in the interior substance, unless the highest development of the growth. It is said that the child may have breathed, and therefore lived, without air being found in the lungs. This is not proved, and is at variance with the received ideas of the manifestation of life. 3. That part of the lungs may swim, another may sink. This can happen only with lungs in a diseased state, and would only prove an attempt of the infant to breathe, without the possibility of living. 4. That a child may have lived without breathing; but this state of apparent death cannot be called life: life cannot be supposed without breath. If all precautions are taken, these and the subsequent cases considered, then the external appearance of the infant well observed, and the state of the other intestines examined, the foregoing test may be considered as sufficient for the decision of the question, whether a child has lived after birth or not. Another kind of test by means of the lungs has been proposed, which is founded on the following circumstances: of the lung which has breathed, and one which has not; and still another, which rests on the circumference of the chest before and after breathing has commenced; but both are more complicated, troublesome, and less certain than the former one.

On a yearly festival observed at Rome, the 15th of February, in honour of the god Pan; surmounted Lupercus (from lupus, wolf, and arceo, to drive away), the defender from wolves. It was usual first to sacrifice two goats and a dog, and to touch, with the bloody knife, the forefeet only, of two or three young kids, which were obliged to smile while they were touched. The blood was wiped away with soft wool dipped in milk. After this, the skins of the victims were cut into thongs, with which whips were made for the youths. With these whips the youths ran about the streets, all naked except the middle, and with these the young men were flogged, in particular, were fond of receiving the lashes, as it was believed that they removed barrenness, and eased the pains of child-birth. This excursion in the streets of Rome was performed by naked youths, because Pan is always represented naked, and a goat was sacrificed because that deity was supposed to have the feet of goats. A dog was added as necessary for the shepherd. The priests which officiated at the Lupercalia were called *Luperci.*

LUPINE; a genus of leguminous plants, containing about thirty species, which are herbaceous or frutescent, bearing pinnate or simple leaves, and having large, handsome flowers, which are disposed in a terminal raceme. The *Lupinus perennis* grows wild in sandy places, from Canada to Florida, and bears beautiful blue flowers. It has been cultivated in Europe for more than 150 years.

LUFULIN. M. Planche first ascertained that the three active ingredients of the hop, viz., the oil, resin, and bitter principle, reside in the brilliant yellow grains scattered over the calicular scales of the cones, which serve as their envelope. Doctor Ives of New York, and MM. Payen, and Chevalier, have since confirmed this position. This matter, when in solution, is a golden yellow colour, in little grains without consistence, which attach themselves to the fingers, and render them rough. It has a penetrating aromatic odour; 200 parts of it afforded, 1. water; 2. essential oil; 3. carbonic acid; 4. subacutate of ammonia; 5. traces of osmumite; 6. traces of fatty matter; 7. gum; 8. malic acid; 9. malate of lime; 10. bitter matter, 25 parts; 11. a well characterized resin, 105 parts; 12. silica, 8 parts; 13. traces of carbonate, muriate, and sulphate of potash; 14. carbonate and phosphate of lime; 15. oxide of iron and traces of sulphur. The bitter matter, introduced into the composition of beer, destroys malts.

LUSITANIA (Lusitania), an extensive country, bordering on Bohemia to the south, Meissen to the west, Brandenburg to the north, and Silesia to the east. It was formerly a magistracy, and was divided into Upper and Lower Lusitania, with a superficial area of 4250 square miles, the population of which is about 300,000.

With the exception of the circle of Kottbus, which had fallen into the hands of the house of Brandenburg in 1550, Lusitania was granted to the elector of Saxony, in 1635. In 1815, all Lower Lusitania (1740 square miles), with a large part of Upper Lusitania, was ceded to Prussia (in all 3900 square miles, with 204,700 inhabitants). This part of Upper Lusitania, which remained to Saxony (1050 square miles, with 195,000 inhabitants), now forms the circle of that name, comprising the eastern part of the kingdom; chief town, Bautzen, (now Liegnitz.) It is not very fertile, hardly supplying half of the corn consumption of the body of the land; it is raised in all parts, but great quantities are imported for the use of the manufactures. Linen, woollen, and cotton are the principal manufactures. See Saxony. LUSIAD. See Camaenus.

LUSITANIA; a part of Spain, whose extent and situation have been accurately defined by the ancients. According to some descriptions, it ex-
LUSTRE—LUTHER

tended from the Tagus to the sea of Calabria. The inhabitants were warlike, and the Romans conquered them with great difficulty. They generally lived upon plunder, and were rude and unpolished in their manners. They spoke Latin, and Portuguese.

90. LUSTRATION—purification; in particular the solemn purification or consecration of the Roman people, by means of an expiatory sacrifice (sacri-
ficium lustrale), which was performed after every census. (See Census.) The name may be derived from lustrum, in the sense of solvere, for, on this occa-
sion, all public taxes were paid by the farmers-general to the censor; or from lustrare (to expiate), because, after the census, an expiatory sacrifice was offered for the whole Roman people. The sacrifice consisted of a bull, a sow, and a sheep or ram (suoetauritio). The ram was dedicated to Jupiter, the swine to Ceres, and the bull to Mars. This solemn act was called lustrum condere. As this lustration took place at the end of every five years, lustrum came to signify a period of five years.

LUSTRE. See Lustration.

LUTE (in Italian, liuto; French, luth; German, lute, perhaps from the German lauten, to sound) is an instrument which is derived from the ancient lyre. Some, however, think that it was introduced into Spain by the Moors, where it was called tuna; and from thence into Italy, where it received the name of liuto. The chelys, or testudo, of the Romans, was probably a similar instrument. It is a stringed instru-
ment, formerly much in use, anciently containing only five rows of strings, but to which six, or more, were afterwards added. The lute consists of four parts, viz., the table; the body, which has nine or ten sides; the neck, which has as many stops or divisions; and the head, or cross, in which the screws for tuning it are inserted. In playing this instrument, the per-
former strikes the strings with the fingers of the right hand, and regulates the sounds with those of the left. The notes of the lute are generally written on six lines, and not on five. There were formerly various kinds in use. The lute, simply constructed, is called the French lute; if it has two necks, one of which sustains the base notes, it is called a theorbo; if the strings of the other neck is doubled, it is called an archi-
lute. The difficulty of playing upon this instrument, as well as that of tuning it, is probably the reason that it has gone out of use.

LUTHER, MARTIN, the great ecclesiastical re-
former, was born at Eisleben, November 10, 1483. His father, a farmer, was a member of the monastic family to Mansfield, in 1484, and was appointed to a seat in the council. Martin was educated in the deepest respect for religion, and, at the age of four-
teen, was sent to the school at Magdeburg; but receiving no assistance there, he was sent, in 1498, to Eislembach. At first he obtained his support by singing songs at the doors, like many other poor scholars; but he was soon taken under the care of a paternal relation in easy circumstances. At school, he made rapid progress in Latin and other studies; in 1501, entered the university of Erfurt; in 1503, received the degree of master, and delivered lectures on the physical and moral ethics of Aristotle. About this time, he discovered, in the library of the university, a Latin Bible, and found, to his no small delight, that it contained more than the excerpts in common use. He was destined by his father to the law; but his more intimate acquaintance with the Bible, of which the clergymen of that time knew only the Gospel and Catholic ethics, influenced his inclination to the study of divinity. The impression pro-
duced on him by the death of his friend Alexis, who expired at his side, on a journey from Mansfield to Erfurt, by a stroke of lightning or the blow of an

assassin, uniting with the effect of his early religious education and his poverty, decided him to devote himself to the monastic life. Contrary to the wishes of his father, he entered the monastery of the Augustinians, at Erfurt, in 1505, and submitted patiently to all the privation and humiliation which the vows of the order imposed upon novices. But he always regarded himself as an unprofitable servant. Pure and innocent as he was, he tortured himself with bitter reproaches, and was attacked by a severe fit of sickness; during which, one of the elder brothers consoling him, and promised him forgiveness of his sins through faith in Jesus Christ. This doctrine, almost forgotten in the zeal of the clergy for good works, as they called them, and in the traffic in indulgences, brought a new light into the soul of Luther. He was also encouraged by the paternal mildness of Staupitz, the provincial of the order, who, perceiving his extraordinary talents and acquirements, delivered him from the menial duties of the cloister, and encouraged him to continue his theological studies.

In 1507, he was consecrated priest, and, in 1508, by the influence of his patron, Staupitz, he was made assistant professor in sacred theology at the University of Wittenberg. In this sphere of action, his powerful mind soon showed itself. He threw off the fetters of the scholastic philosophy, so intimately connected with the papal hierarchy, asserted the rights of rea-
son, and soon collected a large number of disciples. In 1510, he visited the court of pope Leo X., at Rome, on business intrusted to his order. This journey revealed to him the irreligion and corruption of the clergy at Rome, and destroyed his reverence for the sanctity of the pope. After his return, he became a preacher at Wittenberg, and, in 1512, he was made a doctor in theology. As such, his oath-bound him, as he thought, to the fearless defence of the Holy Scriptures. His profound learning, which embraced an intimate acquaintance with the ancient classics, the fathers of the church, and the spirit of the Greek and Hebrew languages, together with the fame of his eloquence, soon made Luther known to the principal scholars, and esteemed as a powerful advocate. A new attack upon which was breaking upon the world. Great, therefore, was the attention excited by his ninety-five propositions, given to the world October 31, 1517, and intended to put an end to the sale of indulgences, by the Dominican Tetzel. Luther was compelled to this course solely by the love of his country, in which he had no share in indulgences, the unhappy effects of which had appeared already in his congregation at Wittenberg. Ambition or hatred of the Dominicans had no influence in producing this measure. His propositions were condemned as heretical as soon as they appeared. Hogstraten, a Dominican at Cologne, doctor Eck at Lugano, and Prierias, an officer of the Roman court, immediately began an attack upon Luther; but neither their invectives, nor the papal summons to Rome, which he did not obey, nor the mild exhor-
tations of the cardinal Cajetan, at Augsburg, in 1518, and of the nuncio Miltitz, at Akenburg, in 1519, with all the alluring power of the church, nor the impudence of the clergy, nor the attempts of the Dominicans to induce him to recant. He replied to his opponents with boldness and determination, and even after his dispute with Eck at Leipzig, in 1519, he still main-
tained the invalidity of indulgences, and of the papal supremacy. No one answered him, and he appealed with justice from the decisions of his adversaries to the general council.

In 1520, Luther and his friends were excommuni-
cated. His writings were burned at Rome, Cologne, and Louvain. Indignant at this open act of hostility after his modest letter, in which he had showed him-
was desirous of reconciliation, declared his submission to the pope, and advised a reform in the church. Luther burned the bull of excommunication, and the decrees of the papal canon, at Wittenberg, December 10, 1520. By this act, he dissolved all connexion with the pope and the Roman church. Frederick, the elector of Saxony, seemed in a doubt whether to follow him. But the nobility of the German noblemen, Hütten, Sickingen, Schamburg, whom he called upon to defend the new opinions, hailed him as the champion of religious liberty, and offered him their fortress and their arms. But Luther wished no protector but God. He refused to accept the crown of Thuringia offered for his efforts. He still forced himself on the Roman hierarchy; a spirit within urged him forward, and he could not resist. The people received, with amazement, the words of a monk, who defied at once the pope and the clergy, the emperor and the princes. For this he did, when he presented himself at the diet of Worms, April 14, 1521, accompanied by a few friends and the imperial herald, who had summoned him. He was met by about 2000 persons on foot and on horseback, at the distance of a league from Worms. Such was his conviction of the justice of his cause, that when Spalatin sent a messenger to warn him of his danger, he answered, "Iam not afraid of any arrow which there are on the roofs of its houses, I would go on." Before the emperor, the archduke Ferdinand, six electors, twenty-four dukes, seven margraves, thirty bishops and prelates, and many princes, counts, lords, and ambassadors, Luther appeared, April 17, in the imperial diet, acknowledged all his writings, and, on the following day, made his defence before the assembly. He concluded his speech of two hours in length with these words: "Let me then be refuted and convicted by the testimony of the Scriptures, or by the clearest arguments; otherwise I cannot and will not recant; for it is neither safe nor expedient to act against conscience. Here I take my stand; I can do no otherwise; so help me God! Amen." He left Worms, in fact, a conqueror; but it was so manifest that his enemies were determined upon his destruction, that Frederick the Wise conveyed him privately to the Wartburg, to save his life. Neither the presence of the Wartburg, nor the forests of the empire of the pope, could disturb him in his retirement, of which he took advantage to translate the New Testament into German. But this retirement continued only ten months. When informed of the disturbances excited by Carstadt, on the subject of images, he could no longer endure restraint, notwithstanding the new outlawry which the emperor had just issued against him, at Nuremberg; and, at the risk of provoking the displeasure of the emperor, he hastened to Wittenberg, the territory of George, duke of Saxony, who was one of his most bitter enemies. The letter to Frederick, in which he justified his departure, proves, not less than his conduct before the diet at Worms, his fearless courage and the greatness of his soul. The sermons which he delivered for eight successive days after his return (in March, 1522), to quell the violence of the enraged insurgents in Wittenberg, are patterns of moderation, and wisdom, and popular eloquence. They show, in a striking light, the error of those who consider Luther only as a violent and rude fanatic. He was violent only against malignity, or when he thought the great truths of religion in danger. Such motives sufficiently account for his caustic reply to Henry VIII., King of England, who wrote to him, on the question of the others of his controversies with Carstadt and Erasmus. The latter, not without reason, charged with worldliness and lukewarmness in a good cause. He viewed the attack of Carstadt on his doctrine of the sacrament as an open apostasy from the faith, and an act of ambitious jealousy.

Amidst these disputes and attacks, his plans for a total reformation in the church, which was called for by the voice of the nation, were matured. In 1523, at Wittenberg, he began to purify the liturgy from its empty forms, and, by laying aside his cavalry sword, the conclusion of the monasteries, and the better application of the goods of the church. In 1525, he married Catharine von Bora, a nun, who had left her convent. After overcoming numerous difficulties, he took this important step at the age of forty-two years, as much from principle as inclination, with the hope of restoring, with the people, the mission of the gospel to their natural and social rights and duties. Warm as was the zeal of Luther for a reform in the church, he was desirous of avoiding disorder and violence. While he went hand in hand with the imperial cities and foreign princes, both in words and actions, he opposed, most decidedly, the violence of the peasants and of the Anabaptists. His enemies have shown great injustice in implicating him as the author of those outrages which arose from the enthusiasm of the ignorant, and were displeasing to his noble and generous mind. Luther prepared, from 1526 to 1539, a new church service corresponding to the desire of the gospel, under the patronage of the elector, and with the aid of Melanchthon and other members of the Saxon church. His larger and smaller catechisms, to be used in schools, were also of great service. But every one must look with pain upon the severity and intolerance which he manifested towards the Swiss reformers, because their views differed from his own in regard to the Lord's supper. (See Lord's Supper, and Sacrament.) He was thus the chief cause of the separation which took place between the Calvinists and the Lutherans. But, without his inflexible firmness, in matters of faith, he would have been unequal to a work against which artifice and power had arrayed all their forces.

The rapidity with which the reformation advanced after the confession of Augsburg, in 1530, rendered the papal bulls and the imperial edicts against Luther inefficient. But he was obliged to be continually on his guard against the cunning Papists, who strove to make him the author of some parts of his creed; and it required a firmness bordering on sternness and obstinacy to maintain the victory which he had won. With a spirit incident to such a state of things, Luther wrote, in 1537, the Smallatical articles; he gave a refusal to the ambassadors of Brandenburg and Anhalt, who were sent, in 1541, by the diet of Ratisbon, to make him more compliant towards the Catholics; and, in 1545, he refused any participation of his party in the council of Trent.

The severity which he used in the defence of his faith, by no means diminishes the merit of his constancy; and an apology may easily be found for the frequent rudeness of his expressions, in the prevailing mode of speaking and thinking; in the nature of his undertaking, which required continual contest; in the provocations by which he was perpetually assailed; in his frequent sickness; and in his excitable imagination. The same excitability of temperament will serve to explain those dreadful temptations of the devil, which disquieted him oftener than would seem compatible with his strength and vigour of mind; for that age regarded the devil as a real personage, an evil principle ever active; and, if any one devoted himself to the cause of God, he was constantly obliged to resist attacks of his evil spirit, sometimes by the aid of his controversies.
LUTHER—LUTZEN.

and make straight the paths; but, if I must, necessarily, have some failing, let me rather speak the truth with too great severity, than once to act the hypocrite and conceal the truth." Even the enemies of Luther are forced to confess that he always acted justly and honourably. No one can behold, without astonishment, his unwearied activity and zeal. The work of translating the Bible, which might well occupy a whole life, he completed from 1521 to 1534, and thus rendered his name immortal. He equalled the most prolific authors, in the number of his treatises on the most important doctrines of his creed. After the year 1512, he preached several times every week, and, at certain periods, every day; he officiated at the confessional and the altar; he carried on an extensive correspondence in Latin and German, on various subjects, with men of rank, and of distinguished literary attainments, and with his private friends; and, notwithstanding all this press of occupation, he allowed himself some hours every day for meditation and prayer, and was always accessible to visitors. He gave advice and assistance wherever it was needed; he interested himself for every indigent person who applied to him, and devoted himself, with his whole soul, to the pleasures of society. In company, he was always lively, and although a skilful and elegant conversationalist (preserved in his Tischreden [Table-Talk]); he was never without something new in his enjoyments. Luther was no stranger to the elegant arts. His excellent hymns are well known. His fondness for music, too, was such, that, as often as circumstances permitted, he would relax his mind with singing, and playing on the flute and lute. But few men are equal to such excessive labour; and, with a weaker constitution, such a constant round of action, and vicissitude, and toil, would soon have overcome the great reformer. Indeed, from the year 1531, he had a painful disease (the stone, accompanied with vertigo) to contend with, and, in several fits of sickness, was brought near to the grave; but he lived to the age of sixty-three. Just before his last journey to Eisleben, where he was summoned by the count of Mansfield to settle a dispute, he wrote, in a letter to a friend, the following description of his condition:—"Aged, worn out, weary, spiritless, and now blind of one eye, I long for a little rest and quietness; yet I have as much as I desire, and never was more active, as if I had never written, or preached, or acted. I am weary of the world, and the world is weary of me; the parting will be easy, like that of the guest leaving the inn; I pray only, that God will be gracious to me in my last hour, and shall I quit the world without reluctance." He wrote this in January, 1546. On the 18th of the succeeding February, he died at Eisleben, and was buried in the castle-church of Wittemberg. He left a wife, whom he tenderly loved, and two children (two others having previously died), in straitened circumstances. His wife died in 1532. The male line of his posterity became extinct in Martin Gottlieb Luther, who was a counsellor at law, and died at Dresden, in 1759. Against his will, his adherents styled themselves Lutherans; against his will they engaged in a war which broke out immediately after his death and desolated Germany. As long as he lived, Luther was peace; and he succeeded in maintaining it; he represented the idea of the Church as an earthly kingdom, because of God by force; and in fact, during thirty years of his life, the principles of the reformation gained a firm footing, and were more widely propagated, by his unshaken faith and unwearyed endurance, than by all the wars, and treaties, and councils, since.

Luther's Summtit. Werke (Complete Works) appeared in 1826, at Erlangen, in 60 vols. Five different collections of his writings were published earlier, of which the most complete is that by Walch (24 vols., 4to). There is a life of Luther, by Schroch, in his Lebensbeschreib. beruhmter Gel. (Lives of distinguished Scholars), (part 1, 1790).

For further information, see the articles Reformations, and Protestants. See also the Life of Luther, with an Account of the Reformation, by A. Bawer (London, 1813), and the articles on Calvin, Melancthon, Erasmus, Zwingius; also Robertson's Charles V., and Mosheim's Ecclesiastical History.

LUTHERANS; the followers of the doctrines of Luther, though he reformer himself, in his writings, expresses his disavowal of making his name that of a sect. In Spain, and some other Catholic countries, the name Lutheran is, in common parlance, almost synonymous with heretic. In Sweden and Denmark, there is an established Episcopal Lutheran church; this is not the case in Protestant Germany. The Bishops have lately been created in Prussia (see Liturgy); but, as far as church government is concerned, they are merely titular, whatever may have been the intention of their establishment. They are, however, neither Lutheran nor Calvinist, but evangelical. The Lutherans in Germany cannot be said to adhere strictly, to the doctrines of Luther; they hold a front, opinion on religious matters, having gained ground in that country. As few German Calvinists adhere to predestination, few Lutherans adhere to consumatist, in the Lord's supper. See Luther, and Reformation.

LUTHERN, in architecture; a kind of window over the cornice in the roof of a building, serving to illuminate the upper story.

LUTZEN, a small town in the present Prussian duchy of Saxony, to which two celebrated battles have given historical renown, containing 1300 inhabitants, and belonging to the government of Merseburg, lies eleven miles S. W. of Leipsic. Strategy shows why Saxony has so often been the field of battle between the powers of the north-east and the powers of the south-west of Europe. How often have the plains of Leipsic and Lutzen, the neighbourhood of Dresden and Bautzen, been the scene of conflict! The first battle of Lutzen was fought in the thirty years' war, Nov. 6 (16), 1632, between Gustavus Adolphus, king of Sweden, and Wallenstein, duke of Friedland. The imperial troops, under the latter, amounted to 40,000 men; the Swedish troops, under Gustavus, to 27,000, including the Saxons under Bernard, duke of Saxe-Weimar. The battle was extremely obstinate, and neither party was decisively victorious during that day, but Wallenstein began retrograde movements the next day. In his army, the famous general Pappenheim was mortally wounded, and soon after died. On the side of the Protestants, the hero of their cause, Gustavus Adolphus, fell. The circumstances of his death are uncertain; but it is a matter of common knowledge that he fell a victim to revenge and treachery. His body was found, by the soldiers sent in search of it by Bernard, under a heap of dead, and so much mutilated by the hoofs of horses, as to be recognised with difficulty. A plain stone marks this spot, not far from Lutzen, on the great road to Leipsic; a few poplars and a stone pavement marks the spot. Thus was carved to Lutzen, where traces of the blood are still shown, in the town house. See Gustavus I., and Thirty Years' War.

A second battle, fought near Lutzen, May 2, 1613, between Napoleon and the combined Russians and Prussians, was the first great conflict between Napoleon's disasters in Russia; and on this occasion, the young French and Prussian levies first measured their
LUTZOW—LUXEMBURG. 387

strength. Several reasons induced the allies to attack Napoleon, though his army, according to the best calculations, was much superior in numbers. The French corps in Saxony amounted to about 150,000 men; the allies had 55,000 Prussians and 30,000 Russians beyond the Elbe. The latter were superior to Napoleon's forces, and Napoleon, and each was desirous to decide by the species of troops in which his superiority consisted. Count Wittgenstein commanded the allied forces. Napoleon's troops were moving in the direction of Leipzig, and had already advanced considerably, while they were still held up by the heavy body of the allied army. The General Kleist became engaged in a sharp conflict with the French van, which was much superior to him in numbers. The mass of the enemy was thus directed against the flank and rear of the allies. Between the allies and Lutzen lay the villages Starlsiedel, Kaya, Rana, Gorschau, hardly guarded by Ney's corps, which was quietly bivouacked behind them. Wittgenstein took this corps for Napoleon's van, and ordered the attack accordingly. The Prussian troops took these villages with great promptness. It was necessary that Ney should sustain himself until Napoleon could bring back his masses from the direction of Leipzig, and that these villages was, therefore, warmly contested; they were taken and retaken with equal courage and obstinacy; but the successive arrival of new bodies of French caused some changes in Wittgenstein's orders; the allied cavalry could not operate so effectually as had been hoped, and the want of infantry began to be felt severely. Both armies displayed great courage. The Prussian troops fought with a resolution corresponding to the ardour which had hurried them into the field, and its effect became visible on the French centre, which did not escape Napoleon's experienced eye. "The key of the position," says the duke of Rovigo, "was the village of Kaya, occupied by Ney, and through which ran the road from Pegay to Lutzen. Had the allies succeeded in carrying this place, they could have advanced to Lutzen, and thus have divided the French army into two portions, which could only have been reunited on the other bank of the Sanne. Great efforts were therefore made by the French to maintain Kaya, which was taken and retaken several times in the course of the day." The emperor Napoleon now ordered general Drouot, his aide-de-camp, to advance in all haste, with sixty pieces of artillery, as near as possible to the left of the enemy's line, and by a smart movement, strike the enemy obliquely, on his left flank; for this, the course of the Flossgraben, which had also been used to great effect 200 years before, in the battle first described, afforded an advantageous position. The artillery made such ravages in the enemy's columns, for the space of an hour, that he could not resist the vigorous attack which Napoleon renewed on Kaya, by means of marshal Mortier's corps. This village was at last carried, as well as the others: night came on, and the last attempt by the Prussian cavalry was abortive. Thus both armies occupied nearly the same ground after the battle as before. According to the most accurate and impartial accounts, there were about 69,000 of the allied troops engaged against 102,000 French. The latter are said to have lost 15,000 men, killed and wounded, among whom were five generals; the Russians are said to have lost 2000 men. Generals Buxheuer and Schermhorst were wounded; the latter died in Prague—a severe loss for the Prussians. The French had lost Bassières, duke of Istria, on the preceding day. The allies were obliged to make retrograde movements, and, owing to this battle, Napoleon was again master of Saxony and the Elbe on May 10. The French say, that, had they possessed sufficient cavalry to pursue the enemy briskly, the campaign might have been ended by this battle; the allies assert, that had they been better supplied with artillery, they would have remained in possession of the villages, and the most serious consequences might have ensued. This battle had the best effect on the spirit of the Prussian troops and nation. It was the first in which the Prussian forces had measured themselves with the French since the disastrous campaign of 1806, and they were now convinced of their ability to withstand the Prussians. This was, however, the first battle in which the Prussian troops had been engaged with the French to an extent which was, indeed, advantageous for the French; but the advantage was so dearly bought, and the Prussians, whom the French troops had been taught to consider as "schoolboys," and inexperienced peasants, had conducted in such a manner as to show that campaigns like those of 1804, 1806, and 1809, were no longer to be expected.

LUTZOW'S FREE CORPS, or VOLUNTEERS; a Prussian corps, during the war of 1813 and 1814, which originated from the Tüxenbund, and was commanded by major Lutzow. Many young men of the best families, and most patriotic spirit, joined it. The corps, which belonged to this corps, and celebrated it in several of his poems.

LUXATION, in surgery, is the removal of a bone out of its place or articulation, so as to impede or destroy its proper motion or office; hence luxations are peculiar to such bones as have moveable joints.

LUXEMBOURG, PALACE OF; one of the most magnificent palaces in Paris, built in imitation of the Pitié palace at Florence, completed in 1620, after four years' labour, by Jacques Desbrosses, for Mary of Medicis, widow of Henry IV., on the site of the hotel of the duke d'Épinay-Luxembourg, and successively inhabited by mademoiselle de Montpensier, the duchess de Guise, the duchess of Brunswick, and mademoiselle d'Orleans. Louis XVI. gave it to Monsieur, his brother; during the revolution, it was converted into a prison; it was afterwards occupied by the secretary of state; at present, the chamber of commerce assemble there. The building is very spacious, and its rooms contain beautiful specimens of architecture and statuary.

LUXEMBOURG (Hôtel du Petit); an edifice in Paris, adjoining the garden of the Luxembourg palace. It was built by cardinal Richelieu for his mother, madame de La Rochefoucauld, and belongs to the prince of Conde. During the republic, the directory was established here, and here it received general Bonaparte, on his return from Egypt, a few days before the 18th of Brumaire. It was next occupied by the first consul, during the first six months of his consulship. Ney was confined here, and shot in the garden; and, more recently, prince Polignac, and his colleagues were confined here, previous to their trial.

LUXEMBOURG (Francis Henry de Montmorency), duke of, marshal of France, was born in 1628. He was the posthumous son of the count de Bouteville, who was beheaded in the reign of Louis XIII., for fighting a duel. He served, when young, under the prince of Conde; and, in 1662, he was made a duke and peer of France; and, in 1667, a lieutenant-general. In 1672, he commanded during the invasion of Holland; and, having gained the battle of Steinkirchen, in 1674, he was created a marshal of France. In the war of France against England, Holland, Spain, and Germany, he won the three great battles of Fleurs (July 1, 1690), Steinkirchen and Neerwinden (June 29, 1693). He died in 1695.

LUXEMBOURG; a late province of the kingdom of the Netherlands, with the title of grand duchy,
and, at the same time, a member of the Germanic confederation, comprising the duchies of Luxembourg and of Bouillon, bounded by Lige, the Lower Rhine, Namur, and France. The superficial extent is about 2400 square miles, with 293,555 inhabitants. The surface is covered with woods, mountains, and desert hills, among which, however, are some pleasant valleys and fertile plains. The Ardennes are the chief mountains. The soil is stony, marshy, and not very productive. The Moselle and the Ourthe are the principal rivers. Agriculture is the chief occupation of the people, but potatoes form the principal food, corn not being raised in sufficient quantities. The forests belonging to state alone extend over 117,971 hectares. Cattle are abundant; great flocks of sheep are reared on the plains of the Ardennes; the horses are small, but celebrated for their spirit and activity. The iron mines are extensively wrought, and the slate quarries yield large quantities of roof-slates. The inhabitants are Walloons and Germans, and are in general rude, superstitious, and ignorant. They are of the Roman Catholic religion.

Till the late revolution, the king of the Netherlands, as grand duke of Luxembourg, was a member of the Germanic confederation, with one vote in the diet and three in the plenum, and furnished about 2550 men to the army of the confederacy. The Belgians laid claim to Luxembourg. (See Netherlands.) As a province of the kingdom of the Netherlands, it sent four members to the lower house of the states-general. The provincial estates consist of sixty members, named by the three orders, that of the nobles, that of the clergy, and that of the country. Luxembourg was erected into a duchy, by the German emperor, in 1354, and formed a part of the Austrian Netherlands. In 1815, it was granted to the king of the Netherlands, by the congress of Vienna, as a indemnification for his cessions in Germany. (See Nassau.) Luxembourg, the capital, with 11,490 inhabitants, is one of the strongest fortresses in Europe. The upper town is situated on an elevated rock, rising precipitously from a plain, and defended by strong works. Five batteries on the neighbouring heights command all the country round, and particularly the roads from Trèves and Thionville. It is one of the few places recently belonging to the Germanic confederation, and garrisoned by a large body of German troops. Lat. 49° 37' N.; lon. 6° 9' E.; 27 leagues S.E. of Lige; 30 S.E. of Brussels.

LUXOR; a village of Upper Egypt, on the right bank of the Nile, containing splendid ruins of Thebes, the site of which it occupies. See Thebes.

LUYNES, CHARLES D'ALBERT, duke de, favourite and premier of Louis XIII., and constable of France, born in 1578, was descended from a noble Florentine family (Alberti), which had been banished from Florence. Having become one of the pages of Henry IV., he was the playmate of the dauphin, whose favor he soon won by consulting all his caprices. When Louis ascended the throne, he appointed Luynes his grand falconer, and marshal D'Ancre, who was all-powerful at court, showing some jealousy of his influence, the favourite soon effected his disgrace. The marshal was assassinated, and Luynes obtained a grant of all his immense estates, with a commission to all his feudal charges (1617). In 1619, his estate of Mailfô was erected into a duchy, under the title of Luynes. He next supplanted Mary of Medic, mother of the King, whom he caused to be exiled; and the whole administration was now in his hands. In 1621, the death of the constable of France revived for him. Though the feeble king often complained of his cupidity and arrogance, though the whole court was intriguing against him, and the nation indignantly called for his disgrace, Luynes died in 1621, without having experienced any visible loss of favour or influence. See Louis XIII.

LUZAC, JOSEPH; a distinguished philologist, jurist, and publicist, born at Leyden, in 1746. His parents were French Protestants, who had left France to avoid religious persecutions. After completing his studies, under Valckenaer and Rulunken, he declined the chair of jurisprudence offered him at Leyden, and that of Greek at Groningen, and went to the Hague to prepare himself for the bar. In 1772, he returned to Leyden, to assist in editing the Leyden Gazette, which was read by all European scholars and statesmen at that time, on account of the valuable character of its materials. * From 1775, he had almost the entire direction of that journal. His editorial and professional labours did not prevent him from the assiduous study of ancient literature. He corresponded with the most distinguished personages of the time, and received the most flattering marks of esteem from Washington, Jefferson, Adams, the emperor Leopold, and Stanislas, king of Poland. In the midst of these various occupations, he accepted the Greek chair in the university of Leyden, to the regular duties of which he added exercises for deserving students. In 1795, he published an address De Socrate Cive, accompanied with learned and judicious notes, and dedicated to John Adams, whose eldest son had studied under his direction. During the revolutionary troubles which succeeded in Holland, Luzac, who was no less a friend of order than of liberty, was forbidden to continue his lectures on history (1796), but was permitted to continue his instructions in Greek literature. He refused to accede to this arrangement, and was therefore entirely suspended from his professorial functions. On this occasion, Washington wrote to him, assuring him of his esteem, encouraging him to hope for justice when the ferment of the moment should be over, and professing that America was under great obligations to the writings and conduct of men like him. In 1802, he was restored to his former post, with an increase of salary and powers. He continued actively engaged in his literary labours till 1807, when he was obliged by the explosion of a vessel with gunpowder aboard, in the harbour of Leyden. His Lectiones Atticae, a defence of Socrates (1809), was published by professor Shütter. His colleague, professor Siegenbank, has given an account of Luzac, in his history of the catastrophe which caused his death.

LUZERNE, ANNE CÉCILY DE LA; a French diplomatist, born at Paris, in 1741. After having served in the seven years' war, in which he rose to the rank of colonel, he abandoned the military career, and, turning his views to diplomacy, was sent, in 1776, envoy extraordinary to Bavaria, and distinguished himself in the negotiations which took place in regard to the succession of the elector. In 1778, he was appointed to succeed Gerard, as minister to the United States, and conducted himself during five years in which he remained there, with a prudence, wisdom, and concern for their interests, that gained him the esteem and affection of the Americans. In 1780, he was recalled by the revolution, in a most destitute condition, and the government without resources, he raised money on his own responsibility, and without waiting for orders from his court, to relieve the distress. He exerted himself to raise private subscriptions, and placed his own name at

* The Leyden Gazette (Gazette de Leyden) was established in 1728, by the uncle and father of John.
LYCANTHROPY.—LYCURGUS.

589

the head. In 1783, he returned to France, having received the most flattering expressions of esteem from congress; and, in 1788, was sent ambassador to London, where he remained till his death, in 1791. When the federal government was organized, the secretary of commerce (Surrhon) addressed a letter to the chevalier De la Luzerne, by direction of Washington, for the purpose of making an express acknowledgment of his services, and the sense of them entertained by the nation.

LYCANTHROPY (from the Greek λυκάνθωρ, wolf, and τρρυς, to eat; as defined by Cottgrave, "a frenzy or melancholy, which causeth the patient (who thinks he is turn'd wolf) to flee all company and hide himself in dens and corners," Heroldus, with great naïveté, tells us, that, when he was in Scythia, he heard of a people which once a year changed themselves into wolves, and then resumed their original shape; "but," adds he "they cannot make me believe such tales, although they not only tell them, but swear to them." But the lycanthropes of the middle ages, or loups-garoux, as they were called by the French, were sorcerers, who during the Lenten fast, and on the eve of All Hallows, could change themselves into human flesh. The Germans called them Witherwicks. Many marvellous stories are told by the writers of the middle ages, of these wolf-men, or loups-garous, and numerous authentic narratives remain of victims committed to the flames for this imaginary crime, often on their own confessions.

LYCEUM; an academy at Athens, which derived its name from its situation near the temple of Apollo, λύκου (slayer of the wolf). In its covered walks, Aristotle explained his philosophy. In modern times, the name of Lyceum has been given with the same singularity to the schools in Paris, to the libraries of Oxford, to the universities of Heidelberg, by Schelling (Rome, 1803), by C. G. Muller (Leipsic, 1811, three vols.), and in the United States.

LYCURGUS, the Spartan lawgiver, supposed to have flourished in the latter half of the ninth century B.C., was, according to the commonly received traditions, the youngest son of the Spartan king Eumous. His eldest brother, Polydeuces, succeeded his father in the government, but died soon after, leaving the kingdom to Lycurgus. As the widow of Polydeuces was known to be pregnant, Lycurgus declared that, if she bore a son, he would appropriate to himself his kingdom. To convince the Lacedaemonians of his sincerity, he laid aside the royal title, and administered the kingdom as guardian to the future heir. In the mean while, the queen sent word to him, that, if he would marry her, she would without delay cause the child to be given to him. He flattered himself with the idea that he would comply with her wishes, until he obtained possession of the child. From the joy of the people at his birth, the child received the name of Charitius (joy of the people). Lycurgus, by the wisdom of his administration, had already won general esteem; and his noble disinterestedness now raised his glory to a height, which awoke envy against him in the minds of some of the most distinguished Spartans, with whom the queen conspired to revenge her disappointment. She spread among her people the opinion, that it was dangerous to intrust the future heir of the throne to the care of him who should gain power over them. To avoid this suspicion, Lycurgus was obliged not only to resign the guardianship of the young king, but even to leave his country. Whether this resolution was partly induced by the desire of seeing foreign nations, and learning their manners, or not, we do not know; but, at any rate, he is described as employing the time of his absence in this way. After visiting Crete, and admiring the wise laws of Minos, he went to Ionia. The effeminate and luxurious life of the inhabitants, the feebleness of their laws, which formed a striking contrast with the simplicity and vigour of those of Crete, made a deep impression upon him. Here, however, he is said to have become acquainted with the poems of Homer. From hence he is said to have travelled into various countries, including Egypt, India, and Spain. But, as we do not find in his laws any traces of Indian or Egyptian wisdom, this seems to be doubtful.

In the mean while, the two kings, Archelaus, and Charillus, were esteemed neither by the people nor by the nobility; and, as there were no laws sufficient to maintain the public tranquillity, the confusion passed all bounds. In this dangerous situation, Lycurgus was the only man from whom help and deliverance could be expected. The people hoped from him protection against the nobility, and the king believed that he would put an end to the disobedience of the people. More than once, ambassadors were sent to beg him to come to the assistance of the state. He long resisted, but at last yielded to the urgent wishes of his fel low-citizens. At his arrival in Sparta, he soon found that not only particular abuses were to be suppressed, but that it would be necessary to form an entirely new constitution. The esteem which his personal character, his judgment, and the dangerous situation of the state, gave him among his fellow-citizens, encouraged him to encounter boldly all obstacles. The first step which he took was, to add to the kingship a third part in the national government. This was, however, properly speaking, delusive privileges, but only the limited right of accepting or of rejecting what was proposed by the kings or the senate. The Spartans conformed in general to the institutions of Lycurgus; but the equal division of property excited among the rich such violent commotions, that the
LYCURGUS.

To save his life, fled towards a temple. On the way, he received a blow, which struck out one of his eyes. He merely turned round, and showed to his pursuers his face streaming with blood. This sign of fright and shame and impotence; they implored his pardon, and led him respectfully home.

The person who had done the deed, a young man of rank, and of a fiery character, was given up to him. Lycurgus pardoned him, and dismissed him covered with shame.

Afterwards he had the following constitution for Sparta. Lycurgus endeavoured to provide for its continuance. He made all the citizens take a solemn oath, that they would change nothing in the laws which he had introduced, before his return. He then went to Delphi, and asked the god whether the new laws were sufficient for the happiness of Sparta. The answer was, "Sparta will remain the most prosperous of all states as long as it observes these laws." He sent this answer to Lacedemon, and banished himself. He died, as it is said, of voluntary starvation, far from his country; according to some, at Circe; according to others, at Elis or Crete. According to his custom, the body was burned, and the ashes thrown into the sea, lest they should be carried into Sparta, and the people thus think themselves released from their oath. A temple was erected in honour of him at Sparta, and a society was instituted by his friends, which continued until the latest times of Sparta, and had for its object to celebrate the memory of his virtues.

The principal object of the laws of Lycurgus was, to introduce into his country a mixed form of government, composed of monarchy, aristocracy and democracy, in such a manner that each element was restrained by the others. The two kings, and with them the council of Gerontes, stood at the head of the government; the people, however, having an indirect influence upon their measures. He divided all the inhabitants of Sparta into three, according to some into six or more classes, subdivided into thirty tribes. With this was, probably, connected the administration of the police and of justice, and the rules of military service. As the Spartans had already made some progress in civilization, we may well admire the resolution and the genius of Lycurgus, who was able to change not only their civil relations, but their morals and manners, and to induce such a nation to sacrifice even the comforts of life. Even his proposals for the reformation of Lycurgus at prayer was violently opposed, was still accepted as a law by all the citizens. At the time when Lycurgus altered the constitution, there existed three classes—the ruling Spartans, the tributary Lacedemonians, and the Helot slaves. (See Helots.) Though it appears cruel in him to have left the Helots in slavery, this was not shocking in the eyes of the Greeks. They had no idea of the injustice of such a distinction between men. Lycurgus sought to use, in the way which he thought most for the good of the state, the bonds which nature, relationship, and love form among men. He treated love only as a means of producing vigorous bodies for the army, and preserving national independence. He appointed punishments for unmarried men, and for those who married too late, or married persons of a very unequal age. He made it difficult for those who were newly married to meet their wives, that their passions might remain unquenched, and that they should continue for a long time loving, but without the fruit of love, and thus of a sound constitution, if their wives were weak and impotent, to take others. Children were not the property of the parents, but of the state. The state determined on their life or death, and directed their education without regard to the parents. To introduce temperance and moderation among the people, he ordered that the houses should be built in the most simple manner, and that all should take their meals in public, affixing also severe penalties to debauchery and drunkenness. No foreigner could remain in Sparta, or the Spartans could not leave their city, except in times of war, could leave the country. The people were allowed to possess neither gold nor silver; but iron was used for money. The Spartans were never to devote themselves to the sciences, but only to learn the most indispensable branches of knowledge; they were not to have artists, nor to perfect their music; they could have among them neither artists nor orators without the consent of the government. Lycurgus made no change in the religious constitution of Sparta; he used it, on the contrary, for his political ends, and united the highest priestly dignity with the royal office. He ordered a simple burial for the dead, forbade all public lamentations, and limited private mourning to eleven days.

He allowed, however, the dead to be buried in the city, and monuments to be erected to them in the temples, in order that the hope of obtaining such honours after death might lessen the fear of losing life. With regard to marriage he dismissed his women, but few laws; but these were sufficient, if the other laws were obeyed. The quarrels which arose were decided either by the Kings, or by the assembly of the people, or by the gerousia, or, more generally, by impartial and equitable citizens. One of the most remarkable institutions of Lycurgus, was the military education of the Spartan youth, which was such as to destroy all sensibility suffering, and to overcome the fear of death. The beginning of a war was to them the beginning of a festival, and the camp was a place of recreation, for here ceased all that strictness of life which was observed at home; even the bodily exercises were less frequent. Victory or death was their highest glory; eternal shame followed the cowards and those who fled. The courage of the Spartans was maintained, also, by those laws which forbade them to surround their city with walls, to fight often with the same enemy, to pursue too far a routed enemy, to plunder the dead during battle; and also by the solemn burial of their heroes, the monuments to their memory, the festivals and temples in their honour. Nevertheless, Lycurgus did not intend that the Spartans should become a conquering nation, as is evident from his forbidding them a navy. The existence of Lycurgus is described in a manner much as they have been praised. Plato, in particular, accuses them of destroying every thing humane, and making mechanical value the highest virtue, and thinks that this suppression of all the feelings of humanity was the cause of the countless evils which fell upon Lacedemon, and were prepared by her for other nations. Thucydides makes Pericles say, that the virtue of the Spartans is morose, and founded only upon fear, and that their education made them cruel and inhuman.

We have here given the commonly received traditions concerning Lycurgus and his institutions, which, however, must be received with much caution. If there were such an individual,—for this is doubtful,—he lived before the time of historical certainty; and what are called his laws, were probably the usages and institutions which were common to the whole Doric race from the earliest period. A very full account of the examination of the subject may be found in Muller's learned work, Die Dorier, which has been translated into English, under the title of the History and Antiquities of the Doric Race (2 vols., 8vo, London, 1830).

Lycurgus was also the name of an Attic orator of some celebrity. He was a contemporary of Demos-
LYDIA—LYNX.

591

thens, whom he survived, and was famous for his integrity. Only one of his orations, distinguished
for its birth and dignity, has been, preserved to us. The latest editions are those of Heinrich, Osann and
Becker, all of 1824.

LYDIA (in ancient times, Maenia); a large and ferti11e country of Asia Minor. The Ionians inhabited
the part on the coast of the Ionian sea. Towards the south, it was separated from Caria by the Mesander
(now Meisland); towards the east, it was bounded by Phrygia, and on the north by Mysia. It was, in early
times, a celebrated kingdom, divided from Persia by the river Halys (now Kizil Ermak). Cyrus con-
quered Croesus, the last Lydian king. The people, especially under the Lydian empire, were the richest, and,
perhaps, also, the most elegant and luxurious in all Asia. The Lydians invented luxurious garments, costly
carpets, precious ointments, and exquisite vases; and a kind of Grecian music, which was said to
bear the character of effeminacy, was called the Lydian. They also laid out beautiful gardens. They
first discovered the properties of water, and rendered it impotent to men, that they might use them to
guard their wives and concubines. In the time of Herodotus, the corruption of manners among the
Lydians was already so great, that the women publicly sold their charms. Their example corrupted also
the men. The wealth of the Lydians, however, was probably, in a great measure, confined to the kings and chief men. These could fill their coffers with the gold washed down by the Hermus
(now Sarabut) and the Pactolus, and that obtained from the mines; and they procured all the necessities
of life by the labour of their slaves, whose services they required, not with money, but with the produc-
tions of the soil. They could thus accumulate the precious metals. Croesus was richer than all his
predecessors, for he subjected the whole coast of Farther Asia, and plundered all the commercial cities.
Although it cannot be proved that the Lydians had, in ancient times, any considerable commerce, it
cannot be denied that they had, long before the Greeks, attained a certain degree of civilization, and
that the Grecian colonies in Lower Asia owed to the Lydians their superiority over the mother country in
the arts and sciences. Among other things, they own the invention of the cats of gold and silver; the
seats of inns, of certain musical instruments, the art of dyeing wool (which was afterwards carried to such
perfection in Miletus), also the art of melting and working ore, and, perhaps, the first rudiments of
painting and of sculpture. At Sardis, the capital of the country, the Grecians, Phrygians, and even the
nomadic tribes, bartered their goods. There was here a great market for the slave-trade, which fur-
nished the harems of Persia with eunuchs. Lydia now belongs to the Turkish district of Natalia

LYMEN. This is a well-known place, a learned English divine, mathematician, and chronologer of the seventeenth
century, who composed several learned works, some of which he was prevented from publishing by his
pecuniary embarrassments, which were occasioned by his having become security for another person's
debts, and subjected him to imprisonment. He afterwards suffered greatly for his attachment to the
royal cause, in the civil wars, and died in obscurity and indigence, in 1646.

LYDUS. John Laurentius, commonly called Lydus, from the province in which he was born (A.D. 420), lived in Constantinople, where he held several offices of trust under Justinian. He is prin-
cipally known by his work De Magistratibus Reipu-

blicae Romanae, which was printed, for the first
time, in 1812, from a manuscript, obtained in 1785,
by Choiseul-Gouffier, French ambassador at Con-
stantinople. It was edited, with a learned commen-
tary on the life and writings of Lydus, by M. H. de
Niebuhr calls it a new and rich source of Roman
history. His other works are on the Months (in
Greek), of which we have only fragments, and on
Omens (in Greek), of which some fragments only
were before known, but nearly the whole of which
is contained in the manuscript.
exported. It is a timid creature, incapable of attacking the larger quadrupeds, but very destructive to rabbits and hares, which it chases by weary toils. It makes but little resistance when brought to bay by a hunter; for though, like a cat, it spits, and erects the hair on its back, it is easily destroyed by a blow with a slender stick. It is about three feet long from the tip of its nose to the end of its tail, which is about six inches in length, with a black tip. Its large paws, slender joints, and long, but thick hind legs, with large buttocks, scarcely relieved by a short, thick tail, give it a clumsy and awkward appearance.

Its gait is by bounds, straight forward, with the back a little arched, and lighting on all the feet at once. It swims well, and will cross the arm of a lake of two miles in width, but is not swift on land. Its flesh is eaten, being fat, white, and somewhat resemble the rabbit in flavour. It breeds once a year, having two young at a time. The other American species are F. rufa and F. fasciata, both of which are smaller than the preceding. The former occurs in the Atlantic states as well as to the north and west; the latter appears to be confined to the borders of plains, and the woody country in the vicinity of the Pacific.

LYONNAIS; a ci-devant province in the eastern part of France, of which Lyons was the capital. It consisted of Lyonnais Proper, Beaujolais, and Forez. It now forms the departments of the Rhone and the Rhone-Seyne.

LYONNET, Peter, a celebrated naturalist, born in 1707, at Maestricht, graduated at Utrecht, and was for some time a counsellor at the Hague. He afterwards became secretary, and Latin and French interpreter to the states of Holland. This situation occupying but little of his time, he employed himself in researches into the habits and habits of aquatic and terrestrial animals, particularly such as were to be found in the vicinity of the Hague. He formed a valuable collection of shells, and was admitted into many of the principal scientific societies in Europe. His death took place January 10, 1789. His most important production is entitled Traité anatomique de la Cheville qui rouge le Dois de Soaute (1760, 400)—a work no less remarkable for originality of design than for splendour of execution. Lyonnnet was distinguished for his skill as a painter and engraver, and he displayed much ingenuity in improving microscopes, and other instruments used in making his observations.

LYON (Lyon), the second city of France, situated on the Rhone and Saone, ninety-three leagues S. E. of Paris, and sixty-three N. W. of Marseilles; an archiepiscopal see; capital of the department of the Rhone; head-quarters of a military division; and sent of numerous administrative and judicial authorities; lat. 46° 40' N.; lon. 4° 49' E.; population, including the suburbs, in 1828, 185,723. Three bridges cross the Rhone, which is here about 650 feet wide, and often occasions great destruction by its inundations, as was the case particularly in 1812 and 1825. The Saone, which is 480 feet wide, is crossed by six bridges. The rivers are lined with wharves, some of which are adorned with handsome buildings, thronged with boats of various descriptions, and resound with the hum of numerous mills and water-shops. The interior of the city presents the aspect of an old town, with narrow and dark streets, lined with houses seven or eight stories high, built solidly of stone. The pavements are pebbled, and there are no side-walks. Some of the streets, in the more modern quarters of the city, are more spacious and handsome. There are fifty-nine public squares, among which that of Louis le Grand, or Bellecour, one of the most magnificent in Europe, is adorned with beautiful lime-trees, and an equestrian statue of Louis XIV. The monastic grounds and gardens have been mostly covered. Many buildings since the revolution. Among the principal buildings are the splendid hôtel de ville, next to that of Amsterdam, the finest in Europe; the palace of commerce and the arts, connected with which are lecture-halls, where various courses of lectures are delivered; the vast prefect house, formerly a Dominican convent, with an extensive garden; the principal hospital, or hôtel Dieu; the Gothic cathedral of St John, &c. There are also numerous hospitals and churches, a palais de justice, and an extensive prison. The tower of Pitrat, erected on an elevation to the north of the city, for an observatory, fell down in 1828, but has since been reconstructed. Mary-bank, &c., has been found in the part of the city situated on the ancient Forum Traiani, and on the site of an imperial Roman palace. Medals, coins, vases, statues, lachrymatories, &c., with remains of aqueducts, of a theatre, and Roman baths, are among the relics of antiquity. On the hill of Fourvieres is a general cemetery, adorned with the tombs of famous men, laid out in 1808. Lyons contains one of the finest libraries in France, consisting of 92,000 volumes. Among its scientific and useful institutions, are a royal college, medical and theological schools; an academy of science, literature, and the arts; agricultural, Linnean, medical, law, Bible, and other societies; the Lyonnaise, a commercial society; &c., and great quantities imported from Italy, are wrought up here. The silk raised in the vicinity is remarkable for its whiteness. In 1828, the number of establishments for the manufacture of silk was (within the walls) 7440, and that of the looms, 18,829. Printing and the book trade, paper hangings, the manufacture of glass, jewels, artificial flowers, hats, &c., give occupation to numerous hands. Lyons has an extensive transit trade of provisions for the southern cities, and of the oil and soap of Provence, and the wines of Languedoc, for the northern. Numerous and extensive warehouses and docks facilitate the immense commercial operations of this Greater Eastern France. The Lyonnese are industrious, prudent, acute, intelligent, and honest.

The time of the foundation of Lyons is uncertain. Augustus made it the capital of Celtic Gaul, which received the name of Lugdunum. In the reign of Nero, it was burned to the ground. In the fifth century, the Burgundians made it their capital. In the twelfth century, the sect of Waldenses was founded by Peter de Vaud, a merchant of Lyons. Italian fugitives, who came to seek refuge from the rage of parties in their country, in the thirteenth century, brought with them their arts and wealth. Lyons suffered much during the religious wars of the sixteenth century, and was recovering from its losses when the revolution of the eighteenth again covered it with desolation. The citizens having risen against the terrorists, in their municipal government, and the Jacobin club (May 29, 1793), the convention sent an army of 60,000 men against the devoted city, which, after a brave resistance of six days, was taken. Collet d'Herbois and Couthen erected the guillotine, en permanence, and, dissatisfied with this slow method of execution, massacred the citizens, in crowds, with grape-shot. The fortifications, and many buildings were demolished the name of Lyons.
LYONS—LYSANDER.

593

abandoned, and that of Ville-Afranchic substituted for it. In 1814, it was the theatre of several bloody actions between the French and the allies. In 1834, serious political disturbances broke out at Lyons, which, after continuing for two or three days, were suppressed, with great severity, by military force.

LYONS, GULF OF (Gallicus Sinus); a bay of the Mediterranean, on the south-eastern coast of France, between lat. 42° 20' and 43° 35' N., and between lon. 3° and 6° 20' E. The principal ports on this gulf are Toulon, Marseilles, and Cetxe. It is distinguished chiefly by its bays, Gulf of Lyres, the name being derived from the agitation of its waters. See Lion, Gulf of.

LYRE; the most ancient stringed instrument among the Egyptians and Greeks. The mythological tradition of the origin of the Egyptian lyre, the more ancient of the two, is curious. After an inscription of the Nile, a tortoise was left ashore among other animals; after its death, its flesh decayed, and some of the tendons were dried by the sun, so as to produce a sound when touched by Hermes, as he was walking on shore. He immediately made an instrument in imitation of it, and thus invented the lyre. This lyre originally had but three strings. The Egyptians ascribed the invention of the lyre to their Hermes (Mercury), the son of Jupiter and Maen. (Paus. v.) But the Greeks also say, that Hermes first used the shell of a tortoise. According to others, Mercury merely improved the invention of the Egyptian. Diogenes tells us that Apollo felt so much repentance for his cruelty towards Marsyas, that he tore the strings from his cithern. The muses, after this, invented a tone, and Orpheus, Linus, and Thamyris, one each. These, being added to the three-stringed Egyptian lyre, gave rise to the heptachord, or seven-stringed lyre of the Greeks. The invention of the instrument has also been ascribed to each of its chief improvers. The Egyptian and Greek lyres were, at first, strung with the sinews of animals. The number of the strings was at last increased to eleven. It was played with the plectrum, or lyre-stick, of ivory or polished wood, also with the fingers. The lyre was called by different names—lyra, phorminx, eoros, and melos. The addition of several strings to the lyre was hollow, to increase the sound. Few objects are so graceful in form, and susceptible of such various application in the fine arts, as the lyre, which is even yet used as a musical instrument. It is the symbol of Apollo, yet other deities also bear the lyre; and mythology mentions many gods, who distinguished themselves on this instrument. It was played by educated Greeks in general; and Thesmophories having once declined playing when requested, he was considered a person without cultivation. θησμοφορος (unmusical) signified an illiterate man. In a work of Doni, entitled Lyra Barberina, the various forms of the lyre are collected in two large volumes.

Lyric was, originally, what belongs to the lyre; it was applied to songs sung to the lyre, odes, &c., and soon came to designate a species of poetry contradistinguished from dramatic poetry, which was accompanied by flutes. See Lyric.

LYRE-IT is the species of poetry by which the poet directly expresses his emotions. The predominance of feeling in lyric poetry is what chiefly distinguishes it from dramatic poetry, in which action and character, independent of the individual emotion of the poet, predominate; and from epic poetry, of which a series of actions and characters, as such, is the characteristic. No definite limit can be readily drawn between such departments of the art. There may be lyrical passages in an epic, or a drama, when opportunity is afforded to the poet to pour out his own excited and exalted feeling; but it is an irregularity, and a dangerous one. Poets of moderate talents, or little experience, are apt to burden the reader with themselves, unable to follow up the representation of life in a form not individually their own. Lyric is more likely to be limited by the tone and the epic (q. v.) because feeling is limited to the present; but, on this account, it is more excited and stirring. From the nature of lyric poetry, it has flourished better at court than the dramatic and epic, both of which, like history, require liberty, because they must represent truly the character of man in his manifold strivings, which cannot be done but by viewing life impartially, and depicting it freely; whilst the lyric poet, in most of his highest efforts, aims to express his adoration, be it of a hero, or his mistres, or nature, or God; and this tone coincides very well with the adulation of courts. Hence, when the drama and epic have gone down with the decay of national independence and spirit, and genius, debarring from action, lives only in contemplation, lyric poetry continues, and not unfrequently even flourishes, because man always feeds; admiration, love, and hatred cannot die. Even the slave may express in verse the emotions of love and admiration, and religion, in all circumstances, is a never-failing spring of elevated feeling. We must not suppose, however, that every expression of feeling, in verse, deserves the name of a lyrical poem, although the mistake is a very common one, as the crowds of unfledged aspirants to lyric honours testify. It is necessary that the feeling represented should be itself poetical, and not duly worthy to be preserved, but accompanied by a variety of ideas, beauty of imagery, and an eloquent flow of language. One distinct feeling should predominate, giving tone to the whole: the feeling must be worthy of the subject which caused it, corresponding to the same end in both degree and kind, and must be so exhibited as to give a living picture of the poet's mind; while, at the same time, what is merely individual and accidental must be excluded, so that the poet shall be truly the representative of his race, and awaken the sympathy of all. But this requires genius of a high order.

From the nature of lyric poetry, the following are the characteristics of lyric poetry, and the variety of style and rhythm, exhibited in almost numberless metres, the bold associations of ideas, and the peculiar imagery belonging to this species of poetry. The tone of lyric poetry is warmest if it expresses feeling called forth by present circumstances. It is more compiled when it represents feelings which are past. The hymns of the ancients, the ode in general, the song and hymn, with which are connected several metrical forms of the Italians and Spaniards (sonnets, canzoni, &c.), belong to the former; the epigram, in the Greek sense of the term, the elegy, &c., to the latter. See the various articles, and Lyric.

LYSANDER; a Spartan general, who terminated the Peloponnesian war by the conquest of Athens, B. C. 404. With the activity, and ambition, and penetration of Theophrastus, he united the pliancy and insinuating address of Alcibiades. He gained more easily, and retained longer the favour of the great and powerful, than Alcibiades did the hearts of women and of the multitude. He sacrificed the welfare of his country to his own ambition. He used every means to elevate his friends and ruin his enemies. Justice and truth to him were empty words. He used to say, that if one cannot accomplish a thing by legitimate means, he should stab his rival in the back, or poison the fox's. Force and fraud were his political instruments. In the court of Cyrus the Younger, when he resided a long time, he endured, without a mur
LYSIAS—LYSIMACHUS.

He, hence his reign was the overwhelming power of his person, and the unbounded respect of the Greeks. His hatred was implacable, and his revenge inexorable. He was the ruling passion of his soul. He destroyed the powerful city of Athens, and conceived the plan of raising his country to the summit of greatness, at the same time, it was to be under his own rule. He used every means to accomplish this object; he collected a fleet, and repulsed the Athenians, who lost the battle. Fifty vessels, on this victory he endeavoured to increase by intrigues. When, therefore, Callistratides, who succeeded him in the command, had been defeated by the Athenian Conon, in an engagement near Arginusae, in which he lost his life, Lysander, contrary to the established custom, was appointed admiral of the fleet, a second time appointed admiral of the fleet. He immediately sought the Athenian fleet, which was much superior to the Spartan; it lay at anchor before Egospotamos. Only nine of the ships escaped the fury of his attack; one carried the news of the defeat to Athens; with the rest, Conon, the Athenian admiral, escaped to Evoeas, king of Chersonesus, and was appointed one of the heads of the Spartans, almost without resistance, and Lysander sailed with it into the port of Lamascus in triumph. He put to death the prisoners (3000), with their generals, because they had thrown from a rock the crews of two Corinthian vessels, and had determined to cut off the right hand of all the Peloponnesian prisoners. After this defeat, all the Athenian allies went over to the Spartans. In the islands and cities which had surrendered, he abolished the democratic government, and founded an oligarchy. With a fleet of 180 ships, he then surrounded Athens by sea, while Agis and Pausanias encircled it with a powerful army on land. Famine at length compelled the Athenians to surrender. They lost their independence, and considered themselves happy that their city was not destroyed. An oligarchy of thirty tyrants was now established, which was administered with the most terrible cruelty. Lysander then returned to Lacedememon, where his character was well understood; yet the splendour of his victories, his extraordinary liberality, and his apparent disinterestedness, gave him such an ascendancy that, in fact, if not in name, he was sovereign of all Greece. Contrary to the laws of Lycurgus, he brought into Sparta immense sums of money, and valuable objects of art, which were ruined by the Diet; but he now attempted to accomplish, by artifice, his long-conceived plan of destroying the constitution of his country, by admitting to the throne not only all the Hellenides, but all native Spartans, and, finally, assuming the sceptre himself. Apollo himself was said to have declared that, to secure the prosperity and happiness of Sparta, its worthiest citizens should sit upon the throne. But the moment that the fraud was to have been committed in the temple at Delphi, one of the priests retracted his consent, from fear of the consequences, and frustrated the whole plot, although it was not discovered until after the death of Lysander, who was found at his palace. One of his generals was killed in a battle, in the Boeotian war, in which he commanded the Spartan forces (B. C. 394). His memory was honoured in Sparta; for the nation, blind to his guilt, regarded him as a virtuous citizen, since he did not enrich himself, but lived always in poverty. His life has been written by Plutarch.

LYSIAS; an Athenian orator, who flourished between the eighth and hundredth Olympiads, about 458 B. C. His father, Cephalus, was likewise an orator, of whom Plato makes honourable mention in his Republic. Soon after his father's death, Lysias, then in the sixtieth year of his age, went to Thurium, in Magna Grecia, to study philosophy and eloquence under Tiasus and Nicias of Syracuse. Having settled in Thurium, he was employed in the government; but, on the return of the Delian league, he was banished, with many of his countrymen. He returned to Athens; but the thirty tyrants banished him from that city, and he retired to Megara. After Athens had recovered its freedom, he exerted himself for the advantage of the city, and even sacrificed much of his property and fortune. In the war against Corinth, standing generously, the rights of an Athenian citizen were never granted him. At first, he gave instruction in eloquence; but, finding himself surpassed by Thedorus, another teacher of oratory, he devoted his time to writing orations for others. He wrote more than 200, some say 400, orations; only 223, however, were regarded as genuine. In these he excelled all the orators of his time; and has rarely been surpassed by succeeding orators. Dionysius praises the purity, clearness, conciseness, and elegance of his expression, the beautiful simplicity of his style, his knowledge of men, and his lively description of their passions. John Gillies, the historian of Greece, translated the orations of Lysias and Isocrates, and accompanied his translation with an Account of their Lives, and a Discourse on the History and Manners of the Greeks (London, 1778). LYSIMACHUS; son of Agathocles, a general and friend of Alexander, in the division of whose conquests he received a part of Thrace. The inhabitants obstinately opposed his authority, and he was obliged to conquer the country. After this, he built the city of Lysimachia, on the Thracian Chersonesus, assumed the royal title, like the other generals of Alexander, and formed a league with some of them to conquer the Persian empire. He then attempted to subjugate the Getae, who lived beyond the Danube, his son and himself fell into their hands. He was compelled to surrender, with his army, to the barbarians, who, with horrid cries, demanded his death. But their conquerors, out of regard for the ambitious Lysimachus, dared to hope. He provided for his prisoners an entertainment in the manner of the Greeks, and left them their own splendid furniture and utensils; his own food, on the contrary, was mean, and his vessels were all made of clay or wood. After this, he concluded, he had concluded, he could not consider the ambitious Lysimachus had dared to hope. He provided for his prisoners an entertainment in the manner of the Greeks, and left them their own splendid furniture and utensils; his own food, on the contrary, was mean, and his vessels were all made of clay or wood. After this, he concluded, he could not consider the ambitious Lysimachus the most desirable, and advised him to make peace with a nation from whom so little was to be gained, restored him his power, admitted him to his friendship, and dismissed him without a ransom. This generous conduct made a deep impression on the tyrannical
conqueror. He restored to the king of the Getae the countries which he had gained beyond the Ister, and gave him further territories. At this time, the power of Lysimachus became more and more extended, till his domestic relations involved him and his kingdom in ruin. Having put away his first wife, he married Arsinoe, a daughter of Ptolemy, who led him to commit many acts of folly, and even prevailed upon him to murder Agathocles, his son by his first wife, in order to secure the succession to her own children. The virtues of Agathocles had gained him many powerful friends, who determined to take vengeance upon his weak and cruel father. They fled to Seleucus, and engaged him in a war against Lysimachus. Seleucus conquered all Asia Minor almost without a blow. A general battle was fought at Corupedium, in Phrygia, and, after a valiant resistance, Lysimachus was totally defeated and slain, B. C. 282, in the seventy-fourth year of his age.

LYSIPPUS: a sculptor, who flourished in Sicily, about 330 B. C., in the time of Alexander the Great. Alexander would permit no one but Apelles to paint his portrait, and no one but Lysippus to make his statue. The statues of Lysippus were principally portraits. He was first a coppersmith, and afterwards devoted himself to sculpture. The painter Eupompos, whom he asked what master he should follow, told him to follow nature. His statues were wrought with much greater beauty and elegance than those of his predecessors. He made the body more slender; the head smaller; the hair more natural, flowing, and delicate; he avoided angularity, and endeavoured to give to every part more roundness and softness of outline. He used to say, he represented men as they appeared to his imagination, but his predecessors represented them as they really were. Even the minutest parts were laboured with the greatest care. It is not known whether he executed any marble statues, but many in bronze are still preserved. The most celebrated are, a man rubbing himself in a bath (Apoxymenus); several statues of Alexander, representing him in all the different stages of his life; a group of Satyrs, which was found at Athens; Alexander and his friends, a number of statues which were intended to bear an exact resemblance to the original; and a colossal Jupiter at Tarentum. The first mentioned statue (Apoxymenus) was placed by Agrippa in front of the public baths at Rome. The emperor, Tiburius, having removed it to his palace, was compelled by the populace to restore it to its original station. It has been supposed that the mutilated statue now at Rome, called the Torso, which was so much admired by Michel Angelo, is in fact the remaining part of this very celebrated statue; although Winckelmann considered it as being a fragment of a Hercules posing after his labours.

LYTTELTON, George, lord, an elegant writer and historian, was the eldest son of Sir Thomas Lyttelton, baronet, of Hingley, in Worcestershire, where he was born in January, 1700. In his nineteenth year, he set out upon a tour to the continent, and, on his return, in 1730, was chosen member of parliament for Okehampton, and concurred in the measures of the opposition, led by Pitt and Pulteney. When Frederick, prince of Wales, formed a separate court, in 1737, he was appointed his secretary. On the expulsion of Walpole, he was appointed one of the lords of the treasury; but, although he spoke with elegance and fluency, his oratory wanted force, and he never attained the rank of a political leader. In early life, he had imbued sceptical opinions; but, being subsequently led into a conviction of the divine origin of Christianity, he composed his well-known Dissertation on the Conversion of St. Paul, first printed in 1747. About this time he lost his first wife, on whom he wrote the celebrated monody, and, in 1748, married a lady from whom, after a few years, he was separated by mutual consent. In 1751, he succeeded his father in his title and ample estate, and, by his elegance and taste, rendered Hingley one of the most delightful residences in the kingdom. At the dissolution of the ministry, he was raised to the peerage by the title of baron Lyttelton, of Frankley, in the county of Worcestershire. From this time, he lived chiefly in literary retirement, and, in 1760, published his Dialogues of the Dead. The latter years of his life were chiefly occupied in his History of Henry II., which is the result of assiduous research, but too prolix. He died in August, 1773, in the sixty-fourth year of his age, leaving a son, who succeeded him in his titles, and, with great talents, became conspicuous for a conduct entirely opposite to that of his father. The poems of lord Lyttelton maintain a place among the collection of British poets, for their correct versification, and delicacy of sentiment, rather than for higher qualities. His miscellaneous, in prose, also display good taste, and a cultivated mind. His works were first collected and printed, in 1774, 4to, and since in 8vo. See Johnson's Lives of the Poets.

M

M; the thirteenth letter and the tenth consonant in the English alphabet, a labial, produced by a slight expiration with a compression of the lips. It is one of the liquids or semivowels, and was not therefore considered by the Romans a consonant; but, was very faintly pronounced, rather as a rest between two syllables, than as an articulate letter (Quint. ix. 4), which explains why it was subject to elision. 1. It is one of the first letters which children learn to pronounce, in connexion with the easy vowel a. (See A.) 2. It passes easily into other letters, losing itself in the preceding or succeeding letters—a circumstance which the etymologist must bear in mind, in seeking the derivation or connexion of words having an m in their root; thus, for instance, the German Wange (cheek) is the ancient Mongon, and the middle Latin gives hombarius as well as habarius. The Italians use o for the Latin um, at the end of words. We even find the s assumed at the end of words, on some ancient medals and inscriptions; thus, on the medals of the Æmilian and Plautian families, we find PREIVERN. CAPTY; on others, AVGYSTORV. If the m is fully pronounced, the sound passes partly through the nose, as is also the case with n. Hence, in French, it is nasal at the end of a word, as in parfum, main, some foreign words excepted, as Abraham, Jerusalem. The men of the Hebrews, as a numeral, signified forty; the
same was the case with the Greek μ.; μ., however (characterized by the stroke before it) signifies 1,000,000, or 1,000,000, or a thousand thousand. In numismatic, M stands for a great number of words; for Macedonia, as LEG. M. XX. Legio Macedonica Fœcenta; Mss. Manus, Massilia, Marcellus, and many other places or countries; for Marcus, Marcellus, Marcellus, and other names; for magnus, military, mensis, water, magister, &c. EQ. M. for equitum magister. M. D. signifies medicine doctor (doctor of medicine); A. M. artium magister (master of arts); MS. manus scriptum (manuscript); MSS. (manuscripts). D. O. M. signifies Des optimo maximo (To the best and greatest God, or, To the Most High). On tombs, D. M. S. means Dies Manibus Sacrum. M stands for noon, from the Latin meridi. Hence P. M. post meridian (afternoon). A. M. ante meridiem (forenoon). In medicine, it signifies mince or miscantur (null); also manipula (a small meal or pill). C. signifies—1. the mint of Toulouse; 2. with a small c over it, Mexico; 3. with a crown, Madrid. M, in French, often stands for Monseur; MM, for Messieurs. In music, it is used for the Italian words meno (less), meno (hand), mezzo and modere (moderate). M stands, in Sonnet, for measure, but is likewise used by printers for the unit of measure of printed matter. Types of the same font have bodies of equal thickness in one direction, and the square of this dimension is used in determining the amount of printed matter in a given space, as a page for instance, and is termed a m. MAB; the queen of the fairies, so fancifully described by the sportive imagination of Shakspere, in Romeo and Juliet. Chaucer speaks of a king and queen of Faerie, but seems to attribute the royal dignity to Prosperpine and Pluto. The origin of the more amiable Oberon and Titania or Mab (if they are not the same) is uncertain. Poole, in his Par- nassus (1657), thus describes the Fairy court: Obe- ron, the emperor; Mab (amabilis), the empress; Perrigwinnick, Puck, Holgobolin, Tom Thumb, &c., courtiers; Hop, Mop, Drop, Tib, Tit, Tin, Tick, Pip, Trip, Skip, &c., &c., maids of honour; Nym- phdia, mother of the muids. Puck is the emperor's jester, Mab's; Midas, and the Midsummer Night's Dream, are delightful illustrations of the antiques of queen Mab's empire.

MABILLON, John, a learned French Benedictine of the congregation of St Maur, a writer on ecclesiastical antiquities and diplomatics, was born in 1632, in Champagne, and studied at the college of Rheims. He took the monastic vows in 1654, and, in 1660, was ordained a priest. After having assisted father D'Acheri, in his Spicilegium, he edited the works of St Bernard; and, in 1668, published the first volume of the Acta Sanctorum Ordinis S. Benedicti, of which the ninth and last volume appeared in 1702. One of his most important pro- ductions is his treatise De Re Diplomatica, Lib. vi. (1681, folio). This procured him the patronage of the French ministry. He was sent to Italy, with a com- mission from the king, to make a literary collection; and, returning to France with books and MSS. for the royal library, he published an account of his journey, &c. under the title De Magistris Italicis (1657, 2 vols., 4to). In 1701, he was chosen a member of the academy of inscriptions, and, in that year, began to publish his Annales Ordinis S. Bene- dicti; four volumes of which appeared previously to his death, in 1707. Father Mabillon was the author of many other works of research, distinguished for liberty of sentiment and freedom of opinion, as well as for profound learning.

MABUS, or MAUBEUZE, John de, an able artist, was born at Maubeuze, a village of Hainault, in 1492, and studied the works of the great masters in Italy. His habits were so dissipated, that the patience, fidelity, and beauty with which his pieces were executed, were doubly remarkable. He painted a great altar-piece, representing the descent from the cross, for a church in Middletburg; but the church and the picture were destroyed by lightning. Another desecrated by the same calamity, at Amstel- burg. His irregularity occasioned his imprisonment in this place; and, during his confinement, he painted several fine pieces, which are lost. He afterwards came to England, and painted several pieces for Henry VIII. Several excellent works of his are at Middlet- burg; the best of which is the altar-piece, representing the descent from the cross. Having received a piece of rich brocade, in order to appear before the emperor Charles V., he sold it at a tavern, and painted a paper suit so exceedingly like it, that the emperor could not be convinced of the deception, until he examined it with his own hands. He died in 1559.

MACABER; according to some, an early German poet, author of a work entitled the Dance of Death, or, the Dance of Macaber, consisting of a series of dialogues between Death and a number of personages belonging to various ranks of society. Others suppose the word merely a corruption of the Arabic magreb, a cemetery. (See Death, Poems.) An English translation of these dialogues was published by Dugdale and Dodsworth, in the third volume of the Monasticon Anglicanum; and French and Latin versions have been repeatedly printed.

MACAO, China, in Quang-tong; lat. 11° 35' 30", long. 29° 15' N. This town is built on a penin-
sui, or rather on a small island, which has an area of 106 square miles, and contains 35,800 inhabitants. It is the only European settlement in the island, and was ceded to the Portuguese in 1580. (See India, Portuguese.)

The Portuguese fortified the place, and surrounded it with strong walls. Macau has a Portuguese governor, and a Chinese mandarin; and the English and other nations have factories here. The houses are built of stone, built after the European manner, but they are low, and make little show. The city is defended by three forts, built upon eminences; its works are good, and well planted with artillery. It was formerly a place of the greatest importance, being the centre of the trade of the Portuguese in the far east part of Asia. Since the decline of the Portuguese trade, the town has sunk into a place of comparatively little importance. In the garden of the English factory is shown a cave, called the grotto of Camaoes, in which he is said to have composed the Lusiad.

MACARTHUR, Sir Charles, an Irish officer, who commanded at Cape Coast, in 1821. While making preparations to repel the Asantees, the king sent his compliments to him, and said he hoped to have his head, as an ornament to his great war-drum. In 1823, Sir Charles marched against the Asantees, with a mixed force of Europeans and blacks, the latter of whom ran away, and the whites being repulsed by their disloyal and cowardly conduct. The victory, which fiercely realized his menace, January 21, 1824. In a subsequent battle, the Asantees were entirely defeated, and this barbarous trophy was recovered and conveyed to the relations of Sir Charles.

MACARTNEY, George (earl Macartney), the son of a gentleman of Scottish descent, was born in Ireland, in 1737, and educated at Trinity college, Dublin; after which he became a student of the Temple. In 1764, he was appointed envoy extraordinary to Russia, afterwards became secretary to the lord-lieutenant of Ireland, and was created knight of the Bath. In 1775, he was made captain-general and governor of the Caribbee islands, Grenada, the Grenadines and Tobago. Grenada was invaded and taken by the French, and the governor was sent a prisoner to France. On his return to England, he was appointed to the presidency of Madras, having previously been engaged in his employ in China, in 1792, he believed with great address, and succeeded in the chief object of his mission. His only subsequent public situation was that of governor of the cape of Good Hope, whence he returned, on account of ill health, in 1797. He died March 31, 1806. His English earldom was bestowed on him for his services in China. Lord Macartney was the author of a Journal of his Chinese embassy, and other publications. See Stanunton's Embassy to China, and Barrow's Life of Lord Macartney.

MACASSAR ; a city of Celebes, on the southwest coast, capital of a kingdom called Macassar or Bantam; but, 95,500 in 1804; and 50,000 in 1822, according to Hassel, 100,000. This town is the chief settlement of the Dutch on the island, and called by them Fort Rotterdam. The town is built on a neck, or point of land, at the mouth of a river which forms a harbour, with water enough for a ship to come within cannon shot of the walls. The town is defended by three forts, and guarded against the inundations. The country round about is level and beautiful, abounding with plantations and groves of cocoa-nut trees. At a distance inland, the country rises into hills of great height, and becomes rude and mountains. See East India Company, Dutch.

MACASSAR, Straits of, the channel or narrow sea between Celebes and Borneo, about 350 miles long, and from 110 to 140 wide, except at the north extremity, where there are several barrier reefs, and west of the town of Macao, and west of the Spanish coast, in the year 1542. MACAULEY, Catherine, or GRAHAM, the name of her second husband, was born in Kent, at the seat of her father, John Sawbridge. She was well educated, and became early attached to the perusal of history. In 1760, she married doctor George Macaulay, a physician, and, in 1763, published the first volume (4to.) of her History of England from the Accession of James I., to that of the Brunswick line. This was continued in successive volumes, to the eighth, which completed the work, in 1783. The spirit of this history is almost purely republican. The other works of Mrs Macauley are Loose Remarks on some of Mr Hobbes' Positions; an Address to the People of England on the present Important Crisis (1775); a Treatise on the Immutability of Moral Truth, afterwards republished, with additional matter under the title of Letters on Education (1790). Her last publication was a Letter to Earl Stanhope, in reply to the opinions of Burke on the French Revolution (1791). In 1785, Mrs Macauley married a young man of the name of Graham, and the disparity of their ages subjected her to much ridicule. She paid a visit to general Wash-ington, in America, in 1785, and died in 1791.

MACAW. These magnificent birds belong to the psittacines. They usually go in pairs. Sometimes, however, they assemble, in the morning and evening, in great numbers. Although they fly well, they seldom wander far, except in quest of food, and regularly return in the evening. They build their nests in the hollow of rotten trees, and lay twice in the year, generally two eggs at a time. The male and female share alternately in the labours of incubation and rearing the young. When young they are easily tamed, and soon grow familiar with persons whom they frequently see. But like all the parrot tribe, they have an aversion to strangers, and particularly to children. In a domesticated state, they will feed on almost any food, and are not particular as to the kind of sugar, bread, and fruits. They do not masticate the latter, but suck them by pressing their tongue against the upper mandible. Like the other parrots, these birds use their claws with great dexterity, though, in climbing, they always begin by taking hold with their bill in the first instance, using their feet only as a second point of their motion. When they were first carried to Europe, their great beauty and size caused them to be in much request, and they were considered as valuable presents between sovereign princes. This bird was spoken of, by Aldrovendas, as early as 1572.

MACBETH, where is contrived the battle of the eleventh century. He served against the Danes as general of his relation Duncan I., or Donald VII., king of Scotland. The Danes were completely defeated, and Macbeth now conceived the idea of obtaining possession of the Scottish throne. He appears, like most of the early kings, to have held various offices of the pretenders to supernatural knowledge. On his return from his victory over the Danes, three old women met him with the insignia of the witches of that period, and saluted him—the first, as thame of Glamis; the second as thame of Cawdor; the third, as about to be king of Scotland. Two first predictions being almost immediately fulfilled, Macbeth was led to hope for the accomplishment of the last,
and, after brooding over the subject for a time, determined to assassinate the king; and perpetrated the crime when the king was visiting him at his castle of Inverness. The king's sons were obliged to save themselves by flight; and Macbeth brought the nation to favour his cause, by liberality to the nobility, and by strict justice in his administration. For three years, he reigned with moderation; but, after this period, he suddenly became a tyrant. His first victim was Banquo, who had been privy to the murder of the king. Feeling insecure, he erected a castle on Dunsiyne, from which he could overlook the whole country. This was the bend, which has been adopted by popular song. But history shows the much less person. Banquo; Duncan was slain near Elgin, and not in Macbeth's own castle; and Macbeth, though he ascended the throne by violence, had in fact a better claim to it than Duncan, and was a firm, just, and equitable prince. Macduff, hence of Fife, fled to England, and urged Malcolm, the son of the murdered Duncan, to take vengeance. Assisted by Siward, earl of Northumberland, they returned to their country. Macbeth was defeated, fled to his castle, and was slain in the seventy-fifth year of his reign, A. D. 1057.

**MACCABEES**; two apocryphal books of the Old Testament, which contain the history of the Maccabees, the names of which are analogous to the names of the brothers, and the wars which they sustained against the kings of Syria, in defence of their religion, and the independence of their country. (See Jesu.) The author and the age of these books are uncertain. The council of Trent placed them among the canonical books, but the Protestants have rejected them as apocryphal.

**MACCARI, MACCARI or MACCHERO-** NI; a preparation of fine flour, which forms a favourite article of food among the Italians. It is eaten in various ways, generally simply boiled, and served up with grated cheese. Maccaroni is generally made in pieces resembling a long pipe handle, of small diameter; sometimes, however, in other shapes, as flat, square, &c. It is a wholesome food, and a national dish of the Italians, particularly of the Neapolitans. It is made best in the neighbourhood of Naples, whole villages living almost solely by the manufacture; and, in Naples, it is continually sold in the streets, cooked for the lower classes, particularly the women. The rice is being very long, and being held in the fingers during the process of setting, some skill is required to manage them. This fashion of eating yard-long maccaroni, forms a subject of ridicule against the Neapolitans, in more than one Italian comedy. The modes of cooking maccaroni are various; the simplest are the best. The fashion of cutting it into pieces, and stewing it with eggs, &c., as is done in England, is not to be recommended. Maccaroni is well made at Aix in France, and pretty well also in Germany.

**Maccaroni** is also used as a term of contempt for a coxcomb—*homo crassus Minervae.*

**Maccaroni Poem**—a kind of facetious Latin poems, in which are interspersed words from other languages, with Latin inflections. They were first written by Teofilo Folinii, under the name of Merlino Coccio, a learned and witty Benedictine, born in 1464, at Mantua. He was a contemporary and friend of Sanmario. Ferdinand of Gonzaga, with whom he resided, was ambitious, and his patron, and Folinii often celebrates his praises. He spent the rest of his days in a monastery at Bassano, where he died in 1544. Various grave and religious poems of his, in Italian and Latin, are still extant, and are not without value. He is regarded by the Italian poets as the author of this style. The principal poem in this style was called *Maccaronen,* because it was mixed up of Latin and Italian, as maccaroni is made up of various ingredients. An edition of this poem, printed in 1591, is still extant. In imitation of Virgil, he carries the hero of his poem through numerous circumstances, and, at last, to the infernal regions. Here, among other things, he sees the punishment of poets. For every untruth or exaggeration in the construction, or in theMAXIMILIAN, he was appointed to extract a tooth, which grew again every day. This poem contains many satirical accounts of the manners of the age, with beautiful passages in genuine Latin verse. Besides this, he wrote a smaller comic poem, entitled *Moror,* or the War of the Gnats and the Emblems—a youthful production, also Eclogues and Epistles; all in the macaronic style. Heinsius (Test, 4th part, p. 171) mentions a German poem of this sort—*Flott, Cortum versicale de Flott saeculis, illis Ditetius qua omnes fere Minachos, Manos, Hebrarcs, Janfiras, &c., behuapere, et Spitzburns suis saebstas steckere e libertere veloci; Autore Grispaldo Kleinknacko ex Flo- landia* (anno 1593, 4to.), of which he gives the introduction. A new edition of this work appeared in 1822, at Ham; and a translation at Leipzig, in 1827. We find an example of French maccaronic verses in the third interlude of Molière's *Malade imaginaire.* It was introduced into England in the reign of Henry III., when it was called *the French.* It was fashionable under Elizabeth, in whose reign a poem on the Armada, of which Warton gives a specimen, was written. Drummond, of Hawthornden, also wrote a maccaronic poem, of which the following will be a sufficient specimen:—

Convocat extemplo baronumman nos atque minoras,
Jackamummque hirennomos, pleghisierster atque pleagh-
mennos
Tamblantereque simul, recco eex kitchine hoyas,
Hone qui distinveras terat cum discholite dishus, &c.

**MACCHIAVELLI, Niccolo.** It is not easy to determine a man's disposition and character from his writings. When, however, as was the case in the governments of antiquity and the Italian republics of the middle ages, a man's writings are more the offspring of his political situation than mere exercises of his intellect, and especially if they coincide with his conduct, they afford fair grounds for judging of the author's character. This is the case with Niccolo Macchiavelli, the famous Florentine secretary. The prejudices and mistaken interpretations which an incorrect understanding of his treatise called *Il Principe* (the Prince), have caused him to be regarded as the teacher of a detestable line of policy, called from him *Macchiavellism,* intended to enable despoticism to perpetuate its existence by fraud and violence, though there are few men on record who have been shown so much of a truly civic spirit.—He was born at Florence, in the year 1499, of a noble family, whose members had enjoyed the highest dignities in the republic. Little is known of his youth, and nothing of his education, except that he studied under Marcellus Virgilius. On account of his distinguished talents, he was very early a companion and fellow student of the Florentine republic, and, not long afterwards, was advanced to the post of secretary of state, for which reason he is most commonly called Segretario Fiorentino. When Florence had recovered her liberty, by the expulsion of the Medici (see Medici), and, from fear of the exiled family, had become involved in the intrigues of the Medici, in the year VIII., at a time when great political adroitness, and a spirit of genuine republicanism, were required in her envoys, Macchiavelli was several times charged with important embassies. He was four times plenipotentiary at the French court, twice at that of the pope, and twice, also, at that of Pope Alexander. The republic acknowledged his great services, but rewarded them sparingly, so that he was sometimes
obliged to petition the signoria (supreme authority of the state) on account of his poverty. His advice was of great use to the commonwealth, at the time of the insurrection of Val di Chiana. The leading principles of his counsels, at this juncture, may be deduced from his numerous letters preserved in the Florence archives.

They were to maintain a peaceful and friendly spirit in the settlement of difficulties, to provide for an upright and strict administration of justice, to make the burden of taxes as light as possible, and to keep a watchful eye on the smallest circumstances that had relation to public concerns. Even in regard to the Florentines, the most inveterate enemies, the state was so convinced of the sagacity of his views, that they preferred his counsel to any other. Among other things, a Tuscan legion was established by his advice. This band, at a later period, distinguished itself remarkably under the command of Giovanni de' Medici. When Pope Julius II. had succeeded in establishing a league in Italy against the overwhelming power of the French, Louis XII., to revenge himself, and wound the dignity of the pope in the tenderest point, attempted to assemble a council in Italy, and requested the Florentines to allow Pisa, which had become again subject to the Medici, to be the place of their payment. Macchiavelli opposed the palpable thunders, and advised his countrymen to evade the proposal. He went with this view as envoy to the king, but the king would not be refused. After his return, he was sent to Pisa, to watch the proceedings of the council, and to labour for its dissolution. Nevertheless, the pope was so indignant against the Florentines, that he formed an alliance with Ferdinand of Arragon to deprive them of their freedom, and, by their means, the power of the Medici was re-established. As Macchiavelli had laboured incessantly for the good of the republic, Lorenzo de' Medici, now dictator of Florence, seized the opportunity, in spite of a public decree, to strip him of his dignities. He was afterwards accused of participating in the conspiracy of the Boscoli and Capponi against the cardinal Giovanni de' Medici, imprisoned, put to the torture, and banished; all which he endured with a firmness approaching to indifference. After some time, when the name of Leo X., his patron, was mentioned, his imprisonment was remitted. He returned to his native country, and wrote his discourses on the ten first books of Livy; also his Prince, which he dedicated to Lorenzo de' Medici. Upon this, he was received again into favour by this powerful family; and cardinal of Florence, seized the opportunity, in spite of a public decree, to strip him of his dignities. He was afterwards accused of participating in a new conspiracy against the Medici; but the only consequence was, that he was obliged to return to private life and to indigence. When Julius, under the name of Clement VII., ascended the papal chair, Macchiavelli was again employed in public business: in particular, he was sent to aid the allied forces of the pope and the Florentines in the defence of Tuscany against the army of Charles V. The confidence reposed on him by the Medici, permitted him to limit the affections of the Florentines; and, after his return to Florence, he died, June 22, 1527, neglected and poor. It appears, from the letters of his son Pietro to Francesco Nelli, that he manifested on his death-bed the feelings of a Christian. The account of the death of the Pope given by Macchiavelli, who heard a suicide and an atheist, is not to be depended on.

The writings of the immortal Florentine may be arranged under four heads,—history, politics, belles lettres, and military treatises. His eight books on the history of Florence, written at the command of Clement VII., begin with the year 1215, and end with Lorenzo de' Medici, in the year 1492. They are among the first historical works of modern times, which deserve to be placed side by side with the beautiful remains of antiquity. Macchiavelli was probably prevented from completing this work, and is said to have left his collection of materials to Guicciardini. The history is distinguished for its pure, elegant, and flowing style; its impartiality is doubtful. The Life of Castruccio Castracani, lord of Lucca, is more properly a romance than a biography. The Life of Leo X., who is as great a villain as Caesar Borgia, is continually interrupted by the banquets from Plutarch. Under the head of politics are included his two most important works—the Prince (of which more will be said hereafter), and the Discourses upon the ten first books of Livy. His purpose, in these last, is to show how a republic may be supported, and how it is exposed to ruin. The work breathes, throughout, a warm love of freedom. Filippo Neri relates, in his commentaries, that Macchiavelli was induced to write these discourses, and those on the Art of War, by a number of young men who were accustomed to assemble with him in a certain garden in Florence, and be tutored in politics by the perusal of the ancients. Montesquieu and Rousseau have both drawn freely from these works. In a treatise, composed in the year 1610, upon a reformation in the state of Florence, he advises the pope Leo X. to restore the republican form of government to this city, although he pretends to have the aggrandizement of the Medici in view. His object in the seven books on the Art of War was, to show the Italians that they were able to recover their freedom without the assistance of the foreign mercenaries, so generally employed in the states of Italy; and he shows himself fully sensible of the great importance of infantry, then little valued. Frederic the Great knew and esteemed this treatise. For the restoration of the comic drama, also, the world is indebted to the Florentine secretary. His comedies, La Mandragola and La Città, are the first regular dramas written since the time of the Romans. Voltaire preferred the first to any of the plays of Aristophanes. His other poems are quite thoughts. The novel entitled Belisar is very fine, and has been versified by La Fontaine. His description of the pestilence, which raged in Florence in the years 1522—3, may be compared to the similar account in Thucydides. He has written, also, many other discourses, treatises, of his other poems are full of thought. Among his papers is a constitution for the regulation of a gay company, called Compagnia di Piacere.

The Prince has been often translated. The opinions on this work are very various. Some persons condemn it as intended to instruct tyrants in the art of oppression. This idea originated with the archbishop of Cosna, Ambrosio Catarino, long after the book was given to the world. Bayle, in his famous dictionary, and Frederic the Great, in his Anti-Macchiavelli, which was translated, together with the Prince, by the order of Mustapha III., are of the same opinion. However, it is easy to give a true meaning, for his other writings, as well as his life, prove that he loved liberty ardently. Others consider the Prince as a satire; but this is impossible. The tone of the work is most serious throughout: no trace of satire can be discovered. Others think it a work full of valuable counsels for princes, but infected with a looseness of morals which prevailed in the age of the writer: but Macchiavelli hated Alexander VI., Caesar Borgia, and all the tyrants of his age; and the full consideration with which he advances his starting principles, shows that they could not have sprung;
from the unconscious influence of his time. They are well weighed and thoroughly understood. Others believe that Macchiavelli's object was to make tyrants odious; but tyrants, such as he describes, need no colouring to make them abhorred. Others maintain that Macchiavelli treated the question of tyranny, in the abstract, without reference to morality, not in order to give advice, but as a mere scientific question, on the ground of lord Bacon, that "there be not any thing in being or action which should not be drawn and collected into contemplation and doctrine," just as a person might write a treatise on poisons, investigating all their effects, without touching on their uses. But could any mind find a thread in Macchiavelli's, if his object had been merely scientific discussion, have contemplated, long and closely, crimes so shocking to his love of liberty, without ever betraying his horror? Could we believe a man to possess a pure spirit, who could write a long and scientific treatise on the seduction of innocence, as skilful in its way as Macchiavelli's in his, though such a treatise might afford much interesting analysis of the springs of human conduct? In our opinion, the Prince must be considered as a work written for a certain purpose, time, and person, although particular questions, doubtsless, are often treated abstractly, and the application left open. As a whole, the Prince is a treatise, original, and not in his execution, a mere scientific treatise. Many questions are left undiscovered; the titles of the chapters are often of a general nature, while the chapters themselves are not. Macchiavelli's feeling was, that union and freedom from a foreign yoke were even more important than civil liberty; that they formed the very elements of the life of a nation. In the first part of his career, he had been thoroughly Florentine in spirit, but his misfortunes forced him to elevate his views, to become Italian; and, for the purpose of saving Italy, he could have seen, with patience, even Florence enslaved. No noble-minded Italian has written or sung, since Dante's di dolor estello, without giving vent to his grief for the unfortunate condition of his beautiful country; and Macchiavelli, one of the noblest spirits of Italy, burned to see her united and freed from foreigners. He sought the cure of Italy; yet her state appeared to him so desperate, that he was bold enough to prescribe poison. But it is not the different nations that he has in view, but the measures which he discusses. He often treats them like mechanical principles in the abstract, and leaves the consideration of their expediency in practice to him who wishes to make the application. Undoubtedly Macchiavelli believed that many things are permitted for the purpose of uniting a distracted country, which would be criminal in any other case; and, to determine the true spirit of his famous work, the reader should have a full knowledge of the history of the age. If he had written at the present day, he must have recommended very different means. In the last chapter of the Prince, he calls upon Lorenzo of Medici to save his country. Lorenzo was the nephew of pope Leo X. Julian, brother to Leo, was expected to become king of Naples, while Lorenzo, a man of a warlike and fierce spirit, was expected to unite the country between the Tuscan and Adriatic seas, and to found a kingdom of Tuscany. On him all eyes were turned, and him it was Macchiavelli's particular object to deliver. Macchiavelli was far from being alone in expecting salvation for Italy only from a conquering king. Polydore Virgil, in 1526, when he dedicated his work De Prodigis to Francesco Maria of Urbino, expressed this opinion. Twenty years earlier, John Anthony Flaminius said the same to pope Julius; and Varchi says, "Italy cannot be tranquil until ruled by one prince." Some of the best observations on Macchiavelli are to be found in a work probably little known to our readers,—professor Ranke's Zur Kritik neuer Geschichtsschreiber (Berlin and Leipzig, 1824).

In regard to Macchiavelli's personal character, even his enemies acknowledge that he was kind and affable, a friend of the virtuous, industrious and brave. He was one of the greatest thinkers of his age, indefatigable in the service of his country, and frugal in his manner of life. He well deserves the inscription placed over his tomb in the church of Santa Croce, in Florence—

Tanto namissi mulhum par eliguium.

Anthony Orbucus Macchiavellis.

Obit An. A. P. V. MDXXIII.

The reader will recollect the stanza in Child Harold (canto four, stanza liv.), in which his remains are described as lying in company with those of Galileo, Michael Angelo, and Allib.}

MACCHIAVELLISM, in politics; that system of policy which overlooks every law, and makes use of any means, however criminal, to promote its purposes. The word originated from an erroneous view of Macchiavelli's Prince. See Macchiavelli.

MACE. Clubs of various descriptions are found among almost all savages, formed of a hard and heavy wood, some broad and flat, others round, angular, long or short, some plain and rude, others neatly carved. From this simple implement, the mallet, hammer of arms, and mace originated, which were generally used, of old, both in Great Britain and on the continent of Europe. The gradual progress of improvement having rendered armour impenetrable by edged weapons, some instrument of effectual demolition became necessary. An author on military affairs, of the sixteenth century, recommends a leaden mallet, five feet long. The mallet was wielded with both hands, and horsemen had it hung by a thong or chain from the pomell of the saddle. The hammer of arms greatly resembled a common hammer. It differed from the mallet in being square or a little rounded or convex, while one side of the mallet was square and the other pointed or edged. The mace, in its simplest form, is only an iron club, short and strong. Its shape varied among different nations and at different times. Of the mace preserved, is of iron, two feet one inch long, with a hollow handle, and a head seven inches long, consisting of seven iron leaves perpendicularly fixed round a cylinder, and equidistant. The whole weighs three pounds nine ounces. Two maces, said to have belonged to Roland and Olivier de Ronscevaux, famous champions under Charlemagne, were preserved in France towards the beginning of the last century, and perhaps later, consisting of a handle two feet long, to which an iron ball was attached by a triple chain. It appears that the ball was frequently covered with iron spikes, and was attached to the handle by a single chain. Mr Grose states, that similar implements were long used by the trained bands of London, under the name of morning stars. (See Battle-Axe, and Arms.) At present, the mace is used as an emblem of the authority of officers of state (e. g. the speaker of the house of commons), before whom it is carried. It is made of the precious metals, or of steel, or silver, gilt, and ornamented with a crown, globe, and cross. MACE: the outer, fleshy, and coriaceous cover of the nutmeg. When the fruit is gathered, the mace is carefully separated from the nut, dried in the sun, and afterwards is packed in chests of different sizes, in which state it is obtained in commerce. See Nutmeg.
Macedonia—Machinery.

Macedonia (now Macedonia or Filibia Vila- jeti, a territory containing 15,250 square miles, and 700,000 inhabitants); the northern part of the peninsula in Europe, inhabited by the Greeks, a mounta- inous district, the Po River. The whole district consisted chiefly in mines of gold and silver; the coasts, however, produced corn, wine, oil, and fruits. It was separated from Thessaly on the south by the Olympus and the Càmbrian mountains (now Monte di Volauzzo); and on the west, from Ephipus, by the Thermaic Gulf. The region toward the east, northern, and north-western boundaries, we must distinguish between the time before and after Philip, the father of Alexander. Before his time, all the country beyond the Strymon (Struma), and even the Macedonian peninsula from Amphipolis to Thessalonica, belonged to Thrasea; and Paeonia, likewise, on the north. On the north-west, towards Illyria, it was bounded by lake Lycnthis (Achrida). Philip conquered this peninsula, all the country to the river Nessus (Karasu) and mount Rhodope; also Paeonia and Illyria, beyond lake Lycnthis. Thus the widest limits of Macedonia were from the Aegean sea to the Ionian (Philippi; they dwelt here at an early period; but we have no particular accounts of them. The Macedonians were a civilized people long before the rest of the Greeks, and were, in fact, their instructors; but the Greeks afterwards so far excelled them, that they regarded them as barbarians. They were divided into several small states, which were incessantly at war with the Thracians and Illyrians, till Philip and Alexander gave the ascendency to one of these states, and made it the most powerful in the world. We have no particular account of this state, but it is known to have been Antiochus; but, in the time of Alexander, it was divided into several small states, which were incessantly at war with the Thracians and Illyrians, till Philip and Alexander gave the ascendency to one of these states, and made it the most powerful in the world. The succession of its kings begins with the Heraclide Carinus, but first becomes important with the accession of Philip (q. v.) That prince, taking advantage of the strength of the country and the warlike disposition of its inhabitants, reduced Greece, which was distracted by intestine broils, in the battle of Chaeronea, B. C. 338. His son, Alexander, subdued Asia, and by an uninterrupted series of victories, for ten successive years, made Macedoniam, in a short time, the mistress of half the world. After his death, this immense empire was divided. Macedonia, received new its ancient limits, and, after several battles, lost its dominion over Greece. The alliance of Philip II. with Carthage, during the second Punic war, gave occasion to this catastrophe. The Romans delayed their revenge for a season; but, Philip having laid siege to Athens, the Romans came to their assistance; the latter declared war against Macedonia; Philip was compelled to sue for peace, to surrender his vessels, to reduce his army to 500 men, and defray the expenses of the war. Perseus, the successor of Philip, having taken up arms against Rome, was totally defeated at Pydna by Paulus Aemilius, B. C. 168, and the Romans took possession of the country. Indignant at their oppressions, the Macedonian nobility and the whole nation rebelled under a faction of Thracians. But after a long struggle, they were overcome by Quintus Cæcilius Macedo- nicus, the nobility were exiled, and the country became a Roman province, B. C. 148. Macedonia now forms a part of Turkey in Europe, and is inhabited by Wallachians, Turks, Greeks, and Alban- ians. The south-eastern part is under the pacha of Saloniki; the northern, under beys or agas, or forms free communities. The capital, Saloniki, the ancient Thessalonica, is a commercial town, and contains 70,000 inhabitants. See the History and Antiquities of the Dorian Race, translated from the German of C. O. Muller, (Oxford, 1830).

Maceration (from macero, to soften by water) consists in the infusion of substances in cold water, in order to extract their virtues. It differs from digestion only as the latter operation admits the application of heat. Maceration is preferable in cases where heat would be injurious, as where volatile and resinous substances are used.

Machaon. See Aesculapius.

Machinery. The utility of machinery, in its application to manufactures, consists in the addition which it makes to human power, the economy of time, and in the conversion of substances apparently worthless into valuable products. The forces derived from wind, from steam are so many additions to human power, and the total inanimate force thus obtained in Great Britain (including the commercial and manufacturing) has been calculated, by Dupin, to be equivalent to that of 20,000,000 labourers. Experiments have shown that the force necessary to carry a bow on land, if its quarry is nearly two-thirds of its weight; on a wooden floor, three-fifths; if soaked, one-sixth; upon rollers on the quarry floor, one thirty-second; on wood, one-fortieth. At each increase of knowledge, and on the contrivance of every new tool, human labour is abridged: the man who contrived rollers quintupled his power over brute matter. The next use of machinery is the economy of time, and this is too apparent to require illustration, and may result either from the increase of force, or from the improvement in the contrivance of tools, or from both united. Instances of the production of valuable substances from worthless materials are continually occurring in all the arts; and through this may appear to be merely the consequence of scientific knowledge, yet it is evident that science cannot exist, nor could its lessons be made productive by application, without machinery. In the history of every science, we find the improvements of its machinery, the invention of instruments, to constitute an important part. The chemist, the astronomer, the physician, the husbandman, the painter, the sculptor, is such only by the application of machinery. Applied science in all its forms, and the fine and useful arts, are the triumphs of mind, indeed, but gained through the instrumentality of machinery. The difference between a tool and a machine is not capable of very precise distinction, nor is it necessary, in a popular examination of them, to make any distinction. A tool is usually a more simple machine, and generally used by the hand; a machine is a complex tool, a collection of tools, and frequently put in action by immense force. All machines are intended either to produce power, or merely to transmit power and execute work. Of the class of mechanical agents by which motion is transmitted,—the lever, the pulley, the wedge,—it has been demonstrated that no power is
Machinery.

Causes of execution, preserving greater rapidity of motion, and, when moving with considerable velocity, if its force is concentrated on a point, its effects are exceedingly powerful. Another method of accumulating power consists in raising a weight, and then allowing it to fall. A man, with a heavy hammer, may strike repeated blows on the head of a pile without any effect; but a heavy weight, raising and lowering by great height, though the blow is less frequently repeated, produces the desired effect.

2. Regulating Power. Uniformity and steadiness in the motion of the machinery are essential both to its success and its duration. The governor, in the steam-engine, is a contrivance for this purpose. A vane or fly of little weight, but large surface, is also used. It revolves rapidly, and soon acquires a uniform rate, which it cannot much exceed; because any addition to its velocity produces a greater addition to the resistance of the air. This kind of fly is generally used in small pieces of mechanism, and, unlike the heavy fly, it serves to destroy, instead of to preserve, force.

3. Increase of Velocity. Operations requiring a trifling exertion of force may become fatiguing by the rapidity of motion necessary, or a degree of rapidity may be desirable beyond the power of muscular action. Whenever the work itself is light, it becomes necessary to increase the velocity in order to economize time. Thus twisting the fibres of wool by the fingers would be a most tedious operation. In the common spinning-wheel, the velocity of the foot is moderate, but, by a simple contrivance, that of the thread is most rapid. A band, passing round a large wheel, and then round a small spindle, effects this change. This contrivance is a common one in machinery.

4. Diminution of Velocity. This is commonly required for the purpose of overcoming great resistances with small power. Systems of pulleys afford an example of this: in the smoke-jack, a greater velocity is produced than is required, and it is therefore moderated by transmission through a number of wheels.

5. Spreading the Action of a Force exerted for a few minutes over a large Time. This is one of the most common and useful employments of machinery. The half minute which we spend daily in winding up our watches is an exertion of force in a small, and for a short time, but the aid of a few wheels, is spread over twenty-four hours. A great number of automata, moved by springs, may be classed under this division.

6. Saving Time in Natural Operations. The process of tanning consists in combining the tanning principles with the skin, which, by the ordinary process of soaking it in a solution of the tanning matter, requires from six months to two years. By enclosing the solution, with the hide, in a close vessel, and exhausting the air, the pores of the hide being deprived of air, exert a capillary attraction on the tan, which may be aided by pressure, so that the thickest hides may be tanned in six weeks.

The operation of bleaching affords another example.

7. Exercising Forces too large for Human Power. When the force of large bodies of water, of men or animals is applied, it becomes difficult to concentrate it simultaneously at a given point. The power of steam, air, or water is employed to overcome resistances which would require a great expense to surmount by animal labour. The twisting of the largest cables, the rolling, hammering, and cutting of large masses of iron, the draining of mines, require enormous exertions of physical force, continued for considerable periods. Other means are used when the force required is great, and the space through which it is to act is small. The hydraulic press can, by the exertion of one man, produce a pressure of 1500 atmospheres.

8. Executing Operations too delicate for Human Touch. The same power which twists the stoutest cable, and weaves the coarsest canvass, may be employed, to more advantage than human hands, in spinning the gossamer thread of the cotton, and in the twining, by fairy fingers, of the most delicate fabric.

9. Registering Operations. Machinery affords a sure means of remediying the insufficiency of human agents, by instruments, for instance, for counting the strokes of an engine, or the number of coins struck in a press. The tell-tale, a piece of mechanism connected with a clock in an apartment to which a watchman has not access, reveals whether he has neglected, at any hour of his watch, to pull a string in token of his vigilance.

10. Economy of Materials. The precision with which all operations are executed by machinery, and the exact similarity of the articles made, produce a degree of economy in the consumption of the raw material which is sometimes of great importance. In reducing the trunk of a tree to planks, the axe was formerly used, with the loss of at least half the material. The saw produces thin boards, with a loss of not more than an eighth of the material.

11. The Machine is more remarkable than the perfect similarity of things manufactured by the same tool. If the top of a box is to be made to fit over the lower part, it may be done by gradually advancing the tool of the sliding rest; after this adjustment, no additional care is requisite in making a thousand boxes. The same result appears in all the arts of printing: the impressions from the same block, or the same copperplate have a similarity which no labour of the hand could produce.

12. Accuracy of the Work. The accuracy with which machinery executes its work is, perhaps, one of its most important advantages. It would hardly be possible for a very skilful workman, with files and polishing substances, to form a perfect cylinder out of a piece of steel. This process, by the aid of the lathe and the sliding rest, is the every day employment of hundreds of workmen. On these two last advantages of machinery depends the system of copying, by which the whole, or a part, of the original may be multiplied, and thus almost unlimited pains may be bestowed in producing the model, which shall cost 10,000 times the price of each individual specimen of its perfections. Operations of copying take place, by printing, by casting, by molding, by stamping, by punching, by engraving with acids, and by etching. A careful and careful examination of the arts of copying lies before the eye of the reader in these pages.
obtained by printing from stereotype plates. 2. Those plates are copies obtained (by casting) from moulds formed of plaster of Paris. 3. The moulds are copies obtained by pouring the plaster, in a liquid state, upon the moveable types. 4. The types are copies (by casting) from models of lower matrices. 5. The latter part of the matrices, bearing the impressions of the letters or characters are copies (by punching) from steel punches, on which the same characters exist in relief. 6. The cavities in these steel punches, as in the middle of the letters, a, b, &c., are produced from other steel punches in which those parts true, relieved beyond the gum, are moveable.

For machinery, in political economy, see Labour-saving Machines.

Machinery, in poetry. See Poetry.

MACK, CHARLES, baron von; an Austrian general, born in Frankonien, in 1752. On leaving college, his inclination led him to enlist as a private in a regiment of dragoons, and his good conduct soon obtained him the rank of a petty officer. In the war with Turkey, he obtained a captain's commission. His spirit of enterprise procured him the favour of Lauden, who recommended him to the emperor. On the occurrence of war with France, Mack was appointed colonel-in-chief of the imperial forces of the prince of Coburg, and directed the operations of the campaign of 1793. In 1797, he succeeded the archduke Charles in the command of the army of the Rhine. The following year, he was sent to Naples, then invaded by the French; but, being beaten in the field, and suspected of treason by the Neapolitans, he fled to the French camp, and was sent as a prisoner to Dijon. He found means to justify his conduct in the opinion of the emperor, who, in 1804, constituted general Mack commander-in-chief in the Tyrol, Dalmatia, and Italy. In 1805, Napoleon forced him to yield the garrisons of the Tyrol and Carinthia, and to submit to the famous capitulation of Ulm, by which 28,000 of the Austrians became prisoners. Mack was permitted to go to Vienna, where he was tried before a military tribunal, and received the sentence of death as a traitor to his country. His doom, however, was commuted by the emperor for imprisonment; and he was, after a time, released, and died in obscurity, in 1828.

MACKENZIE, SIR GEORGE, a celebrated Scottish lawyer and state officer, was born at Dundee, in 1636. His father was Simon Mackenzie of Lochsill, brother of the earl of Seaforth, and his mother Eliza- berth, daughter of the principal of St Leonard's college, St Andrews. His progress at school was so rapid, that in his tenth year he was master of all the classical authors usually taught in schools. He afterwards studied Greek and philosophy in the universities of St Andrews and Aberdeen, and civil law in that of Bourges in France; and, in January, 1659, before the termination of his twenty-third year, entered as an advocate at the Scottish bar.

In 1660, he published his Aretina, or Sermons Romance, in which, according to his kind biographer, Rutland, he gives "a very bright specimen of his gay and exuberant genius." His talents must have been early observed and appreciated, for, in 1661, his third year at the bar, he was selected as one of the counsel of the marquis of Argyle, then tried by a commission of parliament for high treason. On this occasion he chiefly made use of the buskins, but with much and even boldness, as at once established his character.

The purely literary labours of this eminent person, appear to have been chiefly executed during his earlier years. His Religio Stoici, or a Short Discourse upon several Divine and Moral Subjects, appeared in 1663. Two years afterwards, he published his Moral Essay on Solitude, preferring it to public employment, with all its appendages, such as fame, command, riches, pleasures, conversation, &c. This production was answered by the celebrated Evelyn, in a Panegyric on Active Life. "It seems singular," says the Edinburgh Review, "that Mackenzie, plunged as he was in the hardness of his temper, should have been the advocate of retirement, and that Evelyn, comparatively a recluse, should have commended that mode of life which he did not choose." But it is probable that each could write more freely on circumstances disconnected with the daily events of his life, while each of them was all the more candid in his arguments. In 1667, Mackenzie published his Moral Gallantry, one of the reflective treatises of the period, intending to prove the gentlemanliness of virtue, and the possibility of establishing all moral duties on principles of honour. To this production he added a Consolation against Calumnies. The fiery course of politics which he had afterwards to run, made a hiatus of considerable extent, in the elegant literary pursuits of Mackenzie; but after his retirement from public life, he wrote another work which may be classified with those just mentioned—The Moral History of Fingal. This he dedicated to his Essay on Reason. During his early years at the bar, he also wrote Celas Country House and Closet, a poem in English epics, and written in a manner more nearly akin to the style of Pope and his contemporaries, than that which flourished in the author's own time.

Soon after the Restoration, he was appointed a justice-depute, or assistant to the justiciar or chief justice; a situation, the duties of which were almost equivalent to that of an English puisne judge of the present day, in criminal matters. Within a few years after this period, the time is not particularly ascertained,) he was knighted. In 1690, he represented the county of Ross, where the influence of his family was extensive, in parliament. During that year, the letter of Charles, proposing the immediate consideration of a plan for an incorporating union of the two kingdoms, was read in parliament. Sir George, an enemy to every thing which struck at the individual consequence and hereditary greatness of the country, in which he held a stake, opposed the proposition. His speech on the occasion is generally understood to be the earliest authentically reported specimen of legislative eloquence in Scotland. It is compact, clear, accurate, well composed, and without flight or hyperbole, he defeated the burning impetuosity which afterwards distinguished Fletcher and Bellhaven. Sir George sought distinction in his course through parliament by popular measures. In 1699, an act had been passed, compelling merchants to make oath as to their having paid duties on their merchandise. "The commissioner had that day said, that the stealing of the king's customs was a crime, which was to be provided against: whereupon, Sir George Mackenzie replied, that if it was a crime, no man could be forced to swear for it; for by no law under heaven was it ever ordained that a man should swear in what was criminal." He opposed the act of forfeiture against the western rebels, insisting that no man ought to be found or proved guilty in absence. He would have gone to the grave with the character of a patriot, had he not been placed in a position where serving a king was more beneficial than serving the people.

On the 23d of August, 1677, he was named king's advocate, on the dismissal of Sir John Nisbet. As the trial of the earl of Argyle in 1661 was the first important political case in which he had tried his powers as a defender, so was that of his son in 1681, the first which exercised his abilities as a state prosecutor.
In the father's case he had to resist the oppressive 

fictions of the crown lawyers, but all he suffered was 
as sumptuous view of the world. After this branched 
trial, he appears to have obtained, as part of the spoil, 
a gift of the barony of Bute, ratified by the parliament 
of 1681. On the recapture of the earl after his 

escape, Mackenzie was one of those who objected 
to a new trial, and he accordingly recommended 
his suffering on his former sentence; he is alleged 
to have done so from the probability, that if he 

ceased to be accused, his case would be tried in 

other countries, Sir George might be cleared of his 

wrongdoing. The trial was conducted with much 

clemency. Sir George was himself in the chair of the 

advocates. His works. His position in the court of 

the Exchequer, as well as his acquittal, was an 

illustration of the justice of the sentence, his heirs 

might probably be restored to their heritage. Meanwhile 
his professional ingenuity had been employed in the 
case of the lawbreakers, by which a legal form, useful 
in the defence of the subject against lawless 

aggression, was, by adding to its natural power the weight 
of the royal influence, made an engine of oppression. 

It would be a vain task to enumerate the minor state 

prosecutions, which, in this eventful period, gave full 

employment to this active servant of government: 

most of them are well known, and they were at any 

rate numerous enough to stamp him in the minds of 
his contemporaries as the most illustrious of his 

name—"The blood-thirsty advocate." Sir George found 
it necessary to attempt a vindication of his acts, under the title of A Vindication of the Government of Charles II. "No age," he says, "did see so many thousands pardoned, nor so many hundreds hanged, as during his time, which, as it must be principally ascribed to the 
extraordinary clemency of the kings he served, so it 

may be in some measure imputed to the biases which 

Sir George had to the merciful hand." Sir George 

leaves out of view, that it is possible for one lord 

advocate so far to exceed another in the number of 

his prosecutions, as both to acquit and sacrifice more 

than the whole number accused by his brethren. It 

was not those who were forgiven, but those who were 

not forgiven, that fix upon the reign of Charles II., 

and also upon his Scottish advocate, the indelible 

character of oppression and blood-thirstiness. It 

must, at the same time, be allowed, that the acute mind 
of Sir George Mackenzie was never aspre to practi-
cal improvements in jurisprudence, although the lust 
of power was sufficient to subdue his efforts, or turn 

them into another course. While he wielded the 
sword of persecution himself, he did much to unif it for 

the use of others. He countenanced and cherished a 

proach in behalf of his clients in criminal cases, in 

presence of the accused, instead of the secret chamber of the 

prv council. A frightful fiction of the law of both 
countries, by which no evidence could be led by a 

prisoner in opposition to the assertions of the libel 
made by the prosecutor, as representing the king, 

was removed by Sir George, forty years before it 

cessed to exist in England; and he put a stop to the 
system of permitting the clerk of court to be enclosed 

with the king, for the purpose of assisting him. In 

1686, Mackenzie showed that he had a feeling of 

conscience, and that his religion, if entirely political, 

was not accurately squared to personal aggressime-

ment, by suffering himself to be dismissed for not 

agreeing to the catholic projects of James II. In 

1688, however, he was restored, on the advancement 
of his successor, Dalrymple, to the presidency of the 
court of session.

The Revolution terminated his political career. At 
his father's instigation Sir George entered into a 

political career of his own, and as he had been 

educated, he could so far abstract his mind from politics, 
as to perform the greatest public service which is 

ever now connected with his name, by founding the 

advocates' Library. The inaugural speech which 

was pronounced on the occasion, is preserved in his 

works. The institution has flourished, and redeems 

Scotland from the imputation of not possessing an 

extensive public library. After the Revolution, Sir 

George wrote himself into the annals of the university 
of Oxford, the finest receptacle for so excellent a 

vindicator of the old laws of divine right. He was 

admitted a student on the 2d of June, 1690; but he 
did not long live to feel the blessings of the retirement 

he had praised, and for the first time experienced. 

He died at St James's on the 2nd May, 1691.

Sir George wrote himself into the annals of the more labori-

ous cast than those to which we have referred. His 

Institute of the Law of Scotland is well arranged, but, 
in comparison with the profundity of Dalrymple, 
is meagre, and its brevity makes it of little use. His 

Laws and Customs in Matters Criminal, is full of 

useful information, and is the earliest arrangement 

(though not a very clear one) of our criminal code. His 

Observations on the Laws and Customs of 

Nations as to Precedency, with the Science of 

Heraldry as part of the Law of Nations, is esteemed 

by heralds. When Stilliglute and Lloyd made their 
critical attacks on the fabulous history of Scot-

land, Sir George followed up his cause, and made a 

serious matter to deprive his majesty of forty ances-
tors, wrote in 1680 A Defence of the Royal Line of 

Scotland, in which he comes forward as his majesty's 

advocate, and distinctly hints to the contemporaries 

of the royal line, that, had they written in Scotland, 

he might have had occasion to put his authority in force 

against them. These works, along with the observa-

tions on the acts of parliament, and some other 

minor productions, were edited by Ruddiman, in two 

handsome folio volumes, in 1722. His Memoirs, 
or account of his own times, certainly the most interest-
ing of all his works, though promised at that time, 

was withheld through the timidity of his friends. 

When long lost sight of, the greater part of it was a 

few years ago recovered to the world. It is full of 

graphic pictures of the state of the times; and if not 

so descriptive in character as Clarendon or Burnet, 

is often more lively in the detail of incident, and 

more acute in perceiving the selfish motives of the 

actors.

MACKENZIE, Henry, the author of the Man of 

Feeling, was born at Edinburgh, in August, 1745. 

His father was Dr Joshua Mackenzie, an eminent 

physician. His mother was Margaret, eldest daugh-
ter of Mr Rose of Killarvock, a gentleman of ancient 

family in the county of Ross. He was educated at 

the high school and university of Edinburgh. Mr Macke-

nzie was articled to Mr Inglis of Redhall, in order 
to acquire a knowledge of the business of the Exchequer. 

To this, though not perfectly compatible with the 

literary taste which he very early displayed, he 

applied with due diligence; and, in 1765, went to 

London to study the modes of English Exchequer 

practice, which, as well as the constitution of the 
court, were similar in both countries. While there, 

his talents induced a friend to solicit his remaining 
in London, and qualifying himself for the English 

bar. But the anxious wishes of his family that he 

should reside with them, and the moderation of an 

unambitious mind, decided his return to Edinburgh; 

where he became, first, partner, and afterwards suc-

cessor, to Mr Inglis, in the office of attorney for the 

crow. 

His professional labour, however, did not prevent 
his attachment to literary pursuits. When in London, 

he sketched the plot and principle of his future 

work, The Man of Feeling, which was published in 

1771, without his name, and was so much a favourite 

with the public, as to become, a few years after, the 

occasion of a remarkable fraud. A Mr Eccles of 

Bath, observing the continued mystery as to the 

author, laid claim to the work as his own, and, in
order to support his pretensions, transcribed the whole with his own hand, with an appropriate allow-
ance of blottings, interlineations, and corrections. So
																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
transactions, are an elegant tribute to the memory of his
friend lord Abercromby, and a memoir on German
tragedy; the latter of which bestows high praise
on the Emilia. Robert Montmorency, a Novel, was
published, written, and the whole corrected by
Scillier. For this memoir he had procured the
materials through the medium of a French work;
but desiring afterwards to enjoy the native beauties
of German poetry, he took lessons in German from a
Dr Okely, who was at that time studying medicine
in Edinburgh. The fruits of his attention to German
literature appeared further in the year 1791, in a
small volume, containing translations of the Set
of Horses by Lessing, and of two or three other
German pieces. But the most remarkable result of his
studies in this department, was certainly the effect
which his memoir produced on the mind of Sir Wal-
ter Scott, then a young man. It gave a direc-
tion to the genius of this illustrious person, at a time
when it was groping about for something on which
it was thus far successful; and harmonizing with the
native legend and lore with which he was already replete,
decided, perhaps, that Scott was to strike out a new
and unexplored path, and to labour and strive untirely
on the already beaten walks of literature.

Mr Mackenzie was also an original member of the
Highland Society; and by him were published the
volumes of their Transactions, to which he prefixed
an account of the institution, and the principal pro-
ductions of the society. He was also to be found his
view of the controversy respecting

Ossian's Poems, and an interesting account of
their

At the time of the French Revolution, he wrote
various tracts, with the design of counteracting the
progress of liberal principles in his own country.
These services, with the friendship of Lord Melville
and Mr George Rose, obtained for him, in 1804,
the lucrative office of comptroller of taxes for Scotland
which he held till his death.

In 1793, he wrote the life of Dr Blacklock, pref-
exed to a quarto edition of the blind poet's works,
which was published for the benefit of his widow.
In 1812, he read to the Royal Society his Life of
John Home, which was some years after prefixed to
an edition of that poet's works, and was also published
separately. At the time he read this paper to the
Society, he laid also before them, in connexion with
some Criticisms on Pieces, chiefly relative to dramatic
poetry, which had not then been published. He was
himself a dramatic writer, though not a successful
one. A tragedy, written by him in early life, under
the name of 'The Spanish Father,' was never represen-
ted; in consequence of Mr Garrick's opinion, that
the catastrophe was of too shocking a kind for the
modern stage; although he owned the merit of the
poetry, the force of some of the scenes, and the scope
for fine acting in the character of Alphonso, the lead-
ing person in the drama. In 1773, Mr Mackenzie
produced a tragedy under the title of 'The Prince of
Funs,' which, with Mrs Yates as its heroine, was
performed with applause for six nights, at the Edin-
burgh theatre. Of other dramatic pieces by
Mr Mackenzie, the next was 'The Shipwreck,' or Fatal
Curiosity, which might be described as an alteration
of Lilly's play under the latter of the two names. The
ty. The comedies entitled 'The Force of Fashion,' and
'The White Hyacinth,' both of which were unsuccessful,
exto the list. Mr Mackenzie's grand deficiency
as a dramatic author, was his inability to draw forcible
characters. His novels and tales charm by other
means altogether; but in the drama, striking charac-
ters, and a skilful management of them, are indis-

In 1808, he published a complete edition of his
works in eight volumes. From that period, and

In 1777 or 1778, a number of young men of literary
taste, chiefly connected with the Scottish bar, formed
themselves into an association for the prosecution of
their favourite studies, which came to bear the name
of the Mirror Club. Of this club, Mr Mackenzie
was readily acknowledged chief; and when it was
resolved to issue their literary essays in a small
weekly paper, resembling the Spectator, he was ap-
pointed to undertake the duties connected with the
publication. The Mirror was commenced on the
23rd of January, 1779, in the shape of a small folio
sheet, price three halfpence, and terminated on the
27th of May, 1780; having latterly been issued twice
a week. Of the one hundred and ten papers to
which the Mirror extended, forty-two were con-
tained in the first volume, while, every three months,
several others of the most admired of his minor
pieces. The sale, during the progress of the pub-
lication, never exceeded four hundred copies; but
this was more than sufficient to bring it under the
notice of a wide and influential circle, and to found
the reputation it has since enjoyed. When re-pub-
lished in duodecimo volumes, a considerable sum
was realized from the copyright, out of which the pro-
negotiators presented £100 to the Orphan Hospital,
and treated themselves to a hoghead of claret, to be
drank at their ensuing meetings. The Lounger, a
work of exactly the same character, was commenced
by the same editors, and under the same auspices.
February 6, 1786, and continued one week till the
6th of January, 1787; out of the hundred and
one papers to which it extended, fifty-seven are the
production of Mackenzie. One of the latter papers
the editor devoted to a generous and adventurous
critic on the poems of Burns, which were just then
published, and had not yet been approved by the
public voice. As might have been expected, Macken-
zie dwells most fondly on the Addresses to the Mouse
and the Mountain Daisy, which struck a tone nearest
to that prevailing in his own mind.

On the institution of the Royal Society of Edin-

burgh, Mr Mackenzie became one of the members;
and among the papers with which he enriched its

MACKENZIE. 605
MACKENZIE'S RIVER—MACKINTOSH.

indeed from one considerably antecedent to it, he might be said to have abandoned literature, though, to use his own affecting image, as employed at one of the meetings of the Royal Society, the old stump would still occasionally send forth a faint green shoot. The patronage of the government was unfortunately extended in a somewhat improper shape, in as far as the office bestowed upon him, though lucrative, required unremitting personal labour. He was thus unable, even if he had been willing, to cultivate literature to any considerable purpose. Such leisure as he possessed, he spent chiefly in healthy recreation—"in shooting, particularly, and angling, to which he was devotedly attached, and the former of which he practised in early life, on the ground now occupied by the New Town of Edinburgh. He thus protracted his days to a healthy old age, until he finally stood amidst his fellow men, like Noah amongst his descendants, a sole-surviving specimen of a race of literary men, all of whom had long been consigned to the dust. His recollections of the great men who lived in his youth, were most distinct and interesting; but it is to be regretted, that with the exception of what he has given in his Life of Home, he never could have been an active contributor to any periodical, nor made any addition to his father's literary legacy. At length, after a comparatively brief period of decline, he died January 14, 1831, in the eighty-sixth year of his age. By his wife, Miss Pennel Grant, daughter of Sir Ludovick Grant, of Grant, bart., Mr Mackenzie had eleven children, the eldest of whom is a judge of the courts of session and justice of the peace.

MACKENZIE'S RIVER; a river of North America. In the first part of its course, it flows N. E. to the Lake of the Hills, under the name Unigah, or Peace river; thence to Slave lake, it is called Slave river; it then takes the name of Mackenzie's river, and flows 780 miles N. into the Arctic sea; lon. 130° to 135° W.; lat. 60° 14' N. Its whole course is about 2000 miles.

MACKEREL (scomber). This is a tribe of migratory fishes, which annually visit the American coast, and is among the most celebrated of that class, for its numbers, and for the great use made of it in a salted state. The European mackerel (S. scombrus) is the best known as a food fish, and was held in high esteem by the ancient Romans, as forming the celebrated aarum, a pickle, or sauce, of which they made great use. This was prepared from different kinds of fishes, but that from the mackerel was deemed by far the best. The mackerel is also taken, by a variety of boats, and the capture always succeeds best during a gentle breeze of wind, which is hence termed a mackerel breeze by seamen. At such a time the usual bait is a bit of red cloth, a coloured feather, &c. This fish, when alive, possesses great symmetry of form and brilliancy of colours, which are much impaired by death, though not wholly obliterated. It is said, that in the spring, their eyes are almost covered with a white film, which grows in the winter, and is regularly cast at the beginning of summer, before which they are half blind. There are several species of mackerel on the coast of the United States, the most common of which is the S. tenuis, closely resembles the European species.

MACKINAC. See Michilimackinac.

MACKINTOSH, Sir James, eminent as a jurist, a statesman, and a writer,—equally distinguished for his extensive learning, his large views, and his liberal principles in law, politics, and philosophy—was descended of an ancient Scottish family, and born in the parish of Kyle, county of Kincardines, in 1765. After studying at the school of Fortrose, in Ross-shire, he was sent to King's college, Aberdeen, and spent three years at Edinburgh, chiefly in medical studies. He received his medical degree in 1787; but his attention had already been drawn to general literature, history, and moral, political, and speculative philosophy, and his inclination soon led him to abandon the practice of his profession. In 1790, he published a pamphlet on the regency question, which, on account of the sudden recovery of the king, attracted little notice. A visit to the continent, at that interesting period, contributed to excite his sympathies for the French, and he published a series of celebrated Reflections of Burke, under the title of Vindiciae Gallicae, or Defence of the French Revolution (1792), a work which laid the foundation of his fame, and acquired for him the friendship both of Fox and his great antagonist. About this time, Mr Mackintosh entered himself as a student of Lincoln's Inn, was soon called to the bar by that society, and commenced the practice of the law. Having obtained permission, though not without much difficulty, to deliver a course of lectures in the hall of Lincoln's Inn, on the law of nations, he published his Introductory Lecture, under the title of A Discourse on the Law of Nature and Nations. The publication of this discourse was an immediate and universal sensation, including some of the most distinguished men of the country. On the trial of Peltier for a libel against Bonaparte (then first consul of France), in which the prosecution was conducted by Mr Percival, the attorney general (afterwards first minister of state), and Mr Abbot (afterwards lord Tenterden), the defence was conducted by Mr Mackintosh, as sole counsel in one of the most brilliant speeches ever made at bar or in forum, which at once established his reputation as an advocate and an orator. The recordership of Bombay, with the dignity of knighthood, was soon after conferred on him, and, besides the discharge of the duties of his office, the nine years which he spent in India were marked by his exertions in the amelioration of the criminal law, the foundation of the Literary Society in Bombay, and his valuable communications in the Asiatic Register. While sitting on an admiralty cause, he declared that that court was bound to decide by the law of nations, and that the court had been appointed to do so (by the judge in England) by any direction from the king or his ministers. His return to England was hastened by a severe illness. He left Bombay in November, 1811, retiring from the Recordership with a pension of £1200 per annum.

In July, 1813, he was elected, through the interest of lord Devonshire, for the county of Devonshire, and was re-elected at the subsequent elections of 1820, 1826, 1830, and 1831. He was also elected Lord Rector of the university of Glasgow in 1822, and again in 1823. Sir James was now become a person to whom a national importance and consideration were attached, one of the marked and elevated characters of the country, who had acquired a conventional right from the soundness and capacity of his judgment, and the extraordinary splendour of his abilities, to take an active and prominent part in the management of her affairs, and a conviction of this truth prevailing in those high quarters where it could be acted upon, he was appointed in 1828, one of his majesty's privy council, and on the formation of the Earl Grey administration in 1830, he was made on the 1st December a commissioner for Indian affairs. In parliamentary changes Sir James took a prominent part in all questions connected with foreign policy, and international law; but more especially distinguished himself in the discussions on the alien bill, the crim-
inal law, the liberty of the press, religious toleration, the slave trade, the settlement of Greece, reform in parliament, and on the right of our colonies to self-government. The last was an article of faith, on which all his votes and speeches in parliament were in favour of the opinions and sentiments of that party; but he was, perhaps, one of the most moderate and tolerant politicians that ever existed, as the natural mildness and benevolence of his disposition never failed to mingle largely in whatever character he assumed, which was, indeed, in all his official positions.

In private life, he displayed all the domestic virtues, and all the better qualities of human nature. He was mild, benevolent, generous, humane, and unaffected. His conversational powers were of the first order, and never failed to delight all who had the good fortune to enjoy his society. His person was well formed, and above the middle stature. His countenance was intelligent, and exhibited a pleasing compound of grave and gay expression, indicative of a readiness to sympathize with either of these feelings, as chance might direct their appeals to him.

Sir James died in May, 1832, and was buried at Hampstead. A Memoir and a collection of his productions is his Dissertation on the progress of philosophy in the Encyclopedia Britannica. He also published a life of Sir Thomas More in Lardner's Cyclopedia, and two volumes of an abridged history of England. These two little volumes contain some striking passages and disquisitions, but in the opinion of Mr. Campbell, they were merely the expansion of the prefatory matter which he intended for a great historical work on the affairs of England since the Revolution, and which he had contemplated for several years, and in part written, but was too much impeded in his progress, both by his parliamentary duties and the infirm state of his health, to bring to a conclusion. His labours were, nevertheless, given to the world in 1834, as a History of the British Revolution. It was the opinion of Sir James that history ought to be written with feeling, but without passion; and to this excellent dogma he has himself rigidly adhered. He also contributed various excellent articles to the Edinburgh Review.

Sir James was twice married; first in 1789, to Miss Catharine Stewart of Gerrard Street, Soho, sister to the Messieurs Stewart, formerly proprietors of the Morning Post, by whom he had a son, a child of infancy, and three daughters—viz., Mary, married to Rev. James Erskine, M.A., of Maitland, married to W. Erskine, Esq., and Catharine, married to Sir W. Wiseman, Bart. Mrs Mackintosh died in 1797. He was afterwards married to Catharine, daughter of J. B. Allen, Esq. of Cressellin, in Pembrokeshire. By this lady, who died at Chesme, near Genoa, on the 6th May, 1800, he had one son and a daughter; viz., Robert Mackintosh, Esq., B.A., fellow of New College, Oxford; and Frances, married to H. Wedgewood, Esq. Staffordshire.

MACKLIN, Charles, an actor and dramatist of some celebrity, was born in Ireland, 1680, and was employed in Dublin, as a burgeman, until his twenty-first year, when he went to London, and joined a company of strolling comedians. In 1716, he appeared as an actor in the theatre at Lincoln's-Inn-fields. It was not, however, until 1741, that he established his fame as an actor, by his admirable performance of Shylock, that being, indeed, the only character in which he stood pre-eminent. He continued on the stage till 1753, and was marked by the usual vicissitudes of theatrical life, rendered still greater by the temper of the individual. During the last years of his life, his understanding became impaired, and in this state he died, July 11, 1797, at the age of 107. His Man of

MACKLIN—MACROBIUS. 607

of the World, a comedy, discovers a keen knowledge of life and manners, and exposes meanness, sycophancy, and political servility, with considerable skill. His other works have a La-Mode air, possess kindred merit. Macklin was an entertaining companion, although dictatorial, and very irascible.

MACKNIGHT, James, a learned Scottish divine, born in 1721, was educated at Glasgow and Leyden, and, on his return, was ordained minister of Maybole, where he remained sixteen years, and composed his Harmony of the Gospels, and his New Translation of the Epistles. In 1763, he published his Truth of the Gospel History. In 1772, he became one of the ministers of Edinburgh. Dr Macknight employed nearly thirty years in the execution of his last and greatest work, on the apostatical epistles—a New literal Translation from the Greek of all the Apostles' Epistles, with Commentaries and Notes, philosophical, critical, explanatory and practical (1795, 4 vols., 4to). He died in 1800.

MACLAURIN, Colin; a celebrated mathematician and philosopher, born at Kilmoddan, in Scotland, in 1698. He studied at Glasgow, where he took the degree of M.A. at the age of twenty, and defended a thesis on the Power of Gravitation. In 1717, he obtained the mathematical chair in the Marischal college at Aberdeen, and, two years after, was chosen a fellow of the royal society. In 1725, he was elected professor of mathematics at Edinburgh, where his lectures contributed much to raise the character of the university as a school of science. A controversy with bishop Berkeley led to the publication of Maclaurin's great work, his Treatise on Fluxions (Edinburgh, 1742, 2 vols., 4to). He died June 14, 1746. He was the author of a Treatise on Algebra; an Account of Sir Isaac Newton's Philosophical Discoveries, and in several other works.

MACPHERSON, James; distinguished in literary history for his translations or imitations of Gaelic poems, said to have been composed in the third century. He was born, in Inverness-shire, in 1738, and studied at Aberdeen and Edinburgh. Having published Fragments of Ancient Poetry, translated from the Gaelic or Erse Language, a subscription was raised to enable him to collect additional specimens of national poetry. He produced, as the fruit of his researches, Fingal, an ancient Epic Poem, translated from the Gaelic (1792, 4to); Temora, and other poems (1794, 8vo); and Ossian, the son of Fingal, a Gaelic prince of the third century, and his contemporaries. (For an account of the controversy on this subject, see Ossian.) From the evidence of the contending parties, it may be concluded, that Macpherson's prose epics were founded on traditional narratives current among the Highlanders; but the date of the oldest of their lays is comparatively modern; and it is now difficult, if not impossible, to ascertain the precise extent of his obligations to the Gaelic bards of former ages. Mr Macpherson was afterwards agent to the nabob of Arcot, in consequence of which he had a seat in the house of commons from 1780 to 1790. He died in 1796, and was interred in Westminster abbey. He was also the author of a prose translation of Homer's Iliad, and of some other works.

MACRABIOGRAPHIST (from μανάρξισ, long, and βριος, life); the science of prolonging life. Hufeland endeavored to prolong life by means of Macrobius' book, the Art of prolonging human Life. See Longevity.

MACROBIUS, Aurelius Ambrosius Theodosius; a Latin author, in the reign of the emperor Theodosius, to whom he officiated as an officer of the wardrobe, and enjoyed a considerable share of
MADAGASCAR—MADDER.

The name and position of this island were first made known to Europeans by Marco Polo, in the thirteenth century, although it had been known to the Arabs for several centuries. It was visited by the Portuguese in the beginning of the sixteenth century. The French made attempts to found colonies there in the middle of the seventeenth century, but abandoned the island after many struggles with the natives. In 1745, they made new attempts, but without much success. In 1814, it was claimed by Britain as a dependency of Mauritius, which had been ceded to her by France, and some settlements were established. One of the native kings of the interior, who had shown himself eager to procure a knowledge of European arts for his subjects, consented, in 1820, to relinquish the slave-trade, on condition that ten Madagascan should be sent to Britain, and five to Mauritius. Those sent to Britain were placed under the care of the London missionary society, who sent missionaries and mechanics to Madagascar. In 1826, 1700 children were taught in the missionary schools, and parts of the Scripture have since been translated into the native language. This king died in 1828, and we do not know what has been the disposition of the new ruler.—See Rochon, Voyage à Madagascar; Flacourt, Histoire de Madagascar; Copland, History of Madagascar (1822).

MADAME, in France; the title of the wife of the king's brother, of the sister of the king's father, or the sister of the king's mother; the daughter of the king's mother, the daughter of the king's mother's brothers. In 1734, it was ordered that it should be given only to the first princess of the blood.

MADDER (rubia); a genus of plants that has given its name to an extensive family, including, among others, the genus galium or bedstraw, which it closely resembles in habit, but differs in the fruit, which consists of two globular corose berries. Fifteen species are known. They are chiefly herbaceous, with rough branching stems, simple leaves arranged in whorls of four or six, and small flowers, which are usually disposed in terminal panicles. R. tinctorum, or dyer's madder, is by far the most important species. It is a perennial plant, with a brownish-red root, which yields the colour afforded by the roots; and, indeed, this substance is essential to dyers and calico-printers, and their manufactures could not be carried on without it. In consequence, it has become an important article of commerce, and is imported into this country from Holland to a very great extent. Though cultivated in France for a century and a half, the supply is yet inadequate to the consumption in that country, and it is largely imported from the Levant as well as from Holland. The plant grows wild in many parts of the south of Europe. The root is perennial, long, creeping, about as large as a quill, and red both without and within; from it arise several trailing, quadrangular stems, rough, branching, and two or three feet in length; the leaves are oblong-oval, and prickly on the margin and mid-rib; the flowers are yellow and small, and are disposed in a panicle, at the extremity of the branches, and in the axils of the superior leaves; they make their appearance in June and July, and are succeeded by blackish-purple berries. The most approved method of culture is from seed, and where this practice is pursued, certain precautions are requisite. As the madder of hot climates affords more colouring matter, as well as a deeper tint, it is best for those who live in a northern region to import the seeds from the south. If the seed is too much dried, it may remain in the ground two or three years before it will germinate.
MADDER.

account, it should be kept in a bed of moistened earth or sand, whenever there is any delay in sowing it. A light, rich, and deep seed-bed, free from weeds, and it should be ploughed to the depth of two feet. The time of sowing is in February, or the beginning of March, for the more northern, and September or October for the more southern regions. This kind of crop requires but little care and attention: for the first year, it is necessary only to hoe it from the weeds, and to hoe it slightly once during the summer; for the second, it requires hoeing in the spring, in the summer, and again, a little more deeply, in the latter part of the season; the same is requisite for the third year, except that the earth is heaped up about the base of the stems, in order to make it shoot with more vigour, and enlarge the roots. It is usual, before the second time of hoeing, to cut the stems for cattle, who are very fond of it; but this practice should not be repeated during the season, as recommended by some writers, or the roots will suffer. It is only at the end of the third year, that the crop is ready for harvesting; and, if it is suffered to remain in the ground beyond this period, more is lost than gained. The roots, at this time, contain the greatest quantity of colouring matter, and have attained their full size. The best method of obtaining the roots, is the following: A trench is dug along the margin of the field, to the depth of the roots. When, in loosening the earth about the roots, they may be taken up entire. In a good soil, a single plant may yield forty pounds of the fresh roots, which diminish, in drying, six-sevenths or seven-eighths of their weight. The roots should be immediately washed, freed from all decayed parts, and dried as quick as possible, either in the sun or in a kiln. It is well observed, that madder is a hazardous crop, as, from its yielding a return only after a lapse of three years, it is often impossible to foresee what will be the state of the market at that time. Another mode of cultivation is from the roots, which are divided and set out. Twenty thousand plants may be allotted to an acre. The madder from Holland is most esteemed, and it is cultivated in that country to a very great extent. The process of pulverizing the roots, which is done by pounding or grinding, was, for a long time, kept a secret by the Dutch. In the state of a powder, the root is very liable to become damp, and to be spoiled, if kept in a moist place. Madder is used for dyeing woollen, silk, and also cotton goods, and the colour is very lasting, and resists the action of the air and sun. Within a few years, a method has been discovered of rendering the red exceedingly brilliant, and approaching to purple. It also forms a first tint for several other shades of colour, and besides, has, of late, been successfully used by painters, and is found to yield a fine rose colour. Madder also possesses the singular property of imparting its red colour to the bones of those animals which have used it for food, and also to the milk of cows, which have had it on their food. Composition of Madder, and its Employment in Dyeing. All the parts of the plant contain a yellow colouring matter, which, by absorption of oxygen, becomes red; the root is, however, most productive in this colouring matter, and is the only part employed in dyeing; the leaves and flowers having a much smaller degree of the back, the middle portion, and the interior woody fibre. The bark contains the same colouring matter as the wood, but mixed with much brown extractive matter which degrades the hue. The bark may be separated from the mill, for it is merely dry ground, and may then be removed by the sieves. The middle part of the root, which contains the finest colouring matter, and that in largest quantity, there may be distinguished, by the microscope, a great many shining red particles, dispersed among the fibres. These constitute the rich dying material. The fibres contain a brown substance, similar to what is found in the bark. The roots occur in commerce, dried and in powder. They are also sold fresh; in which state they yield finer colours, dye more, and give up their colouring matter with one third less water. According to experiments made in England, five pounds of fresh madder, are equal to four of the dry roots; and it is estimated that eight pounds of fresh roots are reduced to one in drying; hence the great advantage of using the green roots becomes apparent. The roots produced in the south of France, when sold in the fresh state, are called altari. They are reddish-yellow, but, when ground, take a fine red tint. The madders of Germany and Holland are orange-yellow, passing into brown-red, having an acid and saccharine taste, and a strong smell. Jahn found, in 100 parts of madder,

Fatty matter, of a red-brown colour, resembling wax, 1.0
Red resinous matter, 1.0
Red extractive matter, 3.0
Oxidized extractive, 2.0
Brownish gum, 2.0
Lignous fibre, 43.5
Acetate of potash and lime, 6.0
Phosphate, muriate, and sulphate of potash, 2.0
Silica, 1.5
Oxide of iron, 100.0

According to other analyses, madder contains free tartaric acid. Kuhlmann finds, in the madder of Alsace, red colouring matter, dun-colouring matter, lignous fibre, vegetable acids, mucilage, vegeto-animal matters, (nitrized), gum (4 per cent.), sugar (16 per cent.), bitter matter, resin, salts; the last consisting of carbonate, sulphate, and muriate of potash, carbonates, and sulphate of lime, with silica. The recent researches of M. M. Robiquet, Colin, and Kuhlmann, seem to prove that the differences in the madder dyes proceed from the relative proportions of two distinct colouring principles in madder, which they have called altaiare and xanthine. By digesting the powder of madder in water, and acting upon the jelly-like solution thus obtained, by boiling alcohol, an extract is afforded, which, at a subliming heat, yields the proper red colouring matter of madder, or altaiare. Or the ground madder may be treated directly with alcohol, and to the alcoholic solution, dilute sulphuric acid is added, which precipitates the altaiare in a copious orange precipitate. Altaiare has a golden-yellow hue, is insoluble in water, soluble in alcohol and ether, is precipitated by acids, but not by alkalis, showing distinctly an analogy to resins. The xanthine was obtained from a fawn-yellow matter, soluble in alcohol and water, by precipitation with oxide of lead, washing the precipitate with alcohol, and extricating the colour by sulphuric acid. It has an orange-green tint, and a saccharine taste; alkalis cause it to pass into red, and acids to lemon-yellow. It is inferred by these chemists, that, in those fabrics, which in the tartar tints, the xanthine predominates; while in the violet, it is nearly wanting. From a knowledge of these facts, it becomes easy for a skilful dyer to promote the absorption, by the cloth, of one or other of these colouring principles, or to remove one of them, should both together be attacked. It was published, in the Polytechnic Journal of Dingler for 1827, a process, by a spirituous or vinous fermentation, and an immediate subsequent washing, which gives a perfect result with all the madders of commerce. The madder, penetrated with water, and covered ones merely one inch, ferments in Kunius's tub at sixty to eighty hours, when the whole is transferred into a tub containing a considerable quantity of cold water. Here the madder precipitates, and must be

29
washed with several cold waters. The ordinary madder-red dye is given in the following way:—the yarn or cloth is put into a very weak alkaline bath, at the boiling temperature; then washed, dried, and galled; or, when the calico is to be printed, for this bath may be substituted one of cow-dung, subsequent exposure to the air for a day or two, and immersion in very dilute sulphuric acid. In this way the stuff becomes opened, and takes and retains the colour better. After the galling, the goods are dried, and aluminised twice; then dried, rinsed, and passed through the madder bath. This is composed of three-fourths of a pound of good madder for every pound weight of the goods. The bath is slowly raised to the boiling point in the course of fifty or sixty minutes, more or less, according to the shade of colour wished for. When the boiling has continued for a few minutes, the stuff is taken out, washed slightly, dried, and treated a second time in the same manner, and with as much madder. It is then washed and dried, or passed through a hot soap bath, which carries off the fawn-coloured particles. Other dyes likewise are added to the madder bath, to obtain other shades of colour; for example, a mixture of fuchsin, quercitron, knoporm, the mordants being modified accordingly. Hoelterhoff prescribes for ordinary madder-red, the following proportions:—twenty pounds of cotton yarn, fourteen pounds of Dutch madder, three pounds of gallnuts, five pounds of alum; to which are added, first, one pound and a half of saltpetre, and second, four ounces of chalk. When bran is added to the madder bath, the colour becomes much lighter, and of a more agreeable tint.

Adrianoipe madder-red is given by many distinct operations. The first consists in cleansing or scouring the goods by alkaline baths, after which they are sung and washed, i.e., saponified by the addition of a little carbonate of soda in solution. Infusion of sheep's dung is often used as an intermediate or secondary steep. The operation of oilling, with much manual labour, and then removing the superfluous or loosely adhering oil with an alkaline bath, is repeated two or three times, taking care to dry hard, after each process. The cloth is then dried, powdered, and brightened, for removing the dun-coloured principle, by boiling at an elevated temperature, with alkaline liquors and soap. The whole is often concluded with a roasting by salt of tin.

MADEIRA; an island off the western coast of Africa, belonging to Portugal; lon. 17° W.; lat. 32° 30' N.; square miles 407; population estimated at 100,000. The body of the people are of Portuguese descent, negro slavery not being permitted. The peasants are very poor, rude, and ignorant; the hardest labour is performed by females. The religion is Catholic. The island consists of a collection of mountains, the most elevated of which is 5065 feet high. The lower slopes are covered with vines, the loftier summits with forests of pine and chestnut. A great part of the sides of the hills consists of abrupt precipitous rocks, supposed to be of volcanic formation. Most of the rocks along the coast are composed of a white lava. The productions, besides wine, are wheat, rye, sugar, coffee, mate, kidney-beans, arrow-root, indigo, &c. The principal production is sugar, of well-known excellence. The quantity annually made is about 20,000 pipes, of which two-thirds are exported principally to Great Britain and the British colonies. The best vines grow on the south side of the island. There are several varieties of wines; the best is called Madeira. The particular production is wine made to run wild, acquire a taste of vinous; the rabbit also is very common in the mountainous districts. Bees are very common, and the honey they produce is very delicate. Beggar is common among the peasants, but is considered no disgrace. The Portuguese gentry live in a proud and retired manner, associating little with strangers. In the city, the most opulent part of the inhabitants consists of British merchants, established there for the wine trade. The commerce of the island consists almost entirely in the export of its wines. For vessels stopping at Madeira, provisions and refreshments are exorbitantly dear. Adjacent to Madeira is Porto Santo, a small island, and the Desertas, which, with Madeira itself, compose the group of the Madeiras. Funchal, the capital, with 23,000 inhabitants, is in lon. 17° 6' W.; lat. 32° 57' N. Porto Santo was discovered by Zaro, a Portuguese navigator, in 1416, unless we may believe the romantic story of Macham, an Englishman of obscure condition, who is said to have eloped with a young lady of noble birth, and set sail for France, but was driven to this region. The lady is said to have died in consequence of her sufferings. The Desertas, and the island of future discovery, are very inhospitable.

MADEIRA; a river in South America, large, abundant, and navigable; about 1100 miles long, rising in the mountains of Chuquisaca, in the republic of Peru. It runs an easterly course to Santa rua de la Sierra, with the names of La Plata, Chuquisca, Cachimayo, and Guapay; and, turning to the north, enters the Amazon river, with the name of La Madeira (Portuguese for wood), on account of the vast quantity of wood which it carries down with its current. It abounds in excellent fish.

MADOC; according to a Welsh tradition, a Welsh prince, who, in consequence of some domestic dissensions, went to sea with ten ships and 300 men, in the twelfth century, and discovered land in the ocean far to the west. He made several voyages to and from this unknown land, but finally was lost to the knowledge of his countrymen. The story is to be found in the Welsh Triads, and Hakluyt gives an account of the voyages in his collection. Later travellers have imagined that they had discovered traces of these early emigrants in different parts of the country, and we have had stories of white Indians and Welsh Indians, &c. See Humboldt's Personal Narrative, book ix., note A.

MADONNA {Italian); properly, my lady: thus Petrarch often calls Laura madonna; but now it is more particularly applied to the Virgin Mary, as she is called in other languages, our lady. Many celebrated pictures are known under the name of Madonna, as the famous Madonna di Sisto of Raphael, in the gallery of Dresden.

MADRAS, PResidenCy of; part of the British possessions in Hindoostan, comprehending the whole of the country south of the Krishn, excepting a narrow strip on the western coast and the Northern Circars. A considerable portion of it is governed by native princes subordinate to the British, and protected by the British, and protected by the British force; the rest is under the immediate direction of the governor and council of Madras, and, in 1822, was subdivided into twenty-four districts, with an area of 160,000 square miles.
and a population of 13,677,000. The commerce of this presidency is considerable, compared with that of the others, in consequence of the want of a harbour, and of navigable rivers. Madrid, the capital of the province of Madrid, is the seat of Government. It is 13° 6' N.; lon. 3° 21' E.; 1044 miles from Calcutta, 770 from Bombay, by population, in census, in 1823, 415,751. It consists of fort St George, the Native or Black town, and the European houses in the environs, surrounded by gardens. The heavy surf of the ocean and the rapid current in this part of the gulf, render the landing often dangerous and always difficult. Boats, formed of three planks sewed together, are used for crossing the surf; but in stormy weather, when no boat can venture through it, the native fishermen pass it on rafts called cañamarras. The Black town is an irregular assemblage of brick and bamboo houses, crowded together in narrow and dirty streets, inhabited by Hindoos, Mohammedans, Armenians, Portuguese, and other Europeans engaged in the company's service. The houses of the Europeans are generally of but one story, surrounded with verandas; wet mats of cloth are placed before the windows in the rainy season, to perfume and cool the apartments; the heat is therefore excessive. Besides some literary and charitable institutions, Madrid contains the government houses, and is the seat of the supreme court of the presidency.

MADRID: the capital of Spain, is situated in New Castle, and in a province of the same name, on the Manzanares, near the centre of the kingdom, about 200 miles from the sea; 650 miles S. W. of Paris, 350 W. by S. of Rome; lon. 3° 38' W.; lat. 40° 25' N.; population, by census in 1823, 301,344, including strangers. It is built on several eminences, and is 2200 feet above the level of the sea, being the most elevated capital in Europe. Seen at a distance, it presents nothing that announces a great city, and, the environs being destitute of wood, and even of vines, while most of the villages are in hollows, the prospect is uncommonly dreary. On drawing near, the prospect is more cheerful. The city is of an oblong form, about six miles in circuit, surrounded by a high earthen wall, but has no ditch, or any other means of defence. The old streets are narrow and crooked, but many others are wide, straight, and handsome. They are paved, kept clean, and lighted. The city has 15 gates, 42 squares, mostly small, 56 streets, 16 churches, and 18 hospitals, 65 public edifices, 17 fountains, and several promenades, among which the Prado is the principal. The private houses are uniform, generally low, with grated windows, and have little striking in their exterior. The churches are less magnificent than in several other cities in Spain. There are two palaces on a large scale—the Palacio Real at the western extremity, and the Buen Retiro at the eastern. The Palacio Real is of a square form, extending each way 404 feet, 86 feet high; the enclosed court 120 feet square. It is strongly built, the exterior elegant ornamented, and contains a collection of paintings of the best masters of Painting, with cabinets, and 18 libraries. The royal library contains about 130,000 volumes, and 2000 manuscripts. The great school of Madrid has sixteen masters, who teach the various arts and sciences. There is another seminar, on an equally extensive plan, for the sons of the nobility and gentry. There is also a special chair for the study of the several fine arts, a botanical garden, and a variety of charitable institutions. Madrid is the Mantua Carpenatorum of the Romans, and the Majoritum of the middle ages. Philip II. first made it the capital of the kingdom, on account of its central position. It was occupied by French troops in 1808, and was the residence of Joseph Bonaparte until 1812. It was afterwards occupied by the British. In the French expedition into Spain in 1823, it was again entered by the French, under the duke d'Angouleme. See Spain.

MADURÁ: a territory celebrated in the Hindoo mythology, now forming a part of the Madras presidency. The capital, of the same name, contains the vast palace of the ancient rajahs, now going to decay, with its lofty dome, ninety feet in diameter, and the Great Temple, one of the most remarkable monuments of Hindoo architecture, with its four gigantic porticoes, each surmounted with a pyramid of ten stories. Mahadeva, under the mystic form of the lingam, is the principal object of adoration. Among other remarkable places in this territory is the island of Rameswara (the Lord Rama), separated from the main land by a narrow strait, across which stretches a line of rocks called Adam's bridge. Rama, seized with compunction for the slaughter of the Brahmins in his wars, here set up the holy lingam. MAUNDER, now MEINDER; a river of Asia Minor, which takes its rise in Phrygia, on mount Eburnus: it forms the boundary between Caria and Lydia, and flows into the Egean sea between Priene and Miletus. It was celebrated among the ancients for its winding course. The name was thence transferred to the intertwined purple borders on mantles and other dresses, as well as upon urns and vases; hence, figuratively, meandering paths, meandering rivers; that is, artificial turns and circumlocations, &c.

MÆCENAS, C. CINNIUS, the favourite of Augustus, and patron of Virgil and Horace, traced his genealogy from the ancient Etrurian kings. He has been described as a pattern of every political virtue, and a most generous patron of the sciences. He was never, in fact, however, a public minister; for even the office of prefect of Italy and Rome, which he held after the victory at Actium, was only a private trust; and the notions which are entertained of him as the protector of the learned, and which have made his name proverbial, seem to be very much exaggerated. His Staff in Spain was the Manutus Carpenatorum of the Romans, and the Majoritum of the middle ages. Philip II. first made it the capital of the kingdom, on account of its central position. It was occupied by French troops in 1808, and was the residence of
not a man of great qualities; but he well understood how to employ the favours of fortune. Without strong passions and a lofty ambition; endowed with a fine taste and a sound judgment; prudent, and cool enough to do whatever he did rightly and thoughtfully, and skilful in employing others for his own purposes; careful in the choice of his intimate friends, but faithful and constant after he had once chosen them; and, if necessity required, capable of any sacrifice;—these qualities gained him the confidence of Augustus, which he enjoyed undiminished till his death. Augustus used to banter him on his effeminacy, his love for curiosities, precious stones and gems, his affecion in mixing old Etruscan words with Latin, and making new words. In return, Macenas ventured to make use of great freedom, or rather of severity of expression, as, for instance, during the triumvirate, when Octavius, in the ardour of his passions and the sense of death, Macenas presented him his tablets with the words, "Surge tandem, carnifex!" (Rise, executioner!)—a reprimand which produced its effect; and Octavius did not take offence at it.

When Augustus consulted with Agrippa and Macenas, whether to retain or resign the supreme power, Macenas, in opposition to the advice of Agrippa, urged him to retain it. Thus he proved, that he preferred the profitable to the honourable. Macenas appears less worthy of esteem as a private man. He had a palace, in the form of a tower, on the Esquiline hill, which was surrounded with splendid gardens. Here, at the close of the civil wars, being about forty years old, he resigned himself to indolence, luxury, and frivolous pleasures. Of all spectacles, he was most fond of the pantomime dance, which he himself introduced into Rome. Bathylus (q. v.), who was famous for his beauty, and his skill in this exhibition, was his favourite. He was no less fond of the beauty of the palaces. His indolence betrayed itself in his dress, in his gait, in his manners, and even in his style. He died in the year of Rome 745. His writings are mentioned by Seneca, Isodorus, and others; but none of them are extant.

MAELSTROM, or MOSKOE-STROM; a whirlpool in the North sea, near the island of Moskoe. In summer, it is but little dangerous, but is very much so in winter, especially when the north-west wind restrains the reflux of the tide. At such times, the whirlpool rages violently, so as to be heard several miles, and to engulf small vessels, and even whales, which approach it.

MÉNADÉS (from menein, I am mad); a name applied to the Bacchusians, the priestesses of Bacchus.

MÉONIDES. (See Homer.) The Musae were likewise sometimes called Mæonides, because Homer was viewed as their greatest favourite.

MÉOTIS. Pâtes Meotis is the name given by the ancients to what is now called the Sea of Azoph. See Azoph.

MAESE. See Meuse.

MAESTRICHT. See Maestricht.

MAESTRO; the Italian for master, and not usually used in maestro di capella, chapel-master. Maestro del coro is the usual term for the general censor of books and the pope's confessor, a Dominican.

MAFFEI; a celebrated Veronese family, which has produced many eminent men.

1. Alessandro (marquis), born 1602, served under Maximilian Emanuel, in the campaign against the Turks and the French, distinguished himself in the war of the Spanish succession, and, after the victory of Belgrade (1717), was made field-marshal, and died at Munich, 1730. The memoirs which appeared under his name (Verona, 1727), were written by his brother, Scipio.

2. Bernardino, born at Padua, created cardinal at the age of thirty-five, died at the age of forty. He possessed a large collection of coins, of which he made use in his lost History from Meda. See Verona, 1727.

3. Francesco Scipio (marquis), born at Verona, 1675, studied in the Jesuits' college at Parma, and went to Rome in 1698, where he devoted himself to poetry, and was received into the Arcadia. He afterwards entered the military career, served under his brother, Alexander, in the Spanish succession war, and, in 1704, was present at the battle of Donauworth as a volunteer. His literary taste soon recalled him to Italy, where he wrote his Della Scienza chimica Cavalleresca—a work full of learned research into the usages of the ancients in settling private quarrels, and in which he maintains that the laws of nations are governed by reason, and the welfare of society. To improve the condition of Italian literature, the decline of which he lamented, he undertook, in connexion with Apostolo, Zeno, and Vallisneri, the publication of a periodical, the object of which was to criticise native works, and make his countrymen acquainted with foreign literature. At the same time, he directed his attention to the Italian drama, which he enriched by his Teatro Italiano—a collection of the best comedies and tragedies (3 vols., 1723)—and by his original tragedy of Merope. (See Italian Theatre, in the article Italy. This production, although only a judicious essay towards uniting the Greek and French tragedy, met with the most brilliant success. His comedy La Ceremonia was also brought upon the stage with applause. To revive the study of the Greek language, which was much neglected by his countrymen, he invited skilful teachers to Verona, whom he supported at his own expense. The discovery of the sacred books of the Hebrews, and a feeling for the central of his native city, gave his learned labours a new turn, one of the results of which was Verona Illustrata (1731). Maffei's reputation had now extended to foreign countries, and, in 1732, he set out on a visit to France, Britain, Holland, and returned by the way of Vienna, where he was received in the most flattering manner by Charles VI. He died in Verona, in 1755, and a monument is there erected to his memory. Among his numerous works, the most important, besides those already mentioned, are Rime e Prose (1710); Istoria diplomatica; Museum Veronense, and other writings relative to his native city. His complete works appeared at Venice (1790, 21 vols., 4to).
ness of research or acuteness of judgment. He died at Tivoli, 1603.

5. Paolo Alessandro, born at Volterra, 1653, died in Rome, where he lived and worked from 1716. He was an enthusiastic lover of museums and cabinets, and acquired an extensive knowledge of ancient works of art. His principal works are Raccolta di Statue Antiche e Moderne (Rome, 1704), and an edition of Agostini's Glimps Antiche, which he enriched with valuable notes and additions; it is less prized by connoisseurs than the old and scarce edition of 1657, which is remarkable for the beauty of its engravings.

6. Raphael, called also Raphael of Folter, born at Volterra, in the middle of the fifteenth century, died there in 1522. His chief work is Commentarii Rerum Urbanarum Libri xxviii (Rome, 1550), of which the first twenty-three books contain geographical and biographical treatises; the remainder is a general view of the state of knowledge at that time.

MAFRA; a town of Portugal, province of Estremadura, six leagues north-west of Lisbon, containing a magnificent palace, erected by John V. It is constructed of marble, and is nearly a square of 728 feet. The church is placed in the centre of the fabric, having the palace on one side and the convent on the other. It was begun in 1717, and finished in 1742. A beautiful park and fine gardens are attached to it. The kings of Portugal have often resided here. The palace includes a college, which has an annual revenue of 40,000, or 50,000 volumes, and a fine mathematical apparatus. Population, 2,800. See Murphy's splendid work, published in London, in 1791, the text of which is by Luis de Sousa.

MAGADOXO, MAGADOSHO, or MAKDI- SHO; a kingdom of Africa, situated on the coast of the Gulf of Guinea, opposite to the river Juba, near the equator, to beyond the fifth degree of north latitude. How far it extends to the westward, is not known. It has its name from its capital, situated in a large bay, formed, as has been said, by the mouth of the river of the same name, which is called by the Arabs the Nile of Magadoxo, by reason of its annual overflowing. Owen's chart (1827) lays down the river between the Juba and 8° north, an extent of 500 miles. The city of Magadoxo is a place of great commerce, and vast resort from the kingdoms of pond, and other parts; whence their merchants bring cotton, silk, and other cloths, spices, and a variety of drugs, which they exchange with the inhabitants of the coast, for gold, ivory, wax, and other commodities. It is chiefly inhabited by Mohammedans. The town is situated in lon. 45° 19' E.; lat. 2° 1' N.

MAGALHAENS, or MAGELLAN, FERNANDO DE; a famous Portuguese navigator, who discovered the straits at the extremity of South America, and conducted the first expedition round the world. He served under Albuquerque in the East Indies, and distinguished himself, especially at the taking of Malacca, in 1510. He afterwards entered into the service of Spain, and was intrusted, by Charles V., with the command of a fleet destined to explore a passage to the Moluccan islands, by passing westward. The voyage was commenced September 20, 1519. About the end of October, 1520, he entered the straits since called after his name, and, on the 27th of November, discovered the Pacific ocean. Continuing his course, he arrived at the Ladrone islands, and subsequently at the Philippines, on one of which he lost his life in a skirmish with the natives, in 1521.

MAGAZINES. See Periodicals.

MAGDALEN, or MARY OF MAGDALEA, a city on the lake of Galilee, in Palestine, by an old erroneous interpretation, is confounded with the sister mentioned in Luke vii., whose name is not given, and who, on account of her repentance and trust in Christ, was assured by him of the forgiveness of her sins. The history of her conversion from a licentious life, early bound together, and formed a religious order, under the protection of St Magdalena, which existed in Germany before 1215; and similar institutions arose about the same time in France, Italy, and Spain. In France, they termed themselves Madeclonettes. They adopted the rules of St Augustine, and formed various congregations, distinguished by the colour of their dress (white, gray, or black), and by the different degrees of strictness in their mode of life. This order, which admitted, at first, only courtesans and females who had lost their honour, has spread into both Indies; and, although the members of it were only bound to social exercises of devotion, and did not apply themselves to useful offices, and have, moreover, departed from their ancient character by the reception of virtuous women, yet the institutions continue till the present day. The Catholic Mag- dalen establishments now remaining in Protestant countries, have been obliged to devote themselves to the care of the sick; such as that at Lauban, in Upper Lusatia.

Magalen Societies, so called from the view of the character of Mary Magdalena already given, have also been established, of late years, to afford a retreat to penitent prostitutes, and enable them to pursue the work of their own reformation. Such a society was established in London, in 1758, principally by the exertions of the Rev. Mr. Adams, who, from the year 1749 to 1776, was in charge of a congregation of between 4000 and 5000 abandoned women have enjoyed the benefits of the establishment, and have been restored to their families and society. By far the greater number of those who have been protected here have subsequently continued respectable and correct in their behaviour. No female who has conducted herself with propriety in the house, is allowed to leave it unprovided for. Similar societies also exist in some other of our principal cities.

MAGDALENA, a large river of South America, rises from lake Pampas, in the Colombian province Cundinamarca, receives many other rivers, and falls, after a course of 900 miles, by two branches, into the Caribbean sea. It contains numerous tributaries. It gives name to a department of Columbia. There is another river of the same name in Texas.

MAGDALENE ISLANDS; a cluster of islands, seven in number, situated in the gulf of St Lawrence, about forty-two miles north-west from the island of Cape Breton. They are thinly inhabited by fishermen. Lon. 61° 40' W.; lat. between 47° 13' and 47° 42' N.

MAGDEBURG, one of the most important forresses of Germany, and, from the time of Charle- magne, of considerable commercial interest, capital of the former Duchy, and present Administrative Government of the same name, in the province of Saxony, is situated on the left bank of the Elbe, which is crossed by a wooden bridge, about ninety-five miles from Berlin; lon. 11° 38' E.; lat. 52° 8' N.; with 36,000 inhabitants, exclusive of the garrison. Magde- burg, with her sixteen bastions, extensive works, etc., forms the strongest fortification in the kingdom, and commands the middle Elbe. The Gothic cathed- ral is worthy of notice. Magdeburg has two excel- lent gymnasium, many other establishments, and considerable transit trade between the coasts and the interior of Germany, with some manufactures,
In 1743, a canal was constructed uniting the Elbe and Havel, and, therefore, the Elbe and Oder. Magdeburg was the favourite residence of Otho I. The town took an active part in the reformations. It was invested by Frederick I. on May 20 (10), 1631, by the Catholic generals Tilly and Pappenheim, and was the scene of great cruelties. In 1806, it was dishonourably surrendered, by general Kleist, to Ney, after the battle of Jena. By the peace of Tilsit, it was ceded to France, which annexed it to the kingdom of Westphalia, and, by the peace of Paris, it was restored to Prussia. Carnot lived here, and in banishment as a regicide, and died here.

MAGDEBURG—CENTURIES OF Magdeburg.

MAGELLAN, See Magalhaens.

MAGELLAN, STRAITS OF; the passage between the Atlantic and Pacific oceans, at the southern extremity of the continent of America; upwards of 300 miles in length, from cape Virgin, in the Atlantic, to cape Desire, in the Pacific ocean, in some places several leagues over, and in others not half a league. The passage through these straits is difficult and dangerous. Lon. 70° to 77° W.; lat. 55° 30' to 54° S.

MAGELLANIC CLOUDS; whist appearances, like clouds, seen in the heavens towards the south pole, and having the same apparent motion as the stars. They are three in number, two of them near each other. The largest lies far from the south pole; but the other two are about 11° distant. They may be multitudes of stars, like the Milky Way.

MAGELLON THE BEAUTIFUL; the name of an old French novel, reproduced in various forms, in many languages, probably composed in the eleventh or twelfth century, by a Provencal minstrel. Magelonna was the daughter of the king of Naples; Peter, son of the emperor of the Pehli language, Persch, is said to have given the present form to the novel, its title is L’Histoire du noble et vaillant Chevalier Pierre de Provence et aussi de la belle Magellone, Fille du Roy de Naples (1496, 1524, 1625). There are other editions, without year and place. The duke of Marlborough paid, in 1813, for a copy in folio, £22 ls. Lope de Vega made use of the subject in his drama, the Three Diamonds. See Millin’s Voyage en France, vol. iv, p. 354; also Gorres’s Deutsche Volksbucher.

MAGGIORE, LAKE. See Lake Maggiore.

MAGIANS (Magi) derive their name from mag or mages, an ancient thing among the Pehli languages. (See Indian Languages.) They were the caste of priests with the Persians and Medesians. They were in exclusive possession of scientific knowledge. As sacrifices and prayers could be offered to Ormuz only through them; as Ormuz revealed his will only to them, and they therefore could pray into futurity; in short, as they were considered mediators between the people and the Deity—they necessarily possessed great authority, which they abused. Zoroster was their reformer. He divided them into learners, teachers, and perfect teachers. For the doctrine of Zoroster, see the article.

MAGIC. Men, as soon as they began to observe the phenomena around them, could not help seeing the close connexion which exists between man and external nature. When the sun sets, he wants rest, and sleep approaches with night; atmospheric changes affect his health; certain wounds become painful with the change of weather, or at certain phases of the moon; strange passions are often felt in the presence of particular animals (see Antipathy); certain liquids exhilarate, others destroy life. Such and similar observations, combined with many of an erroneous and exaggerated character, springing from credulity and ignorance, soon led men to treat this mysterious connexion of man and nature, and the influence of things or causes without him, upon his mind and body, as a peculiar knowledge. The different occupations and manners of the ancients, were necessarily divided, of course belonged to the priests, whose exclusive possession of knowledge made them the guides of men in science and the arts as well as in religion. This is considered, by some, the natural origin of supernatural magic; others, on the contrary, believe that there once actually existed a deeper knowledge of the powers and influences of nature, transmitted from earlier and purer ages, but lost with increasing folly and guilt; and others believe that men once possessed the means of producing supernatural effects with the assistance of evil spirits, as those particularly gifted by Providence were able to produce supernatural effects with the assistance of God. Main, the eternal mother of things, is, in the Indian mythology, the goddess of intellectual as well as of sensual love. In another signification, she is the muse, the goddess of prophecy and poetry, and also of deception; and the word magie seems to be connected with this root, of so various, and especially conjurations. The Magi, Pers; and the neighbou ring countries, famous for their knowledge of astronomy and astrology, are described as the chief seats of the ancient magi, whose doctrine seems to be, in part, of great antiquity. This doctrine represented opposition or strife as the parent and original cause of all things. After the opposition between light and darkness, Ormuz and Ahriman, was established, the whole series of finite beings, the whole sensual world, proceeded from this constant struggle of light and darkness, good and evil. The change of day and night, light and darkness, the whole series of ages, time itself, is only a consequence of this struggle, and the darkness, light, sometime lordly, sometimes servile, appears victorious, until finally light shall conquer for ever. If all finite things stand under the influence of preserving and destroying powers in nature, it is clear that he who could master these powers could dispose, at his pleasure, of the things subject to them; and the doctrine of the Magians was, that, by prayer and a true knowledge of those laws of opposition, love and hatred, light and darkness, such power could be obtained; and thus, also, it was possible to pry into futurity. But it was believed that as the world became sinful, the light of the ancient doctrine of the magi was obscured, and those who bore the name became, at last, only strange things, things or words in the languages (See Indian Languages.) They were the caste of priests with the Persians and Medesians. They were in exclusive possession of scientific knowledge. As sacrifices and prayers could be offered to Ormuz only through them; as Ormuz revealed his will only to them, and they therefore could pray into futurity; in short, as they were considered mediators between the people and the Deity—they necessarily possessed great authority, which they abused. Zoroster was their reformer. He divided them into learners, teachers, and perfect teachers. For the doctrine of Zoroster, see the article.

MAGIC. Men, as soon as they began to observe the phenomena around them, could not help seeing the close connexion which exists between man and external nature. When the sun sets, he wants rest, and sleep approaches with night; atmospheric changes affect his health; certain wounds become painful with the change of weather, or at certain phases of the moon; strange passions are often felt in the presence of particular animals (see Antipathy); certain liquids exhilarate, others destroy life. Such and similar observations, combined with many of an erroneous and exaggerated character, springing from
MAGIDASchein, who contains the history of numerous
sentiments, doctrines; see also Creuzer's Symbolik und
Mythologie, especially the chapters on October, Astrology,
Alchemy, and Magic, (in German, Frankfurt, 1815); also, George Conrad Horst, On Ancient
and Modern Magic, its Nature, Origin, and History
(in German), with his Zauberbibliothek (6 vols.,
Menz, 1820—25). See Divination, Demon, Witch-
craft.

MAGIDASchein: See Mindanao.

MAGISTER ARTIUM. See Master of Arts.

MAGISTER EQUITUM. See Master of the
horses.

MAGISTER MATHEOS. See Pythagoras.

MAGISTER: a public civil office, invested
with the executive government or some branch of it.
Thus, in monarchical governments, a king is the
highest or first magistrate. But the word is more
particularly applied to subordinate officers, as govern-
nors, intendants, prefects, mayors, justices of the
peace, and the like. In Athens, Sparta, and Rome,
the chief magistrates were as follows: From Cecrops
to Codrus, Athens had seventeen kings; from Melen
to Alcmeon, thirteen archons for life; from Charops
to Eryxias, thirteen decennial, and from that time,
annual archons. The democracy established by
Solon was changed into a monarchy by Pisistratus,
who was succeeded by his sons Hippias and Hippias
the Younger. The ancient democracy was then restored,
but was interrupted for a year, after the unhappy
issue of the Peloponnesian war, by the domination
of the thirty tyrants, and, for a short time, by that of
the demicviri. Under the Macedonian kings, and
afterwards under the Romans, except at intervals,
the freedom of Athens was only a name: and Antipater
decreed that 9000 of the principal citizens should
administer the government, and Cassander made
Demetrius Phalereus prefect of the city. In Sparta,
the magistrates were king, senators, ephors, &c. Chosen
by a majority of suffrages, they held their
offices, some, as the kings and senators, for life,
others for a limited time. Among the Romans, there
were different magistrates at different times.
The first rulers were elective kings. After the expulsion
of Tarquin the Proud (in the year of the city 244,
B. C. 510), two consuls were elected annually to
administer the government. A King was but a
danger, a dictator was appointed, with unlimited
power, and, in case of a failure of all the magistrates,
a perpetual dictator succeeded. This course continued,
with occasional interruptions, till the year of the city 679,
or B. C. 51, when Sylla assumed the supreme power,
as perpetual dictator. After three years, however,
he voluntarily laid aside his authority, and the con-
sular government lasted till Julius Cæsar caused
himself to be declared perpetual dictator, B. C. 49.
From this time, the consular power was never entirely
restored. Soon after the assassination of Cæsar, the
triunvi, Octavius, Lepidus, and Antony, assumed
a still more absolute sway; and Octavius finally be-
came chief ruler of the Roman empire, under the
title of princeps or imperator. He retained
the magistrates of the republic only in name. In
the beginning of the republic, the consuls seem to have
been the only regular magistrates. But, on account of
the constant wars, which required their presence in
the field, the various other magistrates were ap-
pointed, as pretors, censors, tribunes of the people,
&c. Under the emperors, still different offices
were created. The Roman magistrates were divided
into ordinary and extraordinary, higher and lower,
curule and non-curule, patrician and plebeian, civic and
equals; and, in the year 354 (B. C. 497), that
between civic and pro-
vincial, when the Romans extended their conquests
beyond the limits of Italy. The ordinary magistrate
were divisi, and, in the exercise of their
functions, belonged the consuls, pretors, and censors; to
the latter, the tribunes of the people, ediles, questors
(q. v.), &c. The most important extraordinary magis-
trates were the dictator, with his master of horse,
and the interrex. The difference between curule and
non-curule magistrates depended on the right of
using the curule chair, which belonged only to the
dictator, consuls, pretors, censors, and curule ediles.
During the republic, magistrates were chosen at the
comitia, particularly in the centuriata and tributa; in
the former, the higher ordinary authorities
were chosen, and, in the latter, the lower ordinary authorities.
Under the emperors, the mode of the election of
magistrates is uncertain.

MAGLIABECCHI, ANTONIO: a learned critic,
who was librarian to the duke of Tuscany, celebrated
alike for the variety of his knowledge and the
strength of his memory. He was born at Florence,
in 1633, and, in the early part of his life, was engaged
in the employment of a goldsmith, which he re-
linquished to devote himself to literary pursuits. He
was assisted in his studies by Michael Ermini, li-
brarim to cardinal Leopold de Medici, and other
literati residing at Florence. Through unremitting
application, he accumulated an extraordinary
library, the property of which made him the wonder of his age. Duke
Cosimo III. made Magliabechi keeper of the library
which he had collected, and gave him free access to
the Laurentian library, and the Oriental MSS.; of
the latter collection he published a catalogue. His
habits were very eccentric. His attention was
wholly absorbed by his books; among which he took
his rest and his meals, dividing his time between
the ducal library and his private collection, interrupted
by the visits of persons of rank or learning, attrac-
ted towards him by the report of his extraordin-
ary endowments. He left no literary work deserving
of particular notice; but he freely afforded informa-
tion to those authors who sought his assistance in
their own undertakings. Notwithstanding his seden-
tary mode of life, he was eighty-one years old when
he died, in July, 1714. See Spence's Parallel be-
tween R. Hill and Magliabechi.

MAGNOLIAE, the generic name of a large
family of trees; the Great Charter of Liberties, extorted from king John,
in 1215. (See John.) The barons who composed the
Army of God and the Holy Church, were the whole-
nobility of England; their followers comprehended
all the yeomanry and free peasantry, and the accu-
sion of the capital was a pledge of the adherence
of the citizens and burgesses. John had been obliged
to yield to this general union, and June 15, both en-
camped on the plain called Runnymede, on the
banks of the Thames, and conferences were opened,
which were concluded on the 19th. The preliminaries
being agreed on, the barons presented heads of their
articles, which were carried away by the force of
the nature of the bills now offered by both houses for the royal assent.
The king, according to the custom which then and
long after prevailed, directed that the articles should
be reduced to the form of a charter, in which state
it issued as a royal grant. Copies were immediately
sent to every county or diocese, two of which are yet
preserved in the Cottonian library in the British
museum. To secure the execution of the charter,
John was compelled to surrender the city and Tower
of London, to be held by the barons till August 15, or
until he had completely executed the charter. A
more rigorous provision for securing this object is
that by which the king was enjoined, that he should choose twenty-five of their number, to be
guardians of the liberties of the kingdom, with power,
in case of any breach of the charter, and the delay or denial of redress, to make war on the king, to seize his castles and lands, and to distress and annoy him in every possible way (saving only the persons of the royal family), till justice was done. Many parts of the charter were pointed against the abuses of the past and against the tyrannical exercise of the provisions of the forest laws was checked, and many grievances incident to feudal tenures were mitigated or abolished. But beside these provisions, it contains many for the benefit of the people at large, and a few maxims of just government, applicable to all phases and times, of which it is possible to designate the importance of the first promulgation by the supreme authority. “No scutage or aid shall be raised in our kingdom (except in three given cases) but by the general council of the kingdom.” This principle, that the consent of the community is essential to just taxation, has been the basis of the British constitution. The thirty-ninth article contains the celebrated clause which forbids arbitrary imprisonment and punishment without lawful trial: “Let no freeman (nullus liber homo) be imprisoned or disseized, or outlawed, or in any manner injured or proceeded against by us, otherwise than by the legal judgment of his peers, or by the law of the land, delay, or deny right or justice to none.” This article contains the writ of habeas corpus (q. v.) and the trial by jury, the most effectual securities against oppression, which the wisdom of man has devised, and the principle that justice is the debt of every government, which cannot be paid without rendering it safe, prompt, and equal. The twentieth section is hardly less remarkable:—“A freeman shall be amerced in proportion to his offence, saving his contingent, a merchant saving his merchandise, and the villain saving his wagoneage.” The provision which directs that the supreme civil court shall be stationary, instead of following the king’s person, is an important safeguard of the regularity, accessibility, independence, and dignity of public justice. Blackstone has given an edition of the Charter, with an introduction, in his Law Tracts. See also the histories of Hume and Mackintosh.

MAGNEAN INSTITUTE; founded by professor Aaccineus, 1837, for the publication of Icelandic manuscripts at Copenhagen.

MAGNA GRÆCIA; the southern part of Italy, which was inhabited by Greek colonists. D’Anville bounds it, on the north, by the river Silar or Selo, which empties into the gulf of Patam. But it seems more natural to annex Campania to it, and to take for the boundaries on the one side, the Vulturum, where the territory of Cumæ ceased, and on the other the Frento or Furtor, which forms the boundary of Apulia, and flows into the Adriatic, as the Grecian colonies reached to that point. The tribes, indeed, which had emigrated into Italy from the north, in the earliest times, were spread through all Italy, but are always confined by the Apennines to the interior of the country. Several centuries after, Greeks came hither, began to build cities on the unoccupied coasts, and intermingled by degrees with the inhabitants of the interior. The foundation of these Grecian colonies was unquestionably after the destruction of lord paramount; the Athenians, Achæans, Eubœans, &c., with some Trojans, repaired hither. According to Dionysius of Halicarnassus, the followers of Æneas were scattered through the different parts of Italy. Some landed in Iapigia, others retired to both sides of the Apennines, and founded cities. These, and the Romans sent colonies to Calabria, and partly in that way, partly by conquest, became (272 B. C.) masters of all the Greek colonies. The Greek was no longer the sole language in Calabria; the Latin was also spoken; and an intermixture of the Grecian and Roman manners and usages took place, which is yet perceptible. Magna Graecia comprised the provinces of Campania, Apulia, Iapigia, Lucania, and Bruttii. The most celebrated of these were Bari, Sybaris, Crotona, Posidonia, Locri, and Rhegium.

MAGNATES (in low Latin, the Great) was formerly in Poland, and is still in Hungary, the name applied to the noble estates, who took part in the administration of the government. In Poland, they were the royal and temporal sovereigns, or the counsellors and high nobility. Among the senators were reckoned the archbishop of Gnesen, and formerly the archbishop of Lemberg, the bishops, waywodes, the castellans, and royal officers or ministers. In Hungary, the barons of the kingdom are considered as Magnates. These are—1. the greater; to wit, the Palatine, royal and court judges, the Ban or governor of Croatia, Selavonia, and Dalmatia, the treasurer and the highest officers of the court; 2. the smaller, or counts and barons. To the prelates, inferior nobles and royal free towns, this denomination does not extend.

MAGNESIA; one of the earths, having a metallic basic called magnesiam. It exists in nature, under various states of combination, with acids, water, and other earths, and is found in various mineral springs, and the water of the ocean, united with sulphuric and muriatic acids. It may be obtained by pouring into a solution of its sulphate a solution of subcarbonate of soda, washing the precipitate, drying it, and exposing it to red heat. It is usually procured in commerce, by acting on magnesian limestone with the impure muriate of magnesia, or bittern of the sea-salt manufactories. The muriatic acid goes to the lime, forming a soluble salt, and leaves behind the magnesia of both the bittern and the lime; or the bittern is decomposed by a crude subcarbonate of ammonia, obtained from the distillation of bones in iron cylinders. Muriate of ammonia and subcarbonate of magnesia result. The former is evaporated to dryness, mixed with chalk, and sublimed. Subcarbonate of ammonia is thus recovered, with which a new quantity of bittern may be decomposed. It is often crystallized cold for complete decomposition, 56 of subcarbonate of potash, or 44 dry subcarbonate of soda, and yield I6 of pure magnesia after calcination. Magnesia dissolves very sparingly in water, requiring 5142 times its weight of water at 60°, and 36,000 of boiling water, for solution. The resulting liquid does not change the colour of violets; but when pure magnesia is put upon moistened turmeric powder, it causes a brown stain. It possesses the still more essential character of alkalinity in forming neutral salts with acid in an eminent degree. It absorbs both water and carbonic acid, when exposed to the atmosphere. It is inflammable, except in the compound blowpipe. The salts of magnesia are in general very soluble, and crystallizable, and possessed of a bitter taste. The Carbonate is prepared for medicinal use, by dissolving equal weights of sulphate of magnesia and carbonate of potash, separately, in twice their weight of water; mixing them together, and diluted with a part of warm water; the magnesia attracts the carbonic acid, and the compound, being insoluble, is precipitated, while the sulphate of potash that remains continues in solution. The mixture is made to boil for a few minutes; after cooling a little, it is poured upon a filter; the clear fluid runs through, and the warm water; the compound of magnesia is washed with water till it is tasteless. When the process is conducted on a
large scale, the bitter or liquor remaining after the crystallization of sea-salt, which is principally a solution of muriate and sulphate of magnesia, is substituted for the purify sulphate; and from this solution, allowed to evaporate spontaneously, the carbonate of magnesia is deposited in small prismatic crystals, which are transparent and effervescent.

MAGNESIA. 617

In calculus, which consists of phous fusion, may averts as such, and affects it; but it is dissolved; and from the solution allowed to evaporate spontaneously, the carbonate of magnesia is deposited in small prismatic crystals, which are transparent and effervescent.

Nitrate of magnesia has a taste bitter and acrid. Its crystallization exhibits a mass of needle-like crystals, deliquescent, soluble in half their weight of water at 60°.

Sulphate of magnesia, generally known by the name of Epsom salt, is made directly by neutralizing dilute sulphuric acid with carbonate of magnesia; but in the large way, by the action of dilute sulphuric acid of magnesian limestone, and the native carbonate of magnesium. It is prepared as a saline, bitter, and nauseous taste. It crystallizes readily in small quadrangular prisms, which effervesce in a dry air. It is obtained also in larger six-sided prisms, terminated by six-sided pyramids. Its primary form is a right rhombic prism, the angles of which are at nearly 30°. It is a compound of equal parts of equal weight of water at 60°, and in three-fourths of its weight of boiling water. It undergoes the watery fusion when heated. On mixing solutions of sulphate of magnesia and sulphate of potash in atomic proportion, and evaporating, a double salt is formed, which consists of one equivalent of each of the salts, and six equivalents of water. A similar double salt (isomorphous with the preceding) is formed by spontaneous evaporation from the mixed solutions of sulphate of ammonia and sulphate of magnesia.

Phosphate of magnesia, formed from the combination of the acid and the earth, crystallizes in prisms, which are efflorescent, soluble in about 15 parts of cold water, and which, by heat, melt into a glass. A triple phosphate of magnesia and ammonia exists, which is formed by adding phosphoric acid with ammonia, in excess, to a magnesian salt. It is insoluble, and is precipitated in a soft white powder of a pleasant odor. The mode of forming minute calculus, and its formation affords one of the best tests for the discovery of magnesia.

Muriate of magnesia has such an affinity to water, that it can be obtained in acicular crystals only by exposing its concentrated solution to sudden cold.

Chloride of magnesia may be formed in the same manner as chloride of lime. Chloride of magnesia may be obtained by heating the magnesia in chlorine gas, when the oxygen escapes, and the chlorine combines with the metal. It has the same bleaching power, and it has been proposed to apply it to the same purpose. When the chloride of lime is used, a small quantity of lime is left on the cloth: this, in the last operation of washing the cloth with water acidulated with sulphuric acid, is converted into sulphate of lime, which, being insoluble, remains, and affects the colours, when the cloth is dyed. The advantage of employing the chloride of magnesia is, that, if used in small quantities, it is used as soluble as to be easily removed by washing. Magnesia is a very useful article of the materia medica. It is used as an antacid and cathartic. It is, however, nearly inoperative, unless there is acid in the stomach, or unless acid is taken after it. The carbonate is formed from the carbonate of iron, which is the necessity of the preparations of magnesia; but the pure earth, sold under the name of calcined magnesia, is sometimes preferred; it is liable, however, to form large and dangerous accumulations in the bowels, of several pounds weight, when its use has long been persevered.

MAGNESIUM. Of these, the hydrate of magnesia, or native magnesia, deserves to be mentioned in the first instance. It is a rare substance, having hitherto been met with only at two localities —Swinesand in Ust, one of the Shetland Isles, and Hoboken, in New Jersey; in the latter place, occurring in thin seams, traversing serpentine; it exhibits a lamellated, or broad column structure; but it is rarely found inia. In acid, it is dissolved without efficiently, and consists of 70 magnesia, and 30 water.

The siliceous hydrate, or Deveyelite, is a compact, white, or yellowish-white mineral, found in the New Jersey and New York district of the United States. It is found in New Jersey, Hoboken, Maryland. It has a hardness between calc-spar and fluor, and is composed of silica 40, magnesia 40, and water 20. It appears to be identical with the kerolite of Breithaupt.

Carbonate of magnesia, or magnesite, is found in the form of large rough nodules or masses, in the shape of crystals, tuberose, and massive; fracture, when massive, flat conchoidal. It also occurs pulverulent; fracture flat conchoidal, sometimes earthy; dull; colour yellowish-gray; cream-yellow, yellowish and grayish-white; streak white; opaque; adheres to the tongue. Some of the compact varieties are very tough, given off with the steel, though too soft to impress floor; specific gravity 2:508. It is infusible before the blow-pipe; dissolves with a slow effervescence in the dilute nitric and sulphuric acids. It consists of magnesia 48:00, carbonic acid 49:00 and water 3:00. It is found in Istria, Silesia, and Spain. A variety of it, possessing an earthy fracture, and containing about four per cent. of silice, is found in the islands of Samos and Negropont, in the Archipelago, and is called, by the Germans, leicht, and by the French, Epsom salt. It is soft when first dug, and, in that state, is made into pipes, but hardens by exposure to the air. The most celebrated variety of this mineral, however, is found at Hoboken, in New Jersey, where it occurs disseminated, in seams, through a serpentine rock; and is sometimes crystallized, at others pulverulent.

Sulphate of magnesia is found in crystalline fibres, parallel and divergent, and in the shape of crystals; more rarely, also, it has been found pulverulent. It is easily recognised by its bitter saline taste. Specific gravity, 1:75; colour white; lustre vitreous, transparent, or transparent. It dissolves very easily in water, deliquesces before the blow-pipe, but is difficultly fusible, if its water of crystallization has been driven off. It effervesces from several rocks, both in their original repository and in artificial walls, and then it is a product of their decomposition. It forms the principal ingredient of certain mineral waters. It occurs at Freiberg and its vicinity, efflorescing upon gneiss, also at the quick-silver mines of Idris, in Cornwall, and various other places in Europe. Its most remarkable deposits, however, are the limestone caves of Kentucky, whose floors are often covered with it, in delicate crystals, to a considerable depth, intermingled with a dry earth, which has come from the decomposing or disintegration of the limestone rock: the earth is learned, in very considerable quantities, by the inhabitants of the county, who obtain from it their supply of Epsom.
MAGNETIC NEEDLE—MAGNETISM.

salt. For a notice of Borate of magnesia, see Boracic Acid.

MAGNETIC NEEDLE is a needle touched with a loadstone, and sustained on a pivot or centre, on which, playing at liberty, it directs itself to certain points in the horizon. See Magnetism, and Compass.

MAGNETISM. According to ancient tradition, a shepherd named Magnes, in walking up Mount Ida, found that certain stones were attracted by his iron hook, and from the name of the discoverer these stones were afterwards called magnets. Others assert that these stones derived the attraction from having been first discovered at Magnesia, a town in Heraclea. It is not our business to inquire whether either of these traditions be true; it is sufficient for us to know that a peculiar species of iron ore, known to us by the names natural magnet, or natural loadstone, was known to the Greeks, and called by them magnet.

More recent research has shown that the properties of the natural magnet (see Iron, ores of) may be communicated to other substances, or that artificial magnets may be formed, and the science which explains the laws of the action of magnets, whether natural or artificial, is called magnetism.

The property of the natural magnet of attracting iron seems to have been the amount of the knowledge of the ancients on the subject. Yet some suppose that they were also acquainted with the formation of artificial loadstones. The most important property of the magnet remained unobserved until about the middle of the thirteenth century; we allude to the property of the magnet's taking a certain direction when allowed to move freely on an axis. The discovery of the fact that a magnet when balanced upon a centre will dispose itself in a direction north and south, a discovery which has contributed more than all the inventions yet known to the extension of knowledge and the diffusion of happiness over the globe, is attributed to different individuals: the invention of the mariners' compass has by some been ascribed to Flavio, a Neapolitan; but Dr Gilbert supposes that the invention was brought to Europe from China by Paulus Venetus, an Italian. It is matter of deep regret that any uncertainty should exist respecting the name of the man who has conferred so great a benefit on the human race. From a manuscript letter of R. Adsignt, dated 1269, still preserved in the collection of the University of Leyden, it would appear that he was acquainted with the principal properties of the magnet. In this manuscript we find the first notice of the declination or variation of the needle, i.e., that the suspended magnet does not always point duly north and south; this discovery has been erroneously attributed to Columbus, whose voyage was made nearly 200 years subsequent to the date of the Leyden manuscript.

The next important discovery was that the needle though balanced with the utmost care before it was magnetised, departed from the level after it had received the magnetic influence. This phenomenon, commonly called the dip of the needle, was first observed and made known by Norman, a mathematical instrument-maker, near London, who wrote a work on The New Attraction. The variation of the needle was not at this time known to be changeable, but Mr Bond in 1640, who wrote fifty-nine years after Norman, clearly points it out as not only observed by himself, but also by Mair, Gunter, and Gellibrand.

No attempt was made to form a theory of magnetism before the time of Dr Gilbert, a man of great sagacity, who in 1600 published his work de Magnete, a work that although it contains many fanciful hypotheses, contains a statement of many important facts, and forms an important era in the history of experimental science. Halley published a theory of magnetism in 1683, and in 1698, the command of one of the ships of the royal navy was given him, in order to discover the rule for the variation of the compass. The first account of this voyage was published in 1704, together with a chart of the variation. The continual inverting of the needle was now established, although the law of the variation was not yet determined. More minute observations made by Mr Graham at London, in 1722, and subsequently, showed that the variation hitherto observed was not the only constant thing in the property of magnets besides its tendency westward, it had a daily variation; he observed that the needle made each day an oscillation, the greatest variation taking place between ten and four o'clock in the day, and the least between six and seven in the evening. About the middle of the eighteenth century, experiments on the same subject were made by Wargentius, a Swede, and also by Canton, an English philosopher, which last determined that the diurnal variation is less in winter than in summer.

Mr Canton makes the daily variation for January 7° 8', and for June 13° 2'. Recent observation establishes the fact, but the amount of the variation for the various latitudes. The variation for January 1819, to be 6° 3', and for June 11° 15'. About 1750, professor Wargentius observed that the aurora borealis had a peculiar effect upon the magnetic needle, and more recently during one of Captain Cook's voyages, the iron in the ship was found to affect the direction of the magnet in a very remarkable degree; so much so, indeed, as to render some remedy necessary, especially in high latitudes.

The method of magnetising steel bars was not properly known till about the year 1750; the discovery being due to Dr Knight. Du Hamel, Canton, and others improved upon his plan. Lambert of Berlin was the first who discovered the law of magnetic attraction, viz., the magnetic influence decreases from the magnetised object as the squares of the distances increase, and Coulomb put the truth of the law beyond doubt by his experiments with the torsion balance. Mr Peter Barlow, of the royal military academy, from a series of well instituted experiments, which have been corrected by Dr Faraday, also found that the magnitude of the magnetic action, he established the important law that the magnetic action increases with the surface, not with the mass, and that if any body, as a ball of iron, influence a compass needle, the squares of the tangents of the deviation will be proportional to the cubes of the refractive power. He also experimented on the effect of the addition or abstraction of heat on the magnetic power. Mr Bonnycastle followed up these results by a beautiful analytical investigation which made its appearance in the ninth volume of the Philosophical Magazine. The researches of Biot, Sir H. Davy, Oersted, Mr Arago, and more recently of Mr Faraday, have been directed to the advancement of this highly interesting science, but the plan of this work will only admit of our entering into minor details; we shall therefore content ourselves with a brief notice of what has been done by the last mentioned philosopher.

Mr Faraday, from recent experiments, considers magnetism common to all metals. In a lecture lately delivered at the royal institution, he showed the distribution of the magnetic power at a heat of 250°; and that there was a temporary loss of all its magnetic power, when the metal was brought to a red heat. In order to demonstrate this, he put a magnet in a red hot tube, and let the variation of the magnetic power, excepting within the tube. He then inserted it into a red hot tube, until the magnet acquired sufficient heat to deprive it of its powers.
By the dispersion of the fluid equally through its surface, it attracted and repelled in the same manner, as if interrupted by a sheet of paper. Nickel, as well as iron, is influenced by the magnet; but it loses its power of being attracted or repelled at a much lower temperature; and in boiling, all its powers cease. Soft iron becomes a powerful magnet, under the influence of volcanic electricity; but retains none of the magnetic power, when the current ceases. Hardened steel acquires less power under the same treatment; but becomes a permanent magnet, when the connexion is broken. From numerous experiments, he inferred that all the metals have their power of acquiring magnetic properties among the rest, which require different circumstances to develop. He infers that all the forty-two metals are susceptible of magnetism, under the influence of extreme cold: the temperature being not less than 40° below zero, Fahrenheit. Mr Faraday is still prosecuting this line of inquiry, and daily bringing forth new and interesting facts, a detail of which will be found under Thermo-Electricity, in this work.

**Principles.** The term natural magnet, is chiefly applicable to the amorphous granular varieties of iron ore. The natural magnet is of a grey colour, dull metallic lustre, becoming black when pulverized; is not malleable. Some varieties have the property of attracting iron, and others of being attracted by the magnet. The specific gravity varies from 4·24 to 4·93. Artificial magnets are commonly bars of tempered steel, to which the magnetic property has been communicated. When a piece of natural magnet is surrounded with iron filings, they will be attracted to its surface; but there will be two points of the magnet to which the filings will more particularly adhere, than to any other part. These points of greatest attraction are called the poles of the magnet.

To form an artificial magnet take a bar of tempered steel, and bring one end of it into contact with one of the poles of the natural magnet, and afterwards bring the other end of the bar into contact with the other pole; it will be found that the steel bar has acquired the same property of attracting iron, as the bar of steel. The extremities of the steel magnet are its poles. Form another magnet, in the same way, and suspend both by silk threads from the centre, so that they shall be balanced; it will be found that they will both arrange themselves, after oscillating a little, in a direction which is nearly north and south. Mark N on the pole of one magnet which points to the north, and S on the pole which points to the south. Mark, in like manner, n on the north pole of the other magnet, and s on its south pole. It will be found that both magnets incline a little from the horizontal position, the north pole being inclined downwards. This is called the dip of the magnet. By the direction of the magnet with the true meridian of the place, it will be found that the north pole has either an easterly or westerly direction. This is called the variation of the needle. Both of these last will be more fully discussed hereafter. We shall, in the mean time, draw the attention of the reader to a few experiments with the two magnetic bars we have before spoken of.

Let that magnet marked N S be kept suspended by the silk thread, and bring the pole n of the magnet marked n s near to the N pole of the suspended magnet; it will be found that the N pole will attract the n pole, and the other will be repelled by the magnet n s. Present the pole n to the pole S, and the suspended magnet will be attracted by the magnet n s. In like manner, present s to S, and repulsion will take place; then z to N, and attraction will ensue; so that it is a general law, that poles having a like direction, repel each other; and poles having a contrary direction, attract each other. It is in magnetism then, as in electricity, poles similarly excited, will repel each other; and those oppositely excited, will attract; and, therefore, whatever may be the influence by which the pole of the earth, which attracts the north pole of the magnet, it must be in an opposite state of magnetism; and the same with regard to the south pole. This has led some to propose that they should call the north pole of the magnet, the south pole; and the south pole, the north. This inconvenience would be avoided, by using the terms, &c. and therefore we will continue in this article to call that pole which points to the north, the north pole, and that which points to the south, the south pole.

There being two distinct kinds of action in magnetic bodies, scientific men have considered that there are two distinct species of magnetic fluid, the particles of the one fluid having the property of attracting the particles of the other; but when the particles are separate, they repel; each repels the particles of its own kind, &c. It is supposed, however, that when the particles of the same kind are combined, the action is neutralized, and sometimes it is possible to suspend a magnet from a wire; and this is called passive magnetization.

Soft iron or soft steel cannot be rendered magnetic for a long time. Hard steel can be rendered magnetic for a long time; and if sufficiently hard, the magnetic power will become permanent. The magnetic fluids do not seem to be separated in the middle of the magnetic bar, but both exist in every particle of the bar, from one end to the other; a fact proved by the circumstance, that if you cut a bar through the middle, each piece will have its two poles, one pole at each end. From this fact it has been inferred, that in all bodies capable of being magnetized, both fluids exist, combined in each particle; but, when by any means they become separated, the body becomes actively magnetic. The cohesion of soft iron opposes little resistance to the separation of the two fluids; and, again, when the separating force is withdrawn, the fluids to which this resistance leaves little obstruction from the cohesion of the iron. On the other hand, the cohesion of hardened steel, opposes great resistance to the separation of the two fluids, and also great resistance to their reunion. This lays the foundation of the ordinary methods that have been devised for communicating magnetism. When a bar of steel is chosen to be magnetized, the directions which were to be preferred would seem to be, thickness 1, breadth 3, and length 30; the steel being polished, and brought to as hard a temper as possible.

Different methods have been proposed and practised for magnetizing; but we will confine our selves to the two that have been regarded as the best. The method of Du Hamel consists in placing two steel bars parallel to each other, but an inch or inch and half asunder, being connected at both ends by two cross pieces of soft iron. I am now to begin the account of the form of previously magnetized bars. Each bundle must have all its bars, with their like poles, in one direction. Hold now one bundle with the north pole touching the middle of one of the steel bars, and the other bundle beside it, with its south pole touching the bar; and draw the two bundles along, one to one, to the end of the bar. Then take the other end, repeating this process until both steel bars are completely magnetized. The advantage of employing the cross pieces of iron consists in this, that
the iron becomes, as it were, a connecting link in the succession of the particles of the magnetic fluid, holding them in a developed state, while the magnetizing bars are communicating a further degree of intensity. The annexed wood-cut represents Du Hamel's method, where A B, A' B' are the two steel bars; A B' and A' B the two cross pieces of soft iron; and a b, a' b' are the two bundles of magnetized bars. Aequinus improved this method by connecting the ends of the steel bars by strong magnets, instead of soft iron rods. He likewise made the rods to move at a small distance from each other, and inclined them in a contrary direction to that of Du Hamel.

Horse shoe magnets are formed by bending straight bars somewhat in the form of horse shoes, so that the two extremities may point in one direction, and be near each other. Connect the two extremities with a piece of soft iron, after the manner of Du Hamel. The horse shoe may then be magnetized after the manner of Du Hamel or Aequinus.

There are many other facts that might have been stated with regard to the magnetizing of iron, steel, nickel, cobalt, &c., but the nature of this work renders it necessary that we should confine ourselves to the more important points in this as well as the rest of the sciences.

The most simple magnetic instrument is the horizontal needle. This needle consists of a bar of hardened steel, magnetized. The bar is made of various forms, being commonly rectangular, but having a broad portion in the centre. There is a hole made in the middle of the broad portion, which is tapped with a screw, to receive an exterior screw turned upon a brass cap, into which is fitted a piece of agate, on which the needle is balanced upon a steel point. This form of the needle is exhibited in the accompanying wood engraving.

Another form of the horizontal needle is represented top of next column.
series of magnetic observations from the year 1813 to 1821; during which period the needle passed through its maximum of westerly variation in London.

The principal part of this instrument, viz., its needle, with the box and divided arc, to measure the angle of variation, is very similar to the instrument in the possession of the Royal Society; but it is greatly improved by the addition of a small transit telescope, which readily and accurately determines the true meridian, or the zero from which the degrees of the variation is to be measured. The box containing the needle is not fixed, as in many compasses, but turns horizontally on the centre, and has an index fastened to it, pointing to a divided arc on the brass frame on which it turns. The method of observing is, to move the box until a line drawn on it points exactly to the end of the needle, which being done, the angle of variation is shown by the divisions on the arc; F F is a mahogany board, which is the support of the whole instrument; it stands on the pins of three screws, G, H, I, by which it can be levelled. Above this is a flat plate of brass E E, attached to the board by the centre pin, and resting upon three studs projecting from the board, to insure its having a perfect bearing, whilst it admits of a small horizontal motion round the centre by means of the screw K, K. The arc is divided into degrees, and each degree is divided into minutes; the division of each minute is made to correspond with the divisions of the arc, m, fixed upon one end of it; and a vernier, D, traverses against the divisions; it is divided upon a projecting part of a brass plate C C, which moves upon the common centre pin of the plate E E, and also the needle A A. The plate C C has two segments of brass at each end of the needle, and these have the centre lines drawn upon them, which are brought to the points of the needle when the observation is made. A light brass box d d, with a glass cover, is fitted over the plate C C, to preserve the needle from disturbance by the wind; it also supports a small double microscope M, intended to assist in examining when the index line points exactly to the end of the needle; the stem of the microscope is fitted to a dovetail groove, and can be removed to the opposite end of the box at pleasure. The centre pin of the plates E and C terminate in an extremely fine point, on which the needle is suspended, having an angle of about 45° at the point with much air; the needle has the agate cap fixed in it; the needle is, of course, provided with the usual apparatus for lifting it off the point when not in use, to avoid wearing the point of suspension; a, a, are two arms, screwing down upon the plate, carrying the vernier D; they support a brass plate, which has the usual clamping screw L, and a tangent screw R, the former to fasten it to the arc m, and the latter to give a slow motion, and adjust the box for the observation. The transit telescope, O P, is supported over the instrument by two pillars, N, N, fixed on the brass plate, E E, and having small frames or boxes f f, at the top, for the reception of the y's, in which the pivots of the axis Q of the telescope are supported; this axis is conical, and is fixed exactly at right angles to the tube O P, in the same manner as other transit instruments. On the extremity of one of the pivots of the axis, a small divided circle R, is fixed, and has an arm at the opposite side turning on a pin, which with verniers to read the divisions of the circle; to this arm a small level S, is attached; the whole forming a vertical index to set the telescope at any required altitude, by setting the index at the proper division, and then moving the telescope till the bubble of the level, S, shows the axis to be horizontal; the end piece, A of the telescope has a small dovetail in it to admit a dark glass for observation of the sun; E E are the screws for adjusting the wires in the eye-piece as usual; there is also a detached level to adjust the instrument.

First, place the feet of the detached level upon the brass plate E E, in different directions, and bring it level by the screws H, I, G; then apply the level upon the two pivots of the transit, the covers of the boxes f f opening with hinges for this purpose, and the bottom of the feet having notches to rest upon the pivots; if the axis does not prove level, one of the y's must be elevated or depressed by a screw in the farther pillar N, until the level stands horizontally, and, reversing it, end for end, proves everything to be correct.

Now set the vernier D, at zero, and put an additional object glass over the glass, Y, of the telescope, and in this state the moving needle, against which the needle reads, can be seen through it when directed to them; this proves the zero of the division to be exactly in the plane of the telescope’s motion; a small screw near Q will rectify it, if necessary, by moving the y a small quantity in the box f; the transit may be reversed in its y’s to rectify every thing.

The telescope is now to be adjusted to the meridian by the transit of the stars in the usual manner, the screws W, X, being used to turn the whole instrument round when requisite; but after these observations have been once made in a satisfactory manner, distant marks should be set up, both north and south, and these will give the means of adjusting it at once, and in the daytime.

The needle being suffered to settle, the box is turned about on its centre till its mark comes very near the point of the needle; the clamp screw, L, is then fastened, and the screw, R, is employed to make the coincidence exact, in which the microscope, M, greatly assists the eye. The vernier, D, now shows the angle of variation. It is proper, after the needle has been once observed, to attract it with a piece of iron, and cause it to make a slight vibration. When it settles again, it will not in all cases come to the same point, because of the friction of the suspending point; it is therefore advisable to make this trial three or four times, and take the mean of the whole.

The instrument is placed on a pillar in the open air, free from any iron, and is adjusted before every observation; the vernier is divided into half minutes, and if the meridian be not at a considerable distance, an advantage will be gained by diminishing the aperture of the object glass by a pasteboard cape. See Variation.

It may be worth while to remark, that this instrument will serve as a transit instrument for naval officers to examine the rate of their chronometers while on shore.

The only other form of the magnetic needle, which we shall here describe, is the dipping needle. This needle is so fixed, that instead of playing horizontally, its axis is parallel to the horizon; and therefore the only motion of the needle must be in a vertical direction. The extremities of the needle traverse a circular ring, divided into degrees and minutes, and adjusted by a spirit level, or otherwise, so that the zero shall stand at the end of the needle, when it is horizontal.

The inventor of the dipping needle, and the first to use it, was Robert Norman, a compass-maker at Ratcliffe, about the year 1580. Some have endeavoured to find the latitude and longitude of places by means of the dipping needle.
MAGNETISM. ANIMAL. This name was given by Mesmer, in the latter part of the eighteenth century, to certain phenomena (not yet explained in an entirely satisfactory manner) produced by the action of one man upon another. The origin of the term is doubtful. It is supposed that the action of the animal energy, or vis esse, to which these effects were attributed. Experience has shown the analogy to be unfounded. The principal means used to produce the effects of animal magnetism, are such as touching and stroking with the hands, according to rule (manipulation), breathing on the fingers, &c., and even magnetized persons must always be of a weaker constitution, and, if possible, of a different sex, from the magnetizer; and it is indispensable that he should be of a disposition to believe without doubting. The phenomena themselves consist partly in bodily sensations (for instance, chills, heaviness, flying pains, oppressions, &c.), partly in a diminished activity of the external senses, partly in fainting, convulsions, sleep, with lively dreams (magnetic sleep), in which the magnetized person is transported to higher spheres, observes the internal organization of his own body, prophesies, gives medical prescriptions, receives visions of beauty and perversity, &c., reads sealed letters laid on his stomach, and, when awakened, is totally unconscious of what he has experienced. At the same time, the soul becomes so elevated and refined, that the magnetized individual has an instinctive perception of the presence of the impure, and falls into fits at the approach of disbelievers in animal magnetism, and of all who investigate it by the rules of ordinary reason. Hence it is necessary to keep sceptics at a distance, when it is desired to witness the highest phenomena. The magnetized person shows a remarkable connexion with, and dependence on, the magnetizer, tactual or other effects, that which we call magnetism is nothing inconsistent with the views entertained of it by its adherents, for they maintain that mere reason cannot approach, nor conceive this great mystery; it can be rightly apprehended only by a believer. Since the blow which magnetism received in 1821, the number of its adherents has been greatly diminished, and its pretensions have been much checked. The whole of its effects seem to be ascribable to a heated imagination, to an excitement, half spiritual, half sensual, and to a morbid sensitiveness. Animal magnetism originated thus: Anthony Mesmer (q. v.), in 1772, attempted cures with the mineral magnet, and excited some sensation in Vienna, but at length declared, that not the magnet, but a mysterious power in his own person caused the effects ascribed to the magnet, and that this power was related not only to the magnetic power, but to the attraction dispersed throughout the universe. But a fraud which he attempted (the pretended rectification of the vital power) being discovered, he proceeded, in 1778, to Paris. The attention which he attracted there, and the final report of a committee of the academy on magnetism, or, as it is also called, Mesmerism, we shall speak of under Mesmer. The great supporters of animal magnetism have recently been Rieser, in Jena, and Wolfart, in Berlin; the former explains the phenomena by the striking difference between life by day and life by night, both in the case of animals and vegetables; the latter adopts the mystical jargon of Mesmer. (See Archives of Animal Magnetism, by Mesmer, New series and New edition, published since 1817, in German, and since 1825, under the title Sphinx, or New Archives of Animal Magnetism; and Wolfart's Annals of Animal Magnetism (Lebene-Magnetism), ten numbers, 1818 et seq.) Among the numerous works on the subject, are Deleuze's Histoire critique du Magnetisme Animal (Paris, 1813); F. E. von Enemers Der Magnetismus in der menschlichen Entwickelheit von alten Zeiten und bei alten Völkern (Leipsic, 1819), in the spirit of Mesmer and Wolfart; J. C. L. Ziemann's Geschichtliche Darstellung des Thierischen Magnetismus als Heilwissel (Berlin, 1824), less prejudiced; Del Magnetismo Animale, by Baevei Florence, 1826, and I of Revelations; an Inquiry into the origin, progress, and present state of Animal Magnetism. By J. C. Colquhoun, Esq. 2nd Edition, Edinburgh, 1836, 2 vols. 8vo. See also Russell's Travels in Germany (in Constable's Miscellany); Foreign Review, vol. v., where a full and unfavourable historical account of the science is given; Thomas' Principles of Magnetism, January 1834; and Chambers' Edinburgh Journal, No. 71. We now proceed to an outline of the phenomena of animal magnetism, as described in the work of Mr Kluge, mentioned above. The phenomena, in the case of the magnetizer and the magnetized, are as follows: 1. The Magnetizer. He is generally capable of producing a positive effect only so far as he possesses a higher degree of energy and vital power than the person magnetized. The man generally effects more than the woman. If the magnetizer is the weaker person, there either takes place no apparent effect, or the effects are inverted, viz. the positive effects are apparent in him, and the negative in the person magnetized. If the magnetizer undertakes the manipulation of a susceptible subject, he always feels a glow, and the sensation of a gentle flow from his palm, and particularly from the points of his fingers. If he covers his hands with silk gloves, or other delicate clothes, he has not this latter feeling, and his operation is fruitless; but linen or leather gloves do not prevent the effect. After a successful operation, the magnetizer feels a general uneasiness, a weakness in the digestive system, and, in general, a loss of power, in proportion to the susceptibility of the magnetized subject, and the duration or frequency of the operation. If the magnetizer, during the operation, is isolated with the magnetized subject by electrical bodies, his loss of power is less, but the effects which he produces are stronger. 2. Phenomena in the Person magnetized. The phenomena produced in the subject by a positive operation, are of a double kind; either they have reference to the general state of the body, are then not periodical, but last during the whole cure, and, therefore, may be considered as the general effects of magnetism; or they have reference only to particular activities of the organization. Of the former sort are 1. a general awakening and strengthening of the mind; 2. a sensation of the body; 3. a considerable excitement, as well as in the systems of the nerves and muscles, the vascular and digestive system, as the organs of secretion; 2. a mild excitement over the whole surface of the body, by which every irregularity and local reaction is neutralized and the equilibrium restored; the reawakening of the heightened vital power from the suffering organs to others; 4. a diminution or total suppression of the excitement producing the morbid activity of the
MAGNETISM.

623

erves. The magnetizer not only should have a stronger body than the person magnetized, but also a power to sleep by which the patient seems to accept the

maturity of his bodily powers, but must still be within the age of active life; the mind, too, must be sound and strong, in order to master the affections and passions, to have a living faith and a firm will, and thus to attain perfect control over this means of cure. Repeated sympathy with the patient, which is the same in animal magnetism have been divided into six de-
grees. Those of the first degree are generally the following: first, the feeling of a strong current from the head to the extremities, after which a higher degree of heat follows, easily observable by the thermometer, greater redness of the skin, with in-

creased perspiration, and a feeling of ease and comfort throughout the whole body. In the second degree, the warmth increases, and appears to the patient to diffuse itself from the stomach, as if from a central point, over the whole body. The pulse

becomes generally fuller and stronger, and the breathing easier and deeper. The patient feels a heaviness in the eyelids, and an irresistible desire to close them. If he does close them, they seem to him strengthened by the stronger power, and, during the remainder of the magnetic effects, it is impossible for him to open them. All the other senses, however, remain active, and their activity is often heightened. The patient knows, therefore, everything that is done about him, though he is not always capable of speaking. At the close of the magnetic operation, he opens his eyes by himself, or with the assistance of the magnetizer, and feels generally strengthened and well. After this the patient observes, some-
times, a shining appearance before his eyes, similar to repeated lightning, a pricking in the points of the fingers and toes alternately, a heaviness and coldness in the extremities, unpleasant feelings about the region of the stomach, sickness, violent shuddering, wish to cough, &c. The particular signs often ac-
compnying the third degree, are, especially, swoons, convulsive tremblings, real convulsions, cataleptic and even apoplectic fits. This state generally begins with all the signs of an approaching drowsiness. Repeated yawning, stretching, heaviness of the eye-

lids, announce it. A deep sigh generally follows, after which the eyes close entirely, and a state begins somewhat resembling that of persons who have been pr

ved of all sensation and consciousness. In the fourth degree, the patient awakens, not from his sleep, but within himself, and regains his consciousness; he knows himself again, yet in a changed relation to surrounding circumstances. The external senses are either clos-
ed entirely, or their character is changed, and the in-
ternal sense only remains the same. The somnambu-
lister (as he is called in this state), entirely awakened within himself, distinguishes with his eyes nothing but light and darkness, and not always these, although, as is sometimes the case, the eyelids are open. The ball of the eye is either drawn up con-
siderably or completely, and presents an obtuse in-
spection. Next, the sense of feeling is metamorphosed into that of seeing, so that the somnambulist can distinguish by it, not only the outlines of things, but also colours, with perfect precision. The region of the

stomach becomes the central point of all sensation, and that high degree of heat which is necessary to support the sense of sight is supplied. The somnambulist, there-

fore, can ascertain the time perfectly well by a watch, closely held to the pit of the stomach. By repeated exercise, the patient obtains this faculty in a higher degree, and what originally appeared to him indistinct becomes very clear. Persons appear to him more distinct than inanimate subjects. Hearing

is likewise performed in this state by the pit of the

stomach, and the sense of smell becomes sometimes so acute as to distinguish the different ingredients of compound scents. Objects which do not regard in a healthy and natural state, have often very

sensible, and even dangerous effects on him when in a state of somnambulism. The vicinity of a living being, whom the patient perceives at a dis-
tance of ten to fifteen paces, is generally very dis-
agreeable to him, and the sensation of patients for

him, paleness and coldness occur in the parts touched, and convulsions are generally the consequence. Among inanimate subjects, metals have the most

unpleasant effect. To the magnet the somnambulist is still more sensitive than towards other metals, and of every thing else. During this period, what he has perceived, thought, said, or done, he has, when awakening, either no re-
collection or a very faint one; but if he is brought

again into this state, he recollects every thing very well. In the fifth degree, the patient attains, by his

heightened consciousness and the increased strength of his general feelings, to that internal self-contem-
plation by which he is able to investigate even the minuter parts of his bodily structure. By virtue of
this accurate knowledge of his internal frame, the clairvoyant, as he is called in this state, not only deter-

mines very distinctly the seat and quality of his diseases, but can often at times tell the person himself, who in his seat, which makes him understand the means necessary for his cure. Besides mentioning the remedies, the clairvoyant also indicates the kind of magnetizing necessary, and thus directs his own cure. This deep insight is not limited to the clair-

voyant's self, but extends to persons brought into magnetic relations with him, whose sensations are always communicated to him. Between the magneti-

zer and the clairvoyant this sympathy is the strong-
est and most remarkable. Very often the feeling of disease in the magnetizer is not only communicated to the patient, but the disease itself, which, in some cases, has continued after the patient was awakened. Afections of the soul also pass from the magnetizer to the clairvoyant. Sometimes this sympathy reaches such a height, that it remains even when the parties are distant from each other. This magnetic sympa-
thy may be still more heightened, and then the clair-

voyant has a clear insight into the internal physical magism of the disease, and may distinguish just as he has of his own; can determine their dis-

ease, its course, and future phenomena, and prescribe the means of cure accordingly. He insists that he perceives the diseased state of others precisely as his own by the stomach. His language becomes more elevated than ordinary, and is marked by fire, spirit, and

precision. His perception is lighter and stronger, his thinking freer, deeper, his judgment quicker and more penetrating. He not only perceives the pre-

sent, and the influence of external relations, much more distinctly than before, but penetrates also into the most distant period of past time, by way of mem-

ory. There exist after obvious influence of patients for

each other, if they are treated by the same magneti-

zer, and particularly if they are in a state of som-

nambulism at the same time. The patient who has

attained internal clearness by the fifth degree, pen-

etrates, in the sixth degree, the darkness of external things, and can distinctly perceive the highest visions of imagination. With unconcealed clearness he often distin-

guishes the secrets of the past, what is distant and unknown in the present, and the events of coming time. If the patient is asked how he knows all this, he generally answers, that it is as if he were told of it by some other person, or that he feels it through the pit of the stomach. He is always fully con-
instant of the truth of what he thus acquires. In re-
the choice of proper remedies, the clairevoyant is less limited than before. In the former degree, it was necessary to put him into connexion with another person, by having the two bodies in this degree, he may be connected with any distant person, if he knows him, or feels a lively interest for him, or even if the magnetizer, or any other person brought into connexion with the clairevoyant by actual touch, knows the distant person, and thinks intently of him. The view of the clairevoyant extends even into the future condition of others. In this degree he attains to a higher, fuller life than he had before. The body seems to be intimately amalgamated with the mind, to be blended into the most harmonious union with it. The individual is removed from everything coarse and sensual, and placed in a state of serene and elevated self-contemplation. The feeling of the most bodily comfort and purity of soul produces a serene peace within him, which expresses itself in the nobler expression of the whole body. In this state, which, according to the clairevoyants, borders on heavenly felicity, they are incapable of impurity, and even the guilty obtains the feeling of virtue.

Such are the wonders of animal magnetism, of which our readers may believe much or little. The attention which the subject has attracted in Europe is our excuse for the length of this article. The footing which it has gained, and the effects which it has produced, exemplify, strikingly, the power of imagination, the as yet unoccupied space to describe all the various manipulations and other operations by which the patient is placed in the magnetic state; for information respecting these, see Kluge's work, already cited.

MAGNIFICAT. The words which Mary pronounced (contained in chap. i. of Luke, 46—55), begin, in the Vulgate, Magnificat anima mea dominum (My soul doth magnify the Lord). Hence the whole of her thanksgiving, on this occasion, has been called the magnificat. The present usage of the Roman Catholic church is, to chant or pronounce the magnificat every day, at vespers. It has often been set to music, and forms part of the musical cycle of the Catholic church. The magnificat is also often used in Protestant church music, on the European continent.

MAGNIFICENCE (highness, eminence): a title applied to the rectors and chancellors of the German universities, and to the burgomasters of free cities. A prince who takes the office of a rector is styled magnificenssissimus.

MAGNIFICENT. See Microscope.

MAGNISA, or MANIKA (anciently Magnesia ad Sipylum); a town of Natolin, near the Sarabat; twenty miles N. E. of Smyrna; lon. 27° 18' E.; lat. 38° 44' N. The streets are wide, the mosques painted white, and the houses better than in most other towns in this part of Natolin. It is situated at the foot of the ancient mount Sipylos, whose top is always covered with snow. It is celebrated in history by the victory of the Romans over Antiochus the Great. Under John Ducas, it was made the capital of the Greek empire. The greatest ornament of the ancient town was a temple of Diana, called Leucophryene, or the White-browed. The environs were formerly celebrated for the production of leadstone, and it is supposed the word magnet is derived from it.

MAGNITUDE, APPARENT. If straight lines be drawn from the extremities of a visible object, to the centre of the pupil of the eye, the angle formed by them is called the visual angle or the apparent magnitude of the object. This angle varies with the different distances of objects, being larger when they are near, and smaller when they are remote. Hence our idea of the magnitude of any object, depends not only upon its true dimensions, but also upon the angle under which we view it; and objects of very different dimensions will appear of equal magnitudes, if the visual angles under which they are viewed be equal. Thus, for instance, the sun and moon, though their diameters are vastly different, each subtends an angle of about a degree. Besides, numerous prejudices and optical illusions, which we can never overcome, modify our ideas of the magnitude of objects. One of the most remarkable examples of such involuntary deception, is that which every one has experienced in looking at the moon: when it has just risen, it appears larger than when it has reached the zenith. In the horizon, we are apt to imagine it at a greater distance from us than in the zenith, because in the former case there are intervening objects with which we can compare it, but in the latter no such objects occur. If the moon is viewed through a telescope, or an open tube, so as to exclude the intervening objects, it will appear of equal magnitude in both cases, and the whole illusion will immediately vanish.

MAGNOLIA. The magnolin trees are much admired on account of the elegance of their flowers and foliage. Their leaves are alternate, petiolate, and, in one species, evergreen; and their flowers are large, white or yellowish, solitary at the extremities of the branches, and, in some species, very fragrant; the leaves and wood are also more or less aromatic. They are a great request in gardens. The leaves and wood in general is soft, spongy, and of no great utility.

The M. tripetala, or umbrella tree, so called from the disposition of the leaves, in a radiated manner, towards the extremity of the branches, inhabits the whole extent of the Alleghanies, as far north as the forty-third parallel of latitude. The leaves and flowers are very large, the latter having from nine to twelve white petals, the three exterior ones being reflexed.

The M. acuminata inhabits the same districts as the preceding. It is a lofty tree, attaining the height of eighty feet, with a proportional diameter. The flowers are inodorous, and have from six to nine petals of a greenish-yellow colour. The leaves are pubescent beneath. The wood is soft, fine-grained, and susceptible of a brilliant polish; it is sometimes sawed into boards, and used in the interior of wooden houses. From the shape of the fruit, which is about three inches long, it is usually known.

The M. auriculata is readily known by the two lobes at the base of the leaves. It inhabits the south-western parts of the Alleghany mountains.

The M. cordata also inhabits the south-western parts of the Alleghanies. The leaves are cordate, pubescent beneath, and the flowers are yellow. It attains the height of forty or fifty feet.

The M. macrophylla is remarkable for the size of its leaves and flowers. The former are between two and three feet long, and the latter are upwards of a foot in diameter. The petals are from six to nine in number, and the three exterior ones have a purple spot at the base. It inhabits the south-western parts of the Alleghanies, but seems to be confined to certain limited districts.

The M. glauca, or beaver wood, is a beautiful little tree, or rather shrub, with leaves and flowers much smaller than in any of the preceding. It attains the height of fifteen or twenty feet; the leaves are smooth, elliptical, obtuse, and glaucous beneath; the flowers are very elegant, and diffuse a delightful fragrance, though rather too powerful if the plant is shut up in an apartment. The leaves and wood have also a strong aromatic taste. It grows in wet situations in the Atlantic states, from near lat. 43°
to Florida, and along the borders of the gulf, beyond the mouths of the Missisippi, but is not found in the upper country, nor west of the Alleghany mountains.

The *M. grandiflora*, or big laurel, is confined to the lower parts of the Southern States, from North Carolina to Florida and Louisiana. It is a lofty and magnificent tree, with large evergreen leaves, and white flowers, which are conspicuous at a great distance. Magnolias are wanting in Europe, as well as in Western Asia, but towards the southern-eastern part of this latter continent, we again meet with them.

The *M. yulan* grows to the height of thirty or thirty-five feet, and the large and numerous white flowers, expanding before the development of the leaves, give it a very ornamental appearance.

The *M. purpurea* is a shrub, bearing large flowers, which are purple externally.

The *M. fuscata* is also a shrub, with small, dusky, yellowish, and delightfully fragrant flowers. Some magnificent species have lately been discovered on the mountains of the north of India.

MAGOG. See Gog.

MAGPIE (corvus pica, L.). This crafty and well known bird in its habits and manners much resembles its brethren the crows; like them, it indiscriminately feeds on both animal and vegetable food, and by its egg is surrounded by the eggs and young of the lessor tribes of birds. It is about eighteen inches in length, and weighs from eight to nine ounces. It has a black bill, wings and tail; but the latter are variegated with white, green, purpl, and blue, of different shades. The construction of the nests of these birds shows great art, they have a thorny cover, and the entrance being at the side. The female lays from five to seven pale-greenish eggs, closely spotted with black. When taken young, they readily became domesticated, and learn to repeat many words, and even sentences, as well as to imitate every noise within hearing. This faculty appears to have been known to the ancients, as Plutarch relates an account of the performances of one of these birds belonging to a barbarer in Rome. Like the other birds of the crow kind, the magpie is a notorious thief, and will not only steal food, but will carefully dismember it. In 780, he was ordered him to return to his father, and in 1029, he was appointed grand vizier. His empire is the most brilliant chapter in modern Turkish history. He was born July 20, 1785, and was brought up in the ancient seraglio. (See Ottoman Empire.) Mustapha IV., the elder brother of Mahmoud, who ascended the throne in 1807, had already, according to ancient custom, ordered him to be put to death, that he might have no competitor to fear, when Ramiz Effendi, paymaster of the army, at the head of 2000 Albanians, rescued the prince. The valiant Bairaktar, pacha of Rouchuk, immediately deposed Mustapha IV., and girded Mahmoud with the sword of Osman, July 28, 1808. Fourteen weeks afterwards, the janizaries, offended by the military reforms made by the grand vizier Bairaktar, took the seraglio by storm. Bairaktar immediately ordered the execution of Mustapha and his mother, and then blew himself up with his enemies. This happened Nov. 16, 1808. (See Ottoman Empire.) The battle between the Seymiers (infantry on the European system, in favour of whom the sultan Mahmoud had declared himself) and the janizaries was continued thirty-six hours longer in the seraglio and the capital, amidst pilage and confinements. The rebels gained the victory, and, for the preservation of the sultan, Mahmoud was compelled to send deputies to the head of the army, and to submit unconditionally to their demands. After these horrors, Mahmoud was not able to execute any plan of reform in the army, although he still persevered in his intention. At every attempt, the janiza-

VOL. IV.
aries obtained by force the discharge and execution of the commanders and ministers who undertook to establish order and discipline. Mahmoud thought only of securing himself upon the throne, stained with the blood of his uncle Selim and of his brother Mustapha. He therefore, according to Pouqueville, murdered the son of Mustapha IV., an infant three months of age, and caused four pounds of flesh to be sewed up in sacks, and thrown into the Bosphorus. Thus he remained the last and only descendant of the family of the prophet. His will was now made known by the severest orders. Without advisers, without resources, and almost without an army, he confessed himself to the Sultan to-day, and to the Viceroy to-morrow. At length, when he was totally exhausted, his divan concluded a treaty at Bucharest, with Russia, May 28, 1812. This measure was advised by Britain, but disappointed the expectations of Napoleon, who, in connexion with Austria and Prussia had announced the integrity of the Porte. (See Ot- toman Empire.) Having been educated in the seraglio, where the vâlitâde, or sultana mother, according to ancient custom, never calls her son otherwise than, My lion, my tiger! the grand seignior knows no law, but some forms of custom, and has no regard for any constraints but those of necessity. The circum- stances of horror, under which he ascended the throne, and the dangers which perpetually surrounded it, hardened his heart and blinded his judgment. As every sultan is directed to learn some art, he chose calligraphy. Vain of his skill, Mahmoud resolved to write with his own hand all the kiat-sheriffs, or orders, in his own name, and to keep a journal of his thoughts. His papers soon accumulated to such a degree upon his sofa, that he looked around for a private keeper of the archives. He found a suitable person for this office in his barber (Berber Baschi), who was doubly worthy of his confidence, because he could neither read nor write. Khulet Effendi, a courtier, who amused and ruled the sultan by his buffoonery, also occupied a high place in his favour. Berber Baschi introduced this Khulet to Mahmoud; he had once been his companion in the coffee-houses of Galata, a clerk of the corporation of butchers in Constantinople. He was afterwards, in 1806, the ambas- sador of Selim III. to the court of Napoleon. These men were the authors of the horrors which were spread from the seraglio to the provinces. Khulet soon amassed great wealth by means of presents, and his influence became so important, that he completely governed the sultan and the submissive divan. But he was unable to persuade the mufti to admit him among the ulama. (See Ottoman Empire, at the end of the article.) This privileged caste scorned to receive the universal favourite, because he was the son of a man who sold livers, and, moreover, a child of the world, who drank wine. Khulet punished the mufti with banishment. The new mufti, therefore, and Ali, the new grand vizier, were very desirous to conciliate the favour of Berber Baschi and Khulet Effendi. The latter, however, avoided receiving any important office, lest he should be held responsible for the ill success of any measure which he advised. But he divided the spoil with the governors, who plundered the trader and who bribed the principal members of the divan; and was careful that no complaint should reach the sultan's ears. Pouque- ville maintains, that the grand seignior himself shared with his favourite the sums extorted from the rich. Mahmoud exhibited, however, a proud and inflexible disposition towards Christian princes. The speedy execution of justice in the capital, united with the severe and bloody police, over which Mahmoud, who unfrequently walked about incognito, kept watch, shows that he was not deficient in energy or talents. But the great and the powerful always remained the slaves of his humour, his avarice, and his suspicion. No high officer, whether guilty or innocent, was secure of his property or his life; hence the universal dis- position for a revolution, and the intriguing policy of the divan, to confuse the Sultan, destroy his mutual destruction, and thus to obtain the treasures of both parties. The reign of Mahmoud has therefore been a continued scene of treasons and rebellions. The Servians succeeded in shaking off the yoke of the pacha of Belgrade; Mohammad Ali Pacha, carrying out the designs of the Sultan, Wechabites, became almost absolute sovereign of Egypt; by means of bloody insurrections, Rumelia, Widdin, Damascus, Trebisond, St Jean-d'Are, Aleppo, Bagdad, Lattakia (anciently Laodicea), and other pachalics, changed their masters; the bold and crafty Ali, in Janina, raised himself to the throne of Epirus. To make himself master of the treasures of this pacha, Mahmoud, by the advice of Khulet Effendi, accused him of high treason. This policy involved the Porte in a civil war, which betrayed its weakness, drove the Greeks to despair, and brought on their revolution. A foreign em- bassy informed the Sultan of the plans of the Greeks, and Khulet Effendi resolved to extirpate them. In the name of Mahmoud, he gave the following commission to the serskier Ismael and Khurschid Pacha — "Every Christian capable of bearing arms must die; the boys shall be circum- cised and educated in the military discipline of Europe; not to offend the ulama, they shall be styled janissaries." All the decrees which roused the fanaticism of the Mussulmans in the capital and in the provinces, the equipment of the faithful for war, favourable prophecies in the name of the prophet, the proscriptions and executions of the rich, the profanation of Christian churches, &c., were all these, Pouqueville says, proceeded from the seraglio, and were the work of Khulet. Cruelty and avarice led the sultan and his favourite to these measures of terror, while, by letters extorted from the patriarch, and promises of amnesty, made only to be violated, they strove to persuade the Greeks to lay down their arms and to expel the Greeks, and Khulet Effendi resolved to extirpate them. He beheld from a kiosk of the seraglio the bodies of the patriarch Gregory, and of the murdered members of the Grecian synod, dragged by Jews, and thrown into the sea; and witnessed the execution of the princes Mavrocurotic and Chantzgeres, with a multitude of rich merchants and bankers of the Porte. When Mahmoud had, at last, succeeded in destroying his enemies in the capital and in the two principalities where the rebellion originated, while the dissected governors in the provinces had been subdued by ambitious pachas, Mahmoud had no reason to complain of his feet; when he had happily concluded the war with Persia by the peace of 1823, brought about by the mediation of Britain, and had no more to fear from the Wechabites,—then it was, after so many perils, that, intoxicated with apparent success, he every day grew more cruel and more despotic. The children and the grandchildren of Ali, who had surrendered themselves on the faith of the sultan, were put to death. Inflexible in that design of

* See Pouqueville's Histoire de la Regeneration de la Grece (History of the Regeneration of Greece), B. 171.
† After the fall of Ali, Khurschid was ordered by the grand seignior to write a letter to his subjects, showing no compassion even to women and children; to exterminate the Morets, and to lay waste the whole Morea. Pouqueville, Ill. 235.
extortion which he had conceived against the Greeks, he submitted to the powers of Europe in only a few particulars relating to the restoration of the churches and of the advantages of trade, and, after the intercession of the British ambassadors for three years, he consented to the evacuation of Moldavia and Walachia, June 23, 1824. When the diplomats, whose several generals tried in vain to bridle them, wasted the capital with fire and sword; he sacrificed every thing to calm their fury—the most able men in the state and in the army, his nearest relatives, his most tried friends, and even Khale Effendi, whose services were indispensable to him. In this favour the Janizaries saw the author of the fatal Greek revolution, and of those oppressive exactions which were intended to supply the extravagance of the seraglio. They commenced their attacks upon him by posting up psalmodies on his character; scurvulous songs were sung in the watchhouses respecting Khale Effendi and Khasnadar Usta. The Janizaries, with their bullion, vied with each other in disgust and insolence. But at some time or other, he...)
MAHOGANY—MAHRATTAS.  

Atmadn. He used every effort for the formation of an army on the European system, and succeeded in uniting the most important districts under one. For further information, see Janizaries; for the consequences of his refusal in regard to the Greek question, see Greece, Revolutions of, near the end; for the late war between Russia and Turkey, declared on the part of Russia, March 14, 1828, in consequence of the breach of the treaty of Ackerman, see Russia and Turkey.  

MAHOGANY; the wood of the sweitienia mahogani, a lofty and beautiful South American tree, allied to the pride of India, so commonly introduced into the southern parts of the United States, and belonging to the same family—meliaceae. The leaves are plumeate, composed of four pairs of oval, acuminate, entire leaflets, and destine of a terminal one. The flowers are small, white, and are disposed in loose panicles. The fruit is a hard, woody, oval capsule, about as large as a turkey's egg. The wood is hard, compact, reddish-brown, and susceptible of a brilliant polish. It is one of the best and most durable woods known to commerce. Furniture and articles of furniture. It is brought principally from Honduras and the West Indies, from which places it is exported, in vast quantities, to Great Britain, the continent of Europe, and especially to the United States, where it is so abundant and cheap as to have brought it into general use. This wood, when otherwise would be highly esteemed in cabinet-making. The tree is of rapid growth, and its trunk often has a diameter of four feet. Mahogany-cutting constitutes a principal occupation of the British settlers in Honduras. Gangs of Negroes, consisting of from ten to fifty each, are employed in this work: one of their number is styled the pannumen, and his duty is to traverse the woods in search of the trees. When these have been discovered, a stage is erected against each, so high that the tree may be cut down at about twelve feet from the ground. After the branches are lopped, the task commences of conveying the logs to the water's side, which is often a work of considerable difficulty. They now float down the current singly, till they are stopped by cables, which are purposely stretched across the river at some distance below. Here the different gangs select their own logs, and form them into separate rafts, preparatory to their final destination. In some instances, the logs are so large and heavy that, on reaching the river, a single tree has sometimes been known to have produced about £1000. Mahogany now begins to be rare in St Domingo, Jamaica, and the other West India islands. It is said to have been introduced into Britain about the year 1724.  

MAHOMET. See Mohammed.  

MAHON, POPE MAHON (Portius Magnoni); a town on the eastern coast of the island of Minorca, of which it is the capital; lat. 39° 51' N.; lon. 4° 18' E. It is the residence of a governor and the principal authorities of the island. It is built chiefly on lofty rocks, and enjoys a pure and healthy air. The houses are generally well constructed, neatly kept, and provided with cisterns. Its harbour is one of the safest and most convenient in the Mediterranean. It is capable of accommodating large fleets, but at the entrance there are some shoals. It is defended by three batteries, and eight large pieces of cannon. There are four islets near, one of which was the supposed burial place of 800 patients, founded by the British in 1711; another, the quarantine buildings; a third, one of the finest lazaretos in Europe, for 1500 inmates; a fourth, an arsenal. A natural mole runs along the harbour, and is occupied by shops with naval stores. Mahon was taken by the British in 1765; by the French in 1768; restored to the former in 1763; and taken by the Spaniards, after a memorable siege, in 1782.  

MAHORRATTA (Mahratta). The whole south-western part of the Deccan. They first became known to Europeans in the beginning of the last century, and have become celebrated within the last fifty years. They originated from the Rajapoots, an old warlike tribe. Being driven by the Mongols from the provinces of Hindostan, where they dwelt, they fled to the mountains extending from Beot to Goa. The various tribes of which the nation consisted, were united into a monarchy, the founder of which, Sevajee, died in 1680. The capital of his kingdom was Sattarah. Inured in their hills to all the hardships of war, accustomed to live on rice and water, and armed with excellent sabres, they formed, like the Cossacks, with their hardy horses, a body of cavalry which was the terror of their neighbours, upon whom they made frequent attacks. When Aurungzebe attacked the Coromandel coast, the inhabitants called in the Maharrattas to their aid, and the formidable conqueror found it prudent to conclude a truce with them on very advantageous terms. After the death of Aurungzebe, the Maharrattas took advantage of the dissensions which agitated the Mongol states, to extend their own territory. Their territory amounted to about 593,829 square miles, the greatest part of which was uncultivated. The sovereigns, despotic as was their government, the sons of Sevajee, bore the title of maharajah (grand prince). They abandoned the administration of the government entirely to their ministers, by whom they were held as prisoners. The last of the royal family, Ram Rajah, ascended the throne in 1740, at the age of eight years. His prime minister, the peishwah (grand vizier) Bajeeow, took advantage of the minority of the prince, seized the reins of government with the aid of Rajoojee, another minister, and confined Ram Rajah, (who remained a prisoner till his death in 1777), though he left him a show of dignity. Bajeeow, with the other minister, then proceeded to divide the territories as independent sovereigns, the former assuming the western provinces, and fixing his residence at Poonah. His kingdom was called the empire of the Poonah-Maharrattas. Rajoojee took the eastern provinces, established his court at Nagpou, and founded the empire of the Berar-Maharrattas. Bajeeow died in 1761. The dignity of peishwah was hereditary in his family. About 1763, a council of government was formed in 1777, consisting of twelve Bramins, which left the peishwah nothing but the executive power. This division of the Maharratta states could not be effected without the consent of the principal governors of the separate states; they were gained by additions of power and revenue. Hence many Maharratta princes arose, some of whom were only in appearance dependent upon the sovereigns of the more extensive districts, much as the German princes anciently depended on the emperor.  

1. The empire of the Poonah-Maharrattas comprehended the whole coast from Goa to Cambay, and was surrounded by Mysore, Golconda, Berar, and the Maharratta principalities Guzerat, Oojeen, and Indore. It contains the most important possessions of the Bombay presidency. Bajeeow defeated the Mussulmans in 1760, and extended his conquests to the banks of the Indus. This brought the Poonah-Maharrattas in contact with the tartars under Abdallah, formerly allied to Nadir Shah. The peishwah having formed a plan for driving the Mohammedans out of the country, and extending the dominion of the Maharrattas over all India, the whole country was divided (1759—61) into two parties. The Mohammedans adhered to Abdallah, and appeared 150,000 strong in the plains of Carnal and Painput; the
Mahrattas, together with the Jats, were 200,000 strong. After a long and bloody battle, the latter were defeated, and lost all hopes of the supremacy over India, which had been the object of the war. Bajeeow died soon after. His son Maderow died in 1772; his grandson Narain Row was assassinated in 1773, by his own family. He could not, however, obtain quiet possession of the peishwahip, for a posthumous child of Narain was acknowledged for his lawful son. Ragobah offered to the British the island of Salsette, on condition that they should support his claims. But the council of Bengal was unwilling to engage in a war with the Mahrattas, and, consequently, by the terms of which Ragobah relinquished his pretensions, the British were to remain in possession of Salsette, and to receive a territory producing a yearly revenue of three lacs of rupees. Ragobah remained at Bombay; the British maintained that the district ceded to them did not yield the sum agreed upon. The friends of Ragobah had defeated the adherents of the young peishwa at Poonah, and the government of Bombay, with the consent of the council of Bengal, sent Ragobah, in 1778, with a British army, to Poonah. The British gained many important advantages; but, on account of their want of support of the inhabitants, the project was abandoned. It was concluded in 1782. They restored all the conquered countries except Salsette and the neighbouring islands. Maderow, the son of Narain Row, who had been assassinated, was born in 1774, and, in 1783, declared peishwa, and was, for a time, under the guardianship of one of the other Mahratta princes. Bajeeow, the last peishwa, was established by a British force, under the command of marquis Wellesley, now duke of Wellington, and subdued several of the Mahratta tribes, with the assistance of the British armies; but, in 1817, he commenced hostilities against the British. He was, however, so severely handled (November 10) by general Smith, that he abandoned his residence at Poonah, and fled to a mountain fortress. In 1818, he submitted to the British authority, and lived as a private individual, with a yearly pension, under the British inspection.

2. The state of the Berar Mahrattas was not so disturbed by war, and the British, in consequence, were unable to defend it against the invasions of the Peshwa, or to protect it from the depredations of the Maratha princes, the most important were Sindia and Holkar. The former was rajah of Oojien, and had become very powerful. To limit his growing power war was declared against him by the British, in 1802, and he was defeated by the duke of Wellington (then marquis Wellesley), September 28, 1803. He was obliged to cede the whole of his territory to the British, and sign a treaty of peace, which was afterwards often violated. He died in 1827. Holkar, sovereign of Indore, whose revenue was estimated at £4,600,000 sterling, was alternately the friend and enemy of the British. In the war of 1803, he was compelled to submit to disadvantageous terms. In 1817, he again took arms, but was defeated and obliged to submit, and deprived of two-thirds of his territories. He died in 1825.

The Mahrattas profess the religion of Brahma; they are strong and graceful. The Bani or built, and vary in their complexion from black to a light brown; their manner of living is simple; they have few wants; they are educated for war; in battle, they intoxicate themselves with a sort of opium or wild hemp, which they smoke, like tobacco. In the last war, their artillery exhibited astonishing skill. The province of the Mahratta states was facilitated by the circumstance that the military caste of the rajus was universally hated, because they treated the other castes as slaves. The property and rights of the latter found protection only under the British dominion. The caste of warriors left the British provinces in consequence, formed banditti (guerillas) on the Nerbudda, and sought protection from the small Mahratta princes, who were jealous of the British. Thus arose the last general contest of the Europeans with the ancient and proud caste of warriors, which ended with the total dissolution of their order, and the overthrowing of the independence of their principal families, in 1818.—See Duff's History of the Mahrattas (3 vols., 1826.)

MAI; the eldest daughter of Atlas and Pleione, the mother of Mercury by an amour with Jupiter, in a grotto of the mountain Cyllene, in Arcadia. She was placed, with her six sisters, among the stars, where they have the common name of Pleiades. The Romans also worshipped a Maia, who, however, was the mother Earth (Cybele). The Tusculans called their principal deity Majus, so that here the two highest deities or principles of nature appear in a male and female form. The month of May is said to have received its name from them. See Magic.

MAID OF ORLEANS. See Jeanne d'Arc.

MAIDEN. The name is of the instrument of capital punishment, formerly used at Halifax, in Yorkshire, and in Scotland, which is the prototype of the French guillotine. The maiden is a broad piece of iron, a foot square, sharp on the lower part, and loaded above with lead. At the time of execution the head was pulled up to the top of a frame ten feet high, with a groove on each side, for the maiden to slide in. The prisoner's neck being fastened to a bar underneath, on a sign given the maiden was let loose, and the head instantly severed from the body.

MAIL, COAT OF; also called habergeon. There are two sorts—chain and plate mail. Chain mail is formed by a number of iron rings, each ring having four others inserted into it, the whole exhibiting a kind of net-work, with circular meshes, every ring separately riveted. This kind of mail answers to that worn on the ancient breastplates, whence they were denominates lorica hamatae, from the rings being hooked together. The habergeon, or hauberk, resembled a shirt in make, and was thrown over the upper part of the body above the clothing; a collar was applied round the neck; and there was a hood, or net helmet, to cover the head. Sometimes the crown consisted of plate of the Mahratta kind; and iron plates, in like manner, were sometimes clasped around the breast and back. In addition to these parts, there were trowsers of similar construction, and it is probable, that the feet were defended by a guard of the same description.

Plate mail consisted of small lamiae or plates, usually of the size of sixpence, and each other like the scales of a fish, and sewed to a strong linen or leather jacket. The plates were in general very numerous, small, and united so as to move freely
MAIL, and MAIL COACHES. See Posts.

MAIMBOURG, Louis; a celebrated French ecclesiastical historian, was born at Nancy in 1689, entered into the society of耶稣 at sixty-two years of age, and when he had finished the usual course of study, became classical teacher for six years. Having written a treatise in defence of the rights of the Gallican church against the yoke of Rome, he was expelled from the society of Jesus (1682), by order of Pope Innocent XI.; for which disgrace he was compensated by a pension from Louis XIV. He died in 1686. As an historian, he is partial and inexact. His complete historical works (29 vols., 1686), contain stories of the Crusades; of the League; of the Decline of the Empire after Charlemagne; of the Pontifices of St Gregory and St Leo; of the Schism of the Greeks; of the Grand Schism in the East; of Arminism; of the Iconoclasts; of Lutheranism, and of Calvinism.

MAIMON, Moses, or MAIMONIDES, one of the most distinguished Jewish scholars, was born at Cordova, in Spain, in 1130. With the lessons of the Arabian Thopahil and Averroes in medicine and philosophy, he united the study of the ancient philosophers, particularly of Aristotle, and thus rendered himself an object of suspicion to his Jewish brethren. To escape their persecution, he went to Egypt, and became physician to the sultan Saladin, under whose protection he established a celebrated seminary in Alexandria. The intriguers of his enemies soon obliged him to leave that city, and the remainder of his life, which he closed in Cairo or in Palestine, in 1265, was passed in continual wanderings. In his writings, the most celebrated is his Mekor Nechaim (the Teacher of the Perplexed), an attempt to reconcile the doctrines of the Old Testament with reason, or a sort of religious philosophy, which bears strong testimony to his acuteness and clear understanding. It was written originally in Arabic, and translated by some Jews into Hebrew, and by Buxtorf into Latin (1629). Among his other works his Commentaries on the Mischnah, in Hebrew and Latin (Amsterdam, 6 vols. fol.); his Had Chazakha (Strong Hand), an abridgment of the Talmud (Venice, 4 vols. fol.); his Sepher Haminadot, or book of Precepts, Hebrew and Latin (Amsterdam, 1640), an exposition of 613 affirmative and negative precepts of the law,—deserve mention. He was also author of a book on Idolatry, translated by Vossius; one on Christ, translated by Genebrard; several medical and other works, letters and essays. The Jews call him the doctor, the great eagle, the glory of the West, the light of the Church, and consider him inferior only to Moses. They often designate him according to their usual custom, by the four letters R. M. B. M. (Rabbi Moses Ben Maimon), whence the name Rambbm.

MAIMON, Solomon, a distinguished Jewish philosopher, born in Lithuania, 1753, was the son of a poor rabbi, who directed his studies to the Talmud. After having lived in extreme poverty, his thirst for knowledge carried him to Germany, where he became known to Mendelssohn, in Berlin, and obtained assistance from him. He pursued his studies, particularly in philosophy, with great zeal, turned his attention to the time to pharmacists, travelled to Hamburg, Amsterdam, Breslau, returned to Berlin, and died in Silesia, in 1800. He wrote Memoirs of his own Life (Berlin, 1792—93, 2 vols.) Maimoniana, illustrative of his character, were published by S. J. Wolf (Berlin, 1813). He was the author of Essays on the Transcendental, and Natural Philosophy (Berlin, 1790); Essay toward a new Logic, with letters to 鈥斻ēsesidemus (Berlin 1794), in which he attempts to correct and define more accurately Kant's transcendental logic; a work On the Categories of Aristotle (1794); and Critical Inquiries into the Human Mind (Leipsic, 1797). In the writings of Maimon, the outlines of the ethical philosophy with great ingenuity.
MAINE—MAINE.

MAINE, a small village of the Morea, which gives its name to a district situated in a bay of the Mediterranean; lon. 22° 22' E.; lat. 36° 42' N. The district is mountainous, the least fertile part of the principal rivers; it is inhabited by the ancient Lacoonians, and at present is included in the provinces of Laconia and Lower Messenia. See Mainots.

MAIN DE JUSTICE (French, hand of Justice) is a staff, at the upper end of which a raised hand is fastened. It is one of the French insignia of royalty. Napoleon had it among the imperial insignia.

MAIN-MAST; the chief or middle mast of a ship. It is divided into four unequal sections, viz. the main-mast, properly so called, which first rises from the deck; the main-top-mast, immediately rising from the main-mast; the main-top-gallant-mast, just above the main-top-mast; and the main-royal-mast, which crowns the whole. The form of the main-mast, like that of other masts, is taper. Each division of the mast has its particular sail, to which it gives name, as the main-top, the main-top-gallant, the main-royal mast, the top-mast, the top-gallant-mast, &c.; besides its separate head or top, as the main-top, main-top-mast-head, &c. The ropes, tackling, &c., of each section are named in a similar manner.

MAIN, MAINE, or MAIN (anciently Manus); a river of Germany, which rises on the confines of Bohemia. It is formed of two streams, the one end called the Weser, or White, the other, Rother, or Red; both these join near Cumbach. It receives the Regnitz, the Franconian Saul, the Tauber, the Kinzig, and the Nidda, and flows through Bavaria, Baden, Hess-Cassel, Hesse-Darmstadt, the territory of Frankfurt, and the duchy of Nassau, and joins the Rhine near Mentz. It affords a navigation as far as Bamberg. Length, about 300 miles.

MAINE; formerly a province of the western part of France, bounded by Normandy on the north, the Orléansais on the east, Anjou and Touraine on the south, and Brittany on the west. It now constitutes the departments of the Sarthe and the Mayenne. It derives its name from the Cenomanii, an ancient Gallic people. It was part of the French dominions of Henry I. of England, and was conquered by Philip Augustus.

MAINE ET LOIRE, a department of France. See Department.

MAINE; one of the United States of America, bounded N. and N. by Lower Canada, E. by New Brunswick, S. E. and S. by the Atlantic, and W. by New Hampshire. Lon. 68° 49' to 70° 55' W.; lat. 43° 5' to 48° 12' N. Its length, on the northern frontier, is 280 miles, on the eastern, 210; greatest length from north to south, 225, and greatest breadth from east to west, 195; square miles, 32,028; population in 1790, 90,540; in 1800, 151,719; in 1810, 229,705; in 1820, 298,335; in 1830, 399,482; in 1840, 599,332; in 1850, 745,751; in 1860, 913,787. The principal rivers are the Kennebec, Kennebec, Androscoggin, Saco, St Croix, and St John's. The principal basins are Casco, Penobscot, Frenchman's, Englishman's, Machias, and Passamaquoddy. The chief lakes are Moosehead, Umbagog, Sebago, Saco, and several others farther in the interior. Maine is either an elevated or mountainous country, having generally a diversified surface. A tract commencing on the west side of the district, east of the White mountains in New Hampshire, and holding a north-east direction as far as the heads of the Aroostock, about 150 miles in length, and sixty in its greatest breadth, is named in mathematics the northern mountain the most elevated summit in the range. There is also a small mountainous tract in the northern extremity. The remainder of the state may be considered, generally, as a moderately hilly country. The tract of country along the sea-coast from ten to twenty miles wide, embraces all the varieties of sandy, gravelly, clayey, and sandy soils intermixed; and in very limited distances; seldom very rich; in many places tolerably fertile, but generally poor. Of this section, Indian corn, rye, barley, grass, &c., are the principal productions. In the tract lying north of this, and extending fifty miles from the sea in the western, eighty in the central, and one hundred in the eastern section, the same kinds of soil are found, but they are less frequently diversified, and generally more fertile. The surface rises into large swells of generally good soil, between which, on the margin of the streams, are frequently rich intervals, and in other places sandy or gravelly, pine plains, or spruce and cedar swamps. Of this section, the principal productions are grass, Indian corn, wheat, barley, rye, flax, &c. The country beyond the limits above specified, is but little settled. It exhibits great diversities in the appearance of its soil, growth of timber, and also in climate. The land on the coast, is generally low and sandy, and the Peninsulas, is accounted the best in the state. It is well adapted to the various purposes of agriculture, and, as a grazing country, is one of the finest in New England. Though the climate of Maine is subject to great extremes of heat and cold, yet the air, in all parts of the country, is pure and salubrious. The summers, in most parts, are favourable to the growth of all the vegetable productions of the Northern States. In some parts, however, Indian corn, and some other plants of a more tender kind, are frequently injured, and sometimes destroyed, by frosts late in the spring and early in the autumn. The cold of winter is severe, yet the severity of the sky, and the invigorating influence of the atmosphere, during the same season, make amends, in some degree, for the severity of the weather. Maine enjoys great facilities for commerce. The coast is indented with bays, abounding in excellent harbours. All the settled parts of the country lie near a market, and the produce of the farmer is readily exchanged for money, at a good price. The principal article of export is timber. Vast quantities of boards, shingles, clapboards, masts, spars, &c. are transported to the neighbouring states, to the West Indies, and to the British possessions. Much lumber consumed in Boston, Salem, &c. is brought from Maine. Dried fish and pickled salmon are considerable articles of export. Beef, pork, butter, pot and pearl ashes, and some grain, are also among the exports. Great quantities of lime are annually exported from Thomaston. The value of the imports for 1820, was 742,781 dollars, or about $110,000; of the exports, 737,832 dollars, of which 729,106 was of domestic produce. The tonnage in the beginning of that year was 232,939. Cumberland and Oxford canal extends from Portland to Seabago pond. (See Canals.) The principal literary institutions are Bowdoin college at Brunswick (students in 1830, 112); Waterville college at Waterville; the Bangor theological seminary; the Gardiner lyceum at Gardiner, founded in 1821, for the purpose of affording a useful education to the operative and productive classes; the Wesleyan seminary at Reidsfield; and twenty-nine country schools, with funds amounting to 170,000 dollars, or about $36,000. Each town is required by law to raise a sum equal to forty cents for each inhabitant, for the support of free schools. In 1826, there were in the state 2499 school districts, and 137,930 scholars. Some voyages of discovery were made by the British to that portion of the country since called Maine, as early as 1692 and 1603, and it is described under the name of Massa-
sken. It was visited by French navigators, as De Monts and Champlain, a few years later, but the first permanent settlements were made in 1632. The government was at first proprietary, but in 1632, the province of Massachusetts bay claimed this territory as included within the limits of their charter. In 1820, it was separated from that state, and received into the Union as an independent state. See Massa-

MAINTAINON, FRANCQRE DE AURION, marchioness of, descended of a noble Protestant family, was born in 1633, in the prison of Niort, where her father was con-
fined. In 1639, M. d'Aubigné, having been released, set sail for Martinique with her daughter. After his death, in 1645, his widow returned to France, totally desolate, and the young Frances was taken into the house of her aunt, a Calvinist, whose creed she unwillingly adopted. Every attempt, however, to deprive her of her mother to reclaim her, and she finally yielded to harsh treatment, and, after a long residence, abjured that creed. The death of her mother left her soli-
tary and dependent, and, although she was received into the house of madame de Neulliant, her god-
mother, she was subjected to all kinds of humiliations, and considered herself happily in becoming the wife of the deformed, infirm, and impotent Scarron, who, touched with her situation, offered to pay the sum necessary to enable her to enter a convent, or to marry her. Scarron was not rich, but his family was respectable, and his house was frequented by the most distinguished society of the court and the city. His wife conciliated general respect and esteem and affection by her social qualities, her talents, and her modesty. On his death, in 1660, his widow, who was again left destitute, was on the point of embark-
ing for Portugal as a governess; when madame de Montespan, the mistress of Louis XIV., procured her a pension, and afterwards had her appointed gover-
ness to the duke of Maine and the Infanta of Toulouse, his sons by Louis. In this post, she became better known to the king, who was, at first, prejudiced against her, but who learned to esteem her for her good sense, and the care which she bestowed on the education of the duke of Maine. He made her a present of 100,000 livres, with which, in 1679, she purchased the estate of Maintenon, and, becoming fond of her society, gradually passed from intimacy to love. Madame de Montespan herself contributed much to the elevation of De Maintenon by her capri-
cious and arrogant temper, and, while the latter with-
drew the king from his connexion with the former, she supplied her in his affections. Louis XIV. was then at an age when men were for a wife in whom they might confide their joys and sorrows, and he longed to alleviate the weight of government by the innocent pleasures of domestic life. The yield-
ing temper of madame de Maintenon, who, from youth up, had learned to accommodate herself to the wishes of others, promised him an agreeable companion and a trusty friend. Besides this, she had a leaning towards devotion, and the king had himself manifested a similar inclination, as years came on. Pére Lachaise, his father confessor, advised him to sanction his wishes by a secret but formal marriage, which was solemnized in 1685. The archbishop of Paris refused to perform the ceremony in presence of the confessor and two witnesses. Louis was then forty-eight, madame de Maintenon fifty years of age. At court, the marriage always appeared doubtful, although a thousand indications appeared it. Yet the happiness of De Maintenon was not soon lasting; as a confidant she never had, and resisted this inclination, even in the case of the wish, which I no longer indulged, was fulfilled, I thought myself happy; but this intoxication lasted only three weeks." After her elevation, she lived in a sort of retirement from the world. Louis XIV. visited her several times a day, and transacted business with his minis-
ters in her apartments, while she read or otherwise employed herself. Although, in appearance, she neither knew nor wished to know any thing of state affairs, yet she often had a decisive influence on them. Chamillart was made minister, and Marsin com-
mander of the army in Germany (1703), and Vendoue and Catignat were dismissed, by her influence. The nation accused her of errors, and the excuse of good intentions could not always exculpate her. In all other respects entirely submissive to the will of the king, she was wholly occupied with the means of rendering herself agreeable to him, and this slavery of her age made her more unhappy than the poverty of her youth. "What a martyrdom," said she to lady Bolingbroke; "I used to be happy, and I am led to accuse a man who is incapable of being abused." The king, who sometimes teased her with his ill-humour, endeavoured to stone for this by proofs of esteem, such as he had never shown to any other woman. But these external forms could not console her chagrin. She did nothing for her family, because she feared to attract the notice of the nation: she would receive nothing herself but the estate of Maintenon, and a pension of 48,000 livres. Among her benevolent plans, was the foundation of the school at St Cyr, for the education of poor girls of good family. Thither she retired, after the death of the king, in 1715, taking part in the instruction and amusements of the pupils, till her own death, in 1719. La Beaumelle published le Lettres de Madame de Maintenon (Amsterdam, 1756, 9 vols., 12mo), but with many arbitrary changes. The edition of 1812 (6 vols., 12mo) is more complete. La Beaumelle's Mémoires sur Madame de Maintenon et le Siècle pour la Vie de Madame de Maintenon, by Caraccioli, con-
tains a full account of the institution at St Cyr. The

Entretiens de Louis XIV. et de Madame de Main-
tenon sur leur Mariage (Marseilles, 1701) is a scarce book. In 1826, the Lettres inédites de Madame de
MAIOLIKA—MAIZE 633

MAIOLIKA. See Faience.

MAIRE, LE, STRAITS OF; a narrow channel or passage from the Atlantic to the Pacific ocean, between Terra del Fuego and Staten Land. The strait was named and most certainly discovered by Fuegus, and east by the west end of Staten Land, is about fifteen miles long and as many broad. It derives its name from Le Maire, a Dutch pilot, who discovered it in 1616.

MAISTRE, Joseph, count de, Sardinian minister, and president of the royal academy of sciences at Turin, born at Chamberry, 1753, of a French family, was a senator of Piedmont at the time of the French invasion (1792). He left his country in consequence of that event, and afterwards followed his king to Sardinia. In 1804, he was sent ambassador to St Petersburg, returned to Turin in 1817, and died there in 1821. De Maistre was familiar with the Greek and Latin literature. He was an enemy of liberal principles in religion, politics, and philosophy. As a diplomatist, he exerted himself to effect the restoration of all his former possessions to his master, and to establish the Church of Genoa. Among his political writings are his Eloge de Victor Amade III; Considerations sur la France (1796, 3d edit., 1814, and also three editions at Paris); Essai sur le Prince de Génie des Constitutions politiques, in which he maintains the divine origin of sovereignty; Soirées de St Petersbourg; Du Papier and Du Congrès de Rastadt, the last in conjunction with the abbe de Pradt.—His brother Xavier, born at Chamberry, 1764, major-general in the Russian service, member of the Turin academy of sciences, is favourably known as a writer. The Transactions of the Turin Academy contain several chemical communications from him. He is an excellent landscape painter, and a witty poet. His Voyage autour de ma Chambre, distinguished for its gaiety and philosophy, has been translated into several languages. Le Lépreux de la Cité d’Aosta (translated into English, Philadelphia, 1826) delineates with much talent and feeling, but in sombre and mystic colours, the suffering of a man cut off from all human society. His (Oeuvres, 3d edit., Paris, 1825, 3 vols.) contain also the Expedition nocturne autour de ma Chambre; Les Prisonniers du Caucaze; and La jeune Siberienne (a translation of the latter, 1826). MAITRE; the French for master; a word used in many senses. Maître d’armes is a degree bestowed in France by the societies of teachers of fencing, on such persons as are deemed capable of instructing in this art. Maître de requêtes were officers of the parliament of Paris, before the revolution, who reported on petitions, &c. (requêtes). Napoleon restored the title, and gave it to certain officers belonging to the council of state.

MAITTAIRE, Michael; a learned critic and bibliographer, born in France, in 1698. His parents having fled to England, to avoid the persecutions in France, he was educated at Westminster school and Christ-church college, Oxford, where he took the degree of M.A., in 1696. The preceding year, he had been made second master of Westminster school, which office he relinquished in 1699, and, from that period, devoted his time to private tuition and the study of literature. His attainments in Greek and Latin authors are esteemed for their accuracy. His most important literary production is his Annales Typographici ab Artis Inventione (1712—1741, 4to, augmented by Denis and Pruner). He also wrote a Historia Stephanorum Gr. Linguae Dialecti, and edited the Marmor Osseion.
mode of planting, is in little hillocks raised at intervals throughout the field, to each of which is allotted five or six rows. These last, after being dipped in water, will often sprout at a lapse of five or six days; the young plants are liable to be injured by frost. In many countries, after flowering, the tops are cut and used for fodder for cattle, and a portion of the leaves may also be this last operation you should be allowed, till the time of maturity, which is indicated by the dying of the leaves, and the hardness and colour of the grains. The spikes or ears are gathered by hand, and the husks, when perfectly dry, stripped off, and, together with the stalks, laid by for winter fodder, while the ears are conveyed to the granary. The green stems and leaves contain a nutritious matter for cattle, and in some countries it is cultivated solely for this purpose, especially after early crops of other vegetables; when planted for this object, it should be sowed very thickly. Corn, when well dried, will keep good for several years, and preserve its capability of germination. It is eaten in various manners in different countries, and forms a wholesome and substantial aliment. Domestic animals of every kind are also extremely fond of it. According to count Rumford, it is, next to wheat, the most nutritious grain. It is considered as too stimulating for the common food of cattle, and is frequently stripped of its thick covering of husks, and then either dried, or steeped in water, or made into bread by use of it. Mixed with rye meal, it forms the common brown bread of New England; mixed with water alone, it makes a very palatable species of extemporaneous bread. Ground very coarse and boiled, it forms the "hominy," which is so great a favourite at the south; and the fine meal boiled thick in water, is the "mush" of Pennsylvania and the "hasty-pudding" of the Eastern States. In the form of hulled corn or samp, the whole grains furnish a very palatable, although rather indigestible luxury. The stems contain sugar, and attempts have been made in France to extract it, but the modes hitherto devised have proved too expensive. In more southern latitudes, the experiment would, doubtless, be attended with more success; indeed, according to Humboldt, this branch of manufacture is carried on in Mexico. The ashes contain a large proportion of potash. Of the husks, a beautiful kind of writing paper is manufactured in Italy; and when soaked in hot water, they make excellent mattresses; a greyish paper may be made from all parts of the plant. From some information which has lately reached this country, it would seem that the native country of Indian corn has, at last, been ascertained. A variety has been obtained in Paraguay, in which each grain is enclosed by glumes, and this, according to the report of the Indians, grows wild in the woods.

**MAJESTY.** (from the Latin majestas) signified, in republican Rome, the highest power and dignity— the attribute of the whole community of citizens, the populace. The **majestas** assigned to a dictator, consul, and even senate, though, in the case of the latter, the word **auctoritas** was used in preference. The **majestas** was ascribed to persons, or bodies of persons, so far as they had legislative power, the right to declare war and peace, decide on political offences, and elect magistrates. He who violated the **majestas** of any one of these persons was condemned as a seditionist, or infringing the existing institutions or the rights of the people) made himself guilty of the **crimen majestatis.**—See Hauoldt De Legibus cr. Laes. Maj. (Lépise, 1786, 4to.) When the republic was overthrown, the dignity, power, and name of **majestas** passed to the Roman emperors, and from them again to the emperors of Western Europe (**majestas Augusti**). At a later period, under the Roman emperors, **majestas** was the name of the imperial dignity; whilst that of a magistrature was called **dignitas.** To kings the attribute of majesty was given much later. The courtiers introduced the title in France under Henry II.; yet as late as during the negotiations respecting the peace of Westphalia, we find disputes respecting this title. In the treaty of Lorraine (1555), the title of majesty is given to the Emperor Charles V. only. In the treaty of Crescy (1544), Charles V. is styled **imperial, Francis I. royal majesty; and in the peace of Chateau-Cambresis (1559), the titles of most Christian and Catholic majesty are found for the first time. In England, Henry VIII. first adopted the title majesty. At present, this title is given to all European emperors and kings. The grand seguior is called **highness.** On the continent of Europe, majesty is used also to denote the royal dignity and the privileges derived therefrom, even in the case of princes who have not personally the title. On the other hand, the title of majesty is sometimes separated from the legal meaning of the word, as in cases of abdicated monarchs who retain the title of majesty and sire; thus King Stanislaus Leszinsky, of Poland. The few courtiers who surround the deposed Charles X., give him, also the former dauphin, and the Duke of Bourdeaux, as Henry V., the title of majesty. This title was often given to the awkward obsequiousness of former ages, and the indefinite conception of a religious character attached to earthly rulers, added epithets intended to elevate it still higher, as "most gracious" in England, "most highest" (Althöchste) in Germany:* Before the word majesty was used, the term of the Emperor, the letters K. K. are put, which stand for Kaiser-lich-Königliche-Majestät (imperial royal majesty). The pope has given the epithet of majesty to several monarchs, as Catholic majesty to the king of Spain, Apostolic majesty to the king of Hungary, Most Christian majesty to the king of France, Most faithful majesty to the king of Portugal.

* The pedantic spirit of the Germans, which shows itself in so many high-sounding titles (see Consulat, and Ceremonies) has given a character of formal and laboured reverence to the style of addressing princes, which, to many and simple reason, is little less offensive than the incense offered to an Asiatic monarch. In the titles of the latter, there is, at all events, poetry mixed with nonsense; but in the former, there is neither reason, nor grammar, nor poetry. In writing, a king in Germany is, at the head of the letter, addressed thus:—Althöchste, Allerhöchste, Allerhöchsteherrlich, Allerhöchsteherrlicher, König, Kaiser, etc., which would give the following double superlatives: Most-senest, most-höchsteherrlich, greatest-mightiest king, most-höchster Herrlich and lord. Besides this, the single pronouns he, they, you, etc., are also too vulgar to designate a king, and whenever they are used, the prefix supers ever accompanies, as Altherhöchste, etc. We have most-höchsteherrlich (for he), most-höchster Herrlich, most-höchsteherrlichen. A prince is addressed as most-höchsteherrlich-gentle, etc., and is mere next of kin to a god. We may well exclaim, Heist-he? An anecdote is told in Germany, which, though it can have no advantage, has at least a moral attached to it: the king of Bavaria—a man, by the way, who hated nothing more than the toppery of royalty—was travelling through his own country, and as he was in a small place, according to custom, to deliver his address. He thought that he must be addressed as in speaking in writing. He therefore began, "Most-senest, most-höchsteherrlich, greatest-mightiest," etc. Being somewhat bewildered by the presence of a king, and being auscultating it to give such exalted epithets to the Creator only, he continued, carried away by the current of his associations—"Everlasting God and Lord, Almighty Father, Son and Holy Ghost."
was one of the principal causes of the thirty years’ war, and of the intellectual debasement of that fair country. The Bohemians were converted by the desire to the Catholic faith, and the spirit and intellect of the Commonwealth was lowered on the scale of cultivation than a Bohemian peasant.

MAJOR, in military language; the lowest of the staff-officers; a degree higher than captain. There appear to have been officers called majors as early as 1500, in the German and Spanish troops; they were then called major offiz. At present they are generally the commanders of battalions. The French, however, abolished this degree during the revolution; they have chefs de bataillon. Their gros major is a half-invalid officer, who commands the depot of the regiment.

MAJOR; in music, an epithet applied to that of the two modern modes in which the third is four semitones above the tonic or key-note. Those intervals which contain the greatest number of semitones under the same denomination are also called major; as a third, consisting of four semitones, instead of three, is termed a major-third; a sixth, containing nine semitones, instead of eight, is called a major-sixth.

MAJOR, in logic; the first proposition of a regular syllogism containing the general premise; as, "All vicious acts are pernicious" (the major); "this act is vicious" (the minor), "therefore this act is pernicious" (conclusion).

MAJORANO GAETANO, known under the name of Caffarelli, a celebrated soprano, was born in the Neapolitan territory, 1703. A musician, who had remarked the excellent voice of the boy, advised his father, a peasant, to send him to school at Nocia, afterwards took him into his own house, instructed him, and presented him to Porpora at Naples, who taught him for six years. At the end of that time, Porpora told him that he could teach him nothing more, and that he was now the first singer in Italy, and in the world. In 1738, he went to England, just after Parinelli’s (q. v.) departure, but was not in high favour there. After his return to Italy, he sang in several theatres with extraordinary applause, and contributed to extend the florid style of singing. In 1740, he is said to have received 700 sequins for a single night at Venice. He accumulated a large fortune, and left his son-in-law the sum of 12,000 ducats a year, and his duchy.

MAJORAT; a term used on the European continent to denote, in its widest sense, the order of succession which is regulated by age, and the right of preference which hence belongs to the eldest. It is divided into three kinds:—1. Primogeniture, or the right of the first-born, by virtue of which the eldest, in the eldest line always succeeds to an inheritance. This law regulates the succession to the throne in almost all the European kingdoms of the present day.—2. The majorat, in the narrower sense of the word, gives the inheritance to the eldest of the relatives by blood, so that the next in order is always left to the eldest in the family, without regard to the proximity of relationship.—The majorats cannot lawfully be alienated or mortgaged. The increase of majorats in a state has hitherto been regarded as a species of injustice. The more the wealth of the country is concentrated in a few hands, the more it is necessary for the bulk of the population to be reduced to poverty, and to experience the consequent evils of want, ignorance and crime. The example of Britain may well deter other nations from that defective system of laws, of which the natural consequence is, that more than 150,000 Britons live on the continent, not to grow wealthily, but to consume their wealth. See the article Entailments.

MAJORCA; the largest of the Balearic islands, lying between 39° 16' and 39° 57' N. lat., and 2° 24' and 3° 31' E. lon., being about forty leagues from the Spanish, and fifty from the African coast; it is about 410 square miles in area, and has a population of 60,000 inhabitants. The climate is temperate, the heat being moderated by sea-breezes. The island yields excellent grain, flax, figs, olives, grapes, almonds, oranges, melons, &c. The principal articles of manufacture are tapestry, blankets, and sashes, linen, sailcloth, &c. The coral fishery, the making of wine and brandy, also employ the inhabitants. The administration is composed of a captain-general and a royal audience, under whom is the government of the Balearics. The capital is Palma, with 34,000 inhabitants. Alcudia, on the north-eastern coast, is the only other city, only, is the birthplace of the French, who was overseer of the household. The dignity of first duke (i.e. commander of the army) was soon connected with this office. The dignity became hereditary, and at length Pepin, who held this office, made himself emperor. See Pepin, and France; see also Geschichte der Merovingischen Hausmeier von G. H. Pertz (Hanover, 1819.)

MALABAR (from the Hindoo Malayavar, signifying the mountain, enclosed region) is the appropriate name of the narrow strip of land which lies between the western Ghauts and the sea, on the western coast of the peninsula of the Deccan. The whole western coast, from cape Comorin to 15° N. lat., is sometimes called the Malabar coast, in distinction from the Coromandel coast, on the eastern side of the peninsula. The province of Malabar is a small part of this region, containing about 7249 square miles with a population of 907,575 persons. It was annexed to the presidency of Madras in 1803. In 1817, the revenue amounted to £225,652. The foreign trade is almost exclusively confined to Bombay, Guzerat, and the gulf of Persia. Calicut, Malac, belonging to the French, is the principal town; except on the coast there are no inhabited villages, each land-holder living separately on his own estate. Rice, cocoa-nuts, and pepper are the principal productions. The majority of the inhabitants are Hindoos, and, on account of the remote and sheltered situation, they have preserved their manners and customs with greater purity than has been done elsewhere, where the Mohammedans never having entered their territory as enemies till the irruption of Hyder Ali in 1766. There are also about 10,000 Nestorian Christians and 150,000 Roman Catholics.

MALACCA, or MALAYA; a country of India beyond the Ganges, consisting of a large peninsula, connected with Siam by the isthmus of Krao, which is about seventy-five miles broad. In all other places, it is surrounded by the sea. It is about 775 miles long, and 150, on an average, broad. It is traversed throughout by a chain of lofty mountains, and is covered with a dense forest of mangroves; the climate is difficult to penetrate into the interior. The fruits are excellent and plentiful, but grain is not produced in sufficient quantity to supply the inhabitants. Its political condition alternates between a dependence upon Siam and a division into a number of petty independent states. See Malaya.

MALACCA; a seaport of the above country, on the western coast, and on the straits of Malacca; lon.
MALACCA PASSAGE—MALAYS.

102° 12' E.; lat. 20° 14' N. Many of the houses are well built of stone, and there are several spacious and handsome streets. The surrounding country is fertile and pleasant. There is a good roadstead about one and a half miles distant from the town, but the entrance of the river by boats is difficult. The exports are tin, sugar, pepper, canes, elephants' teeth, and gold dust. This place was once possessed by the Portuguese, afterwards by the Dutch, till 1717, when it was subjected by a British force, but restored in 1801, recaptured in 1807, and again restored in 1815. But it was finally received in exchange for the British settlements in Sumatra, and occupied by the British authorities in 1825. Population in 1833, 33,859.

MALACCA PASSAGE; channel of the East Indian sea, between Polo Way and the coast of Sumatra, about thirteen miles long.

MALACCA, STRAITS OF; a narrow sea between the island of Sumatra and the country of Malacca, extending from the equinoctial line to lat. 5° N.

MALACHI, the twelfth and last of the minor prophets, was the contemporary of Nehemiah, and prophesied, according to Jaha, from 419 to 408 B. C. The name signifies angel, or messenger of the Lord. Our entire ignorance of his history has given rise to numerous conjectures concerning him. His prophecy is short, his style prolix and rough, and he denounces with the utmost severity the backslidings of his countrymen. He declares that the Messiah will save the Gentiles, and announces the coming of one who shall precede and prepare the way for the Saviour. Among the principal commentators are Jerome, Pococke, Calmet, Rosenmuller, &c.

MALACOLOGY (from malaxis, Greek for the mollusk) was a term now used, particularly by the French, for that part of science which treats of the mollusca.

MALAGA; a maritime town of Spain, on the coast of the Mediterranean; lat. 36° 43' N.; lon. 4° 25' W.; population, 51,900. It has an excellent harbour, and is situated in the midst of a fertile country, producing great quantities of figs, almonds, oranges, lemons, olives, sumach, juniper-berries, wax, and honey, which, with dried raisins and wines from the mountains, and cork from the hills, form the foundation of the commerce of Malaga. Besides these articles, it exports a great variety of manufactured goods. Many of the tin in the neighbourhood of Malaga is exported is enclosed on three sides, and is capable of accommodating 400 merchants and nineteen ships of war. The city presents a Moorish appearance, with high houses, and narrow, crooked, badly-paved streets. There is, however, a splendid public walk, and a rich, but unfinished cathedral. The vineyards on the neighbouring hills produce, annually, from 2000 to 3000 pipes of wine. The first vintage, in June, furnishes the Malaga raisins. The second, in September, furnishes a kind of wine resembling Sherry, but inferior to it. In October and November, the sweet Malaga wine is made.

MALAGRIDA, GABRIEL; an Italian ecclesiastic, notorious for his intrigues and futalism, was born in 1866, and, having become a member of the Jesuits' college, was despatched by that fraternity as their missionary to Lisbon. Here he acquired considerable popularity by his eloquence, and his pretensions to extraordinary sanctity. Being accused of participa-
tion in the most disgraceful crimes, and the murder of D'Avila, an eminent opponent against the crown of Portugal, he was thrown into prison by the government. But, instead of being tried by the judicial tribunals, he was delivered over to the inquisition, and condemned as guilty, not of treason, but of heresy, uttering false prophecies, and seducing Asians, and was sentenced to the stake, and executed September 21, 1761. See Pombali.

MAL' ARIA (Italian, bad air); a state of the atmosphere or soil, or both, in which, in certain regions to the westward, the sun is so rare, that it is reported to be very violent according to the nature of the exposure. The country of the mal' aria, in Italy, is the Maremme, which extends from Leghorn to Terracina, about 200 miles, and from the sea to the Apennines, from twenty five to thirty miles. The centre of the infected district is Rome, formerly Cauaa di Roma). We are still ignorant of the causes of this fatal infection. It exists in the rice grounds of Lombardy, on the highlands near Padua, on the summits of the Radicofani, and round the gulf of Salerno. The sky of the devoted spots continues pure, the air calm, the verdure fresh, but all this serenity and beauty of nature only forms a shocking contrast with the death-like desolation around, or with the sickly appearance of the few peasants who venture to wander in the unhealthy district. Bigelow (Travels in Malta and Sicily) gives a similar account of its effects in Sicily. It is found in all parts of the island, infecting not only the valleys, but often elevated situations. The city of Rome, it is well known, has been gradually invaded by it, and a large part of the city has been successively deserted by the inhabitants. In 1406, the Lataren was condemned; since 1623, the Vatican has become unsafe; since the year 1710, the island of Maximus, the forum, and, indeed, the whole of ancient Rome, has been deserted; even the finest parts of the modern city have become unsafe. See Rome.

MALAYS; according to Sir Thomas Stamford Raffles (Asiatic Researches, xii. London, 1818), a people of Asia, who have adopted the religion and language of the Chinese and Arabians, and intermarried with them, so that they have become separated from their original stock, and form a distinct nation. In the thirteenth century, we find the Malay s on the peninsula of Malacca, where they built a city of the same name, and founded an empire. Their sultans subdued Sumatra, where the nation seems to have dwelt previously to their settling in Malacca. They afterwards possessed themselves of the rest of the Suma isles, of the Philippines, the Moluccas, and some of the Australian groups, where Malay tribes are found, resembling, in their features, religion and government, the Malays of Malacca. At that time, they sent estable of spices, built Malacca into a great seaport, and, in part, with their own ships, and planted colonies. Great numbers of ships from China, Coch in, Sindostan, and Siam filled the harbours of Malacca. They are now divided into distinct tribes, without any general head. This is partly owing to the superiority which the Europeans, particularly the Dutch, have obtained in the Indian seas, and partly to the feudal system of the Malays, by which the national power has been divided, and a common spirit prevented by the increasing power of the vassals. The superior vassals obey the sultan or supreme commander only when they please, and the vassals under them have similar liberty. The great body of the nation consists of slaves; their masters are the orumati, or nobility, who are independent, and sell their services to him who pays them best. The Malays are different from the Hindoos, Birmans, and Siamese. They are strong, nervous, and of a dark brown colour; their hair is long, black, and curly, and, with the D'Aguilar, of a lighter shade and full of fire. Incompetency, bordering on fury, treachery, impotence of constraint, love of plunder and blood, characterize the Malays of Asia. Those in the islands of Australia are in general more gentle, kind, affable, open, and honest, and are distinguished by the finest and most symmetrical in form of Malacca, including the Edhahans and Dejak-
kese, in Borneo; the Binjoos (one of the wildest tribes), and the Macassars, in Celebes; the Harrafoes, on the Moluccas; the Sabansos, in Magindanao; the Tagats and Pampangoes, in the Manillas; the Bitoys and the Negritos, dwelling chiefly in the Sulu, have a resemblance in their features, in their form of government (a sort of feudal system), and in violence and cruelty. In general they profess the Mohammedan religion, are fond of navigation, war, plunder, change of place, and of all daring enterprises. Besides the Korna, the Malays have various local laws; each state has an unmeaning code to commence. The maritime code of Malacca was collected as early as 1276, and confirmed by Mohammed Shah, sultan of the country. They pay more respect to their absurd laws of honour than to justice or humanity, and we find force continually triumphing, among them, over weakness. Their treaties and their promises of friendship continue only as long as the interests which prompted them seem to demand. They are always armed, and are perpetually at war among themselves, or engaged in plundering their neighbours. When they find opportunity, they will attack European and American vessels by surprise, and kill the crews, if they have the opportunity. The Malay are said to have been seen without a dagger. The people, in general, are very skilful in preparing weapons, particularly daggers. Their constant use of opium contributes to infuriate them, and, when maddened by its effects, they rush out with their daggers in their hands, yelling, Anok; Anok, (i. e. kill, kill); whence the expression, to run a suak. The Malays are active only in war, where they are excited by the thirst of robbery and blood. At home, they are indolent, leaving all the labour to their slaves, and despising agriculture. The Malay language is the language of commerce on all the shores of eastern India, and is very extensively used as that of literature and of correspondence. See Marden's History of Sumatra, and his Dictionary and Grammar of the Malay Language, (1812, 4to); Crawford's Indian Archipelago, etc.

MALCOLM. Sir John, a distinguished soldier and diplomatist, was born near Langholm, in Dumfriesshire, on the 2d of May, 1769, and entered in 1782, as a cadet, the service of the East India Company. Having distinguished himself at the siege of Seringapatam in 1792, he was appointed by lord Cornwallis to the situation of Persian interpreter to a British force serving under the sign of a prince. In 1795, on his return from a short visit to his native country, on account of his health, he performed some useful services in general Clarke's expedition at the Cape of Good Hope, for which he received the thanks of the Madras government, and was appointed secretary to the commander-in-chief. In 1797, he was made captain; and from that time to 1799, he was engaged in a variety of important services, terminating at the fall of Seringapatam, where he highly distinguished himself. He was then appointed joint secretary with captain (afterwards Sir Thomas) Munro, to the commissioners for settling the new government of My- son, in the lesser Philippines, having an appointment from Wellesley to proceed on a diplomatic mission to Persia, where he concluded two treaties of great importance, one political and the other commercial; returning to Bombay in May, 1801. His services were acknowledged by his being appointed private secretary to the governor-general. In January, 1802, he was raised to the rank of a brigadier, and on the occasion of the Persian ambassador being accidentally shot at Bombay, he was again entrusted with a mission to that empire, in order to make the requisite arrangements for the renewal of the embassy, which he accomplished in a manner that afforded the highest satisfaction to the Company. In January, 1803, he was nominated to the presidency of Mysore, and to act without special instructions; and in December, 1804, he was promoted to the rank of lieutenant-colonel. In the June of the following year, he was appointed chief agent of the governor-general, and he continued to serve in that capacity until March, 1806, having successfully concluded several very important treaties during that period.

Upon the arrival in India, in April, 1808, of the new governor-general, lord Minto, colonel Malcolm was sent by the lord to the court of Persia on a diplomatic mission. He returned to Calcutta in the following August, and soon afterwards proceeded to his residence at Mysore. Early in the year 1810, he was again selected to proceed in a diplomatic capacity to the court of Persia, whence he returned upon the appointment of Sir Gore Ouseley, as ambassador.

In 1812, colonel Malcolm again visited his native shores; shortly after which he received the honour of knighthood. He returned to India in 1816, and soon became engaged in extensive political and military duties. After the termination of the war with the Mahrattas and Pindarees, to which his services had eminently contributed, he visited lord Hastings in visiting and settling the distressed territories of Mulhar Rao, which, and other services, he accomplished in a most satisfactory manner, gaining to British India a large accession of territory and treasure.

Sir John returned to Britain in April, 1822, with the rank of major-general, and soon after he was presented by those who had acted under him in the war of 1818 and 1819, with a superb vase of the value of £1500. During this visit to Britain, he received a proud testimony of the favour of the East India Company, and acknowledgment of the utility of his public career, in a grant, passed unanimously by a general court of proprietors, of a thousand pounds per annum, in consideration of his distinguished merits and services.

Sir John had quitted India with the determination to spend the evening of his life in his native country; but the solicitations of the court of directors, and of his majesty's ministers for Indian affairs, induced him again to embark in the service of his country, where experience had so fully qualified him to act with advantage. In July, 1827, he was appointed to the high and responsible situation of governor of Bombay, in which post he was enabled to pursue his studies, and he finally returned to Britain, having effected, during the few years of his government, incalculable benefits both for this country, our Indian territories, and every class of the inhabitants there. Shortly after his arrival in England in 1831, he was returned to parliament for the borough of Launceston. He frequently addressed the house at length; and his speeches were characterized by an intimate knowledge of the history and constitution of his country, by a happy arrangement, and much elegance of expression. His last public address was at a meeting in the Thatched House Tavern, for the purpose of forming a company for buying up the mansion of Sir Walter Scott for his family; and on that occasion, his concluding sentiment was "that when he was gone, his son might be proud to say, that his father had been among the contributors to that shrine of genius." On the day following he was struck with paralysis, the disease which has embittered the illustrious person on whose address this address had been made. His death took place in Prince's Street, Hanover Square, London, on the 31st of May, 1833. As an author, his principal works are—A Sketch of the Sikhs, a singular nation in the province of the Punjab, in India; The History of Persia, from the
earliest period to the present time; Sketches of Persia; A Memoir of Central India; and his treatise on the "History of Light" (1736), which was published only a few weeks before his death. Sir John had also been engaged for some time before his death in writing a life of lord Clive, which has since appeared.

MAL DE NAPLES: an early name for syphilis, because the disease was spread among the bed-singers of Naples, and from them rapidly communicated to others.

MALDIVE ISLANDS; a cluster of islands in the Indian sea, situated about 270 miles south-west of Cape Comorin. The number is said to amount to 1000 or more, but they are for the most part small, and uninhabited. The greatest breadth of the chain is from twenty to twenty-four leagues. The inhabitants appear to be a mixture of Arabs and Indians of Malabar. They supply vessels with sails and cordage, cocoa nuts, oil and honey, dry fish, tortoise-shell, and, especially, cowries. They are divided into seven or twelve Attollons, or provinces, and are governed by one king; but each Attoll has its particular governor, who rules with great oppression. The subjects are miserably poor; and none dare wear any clothing above the waist, except a turban, without a particular license. They have only four ports, in which their few articles of commerce are exchanged. The Maledivian islands lie in lon. 73° 30' to 75° 45' E; and lat. 3° 30' to 7° 5' N. No European settlements have been made in them.

MALEA, CAPI. See Matapan.

MALEBRANCHE, NICOLAS, a French priest of the congregation of the oratory, and a celebrated philosopher, was born at Paris, in 1638. In his health being delicate, he was classically instructed by a domestic tutor, but afterwards went through courses of philosophy and divinity at the colleges of La Marche and of the Sorbonne. At the age of twenty-two, he determined to embrace the monastic life, and was admitted into the congregation of the oratory. He applied himself first to ecclesiastical history, and afterwards to Oriental learning and biblical criticism; but, having accidentally met with Descarte's treatise On Man, he determined to make himself master of that author's system of philosophy. The result of this study was his famous treatise On the First Principles of Philosophy; the first edition of which the best edition is that published by himself in 1712, in 2 vols. 4to., and 4 vols., 12mo. The doctrines of this celebrated work, which contains fine thoughts and uncommon reflections, rendered still more striking by his elegant manner of conveying them, are founded upon Cartesian principles, and are, in some particulars, Platonie. It is principally distinguished by the maintenance of a mysterious union between God and the soul of man, and the doctrine that the human mind immediately perceives God, "and sees all things in him." His next publication was Christian Conversations (1676). This was followed (in 1680) by a Treatise on Nature and Grace, which led to several controversial pieces between him and Arnauld. Father Malebranche also wrote several works on physical subjects, and several papers for the academy of sciences, of which he was admitted an honorary member in 1699. Malebranche was a man of transcendent genius, and nothing could be more amiable and simple than his conversation and manners. As a philosopher, although he agreed with those who preceded him, in conceiving ideas to be the immediate objects of perception, he distinguished, more than any previous metaphysician, the object from the sensation which it creates, and thereby led the way to a right understanding, both of our external senses and mental powers.

MALESHERBES, CHRISTIAN WILLIAM DE LAMOIGNON DE, an eminent French statesman, descended from a family of distinguished worth and talents. He was the son of William de Lamoignon, chancelor of France, and was born at Paris, in 1721. After studying at the Jesuits' college, he qualified himself for the legal profession, and became a counsellor of the parliament of Paris. In 1750, he succeeded his father as president of the court of aids, and was also made superintendent of the press, in both which offices he displayed a liberal and enlightened policy, highly honourable to his talents and character. On the banishment of the parliaments, and the suppression of the court of aids in 1771, Malesherbes was exiled to his country seat, where he devoted his leisure to the study of statistics and agriculture, and the improvement of his estate and of the country around it. After the accession of Louis XVI., he resumed his presidency over the revived tribunal, and, in 1775, was appointed minister of state. Finding his plans for the benefit of the nation counteracted by the influence of others, he resigned his post in May, 1776, and went to reside in Switzerland. He was recalled to the king's councils in 1789, when he drew up two memoirs, On the Calamities of France, and the Means of repairing them; but his ambitious project for the trial of the king, and his subsequent attempt to escape, brought on his final leave of the court. Returning to the country, he continued his patriotic labours, and, in 1790, published an Essay on the Means of accelerating the Progress of Rural Economy in France. He took no part in the proceedings which led to the overthrow of the monarchical government; but on the decree of the national convention for the trial of the king, he emerged from his retreat to become the voluntary advocate of his unfortunate sovereign. His generous attachment to his fallen master excited the jealousy of the French rulers, and caused his destruction. Shortly after his return home, his daughter, madame De Rosambo, and her husband, were arrested and conducted to Paris; and his own arrest, with that of his grandchildren, soon followed. Almost his whole family were exasperated by the merciless proscription of his persecutors. Malesherbes was beheaded April 22, 1794, and he bore his sufferings with a spirit worthy of his life. Louis XVIII. ordered a monument to be erected for him in 1829, on the Place de Justice. It was completed in 1826, with the inscription by the king—Statue, semper fidelis regi suo, in solio veritate, praesidium in carceri atuilib.

MALET, CHARLES FRANCOIS, a French brigadier-general, was born at Dole, in 1754. Having entered the military service, he embraced the cause of the revolution with ardour, and rose rapidly in the first wars of the republic. At the time of Napoleon's assumption of the imperial dignity, he openly avowed his republican opinions, and was, in consequence, left without employment. His connexions with individuals known to be hostile to the imperial government, rendered him an object of suspicion, and, as no proofs of his guilt could be obtained, he was detained in prison for several years. During his confinement, he became acquainted with Lahorie, formerly attached to Moreau's staff, and general Guisard, who was [sic] on leave in October 1812, Malet formed the daring plan of overthrowing a prince then at the summit of his power and glory. For this purpose, he engaged the co-operation of his fellow prisoners, and, having obtained permission to be carried to an hospital, he escaped during the night of October 23, and, presenting himself to the colonel of a regiment of the Paris guards, he ver-
sounded him that the emperor was dead, and that an opportunity was now offered to restore the republic. He also showed him a decree of the conservative senate, abolishing the imperial government, and constituting generals and colonels. He hastened to the barracks of the tenth cohort, under the command of Soullier, who, having been previously gained, or was easily made to believe what he desired—the emperor's death and a change of government. Soullier took possession of the Hotel-de-ville at eight o'clock in the morning, and proceeded through the streets of Paris, where he arrived soon after, was brought to believe that the emperor had been killed. Measures were taken for establishing a provisional government, and a detachment under general Guidal hastened to the Hotel of the Police, seized general Savary, the minister, conducted him to the prison la Force, and installed Laborde in his place.

Malet next proceeded with some soldiers to the quarters of general Hullin, but could not convince him that the story of the emperor's death was true, nor that the pretended decree was genuine. After some altercation, Malet discharged a pistol at him, and wounded him in the jaw, but was immediately seized from his horse by the adjutant-general Laborde, adjutant of the post, who, on hearing of the military movements, had hastened to general Hullin's quarters, and had been admitted without opposition by Malet's soldiers. The latter, who appeared to have been ignorant of Malet's designs, consented to conduct him to prison. His accomplices were soon after arrested, and were examined with him, before a court-martial, the next day. The examination continued two days and three nights. During the whole time Malet displayed the most imperious and coolness, avowed his designs, and declared himself ready to die. He was shot, with the other conspirators, October 27, in the plain of Grenelle.

MALHERBE, FRANÇOIS DE, a celebrated French poet, was born in 1555, at Caen, of an ancient but decayed family. His father was a Calvinist, but, having adopted as a principle, that a gentleman should be of the religion of his prince, he himself adhered to the church of Rome. He entered into the service of Henry d'Angoulême, natural son of Henry II., and married the widow of a counsellor, by whom he had several children. He did not visit court until his fiftieth year, when Henry IV. received him into his service, and gave him a liberal pension, chiefly in consequence of the recommendation of cardinal de Perron, who mentioned him as one who surpassed all the French poets who had preceded him. He died at Paris, in 1627. Although the recorded incidents of his life be few, numerous testimonies abound of his eulogistic wit, greediness of presents, and litigious temper; he being generally at war with one or another of his relations. He was also lax and licentious in respect both to morals and religion. Such was his zeal for the purity of the French language, that, when near expiring, he reprieved his nurse for using a word not duly authorized. He may be deemed the father of French poetry, being not only an excellent versifier, but possessed of many of the qualities of a poet; not indeed of the highest class, but he was ingenious, harmonious, elegant, and sometimes even elevated. His poetry consists of odes, stanzas, sonnets, epigrams, and other short pieces, with a few of a devotional cast. He also published six tragedies, which are, and have been, a portion of Livy, with some letters. The best editions of his works are those of Paris, 1722, 3 vols., 12mo, and 1757, 8vo.

MALL, or PALL-MALL, was a game formerly much played in England, in which a box ball was struck through a ring. The mall (French mail) was properly the stick (mallet) used for striking; but the French mail also signified the game itself, more commonly called, by the English, pair mall or pairs mall, and the box or mall, as which it was often played. The site of the street now called Pall-Mall (pronounced pair-mall) was originally appropriated to playing this game, and derives its name from that circumstance. The walk called the mall, in St James's park, also received its name from having been the royal playground in the time of Charles II., when mall was a fashionable amusement.

MALLEABILITY; a property of metals, whereby they are capable of being extended under the hammer. (See Ductility, and Metal.) This word has of late been used by some philologists, to indicate the power of certain languages to form words from given roots by adding prexes and affixes, and thus to express many different shades of the original idea.

MALLET, DAVID, a miscellaneous writer, was born at Crief, in the county of Perth, about 1700, and, in 1728, was a tutor in the family of Mr. Home at Edinburgh. In 1729, he accompanied two younger sons of the Duke of Montrose to the University of St. Andrews, and, in the same year, published his admired ballad of William and Margaret. He subsequently made the tour of Europe with his pupils, on his return settled in London, and dropped the name of Malloch for Mallet. In 1728, he published a poem, entitled the Excursion; and, in 1731, a tragedy, called Eurydice, which met with temporary success. A poem on Verbal Criticism followed in 1733, and he was soon after made under-secretary to Frederic, prince of Wales. His tragedy of Mustapha was produced with success in 1739, and, the following year, his life of the poet, with a prefixed translation of a new edition of the works of that great man. In 1747, he published his largest poem, entitled Amynor and Theodora. On the death of Pope, Mallet lent himself to the resentment of lord Bolingbroke against the deceased poet, for having clandestinely printed his Idea of a Patriot King. For this service, he was rewarded by Bolingbroke with a bequest of his works, the publication of which produced a prosecution. The duchess of Marlborough having left £1000 between him and Glover, to write the life of her husband, the latter declined the task, and it was undertaken by Mallet alone, who received more or less of the recompense, without leaving on his death, a line towards the ward of that great man. On the death of lord Byron, he was employed, by the ministry, to assist in making that unfortunate officer's scape-goat, and was rewarded by a considerable pension. On the accession of lord Bute to the premiership, he wrote his Truth in Rhyme, and tragedy of Elvira, to which a political tendency was given, to serve the politics of that nobleman, and he obtained a place in the customs for his recompense. He died in 1765.

The religious scepticism which he avowed, may have assisted to darken the portraits usually given of Mallet; but it is obvious that no partiality could have rendered it amiss.

MALLET; a weapon. See Mace.

MALLEUS, in anatomy; a bone of the ear, so called from its resemblance to a mallet, and in which is observed the head, the neck, and handle, which joins the membrae of the tympanum. See Ear.

MALLICOLO, or MANICOLO; an island in the South Pacific Ocean, which, in consequence of Lord Dillon, should be considered as forming one of the group called Queen Charlotte's islands; lat. 11° 41' S.; lon. 167° 5' E. It has acquired an interest from having been the place where Lapérouse was cast away, as appears from the results of the expedi-
tion of captain Dillon, who went on a voyage of investigation, in 1827 (Narrative, &c., 2 vols., 8vo, London, 1829). The relics which he obtained from the island, were identified by Lesseps, who had left Lapérouse in Kamtschatka, and by Betham, as having the armorial bearings of Colignon, botanist on board the frigate. According to the information obtained by captain Dillon, two ships had been thrown ashore; the crew of one perished; the people of the other built a small vessel, and went to sea; what became of them is not known; of two Frenchmen who had remained on the island, one died about three years before the arrival of captain Dillon; the other had followed the fortunes of a defeated chief to some other island. Lesseps has published (Paris, 1831) the Voyage de Lapérouse, with all the documents and results of the researches since made to discover his fate. This island must not be confounded with Malcolo, one of the New Hebrides, in lat. 10° 30' S., lon. 167° 50' E.

MALLOUNES, or MALOUINES. See Falkland Islands.

MALMAISON; a chateau, two and a half leagues from Paris, and one and a half from Versailles, in one of the most charming situations in the vicinity of the city. It was the residence of Josephine, who died there in 1814, and whose grave is indicated by a simple monument. In its beautiful walks, Napoleon loved to find recreation from the cares of state. It received its name (malo domus) from its having been erected on the spot where the Normans landed on one of their incursions in the ninth century.

MALMESBURY, William OF, an ancient English historian of the twelfth century, was born in Somersetshire, on which account he was sometimes called Somersetanus. He relates that, when he was a child, he had a great inclination for learning, which was encouraged by his parents, and it is supposed that he was educated at Oxford. He became a monk of Malmesbury, and was elected librarian of the monastery. He studied all the sciences of his time, but attached himself particularly to history, and finding that a satisfactory account of his own country was wanting, he determined to write one, "not of himself says, but of his learning, which is no greater matter, but to bring to light things that are covered with the rubbish of antiquity." His De Regibus Anglorum is a general history of Eng- land, in five books, from the arrival of the Saxons, in 449, to the twenty-sixth Henry I., in 1120; a mod- ern history, in two books, from that year to the escape of the empress Maud from Oxford, in 1143; with a church history of England, in four books, pub- lished in Sir H. Savile's collection (1596). He dis- covers great diligence, good sense, and modesty. His Antiquities of Glastonbury was printed by Gale, and his Life of St. Aldhelm, by Wharton. He died in 1149.

MALMESEY WINE is a sweet wine, made from a grape originally brought from Monemvasia, a small town on the south-east coast of the Morea. The English call the place by its Italian name, Malvasia, and the French, Maloises; hence the name of the wine, Malmezy (vin de Maloisse). Much of the Malmsey now used is made from a grape grown on the ruins of the old walls of the town, which are in full influ- ence of the sun. It is left to hang about a month later than the grapes used for the dry wines, and is not gathered until partially withered. See Henders- on, Hist. of Wines, 250.

MALOES, St (properly, St Malo); a seaport on the north-west coast of France; in lat. 49° N., lon. 1° W.; population, 9860. It is situated on a penin- sula, which is connected with the main land by a narrow tongue (the Silou). The harbour is large and commodious, but difficult of access. The forti- fications are extensive and strong. The inhabitants are active, hardy, intelligent seamen, and are occu- pied in the cod and whale fisheries, in the East India, and colonial trade. Wine, brandy, tobacco, salted provisions, and marble, are the chief goods of trade. In 1622, this place fitted out twenty-two privateers; in 1711, it gave 38,000,000 livres to Louis XIV. It is the native city of Maupertuis, Dugay- Tron, and Cartier, the discoverer of Canada.

MALONE, Edward, a commentator and editor of Shakespeare's plays. Mr Malone quarrelled with that gentleman, and published an edition of his own, in 11 vols., 8vo, 1790. He also published an Inquiry into certain Papers attributed to Shakespeare (see Ireland); biographical memoirs of Sir Joshua Reynolds, Dryden, W. Gerard Hamilton, &c. He died May 25, 1812.

MALPLAQUET, a French marquis; an Italian physi- cian and anatomist of the seventeenth century. He was born in 1628, near Bologna, and studied in the university of that city. He was admitted M.D. in 1653, and, three years after, was appointed to the medical chair. The grand duke of Tuscany invited him to become professor of medicine at Pisa, where he stayed three years, and, in 1660, returned to occupy his former office at Bologna. He was tempted by a high stipend to accept the professorship of medicine at Messina, in Sicily; but the jealousy of his colleagues rendered him uneasy, and he again settled at Bologna, in 1666. He was elected a fellow of the royal society of London in 1669, and communicated to that association various anatomical dis- coveries relative to the minute structure of animal bodies, the results of microscopical observations. Pope Innocent XII., in 1691, called him to Rome, and appointed him his physician, chamberlain, and domestic prelate, which post he held till his death, in 1694. In his residence at Rome, his dis- covery of the importance of the spermatic or- gans, and vegetable anatomy, comprise much curious and important information on the brain, the nerves, the spleen, the uterus, &c.; also on silk-worms, the formation of the fœtus in the egg, on glands, on the anatomy of vegetables, &c. His complete works have been often published (London, 1687, &c.). His posthumous works were published at London (1827, folio), and republished at Venice and Leyden. Gasparini published his Consult. Med. Centuria at Padua (1713). Although Malpighi is not free from errors, yet he contributed much to the progress of physiol- ogy, and deserves a distinguished place among dis- coverers.

MALPLAQUET, BATTLE OF (Sept. 1, 1709); the bloodiest in the war of the Spanish succession, gained by Marlborough and Eugene, the command- ers of the allies, against the French under Villars. After the capture of Tournay, the allies wished to invest Mons, the capital of Hainault. To prevent this, Villars marched against them with a stronger army, and forced Marlborough and Eugene to surrender the issue. Having collected a large force, he advanced against them, and defeated them with great loss. The allies, who num- bered about 80,000 men, with 140 pieces of cannon, commenced the attack, near the wood in the neigh- borhood of the villages of Bagnies and Malplaquet. The French, under Marshal Villars, the German troops in the British pay, on the right wing. Eugene led the centre; Tilly and a count
Nassau, the left wing, where the Dutch were stationed. Villars commanded the right wing of the French forces; Boufflers, the left. The left wing of the allies was put to flight, and Marlborough had to struggle against the most furious attacks upon the right. The determined resistance (see below) of the French cavalry, under St George, charged twelve times, at the head of the French cavalry. Villars then wrenched his centre, by despatching reinforcements for the left wing. At this crisis, Eugene advanced, stormed the intrenchments which covered the enemy's centre, and drove back the determined attack of the French, who poured back, leaving the left wing, but too late; he was wounded himself; his centre was broken through, and the wings separated. The battle was lost. The field was covered with about 30,000 dead and dying. The French lost hardly 10,000; the allies, more than 30,000. The conquerors took no prisoners nor canon. Boufflers conducted the retreat in good order, between Le Queesnoy and Valenciennes. The allies immediately laid siege to Mons, which fell into their hands.

MALTE is the preparation of barley, from which ale, beer, and porter are brewed, all which are generally prepared. For this purpose, the barley is steeped in water for three or four days. It is then taken out and suffered to lie until it begins to sprout or germinate. As soon as this process has advanced sufficiently, its further progress is prevented by drying it in a kiln, heated by coal or coke, for which purpose the anthracite coal is found to answer admirably well. The grain is now become mellow and sweet, and after having been crushed in a kind of mill, contrived for the purpose, its saccharine and mucilaginous portions are extracted by boiling water. The liquor thus produced has the name of wort, which, having undergone the process of fermentation, and having been flavoured by the addition of hops, &c., constitutes ale or beer. What remains of the malt after brewing, is called the grains, which are used for feeding horses and cows. Besides the use of barley for malt, it is also extensively used for soup, broth, bread, &c., in all the countries of Europe. See Fermentation and Brewing.

MALTA (anciently, Malam) is an island in the Mediterranean, possessed, through several centuries, of a degree of celebrity and power greater than that ever been attached to any other territory of so little extent; lat. 35° 53' N.; lon. 14° 30' E. (of the observatory of the grand master); sixty miles from Sicily, thirty from Crete, twenty from Tripoli, forty from Tunis, and nineteen from the coast of Arabia. It is situated between the island of Gozo by a strait four miles wide, comprising, with Gozo and the rock Camino, which lies between, about 170 square miles. The population of the group was, at one time, 114,000; at present, 94,000; of which 14,000 belong to Gozo. Besides the natives, there are British (about 700, besides the military), Jews, Greeks, Turks, Egyptians, Italians, French, and Dutch. The Maltese, English, and Italian are the predominant languages. The soil consists of a thin covering of earth, on a soft, calcareous rock, and is increased by breaking up the surface of the stone into a sort of gravel, and mixing it with the earth. Through the south-west, the lands rise precipitously more than 1200 feet; to the north-east, it is low. There is but one small stream in the island, which is conducted, by an aqueduct of several thousand arches, and eight miles long, to Valetta; a supply of water is obtained here from cisterns, in which the rain water is collected. The rocks are rocky for anything any half hour; that of Marsa, on the coast, forming the port Valetta, is one of the best in the Mediterranean, being completely land-locked, and capable of containing 500 vessels. The climate is hot, but the heat is mitigated by a sea breeze, which always sets in at night. The principal production is cotton. Melons and oranges, of an excellent quality, are abundant. Corn is raised in small quantities. Figs are cultivated with great care, the process of caprifolium prevention (see above), or chevalier of African origin; with a swarthy skin, hair inclined to frizzle, and nose somewhat flattened. They are industrious, frugal, and excellent seamen; but poor, ignorant, superstitious, vindictive, and dishonest. The upper class speak Italian, but the language of the lower class is Maltese (which is the fundamental and principal part), German, Greek, Italian, and other languages. The Arabic so far predominates, that the peasants of Malta and Barbary can understand each other. They have no alphabet, and, according to the fancy of individuals, adopt those of other tongues. The capital is Valetta, founded in 1566, by Lavallette (q. v.), grand master of the knights of Malta, with a population of 40,000. It is remarkable for the magnificence of its buildings, and the position and strength of its fortifications. The church of St John, the patron of the order, is a noble building, 240 feet long, 120 feet broad, with 12 towers and 2 great riches, until they were seized by the French. The hotels of the knights, corresponding to the eight languages into which the order was divided (see John, St. Knights of) are now occupied by the British officers. The palace of the grand master is an extensive pile, and contains a magnificent armoury of ancient and modern weapons. The great hospital afforded accommodations for 2000 patients, who were attended by the knights. The vessels used in the hospital service were of solid silver. Immense granaries, cut out of the rock, were stored with corn, sufficient to maintain the garrison twenty years. They were hermetically closed, and the grain has been preserved in them, so as to be fit for use after a hundred years. The fortifications are the strongest in the world. Besides five forts, commanding the most important points, there are lines of vast strength, enclosing the various quarters, and forming works of such extent as to require 25,000 men to man them. More than 1000 to 2000 are complete. Valetta is protected on three sides by the water, and on the fourth, by five lines of fortifications. The ditches are, in some places, ninety feet deep, hewn out of the rock, and the ramparts are mostly formed in the same manner. 1000 pieces of cannon are mounted on the walls of the island.

Malta was early in the hands of the Carthaginians, who were dispossessed by the Romans. (On the antiquities, inscriptions, vases, coins, &c., consult the Malta antica illustrata, by Bres, Rome, 1816, 4to.) It was occupied, in the middle ages, by the Saracens and Normans, and, in 1539, was conferred, by Charles V., on the Knights of St John, who had been expelled from Rhodes by the Turks. It was soon fortified by the knights, and underwent several memorable sieges. In 1798, General Bonaparte took possession of it, on his expedition to Egypt; and, in 1800, the French garrison was obliged to evacuate it. The possession of Malta was finally confirmed to Great Britain, by the treaty of Paris. See Boisgelin, Ancient and Modern Malta (London, 1805, 2 vols., 4to); Dryden's Tour through Sicily and Malta; and Bigelow's interesting Travels in Malta and Sicily (Boston, 1831); Vas- selli's Grammatica della Lingua Maltese (Malta, 2d ed., 1827).

MALVASIA: a district in the Morea. The chief place, called Malvasia di Romani, is situated on an island, and connected with the continent by a bridge. It is a fortress; has a bishop, and 2000
MAMELUKES.

inhabitants. Since the late division of Greece, Mal-
vania forms a province of the department Luconia.
The well-known cape Malea belongs to Malvasia.
The famous Malmsey wine is made here (also on some other Greek islands). A similar kind of wine is also made in Sicily, Sardinia, in Provence, and Spain. Among the Sardinian wines of this sort, the Metangia di Sirolo is particularly distinguished. The Spanish sort comes mostly from Catalonia and Tene-
rife. There are both red and white kinds. See Malmsey Wine.

MAMELUKES, MAMLOUKS, or MAMA-
LUKES (from the Arabic memaliwk, a slave); slaves from the Caucasian countries, who, from mental offices, were advanced to dignities of state. They did not, however, form a separate body, but when Gengis-Khan made himself master of the greatest part of Asia, in the thirteenth century, and carried vast numbers of the inhabitants into slavery, Nedj-
medin (Malek Sahal), sultan of Egypt, bought 12,000 of them, including natives of Mingrelia and Circassia, but chiefly Turks from Caphelnk (Kipak), had them instructed in the military exercises, and formed a regular corps of them. They soon exhibited a spirit of insubordination and rebellion. Under his successor, they interfered in the government, assassinated the sultan, Turan Shah, and, in 1254, appointed Ibehg, one of their own number, sultan of Egypt. The dominion of the Mamelukes in Egypt continued 263 years. The command was usually held by the bravest of their number. During this period, they made some important conquests, and, in 1291, they drove the Franks entirely out of the East. Selim I. put an end to this kingdom, after having taken Cairo the capital, by storm, in 1517. He placed a Turkish pacha as governor over Egypt, but appears to have been compelled, by circumstances, to leave the twenty-four boys, who governed the different prov-
inces, in possession of their power. This state of things continued more than 200 years. But, from the middle of the last century, the number and wealth of the Mamelukes gave them such a superiority over the Turks in Egypt, that the pacha appointed by the Porte was obliged to conform entirely to their wishes. This superiority was owing principally to Ali Bey, who ruled with unlimited power, from 1766 to 1775, when he was assassinated. The Mame-
luke boys, especially Murad Bey, played an im-
portant part at the time of the French invasion. The Mamelukes, who were scattered throughout Egypt, and estimated at 10 or 12,000 men, main-
tained their numbers, principally by slaves brought to Cairo from the regions lying between the Black and Caspian seas. These were compelled to embrace the Mohammedan faith, and were all educated as sol-
diers. After a time they obtained a share in the government, and some of them even became beyes; for none but Mamelukes were capable of holding this office. They formed a fine body of cavalry, and at-
tacked the French, when they landed in Egypt, with the greatest fury; but they were unable to withstand the European artillery, and many of them soon joined the French. The pacha of Egypt, Mohammed Ali, destroyed the Bey, 1st March, 1811, by a strong arm.

MAMMALIA. This class contains all animals which are provided with breasts, by means of which they suckle their young. The term is derived from mammae, breasts.

The first writers on this branch of natural history were Aristotle and Pliny, and some time afterwards they were followed by Celsus, Alcinus, and, above all, by Strabo. The nature of animals, and Oppian, in a treatise on hunting, describes, at some length, the wild animals which were known at his time. In the writings of Hippocrates, Cato, Columella, and Varro, we find occasional observations on the uses of wild animals, and, also, on their ferocity, most of which are pretty considerably mixed up with fable.

In 1551, after the revival of letters in Europe, Gesner published a history of quadrupeds, which he placed in alphabetical order; but some of the more striking genera, such as horses, deer, apes, and oxen, were arranged in groups. But it was John Ray, a native of Britain, who formed the first classical arrangement of quadrupeds, which was published in the year 1693, under the title of Synopsis Metho-
dica Animantion Quadrupedum. These he divided into two classes; first those with hoofs, and second, those provided with nails.

Succeeding writers continued to improve upon the superstructure of Ray; but it was reserved for the great Linnaeus to lay the first foundation of a more extensive and distinct classification. To his genius, also, we are indebted for a more perfect method of definition. He attempted what never had been done before, in his Systema Naturæ, which appeared in 1735, by bringing under review the whole animal, vegetable, and mineral kingdoms, wherein he de-
scribed and named every natural object which had been discovered up to his time, and introduced into his writings a language fitted to supply all the wants of the age. This celebrated work was eagerly sought after, and, in a short time, passed through twelve editions; and not long after his death, Gmelin edited a new volume of the Systema Naturæ, with additions, up to the date of its publication in 1788. After his time many distinguished men attempted to improve the arrangement of Linnaeus, the most suc-
cessful of which was Blumenbach.

A new era commenced in the study of natural history in France. Cuvier, Lamarck, and Latreille laid the foundation of a school which classifies all ani-
imals from their organization. These great naturalists so far adopted the Linnean method, but their investiga-
tions being more precise, and the accumulation of objects being almost daily augmented, they found it necessary to institute many new genera, in every department of zoology. They soon found that the study of internal comparative anatomy was indispens-
ably necessary to a true knowledge of animals; and, by their vigorous and patient investigation, they showed the world that this was the only certain method of ascertaining the distinctions between nearly allied groups and species. This, with the aid of external characteristics, has brought the study of natu-
ral history to its present advanced condition.

Cuvier has shown that there are "immutable laws prescribed to living beings," which he thus illustrates: "Every organised being forms a whole and entire system, of which all the parts mutually correspond and co-operate to produce the same definite action,
by a reciprocal re-action; none of these parts can change, without a change of the others also. Thus, if the intestines of an animal are organized in a manner only to digest fresh flesh, it is necessary that his jaws should be constructed to devour the prey, his claws to seize and tear it, his teeth to divide the flesh, and the whole system of his organs of motion to follow and overtake it, and of his organs of sense to perceive it at a distance. It is necessary, also, that he should have seated in his brain the instinct to hide himself and spread snares for his victim; such are the general conditions of a carnivorous regimen; they must infallibly be united in every carnivorous animal—without them the species could not subsist. But under these general conditions, there are particular ones with respect to the size of the species, and the abode of the prey for which each animal is disposed.

Of all the departments of zoology, the Mammalia of Cuvier is his most perfect work, and we have, in a great measure, followed him in the following article, to which we have added a few genera, established by other naturalists, and we have otherwise slightly altered the arrangement, to bring it nearer to the present state of zoological knowledge.

Cuvier places the class mammalia at the head of organized beings, because the animals which it embraces are the most perfect in their structure, and hence their most varied powers of motion, sensation, and intelligence.

Most mammiferous animals are formed for walking; a few, however, can sustain themselves in the air; while a limited number are destined to live in the water. Bats suckle their young, and are otherwise constructed like quadrupeds; and whales and other cetaceous animals, although inhabitants of the waters, are strictly mammiferous animals, and also suckle their young.

From man, who, from his most perfect organization, stands at the head of the system, to whales and their congeneres, which are classed at the end of the mammalia, the skeleton is formed upon the same general principles, and its parts are only altered and modified to suit the station which the animal is destined to fill.

Fig. 1. Is the human skeleton: a a the os humeri, b b the radius, h h the ulna, c the bones of the carpus, i i the pelvis, d d the os femoris, e e the fibula, f f the tibia, g g the bones of the tarsus, m m the projection of the os calcis.

Fig. 2. Is the skeleton of a bird; all the bones which correspond with those of the human skeleton, are marked by similar letters. The same apply to the following skeletons. Fig. 3 is that of a frog, and fig. 4 that of a fish.

By those unacquainted with comparative anatomy it will be imagined, on contrasting the skeleton of the human subject with those of the bird and the frog, that these two have more bones in the leg than man, which is not the case, as the bones marked g in the latter skeletons are merely one of the tarsal bones more developed than in man, and that bone, reaching from the toes to the first joint in birds, is called the tarsus. We have illustrated the bones by skeletons of the monkey and horse, which will convey a pretty correct idea of those throughout mammiferous animals.

SKELETON OF A MONKEY. Plate 52, fig. 13.

Bones of the Trunk.

a. The Sternum, or breast bone.
b. The seventh or last true rib.
c. The cartilage of the ribs.
d. The twelfth, or last of the false ribs.
e. The lumbar vertebrae, with their intervertebral cartilages and transverse processes.
f. The os sternum.
g. The os innominatum, composed of the os ilium A, os pubis X, and the os ischium b.

Bones of the Superior Extremity.
h. The clavicle fixed before to the first piece of the sternum, and outwards to the acromion of the scapula.

The scapula; above it is the cervix of the scapula, and below the outward extremity of the clavicle, the superior costa, and coracoid process are seen.

The os humeri.

The head, or ball of the os humeri; on each side are seen the internal and external tubercles of the os humeri, and further out, the groove for lodging the tendon of the long head of the biceps muscle.

The inner condyl of the os humeri.

The outer do.

The radius, at the end of which is its head.

The ulna, at the upper end of which is the coronoïd process.

OQ-0Q. Bones of the carpus, eight in number.

NN. The metacarpal bone of the thumbs.

PP. The metacarpal bones of the fingers.

QQ-0Q. The two bones of the thumbs.

RR—R. The three phalanges of the fingers.

Bones of the Inferior Extremity.

S. The os femoris, the ball or head of the bone is lodged in the acetabulum.

13. The cervix of the bone.

14. The large trochanter.

15. The small trochanter.

16. The inner condyle.

T. The patella, placed upon the trochlea of the os femoris.

U. The tibia.

V. The head of the tibia.

W. The malleolus internus.

X. The malleolus externus.

WY. The bones of the tarsus.
MAMMALIA.

21. The projection of the os calcis.

XX. The mesial bones of the transverse area.

YYYY. The phalanges of the toes, or of the lower hands in mokeys and other quadrupedal animals.

22. The pelvis.

XX. The vertebral of the tail, or caudal vertebra. This upper extremity of the dog is not the same as that of the lower part of the pelvis, and is termed the os coccygis f. 27.

Bones of the Head and Neck.

2. The os frontalis joins to its fellow by the sagittal suture.

b. The parietal bone.

c. The temporal process of the sphenoid bone.

d. The lower jaw.

e. The maxillary or cheek bone.

f. The superior maxillary bone; g. Inferior done.

3. The nasal bone.

SEKLETON A HORSE. pl. 52. f. 88.

a. The posterior maxillary, or Jawbone.

b. The superior maxillary, or upper jaw.

c. The orbit or cavity in which the eye is contained.

d. The nasal bones, or bones of the nose.

e. The suture, dividing the parietal bones below, from the occipital bones above.

f. The occipital bone containing the upper in.

4. The incisors or cutting teeth.

b. The four coronal vertebra, or bones of the neck.

c. The eight dorsal vertebra, or bones of the back.

d. The six lumbar vertebra, or bones of the loins.

E. The sacral vertebra, or bones of the fand.

F. The caudal vertebra, or bones of the tail.

G. The scapula, or shoulder blade.

H. The sternebrae, or fore-part of the breast or breast bone.

i. The coxal, or ribs, seven or eight of which, articu-

lating at a small joint, the sternum, are called true r11s, and the remaining ten or eleven, which are united by a cartilage, are called the false ribs.

K. The pelvis, or bone of the fore-arm.

MM. The ulna, or elbow, with its process, the olecranon.

NN. The carpus, or wrist, containing two rows of bones.

OO. The metacarpal, or shank bone; the large metacar-

pal, or cannon, or shank in front, and the smaller meta-
carpal, or splint bone behind. g. That bone, the pastern and foot, consisting of the os suftigutis, or upper and longer pastern bone, with the semimembranous bone beneath, articulating with the cannon and greater pastern; the os corono, or lesser pastern, the os astragal, or e-trolic, bone, and os navicular, or shuttle bone, not seen, and articulating with the smaller pastern and coffin bones; h. The corresponding bones of the hind feet.

P. The small metacarpal, or splint bones.

Q. The pelvis, or hock, consisting of three portions; the ischium, the ischium, and the pubis.

QQ. The femur, or thigh bones.

RR. The patellar, placed on the stifle joint.

SS. The tibia, and fibula (the latter is a small bone behind) are also called the tibia bones.

TT. The tarso and tarso, or bones, six in number.

UU. The metatarsals of the hind leg, called shank or com-

non bones.

vvv. The os calcis, or point of the heel.

XX. The semimembranosus, or fetlock bone.

The upper jaw of the whole mammalia is fixed immovably to the cranium; the lower jaw consists of two plates, one in the centre of the chin, and articulated by a projecting condyle to a fixed tem-
poral bone. The neck is composed of seven verteb-
rae, and in one species it consists of nine. The anterior ribs are attached to a sternum, formed of several vertical pieces. The anterior extremities or arms commence at the scapula, or shoulder-blade. This bone is not articulated to any other, but simply suspended in the muscles, by thin attachments, and frequently resting on the sternum by the clavicle or collar bone, which holds an intermediate situation; this is prolonged into an arm, fore-arm, and termin-
ated by a hand, consisting of two rows of small bones, called the carpus, or carpus, or row called the metacarpus, and finally the fingers, each com-
posed of two or three bones, called phalanges.

The whole class, with the exception of the Cetacea, have the posterior extremity fixed to the spine, where it spreads out into a pelvis. In young animals the pelvis is divided into three parts of bones; the ilium, or that part attached to the spine; the pubis, which forms the anterior portion of the pelvis, and the ischium, which forms the posterior part. At the place where these bones unite, there is a cavity into which the thigh bone is articulated,

to which is attached the leg, composed of two bones, the tibia and fibula. The leg is terminated by a foot, composed of parts analogous to those of the hand, and are termed the tarsus, metatarsus, and toes. The fingers, or more probably the toes, of the animals, comprising the order quadrupedal, can-
not be termed a foot, as it is in every respect analog-
ous to the hands of the upper extremities, and hence the name of the order, four-handled. It will be readily seen, by comparing the hands of the upper and lower extremities of the Orang-Outang, (Pithacus satyrus) plate LI., figures 23 and 24, that they are both formed for grasping. Fig. 23 is the hand of the upper extremity or arm, and fig. 24 the hand of the lower extremity or leg; a hind hand of the Aye-aye, (Cheiromys Madagasacarensis) is also re-

presented at fig. 40. The Cranium in the mammalia is always articulated by two condyles upon the atlas bone, or first vertebra of the neck. The cranium is divided into three compartments; the fore part is formed of the two frontal bones and the ethmoid; the interme-
diate, by the parietal bones and the sphenoid; and the posterior by the occipital. Between the occipital bones and the sphenoid, are inserted the temporal bones, a part of which properly belong to the face.

In the fœtus the occipital bone is divided into four parts; the body of the sphenoid into two, and three of its pairs of air are separate. The temporal bone con-

sists of three divisions, one of which serves to com-

plete the cranium, another to close the labyrinth of the ear, and the third to form the sides of its cavity. These parts of the bones of the cranium unite more or less quickly, and are perfectly united in the adult.

The face is formed by two maxillary bones, between which the nasal canal passes; they have two intermaxillary bones in front, and the palate behind; between these descend the single lamina of the ethmoid bone, called the Vomer. At the entrance of the nasal canal, are the bones proper to the nose. The jugal, or check bone of each side, unites the maxillary bone to the temporal, and often to the frontal bones; and finally, the lachrymal occupies the internal angle of the orbit, and some-
times a part of the cheek.

The Brain is composed of two hemispheres, united by a medullary lamina, called the corpus cal-
tosum, and contains two ventricles, enclosing four pairs of tubercles, which are termed corpora striata, the thalamus opticus, nates and testes. Between the thalamus opticus and the nervus centralis, which communi-
cates with a fourth, situated under the cerebellum. The cura of the cerebella form always under the medulla oblongata a transverse prominence called pens Varials.

The Eyk is always situated in the orbit; it is protected by two eyelids, and the mullions of a third. The crystalline lens is fixed by the ciliary process and its cellular sclerotic coat.

The Ear has universally a cavity called the tym-
panum or drum, which is closed from without by the membrana tympani; it has also four bones called the incus, malleus, stapes, and os orbiculare at the entrance of which is placed the stapes, which commu-
nicates with these circular canals; finally, a spiral canal called the cochlea, which terminates by one of its canals in the tympanal cavity, and by the other in the vestibule.

The Tongue is always fixed, and attached to the hyoid bone, suspended by ligaments in the cranium. The organ of Voice is always placed at the superior extremity of the trachea; and a fleshly continuation, denominated the Vetus palatii, or soft palate, estab-
lishes a distinct communication between the larynx and back part of the nostrils.
Tooth is always more perfect in animals whose fingers are more numerously developed, and which are least covered at their tips; such as those possessed only a single nail protecting their upper extremities, as in man, apes, and lemurs; sensation in the toes of such as are covered with hoofs, on the contrary, is extremely blunt.

**Clothing.** Animals are provided by nature with a covering adapted to the situation in which they are placed. Those placed on the earth’s surface, the mammalia are exposed to the transitions of heat and cold; the bodies of most of them are covered with a coating of hair, varying in thickness. As their habitation approaches the northern regions, it is more dense, and thinner towards the equator. The cetea-cous animals which inhabit the sea, are totally divested of hair.

The essential characters of the mammalia are taken from the number and structure of their teeth, and the construction of their hands and feet. On the perfection of the organs of touch, the expertness of the animal depends; and from their dentary formula may, in a great measure, be deduced the nature of their food and digestive functions.

Animals which feed on flesh have three kinds of teeth; incisors, or cutting teeth, pl. 52, f. 48, a; canine, or tearing teeth, b; and molars, or grinding teeth, c. Those which subsist entirely on animal food, have all their teeth more acute than those which live partly on other substances. Man is an omnivorous animal, and with the structure of his teeth we shall contrast those of the lion. Plate 52, fig. 7, represents an incisory tooth of man; fig. 10, the incisor of a lion; fig. 8, canine of man; 11, that of a lion; fig. 9, the molar of man, and 12, that of a lion. Figure 16, e. represents the molar of the Mastodon of America. Fig. 15, are the molars of the lower jaw of the Neotoma Floridana, an animal which exists exclusively on grain and other vegetable substances; which is indicated from the construction of these. If these are contrasted with those of a highly carnivorous quadruped, the Viverra grasilis, a striking difference will be observed, for, in place of the flattened surface of those of the Neotoma, the latter exhibit a sharp and irregular surface: fig. 25, represents the second molar of the upper jaw of Viverrna grasilis; 26, second molar of the under jaw, and 27, the molars of the under jaw. The front view of these teeth, if properly divided, were given at 28, which show the strongly developed canines.

Animals of the Rodent order, have but two kinds of teeth, and they live chiefly on grain, nuts, and the bark of trees. Their cutting teeth or incisors, are formed very differently from those of most other animals. Plate 52, fig. 18, is an incisory tooth of the upper jaw of the *Isolana pilorides,* viewed externally; fig. 20, an interior view of the same, and 19 an anterior view. The entire construction of the jaws of these are very different from those which live upon flesh, and other food, as will be seen by comparing the jaws, figs. 14 and 17, with fig. 21, which is the cranum of the *Mangusta Javanica,* an animal which is highly carnivorous, and represented at plate 52, fig. 21.

The method of Cuvier is adhered to, in the generic characters which we have given in the following classification of the mammalia, wherein the dental formula is the principal generic distinction. The arrangement of the figures is intended to represent the upper and under jaw. For instance, in man, the incisory or cutting teeth, are placed in the centre of each jaw, four above and four below, and are marked 1; the canines, or sharp-pointed teeth, are next to these, placed further back, that is, one on each side of the incisory teeth above and below, and are marked 2; beyond these, and further in the mouth, are the molars or grinding teeth, five on each side of the canines, and above and below, marked 3; making a total of thirty-two teeth. The Chimpanzee, an animal which stands next to man in point of organization, has a similar arrangement in the number and kinds of teeth.

Cuvier divides his class Mammalia into the following orders: I. BIMANA; with two hands, of which Man is the only species. He has three kinds of teeth. II. QUADRUMANA; animals with four hands, and having three kinds of teeth. Monkeys, &c.

III. CARNASSIERS. These have three kinds of teeth, which are more or less of a carnivorous character. Opposite to the anterior extremities never opposable to the other fingers or toes. It is divided into four families—Chiroptera, or bats; Insectivora, or such animals as feed much on insects, as the Hedgehog, &c.; Carnivora, animals which subsist on flesh; Cats, &c.; Marsupialia, animals provided with a pouch for the reception of their young after birth, as the Kangaroo, &c.

IV. RODENTIA, or Gnawers; animals with two large incisors in each jaw, separated from the molars by a void space. The molars in most genera with flat or ruffled crowns, and in others blunt tubercles; Hares, Squirrels, &c.

V. EDENTATA; generally destitute of teeth; some genera with molars only; their toes varying in number, and provided with large hoof-like nails. Anteaters, &c.

VI. PACHYDERMATA, or thick-skinned animals; it includes all the hoofed quadrupeds, except the ruminants. Horses, &c.

VII. Ruminantia; animals which ruminate or chew the cud, with cloven feet, and provided with four stomachs. Deer, &c.

VIII. CETACEA; whales.

Latreille and other naturalists have separated the Chiroptera from the order Carnassiers; and even Cuvier himself proposed that the Marsupial animals should be formed into a distinct order.

The following arrangement has been adopted by us:—Order I. Bimana, II. Quadrumania, III. Chiroptera, IV. Feræ, V. Marsupialia, VI. Gliræ, VII. Edentata, VIII. Pachydermata, IX. Ruminantia, X. Cetacea.

Cuvier and Latreille have placed the genus Ornithorynchus in the order Edentata, but this animal possesses characters which will not apply to any of the Cuvierian orders, and would properly make an order of itself, consisting of one genus.

The mouth of the Ornithorynchus is formed like the bill of a duck, resembling that of a shoaler or other broad-billed species; pl. 52, fig. 49. The internal edges of the under mandible, (which is narrower than the upper), are serrated or channeled with numerous spines, as in a duck’s bill. The nostrils are small and round, and are situated about a quarter of an inch from the tip of the bill, and are about an eighth of an inch distant from each other. The fore feet, fig. 47, have five straight, strong, and sharp-pointed toes, the two exterior ones somewhat shorter than the middle three, a broad, fan-shaped web extends considerably beyond the claws. The hind feet, fig. 31, are provided with other claws longer and more curved than those of the fore feet: the exterior toe and claw are considerably shorter than the other four. The males have a long sharp spur, situated considerably above the toes, through a small perforation of which they eject a poisonous liquid. See *Ornithorynchus.*
MAMMALIA.

ORDER I. BIMANA.

This order consists but of one species, Man, who is placed at the head of the animal kingdom. He has three kinds of teeth; hands on the anterior extremities and feet on the posterior, that is to say, five extremities, fitted with expressive movements in an upright posture; hands and feet, furnished with five fingers and five toes, on each of which are flat nails; two mammas or breasts.

Momo Sayor. "knowing himself." Incisory teeth; canines "; molaris "; total 32. Facial angle differing in different nations. Cuvier considers that there are but three distinct varieties of the human race, viz. the Caucasian, Mongolian and Negro; while Blumenhout enumerates five, the Caucasian, Mongolian, Ethiopian, American, and Malay; the chief difference of each variety depending on the development of the skull, and on the facial angle, and general shape. See Article Man.

Variety I. The Caucasian, pl. 52 f. 1, s. coronal surface of the skull. Face oval; facial angle 85 degrees; forehead high, expanded; space between the eyes wide, cheeks coloured with red, hair long, usually of a brown colour. This form predominates in Europe. To which also belong the ancient Greeks; as exhibited in the skull pl. 52 f. 6, where the forehead rises to a great height.

Variety II. The Mongolian, pl. 52 f. 3. Face flat, broad, cornered; with lateral projections of the cheek bones; facial angle 75 degrees; space between the eyes narrow, eyes placed somewhat obliquely; hair straight, hard; lips thick; nose somewhat depressed; beard thin. This race is spread over Asia, Finland, European Lapland, and includes the Esquimaux hordes.

Variety III. The Ethiopian, pl. 52 f. 4. Face round, the upper and lower jaw projecting forward considerably; nose flat, broad; lips very thick; facial angle 70 degrees, skin brownish-black, of different degrees of intensity; hair woolly, frizzled and black. This race inhabits the middle parts of Africa. Fig. 5 represents the coronal surface of the skull.

Variety IV. The American, pl. 52 f. 8. Forehead short; cheek bones prominent; nose flat; facial angle 73 degrees; skin mostly tan, varying to reddish copper-colour; hair straight and coarse, beard thin. This variety comprises the whole aborigines of America, with the exception of the Eskimo. This skull is that of a North American Indian. Fig. 46 is the skull of a Chirib, it represents the most preponderating of the lower lateral and posterior portions of the brain, of any variety of skull known to exist.

Variety V. The Malayon, pl. 52 f. 33. Face of an obtuse oval; nose broad; mouth wide; facial angle 75 degrees; skin varying in colour from mahogany to chestnut-brown. This race is found in Java, Sumatra, Coaita, near the Ganges, with the Islands of the Indian ocean and Polynesia. The skull is that of a Siamese.

ORDER II. QUADRUMANA.

Quadrumanous animals have three kinds of teeth; incisors, canines, and molars; all the four extremities are provided with hands, which fit them in an especial manner for climbing trees. The thumb, however, differs from that of man, being not opposite; pectoral mammas two or four. Their food consists of fruits, roots and insects.

Family I. SIMIS.

Form approaching that of man; 2 pectoral mammas.

Troglodytes Niger. Chimpanzees, pl. 53 f. 1. Facial angle 85; instate of cheek pouches, and tail at the base of the spine; arms moderately short; head round, muzzle projecting a little; canines project slightly, destitute of callosities on the hinder parts.

Pithecus. Stronger, pl. 53 f. 2. Facial angle 65 without cheek pouches, tail, or callosity at the termination of the spine; arms long.

Hylobates syndactylus. Siannang, pl. 53 f. 9. Facial angle 65, arms very long, reaching nearly to the ground, destitute of cheek pouches and tail; some species without callosities.

Presbytis mitrata. Capped Monkey. Facial angle 60; destitute of cheek pouches; distinct callosities; arms reaching to the knees; tail long.

Colobus geryonius. Full-bottomed Monkey, pl. 52 f. 40. Muzzle short, facial angle from 40 to 45; face naked; provided with cheek pouches; nostrils approximated; tail longer than the body; body and limbs slender, no thumbs on the fore-arms: having callosities.

Nasalis larvatus. Proboscis Monkey, pl. 54, f. 44. Facial angle 50; muzzle short; having cheek pouches; nose greatly produced; body robust; thumbs of fore-arms slender; tail longer than body; having callosities.

Lasotopyga nevucea. Dono, pl. 52 f. 24. Facial angle varying from 50 to 60; muzzle but slightly lengthened; face naked; hands longer than the fore-arms; thumbs short and slender; cheek pouches, but no callosities; tail long.

Semnopithecus Entellus, Monkeys, pl. 53 f. 4. Facial angle 45; head round; nose depressed; cheek pouches; thumbs very short, remote from fingers, with callosities, Skull of S. maurus, pl. 53 f. 22.

Cercopithecus mona. Varied Monkey, pl. 53 f. 5. Facial angle varying from 45 to 50; head round; thumbs distinct, approximating the fingers; cheek pouches; tail, length of body at least; callosities, except in one species.

Cercocebus fullirostris. White-eyed Monkey, pl. 53 f. 6. Facial angle 45; cheek pouches and callosities rather large; fingers long and slender; tail thick, scarcely tapering and longer than the body.

Macacus niger. Black Apes, pl. 53 f. 7. Facial angle from 40 to 45; muzzle elongated; canine teeth large and long; tail not quite a third the length of the body; form robust.

Cynocephalus niger. Black Baboon, pl. 52 f. 35. Facial angle 30 to 35; head round, limbs slender; anterior hands without thumbs; tail very long, powerfully prehensile, point naked.

Lagotricha Humboldtii. Capparo, pl. 54 f. 37. Facial angle 60; muzzle projecting; tail long, strongly prehensile, callous beneath near its point.

Mycterus urinatus. Araguardo, pl. 54 f. 38. Facial angle 35; the tail long, prehensile, tucked on the under side at the extremity, os hyoides ventricose.

Cebus fatuolus. Horned Sapajou, pl. 53 f. 10. Facial angle 60; head round, muzzle short; os hyoides small, thumb long and well formed; tail long, prehensile.

Callithrix scureus. Shimari, pl. 54 f. 39. Facial angle 60; head round, muzzle short; tail long, hairy, not prehensile; nails straight.

Aotus trivirgatus. Dourocouli, pl. 53 f. 11. Facial angle 60; head round and large; muzzle short, tail longer than the body, not prehensile; nails flat.

Pithecus melanocephalus. Cacujo, pl. 53 f. 12. Facial angle 60; head round; muzzle short; ears medium size, canines very strong; tail shorter than body, hairy; nails claw-like and bent.

Family—I. QUADRUMANA.

Acacis vulgaris. Striated monkey, pl. 54 f. 52. Head round, muzzle short; occiput prominent; tail longer than the body, quite covered with hair; nails very long, arched and pointed.

Midas rosalia. Silky Tamarin, pl. 52 f. 41. Facial angle 50; head round; muzzle short; forehead extended; ears large; tail much lengthened, hairy.

Family II. LEMURS.

Form approaching quadrupeds; incisary teeth varying in form and number; nostrils placed at the extremity of the muzzle; first finger of the lower extremities next to the thumb, with a sharp turned up nail.
Lichenothis niger. Short-tailed Indris, pl. 54, f. 42. Incisors teeth; canines + molars; Tail very short, or none.

Ortolanus Senegalensis, pl. 52, f. 29. Incisors 2 or 4 lower horizontal; canines + molars 1; cars very large; tail very long.

Indris laniger. Fleecy Indris. Incisors 4; molars 3; tail very long.

Protoris vacca. Ruffled Lemur, pl. 53, f. 13. Incisors 3; lower ones horizontal; molars 1; tail very long.


Nycterbus Bengalaicus. Slow Lemur, pl. 54, f. 43. Incisors 2 or 4; canines + molars 2; tail variable in length.

Catula Senegalensis. Senegal Galago, pl. 53, f. 15. Incisors + lower horizontal; canines + molars 1; Cars very large; hind legs and tail very long.

Chirogaleus. Dentine formula, unknown; ears short and oval; whiskers very long; tail long and tufted, cylindrical, re-convolute.

Tarsius Bancanus. Banks Tarsius, pl. 54, f. 45. Incisors 2, unequal; canines + small; molars 1; ears large and naked; hind legs, tarsi and tail long.

Cheirogaleus Madagascanus. Aye-Aye, pl. 54, f. 41. Incisors 3, strong; no canines, but a blank space for them; molars 1; fore legs short, middle finger long and slender; hind legs and tail, tufted.

ORDER III. CARNASSIERS.

Three kinds of teeth, the molars formed for cutting; jaw capable of a vertical motion only; thumb of the anterior foot, never opposed to the fingers.

FAMILY I. CHIROPTERA.

Fingers connected by a membrane, extending from the anterior to the posterior hands, answering the purpose of wings. Incisors varying in number; canines rather strong; molars with acute crowns.

TRIBE I. GALEOPTIDAE.

Nails of fingers long and greatly hooked; skin of the membranes hairy on both sides.

Galeoptis rufus. Colugo, pl. 53, f. 16. Incisors 2; canines + molars 2; ears small and rounded; tail variable in length; membrane enveloping the neck, and both extremities of fingers of anterior extremities short, nails blunt, slender.

The following arrangement of the Bats is proposed by Mr J. E. Gray.

TRIBE II. VESPERTILIONES.

Sub-Family. Rhinolophinae.

Nasal appendages membranous, complicated; index finger consisting of one joint.

Nyctophilus. Incisors 1; canines + molars 1; upper incisors short and conical, the under equal; first molars in upper jaw acute, with one tubercle; second and third with four tubercles; and the fourth with three.

Rhinolophus. Incisors 1; canines + molars 1; ears extended and united at their base; three nasal appendages; no tail; third finger of hand without the last phalanx.

Rhinolophus. Lasiurus, pl. 54, f. 47. Incisors 2; canines + molars 2; ears long and distinct; tail long, free.

Nycteris. Incisors 1; canines + molars 1; forehead with a deep groove; mouth provided with a pouch on each side.

Sub-Family. Phyllotisinae.

Nasal appendage simple, fleshy, entire or double; Index finger formed of two phalanges.

Phyllotis hirtutus. Javalin Bat. Incisors 1; canines + molars 1; nasal appendage double, one piece heart-shaped, the other lyre-shaped; ears large, naked and separated; tongue bristly.

Normopus. Incisors 1; canines + molars 1; ears large, furnished with auricles; nasal appendage simple; index finger two-jointed; extremity of tail naked. Vampyrus. Incisors 4; canines + molars 1; tail short, involved in the membrane.

Glossophaga. Incisors 1; canines + molars 1; tongue long, extendable and sectorial; intermembranous, usually obsolete.

Molossus. Incisors 1; canines + molars 1, two naso appendages; no tail.

Rhinopoma. Incisors 1; canines + molars 1; nose elongated, ears large, united; one nasal appendage; tail long.

Artibeus. Incisors 1; no canines; molars 1; two nasal appendages.

Diphylla. Incisors 1; canines + molars 1 or 2. Two short nasal appendages.

Monophyllus. Incisors 1; canines + molars 1.

Sub-Family. Pteropinae.

Molars obtusely tuberculated; wings conical; intermembranous membrane and tail usually wanting; index finger with three joints; head elongated, hairy.

Pteropus Jacunicus, pl. 54, f. 46. Incisors 3; canines + molars 3; ears very long; tail short, or none; index finger with a third phalax and a nail; tongue papillary.

Cheiromeles. Incisors 3; canines + molars 1; according to Geoffroy; but according to F. Cavier it is tail very short.

Cynopterus. Incisors 1; canines + molars 1; two of which are false in each jaw; tail very short.

Sub-Family. Nachtalinae.

Molars acutely tuberculated; wings long, narrow; index finger two-jointed; head short, obtuse; lips very large; tail incurved.

Molossus amplexicaudatus. Incisors 1; upper ones cleft; canines + molars 2; large, with numerous points; nose simple; tail long.

Stenodermus. Incisors according to Geoffroy, but F. Cavier says they are 3; molars 1; nose simple; tail none.

Celesto. Incisors 3; the upper sharp and simple, lower formed, as it were, of four columns; no canines; molars 1.

Alito. Incisors 1; no canines; molars 1.

Scotophilus. Incisors 1; no canines; molars 1, provided with acuminate processes.

Picrodiscus. Incisors 1; canines + molars 2; the front one small, the rest tuberculatd.

Chalc mines. Incisors 1; canines + molars 1.

Nectilio. Brazilianis, pl. 55, f. 17. Incisors 1; canines 1; very strong; molars 1; ears small lateral, remote.

Sub-Family. Vesperitilionae.

Molar teeth acutely tubular; wings large, broad; index finger of only one joint; head long, hairy; lips simple; tongue short; tail long.

Vesperitillo marinus. Common bat, pl. 55, f. 18. Incisors 1; upper set in pairs, lower close; canines + molars 1; anterior molars simple conic.

Plectoites. Incisors 1; canines 1; molars 1; ears larger than the head, united at their base.

Thyroptera. Dentine formula unknown; body slender; nose small and wings narrow; tail long, exerted; extremities formed for walking; three kinds of teeth mammaB abdolinal.

ORDER IV.

FAMILY I. INSECTIVORA.

Molars having various sharp points; in some species the canines are very long, and in others short; teeth ventral, sometimes both ventral and pectoral; legs short, always formed for plantigrade loco-motion.

Erinaceus Europaeus. Common hidge-hog, pl. 53, f. 19. Incisors 1; canines 1, shorter than the grinders; grinders 1; upper parts protected by prickles, under parts by coarse hair; tail short or none; six pectoral and four ventral teats.
MAMMALIA.

**Sorex araneus.** Shrew mouse, pl. 53. f. 20. Incisors 4; upper ones incisental at their base into the lower; canines 3; molars 2; muzzle greatly elongated; ears and eyes small; six or eight teeth both ventral and pectoral.

**Mugil Pyrenaeus.** Pyrenean shrew, pl. 53, f. 21. Incisors 4, two upper large, strong; false canines 4; molars 2; tail long; scaly, compressed laterally; toes pinnate.

**Tupaia tana.** Tana Tupaia, pl. 54. f. 49. Incisors 4; canines 4; molars 2; body elongated, head attenuated and blunt; eyes and ears large; tail long; 4 ventral teeth. Scalops Caudatus. Canadian sculpins, pl. 53. f. 24. Incisors 4, very upper large; with 3 lateral false incisors and then a vold; true molars 2; distalite of external ears; anterior toes large, united to the third phalax; nails strong and flat.

**Chrysocloris Asiatica.** Indian chrysochloris, pl. 53. f. 22. Incisors 4, strong and flat in the upper jaw, lower very small; false incisors small; true molars 2; anterior feet three-toed with strong nails; hinder feet with five toes; eyes minute; no external ear; muzzle cartilaginous.

**Taipus Europaeus.** Common mole, pl. 53, f. 23. Incisors 4; canines 4; triangular; molars 2; head elongated; eyes greatly minute; distalite of external ears; fore feet large, somewhat hand-shaped; nails slightly archèd; hind feet slender.

**Centetes catus.** Tenere, pl. 53. f. 25. Incisors 4 or 5; canines 4, shelled the grinders; molars 2; ears very small; legs short, five toes, no tail.

**Condylura macroura.** Radiated condylura, pl. 54. f. 13. Incisors 4; canines 4; molars 2; muzzle long, ciliated at the point; no ears; eyes very small; fore feet formed for digging.

**Family II. Carnivora.**

Each jaw provided with 6 incisors; deovd of sharp points; canines long and strong.

** Tribe I. Plantigrades.**

Predatory animals; their whole foot from toe to heel placed on the ground while walking.

**Urus fross.** North American bear, pl. 53. f. 26. Incisors 4; canines 4; molars 4 to 6; toes five, provided with strong claws forming for digging; tail short; 2 pectoral and 4 ventral mammæ.

**Procyon lotor.** Racoon, pl. 53, f. 27. Incisors 4; canines 4; large and compressed; molars 2, 3, muzzle acute; body slender; ears small; tail long; teeth 6, ventral.

**Nasus fuscus.** Brown coati, pl. 53, f. 28. Incisors 4; canines 4; molars 4; body thin; elongated; snout long and mobile; feet semi-palmated, armed with strong clawed nails; tail long; 6 ventral teeth.

**Cercopites caudicovixilus.** Potto, pl. 53, f. 29. Incisors 4; canines 4; molars 4; body thin; head round; ears oval; toes with strong crooked nails; tail long and prehensile.

**Meles Laboratorum.** American badger, pl. 53, f. 30. Incisors 4; canines 4; molars 4; body short; legs short; ears short; round; eyes small; tail short, under which is a pouch containing a field fluid.

**Myocetes melas.** Train, pl. 54, f. 48. Incisors 4; canines 4; molars 4 or 6; two false molars above and three below; snout pointed like that of a hog; ears nearly concealed; tail very short; two anal glands.

**Genus Arctis.** Wolves, pl. 53, f. 31. Incisors 4; canines 4; molars 4 or 6; head slightly elongated; legs, tail, and ears short; toes with crooked nails.

**Ratelis melleri.** Ratable. Incisors 3; canines 4; molars 4; body thick and depressed; legs strong; short; nails slightly curved and retractile; no external ears. 

** Tribe II. Digitigrades.**

Predatory animals, which walk on their toes only.

1st Sub-division.—With tuberculous tooth behind the great carnivorous tooth of the upper jaw.

**Mustela Canadensis.** Canada martin, pl. 53, f. 32. Incisors 4; canines 4; molars 4; body long, slender; legs short; claws sharp, crooked; a secreting gland.

**Mepotes Americanus.** American skunk, pl. 53, f. 33. Variety of ditto the Chincu, pl. 53. f. 34. Incisors 4; canines 4; molars 4; the great canine tooth with two tubercles on the inner side; posterior tuberculated; tail long and villous.

**Lutra Nair.** Pondcherry otter, pl. 53. f. 35. Incisors 4; canines 4; molars 4; head large, depressed; ears short; feet webbed.

**Enhydrorictis.** Cape otter, pl. 52. f. 8. Incisors 4, teeth short; false molars 4; hind legs and short; body long.

2nd Sub-division.—Having two tubercular teeth behind the great caninone in the upper jaw.

**Canis familiaris.** English pointer, pl. 54. f. 57. Incisors 4; canines 4; molars 4; the three first in the upper jaw, and the four in the lower jaw formed for cutting, and of a small size. Muzzle more or less elongated, depending on variety; ears in wild species erect, penditent in domestic varieties; fore feet five-toed; hind feet with six toes.

1. Pupils of the eyes circular.

**Section I.** Head elongated; parietal bones imperceptibly shuffling towards each other; condyles of the under jaw parallel with the upper molars. Australian dog, greyhound.

**Section II.** Head moderately elongated; parietals approaching each other from their insertions, but slightly divergent. Spaniel, shepherd's dog.

**Section III.** Muzzle more or less truncated, cranium considerably elevated; condyles of the lower jaw placed above the line of the upper molars. Bull dog, mastiff, wolf.

2. Pupils of the eyes long; tail long and bushy. Foxes, Palues fulvus. Fulvous fox, pl. 54. f. 59. Fur reddish fulvous; throat and abdomen white; chest gray; fore part of legs and feet black. North America.

**Lycoons pictus.** Hyena dog, pl. 52. f. 39. Incisors 4, not forming a regular series, the central one both above and below situated more internally than the others; head short; shoulders higher than the flanks like the hyena.

Megaloselis Smithii, Smith's fennec, pl. 52. f. 37. Dentition, supposed the same as in Canis and Lycoons; head long and acute; ears disproportionately large; tail tufted.

**Cynictis Ficrævitæ.** Ficrævitæ, pl. 54. f. 31. Incisors 4; canines 4; molars 4; head long; muzzle acute, with the nostrils placed on its sides; pupils of the eyes capable of being contracted to the breadth of a single line; tongue acuët; claws semi-retractile; provided with an anal pouch.

**Paradoxurus typus.** Type pantodurus, pl. 53. f. 37. Incisors 4; canines 4; molars 4; body long; no secetary gland; tail very long and depressed above.

**Cynictis Steedmanii.** Steedman's cynictis. Incisors 4; canines 4; molars 4; anterior feet with five-toes, posterior feet with four; body long, slender; head and ears short and oval; legs long; tail long and bushy.

**Harpactes groenlandicus.** Gray dog, pl. 51. f. 19. Incisors 4; canines 4; molars 4; anal pouch very large, the vent of which is placed below; feet five-toed.

**Suricata Catemis.** Cape Suricate, pl. 53, f. 38. Incisors 4; canines 4; grinders 4; body lengthened; feet three-toed; tail short; strong; hind foot, with a secretion gland below.

3rd Sub-division.—Of Digitigrades destitute of a tubercular tooth behind the large canine one in the under jaw.

**Hyena Capensis.** Spotted hyena, pl. 54. f. 53. Incisors 4; canines 4; very strong; molars 4; three false molars; toes acuët; ears large; feet four-toed, nails not retractile; provided with a glandular anal pouch; teeth four.

**Felis Nebuloso.** Clouded tiger, pl. 54. f. 58. Incisors 4; canines 4; molars 4 or 6; head round, jaws short; ears short; triangular; tongue acuët,
pupils circular in some, in others vertically oval; fore feet with five toes, hind feet with four; nails retractile.

**Family III. Amphibia.**

Feet enveloped in the skin, short, fine shaped, and adapted for swimming, hind feet placed horizontally; incisors generally i i i.

*Phoca Falcataforma.* Common Seal, pl. 54. f. 63. Teeth variable. Incisors i, or i, or i; canines i 4; molars i i i, or i, or i; nostrils susceptible of being closed at will; eyes large; no ears, or only rudimentary; five-toe the anterior extremities with hands, and the posterior with feet; fingers enveloped in the skin; tail short, thick; four abdominal teats.

*Murina proboscidea.* Proboscis Seal. Incisors i, or i, or 4; canines i, short, broad and flat; no external ears; nose elongated.

*Otaria Ursina.* Sea Bear, pl. 54. f. 65. Incisors 4; canines 4; large; molars i 4; with distinct external ears.

*Trichocus rosmary.* Walrus, pl. 54. f. 64. Incisors 4; canines 4, much elongated, longer than the head; molars 4 i; body elongated, conical; head round, muzzle large; no external ears; tail short; fore feet shaped like paws, with sharp claws; hind feet with five toes united in the skin, and placed horizontally.

**ORDER V. MARSUPIALIA.**

Teeth of the various sub-divisions differing considerably; young produced in an imperfect state, and are matured in an external pouch, which is supported by two marsupial bones; thumbs of hind extremities, mostly distinct and opposite to the fingers, in most species.

1st Sub-division. — With canines and insectivorous cheek teeth.

*Didelphis Virginiana.* Virginian Opossum, pl. 53. f. 59. Incisors 4; canines 4, strong, compressed, and projecting slightly; molars 4 i or i; head long, conical, with a pointed muzzle; ears large and round, nearly destitute of hair; tongue acimated; five toes, nails long and bent; hind feet with long thumbs, opposite to the fingers; tail long, half covered with hairs.

*Cheirogaleus palma.* Yapeck, pl. 54. f. 55. Incisors 4; canines i; grinders i; tongue short, flat; teeth of hind feet destitute of nails; tail long, hairy.

*Dasyurus macrourus.* Spotted Dasyurus, pl. 54. f. 56. Incisors 4; canines i; grinders i; head conical; fore feet, five-toed, nails crooked; thumbs of hind feet destitute of nails; tail long, hairy.

*Gymnura Baflos."* Raffles' Gymnura, pl. 54. f. 20. Incisors 4; canines 4; molars 4 i; head elongated, laterally compressed; upper jaw considerably longer than the under one; ears round, naked; tail long, naked and scaly; feet pentadactyle, nails long, hooked and retractile; hind legs very long.

*Perameles nasut.* Long Nosed Perameles, pl. 54. f. 54. Incisors 4 i or 4; canines 4; molars 4 i or 4; head much elongated; fore feet with five toes; hind feet four-toed, the two internal enveloped in the skin, showing the nails only; tail long, acute.

2nd Sub-division. — Incisors 4; lower ones very long; canines in lower jaw, very small or none.

*Phalangeris Cooki.* Cook's Phalanger, pl. 54. f. 21. Incisors 4; canines 4, or none; false molars 4 or 4; true molars 4 i or 4; head elongated; feet with five toes, tail destitute of hair in some species.

*Petaurus taeniolatus.* Flying Petaurus, pl. 55. f. 25. Incisors 4; canines 4 or 4; molars 4 i or 4; head elongated; eyes small; feet short, five-toed, united by a common nail; ears somewhat short; fore feet with four toes, and the rudiment of a fifth; hind feet with five toes; tail long, usually scaly; back covered with short spines.

*Megaleurops criniferius.* Common Dormouse, pl. 54. f. 25. Incisors 4; canines 4; molars 4; tail divided by transverse bands; eyes large, prominent; ears large, round; fore feet four-toed, with a rudimental thumb; hind feet with five toes; tail long, hairy, and tufted in some species.
Hydrochaeris Cypariss. Cypars, pl. 54. f. 9. Incisors; no canines; grinders; flattened on the crowns, with enamelled ridges in the form of the figure 8; all the feet provided with five toes; thumb of fore foot very small; hind feet palmed; toes united by a membrane; tail cylindrical, length of the body, and acutely tapering.

1st Sub-division. Spineless rats of the old Continent.

Mus Spicculus. Field Mouse, pl. 54. f. 40. Incisors; no canines; molars 4; tubercular; ears oblong or round-ed, almost destitute of hairs; fore feet four toed, and a wart for a thumb, covered with an oblate nail; hind feet five toed; tail long, without hair, and somewhat scaly.


Mus rufus. Red Rat. Fur yellowish red; darker on the head and back; abdomen yellowish, 6 inches long. Inhabits Paraguay.

3d Sub-division. Spiny Rats.

Mus Perhali. Perchail Rat, pl. 54. f. 10. Fur reddish brown above, with shiny hairs intermixed; gray underneath; body 12 inches long; inhabits Pondi-

cary, in India.

Cricetus vulgaris. Common Hamster, pl. 53. f. 8. Incisors; no canines; molars 4; provided with cheek pouches; head thick; ears rounded and oval; fore feet with four toes, an in the thumb represented by a nail; hind feet with five toes.

Geomya Douglasii. Douglas’s Geomys, pl. 52. f. 44. Incisors; no canines; molars 3; head large, depressed; mesofore small, round; cheek pouches found, facing downwards somewhat laterally; mouth small; with large and pendulous cheek pouches; eyes small, far apart; body cylindrical; legs short with five toes in each foot.

Dipus Gerbooa. Gerboa, pl. 54. f. 52. Incisors; lower ones acute; no canines; molars 4 or 5; eyes large; ears long, pointed; foot; fore feet four toed, and mailed tubercles representing a thumb; hind feet five or six times the length of the fore ones, with from three to five toes.

Gerbillus Canadensis. Labrador Sweeping Mouse, pl. 54. f. 5. Incisors; no canines; molars 4; ears moderately short; fore legs short; four toed; hind legs being long; feet with five toes, each provided with a nail; tail long, hairy.

Aplophas Tropidius. The Spalax, pl. 54. f. 4. Incisors; no canines; molars 4; with tubercular crowns; eyes extremely small; no external ears; feet short; with five toes; tail naked; fur soft and short.

Bathyergus maritimus. Coast Bathyergus, pl. 54. f. 1. Incisors 1, very large and curved; one canine tooth; molars 4 or 5; body thick, cylindrical; head thick; muzzle truncated; eyes small; no external ear; feet and tail short.

Pedioc Capensia. Cape pedetes, pl. 54. f. 8. Incisors; no canines; molars 4; lower incisors cut obliquely; molars consisting of two elliptical parts; head short, large, and depressed; muzzle obtuse; ears long, narrow; eyes large; all the feet four-toed. Females provided with an abdominal pouch.

Arctomys marmota. Alpine Marmot, pl. 54. f. 7. Incisors; very strong; no canines; molars 4; upper surface ridged and tubercular; body thick; head and eyes large; ears short; no cheek pouches; fore feet four-toed; hind feet five-toed; tail very short. Habits social.

Spermophilus Franklini. Franklin’s marmot, pl. 53. f. 45. Incisors; strong; no canines; molars 4; head somewhat large, with long cheek pouches; tail long in most of the species; habits solitary.

Capromys Furnarii. Fournier’s Capromys, pl. 54. f. 8. Muzzle long, truncated; one canine tooth; no canines; molars 4; body bulky; fore legs short, with four toes and a rudimentary thumb; hind feet with five toes; tail long, thick at the base, scaly.

Spermophilus Hudsonicus. Chicken squirrel, pl. 53. f. 46. Incisors; flat in front; no canines; molars 4; tubercular; head small; eyes large; ears erect; fore feet four-toed; hind feet five-toed; nails long and curved; tail long, with long bushy hair.

Pteromys ducalis. Lesser American Squirrel, pl. 55. f. 5. Incisors; no canines; molars 4; head and ears round; eyes large; skin on the sides of the body dilated, and extending from the fore to the hind legs, forming a kind of parachute; tail long and villose.

Section II. With imperfect clavicles, or none.

Hystric cristata. Crested Porcupine, pl. 53. f. 50. Incisors; no canines; molars 4; head thick; ears short; tongue with spiny scales; body covered with long and strong movable spines, interconnected with hair; tail short; fore feet with four toes; hind feet with five.

Atherurus fasciatus. Fasciatus Porcupine, pl. 55. f. 13. Incisors; no canines; molars 4; head strong, forehead depressed; ears short, rounded; fore feet with four toes, and a rudimentary thumb; hind feet with five toes; tail one-third the length of the body, scaly, tip provided with a tuft of bristles; body covered with spines, from the head to the root of the tail.

Chinchilla laniger. Chinchilla, pl. 54. f. 11. Incisors; no canines; molars 4; head large; ears thick; eyes small, very large; ears long; fore feet four-toed, and a rudimentary thumb; hind feet with five toes; tail one-third the length of the body, darkly scaly, tip furnished with a tuft of bristles; body covered with spines, from the head to the root of the tail.

Hydrochaeris copypara. Capypara, pl. 53. f. 47. Incisors; no canines; molars 4; muzzle conical, round; eyes large; ears moderate, and rounded; fore feet four-toed, and palmated; hind feet three-toed; no tail.

Cavia Cobaya. Guine Pig, pl. 54. f. 16. Incisors; no canines; molars 4; body thick; muzzle short, compressed; eyes large; ears moderate, and rounded; fore feet four-toed; hind feet with three; no tail.

Dasyprocta Acut. Agouti, pl. 54. f. 17. Incisors; no canines; molars 4; head elongated; forehead flat; muzzle flat; eyes large; fore feet four-toed, and an oblate thumb; hind feet three-toed; nails long and strong.

Caelogenus subunguis. Brown Raccoon, pl. 54. f. 50. Incisors; no canines; molars 4; head obtuse, cheek pouches; five toes on all the feet, all the interior toes small.

ORDER VII. EDENTATA.

Destitute of incisors in either jaw; sometimes having molars only; some species are called toothless; toes variable in number, protected by strong nails.

Tribe I. Tardiigrada.

Face short, with canines and molars, or with the latter only; nails long, bent.

Bradypus tridactylus. Three-toed Sloth, pl. 55. f. 8. No incisors; canines 4; molars 4; canines larger than the grinders; head small; muzzle truncated; fore legs longer than the hind, having three toes, armed with falcate nails; fur thick, harsh, and long.

Megathurium Cuvierii. Cuvier’s Megathurium. No incisors, canines or molars 4; transverse furrows on their crowns; body twelve feet long. Found in a fossil state only, in Paraguay, South America.

Tribe II. Eedofinenda, or digging Edentata.

Muzzle generally elongated; with molar teeth only, sometimes none.

Dasyus novemcinctus. Nine-Banded Armadillo, pl. 55. f. 7. No incisors, or sometimes 4; no canines; teeth subject to great variety, varying in number from 24 to 68; head long, pointed; mouth small; tongue extended; body covered by scales; fore feet four or five-toed; hind feet with five toes; nails long, fitted for digging; tail long.
Mammalia.

**Family I. Proboscidea.**

Upper incisors in the form of tusks; molars compound, few in number; five toes on all the feet; provided with a proboscis.

Elephas Indicus. Indian Elephant, pl. 55. f. 1. Incisors 1, in the form of enormous tusks; molars 1, 2; nose elongated into a cylindrical tapering proboscis, moveable in all directions, with a finger-like process at its tip, and with which it is possible to grasp; head very large, ears large, flat; neck short; tail of medium length, provided with a tuft of hair.

Loxodonta Africana. African Elephant, pl. 55. f. 2. Dorsal form large; sword 1, 2; ears very large; tail short; proboscis very thick at the base; fore feet with five toes, and four on the hind, which have but three hoofs.

Mastodon giganteum. Mammoth, pl. 52. f. 42. Incisors 1, 2; no canines; molars 1, 2, triangular without cortical substance; enamel with points bridged in pairs; tusks nine feet long; height of animal to the withers eleven feet. Found fossil only, in North America. Grind of Mammoth, pl. 52. f. 16.

**Family II. True Pachydermata.**

Mostly with three kinds of teeth, two at least, in others with four or two toes.

Hippopotamus amphibius. Hippopotamus, pl. 53. f. 48. Incisors 1, 2; canines 1, 2; molars 1, 2; head thick and square; eyes and ears very small; legs short; feet with four nearly equal toes, provided with small hoofs; body thick and heavy; skin destitute of hair.

Suro scrofa. Domestic Hog, pl. 54. f. 34. Incisors 1, 2; canines 1, 2; molars 1, 2; nose elongated, cartilaginous and provided with a bone to the snout; feet four-toed; the two middle ones only touching the ground, provided with strong hoofs; body covered with hair.

Phacochoerus Africana. Ethiopian Bear, pl. 54. f. 35. Incisors 1, 2; canines 1, 2; forming large round tusks, directed upwards from the sides of the jaws; molars 1, 2; composed of cylinders, united by a coriace.
tall very short; two inguinal mammae; destitute of horns.

*Cervus Wallichi.* Nepali stag, pl. 55, f. 11. Incisors \( \times 4 \); molars \( \times 4 \); head long, terminated by a muzzle; eyes large, pupil transversely elongated; most species with a lachrymal sinus; ears long; horns solid, deciduous, palmated, branched or simple, in the male only; mammae four; inguinal.

*Alces.* Elk. No canines; horns united into one palm, more or less indented; no muzzle; tail very short. American Elk.

*Cupreolus.* Reebuck. Destitute of canine teeth and lachrymal sinus; horns nearly allied to the elk's; a small antler to the front, high over the beam, and the superior part being turned backwards forms a fork.

*Subula.* Brocket. Muzzle widened to a glandular termination near the nostrils; lachrymal sinus small; horns simple, without branches or processes. Pitta Brocket.

*Stylocerus.* Muntjak. Canine teeth, (mostly found in the males) long; muzzle small; subocular sinus deep; horns small, with one anterior process only, standing upon elevated pedicles. Philippine Muntjak.

**Trem III. Giraffidae.**

Frontal process prolonged in the form of horns, covered with a hairy skin in both sexes.

*Camelopardalis Giraffa.* Giraffe, pl. 55, f. 9. Incisors \( \times 4 \); no canines; molars \( \times 4 \); head long; upper lip entire; no lachrymal sinus; neck extremely long, with a short thin mane; legs slender, the hindmost shortest.

**Trem IV. Capridae.**

Horns persistent, sheathing upon an ovoid nucleus, merely solid, receiving its increase by annual rings at the base.

*Antilope rupicapra.* Chamois, pl. 55, f. 15. Incisors \( \times 4 \); no canines; molars \( \times 4 \); horns common to both sexes, or in the male only; variously inflected, generally annulated, or projecting in spiral ridges, bifurcured in some; with a muzzle, half muzzle, or simple nostrils, with species with a lachrymal sinus; eyes large; ears long and pointed; legs slender; teats four or two.

The following subgenera are proposed by Major Hamilton Smith.

*Diceroscerus Fuscifer.* Prong-horned Antelope. Horns much compressed, rough with an anterior process and the points bending backwards, placed upon the orbits and expanding over the eyes; facial line convex; tail very short.

*Sigocerus laeuchopha.* Blue Antelope. Horns very large, pointed, simply bent back, annulated, placed above the orbits; tail as long as the thigh; mane reversed; throat and under-jaw bearded; destitute of subocular sinus and inguinal pores. Large.

*Oryx leucoryx.* White Oryx. Horns very long and slender, acute, annulated, with a slight spiral twist; ears long; mane reversed; tail length of the thigh; tip tufted; knees smooth, large.

*Gazella Pignata.* White-faced Gazelle. Horns incurved, or turned outwards and again inwards, constituting a lyrate form, black, annulate, and striate; lachrymal sinus small; eyes very large; knees usually tufted; tail short and tufted.

**Division II.**

Horns in the male only.

*Antilope cervicapra.* Common Antelope. Horns never truly lyrate, placed below the frontal crest, and sometimes more or less spiral; subocular sinus developed; inguinal pores distinct; a small bare space representing the muzzle; knees frequently tufted; gregarious.

*Reduna Isabella.* Cream-coloured Antelope.—Horns situated behind the orbits, black, reclining, the tips bending forwards, annulated below, smooth above, short and slender; ears long; muzzle small; knees smooth; tail rather short.

*Tragulus Spatialis.* Steenbok. Horns simple, straight, inclined, round, and shorter than the ears; usually quite smooth; ears long; tail very short; habits solitary.

*Rupiceros acuticornis.* Sharp-horned antelope. Horns with small, simple, striated, or rings round, very sharp, and vertical; animals of small size; forehead narrow.

*Petrocerus quadricornis.* Four-horned antelope. Horns (in the male only) four; the two upper simple, straight, smooth, pointed, and rising on the frontal crest; lower horns much shorter, conical, and situated between the orbits; tail short. This genus was instituted by Dr. Leach. Horns in the male only.

*Cephalophus quadricora.* Four-tufted antelope. Horns small, straight, reclining, placed high on the forehead, annulated; muzzle small, black; hair of the forehead long and tufted; knees smooth; tail short, tufted; habits solitary.

*Netrangus modokoa.* Salt's antelope. Horns horizontal, very small, sub-anulate, black, acute; no subocular slit; head round; nose pointed; muzzle small; tail short; size very dark in dim light.

*Tragelaphus scripta.* Harnessed antelope. Horns with annulated, somewhat spiral, ridges, placed high on the frontals and reclining; muzzle very small; no lachrymal sinus; mammae four.

*Novorucerus Duvuculi.* Duvucelli's antelope. Structure assuming the goat form; horns short, round, bent back, and annulated at their base; muzzle small; the intermaxillary bone in general provided with a pouch; hair coarse, loose; legs strong.

*Rupicapra Mazama.* Ovine antelope. Horns in both sexes slender, vertical, and attenuated, suddenly hooked at their extremities, a few wrinkles on the base; two broad, smooth, pointed suboccipital sinuses; form approaching the goat; limbs strong; hair long, with a small quantity of wool underneath. The chamois is of this sub-genus.

*Acrocerus laniger.* Wool-bearing antelope. Horns simple, sub-recurvated, caninial, with obscure annulations, points smooth and bent back; destitute of muzzle and lachrymal sinus; tail short; form approaching that of a sheep.

*Anoa depressicornis.* Anoa. Horns placed on the edge of the frontal crest, on the same plane with the face, very strong, slightly depressed, subtriangular, short, straight, wrinkled, and acute; facial line straight; no subocular opening.

*Capra hircus.* Domestic goat, pl. 55, f. 14. Incisors \( \times 4 \); no canines; molars \( \times 4 \); horns (usually in both sexes) either vertical or inclined, nodose, and more or less angular; chin bearded; forehead concave; tail short, flat, and naked at the base.

*Ovis aries.* African sheep, pl. 55, f. 18. Incisors \( \times 4 \); destitute of canines; molars \( \times 4 \); horns (generally common to both sexes) large, spiral, more or less angular; foreheadarched; hair of two kinds, one hard and close, the other woolly.

*Damalis.* Incisors \( \times 4 \); no canines; molars \( \times 4 \); horns (common to both sexes, or in one only) situated on the frontal crest, variously twisted; body large; head heavy; legs strong; neck short; generally furnished with a mane and beard; higher behind than before.

The four following are sub-genera, according to Major Hamilton Smith.

*Aerocinus bubalis.* Bubalis. Horns (in both sexes) with double flexures, more or less developed, approximating and annular at their base, smooth and turned back at their tips; head narrow; long; lachrymal sinus small, with inguinal pores; knees smooth; shoulders elevated; tail moderate, tufted.

*Boostaphus vinosus.* Impoofo. Horns (in both sexes) heavy, strong, placed on the summit of the frontal, nearly straightly twisted, and with a slight ridge; neck furnished with a mane; females with an udler, of four manes.
Strepsigerus caudatus. Kochoo. Horns (in the male only) placed on the frontal, smooth, forming regular spiral curves; muzzle broad; man long; chin bearded; shoulders elevated; tail covered with long hair; stature large.

Portax rina. Noel Chau. Horns (in the male only) placed on the sides of the frontal crest, short, strong, sub-angular, and destitute of annulations; shoulders elevated; neck with a mane; throat hairy; dewlap small.

Tribe V. Bovidae.

Horns (in both sexes) persistent, round, smooth, never straight, and invariably placed upon the sides of the frontals; muzzle broad; females with an under; stature large; gregarious.

Catophlogos gnou. Gnu. Incisors ]; no canines; molars ]; horns curved outwards, base broad, approximating, tips turned down, points unctuating upwards; cheeks provided with a glandular excescence; neck and throat with a mane; tail hairy, as in the horse.

Onithos moschatus. Musk ox, pl. 54 f. 33. Horns in contact on the summit of the head, where they are flat and broad, beyond which they bend down against the cheeks, with their points turned up; ears short; eyes small; tail short.

Bos Americanus. American bison, pl. 55 f. 17. Head large, skull strong; dense about the frontals, which are convex; muzzle broad, naked; eyes large; ears funnel-shaped; dewlaps on the neck; tail various lengths, tufted.

Major Smith gives the following as sub-genem. Bubalus, Cape ox; Bison; The bison; Baurus Ursus; Anoa depressicornis.

ORDER X.

Cetacea.

Body formed like a fish, terminated by a cartilaginous caudal appendage placed horizontally; two anterior extremities formed like fins. Teeth conical, or none; skin smooth, entirely destitute of hair.

Family I. Sirenia.

Herbivorous Cetacean.

Manatus Senegalensis. Senegal Manatus, pl. 55 f. 21. Incisors ]; no canines; molars ]; Incisors small, existing in the fetus only. While young they lose four molars; head not distinct from the body; mustachios formed by a bundle of stiff hairs directed downwards; eyes very small; tongue oval; on the margins of the pectorals are small nails.

Halicore Indica. Dugong, pl. 55 f. 19. Incisors ]; in the adult, ]; when young; no canines; molars ]; in the adult, ]; in the young; body fish-shaped, terminated by an horizontal two-lobed fin; muzzle truncated and moveable; fins short; no distinct fingers or nails.

Stellerian Borealis. Northern Stellerus. Destitute of incisors and canines; molars ]; consisting of a plate on each side of the jaws, not attached by roots, but by a number of small vessels and nerves; no external ears; lips double; eyes covered by a cartilaginous membrane.

Family II. Cetacea.

Teeth conical, or none; nostrils assuming the form of spiracles; skin smooth, shining, and destitute of hairs on every part; mamme placed near the anal opening.

Delphinus phocaen. Porpoise. Pl. 55 f. 22. Teeth all canine-shaped, compressed, and notched on their outer edges, varying in number from 200 to none; jaws more or less protudent in form of a beak; aperture of spiracles uniform; an adipose dorsal fin, with sometimes a longitudinal dorsal field of skin; tail horizontally flattened and bifurcated.

Mammal monoceros. Narwal. Pl. 55 f. 20. Incisors ]; destitute of canines and molars; one or two large, straight, very long and pointed tusks inserted in the upper jaw; shaped like the dolphin's; orifice of spiracle, united at the top of the head; with a longitudinal dorsal projection.

Tribe II. Large-headed Cetacea.

Physeter macrocephalus. Great-headed cachalot, pl. 53 f. 23. Underside constricted, with from 19 to 25 thick conical teeth on each side; upper jaw broad, elevated, with bony laminas, or with short and undeveloped teeth; orifice of spiracles united at the upper end of the snout; some species with a dorsal fin.

Halenia mysticetus. Common whale, pl. 55 f. 23. Destitute of teeth; upper jaw keel-shaped, furnished on each side with bony laminas or whalebone; orifices of spiracles separated, placed near the centre of the upper portion of the head; some species with a dorsal fin, and others with nodules on the back.

MAMMEE-TREE, or WEST INDIA APRICOT (maname Americanus); a large and beautiful tree, native of tropical America, and interesting from the peculiarities of its fruit, which is like an apricot. This fruit is large, roundish, and contains a bright yellow, firm pulp, which is enveloped with a thick, leathery rind: within this outer rind is a second very delicate one, closely adhering to the pulp, which should be cautiously removed, otherwise it leaves a bitter taste in the mouth, not very strong at first, but gradually increasing, and continuing for two or three days. The taste is peculiar, sweet, and very agreeable, and is accompanied with an aromatic, pleasant odour. The tree belongs to the guttiferae, the same family with the mangosteen, and attains the height of sixty or seventy feet. The leaves are oval, obtuse, very entire, smooth, from six, or eight inches in length. The flowers are white, an inch and a half in diameter, and diffus a delightful perfume.

MAMMON; the Syrian god of riches, mentioned in the teachings of Jesus, as a personification of worldliness. Spenser has personified Mammon in his noblest manner (book ii., canto 7), where are represented the secret treasures of the "god of the world and worldlings."

"An uncoth, salvoage, and uncivil wight, Of greely hert, and ill-favour'd sight, His face with smoke was tan'd, and eyes were bleart'd, His hair and beard with soot were ill bedight, His coal-black hands did seem to have been sear'd, In smith's fire-spitting forge, and mails like claws appear'd."

"His iron cost all overgrown with rust, Was underneath enveloped with gold, Whose glittering gloss darkens'd with filthy dust, Well yet appeared to have been of old, A work of rich entail and curious mold, Woven with antics and wild imagery: And in his lap a mass of coin he told, And turned upside-down, to feed his eye, And coveted Damit, with his huge maimery."

"And round about him lay on very side Great heaps of gold that never could be spent; Of which some were rude or not purified, Of Mulebe's devouring element: Some others were new driven, and distant Into great ingoes, and to wedges square; Some in round plates withouten monument; But most were stamp'd, and in their metal bare The antique shapes of kings and kessars strange and rare."
great quantity of fossil ivory is obtained from Siberia, and it is visible, almost everywhere, on the banks of rivers, which undermine the soil. Whole carcasses, covered with flesh and skin, preserved by the eternal frost of those regions, have even been found in the northern parts of Siberia. The bones of mammoth have been occasionally found in all parts of Europe, and have given rise to stories of giants. They have been found in Kentucky, South Carolina, and other parts of the United States, and Humboldt discovered them on the elevated plain of Quito. A mammoth, in complete preservation, was seen by Adams, a traveller in Siberia, who found the skeleton to be nine feet and a half high, and fourteen long, from the tip of the nose to the coecux. The tusks were nine feet long. The scientific name of this animal is *elephas primigenius* (Blumen.), or *elephant fossil* (Cuv.). It is not to be confounded with the mastodon, a gigantic fossil animal of North America. See Mastodon, and Organic Remains.

**MAMMOTH CAVE**; a stupendous cave in Kentucky, near Green river, 180 miles south-south-west of Lexington. It has been penetrated nine or ten miles, and has many windings that have not been explored. The depth is sixty or seventy feet. It is one of the most interesting caves in the world of immense size and fantastic form; but is more remarkable for its extent than the variety or beauty of its productions, having none of the beautiful stalactites found in many other caves. The earth is strongly impregnated with salpetre, and large quantities of it are manufactured.

**MAN,** in natural history, according to some naturalists, although, it must be confessed, rather from motives of pride than from anatomical considerations, forms the order *bimana,* in the class mammalia; according to others, and more scientifically, is included in the family *bimana,* in the order *anthropomorpha,* which contains, also, the two families of quadrupana, or proper monkeys, and lemurs. The family *bimana,* according to this classification, contains three genera, —man, the orang-outang, and the gibbon. Linnaeus, was the first who ventured to class man (*homo, homo sapiens*) in a scientific system with other animals; and he did not escape the censure of some, as claiming the dignity of the human race by such an approximation; but classification is a mere statement of a fact in anatomy, and the philosopher, who observes and interprets nature, is not solely to blame. Man, then, whether considered as the head of the animal creation, and a part of it; or as a sole genus and sole species, distinct from others, and lord of all; whether defined to be biped without feathers, or a quadruped without hoofs, a monkey with a voice, or a monkey without a tail,—if viewed solely in a physical light, and setting aside his divine reason, and his immortal nature,—is a being provided with two hands, designed for precision, and having fingers protected by flat nails, and two feet, with single soles, designed for walking; with a single stomach, and with three kinds of teeth,—incisive, canine, and molar. His position is upright, his food both vegetable and animal, his body naked. It has been made a subject of dispute, whether there is more than one species in the human race; but it is more easy to dispute words; and if the term species is used in its common scientific sense, it cannot be denied that there is but one species. There are, however, certain and constant differences of stature, physiognomy, colour, nature of the hair, or form of the skull, which have given rise to subdivisions of this species. Blumenbach reduces these varieties to five:—

1. The first variety occupies the central parts of the old continent, namely, Western Asia, Eastern and Northern Africa, Hindoostan and Europe. Its characters are the colour of the skin, more or less white or brown; the cheeks tinged with red; long hair, either brown or fair; the head almost spherical; the face oval and narrow; the features moderately marked; the nose and mouth small, the front teeth placed perpendicularly in the jaws; the chin full and round. The regularity of the features of such a countenance, which is that of the European, causes it to be generally considered (by them at least) as the most agreeable. The Hindoos, the Abyssinians, the Bokhors, and inhabitants of Mount Atlas, have features not essentially different from those of the Europeans, except in the colour of the skin, and which, among the Hindoo and Abyssinian mountaineers, is quite fair. Blumenbach calls this variety the *Caucasian,* from its supposed origin in the Caucasus. In plate LVI., representations will be found of various tribes who belong to this variety. Fig. 1, is a Georgian: fig. 2, an Armenian: fig. 3, a Tcherkassan: fig. 4, a Circassian: fig. 5, a Czardariner: fig. 6, a Tschtetschenzen: fig. 7, a Cossock of the Don: fig. 8, a Cossock of the Ural: fig. 9, an Athabian: fig. 10, a Moldavian: fig. 11, a Finn: fig. 12, an Arnaut: fig. 13, an Arabian: figs. 14 and 15, inhabitants of the North of Caucasus. Fig. 16, is a man with a beard and a cross, who is called the *Confessor,* a hermit more celebrated among the Christians of the Russian prairies, than in any other part of the world.

2. The second variety has been called the *Eastern variety.* The colour in this race is yellow; the hair black, stiff, straight, and rather thin; the head almost square; the face large, flat, and depressed; the features indistinctly marked; the nose small and flat; the cheeks round and prominent; the chin pointed; the eyes small. This variety comprises the Asians to the east of the Ganges and of mount Belooch, except the Malays. Representations of this variety will be found in plates LVI. and LVII. Plate LVI., fig. 17, is a Turk: fig. 18, an Egyptian: fig. 19, a Persian: fig. 20, a Hindoo. Plate LVII., fig. 1, a Yakoute: fig. 2, an Oustik: fig. 3, a Kalmut: fig. 4, a Kirghises: fig. 5, a Kasanlin: fig. 6, a Mongol: fig. 7, a Tomsk-Tatar: figs. 8, 9, and 10, Chinese: figs. 11 and 12, Japanese: figs. 13, 14, 15, and 16, Kamtschadale: fig. 17, inhabitants of Prince William's Sound: fig. 18, inhabitant of Nooka Sound.

3. The American race resembles that last described in the dignification of the body, by such an approximation; the central part of their body is especially marked; the nose small and flat; the cheeks round and prominent; the chin pointed; the eyes small. This variety comprises the Asians to the east of the Ganges and of mount Belooch, except the Malays. Representations of this variety will be found in plates LVI. and LVII. Plate LVI., fig. 1, is a Turk: fig. 18, an Egyptian: fig. 19, a Persian: fig. 20, a Hindoo. Plate LVII., fig. 1, a Yakoute: fig. 2, an Oustik: fig. 3, a Kalmut: fig. 4, a Kirghises: fig. 5, a Kasanlin: fig. 6, a Mongol: fig. 7, a Tomsk-Tatar: figs. 8, 9, and 10, Chinese: figs. 11 and 12, Japanese: figs. 13, 14, 15, and 16, Kamtschadale: fig. 17, inhabitants of Prince William's Sound: fig. 18, inhabitant of Nooka Sound.

4. The fourth variety of Blumenbach is called by him the *Maley,* and described as of a tawny colour; the hair black, soft, thick, and curled; the forehead a little projecting; the nose thick, wide, and flattened; the mouth large; the upper jaw projecting. This race is found almost the whole of the Pacific ocean. Representations of the Malay variety will be found in plate LIX. Figs. 5, 6, and 7, represent Papus of New Holland; a was a Papus named *Kour-Nou-Bari-Gat;* b, Y-Erran-Gon-la-ga; c, Qui-lea-kine. Fig. 6, represents Tapotawier, a warrior of Nukaliwa; fig. 7, an inhabitant of Fox island; figs. 8, 9, and 10, Pave-Golanders; figs. 10, and 11, inhabitants of Omannahla; figs. 12, and 13, inhabitants of the Sandwich islands; fig. 14, Tammennen, prince
of the Sandwich islands; fig. 15, Naha-Seba, prince of the Tinor island; fig. 16, an Otahitian.

5. The remaining variety is the Negro. Its characters are, colour black; hair black and woolly; head narrow; forehead convex and arched; cheek-bones projecting; nose large, and almost square; and fingers and toes, nearly bisected by the thumb. Incisor teeth large, with the front teeth obliquely placed; the lips thick; the chin drawn in; the legs crooked. This race is found in Western and Southern Africa, and the great islands of the Pacific, generally in the interior. There are very great differences in the tribes included in this variety: the Negro, with the complexion of jet, and wool; the Caliree, with a copper complexion, and long hair; the sooty Papous, or New Guinean; the native of Van Diemen's Land; the Haraforis, who are found in Borneo, and the Hottentots, hardly differ more in situation than in features. Representations of this variety will be found in plates LVIII. and LIX. Figs. 1, 2, 3, and 4, in plate LIX., represent the Negro Proper. Figs. 9, 10, and 11, in plate LVIII., represent Hottentots. Figs. 12, 13, 14, 15, same plate, represent Bushmen, male and female. Figs. 16, same plate, a, b, c, represent Papous of Van Diemen's Land; a, named Gros-Agara; b, Ara-Meida; and c, Para-
lel. See the third of this tribe for a more particular description of the above varieties. Also see Blumenbach, De Varietate nativa Generis Humani. Bory de St Vincent, in his Essais Zoologiques sur l'Homme, divides the human race into fifteen species, and numerous varieties.

Man, considered in his nobler character of a social, moral, religious, and political being, will be more appropriately considered under other heads. See Language, Philology, Political Institutions, Religion.

MAN, ISLE OF (the Monarch of Poloeley); an island belonging to Great Britain, in the Irish sea, nearly equidistant from the coasts of England, Scotland, and Ireland; thirty miles long, and twelve, where widest, broad; seventy in circumference; square miles, 220; population, in 1831, 40,083; chief towns, Castletown (the capital), Douglas, Peel, and Ramsey; lon. 4° 50' W.; lat. 54° 15' N. The interior is very open; the city of Peel is the highest summit, is about 2900 feet above the sea. The soil, not very naturally productive, is greatly fertilized by the abundance of seaweed cast upon the shore. Agriculture, of late, has made great advances. The productions are barley, wheat, oats, turnips, potatoes, flax, cattle, sheep, poultry, &c. The island contains seventeen parishes, under the jurisdiction of a bishop, styled bishop of Sodor and Man, who is sole baron of the island. The Manx language, a kind of Gaelic, prevails in the interior, but English is spoken in the towns. On the south is a small island, called the Calf of Man, which is separated by a narrow channel. In 1405, the island was granted to lord Stanley, and, in 1735, became vested in the duke of Athol. In 1764, it was sold to Great Britain for £70,000, with all its rights of sovereignty.

MAN-OF-WAR; a ship of war; an armed ship. MAN-OF-WAR. See Crest. MANAKIN (pipra, Lin.) This is a small genus of birds peculiar to South America, having a compressed beak, thicker than broad, grooved; usual fosse large. Their tail and feet are short. In their general form and proportions, they are not very unlike the timouse. They are generally small, and incline to the form of happy; they are seen in cultivated fields. The largest of these birds, the _P. nitidus_, is distinguished by a beautiful crest of red feathers upon its head. Its back is of a fine blue, and the rest of the plumage of a deep black.

Closely allied to these birds is one of the most extraordinary of the feathered tribes, the cock of the rock (rupicola). This bird is as large as a pigeon, of a bright orange colour, and is furnished with a double crest of feathers on its head, placed in the form of an fan. The living fruit, which resembles the common fowl, and form their nest of dry wood, in deep holes in the rocks. The female lays two eggs.

MANASAROWARA, a lake of Thibet, among the Himalayan mountains, is one of the most venerated of all the places of pilgrimage resorted to by the Hindoos, especially the Thibetians, to overcome all the difficulties of the journey. The Thibetans also hold it in great reverence, and come from great distances to throw into it the ashes of their friends. It is about fifteen miles long and eleven broad, and, with its borders of lofty crags, and its towering bar-
er of snow-capped mountains, forms a magnificent scene. Its shores are covered with monastic houses.

MANASSEH; eldest son of Joseph, born in Egypt. When brought with Ephraim to receive the blessing of his grandfather Jacob, the old man placed his right hand upon the head of the younger, and his left upon that of Manasseh, thus depriving the latter of the precedence due to his priority of birth. The descendants of Manasseh formed a tribe, which, in the promised land, was settled half beyond the Jor-
dan, and half in the territory of Samaria, Sichem, and Bethany. See Hebrews.

MANCANO (abbreviated manac., Italian) is used in music to denote that the time of a piece must become slower and slower, and the tone by degrees vanish.

MANCHA, LA; a province of Spain in New Castile, almost every way surrounded by mountains, forming an immense plain, intersected by ridges of low hills and rocks; not an enclosure of any kind, except mud walls, about the villages; not a tree to be seen, except a few dwarf evergreen oaks and olive plants, scarce deserving the name. All this vast tract of open country is cultivated in corn and vines. A traveller says, "There is no labourer nor young female peasant, who is not well acquainted with Don Quixote and Sancho." This is the most cheerful country of Spain; the inhabitants are affable, and great lovers of music and dancing; population, 214,087; square miles, 8000; chief towns, Ciudad-Real and Ocaña.

MANCHE, DEPARTMENT OF LA; in the north-western part of France, on the British channel, called in French La Manche. See Department, and Channel.

MANCHESTER, the most important manufacturing town in England, is situated at the south-eastern extremity of the county palatine of Lancaster, 186 miles N. W. from Lomond, thirty-six miles by the high road, thirty by the railway, E. by N. from Liverpool, and eighty-two N. from Birmingham. It stands on the eastern bank of the river Irwell, near its junction with the two tributary streams of the Irk and the Medlock. On the opposite bank has been built the town of Salford, which, though under a different jurisdiction, is yet closely connected with Manchester as to form a part of it, and is therefore comprehended in the same statistical report. The communication is kept up by means of several bridges.

History. Manchester is of very high antiquity. In the time of Julius Agricola, the Roman governor of Britain, it was seen to be a station, and called Man-
cunium, which, says Mr Whittaker, signifies the Place of Tents. Other antiquaries tell us that the origin of the name is to be found in Saxon etymology, it being frequently spelled Manicostor in ancient
records. Another opinion is, that during the possession of Britain by the Romans, the military post stationed in the fortress from which a great camp at Chester, was called *Manöeaster*, (afterwards corrupted to *Mancunia*), the same camp, much on the same principle that Anglesea and Mau, solitary islands, acquired the appellation of Mona. The town, which had gradually accumulated round the ancient fortress, was raised during the early incursions of the Danes, and subsequently restored by Edward the Elder, about 920. On the Norman Conquest, Albert de Grellie, one of the adventurers attached to the standard of William I., obtained possession of this place, and made it his seat of residence; and his son Robert de Grellie, in 1134, after returning from an expedition into Normandy, whither he had attended his sovereign Henry I., obtained from that prince as the reward for his services a grant of a fair to be held in his lordship of Manchester, annually on St. Matthew's Day, and the days before and after it; and this fair, which still subsists, under the appellation of Acker-Fair, now takes place on the first of October. Thomas de Grellie, lord of the manor in 1301, gave the burgesses of the town a charter of the customs of the manor, by which Manchester was constituted a free burgh. From the Grellie family this lordship was transferred to Robert de la Warre, whose descendants, the Warres, were as late as 1738, the founder of the noble establishment of the collegiate church. In 1579, the manorial rights and immunities were sold for £3000 to John Layce, who, in 1596, resold them for £3500 to Sir Nicholas Mosley, in whose family the manor, now immensely increased in value, has ever since continued. Manchester was mentioned by Camden, in the reign of Elizabeth, as a place of importance for its population, manufactures, and commerce; and during the government of Cromwell this town twice returned members to the house of commons. On the commence ment of the civil war between Charles I., and the parliament, possession was taken of Manchester, in behalf of the latter, by the country militiamen, who being joined by the people of the town and neighbourhood, the streets were slightly barricaded; and the earl of Derby, who in September, 1642, at the head of a large body of royalist forces assaulted the town, was repulsed, and forced to retreat. The next year the town was reéstablished, and on the first day of January, 1643, the insurgents were in possession of the town till the war was terminated. When the insurrection against government took place in 1745, under prince Charles Edward Stuart, Manchester became for a short time the quarters of the insurgents. On the 29th of November the main body of their forces entered this town, on their march from Scotland; and the young adventurer took up his quarters at a house in Market Street Lane, called from that circumstance the Palace, and since converted into an inn, which still retains that appellation. The rebel army remained here till the 1st of December, and then proceeded southwards, but was soon after obliged to retreat. The inac
tivity of the local authorities at Manchester on the arrival of the Scottish troops, was construed into disaffection to the existing government, and at the assizes at Lancaster, in 1747, the constables, or presiding officers of the town, were arraigned on the charge of high treason, but the prosecution ended in a verdict of not guilty. In the year 1768, Manchester was visited by Chris IERN VII., king of Denmark, who came to this part of the country to see the works for the improvement of inland navigation, then in progress, under the duke of Bridgewater. In 1817, during a period of great manufacturing depression, a number of distressed persons agreed to assemble and march to London, in order to lay their grievances before the throne. Each individual was furnished with a suit of clothes; and the men from the great camp at Chester, were called Blanketeers. Many set out on their journey, but their perseverance soon gave way, and none proceeded further than Macclesfield. A more remarkable event took place on the 16th Aug., 1819, when a vast concourse of people, assembled on a piece of vacant ground near St Peter's Church, for the purpose of petitioning the parliamentary government. This assemblage was illegally dispersed by a detachment of yeomanry, under the direction of the magistrates; and the chairman of the meeting, Henry Hunt, with several of the leaders, were captured and sent to prison. The yeomanry displayed much unnecessary severity on the occasion; several lives were lost; and about 500 persons of both sexes suffered injury. This transaction, popularly called the Manchester massacre, excited a great deal of indignation throughout the country, as being an outrage both on humanity and the constitutional rights of the people.

**Description.** Manchester is about two miles in length, and one and a half in breadth, containing about 600 streets, which are in general well paved and lighted with gas, and the inhabitants are conveniently supplied with water. The buildings display considerable variety, but among those of modern erection, those of King's Lynn are more lofty. Within the last twenty years, several extensive improvements have been carried into execution in different quarters of the town. In 1822, an act of parliament was procured for making alterations in Market street and its vicinity, and for the erection of a new bridge across the Irwell, from Water street to Salford, over the narrow avenues at the bottom of King street, connecting it with Dennisgate, have been widened; as also those at the lower end of Cannon street, leading to Hanging ditch. In Piccadilly, the carriage way has been widened by removing the railing of the infra-mary pond close to its edge. Market street, formerly called Market street lane, has been rebuilt on such a scale of magnificence as to entitle it to the appellation of the Regent street of Manchester. The carriage-ways in general have been Macadamised; and the footways occasionally widened, and otherwise improved. Gasworks, for lighting the streets of Manchester, were established in 1806, and in 1818, the first within the town. In 1820, the Salford waterworks were established. Manchester and Salford waterworks were established in 1809. Besides the bridges over the Irwell, there are six which cross the Irk, nine the Medlock, and several others over the canals. Among the public edifices, appropriated for the purposes of commerce, is the Manchester exchange, built by subscription, and opened to the public in January, 1800. In York Buildings, and Chapel Street, Salford, are the cloth-halls, or public marts, for the sale of Yorkshire cloth; and in Hanging Ditch is the Corn Exchange, for the accommodation of corn-dealers and brokers. The public markets are numerous, but not in general distinguished for extent or convenience of arrangement. Provisions of all kinds are exposed for sale every day in the week, except Sunday, the regular market-days, however, being only four. The market-places are arranged in the shape of a large square, called Bridge Street, for butcher's meat, with a pork-market adjacent; the fruit-markets are at Long Millgate and Shude Hill; Smithfield Market, Shude Hill, is for various commodities and provisions, except on Wednesdays, when the sale of cattle takes place there; in the London Road are shambles, and a market for
fruit and vegetables; there is a market in Brown Street, opened in November, 1857, on the removal of the old shambles, in Market Street; the poultry and butter market takes place on Saturdays, in Smithy Door; and in Salford is a new market-house, with a Museum of Natural History and Philosophical Society for the sale of butchers' meat, fruit, and vegetables, opened in May, 1827. The municipal buildings include some handsome structures, particularly the town-hall of Manchester, in King Street, a noble edifice, recently erected, designed for the transaction of the municipal and other public duties, and the administration of justice, as well as for public meetings. The town-hall of Salford is in Chapel Street. The New Bailey Prison, or Penitentiary, in Stanley Street, Salford, completed and opened for the reception of prisoners in 1790, consists of an extensive building, in the centre of a large area, enclosed by very high walls: it is three stories in height, and arranged in the form of a cross; and in front, over the entrance, is the court-room, where the sessions are held, and adjoining are commodious apartments for the magistrates, jurors, and others. At Holme are cavalry barracks; and in the Regent's Park, and the Botanical Gardens, in N. Mayfield, Manchester are numerous, and many of them elegant. The oldest is the venerable collegiate church, originally founded by Thomas Lord de la Warre, in the reign of Henry V., and rebuilt in the reign of Henry VII. There are about fifty places of worship for dissenters of various religious denominations. Among the most important of the charitable foundations in Manchester is the Blue Coat School, established through the munificent bequest of Humphrey Cheetbam, Esq. To the same gentleman, the town is indebted for the foundation of a valuable public library. There is a free grammar-school in Long Millgate, which was founded in 1535, by Hugh Oldham, bishop of Exeter, and which is a seminary of considerable importance and great reputation. The other establishments for gratuitous education include the Collegiate Church School, Fennell Street; the Deaf and Dumb School, Stanley Street, Salford; St John's School, Gartside Street; the Catholic Free-school, Lloyd Street; the New Jerusalem School, Irwell Street, Salford; the Ladies' Jubilee School, Strongways Park; the National School, Gennwy Row; the National School, Bolton Street, Salford; the Lancasterian School, Marshall Street; and the Infant School, Saville Street, Chorlton Row. There are also a number of Sunday schools.

The establishments for ameliorating the condition of the sick and poor are in extent commensurate with the population and casualties incident to the working class of a great manufacturing town: the Royal General Manchester Infirmary and Dispensary, the first in consequence, was built in 1753; it is now closed with stone. The Lunatic Asylum, which was established in 1765, is also closed with stone, and with the fine sheet of water extending along the entire foreground of the edifices, presents an appearance of very considerable beauty. The House of Recovery, or Fever Hospital, has existed since 1794; the Lying-in Hospital was instituted in 1790; the Strangers' Friend Society, in 1791; an Institution for the Cure of Diseases of the Eye, in 1815; the Lock Hospital, in 1819; and the Female Penitentiary, in 1822. The school for the Deaf and Dumb, was established in 1821. There are generally about fifty boarded and boardable children of either sex received in this institution. Dispensaries for the relief of the indigent sick, are established in the several adjacent townships. Manchester and Salford are rich in public charities: the annual income of the borough-revee's charities is £2,392, 18s. Id.; and other charities, distributed by various trustees, amount to £1,631, 13s. 6d. One of the effects of these charities is to diminish the pressure of the poor rates upon the inhabitants. The institutions for the promotion of literature, science, and the fine arts, are the Literary and Philosophical Society and Manchester Society for the Promotion of Natural History, with a museum of considerable value; an Agricultural Society; the Floral and Horticultural Society; the Royal Botanical Gardens, in the Stratford road, which presents attractions of the most superior order to the botanist generally; and the Royal Manchester Institution, a superb building, in Mosley Street. The last named was erected from a design by Mr Barry, of London, in the Grecian style of architecture. The libraries in Manchester are exceedingly well furnished with works of ancient and modern literature, periodicals, &c.; the principal of these establishments, after the College library, is the Portico, in Mosley Street, with a news-room—a spacious and elegant edifice, of the Ionic order, completed in 1805. The Mechanics' Institute, in Cooper Street, is very flourishing, and, since its commencement in 1826, has been progressively increasing its usefulness; the Natural History and Philosophical Hall of Science, in Pool Street, is an establishment that promises to rival its sister institution.

The principal places of public amusement consist of the Theatre, in Fountain Street, called the Theatre-Royal, erected in 1800; the Queen's Theatre, in Spring Gardens, originally built in 1753; the Assembly and Billiard Rooms, in Mosley Street, in 1792; and the New Concert Hall, in St Peter's Square. The public baths, at the Infirmary and Lying-in Hospital, at once afford relaxation, and conduct to health. The Races, which were established in 1730, and held on Kersal Moor, continue for three days, in Whitsun-week: at these periods immense numbers are collected together, and a great portion of the population of Manchester and the surrounding country may be said to be assembled at one place during this annual carnival.

**Trade and Manufactures.** About the year 1838, the manufacture of a kind of woollen cloth, made from the fleece in an unprepared state, was introduced into Manchester, and from that period till the introduction of cotton, the town distinguished itself by its woollen and linen fabrics. It was not till about 1750, that the cotton trade assumed any very high degree of importance. In 1700 manufactured goods, which had, until then, been mainly consumed at home, found a market on the continents of Europe and America; and shortly after the picking peg was invented by Mr John Kay. In 1806 the power-loom (originally invented by the Rev. Mr Cartwright), first introduced into Manchester by Mr Grimshaw, was again tried with ultimate success. In 1781, two years before Arkwright's machinery for carding and spinning cotton by steam was introduced here, the quantity of cotton wool imported amounted only to 5,198,778 lbs.; but the successive inventions of Higgs, Hargrave, Arkwright, Crompton and Watt, so rapidly facilitated the manufacture, that its extent has been increased more than thirty-fold. In 1800 the quantity of cotton wool imported into this country was 56,010,732 lbs.; in 1810 it amounted to 132,488,935 lbs.; in 1820 the weight was 144,816,100 lbs.; in 1825 it had increased to 160,773,863 lbs.; in 1830 it was 223,682,014 lbs.; in 1832, 283,000,000 lbs.; and the duty in the same year £600,000. The total quantity of cotton yarn spun in England, in the year 1832, was 222,566,907 lbs. About four-fifths of the whole amount of the cotton trade of the kingdom centres in Lancashire; and it is calculated that the
MANCHESTER—MANCO CAPAC.

658

capital employed in that county in this trade alone, in buildings and machinery, exceeds £8,000,000. In 1825 there were, in the parish of Manchester alone, upwards of 20,000 steam-looms in motion; and the number has increased since that year. In the same year there were, in the townships of Manchester, Chorlton-on-Medlock, Ardwick, Salford, Pendleton, and Hulme, 104 spinning factories, worked by 110 steam-engines of the aggregate power of 3,598 horses; and, in addition to those engines used in spinning cotton, there were 102 others, of 1,277 horsepower, applied to other purposes of trade and manufacture, within the same limits. At the present period, the number of factories has increased to above 120, the aggregate power exercised in which is nearly equal to five thousand horses; furnishing employment to between thirty and forty thousand persons. Although the spinning and manufacture of cotton, and the production of various fabrics from that article, may be considered as the principal branches of trade in this town, yet it must not be inferred that the woollen, linen, and silk trades are insconsiderable. The latter branch has, within a very few years, wonderfully increased; establishments of the first magnitude are continually springing up; and the goods produced are the textures, wrought from this beautiful material, by the genius and persevering industry of the Manchester artisan, that the looms of Spitalfields and France are rivalled by those of this town. There are also extensive bleaching grounds and works for printing and dyeing, and for every other department of the manufacture. Besides the great extent of business transacted in the articles before named, Manchester has long been conspicuous in the manufacture of hats; what are called London hats are chiefly made in this neighbourhood—some of the finer sorts being finished in the metropolis. The making of umbrellas, and a great variety of articles embraced under the denomination of Manchester smallwares, employ many hands, and a considerable capital. The iron foundries are of great magnitude; machine-making is executed here to an extent commensurate with the vast demand for this species of manufacture: the number of steam engines employed in these branches approximates the hundred, and the aggregate power of nearly two thousand horses. Many chemical works are on a large scale; and in the vicinity are mills for the manufacture of paper, from the coarsest kind, for packages, to the finest quality for writing, and printing.

Civil Government. The government of the town is vested in a boroughreeve and two constables; the chief business of the first of these is to preside at public meetings,—the judicial functions connected with the police being executed by the constables and their deputies. The municipal government of Salford is also confided to a boroughreeve and two constables. A court leet, under the jurisdiction of the lord of the manor, as at Easter and Michaelmas; at the latter period the boroughreeve and other officers are appointed. A court baron is held every third Wednesday, for the recovery of debts and damages under 40s; and a court of requests, for the parish of Manchester, every second Wednesday, for the recovery of debts under £5. In addition to these, there are held in the court for the hundred of Salford, every third Thursday, of which the Earl of Sefton is the steward; and the King's leets and courts of record twice a year. The county court is also now held in Manchester once a month, wherein debts to the amount of £10 may be recovered. A county court baron is appointed by government, with a salary of £1,000 a year, sits every day (Sunday excepted) in the court-room of the New Bailey, for the administration of justice, in which he is generally assisted by one or more magistrates. The sessions are held every six weeks, before a barrister, in the commission of the peace, who is chairman, and for which he is paid by the hundred of Salford, £50 a year. The parochial concerns of this township are enormous; such might be expected from its great working population, relying upon the success or declination of the manufactures, which, however generally prosperous, still are subject to adverse fluctuation.

Population. The population of Manchester and Salford, with their suburbs, and of the entire parish of Manchester, according to the returns made by order of parliament in the years 1801, 1811, 1821, and 1831, was as follows:

<table>
<thead>
<tr>
<th>Population of Manchester and Salford, with their immediate Suburbs.</th>
<th>1801</th>
<th>1811</th>
<th>1821</th>
<th>1831</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manchester</td>
<td>76,169</td>
<td>79,459</td>
<td>108,016</td>
<td>142,036</td>
</tr>
<tr>
<td>Salford</td>
<td>15,011</td>
<td>16,114</td>
<td>20,729</td>
<td>26,793</td>
</tr>
<tr>
<td>Chorlton-on-Medlock</td>
<td>675</td>
<td>2,581</td>
<td>8,009</td>
<td>20,560</td>
</tr>
<tr>
<td>Ardwick</td>
<td>1,077</td>
<td>3,031</td>
<td>4,234</td>
<td>6,564</td>
</tr>
<tr>
<td>Cheetham</td>
<td>1,782</td>
<td>2,555</td>
<td>3,152</td>
<td>4,754</td>
</tr>
<tr>
<td>Broughton</td>
<td>724</td>
<td>1,170</td>
<td>2,027</td>
<td>4,025</td>
</tr>
<tr>
<td>Pendleton</td>
<td>987</td>
<td>810</td>
<td>880</td>
<td>1,395</td>
</tr>
<tr>
<td>Total</td>
<td>93,263</td>
<td>115,739</td>
<td>158,631</td>
<td>237,573</td>
</tr>
<tr>
<td>Population of other Chapurries and Townships, in the parish of Manchester, not included in the above.</td>
<td>22,373</td>
<td>37,377</td>
<td>51,248</td>
<td>45,830</td>
</tr>
<tr>
<td>Grand total of the parish of Manchester, including Pendleton</td>
<td>115,941</td>
<td>153,116</td>
<td>209,879</td>
<td>283,403</td>
</tr>
</tbody>
</table>

MANCHEEL (hippopomane mancenicuia); a West Indian tree, celebrated for the poisonous qualities of the milky juice which abounds in every part of it. When a drop of the juice is applied to the skin, it causes the same sensation as a burning coal, and quickly produces a vesicle. The Indians use it for poisoning the points of their arrows, which preserve their venom for a long time. The workmen employed in felling these trees, first build a fire round the trunks, in order to make the juice evaporate, and burn with a flame; but, notwithstanding these precautions, they are subject to be incommoded with the dust. The accounts, however, which represent it as dangerous to sleep in the shade, or to come in contact with the rain which has fallen upon this tree, are highly exaggerated. The inhabitants of Martinique formerly burned entire forests of the manchineel, in order to free their dwellings from its presence. This tree belongs to the natural family euphorbiaceae; the leaves are alternate, ovate, serrate, and shining; the fruit has the form, colour, and scent of a small apple, and contains a nut about as large as a chestnut. It is said that drinking copiously of sea-water is the best remedy, when a man has been swallowed. It grows in the West Indies, and other parts of tropical America, in the immediate vicinity of the ocean.

MANCO CAPAC, legislator and first inca of the Peruvians, was the twelfth in ascent from the inca who reigned at the time when the Spaniards first arrived in 1522, an interval computed by the natives at about 400 years. Their tradition was, that this person, with Manco Oella his wife, and sister, appeared suddenly in an island of the lake Titicaca, and declared themselves to be children of the sun, sent down to civilize and instruct them. Manco accordingly taught the natives agriculture, appointed officers to run the government, and instructed the women to spin and weave. He taught the Peruvians to revere internally, as the highest and
MANDAMUS—MANDINGOES.

Mandate was also the name given to a certain kind of paper-money in the French revolution. After the assigns, which had been kept in circulation by force of violence, an assignat was issued, and new money was created—the mandates,—founded, like the assigns, on the credit derived from the confiscated property, but with the essential difference, that specific pieces of property, enumerated in a table, were pledged for the redemption of the bills, whilst the assignats merely represented money. The mandates could be realized at any moment, as the owner was authorized to take any portion of the property enumerated on the table, as soon as he made his intention known, and paid the quarter part of its assigned value without any further formality. First 600,000,000 of mandates were created, but soon after (March 18, 1796), 2,400,000,000. A forced circulation was given to them, by which the government was enabled to defy the expenses of the approaching campaign. This was hardly done, when they also sank to nothing; they were, therefore, in part redeemed, while the rest disappeared of themselves. France owed France seven hundred millions. France owed her deliverance to this measure. The evil carried along with its excess its cure.

MANDEVILLE, Sir John, a celebrated English traveller of the fourteenth century, was born at St Alban's. He was of a respectable family, and bred a physician; but he decided to visit foreign countries and induced him in 1325, to set out upon a series of travels, in which he is said to have spent thirty-four years. During this period, according to his own account, he visited the greater part of Asia, Egypt, and Libya, making himself acquainted with many languages, and collecting a great mass of information, true and false, which he committed to writing in Latin, French, and English. He died at Liege, in 1372, where a monument is erected to his memory, the inscription on which denotes him John de Mandeville, aita De Barba, Lord of Campoli. The only genuine edition of his travels, entitled the Fable and Travail of Sir John Mandeville, Knight, was printed from an original manuscript in the Cotton library (1727, 8vo). His extreme credulity in the collection of absurd and fabulous stories is only surpassed by his unblushing indulgence in the most extravagant fictions.

MANDEVILLE, Bernard, a writer and physician of considerable pretensions to the temper of celebrity, was born in Holland about 1670. He was probably of English extraction, as he fixed his residence in England, and wrote his works in the English language. His most celebrated production is the Fable of the Bees, or Private Vices made Public Benefits, first printed in 1723. The reasoning in this piece is founded on the sophism, that the luxury and superfluity which mark the advanced stages of society, and the vices which they engender, are often the causes of national prosperity, and hence the necessary prevalence of vicious principles in human nature. Consistently with this doctrine, his general views of mankind are of the most disparaging tendency; and he declares that nothing short of illiterate attempts to exalt the humble classes by education. Many answers appeared, among which was one by bishop Berkeley, to whom he replied in 1723, in his Letter to Dion. His Free Thoughts on Religion (1728), was deemed decisive. He also wrote several other works. He died 1733.

MANDINGOES; a nation of negroes found in different parts of Western Africa, in Senegambia and Guinea. They are of the Mohammedan religion, and their language is, in some measure, the commercial language of Western Africa. They are superior to the rest of the Africans with civilization. The following cut represents their costume: 272
MANDOLA—MANEGE.

MANDOLA, or MANDOLINE; an instrument, the name of which is much more musical than its tones. The Italian name is mandola, mandorla. It has four strings, belongs to the lute and guitar species, and is played with a quill as well as with the finger. There are also instruments of this kind with six or more strings, which, therefore, approach nearer to the nature of the lute. It is chiefly used in Italy, and is pleasing when it accompanies the easy song of the country people. The strings are of steel or brass.

MANDRAGORA and MANDRAKE; a name given by the ancients to a root which grew cleft into two parts, and resembled the human form. Hence miraculous powers were attributed to it, and the herb it produced was called circaeum. According to Josephus (Antiquit., book viii. chap. 2), Solomon had such a plant, which drove away demons. Pliny, in his Natural History (lib. 25, cap. 12) directs how it should be dug up; and Josephus, who called it bararar, states something similar. This root was supposed to have a double sex, and to make prolific; hence commentators on the Bible have conjectured that it was the fruit which Rachel desired of Leah.

MANDSHURES, or MANTCHOOS. Two nations, the Mandshures and Tunguses, whose common origin is proved by their traditions, their language, and their physical conformation, belong to the Mandshure race, which wanders over the vast deserts in the east of Siberia and north of Mongolia. They were known in the earliest times under the name of the Kins, or Nuitshes. From A. D. 926 they were tributary to the Khitans, and dwelt to the north of Corea, in Eastern Tartary, as far as to the Eastern sea, and the Amour. In 1114, they revolted under Oktai, against the Khitans, and, in 1118, established the kingdom of Kin, in Chinn, which was called from the founder of the dynasty. In 1125, Tai-tsong overthrew the kingdom of the Khitans, in the north of China; he then attacked the Song, who had called him in to their assistance, compelled Wey-tsong to cede to him a part of China, and deprived his successor of the remainder of northern China, leaving him only the southern part of the country. The Mongols, hitherto vassals of the Kins, revolted under the successor of Tai-tsong, and compelled the latter to cede to them a part of their territory. In 1208, Genghis-Khan refused the payment of tribute; in 1212 and 1213, entirely defeated the Kins, threw off the yoke, and made the Kins themselves his tributaries. In 1215, Ning-tsong, sovereign of China, of the dynasty of Song, refused to pay the tribute. In 1221, the Kins were deprived of their territory, by Genghis-Khan. In 1230, Oktai continued the war, and reduced the kingdom under Gualtsaour. After the expulsion of the Kins from China, they first reappeared in 1556 under the name of the Mantchoos. They found reception in Lea-Tung, between Shaarra-Mongolia and Corea; but, in 1616, they invaded China under Tienming, and made extensive conquests. To increase the confusion, the rebel Li excited an insurrection, attacked the emperor Wey-tsong, in 1643, and defeated him. The emperor hanged himself, and thus put an end to the dynasty of Ming, the last family of native princes in China. A reconciliation was now effected with the Mantchoos. Tsutai drove Li out of Pekin, but died in the midst of his conquests, which were completed by his son, in 1644, since which period the Mantchoos have been the sovereigns of China. There are at present no Mantchoos within the Russian territory; a part of them, when the Russians came to Siberia, left their possessions in East Siberia, extending from lake Baikal to the Mongolian mountains, and along the river Amour, and withdrew to the Amour and China; those who remained, and submitted to the Russian government, fell under the jurisdiction of China, by the treaty of Nerchinsk, by which Russia gave up all the Amour and the Mantchoos, who were its subjects; and the Mantchoos, who now form the boundary of the country inhabited by the Tunguses, part of whom are tributary to China, part to Russia, and part are independent.

MANE. See Hair.

MANEGE, or MANAGE, is used to denote the art of breaking and riding horses, or the place set apart for equestrian exercises. It is borrowed from the French, who derive it from the Italian maneg-gio. Some writers derive it from the Latin, a manus agendo. Most horses are, by nature, extremely de- cile, and, when proper means are used with them, they are very well disposed to obey their masters. These ought, therefore, to endeavour, from the commencement, to acquire the confidence of the animal, by kind and gentle treatment, and by avoiding all unnecessary severity. Some horses, indeed, are naturally vicious or obstinate, and must be occasionally punished; but the chastisement should be inflicted with discretion and severity, for severity has been sometimes mistaken for vice, and many horses, not naturally vicious, have been rendered so by severity and injudicious treatment. A horse's education may commence between the ages of two and three years, and will greatly facilitate future operations, if he has been housed during the winter. About this age, a halter or cavesson (a nose-band) should be put upon the foal, that he may become familiar with it. The groom, too, when he cleans the animal, should lift each of his feet, and strike them gently with a piece of wood or a hammer, after which he will readily submit to be shod when necessary. Next, before feeding, the groom should sit on a saddle on the back of the foal, and remove it again with great caution. After a while, the girth may be bound over the saddle, and the foal left to stand and feed. Every thing should be taught gradually and gently, to avoid the danger of rendering the animal timid or vicious. The horse should not be made to run a hard course of two or three miles, held in the hand, a nose-band being put on his nose, and a man following him, if necessary, with a long whip. This exercise should be performed with great gentleness, and but little at a time, that the horse may not be fatigued, stumped, or discouraged. After he has acquired a little confidence, and can be led by the nose, he may be mounted. Only a trench or snaffle and cavesson should be used at first. The bit and bridle
should not be introduced till the horse has been taught to carry his head high, and is free in his motions. A fine carriage is to be given to the horse by bringing his head in such a position as to form a perpendicular line from his forehead to his nose, after the head is raised and the neck stretched. It must be brought inwards by pulling the inward rein gently and by degrees, and crossing the outward rein a little over, whereby he acquires the most beautiful position, and is better able to go through his exercises. The natural positions of a horse are a walk, a trot, and a gallop. A horse in a walk does not unite by himself, add an amble, in a walk, a horse lifts two legs on a side one after the other, beginning with the hind leg first; in an amble, two legs on a side at the same time; in a trot, two at the same time, and keeps two on the ground crosswise. In galloping straight forward, the horse may lead with either fore leg, but unless the hind leg on the same side follows it, the legs are said to be disunited; in this pace, all four legs are off the ground at the same time. In galloping in a circle, the innermost fore leg should lead, or he is said to gallop false. The canter or hand gallop is not considered as a natural pace: it is an easier gallop; the hind legs go into the track, and the arms restrain the speed. When the horse has learned to go forward freely, he should be exercised for some time in the manner above pointed out, first at a walk, and then at a trot. The trot is to render him supple in the shoulders, and to make him go with a free, united, and determined action, for which no pace is so well adapted. A horse light in hand should be put to the extended trot. When he goes freely, he should be brought together by degrees, until he bends his legs, and goes unitedly and equally. If, when kept together, he slackens his pace, push him forward, still keeping him gently in hand. If he is heavy in hand, he must be thrown back on his haunches, to shorten his steps and collect his strength. He must not be suffered to sink his neck, and poke out his nose. When he has been brought up into a proper position, he should be made still more supple in the shoulders, by the lesson of the épaupe en dedans, which is, perhaps, the most important lesson of any. To bring the horse into the épaupe en dedans, the rider should have his leg on the horse's side, the horse being in a straight line, the legs of the neck must be procured in the manner formerly described. When he has been ridden in this position till he goes with perfect steadiness and freedom, the rider should walk him forwards to the right, and endeavour, almost imperceptibly, to place him so that they go through a kind of a walk, while the fore feet come out about a foot and a half forwards, towards the centre. This must be effected by crossing the outward rein, in the right hand, to- wards the left, a little backwards, which compels the horse to bring the right shoulder forwards, and to cross the inward leg over the outward. The rider should also press his right leg to the horse's side, which brings in his shoulders. The same crossing should afterwards be effected in the hinder legs, by bringing in the fore legs, &c. In every exercise, the rider should avoid all unsettled motion, and wriggling with the legs. Every thing should be easy, and his legs with perfect touch. If he is not, perhaps, be taught to back. When the rider stops, he should back a few paces, and then put the horse forwards by little at a time. In backing, if he attempts to rear, pull him out immediately into a full trot. When the horse has been sufficiently practised in the épaupe en dedans, he should be made to traverse a passage with his head to the wall and with his crump to the wall. The motion of his legs in passing to the right, is the same with that of the épaupe en dedans to the left, and so vice versa, but the head is sometimes kept out in this in a little more, in the épaupe en dedans, the horse looks the contrary way to that which he goes; in passing, he looks the same way as he is going. The directions for executing this lesson are similar to those of the épaupe en dedans. The equilibrium of the rider's body is perfectly necessary. It is said that the legs of the plumes have been well practised with the trench or snaffle. Horses should be taught to leap by degrees, beginning with small leaps. The rider must keep his body back, raise his hand a little, to help up the fore parts of the horse, and be very attentive to his balance, without raising himself in the saddle, or moving his arms. Horses should first leap standing, then walking, then trotting, then galloping. A low bar, covered with furze, is best to begin with, as it pricks the legs of the horse if he does not raise himself sufficiently, and prevents him from acquiring the dangerous habit of touching the bars or tricks, and to bear the sound of drums and other noises, they should be first accustomed to them in the stable at feeding time. All other things necessary to make a horse steady may be easily taught by good judgment, patience, and gentleness. Of all bad tempers and qualities in horses, those which are occasioned by ignorant riders and harsh treatment, are the most common and the worst. For mounting, &c. see Horsemanship.

MANELLI, PIETRO; a comic singer, who, about the year 1750, went at the head of a company of Italian singers to Paris, and gained the public favour by his comic talent. A warm dispute arose between the favourers of the modern Italian music and the old French style. The parties were called buffonists and antibuffonists. The chiefs of the parties were Grimmel and Rousselle. The Italian music was victorious.

MANES, among the Romans; the souls of the dead. The good spirits were also called lares, and the evil larves. Some regarded them as the good and evil genii, which attend men through life. The manes were reckoned among the infernal gods; but a belief was prevalent, that they sometimes appeared upon the earth in the form of ghosts, particularly on the 30th of August, 4th of October, and 7th of November; whence the Romans considered these unlucky days. The belief of the Romans that the spirits of the departed had an important influence on the good or bad fortune of the living, especially of those with whom they had been formerly connected, produced a general fear of them, and made people very cautious of offending them. As they were supposed to persecute those who disturbed their remains, tombs were held sacred, and victims (inferior) and libations offered to the manes. When it was not known whether a corpse had been buried or not, a cenotaph was erected, and the manes were solemnly invited to rest there, from fear that otherwise they would wander about the world, terrifying the living, and seeking the body of the dead which they should not; or, it was also supposed that they delighted in blood; various animals were, therefore, slain upon the funeral piles,—particularly those of which the deceased had been fond during his life,—and burned with the body.

MANESSE, RUDIGER VON; a native of Zurich, who, in 1336, when the aristocrats of his city, expelled by the burgomster Bruns, threatened to return with the support of Austria, received the chief command from his fellow-citizens, was victorious, and saved the
liberty of Zurich. After the death of Bruno, he was chosen by therector. He was a lover of poetry, and
formed a collection of 140 love-songs, called after
him the Manesse collection. It remained until the
beginning of the seventeenth century in Switzerland,
but was carried off, and, during the thirty years' war,
found its way to Paris, where it was discovered, in
1727, by Ch. B. Bartellein. Part of the manu-
script was published in 1748 (2 vols., Zurich); in
1758, and 1759, complete, by Bodmer and Breitinger.
It is important in the history of German literature.

MANETHO; an ancient Egyptian historian, who
was a high priest of Heliopolis, in the reign of Ptolemy
Philadelphus, about 304 B. C. He wrote in Greek a
history of Egypt, Bologna, at the beginning of the
years of Nectanebus, and pretended that he had taken
it from the sacred pillars of the first Hermes Trisme-
gistus; the inscriptions on which, after the flood, were
translated into Greek, but written in the sacred char-
acters, and deposited in the sacred recesses of Egypt.
The manifest absurdity of this pretension induces
several writers to think, that some mistake or cor-
cussion has taken place in the passage of Eusebius
which relates it. The work of Manetho, which is
lost, consisted of three parts, the first of which con-
tained the history of the gods or heroes, and the
second and third that of twenty dynasties of kings,
which he classified and divided into four parts. They
are recorded by Eusebius. Several fragments of
Manetho are preserved by Josephus, in his work
against Apion. See Schede and Hieroglyphica.

MANFREDI, ESTACHIO; an eminent mathemat-
ician and astronomer, born in 1674, at Bologna, in
Italy. He applied himself to the cultivation of ma-
thematical science, and, in 1698, was appointed pro-
fessor of mathematics in the university of Bologna.
In conjunction with V. Stancari, he commenced a
series of astronomical observations, of which he
afterwards published an account in his Schede Mathe-
matice. In 1700 appeared his treatise on the Solar
Maelw; and the following year he was chosen rector
of the college of Montalto, and also surveyor-general
of the rivers and waters of the Bolognese territories.
In 1705, he published a work on the Reformation
of the Calendar; and he afterwards began the composi-
tion of his Ephemerides Motaum coelestium, which he
published in parts from 1715 to 1750. He was asso-
ciated with the institute of Bologna, in 1712, Manfredi
was appointed astronomer to that establishment. He
was admitted an associate of the royal academy of sciences
at Paris, and, in 1729, a foreign member of the royal
society of London. He died in 1739. Besides the
works already noticed, he was the author of other
mathematical and astronomical productions; and
after his death, appeared a volume of his poems.

MANGANESE, in the condition of an ore, had
been used in certain arts, before its nature, as a dis-
tinct metal, was known. Scheele and Bergman, from
an examination of this ore, inferred that it chiefly con-
sisted of the oxide of a metal. To obtain the metal,
the ore is reduced by means of a reducing agent, and
the oxide of iron in the solution precipitated by ammonia,
and the solution itself evaporated to dryness; the residuum,
after heating to expel the muriate of ammonia, is pure
oxide of manganese, which is made into a paste, with
a small quantity of oil and charcoal, and exposed, in
a closed vessel, to the action of heat, in a furnace
nearly resembling a wind-furnace; the result of the process is the man-
ganese in the metallic form. Hydrogen gas, passed
over the heated oxide, will also reduce it. The metal
is of a white colour, with a shade of gray, having a
moderate lustre, which tarnishes, however, on expo-
sure to the air. The texture is granular; it is brittle
and hard; specific gravity, 8.1; heated to red heat,
chlorine, it takes fire, and forms an oxide or chlorid.
The oxides of manganese have exercised the skill of
many chemists. They are hardly yet determined beyond controversy. Three, most probably four, well defined
oxides may be obtained; and some intermediate
oxides, compounded of these, exist in nature. The
protioxide is best obtained by transmitting hydrogen
gas over the deutoxide, peroxide, or carbonate of
manganese, ignited by a spirit-lamp, in a glass retort.
It is permitted to work in the open air, but, when heated to 600° Fahr., it absorbs oxygen very rapidly, and, at a low
red heat, it passes from its green colour, almost
instantaneously, into black. It consists of mangle-
se 76.82, and oxygen 23.18. It is the basis of all
the proper salts of manganese, which, when pure,
are colourless. The deutoxide is prepared by expos-
ing the nitrate or peroxide of manganese, for a con-
siderable time, to dull ignition. It is found native in
the mineraloid manganese ore (grey oxide of mangle-
se), and consists of 70 metal and 30 oxygen. When
heated with sulphuric acid, oxygen gas is
extricated with effervescence, and a protosulphate
results. The perioxide exists native and crystallized
in perfect purity. It may be artificially prepared, by
heating the dry proto-nitrate till a uniform black
mass be formed, which must be pulverized, washed
while hot with strong nitric acid, and again gently
calcinated with constant stirring. It contains twice as
much oxygen as the previous peroxide. It is
formed by exposing the nitrate, or peroxide of mangle-
se, to a white heat, out of the influence of smoky
vapours. It has a brownish-red colour when cold, and
is nearly black while warm. It consists of two
proportionals of the protioxide, and one of the per-
oxide. It dissolves, in small quantity, in dilute sul-
phuric acid, without disengagement of oxygen gas,
forming an amethyst-red liquid. On heating this
solution, or dilute sulphuric acid, or the red oxide,
oxygen is evolved, the colour disappears, and a proto-
sulphate remains. Strong muriatic acid dissolves
the red oxide into a coloured solution, which exaltes
chlorine, and gradually passes into a colourless proto-
muriate. A compound, possessing very singular
properties, as respects the colours to which it gives
rise when in solution, and which, from this circum-
stance, has received the fanciful name of the mineral
clamcheleon, is formed by fusing together the native
black oxide and a small quantity of potash. The
solution is blue, which, on being dissolved in water, communi-
cates to it a greenish-blue colour. The solution,
standing a little time exposed to the air, lets fall the
oxide of iron which it contains, and the colour
becomes blue; and, on the addition of warm water,
or an acid, the solution assumes a violet colour, from
which it soon passes to red, brown, black, and lastly
becomes colourless. When the colour of the solution is
bluish-green, the manganese is believed to be
united with the alkali, in the condition of mangan-
eseous acid; and when it is red, the manganese is
supposed to be in the state of manganous acid.
The manganous acid is, according to this view, a
very easy of decomposition, and it is represented with potash.
It forms a submanganese; and whenever the potash
is saturated, or its action weakened, the manganous
acid is decomposed into deutoxide of manganese
and manganous acid; hence the changes of the
solution. According to the experiments of Frommherz.
the manganese oxide is an acid, and tastes sweetish at first, but afterwards bitter and astrigent, and is destitute of smell. When heated
with care, it volatilizes. It is decomposed by a current of hydrogen gas, the hydrogen acids, carbonate of sul-
phur, the metals, and all organic substances. The salts
of manganese are usually prepared by fusing the
oxide. They are all of them volatile, and exhibit a strong affinity to the protioxide, expel the excess of oxygen, especially
MANGANESE.

The principal salt is the sublimate of manganese, which may be thus prepared: the acid acts very slowly on the metal itself; if diluted, however, it acts more quickly, hydrogen gas being disengaged of a fetid smell. When concentrated, it is of a rose colour; when obtained neutral, it affords on evaporation, granular crystals of a reddish colour, transparent and soluble. Its taste is styptic and bitter, and it is very soluble in hot water. 

Nitrate of manganese may be formed from the carbonate. It is very soluble in water, and may also be formed by making the acid act on a mixture of peroxide of manganese and sugar or gum; the vegetable substance serving to reduce the manganese to a minimum of oxidation, while much carbonic acid is evolved. The muriatic acid is equally incapable of combining directly with the black oxide, but according to the usual law, it de-oxidizes it: one part of the muriatic acid is decomposed; its hydrogen combines with the excess of oxygen of the black oxide, to form water; the chlorine, the other element of this portion of the acid, is evolved; and the rest of the muriatic acid unites with the unite oxide of manganese, to form the muriate. The solution of muriate of manganese is of a rose colour when concentrated, and affords, by evaporation, small crystals of a pale rose colour, which are four-sided tables; they are deliquescent, very soluble in water, and, by a red-heat, are converted into a red chloride. Carbonate and phosphate of manganese may be formed by double decomposition, being thrown down in the state of insoluble precipitates. The salts of manganese suffer decomposition from the alkalies, which precipitate the oxide: they are not decomposed, however, by the inflammables, or the other metals, which is a proof of the affinity of manganese to oxygen. Oxide of manganese combines with those earths capable of vitrification, and with their compounds, and communicates to the glasses which they form a violet tinge; it imparts the same colour, also, to borax, and other vitrifiable silicates. When heated with those oxides, by the blow-pipe, the colour soon disappears in the interior flame, from de-oxidation, but appears again if a little nitre is added. Sulphuret of manganese was obtained by Berthier, by heating the sulphate in a charcoal crucible; it was of a grey colour and crystalline appearance. Manganese, from its instability, does not combine readily with many of the metals. It shows, however, considerable affinity to iron, occurring frequently combined with it in nature. It is contained, also, in those ores of iron which are best adapted to the fabrication of steel, and is supposed to improve the quality of steel. Gold and iron are rendered more fusible by a due addition of manganese; and the latter metal is rendered more ductile. Copper becomes less fusible, and is rendered whiter, but of a colour subject to tarnish. Manganese is applied to no use in its metallic form. The black oxide is employed by the chemist in preparing oxygen and chlorine gases. It has long been used in the art of glass-making, to counteract the green tinge communicated by the iron contained in the materials—an effect which it produces by yielding oxygen to the oxide of iron, and bringing it to a high degree of oxidation; in a larger quantity added to glass, it gives a purple or blue colour. It is also used to give a black colour to glassware.

Ores of Manganese. 1. Gray manganese ore is found in prismatic crystals, whose primary form may be considered as a right rhombic prism of 100° and 80°. It also cleaves parallel with both the diagonals of this prism. The crystals are usually slender and much striated, longitudinally. Fracture uneven; lustre metallic; colour dark steel-gray to iron-black; streak brownish-black; opaque; brittle; hardness about that of limestone; specific gravity, 4.626; it also occurs in twin crystals, in reniform, botryoidal, and other imitative shapes, with a surface generally rough and dusty; composition columnar, of various sizes of individuals, often forming a second granular composition. In the massive varieties, the granular or columnar composition often becomes impalpable, in which cases the fracture is earthy. Gray manganese ore has been divided into several sub-species, chiefly in consequence of its mechanical composition. Radiated grey, it more resembles a red or reed-like prism, or reed-like prisms, and such massive varieties as consist of columnar particles of composition, while the foliated one refers to small prisms and granular compositions. Compact grey manganese ore contains varieties composed of impalpable granular individuals, and earthy gray manganese ore, such as have lost their coherence, and appear in the state of an earthy powder. The composition of some varieties belonging to this species, has been found by Klaproth to be—

Black oxide of manganese, 98.50  89.90 
Oxide of manganese, 2.50  86.00 
Water, 7.00  20

It is insufﬁble before the blow-pipe, and colours glass of borax violet blue. It is insoluble in nitric acid. In heated sulphuric acid, it disengages oxygen; and chlorine is evolved, if it is brought into contact with muriatic acid; also, before the blow-pipe, or alone in a strong heat, it gives out oxygen. The grey manganese ore frequently accompanies the haematitic iron ores; and sometimes its earthy and compact varieties constitute beds by themselves. It also occurs in veins, particularly in porphyry, along with sulphate of barytes. Its most celebrated localities are Hildelich in the Hartz, and Öhrestock in Thueringia. It has numerous localities also in Saxony, Bohemia, Hungary, France, and Britain. It has been observed in many of the American states; but occurs most abundantly in Vermont, at Bennington and Monkton, accompanied with haematite and uncleanable manganese ore. The blow-pipe blow colour-seen on the blow-pipe, and the blow-pipe, and the blow-pipe blow-colour-seen on the blow-pipe, and the blow-pipe, and follows a second granular composition. Black mud deserves to be mentioned under this species, as a very remarkable substance among those which contain manganese. It occurs in reniform, botryoidal, fruticose, and arborescent shapes, in froth-like coatings, on other minerals, or massive. Its composition is generally impalpable, and the fracture even or earthy. Colour brown, of various shades; opaque; very sectic; soils and stones; hardness beyond that of tale; specific gravity, 3.7; the varieties are very light, when dry; yet, as they imbibe water with violence, when immersed into it, they sink immediately. Mixed with linseed oil, it undergoes a spontaneous combustion. It consists of—

Oxide of manganese, 60.00  65.00 
Water, 17.00  18.00 
Carbon, 4.00  4.00 
Iron and other, 9.00  9.00

It has been found in the Hartz, in Devonshire, and Cornwall, in England, also at one locality in the United States, in Connecticut. The black mud is conceived to be the colouring matter in the dendritic delineations upon steatite, limestone, and other substances.

2. Pyramidal manganese ore is a rare mineral,
occurs crystallized in octahedrons, with a square base, whose pyramids are inclined to each other, at an angle of 117° 30'.

Fracture uneven; lustre imperfect metallic; color brownish-black; streak dark-red; fracture of the broken surface, hardness equal to that of apatite; specific gravity, 4.72. It also occurs massive, possessed of a granular composition.

It is probable that the variety from Piedmont, analyzed by Berzelius, belonged to this species; if so, its composition would be, oxide of manganese, 75-80; silica, 15-17; oxide of iron, 4-14; and alumine, 3-80.

In the crucible heat of the blow-pipe, it yields a fine amethyst-coloured glass. It is soluble in heated sulphuric acid. It has been found in veins, in porphyry, along with other ores of manganese, at Oehrenstock, near Ilmenau in Thuringia, and at Hillefeld in the Harz.

3. Compact manganese ore, or uncleavable manganese ore, occurs in reniform, botryoidal, and fruticose shapes, having a columnar or granular composition, sometimes impalpable. Fracture flat conchoidal, or even; lustre imperfect metallic; color bluish-black, passing into dark steel-grey; streak brownish-black; shining; opaque; brittle; hardness nearly equal to that of felspar; specific gravity, 4.11. It occurs sometimes accompanied by haematite, but generally along with other ores of manganese, in veins, in the older rocks. It is found at numerous places in Europe, and in the United States.

4. Manganese blende, or sulphuret of manganese, is one of the rarest ores of this metal, and has hitherto only been found at Nagyag in Transylvania, and in Cornwall. It is rarely crystallized, generally occurring massive, in distinct concretions. Color iron-black; lustre imperfect metallic; streak dark green; opaque; rather septic; hardness but little superior to that of calcareous spar; specific gravity, 4.014. It consists of protoxide of manganese, 85-00, and sulphur, 15-00.

Before the blow-pipe, it is melted with difficulty. If reduced to powder, and thrown into nitric, muriatic, or dilute sulphuric acid, it emits sulphuretred hydrogen, and is dissolved.

5. Phosphate of manganese occurs massive, with a cleavage in three directions, perpendicular to each other, one of which is more distinct than the rest. Fracture uneven; color even as far as it can be determined; color blackish-brown; streak yellowish-red or reddish-grey; opaque; brittle; hardness above that of apatite; specific gravity, 3.43. Before the blow-pipe, it melts easily into a black scorina; is readily dissolved in nitric acid, without effervescence, and consists of oxide of iron, 31-00; oxide of manganese, 48-00; and phosphoric acid, 21-00. It has hitherto been found only at Limoges in France, and at Washington in Connecticut.

6. Carbonate of manganese is found crystallized in rhomboids of 106° 51', and massive. Fracture uneven, imperfectly conchoidal; lustre vitreous, inclining to pearly; color various shades of rose-red, partly inclining to purple; bassoon; hardness above that of calcareous spar; specific gravity, 3.59; the massive varieties present globular and botryoidal shapes; composition granular, sometimes small, and even impalpable; it consists of oxide of manganese, 54-00; carbonate acid, 33-75; oxide of iron, 1-87; silica, 4-37; lime, 2-50. It effervesces rather briskly in nitric acid; before the blow-pipe, its color is changed into grey, brown, and black, and it decrystallizes strongly, but is fusible without addition. It is found in the Saxton mines in the neighbourhood of Friberg; also at Nagyag in Transylvania. For an account of the red and reddish-brown silicious ores of manganese, see MANCHESTER.

MANGEL-WURZEL; a kind of beet, which does not afford fodder of so good quality, nor in such abundance, as was supposed at the time of its introduction; but it is valuable from its size and hardy nature. The leaves may be eaten as a substitute for spinach, and continue in season long after that plant has withered. In some parts of Germany, the farmers prefer feeding their cattle with this vegetable, and, besides, it can be obtained at the latter part of the season, when green fodder is much wanted.

MANGO; a celebrated fruit, now produced in most of the tropical parts of the globe. It is a native of India, and was introduced into Jamaica in the year 1782. Its taste is delicious, slightly acid, and yields only to the mangosteens. The tree is allied to the sumach, and belongs to the natural order Dioscoreaceae. It attains the height of thirty or forty feet, has a rapid growth, and is very productive. The leaves are simple, alternate, lanceolate, coriaceous, smooth, and entire. The flowers are inconspicuous, reddish, and disposed in large terminal panicles. The fruit is kidney-shaped, subject, however, to a good deal of variation in size, form, and colour, and contains a large, flattened stone. More than eighty varieties of mango are cultivated, some of which are very beautiful, and diffuse a delightful perfume.

MANGROVE (Rhizophora); a genus of plants, consisting of trees or shrubs, which grow in tropical countries, along the borders of the sea, in places which are liable to be overflowed by the salt water, and are consequently protected from the influence of the sun, which they receive only in the distance of a few hours, as they are perpetually hanging down towards the earth, and, when they have reached it, take root, and produce new trunks. In this manner, immense and almost impenetrable forests are formed, which are filled with vast numbers of crabs, aquatic birds, moschettos, and also oysters, which attach themselves to the branches. The leaves are simple, opposite, and entire. The seeds are remarkable for throwing out roots, which vegetate among the branches of the trees, while yet adhering to the foot-stalk. The R. mangle is found in Florida, nearly as far north as the 30th parallel of latitude. This genus, and an allied one, form a natural family by themselves.

MANHEIM; a city of Baden, capital of the circle of the Neckar, at the confluence of the Neckar with the Rhine; thirty-four miles N. of Carlsruhe; lon. 8° 28' E.; lat. 49° 29' N.; population, 21,500. In 1606, it was chosen by the elector palatine for the site of a town, being, before, a petty village, with a castle. In 1710, it became the residence of the elector of the Palatinate and his court, and so continued till 1777. In 1802, it was annexed to Baden. It contains a very large palace, is the second residence of the grand duke, and the seat of the supreme court of appeal for the grand duchy. Manheim presents a fine view from a distance. It is divided into four quarters, and is an oval form. It is built with the greatest regularity; the streets are wide, well paved, the houses uniform and neat, and the
public buildings large and handsome; and it is one of the finest towns in Germany. It contains Lutheran, Reformed, and Catholic churches, a synagogue, and three hospitals. The palace contains a gallery of palatial antiquities, containing a library of 60,000 volumes. The observatory is a noble building, with a curious tower 108 feet high. The lyceum, or gymnasium, for the education of the upper classes, is superintended by able instructors.

MANIA; a Roman spectre, the mother of the Manes, to whom, in the most ancient times, human sacrifices were offered. Scythianus, a partial monument of this, took place as late as the time of Tarquinius Superbus. In subsequent times, onions and poppy-heads were sacrificed instead of children. Little figures, stuffed with wool, were hung outside the house, to appease the Mania; also clews of yarn, equal in number to the slaves, to protect them.

MANIA. See Mental Derangement.

MANICHEES, or MANICHŒANS. Of the founder of this sect—whom the Orientals called Mani, the fathers of the church, Manes, terming likewise his adherents Manichees—history contains two different accounts. The older account, contained in the first book of the Doctrine, is considered by some as more credible than the Arabic version of the tenth century, which makes him an accomplished magician, a skilful painter, and a Christian priest; but says nothing particularly new respecting him. According to the first account, he became, when a boy, a slave, under the name of Ochricus, to a wealthy widow in Persia, at whose house he met with the four books of Scythianus, an Egyptian enthusiast, of whom nothing more is known, which had been left by his scholar Terebinthus, or Buddas, entitled Mysteries, Chapters, Gospel (Artzeng) and Treasury. By the perusal of these books, he was led to his doctrine of the world and of spirits, framed from the dualistic ideas of the Chaldeans, together with the systems of the Gnostics. (See Gnostics.) Being left the heir of his mistress at her death, he assumed the name of Mani, and sought to rear, like Mohammed, on the foundation of these books, a new religious philosophy, for which he acquired disciples. The reputation of his wisdom caused him to be invited to the court of Sapor, king of Persia, where he was imprisoned, because the sick son of this king had died under his care. His scholars brought him information of the obstacles which Christianity had thrown in the way of his doctrines. The reading of the Holy Scriptures of the Christians, and his own were the means by which he was called to the purificatiom of Christianity from Jewish and hierarchical deformities, and to the diffusion of a mystical doctrine, unrevealed by the apostles—say, that he was the Comforter promised in the New Testament. Having escaped from prison, and collected new disciples at Arbela, a fortress on the frontiers of Mesopotamia, he sought, under the name of an apostle of Christ, and, according to the Arabic narrative, favoured by Sapor's successor, Hormizdas (Hormus), A.D. 272, to convert the Christians in those regions to his doctrines. While engaged in these endeavours, he is said to have been twice overcome by Archelaus, a Christian bishop at Kaskar (Charre) in Mesopotamia, in two disputations; to have incurred again the suspicion of the Persian court, and, in the year 277, to have been executed (according to the Christian account, flayed alive), at the command of king Varacces (Valarem). Prophecy, he is said to have predicted the advent of the god—good, the God, without form, in the kingdom of light; and one of evil—the hyle, or devil, of colossal stature and human shape, in the darkness of matter; the former strengthened by two emanations, created in the beginning, the Son and the Spirit, still superior to the latter. These, innumerable by hundreds, hundreds, composed of elements, or elementary natures, proceeding from them, which dwell in the five elements, or spheres, that rise one over the other in the kingdom of good, viz. light, clear water, clear air, enyal, and fire, and pure ether; and, in the kingdom of evil, darkness, or the corruption of fire, earth, water, or air, or smoke, from each of which proceed congenial creatures. During an internal war of the always discordant powers of darkness, the defeated party discovered, from the high mountains on the frontiers, the kingdom of light, hitherto unknown to the devil. In order to conquer it, the devil made peace with his species. The good God endeavoured to subdue his enemies by means of artifice and love. The prince of darkness, having eventually been defeated in the contest, produced the first parents of the human race. The beings engendered from this original stock consist of a body formed out of the corrupt mass of matter of evil, which is divided into two souls, one of which is sensual and lustful, and owes its existence to the evil spirit; the other, rational and immortal, a particle of the divine light, which had been carried away in the contest, by the army of darkness, and immersed into the mass of malignant matter. The earth was created by God out of this corrupt mass of matter, in order to be a dwelling for the human race, that their captive souls might, by degrees, be delivered from their corporeal prisons, and their celestial elements extracted from the gross substance in which they were involved. With this view, God produced two beings from his own substance, Christ and the Holy Ghost; for the Manicheans held a consubstantial Trinity, Christ, or the glorious intelligence, called by the Persians Mithra, subsisting in and by himself, and residing in the sun, appeared in due time among the Jews clothed with the shadowy form of a human body, to disunite the rational soul from the corrupt body, and to conquer the violence of malignant matter, and he demonstrated his divine mission by stupendous miracles. This Saviour was not man; all that the New Testament relates respecting the humanity of Jesus was merely appearance, even his death and resurrection; but his sufferings are essential to the purificatiom by fire of the sin-body of Mani, destined for the new life, necessary for corrupted men. His crucifixion, in particular, is an allegory of the torments of the soul, which is fastened to matter as to a cross. When the purposes of Christ were accomplished, he returned to his throne in the sun, appointing apostles to propagate his religion, and leaving his followers the promise of the Paraclete, or Comforter, who is Mani the Persian. Those souls who believe Jesus Christ to be the Son of God, renounce the worship of the God of the Jews, who is the prince of darkness, and obey the laws delivered by Christ, and illustrated by Mani, the Comforter, are gradually purified from the contagion of matter; and, their purification being completed, after having passed through two states of trial, by water and fire, first in the moon and then in the sun, their bodies return to their original mass (for the Manicheans derided the doctrine of the resurrection of bodies), and their souls ascend to the regions of pure light, where they have neglected the salutary work of purification, pass, after death, into the bodies of other animals, or natures, where they remain till they have accomplished their probation. Some, however, more perverse and obstinate, are consigned to a severer
course of trial, being delivered over, for a time, to the power of malignant aerial spirits, who torment them in various ways. After this, a fire shall break forth and consume the world, and the prince and powers of darkness shall return to their primitive seats of misery, in which they shall dwell for ever. Between these seats and the kingdom of light, the souls of the elect are kept kept, to watch, the both may remain as they were from the beginning.

With this system of religion, which was contained in the books of Scythianus and Mani’s own treatises, letters and apocryphal writings; but, at present, exists only in the fragments found in the ancient manuscripts of St. Augustine against the Manichees, the moral system of this sect corresponds. It divides the Manichees into two classes: the elect are to abstain from wine, flesh, and all animal food, marriage and sexual indulgences, from music, the possession of earthly goods, and all luxury, as well as from war, labour, and doing injury to the vegetable world, and even from plucking fruits; are to kill no animals but vermin, and devote their life to pious contemplation. More was allowed the auditors, or more imperfect. By their labour, they had to support themselves and the elect; in marriage, must abstain from the procreation of children, and place their happiness by virginity. These ecclesiastics had, however, merely the authority of teachers, the church government being democratically administered by the congregations. Temples, altars, images, victims, and other sensible aids of divine worship, were not allowed: their worship consisted of singing, prayers, the reading of their sacred books, and lecturing. The supper they celebrated without wine, and, like the primitive Christians, often delayed baptism to a mature age. Of the fasts and festivals of the Christians, they observed only that which commemorated the death of Jesus, and Sunday; the latter, with strict fasting. In March they celebrated the anniversary of the birth of Mani (Behnam), which day a splendid pulpit, five steps in elevation, was erected in their simple halls of assembly for Mani, present in the spirit. They claimed the title of Christians; but, notwithstanding the reputation of extraordinary purity of morals, conceded them even by their enemies, they had to suffer, after the fourth century, more cruel persecutions than other heretics. Till this time, they had spread with great rapidity from Persia, where they had their origin, through Syria and Asia Minor, to Northern Africa, and even as far as Italy. In Northern Africa, where they had many, though not numerous congregations, with separate places of prayer, were cultivated, in the fifth century, by the Vandals; in the Roman empire, especially in Italy (whither numbers of them had fled from Africa), by the persecutions of Christian emperors and episcopal excommunications. Being finally suppressed in Persia also, they took refuge, after the beginning of the 4th century, partly in the heathen regions of Eastern Asia, where they seem to have had an influence on the formation of Lamaism, partly in the obscurity of secret brotherhoods, and appeared, in subsequent centuries, under different names. The Frisullians, Paulicians, and Caesarians are in common with the Manichees; their name, was, however, given to heretical sects and societies in the middle ages, as to the Canonic, burnt at Orleans in 1022, frequently without reason, and merely to excite the popular hatred.

MANIFEST is a regular list of a ship’s cargo, containing the mark and number of each separate package, the names of the persons by whom the different parcels of goods are shipped, and those of the persons to whom they are consigned; a specification of the quantity of the goods contained in each package, as running per ten, ten, c., and an account of the freight that the captain is to receive from the consignee of such goods, on his arrival, corresponding with the bills of lading which he has already signed. The manifest is usually signed by the shipbroker, who clears the vessel out at the custom-house, and by the captain, and serves as a voucher for the latter, whereby to settle his account with his owners, &c.

MANIFESTO; a declaration publicly issued at the commencement of a war, by the contending powers, to show the causes which justify such a measure. The name is taken from the words manifestum est, &c. (it is manifest), the beginning of these declarations, as they were anciently written in Latin. Manifestoes are in the form of public letters; they commence with a short address to the public in general, and are signed with the name of the sovereign who issues them. Manifestoes on the continent, are usually written in French. They have been in use among all nations, till our own day. In France, where so many old forms have been set aside, the place of manifestoes, during the empire, was supplied by messages from the emperor to the senate, proclamations to the army, and statements in the Moniteur.

MANILUS, Marcus; a Roman poet who flourished, probably, in the Augustan age. The circumstances of his life are unknown. He is less remarkable as a poet than as being the Roman who, in imitation of Aratus, undertook a didactic poem on astronomy. Of this poem, we have but five books. It is entitled Astronomica. It is valuable chiefly as a work of science: it contains, however, a few beautiful and splendid passages, particularly in the introductions. The best editions are by Bentley (London, 1739, 4to), Stober (Strasbourg, 1767), and Pingré (Paris, 1780, 2 vols.)

MANILLA; capital of Luzon, and of all the Spanish possessions in the Philippines; lat. 14° 36' N.; lon. 110° 16' E.; population, including the suburbs, about 60,000, of which 3000 are Spaniards, 7000 Metis, 4000 Chinese, and the rest natives. (See Malaya.) Manila is beautifully situated at the bottom of a bay, on the west side of the island, and is well fortified. The streets are wide, paved, and lighted; the houses generally consist of a basement story of stone, and an upper story of wood, commonly with balconies, and windows of mother of pearl, or some other transparent substance. The principal buildings are the churches and monasteries. The chief manufactures are cigars, and a sort of transparent stuff, which the natives use for clothing. The commerce is very considerable since the port has been opened to foreigners. The chief articles of export are sugar, indigo, cotton, tobacco, rice, honey, pearls, &c.; wine, brandy, cotton, silk, and woollen manufactures, partly of the produce of the islands, partly of the imports. In 1818, nine Spanish, five French, ten American, four Portuguese, seventeen British ships, and thirteen Chinese junks, sailed from this port. Provisions are abundant and cheap. The environs are fertile and well cultivated. The climate is hot and damp. Manila has repeatedly suffered from earthquakes. Those of 1645, 1796, and 1824, were very destructive. A hurricane, in 1824, unroofed most of the houses left standing. In 1762, it was
MANIOC—Manna.

MANIOC, MANDIOCA, or CASSAVA (Gastrapha manihot); a tortuous shrub, allied to the castor-oil plant, and interesting from the nutritive qualities of the roots. It is indigenous to tropical America, and is extensively grown for its starch in Brazil, and in several countries of Asia and Africa. The stem is smooth, branching six or seven feet high; the leaves are alternate, deeply divided into from three to seven lobes, which are lanceolate, acute, and entire; the flowers are disposed in loose compound racemes, and the fruit is about the size of wheat. The fruit is almost globular, and is composed of three cells, each containing a shining seed about as large as those of the castor-oil plant. It is easily cultivated, grows rapidly, and produces abundantly. It is much less subject to the ravages of animals, or to the variations of the atmosphere, than most crops, and, besides, accommodates itself to almost every kind of soil. The roots attain the size of the thigh, and require at least a year to bring them to perfection; neither can they be kept in the ground for a longer period than two years. The cultivated varieties of the root afford more manioc will nourish more persons than six acres of wheat. Every part of the plant is filled with a milky juice, which is a very violent and dangerous poison, bringing on death in a few minutes when swallowed; and it may well excite surprise that human ingenuity should have converted the roots into an article of food. For this purpose the roots were purposely rapped with rough pieces of stone; but they are now ground in wooden mills, and the paste is put into sacks which are exposed for several hours to the action of a very heavy press. By this means it is deprived of all the poisonous juice, and the residue is called cassava. Cassava flour, when kept free from moisture, continues good for fifteen or twenty years. It is very nutritious, half a pound a day being sufficient for any one. The Creole women prefer the cassava to wheat bread, but, to a European, the taste is rather insipid. It is also the basis of several different beverages, some of which are acid, agreeable, and even nutritious. The substance called tapioca, which is frequently imported into Europe and the United States, and is used for jelly, puddings, and other culinary purposes, is separated from the fibrous parts of the roots by taking a small quantity of the paste in one hand, and working it by hand till a thick white cream appears on the surface. This, being scraped off and washed in water, gradually subsides to the bottom. After the water is poured off, the remaining moisture is dissipated by a slow fire, and the substance being constantly stirred, gradually forms into grains about as large as those of sago. This is the purest and most wholesome part of the manioc.

MANIPULATION (from the Latin); work done with the hands. The word is used in pharmacy for the preparation of drugs; in chemistry, for the preparation of substances for experiments; in animal magnetism, for the motion of the hands, by which a person is magnetised. See Magnetism, Animal.

MANIPULUS. See Legion.

MANITOU, among some tribes of the North American Indians, is the name for a magical preparation, whose virtues are somewhat like those of an elixir of life. A figure of an animal, a feather, a horn, a bird's beak, or some other object, is consecrated, with various charms, by the sorcerer, or doctor of the tribe or village, and worn by the individual for whom it is intended as his Manitou, or medicine. It seems to be not unlike the fetich (q. v.) of most barbarous people.

MANLIUS, Marcus Capitolinus; a brave, ambitious, and artful patronian and consul of Rome. The Gauls, under Brennus, had captured Rome (B. C. 300), and were besieging the Capitol. On a dark night, they determined to surprise the citadel. They had already reached the foot of the walls; the sentinels, thinking the enemy secure, had retired, and the enemy had already discovered a vulnerable point, when the garrison was awakened by the cackling of some geese, which were dedicated to Juno. All rushed to their arms; Manlius was the first who reached the place of danger. Two of the Gauls had gained entrance to the city, the third had seized his sword; and the other he thrust over with his shield. His example animated the rest. The capitol was saved, and Manlius received the surname Capitolinus. Having afterwards proposed a law to free the people from taxes, the senate was excited against him, and he was arrested and imprisoned as a disturber of the peace. But the people looked up to him as their greatest benefactor, and with one voice demanded his liberation. It was granted; but his restless spirit led him to new enterprises; he even aimed at the sovereignty, and the tribunes of the people became his accusers. He was condemned to death, and thrown from the Tarpeian rock (B. C. 389).

MANLIUS, Titus Torquatus; a Roman consul and general, son of Manlius Imperius. On account of a defect in his speech, his father was unwilling to carry him into the city, and kept him in the country among the slaves. This conduct appeared so unjust to the tribune Marcus Pomponius, that he summoned the father before him to answer for himself. The son, indignant that his father should be persecuted on his account, immediately hastened to the house of the tribune with a dagger in his hand, and forced him to swear that he would proceed no further. This filial piety made such an impression on the people, that they chose Manlius military tribune for the next year. He marched with the army against the Gauls; one of whom challenged the bravest Roman to single contest. Manlius accepted the challenge, confronted his adversary, and encircled his own neck with the collar (torqua) of the Gaul, in consequence of which he received the surname of Torquatus, which he transmitted to his posterity. Some years after, he was appointed dictator. He was the first Roman who ever held this office. He was afterwards consul, and held the consulsip in the Latin war (B. C. 340). Contrary to his express orders, that no Roman should engage in combat without command, out of the ranks, his son, remembering his father's victory, accepted a challenge to single contest from one of the chiefs of the enemy. He came off victorious, and laid the spoils of the enemy at his father's feet. He turned reluctantly from his son, gave him the crown of victory, and immediately ordered the lictor to execute upon him the punishment of his disobedience. This instance of severity secured to Manlius the most implicit obedience. A few days after, he defeated the enemy. In the battle, his colleague, Decius Mus, devoted his life to his country. The senate voted to him the honour of a triumph. He then retired to private life. Manillana edicta became a proverbial expression for commands of severe justice.

MANNA. This substance, which is so frequently employed in the materia medica, and which forms a considerable article of commerce, exudes naturally or from incisions made in the trunk and branches of a species of ash (ornus rotundifolia). It first appears as a whitish juice, thickens on being exposed to the air, and, when dried, forms a whitish or red-
dish granular substance, which is the mammon of commerce. The tree is a native of Italy, and is cultivated extensively in Sicily. June and July are the two months in which the mammon is collected. It is detached from the trees with wooden knives, and is afterwards exposed to the sun for drying. A little rain, or even a thick fog, will often occasion the loss of the collections of a whole day. The taste of mammon is sweet, and slightly nauseous. It is a mild purgative, and is principally administered to children. The frauzius virgata also yields mammon, but it cannot be obtained from any other species of oruva.

MANNER, in the fine arts, is used in two different meanings: First, it signifies the habitual style of an artist. A style is none other than a manner. Second, manner (also manerism) is used as a term of reproach, and designates those qualities of a work of art which do not proceed naturally from the subject treated, but from the individual character of the artist, or the false taste of an age. Such are the studied yet untrue performances of certain actors, the phraseology or conceptions of certain poets, the colouring or composition of certain painters, &c. The two senses of the word are not to be confused. A history of mannerism in the fine arts would be both interesting and instructive, a correct view of the aberrations of the human mind in one particular furnishing a valuable warning for the future.

MANNERT, CONRAD, a distinguished German scholar, was born at Altdorf in 1782. He was first teacher at the St. Sebaldis-school in Nuremberg, and, in 1798, at the Aegidian gymnasium there. In 1797, he was made professor ordinarius of philosophy at Altdorf; in 1799, doctor at Landshut; and, in 1826, of geography and statistics at Munich. His principal works are: Geographie der Griechen und Römer (10 vols., Nuremberg, 1788—1825; 2d edit., from vol. 1. to vol. iv., 1799—1820); Compendium der Deutschen Reichs-Geschichte (ib., 1803; 3d edit., 1819); Statistik des Deutschen Reichs (Bamberg, 1806); Die älteste Geschichte Befreiens und seiner Bewohner (Nuremberg, 1807); Kaiser Ludwig IV. oder der Bayer, eine gekrönte Freiresschritt (Landshut, 1812); Handbuch der alten Geschichte (Berlin, 1818); Die Geschichte Bayerins (2 vols., Leipsic, 1826); Geschichte der alten Deutschen, besonders der Bayern (1829).

MANUS, a name of the ancient German mythology, the son of Thuiskon, revered, like Hercules, after his death. From him comes the German word mann, signifying a male endowed with power and courage.

MANOEL, DON FRANCESCO, the most celebrated lyric poet of modern Portuguese literature, born at Lisbon, 1734; died at Paris, 1810. His talent was first known to foreigners, whom he attended as a Cicerone, after the earthquake of Lisbon in 1755. His poems are also popular among his countrymen. That on Virtue has been generally admired. His enemies, jealous of his reputation, endeavored to render his opinions ridiculous, for which they found means in his expressions concerning toleration and monks, and in his translation of the Tartuffe of Molière. Cited before the inquisition, he disarmed (July 4, 1778) the agent of the holy office, and fled to Paris, where he ever after continued to reside. He translated Wieland's Oberon. His poems, under the title of Feros de Filinto Elysio, fill several volumes. His odes and his translation of Lafontaine's Fables are particularly esteemed.

MANŒUVRE, in military art; a movement given to a body of troops, according to the rules of tactics, by which it is intended to gain a decisive advantage over an enemy, or to regain advantages which the enemy has already won. A manoeuvre may be executed by large or small masses, according to a preconcerted plan, or upon the sudden impulse of genius seizing upon a favourable moment: in general it may be said, that manoeuvres have become more practicable in proportion as armies have grown larger, and discipline stricter. In an ancient battle, after the combat was well finished, the outflanker lost, in a great degree, the direction of his troops; in modern battles, he is enabled by manoeuvres to exert a much more controlling influence, though there are still moments when he is obliged to let the battle rage. (See Battle.) To execute effective manoeuvres in the heat of battle, requires great coolness and clear-sightedness. The art of manoeuvring in the troops. A manoeuvre generally is a test of the excellence of the officers of all degrees.

One of the most important manoeuvres is that of outflanking an enemy, in which the general keeps back part of his line (refusen), whilst the other part strives to turn the wing of the enemy, or to attack it with the assistance of a division united. This nearly always enabled to get round it, and thus to throw the enemy into confusion. The invention of this manoeuvre is ascribed to Epaninondas; he owed it to his victories at Leuctra and Mantinea. Philip, Alexander, Cesar at Pharsalus, Banier at Witskoff, Torstenson at Janowita, Bonifacius, the Great, Leuthen, Napoleon, and other generals, owe their most brilliant success to this manoeuvre. In executing it, the attacking army always receives an oblique direction, and the attack is sometimes made en échelon (q. v.), as at Leuthen. The breaking through the enemy's line (see Line)—a chief manoeuvre in modern warfare—of land-battles, one of the boldest and most dangerous. The retent en échiquier (chess-board) is one of the most advantageous, and most fitted to preserve calmness and order among the troops. The change of front during the combat is very dangerous, and rarely succeeds. The issue of a battle, where the other circumstances are nearly equal, depends upon the capacity of the troops for manoeuvring; hence manoeuvring in peace with large bodies is very necessary, in which the chief movements of both parties must be laid down beforehand; but the details ought to be left to the moment, so that the judgment of the officers shall be exercised. In the provinces of Prussia, large bodies of troops are uniformly assisted for this purpose. In 1823, from September 5 to September 29, 40,000 troops were collected for this object near Berlin. Gustavus Adolphus and Charles XII. exercised their troops so well that they were allowed to be the best in Europe; but Frederic the Great conceived the whole art of war from a new point of view, and from Potsdam, where he superintended the reviews and manoeuvres of his guards, and the garrison of Berlin, it may be said, proceeded the new art of war. There he perfected the movements which were afterwards introduced into the army at large; and generals from all Europe were sent to study his manoeuvres. But, as so often happens with the creations of genius, the application of his plans by inferior men was attended with a pedantic minuteness of detail with which the armies of Europe were embarrassed when the wars of the French revolution took place. The genius of the French generals now reformed the art of war anew; manoeuvring on a great scale was invented by them. Napoleon carried it still further, and the rest of Europe learned it from him.

MAMOMETER. (Gr. μαμον, rare, and μέτρον, measure; an instrument to measure or show the alterations in the rarity or density of the air.

MANOR (manertum, from manner), to remain, because the usual residence of the owner] seems to have
been a piece of territory held by a lord or great personage, who occupied a part of it, as much as was necessary for the use of his own immediate family, and granted or leased the remainder to tenants for small rents. See coppphold estates, viz. those held by copy of the roll of the court of the manor. No manors, with all their incidents and franchises, have been granted in England since the reign of Edward III. One of the most important incidents to these ancient manors was the right of the lord to hold within the manor, and his jurisdiction of misdeemours and nuisances within the manor, and disputes about property between the tenants. (See Courts.) Another branch of the jurisdiction, and entirely distinct from the preceding, was, the receiving of the surrender of the estate of any tenant, and admitting his grantee or successor in his place, and transacting other matters relating to the tenure or tenancies, for which purposes the court was held by the steward of the manor. The steward was also the registrar or clerk, in the other branch of the jurisdiction, for the prosecution of suits; but the freeholders of the manor were also ex-officio the tenants.  

MANSFIELD; one of the most ancient families of German counts, taking their name from the castle of Mansfeld in the former circle of Upper Saxony.—Peter Ernst von Mansfeld was the natural son of Peter Ernst, count of Mansfeld, governor of Luxemburg and Brussels. The archdeacon Ernst of Austria, godfather to the young Peter, educated him in the Catholic religion. He was of service to the king of Spain in the Netherlands, and to the emperor in Hungary, in consequence of which the emperor Rodolphi II, legitimated him. But when he was denied the dignity and estates which his father had possessed in the Netherlands, and which had been promised to him, he, in 1610, embraced the Calvinistic doctrines, and, joining the Protestant princes, became one of the most formidable enemies of the house of Austria. In 1618, he led troops to the assistance of the revolted Bohemians, fought a long time for the elector Federici of the Palatinate, devastated the territories of the spiritual princes, was several times beaten, but always contrived to make head anew. In 1625, he collected an army by the aid of English and French money, and intended to penetrate into the Austrian hereditary states. April 25, 1626, he was beaten by Wallenstein near Dessau, yet continued his march to Hungary, to join the Protestant generals. In 1631, he died (Truf. sylvanian); but, the latter having clanged his views, Mansfeld disbanded his troops, intending to go to Britain by way of Venice. But not far from Zara he fell sick, and died in 1626, in his fortieth year. He was buried at Spalatro. At the approach of death, he ordered his armour to be put on, and stood up, leaning on two of his aids, to await the last enemy. Mansfeld was one of the greatest generals of his time. He rose more formidable from every defeat. With great understanding, which he showed in his diplomatic transactions, he united overpowering eloquence and inexhaustible cunning. He maintained his troops by plunder, and was compared to Attila. The Lutheran line of the house of Mansfeld became extinct in 1710; in 1780, the last male of the Catholic line died. His only daughter brought all the feudal estates of the family, by marriage, to the rich Bohemian house of Colloredo, which has ever since held and disputed the title. The former county of Mansfeld was, in 1814, added to the Prussian government of Mecklenburg. This county is interesting to Germans, as Eisleben and Mansfeld are situate in it. In the former Luther was born, in the latter he went to school.  

MANSFIELD MOUNTAIN is the highest sum-
duchy of Gotha, May 28, 1759, and died June 6, 1826, in Breslau, where he had been, since 1799, professor of philosophy since 1783, rector of the Mary Magdalen gymnasium. He wrote a good deal in prose and poetry, but his most important works are, History of the Prussian State since the Peace of Hubersburg (Frankfort on the Maine, 1819 et seq., 3 vols.), and a History of the Ostrogothic Empire in Italy (Breslau, 1824), both in German.

MANTCHOOS, or MANTCHEWS. See Mand-ehures.

MANTENGA, ANDREW, one of the most celebrated of the early painters, was born at Padua, in 1431. His master, Squarcione, was induced by the talents which he displayed to adopt him as a son. The youth employed himself principally in drawing from antiques, and, at the age of sixteen, painted a picture for the grand altar in the church of St Sophin, at Padua. Mantegna soon after entered the service of Lodovico Gonzaga, at Mantua, where he opened a school. Here he painted his great picture, the Triumph of Julius Caesar, for the exhibition of which a palace was erected in Mantua. It consists of several pictures, which have since been transferred to Hampton court. Gonzaga conferred on him the honour of knighthood in reward for his merit. Innocent VIII. invited the artist to Rome, to paint in the Belvedere, and he afterwards executed a number of works for the Pope. One of the latest and best was the Madonna della Vittoria, now in the Louvre at Paris, in which Giovanni Francesco Gonzaga is seen returning thanks for the victory gained by him over the forces of Charles VIII. There are several other of his works in the Louvre, and an Annunciation in the Dresden gallery. He died at Mantua in 1506, Mantenga, excelled in perspective, which was then a rare merit. His manner was stiff and dry, and his imitation of the ancient is everywhere manifest. His son, Francesco, was also a painter.

MANTELETS, in the art of war; a kind of movable parapets, made of planks about three inches thick, nailed one over another, to the height of almost six feet, generally covered with sand, and set upon little wheels, so that in a siege they may be driven before the pioneers, and serve as blinds to shelter them from the enemy's small shot.

MANTINEA; one of the most ancient, and, with Tegea, one of the two principal cities of Arcadia, on the frontier of Argolis, on the little river Ophris. The modern Tripolizan (g. v.) is built on the ruins of the ancient cities of Megalopolis, Tegea, Mantinea, and Pallantium. Mantinea was known for its wealth, and famous for the battles fought near it, one B.C. 418, in the fourteenth-year of the Peloponnesian war, the result of which battle was, that Argos succeeded from Athens, and joined Sparta; the other, fought B.C. 363, by Epaminondas, against the Peloponnesians. Epaminondas (g. v.) was victorious, but fell. A third battle was fought near Mantinea, B.C. 206, between Machamides, tyrant of Lacedemon and Philopomen, general of the Achaeun league. The latter was victorious, and slew the tyrant with his own hand.

MANTIS. Few of the insect tribe have attracted more attention than these curious productions of nature, from their singular forms, and still more singular habits. From the manner in which they strengthen their fore legs, they have acquired the reputation of diviners, and because they often rest on their hind legs, folding the anterior pair over their breast, the superstitious have supposed them in the act of prayer; hence they are called, in Language, where they are common, by the name of prié-dieu. The genus mantis has been separated, by modern entomologists, into several distinct genera, viz. manis, spectraria, phasma, and phyllis. The first of these (Mantis religiosa), which, as has been said, is vulgarly considered as possessing miraculous powers. This superstition appears to extend to almost every part of the world in which these insects are found. The Turks regard them as under the especial protection of Allah, and the Hungarians pay divine honours to them. The dry leaf mantis (phyllis siccefolia), in its shape and colour, is remarkable, invariably suggesting the idea of a dry and withered leaf. Their manners, also, in addition to their structure, aid in the delusion. They often remain on trees, for hours, without motion; then, suddenly springing into the air, appear to be blown about like dry leaves. In some parts of the East Indies, a species of mantis is kept, like game cock, for the purpose of fighting, which they do with great ferocity.

MANTISSA. See Logarithms.

MANTUA; a delegation of Austrian Italy, in the government of Milan, lying on the north of the duchies of Modena and Parma; population, 230,436; square miles, 896. The Po passes through it, and it is also crossed by the river Oglio. The surface is very level; the soil of great fertility; the principal product grain; others rice, hemp, flax, fruit, and vines. The late duchy of Mantua, or the Mantuan, was of larger extent than the present province. It was annexed to the Cisalpine republic (q. v.) in 1797, and formed a department of the kingdom of Italy until 1814, when it was ceded to Austria, as a part of the Lombardo-Venetian kingdom. See Lombardy.

MANTUA (Italian, Mantova); a city of Austrian Italy, an episcopal see, and capital of a delegation, formerly a duchy of the same name; seventy miles S.W. of Venice, seventy S.E. of Milan; lon. 10° 46' E; lat. 45° 0' N.; population, 25,000, among which are about 2000 Jews. It is situated on two islands formed by the expansion of the waters of the Mincio, one about a mile square, the other a little more than half that size; on this is the most closely built part of the city. The extensive suburb on the Ceresio is also well fortified, and is, by nature and art, one of the strongest places in Europe. Most of the streets are broad, regular, and well paved; the houses of stone, and generally well built; and the public squares spacious and elegant. It contains a magnificent cathedral, numerous churches, convents, and hospitals, a public library, an academy of arts and sciences, a gallery of antiquities, and several valuable collections of paintings. Other public objects of interest are the palaces of justice, of Gonzaga, and of T, so called from its form; the church of St Andrew; the Corte, with its halls; the famous bust of Virgil; and the buildings of the university, which was founded here in 1263. The silk manufactures were formerly flourishing, and are still considerable; those of leather and woollen are also important. In the summer and autumn, the city is unhealthy, on account of the marshes in its neighbourhood. (See Mid' Arris.) It is a place of great antiquity, said to be older than Rome, five centuries ago, contained about 50,000 inhabitants. Virgil was born at Andes (now Pietola), in the vicinity.

MANUEL, Jacques Antoine, one of the most eloquent and intrepid defenders of French liberty, was born in 1775, at Barcelonette, in the department of the Lower Alps, and was educated at the
college of Nîmes. He entered as a volunteer in one of the battalions of the requisition in 1793, and rose to the rank of captain. After the peace of Campo Formio, he quitted the army, studied law, was admitted to the bar at Aix, and in 1814 acquired a high reputation for his legal acquirements. In 1815, he was elected to the chamber of deputies which was convened by Napoleon, and after the abdication of that monarch, M. Manuell strenuously contended for the rights of the young Napoleon. He also moved a spirited protest against the force which was used by the allies to bring about the restoration of the Bourbons. This was, of course, an unpardonable crime, and an opportunity was found to display, at least, the disposition for punishing him. In 1815, he settled at Paris, and, in the following year, applied for admission to the Paris bar, that he might be entitled to plead in the courts. The council of discipline, as it is called, consulted the members of the bar at Aix as to their opinion of his character, in the hope of finding something against him; but, though their answer was favourable, the council refused to comply with his request. This refusal was repeated in 1816. In 1817 he was elected a member of the chamber of deputies by three departments, and became one of the most formidable opponents of the ministers, speaking eponymously with great facility—a talent possessed by few of the French deputies. On the opening of the budget in 1819, he delivered a speech which produced a very lively sensation, and was printed by order of the chamber. "Our political organization," said he, "is at once deficient in its municipal system, which is its natural basis; in the national guard, which must be our protection in peace, our defence in war; in the jury, without which the liberty of the press is an empty shadow; and in the responsibility of officers, which is the safeguard of all rights." In the ensuing sessions, he continued, in a series of bold and eloquent speeches, to oppose the arbitrary measures which then characterized the policy of the French government. On the exclusion of Grégoire (q. v.), on the bills for suspending the liberty of person and of the press, on the laws of election, on the reform of the jury, the organization of the council of state, colonial legislation, public instruction, &c., he maintained the rights of the nation, and defended the charter in spite of the menaces, murmurs, interruptions, and calumnies of his enemies. In a noble, brave, fervid and ardent, his courage and eloquence were always victorious over the violence of his enemies. During the new elections, in 1823, the greatest efforts were made to prevent his being chosen, and after the election a plan was formed for excluding him, as unworthy of a seat. This being found impracticable, his enemies determined to effect his expulsion, and a pretext was found in his first speech of the session, on the question of the Spanish war. In the outset he was called to order; the president pronounced him in order; he was again interrupted by loud cries; he was accused of defending regicide; his expulsion was demanded; he was prevented from explaining or proceeding, and the president, unable to restore order, was obliged to adjourn the chamber. The next day, Labourdonnay moved his expulsion; Manuell defended himself, in an eloquent speech, from the charge brought against him. The motion was denounced to be brought in regicide; his expulsion was demanded; he was prevented from explaining or proceeding, and the president, unable to restore order, was obliged to adjourn the chamber. The next day, Labourdonnay moved his expulsion; Manuell defended himself, in an eloquent speech, from the charge brought against him. The motion was denounced to be brought in regicide; his expulsion was demanded; he was prevented from explaining or proceeding, and the president, unable to restore order, was obliged to adjourn the chamber. The next day, he again took his seat, and, being required by the president to withdraw, replied that he should yield only to force. The session was then suspended for an hour, the members of the left side remaining in their seats.

In this interval the huissier (sergeant at arms) read to him an order of the president requiring him to leave the hall; but his reply was as before, "I shall yield only to force." The huissier called in a detachment of the national guard for the purpose, and a body of the gendarmerie was introduced. On being directed by the commanding officer to retire, he refused, and the order was issued to the gendarmerie to arrest him. As they approached, he rose and expressed himself ready to follow them, the members present accompanying him. Manuel was then chosen to the chamber in 1824. He died in 1827, and was buried in the Père Lachaise, some obstacles which were interposed to the solemnization of his obsequies being surmounted by the firmness and prudence of his friends.

MANUMISSION, among the Romans; the solemn ceremony by which a slave was emancipated. (See Freedman.) Constantine the Great, after his conversion, transferred to the Christian church all such solemn ceremonies of the heathen. Thus he allowed the Christian masters to emancipate their slaves before the altar on festival days, and especially at Easter, by placing them on the steps of the church and of the freedman in the presence of the congregation.

MANURES; vegetable, animal, and mineral matters, introduced into the soil, to accelerate vegetation and increase the production of crops. If the soil to be improved be too stiff, from excess of clay, it will require sand; if too loose, from excess of sand, it will be benefited by clay; but, when sand is mixed with argillaceous soil, the latter must be broken and pulverized, which may be effected by exposing it to the frost, and afterwards drying it. Marl is a natural compound earth, used with great success in the melioration of soils. It consists of a mixture of clay and lime, sometimes containing a little silicate and blumen. Those varieties of it which contain more clay than lime, are advantageous for a dry, sandy soil; while calcareous marl, or that in which the lime predominates, is suited to an argillaceous soil. The great advantage of marl is, that it dilutes, erodes, and is reduced to powder, by exposure to moisture and air. Marl in masses would be totally useless on the ground; yet it is necessary to begin by laying it on the ground in heaps; for the more it is heaped, the more it dilutes, splits, and crumbles to dust; in which state it is fit to spread upon the ground. Marl is sometimes examined with a compass, to judge of its quality, before it is laid on the soil; in this state, however, it should be applied sparingly at a time, and renewed frequently. It operates by subdividing the soil, and hastening decomposition; its calcareous particles disorganizing all animal or vegetable bodies, by resolving them into their simple elements, in which state they combine with oxygen, and facilitating this union. The best time for marling is the autumn. Quicklime, and especially that derived from fossil, or living shells, is another excellent means of amending soils. It is particularly adapted to cold, marshy soils, abounding in organic matters, as it assists powerfully in the conversion of animal and vegetable substances into nourishment for plants. Ashes are very beneficial to the soil, by attracting moisture from the atmosphere, in consequence of the alkali they contain, and thus accelerating vegetation. Gypsum is, however, the most universal mineral manure; but it is of such a nature, that it acts but powerfully in which it acts on vegetation. It is stirred, in the state of fine powder, over crops, when the leaves are in full vigour towards the latter end of April, or the beginning of May.

Common manure consists of the remains of organized bodies, of every description, whether animal or vegetable, in a state of decomposition (i. e. resolving
MANURES.

itself into those primitive elements which can re-enter into the vegetable system. The principal result of this decomposition is carbonic acid, which, becoming dissolved in water, finds its entrance into the plant by the pores in the fibres of the roots, and, being everywhere distributed through the vegetable tissue, deposits its carbon for the growth of the plant, while its other components pass into the atmosphere through the pores of the leaves. Manure which has not completely undergone the process of fermentation, so that the straw is not yet wholly decomposed, is best adapted to strong, compact soils; the tubular remains of straw answer the purpose of so many little furrows into the earth, and pass the air, thus rendering the soil lighter; besides, the completion of the fermentation taking place after the manure is buried in the soil, has the advantage of raising the temperature. Those bodies which are subject to the most rapid decomposition, are most employed for manure. Of this description are animal manures in general, which require no chemical preparation to fit them for the soil. The great object of the farmer is to blend them with the earthy constituents, in a proper state of division, and to prevent their too rapid fermentation. In maritime districts, fish, when sufficiently abundant, are sometimes used to manure the land. They afford a powerful manure and cannot be ploughed in too fresh, though the quantity should be limited. Mr Young records an experiment, in which herrings, spread over a field, and ploughed in for wheat, produced so rank a crop, that it was entirely laid before harvest. During the putrefaction of urine, the greatest part of the soluble animal matter that it contains is destroyed; it should, consequently, be used as fresh as possible; but if not mixed with solid matter, it should be diluted with water, as, when pure, it contains too large a quantity of animal matter to form a proper fluid nourishment for absorption by the roots of plants. Amongst excrementitious solid substances, one of the most powerful is the dung of birds that feed on animal food, particularly the dung of sea-birds. The guano, which is used to a great extent in South America, and which is the manure that fertilizes the sterile plains of Peru, is a production of this kind. It contains a fourth part of its weight of uric acid, partly crystallized, and another part of some phosphoric acid, combined with the bases, and likewise with lime; small quantities of sulphate and muriate of potash; a little fatty matter; and some quartzose sand. Night-soil, it is well known, is a very powerful manure, and very liable to decompose. Its disagreeable smell may be destroyed by mixing with quick-lime, after which, if exposed to the atmosphere in thin layers, in fine weather, it speedily dries, is easy pulverized, and, in this state, may be used in the same manner as rape-cake, and delivered into the furrow with the seed. The Chinese, who have more practical knowledge of the use and application of manure than any other people, hitherto, mix their night-soil with one third of its weight of a fat marl, make it into cakes, and dry it by exposure to the sun. In this state it is free from any disagreeable smell, and forms a common article of commerce of the empire. After night-soil, pigeons' dung comes next in order as to fertilizing power. If the pure dung of cattle be to be used alone, the woody fibre is always in great excess in the refuse of the farm. Too great a degree of fermentation is, however, very prejudicial; and it is better that there should be no fermentation at all before the manure is used, than that it should be carried too far. In cases where farm-yard dung cannot be immediately applied to crops, the destructive fermentation of it should be prevented by a liberal use of lime, or some other substance, which, as much as possible, from the oxygen of the atmosphere; a compact marl, or a tenacious clay, offers the best protection against the air; but before the dung is covered over, or, as it were, sealed up, it should be dried as much as possible. If the dung is found too hot, and cannot be kept dry, and cooled by exposure to air. When a thermometer plunged into it, does not rise above 100° Faur., there is little danger of much aeraiform matter flying off; if the temperature is above that point, the dung will require to be immediately spread open. Also, when a piece of paper, moistened in muriatic acid, held over the steams arising from a dunghill, gives dense white fumes, it is a certain test that the decomposition is going too far; for this indicates that volatile alkali is disengaged. The situation in which dung is kept by farmers is often very injudicious, it frequently being exposed to the direct influence of the sun, which has been kindled by heat, and which it would always be kept out of, in sheds, or, at least, on the north side of a wall. Less perishable substances, of animal origin, are sometimes used as manure, such as horn, hair, feathers, and bones; but, owing to their dry nature, they require a longer period for their decomposition. They are not calculated for annual harvests, but to fructify the soil for a produce of much longer duration, such as that of olive trees and of vineyards. Vegetable manure does not undergo fermentation previous to being buried in the soil. Of this kind of manure, green crops, such as clover, lupins, and buckwheat, which are ploughed into the soil, are the best, since they contain a considerable quantity of water, and, when buried, serve to lighten the soil previous to decomposition. It is especially adapted to hot climates. Rape-cake, which is used with great success as a manure, contains a large quantity of mucilage, some albuminous matter, and a small quantity of oil. It should always be kept dry and in a covered place, and it is applied. It forms an excellent dressing for turnip crops, and is most economically applied by being thrown into the soil at the same time with the seed. Sea-weeds, consisting of different species of fuci, algæ, and consoræ, are much used as a manure, on the sea coasts. This manure is more transient in its effects, and does not last for more than a single crop, which is easily accounted for, from the large quantity of water, or the elements of water, which it contains. It decays without producing heat, when exposed to the atmosphere, and seems, as it were, to melt down, and dissolve away. It should be used as fresh as it can be procured. It should exist in the fresh state, exposed to the air, for six months or a whole year, as it is often allowed to do. Soot, which is principally formed from the combustion of wood and pit-coal, contains, likewise, substances derived from animal matters, and is a very powerful manure. It requires no preparation, but is thrown into the ground with the manure. The foregoing species of manure have, for the sake of convenience, been described separately, though they are very rarely employed unmixed by the farmer; on the contrary, the most common manure consists of a mixture of animal and vegetable manures, as dung and muck Vectorial manures, such as farm-yard litter, night-soil, mud from the streets, dust from the roads, or earth from the bottom of ponds
and rivers, abounding with organic remains of fish, shells, and rotten plants. Before being laid upon land, it usually requires being well turned up and trodden on for a long time; as soon as it is spread, it should be ploughed in, to prevent loss by evaporation. As to the depth below the surface of the ground, to which it should be deposited, it may be remarked, that this should never be below the reach of the roots of the plants it is intended to nourish. It has been noticed, since the twelfth century, the Latin habits were increased according to their size (opuscula, minuscula), partly according to the various shapes and characters which they assumed among different nations, or in various periods (scriptura Romana antiqua, Merovingica, Longobardica, Carolingica, &c.; to which has been added, since the twelfth century, the Gothic, so called, which is an artificially pointed and angular character); and for all of those species of writing, particular rules have been established, affording the means of estimating the age of a manuscript. Before the eighth century, interpuncuations rarely occur: even after the introduction of punctuation manuscripts may be met with destitute of interpuncuations, but with the words separate. Manuscripts which have no capital or other divisions, are always old. The catch-word, as it is termed, or the repetition of the first word of the following page at the end of the preceding, belongs to the twelfth or subsequent centuries. This habit of writing the heads of manuscripts are, the older it is. Finally, in the oldest manuscripts, the words commonly join each other without break or separation. The division of words first became general in the ninth century. The form of the Arabic ciphers, which are seldom found in our manuscripts before the thirteenth century, also assists in deciding the age of a manuscript. Some manuscripts have at the end a statement, and, commonly, also, by whom, they were written (dated codices). But this signature often denotes merely the time when the book was composed, or refers merely to a part of the manuscript, or is entirely spurious. Since we have had the evidence of the Herculaneum manuscripts, we can determine with certainty that none of our manuscripts are older than the Christian era. In 1825, a fragment of the Iliad, written on papyrus, was discovered on the Island of Elephantum, in Upper Egypt, by a French gentleman, travelling in the employment of Mr. Banks. It contains from 800 to 900 verses, beginning at the 100th, and is handsomely written in capital letters, and is in a good state of preservation, unquestionably the oldest of all classical manuscripts, and probably of the times of the Ptolemies. It is not made up with ink, but wholly to obliterate and erase writings on papyrus, for the purpose of writing on the materials anew. These codices rescripti, nisi, are thought great curiosities. This custom ceased in the fourteenth century, probably because paper came then more into use. See Codex.

MANUSCRIPTS, ILLUMINATED; those manuscripts which are adorned with paintings illustrating the text, or in which the initial letters were decorated with flourishes or gilding. This kind of bibliographical luxury was not unknown to the ancients, and the art of illumination was much practised by the monastic monks. Their vignettes are, in some instances, of considerable historical importance. The specimens from the period between the fifth and tenth centuries are superior to those produced during the succeeding centuries. The term illuminated is derived from the use of minium, for a red colour, by the artistic artists; hence called minium scripts, illuminated. An example of Anglo-Saxon illumination of the eighth century is preserved in the British museum (Cottonian MSS.), which employed the skill of four distinguished theologians of the day. Eadfrid, bishop of Durham, wrote the text (the four Gospels); Ethelwold, his successor, illuminated the volume; Hildibrand, then archbishop, added the opening of the Psalms; silver plates, and precious stones; and Aldred added it to the manuscript in the Urswick library (Cottonian MSS.) by the consent and permission of the Empress Matilda.
glosses. Many MSS. are found with the initial letters omitted, the writer or copyist and illuminator being distinct persons. We still see traces of this practice in the ornamenting of initial letters in some printed books. See Marbillion, De Recipropriatione.

Manutius, Aldus, or Aldo Manuzio; an Italian printer of the fifteenth and sixteenth centuries, celebrated as an artist and a man of letters. He was born at Bassano, in the Roman territory, about 1447, and was educated at Rome and at Ferrara, where he learned Greek under Baptista Gunario. He became tutor to Alberto Pio, prince of Carpi, who invited him to reside with him. In 1470, he established himself as a printer at Venice, but the first work which he finished was not published until 1494.

In the course of the ensuing twenty years, he printed the works of the most ancient Latin and Greek authors extant, as well as many productions of his contemporaries, and some treatises of his own composition. Among the latter are a Latin Grammar; a Greek Grammar; a tract on the Metres of Horace, and a Greek Dictionary. He was the inventor of the italic, or cursive character, hence called Aldine, for the exclusive use of which, for a term of years, he obtained a monopoly of the press at Venice. He established a kind of academy at his own house, and delivered lectures on classical literature, to the general study and improvement of which he greatly contributed. He died in April, 1515, leaving four children by his wife, who was the daughter of Andrea d'Asol, a Venetian, in partnership with whom he carried on his business.

Manuzio, Paolo, son of the foregoing, was distinguished as a classic scholar, no less than as a printer. He was born at Venice, in 1512, and was brought up under the care of his maternal grandfather. He received a learned education, and, in 1533, re-opened the printing-office, which had for some time been closed, but did not carry on the establishment entirely on his own account, till 1540. He opened an academy for the instruction of young persons in polite literature; and afterwards made a tour through the cities of Italy, for the purpose of examining the various libraries. After removing several offers of professorships at Bologna and elsewhere, he was appointed, in 1562, to the printing-office attached to a newly-founded academy at Venice, where he continued till 1561, when he settled at Rome, on the invitation of pope Pius IV. He was employed to conduct a press for printing the works of the fathers, and other ecclesiastical authors; and at the same time, kept up his establishment at Venice, whither he returned in 1570. Pope Gregory XIII. induced him, by means of a pension, to take up his abode again at Rome, where he died, in April, 1574. He was the author of Commentaries on the Writings of Cicero; a treatise De Caria Romana; Proverbs; Letters, &c.

Professor Aldo, the younger, the son of the preceding, was also a printer. He was born in 1547, and was educated by his father, under whom he made an extraordinary progress in literature. In his eleventh year, he produced a Collection of elegant Phrases in the Tuscan and Latin Languages; and other juvenile publications attest his classical accomplishments. On his father's removal from Rome, he carried on the printing establishment at Venice, where, in 1577, he was appointed professor of belles-lettres at the school of the Venetian chancery. In 1585, he succeeded Sigonio in the chair of rhetoric at Bologna; whence he removed to Pisa, to become professor of polite literature, in 1587; and, during his stay there, he received the diploma of doctor of laws, and was admitted a member of the Florentine academy.

In 1588, he went to Rome, and accepted a professorship, which had been held by Muretus. He was much favoured by pope Sixtus V.; and Clement VIII. bestowed on him the office of superintendent of the Vatican press. He died in October, 1597. With the sale of the glory of the Aldine press, the valuable library, collected by himself and his predecessors, was sold to liquidate his debts. He was the author of many works, including Commentaries on Cicero, and Familiar Letters. See Aldine Editions.

Manzonii, Alessandro, an Italian tragic and lyric poet, of noble birth and elevated sentiments, was born in Milan, and distinguished, while young, by his versi sciolti on the death of Imbonati, and, at a later period, created a new kind of lyrics in his Inni. As a tragic writer, he surpasses any living Italian poet. His tragedies are Il Conte di Carmagnola (Milan, 1850), and Adelchi (1892). In both of them, he introduces the chorus. The subject of the first is from Italian wars of the fifteenth century, and has received great applause in Germany (from Goethe) and England, as well as in his own country. A later work is his Betrothed—I Promessi Sposi, Storia Milanesa del Secolo XVIII. (1827)—which has introduced the Italian novel to the English and French reading public, and many miscellaneous prose writings, have been published (in 6 vols., 1829).

MAP; a projection, on a plane surface, of the whole or a part of the spherical surface of the earth. The earth being a spheroid, its surface cannot be represented to coincide rigorously with a plane; and it therefore becomes necessary to have recourse to a projection, that is, a plan on a plane surface, which indicates the relative positions, dimensions, &c., of the different parts of a spherical surface. (See Projection.) The three principal modes of projection are the orthographic, the stereographic, and the central, distinguished by the different points of view at which the observer is supposed to be placed. In the orthographic projection, the surface of the sphere is represented by a plane, which cuts it through the middle, the eye being placed vertically at an infinite distance from the two hemispheres. In the stereographic projection, the spherical surface is represented on the plane of a projection of its great circle, the projection being supposed at the pole of that circle. The central projection supposes the point of view at the centre of the sphere, and the surface is thus projected on a plane tangent to it. Each of these kinds of projection is susceptible of different modifications. None of the planispheres traced by the three modes already indicated gives a perfect representation of the globe; they alter the figures of countries, either at the centre or on the borders; they present equal spaces under unequal dimensions, &c. To obviate these difficulties, the conic and cylindrical projections are sometimes used; the cone and cylinder being curved surfaces, which are capable of being perfectly developed on a plane, and, at the same time, approximating to the nature of a spherical surface. These projections have also been subjected to a great variety of modifications, which we cannot here explain. Other forms of tracing maps, which have not the development of a figure for their basis, have been recommended; such is the proportion or orthogonal projection of a plane, the condition is to represent, by equal spaces, regions of equal extent. (See Mayer's Introduction to the Art of tracing Maps, in German; Puisant's Traditio de Topographia.) In the choice of details to be introduced into a map, the author must be guided by the purpose of his delineations, and needs to be directed by experience, learning, and judgment. The map is designed
MAP.

675

to show the limits of states, the positions of towns and cities, the subdivisions of the country into pro-

cvinces, separate the sea from the land, and may sur-
devoted more particularly to delineating the natural
features of the region, its mountains, rivers, &c.; and
details are selected accordingly. A military map
should indicate every pass, ford, obstruction, &c.,
which may affect a march, facilitate or obstruct a
march, &c. A nautical map, or chart, should indicate
every reef, sand-bank, or rock, delineating, as far as
possible, not only the irregularities of the bottom,
but the direction, &c., of the shore. To the seamen,
the nature of the bottom of the sea is interesting only
within soundings; but to the physical geographer, it
is also important to illustrate the marine system
of mountains and geological formations on the globe.
There are also historical, botanical, mineralogical,
&c., maps, designed to illustrate some particular
point. Elementary maps for instruction are not in-
tended to advance the science by the publication of
new ideas, but to convey and known truths of the science in a simple form; and,
for this purpose, a numerous series of small maps is
better than a few, constructed on a large scale, with
minute exactness. In collecting and combining de-
tails, astronomical observations and geodesical mea-
surings, as those of the latitude, longitude, &c., are
used for the prominent points, and, where the author
is deserted by these, the accounts of intelligent
travelers, of former geographers, &c., must supply the
deficiencies. — Maps are engraved on tin, copper, and
other metals; also, sometimes, in wood, and, of late,
have been lithographed with much success for cer-
tain purposes. Soon after the invention of the art
of printing, an attempt was made to print maps like
musical notes, by Sweeney; later by Buecklink, in
1178; in 1777, by Breitkopf, in Leipzig. Haas, at
Basil, produced pretty good specimens (see his Carte
des Portes de Pologne en, 1777, 1793, et 1796);
and, quite recently, the same has been attempted in
Boston; but the main object of cheap maps thus
made, chiefly for children,—an impressive and clear
survey,—seems not entirely attained. If we consider
the drawing of the country ordered by Joshua (Jo-
schan xviii, 9) as a map, then the origin of geographi-
cal projection is very old. We find traces of maps with
the Egyptians, in the times of Sesostris (q. v.), who
caused his hereditary dominions and his conquests to
be represented on tablets for his people. Scylax,
Eratosthenes (270 B. C.) and Hipparchus (130 B. C.)
followed him. Certain traces of maps are found in
the times of Aristotle of Miletus, and Socrates,
who, by way of a reproof to the pride of Alcibiades,
caused him to search for his own estates on a map.
The Romans, at their triumphs, had pictures of the
conquered countries carried before them, and had
drawings of their territories in their archives, as
Vewo says. Cassius himself took part in the surveying
of different countries. There is a map extant,
perhaps of the times of Diocletian, certainly not later
than Theodosius, a military map, for the use of the
Roman army, called the Peutinger table, from having
belonged to a learned scholar of this name. (See
Peutinger.) Ptolomy maps maps according to the
stereographic projection. Agathodmon, an artist of
Alexandria, drew twenty-six maps for the geogra-
phy of Ptolomy, and with him the first period of the
history of maps is generally closed. They were drawn
from the accounts of travellers without well settled
principles. The second period, which extends to the
beginning of the sixteenth century, is occupied with
famous Behaim (q. v.), can show metal globes, plane
spheres and maps. Nicolas Donis corrected the
maps of Ptolomy, had them cut in wood, and added
five new ones. Sebastian Munster followed in his
steps. In the third period, maps became more and
more perfect. Particular credit is due to those of
Abraham Ortelier (1527-1598), Gerardus de Jode
(died 1594), William and John Blau (who produced
616 maps), Sanson, Schenk, Visselen, De Witt,
Hondius. After them, John Baptist Homann be-
came famous, who consulted the most distinguished
astronomers and mathematicians, and prepared 200
new maps, in regard to the character of the older
maps, and early geography in general, the chapter
on the progress of geographical science in Lardner's
Maritime and Inland Discovery contains valuable
information. The following facts are taken from
that source. The most eminent geographers of the
sixteenth and seventeenth centuries were men of
learning, who, in the spirit of that age, adopted
with zeal and obstinacy all the mistakes committed
by the writers of antiquity, which thereby acquired
an authority that was very difficult to be overthrown.
The first requisite, in a correct system of geography,
is to determine the latitude of places admitted of but little
precision, and their determination of longitudes was
still more erroneous. The countries with which the
Greeks and Romans were concerned, and above all
the Mediterranean, are yet Constantinople is placed
by Ptolomy two degrees north of its true position.
The Arab writers increased this error to four
degrees. The breadth of the Mediterranean
was also increased far beyond the truth. Carthage
is made 4° 32' south of its true place. The errors in
longitude were far greater, the length of the Medi-
terranean being made 62° instead of 41° 28'; in
other words, it was made 1400 English miles longer
than the reality. This enormous error continued in
the maps of Europe, with little variation, till the
beginning of the last century. The difference in
the estimated longitude of Rome and Nuremberg,
two of the best known places in Europe, varied
above 500 miles, from the fifteenth to the seven-
teenth century. The error is still more remarkable,
as existing in the longitude of places which are
nearly in the same latitude. Cadiz and Ferrara,
for instance, were placed nearly 500 miles too far
abunder; and this error continued till the close of
the seventeenth century. Errors of a wilder kind,
originating in credulity rather than in inaccurate ob-
servation, found a place in the maps of the middle
ages, and were slowly banished at a recent date by
the improvements of astronomy and navigation. In
a map of the world, published at Venice, in 1546, by
Guscom, Asia and America are united in lat. 38°.
Thibet is placed at the junction of the two continents.
In another Venetian map, by Tramerini, dated 1554,
the distance from Quinsi, in China, to the gulf of
California, in America, is only one of the two
continents being un不断地 stretched some thousand miles
respectively to the east and the west. The best
maps were long deficient in correct distances, par-
ticularly in longitude. South America is repre-
sented by Fischer as 63°, or above 4300 miles across,
while North America, on the same map, extends
from the mouth of the St Lawrence to the east,
New Albion on the west, through a space of 150°,
or above 9000 miles. Hondius, in 1630, ventured,
indeed, to abridge Asia of the undue dimensions
given it by Ptolomy, and to reduce its extension
towards the east to 165°. But his estimate was not
followed; and many instances might be adduced,
in which the authority of Ptolomy, who was but slightly
acquainted with one half of the globe, was blindly
submitted to in an age when Europeans wandered
over its whole surface. A great step was made
towards the attainment of accuracy, in regard to longitudes, when Galileo discovered, in 1610, the eclipses of Jupiter's satellites. Until, however, Cassini published his tables, in 1689, nothing accurate was known of the relative motions. Cassini laboured indefatigably to improve geography, by alloying it strictly with astronomy, and loudly complained that it needed a total reform. Delisle, his friend, set seriously about the task of reconstructing the geographical edifice. In the year 1700, he published his map of the world, as well as separate maps of Europe, Asia, and Africa, boldly departing from the examples of his predecessors, and making free use of the materials which the improvements in astronomy had placed within his reach; so that he may be considered the creator of modern geography. He died in 1726. His distinguished disciple, D'Anville, appointed geographer of the king of France at the age of twenty-two was remarkable for correctness of judgment and fineness of penetration. Though he proceeded much on conjecture, he rarely erred. He completed what Delisle had begun. For further information on the subject of geography and geographical works, see Geography and Gazetteer; see, also, Degrees, Measurement.

The whole number of maps which have been published may amount to from 23,000 to 24,000, of which, however, hardly 4000 are original. The first maps engraved on metal were made by Baedeker and Schweynheym, in 1479; the first cut in wood, by L. Holl, in 1482. (See Hauber's Essay towards a circumstantial History of Maps (in German, Ulm, 1724); Hubner's (q. v.) Museum Geographicum.) Among the maps prepared of late years in Great Britain, those of Arrowsmith are distinguished.

MAPLE (acer): a genus of plants, peculiar to the northern and temperate parts of the globe, consisting of trees or arborescent shrubs, having opposite and more or less lobed leaves, and small flowers, which are either axillary or disposed in racemes. The fruit consists of two capsules united at base, each containing a single seed, and terminated by a wing-like appendage. In most instances, the leaves are compound and pinnated. Twenty-seven species are known, of which six are found in Europe, twelve are found in North America, six very beautiful ones in the islands of Japan, and the remainder in different parts of Asia.

The red maple (A. rubrum), is one of the most common and most extensively diffused of American trees. It grows in most situations, from lat. 49° to the gulf of Mexico, both in the Atlantic and Western States. The bright red blossoms, appearing at a time when there is no vestige of a leaf in the forest, render this tree very conspicuous at the opening of spring; and again, at the close of the season, it is not less conspicuous from the scarlet colour which the leaves assume when they have been touched by the frost. The leaves are cordate at base, unequally toothed, five-lobed, and glaucous beneath. It attains the height of seventy feet, with a diameter of three or four at the base. The wood is easily turned, and when polished acquires a silken lustre; it is hard and fine-grained, and is employed chiefly for the lower parts of Windsor chairs, sometimes for saddle trees, wooden dishes, and similar purposes.

The variety called curled maple, from the accidental undulation of the fibres, is one of the most ornamental wood-turning, and bestsuited made of it exceed in richness and lustre the finest mahogany. It is sometimes employed for inlaying, but its most constant use is for the stocks of rifles and fowling pieces. The white maple is chiefly remarkable for the beauty of its foliage, the leaves being larger and much more deeply lobed than those of the preceding, and glaucous beneath. The flowers are inconspicuous and greenish yellow, and the fruit is larger than that of other of the species. It is not found so far south as any of the preceding, and is restricted to the west of the mountains; its range extending beyond the sources of the Mississippi, and within the basin of the Arkansas. It attains large dimensions, having a trunk five feet, and sometimes eight feet in diameter. The wood is little used, but the charcoal is preferred by butchers in some parts.

The sugar maple (A. saccharinum) is a valuable tree. Besides the sugar which is obtained from the sap, the wood affords excellent fuel; and from the ashes is procured potash. The sugar is superior in quality to the common brown sugar of the West Indies, and when refined, equals the finest in beauty. The sap of all the maples contains a certain quantity of sugar, but in none, that we know of, does it exist in such a great proportion as in this and the following species. A single tree of this species will yield five or six pounds of sugar. The leaves are smooth, and five-lobed, with the lobes sinuously dentate. It grows in some of the most moist situations, between the forty-second and forty-eighth parallels of latitude, and on the Alleghenies to their south-western termination, extending westward beyond lake Superior, and is abundant in the northern parts of Pennsylvania, the western portion of New York, Upper Canada, New Brunswick, Nova Scotia, and in the northern parts of New England. The potash is exported from the two principal northern ports, New York and Boston. To the latter place the wood is brought in great quantities from Maine for fuel, and is esteemed hardly inferior to hickory.

A variety, with indentations, like the curled maple, and containing besides small spots, is called bird's eye maple, and forms exceedingly beautiful articles of furniture. The charcoal has the preference in the forges of Vermont and Maine.

The black sugar maple (A. nigrum) is a more southern tree than the preceding, and is exceedingly abundant on the Ohio and other great rivers of the Western States. In one instance, the leaves are more compound and pinnated. Twenty-seven species are known, of which six are found in Europe, twelve are found in North America, six very beautiful ones in the islands of Japan, and the remainder in different parts of Asia.

The sweet maple (A. saccharum), or box elder (A. negundo), abounds chiefly west of the Alleghenies, where it has a very wide range, extending from lat. 35° to the gulf of Mexico, and also within the chains of the Rocky Mountains. It is easily known by its compound leaves, and becomes a large tree. The wood is fine-grained, but is little used.

The striped maple, or moose-wood (A. strinatum) is a large shrub, chiefly remarkable from the white lines on the bark, which give it an elegant appearance. It is a northern plant, and in some places the cattle are turned loose into the woods to browse on the young shoots at the beginning of spring. The wood has been sometimes employed for inlaying mahogany, but it is of inferior quality.

The wood of the common European maple is much used by turners, and on account of its lightness is frequently employed for musical instruments, particularly for violins.

MAPPE-MONDES; the French term for maps of the world. See Maps.
MARA—MARAT.

MARA, GERTRUDE ELIZABETH, daughter of a Mr Schmalbing (born, according to some, in 1750, in Cassel; others say in 1743, at Eischbach, in the territory of Eisenach; others say in 1749), was one of the greatest singers of her time. With her, city mice herded; she instructed her in music. When she was seven years old, she played the violin admirably. In her tenth year, she performed before the queen, in London, whither she had accompanied her father, and where she remained two or three years. In her fourteenth year, she appeared as a soprano in 1764, at Leipzig, and received an appointment there. Frederic the Great, though much prejudiced against German performers, was induced to invite her, in 1770, to Potsdam, his residence, showed great admiration of her powers, and gave her an appointment immediately, with 3000 Prussian dollars salary (about £450). In 1774, she married a violoncello player named Mara, a man of careless habits, who involved her in many difficulties, and was dismissed by the king, in 1780. In 1782, she went to Vienna and Paris, where she received the title of a first concert singer of the queen. In 1784, she went to London, and was engaged at the Pantheon opera, to which she was offered ten thousand francs a year, by the burning of Moscow, she lost her house and fortune; she therefore went to Revel, and gave lessons in music. In 1819, she came through Berlin to Britain, and, in 1821, returned to Estonia. The latest accounts of her were, that she celebrated her birthday at Revel, February 23, 1831, having completed her eighty-three years. In 1799, she was induced to compose a poetical tribute. The fame of this singer was founded not only on the strength and fulness of her tone, and the extraordinary compass of her voice, which extended from o to the triple-marked f (nearly three octaves), but also on the admirable ease, quickness, and flexibility, in which she maintained different passages, and her simple and enchanting expression in the adagio. Her singing of Handel's airs—for instance, "I know that my Redeemer liveth"—in the Messiah, was particularly celebrated.

MARABOOTS; among the Berbers (q. v.) of northern Africa, a sort of saints, or sorcerers, who are held in high estimation, and who exercise, in some villages, a despotic authority. They distribute amulets, affect to work miracles, and are thought to exercise the gift of prophecy. The rich presents which they receive from a superstitious people, enable them to live with a good deal of pomp, often keeping a trained force, and maintaining a numerous train of wives and concubines. They make, indeed, no pretensions to abstinence or self-denial.

MARACAYBO, a lake, or rather gulf, of South America, about 200 miles long, and seventy broad, running from S. to N., empties itself into the North sea; the entrance is defended by strong forts. As the tide flows into this lake, its water is somewhat brackish, notwithstanding the many rivers it receives. It abounds with fish and lake trout. There is a power towards the middle, where the town is erected.

MARANHAM, or MARANHAO; a province of Brazil, between 1° 20' and 10° 50' S. latitude, and 45° 10' and 55° 20' W. longitude. It takes its name from an island situated at the mouth of three rivers, about four to five miles in circumference, which is fertile and well inhabited. The island itself is very difficult of access, by reason of the rapidity of the three rivers which form it; so that vessels must wait for proper winds and seasons to visit it. The natives have about twenty-seven hamlets called oe, or tare, each consisting of only four large huts, forming a square in the middle; and each four, twenty, thirty, or forty feet in length, and about twenty or thirty feet in depth; all being built of large timber, and covered from top to bottom with leaves, so that each may contain 200 or 300 inhabitants. The air is serene, seldom interrupted with storms, excessive drought, or moisture, except in the time of the periodical rains, which last from February to June. The soil of the province is very fertile, producing maize, cotton, sugar, rice, coca, pimento, ginger, &c. Population, 183,000, exclusive of the savages. The number of negroes is very great. The capital is Maranhão, or St Luiz, with 12,000 inhabitants; lat. 2° 29' S.; lon. 48° 45' W.

MARON. See Aragon.

MARAT, JEAN PAUL, whose name is odioously notorious in the most hateful times of the French revolution, was born at Boudry, in Neuchâtel, in 1744, and studied medicine at Paris, where he practised his profession at the beginning of the revolutionary movements. He was elected a deputy in 1789, and several works on medical and scientific subjects, which display considerable acuteness and learning. Of a small and even diminutive stature, with the most hideous features, in which some traits of insanity were perceptible, his whole appearance was calculated to excite at once terror, pity, ridicule, and disgust. The first breath of the revolution converted the industrious and obscure doctor into an audacious demagogue, if not into a ferocious maniac. He began by haranguing the populace of one of the sections but was treated with ridicule, and hustled by the crowd, who amused themselves with treading on his toes. Still he persisted, and finally succeeded, by his violence and energy, in commanding attention. Danton had just instituted the club of the Cordeliers, and collected around him all the fiercest spirits, and Marat among the number, who became the editor of the Amis du Peuple, a journal which was the organ of that society, and soon became the oracle of the mob. As early as August 1789, he declared it necessary to hang up 800 of the deputies, with Mirabeau at their head, in the garden of the Tulleries, and, though he was denounced to the constitutional assembly, and proceeded against by the municipal authority of Paris, he contrived to escape, with the assistance of Danton, Lafaye, and other rebels, and by concealing himself in the most obscure corner of the city. His journal, meanwhile, continued to appear regularly, was openly hawked about the streets, and assumed a more furious and atrocious tone, as he was inflamed by an accession of refugees from St Domingo. Here is a large parochial church, an hospital, and four convents. Large vessels cannot come up to the town, on account of the bar at the mouth of the harbour.
by the prosecution of the authorities, and encouraged by the increasing strength of his party. During the existence of the legislative assembly, he continued his outrages, figured among the actors of the 10th of August (see France), and in the assassinations of September (1792). He was a member of the terrible committee of public safety, then formed, although without any official capacity, and signed the circular to the departments, recommending a similar massacre in each. Marat was chosen a member of the convention; and in spite of the contempt and abhorrence with which he was received in that body, particularly by the Girondists, who endeavoured, at first, to prevent his taking his seat, and, afterwards, to effect his expulsion, soon found encouragement to proceed with his prosyary denunciations. The minerals, general Dumouyres, and the Girondists, whom he contemptuously called hommes d’état, were the objects of his attack. Being charged, in the convention, with demanding in his journal 270,000 heads, he openly avowed and boasted of that demand, and declared that he should call for many more if those were not yielded to him. During the long struggle of the Mountain party and the Girondists, his conduct was that of a maniac. The establishment of the revolutionary tribunal, and of the committee for arresting the suspected, was adopted on his motions. On the approach of May 31 (see Jacobins), as president of the Jacobin club, he signed an address instigating the people to the armed attempt at all trials of justice. Even the Mountain party denounced this measure, and Marat was delivered over to the revolutionary tribunal, which acquitted him; the people received him in triumph, covered him with civic wreaths, and conducted him to the hall of the convention. July 13, 1793, his blood was caroused was by assassination. (See Corday, Charlotte.) After the declaration of the May 31, and the proclamation of the Republic, he received the honours of an apotheosis, and his remains were placed in the Pantheon. It was not till some time after the dispersion of the Jacobins, that the busts of this monstrous divinity were broken, and his ashes removed, and then it was as a royalist that he suffered this disgrace.

MARATHON; a village of Greece, in Attica, about fifteen miles N. E. of Athens, celebrated by the victory gained over the Persians by Miltiades, 490 B. C. See Miltiades.

MARATTAS. See Mahattas.

MARATTI, Carlo, painter and engraver, was born in the marble of Anconetta (1560), and while a child, amused himself with painting all sorts of figures drawn by himself on the walls of his father’s house. In his eleventh year, he went to Rome, studied the works of Raphael, of the Caracci, and of Guido Reni, in the school of Sacchi, and formed himself on their manner. His Maddonnas were particularly admired. Louis XIV. employed him to paint his celebrated picture of Daphne. Clement IX., whose portrait he painted, appointed him overseer of the Vatican gallery. He died at Rome in 1713. We are much indebted to him for the preservation of the works of Raphael, in the Vatican, and of the Caracci in the Farnese palace. He also erected monuments to those masters in the church della Rotonda. As an artist, Maratti deserves the title given him by Richardson, of the last painter of the Roman school. His design was correct, and although he was not a creative genius, he showed himself a successful imitator of his great predecessors. His composition was good, his expression pleasing, his touch judicious, and his colour harmonious. He was acquainted with history, architecture, and perspective, and used his knowledge skilfully in his pictures. The good taste which prevails in all his works is remarkable. His chief works are in Rome. He also etched successfully, among other things, the life of Mary, in ten parts. Chiari, Berettoudi, and Passeri, were his imitators.

MARBLE, in common language, is the name applied to all sorts of polished stones, employed in the decoration of monuments and public edifices, or in the construction of private houses; but among the materials thus made use of, it is necessary to distinguish the true marbles from those stones which have no just title to such a designation. In giving a short but universal character of marble, it may be said, that it effervesces with dilute nitric acid, and is capable of being scratched with floor, while it easily marks gypsum. These properties will separate it, at once, from the granites, porphyries, and silicicious pudding-stones, with which it has been confounded, and, on one side, and from the gypseous alabaster on the other. From the hard rocks having been formerly included under the marbles, comes the adage, "hard as marble." Marbles have been treated of, under various divisions, by different writers. The most frequent division has been that of two great sections of primitive marbles, which have a brilliant or shining fracture, and secondary marbles, or those which are possessed of a dull fracture. This classification has grown out of the idea that the former class was more anciently created—an opinion which the deductions of geology, for the most part, sufficiently confirm, though occasionally we find a marble of a compact and greasy nature, and in all trials of fracture, the other, those which are highly crystalline, in very recent formations. Daubenton has founded a classification of marbles upon the colours which they present; those of a uniform colour forming one class; those with two colours, another; those with three shades, a third; and so on. The best classification of these, however, is that of M. Berard, which divides all marbles into seven varieties or classes, viz. 1. marbles of a uniform colour, comprehending solely those which are either white or black: 2. variegated marbles, or those in which the spots and veins are interlaced and disposed without regularity; occasionally, this variety embraces traces of organic remains; when these are disposed in star-like masses, they are sometimes called madrepore marbles: 3. shell marbles, or those which, in part, made up of shells: 4. lunachelli marbles, or those which are, apparently, wholly formed of shells: 5. cipolin marbles, or those which are veined with green to brown; 6. marmoraceum marbles, formed of angular fragments of different marbles, united by a cement of some different colour: 7. pudding-stone marbles, or those which are formed of reunited fragments, like the breccia marbles, only with the difference of having the pebbles rounded, in place of being angular. By ancient or antique marbles is understood those kinds made use of by the ancients, the quadrants of which are now, for the most part, exhausted or unknown. Of these we may mention the following:—

Parian marble. Its colour is snow-white, inclining to yellowish-white; it is fine, granular, and, when polished, has somewhat of a waxy appearance. It hardens by exposure to the air, which enables it to resist decomposition for ages. Diopserus, Scyllis, Malas, and Micasides, employed this marble, and were imitated by their successors. It receives, with accuracy, the most delicate touches of the chisel, and retains for ages, with all the softness of wax, the mild lustre even of the original polish. The fine Grecian sculpture which has been preserved to the present time, is generally of Parian marble; as the Medicane Venus, the Diana Venatrix, the colossal Minerv (called Pallas of Velletre), Ariadne (called Cleopatra), and Juno (called Cephalina). It is also
Marcellus, the leaving the theatre, in built manni, Its	Greeks,
variety, sculptors, not tin-one statues constructed the of given, is by the Greeks, is
mantled. It was, and also, perhaps, because it was found in the vicinity of Athens. The Parthenon was constructed entirely of Pentelic marble. Among the sculptures of the Parthenon at Athens, are the Torso, a Bacchus in repose, a Paris, the throne of Saturn, and the tripod of Apollo.

Carraia marble is of a beautiful white colour, but is often traversed by gray veins, so that it is difficult to procure large blocks wholly free from them. It is not subject to turn yellow, as the Parian. This marble, which is almost the only one used by modern sculptors, was also quarried and wrought by the ancients. Their quarries are said to have been opened in the time of Julius Cæsar.

Red antique marble (rosso antico of the Italians; ἰταλικός, the Italians), is of this marble, according to antiquaries, is of a deep blood-red colour, here and there traversed by veins of white, and, if closely inspected, appears to be sprinkled over with minute white dots, as if it were strewn with sand. Another variety of this marble is of a very deep red, without veins, of which a specimen may be seen in the Indian Baths, in the royal museum of Paris.

Green antique marble (verde antico of the Italians), is an indeterminate mixture of white marble and green serpentine. It was known to the ancients under the name marmor Spartanium, or Lacedæmonium. African breccia marble (antique African breccia). It has a black ground, in which are imbedded fragments or portions of a grayish-white, of a deep red, or of a purple wine colour. This is said to be one of the most beautiful marbles hitherto found, and has a superb effect when accompanied with gilt ornaments. Its native place is not known with certainty; it is conjectured to be Africa. The presence of Venus leaving the bath, and a large column, both in the royal museum in Paris, are of this marble.

MAROD, or MAROBODUUS. See Marcomanni, and Arminius.

Marburg; capital of Upper Hesse, in Hesse-Cassell, on the Lahn, with a pop. of 6700 inhabitants, a castle, and a university. It is built on the declivity of a hill, on the summit of which is the castle. It has five Catholic, Lutheran, and Calvinist churches. The university was founded in 1527, and has an excellent library of above 100,000 volumes, a valuable botanical garden, an anatomical theatre, and other institutions connected with it. In 1829, the number of students was 347. It is remarkable as being the first Protestant university founded in Germany.

Marcellinus Ammianus. See Ammianus Marcellinus.

Marcello, Benedetto; a noble Venetian, youngest son of the senator Agostino Marcello. He was born in 1656; and, while a youth, became a great proficient in the science of music, in consequence, it is said, of a reflection thrown upon his deficiency in that respect, at a concert given by his brother Alessandro, which hurt his pride, and stimulated him to exertion. He afterwards studied under Gasparini, and, receiving a liberal education, distinguished himself as a poet, as well as a musician. In 1716, a serenata of his composition was performed at the celebration of the birth of the first son of the emperor Charles VI., and excited great applause, Eight years after appeared the first four volumes of his adaptation to music of Giustiniani's Paraphrase of the Psalms, which he afterwards completed in eight more, the whole being published in 1726.

Garth, of Durham, has adapted suitable words, from the English translation of the Psalms, to Marcello's music, which are sung in the churches and anthems in the cathedrals, with great success. This elaborate work was printed by subscription, in eight vol. volumes. Marcello was successively a member of the council of forty, provveditore of Pola, and chamberlain of Brescia, in which city he died in 1736.
being considered as allies of Rome. As a mark of gratitude, they declared themselves the clients of the Marcellian family. In the mean time, Marcellus carried on the war against Hannibal, Italy, and found himself at Canusium. In the succeeding year, he was defeated by Hannibal at Cannanum; but, having rallied the fugitives, and inspired them with fresh courage, he renewed the contest on the following day, and gained the victory, though with a heavy loss. B. C. 209, he was chosen consul the fifth time, with Quintus Crispinus. The two consuls united their forces on the Liris, but Hannibal avoiding giving battle. The Romans, preparing to encamp upon a neighbouring hill, were suddenly surrounded; they would, however, have been able to cut their way through, had not the Etrurians, who composed the largest part of the cavalry, immediately surrendered. Marcellus himself fell; his son and the other consul escaped. Thus died this great general, who made himself formidable to Hannibal himself. He was called the sword, as Fabius was the shield, of Rome. Hannibal took the ring from his finger, and caused the body to be burnt with the most distinguished honour, and sent the ashes to his brother in Sicily. He was buried on the spot of his elevation, and furnished many consuls, until it became extinct with the son of Octavia, the sister of Augustus, whom Virgil has immortalized.

MARCH (Latin Mers); originally the first month of the Roman year; so named, according to tradition, by Romulus in honour of his father, Mars. Till the adoption of the new style in Brielin (1752), the 25th of March was new year's day; hence January, February, and the first twenty-four days of March have frequently two years appended, as January 1, 1704, or 1701—2. See Calendar.

MARCH; a movement by regular steps in the manner of soldiers; also a journey performed by a body of soldiers either on foot or on horseback. Soldiers on a march are subject to certain rules very necessary to keep them in good order, and fit to meet the enemy. The march in the first sense of regular step differs on different occasions. In the parade-march, from seventy-five to ninety-five steps, differing in pace, are made in a minute. In the quick-march, from 108 to 115 steps; and in the storming-march, 120 steps.

March further signifies the music composed for such movements; it is composed in 4 or 2 time for the parade-march, and in 4 for quick-time. There are many sorts of such marches for festivals, funerals, &c., varying according to their different purposes.

MARCHE; one of the ancient provinces of France, bounded north by Berry, and the Bourbonnais, east by Auvergne, and south by Guienne and Limousin. Its name is derived from its having been on the frontier of these provinces, and it was often called Marche de Limousin. In the middle ages, it had, for some time, its own sovereign counts. Philippe le Bel acquired it by confiscation. It afterwards belonged to the house of Armagnac, and that of Bourbon-Montpensier. Francis finally united it with the crown domain. See Departement.

MARCHES (from the Middle Latin, marces, marcha, a boundary); the boundaries of a state. Thus in English history, we read of the lords of the Welsh marches, that is, of the frontiers of England and Wales; the marches of Scotland were divided into west and middle marches. The office of the lords marches was originally to guard the frontiers. (See Marqueses.) The idea of a march in French is marche (see Marche), in German mark, in Italian marca. In the estates of the church was a province called Marca, divided into the march or marquise of Arnem. and that of Ferno. In the Venetian territory was the Marc Trevisana. In Germany, the mark of Brandenburgh or the electoral mark (Kurmark), was divided into the Mittelmarch, Neumark, Almarch, and Uckermark.

MARCHESI, Luigi, called also Marchesin, a celebrated singer, born at Milan, about 1755. While a youth, having attracted the attention of some connoisseurs, he was encouraged by them to quit his father's house privately, went to Bergamo, and there subjected himself to the necessary mutilation. After completing his studies at Munich (1775—77), he returned to his native country, where he was received with the greatest admiration and enthusiasm. The academy at Pisa caused a medal to be struck in his honour; he afterwards sung in Rome, Vienna, Petersburg, Berlin, and in 1788 went to London, where the directors of the Italian opera gave him £1500 for one winter, with a benefit and his expenses. Marchesi was not less remarkable for the beauty of his person, and his grace and propriety of gesture, than for his voice. He sung in Vienna in 1810. The king of Prussia died at this time.

MARCHFELD; the Austrian circle under the Mannhartberg, in the country below the Ens (as it is called); particularly the fertile plain from Bockfries to the rivers March and Danube, about twenty-three English miles long and fourteen wide—a spot in the field of decisive battles, and which is therefore of great interest for the military student. Ottocar of Bohemia, defeated here, in 1386, Bata IV. of Hungary, and conquered Straia, which has since remained united to Germany. In another battle, fought here August 26, 1578, between Ottocar and Rudolph of Hapsburg, Orsmond fell. Three days laid the foundation of the house of Hapsburg, which is still seated on the throne of Austria. The third battle on this bloody plain was that of Aspern, May 21 and 22, 1809; and the fourth, the battle of Wagram, July 5 and 6, 1809.

MARCHON, MARCHONITIS. See Guastica.

MARCHESI MARCOMANNI, i. e. borders (see Marche); a powerful league of ancient German nations. After Caesar's death, they lived between the Danube and the Rhine. After the Romans had conquered Noricum and Pannonia, and had become dangerous to the Marcomanni from their proximity, the latter retired, under their king, Maroboduus, made themselves masters of the kingdom of the Boti in the present Bohemia, called by the Germans Bojenheim. By artifice and violence, Maroboduus soon formed a union of a number of tribes under his sovereignty, and became dangerous to the Romans, as this league could bring 70,000 disciplined troops into the field. The Romans were prevented from attacking him by an insurrection of the Pannonians; for which reason Tiberius concluded a treaty with him, six years after Christ; but he was defeated by the Cherusei under Hermann (Arminius), (A. D. 19). The same was the fate of his successor, the Goth, Catulna. Both fell to the Romans, who assigned them Raveura and Aquileia for a residence. Relations of Maroboduus now governed the Marcomanni, who avoided all hostilities against the Romans till the time of Donatian. They subsequently made incursions into the Roman territory. Trajan and Hadrian held them in check. They invaded Pannonia (A. D. 106). After a long war, Vertac and Mercurnm. So Stejermark, in Roman history, under the name of the Marcomannio war, Antoninus the Philosopher drove them back beyond the Danube. Commodus purchased peace in 189,
which they observed, however, only so long as they were paid tribute, or Rome had a resolute ruler. They devastated Noricum and Rhetia, and even advanced through the passes of the Alps. Under Aurelian, in 276, they fled all Italy with consternation. But in the fifth century, the name of Marcus
or Marcus
i
which among the names of the ancient tribes to oblivion. After the overthrow of the dominion of the Hu6, the Rugii, Heruli, Scyri, Turcelingi made their appearance in the countries of the former Marcus
i
A powerful nation, the Baiocrai, we find in the mountains of Noricum and Rhetia, which Mamert assigns among these pestilent nations as the same with the Marcomanni, who had emigrated thither, being driven from their residences by the Rugii, Longobardi, &c. The Baiocrai are the progenitors of the Bavarians.

MARCO POLO. See Polo.

MARCELTHUS; a monk, known in the history of the feudal law, for his work, entitled the Formulary, consisting of a collection of formularies or forms of forensic proceedings and legal instruments, including charters, &c., of the kings of France. He lived about the middle of the seventh century. Jerome Biguan published the formulary of Marcelthus, with an appended index, in 1487; but the most complete edition is that of Bailuze, in the second volume of his Capitularies (1677).

MARCUS AURELIUS. See Antoninus.

MARDI GRAS (Fat Tuesday) is the French name for Shrove Tuesday, because it was formerly, and, in many cases, is still, customary to make this a day of feasting and merriment, by way of preparation for the forty days' fast of Lent, which immediately follows.

MAREMME; tracts of country in Middle Italy, partly in the States of the Church, partly in Tus
an, the region of Siena, on the Tuscan sea, and on the western declivity of the Apennines, and partly also in Naples. These tracts, by reason of the unhealthy exhalations of a soil abounding in sulphur and alum, cannot be inhabited in summer without danger. This unhealthiness has been especially observed since the fifteenth century, and has already begun, according to Hirth, to desert the Vol
terra, although Volterra rises 3000 feet above the level of the sea. The population of a region, which has thus become unhealthy, must emigrate, or be swept away by fever, and this mal aria already prevails in different streets of Rome, which it will, perhaps, one day render uninhabitable. Whenever, from a diminution of a population, the vegetation consumes less of the mephitic air, the evil becomes worse. On the other hand, the Maremme affords, in winter, a luxuriant pasturage for cattle, which grazes, in summer, on the Apennines, and, in this season, man himself experiences no difficulty in dwelling there, in houses, or in the open air; as in the Roman province of Maremme, which the former small proprietors having been bought out, have become, for miles, the depopulated possessions of a few princes, a small part of the land is used in years of scarcity, for the cultivation of wheat. The earth is ploughed in autumn; hired labourers, from far and near, take care of the land. The other field, then, is put out to grain, which is then deposited in the great magazines of the estates, whence it is conveyed to Rome or to Ostia, for further transportation. These labourers are so careless, that they sleep under the few trees, or in the open air, and if they are attacked with the fever, which is heavy at first, the owner of the estate gives them their dearly earned wages and a loaf, with which they return to their mountains, unless previously overtaken by death. The more

MARENGO; a village in the plains between Alexandria and Tortona, in the royal Sardinian duchy of Montferrat, celebrated for the battle of June 14, 1800. Bonaparte had passed the Alps, between the 16th and 27th of May, with 60,000 men. Melas, the Austrian general, discovered his danger too late. June 2d, Bonaparte had obtained possession of the field of Marengo, which he fortified to the entrance of the valley of Aosta; Murat advanced on Milan, Suchet took Nice, and Berthier defeated at Montebello the lieutenant field-marshal Von Ott.
June 13th, Desaix arrived from Egypt, at the head- quarters of Bonaparte; the main body of the army was concentrated at Marano: Desaix commanded the consular guard. On the 15th, in the battle fought, and battering the wall of Kellermann's brigade of cavalry. The slow advance of the Austrians, and the false direction of their numerous cavalry, gave the remains of the French army time to rally behind the corps of Desaix, which the first consul had already ordered to Novi, to cut off the enemy's retreat to Genoa, but which was now recalled in haste. Desaix had taken his position at St. Giuliano, on the left side of the road from Tortona to Alexandrina, where Kellermann arrived with his brigade of cavalry, having received from the adjutant Savary the command to support the attack of this general. Thus the battle was renewed. Kellermann had only 400 horse, and those fatigued by an eight hours' march, the infantry about 3000 or 4000 strong. The enemy was certain of victory. Desaix was mortally wounded at the first attack, and his little corps, unable to resist, retreated. Behind the vineyards which covered him, Kellermann saw 6000 Hungarian grenadiers break their ranks in pursuit of the French. He threw himself into the fastness of the enemy, where, surprised by this unexpected attack, cut off from their cavalry, and thinking themselves surrounded, threw down their arms before the little band. The Austrian main body supposed that the enemy had received a powerful reinforcement, and fell back, in haste and disorder, to Bordigha. Thus Kellermann decided the victory. This defeat led to the armistice of Alexandrina, between Bonaparte and Melas, according to the terms of which the Austrians evacuated within fourteen days, the citadels of Alexandrina, Tortona, Milan, Turin, Pizziqitone, Arona, and Piacenza, with the fortified places of Genoa, Coni, Ceva, Savona, and Urbino, as desired beyond Piacenza, between the Po and the Mincio.

MARFORIO; a colossal statue, representing the river Rhine, in a lying posture, and standing in the court of a wing of the Capitol at Rome. The name Marforio is said to be a corruption of that of the Maenacte prison or of the temple of Mara, which were near the spot where this statue originally stood, on the forum Romanum. The Marforio is famous for having served, like the Piazza, as the place where the Roman satirists placed their sallies.

MARGARET, queen of Denmark, Norway, and Sweden, very justly called the northern Semiramis, the daughter of Waldemar III., king of Denmark, was born at Copenhagen, in 1583, and married to Haquin or Hacon, king of Norway, in 1583. The talents, firmness, and beauty of the princess rendered her popular among her countrymen, and, on the death of her father, she succeeded in placing her son Olau on the throne of Denmark. The death of her husband in 1589, put the government of Norway in her hands, and the majority of united in the two kingdoms, which was favoured by the imbecility of the Swedish monarch, seems now to have occupied the mind of this princess. Olau died in 1587, and Margaret, by her address, caused herself to be declared queen.

Taking advantage of the domestic dissensions in Sweden, and flattering the ladies with the promise of greater power, she raised a party in that country who recognised her as queen; and having defeated the troops of Albert, the Swedish king, at Falkoping, she soon obtained possession of the throne. Looking forward to a permanent union of the three crowns, she endeavoured to effect her purpose by the celebrated act of union, or treaty of Calmar (1597). She restored the Swedes at home, and was successful against the foreign enemies of her kingdom, but her peace was disturbed by the ingratitude of Eric, whom she had nominated her successor. She died in 1412, after having, by her prudence, energy, address, and foresight, raised herself to a degree of power and grandeur, unequalled in Europe from the time of Charlemagne. See Norway, Sweden, and Denmark.

MARGARET OF ANJOU, daughter of Regnier, or René the Good, titular king of Sicily, was married in 1443, to the imbecile Henry VI. of England. By the marriage articles, Maine was given up to her uncle Charles of Anjou, and this cession facilitated the conquest of Normandy by the French. The loss of this important province was attributed to Margaret, and the house of commons accused Suffolk, the author of her marriage and the favourite minister of the queen, of high treason. He was banished the kingdom. Soon after the sentence, and without ever having quitted the country, he was shot. In the war of the roses, which soon began to desolate England, Margaret played a conspicuous and important part. The bold, active, and even fierce temper of this princess, contrasted singularly with the feeble character of her husband. She was for a long time the life of the Lancastrian party. She defeated the duke of York, and, placing, when surprised, her head, exposed him at the gates of the city of York. In 1461, the princess defeated Warwick, at St. Alban's, and her victories were always stained with numerous executions. The son of the late duke of York, the gallant young Edward, soon appeared at the head of the Yorkists, who, now becoming victorious, Margaret's army was annihilated at Towton, and Edward was declared king. (See Edward IV.) The unhappy queen succeeded in obtaining assistance from Louis XI. of France, but was again defeated, and compelled to fly. After concealing herself in the wildest parts of the country, where she was often compelled to hide in great haste from the enemy, and endured the greatest indignities from the lawless bands, with which the distracted kingdom was then infested, the queen finally took refuge in France. It was not long before Warwick became embroiled with the young king, and determined to replace Henry on the throne. Edward was in turn obliged to escape to the continent, but, having obtained assistance from the duke of Burgundy, reappeared in England after a few months, and defeated Warwick at Barnet, on the very day that Margaret landed in England with her son, then eighteen years of age. On hearing of the defeat and death of her champion, the courage of Margaret seemed for once to forsake her, and she took refuge in the monastery of Bea- lien. But her undaunted and masculine spirit again led her to the field; having collected her partisans, the hostile forces met at Tewksbury, and the Lancastrians were totally defeated. Her son was carried before the king. "How dare you," said Edward, "enter my realm with banner flying?" "To recover my father's kingdom," answered the prince, with the spirit of his mother, "and hering from his father and grandfather to him, and from him to me lineally descended." Edward pushed him back, and the barbarous lords despatched him. Henry soon after died, if he was not murdered, in the Tower, and Margaret, remaining in England, was successful in ransoming her for 50,000 crowns, and, in 1482, she died, "the most unhappy queen, wife, and mother," says Voltaire, "in Europe." Her courage, her suf-
juries, and her crimes have been delineated with historic truth and poetic beauty by the genius of Shakespeare.

MARGARET OF AUSTRIA, daughter of the emperor Maximilian I., born in 1490, was sent to France, after the death of her mother, Mary of Burgundy. She had married as a child, the court of civil war, to whose son (Charles VIII.) she was affianced. Charles, however, having married Anna, heiress of Brittany, she was sent back to her father's court, and was married in 1497 to John, Infant of Spain. On the voyage to Spain, a terrible storm threatened the destruction of the ship. The Infant of Farnese, her husband, however, took possession of her and the estates, in the Couronne Margarithique (1549), which contains also many poems, and her Discours de sa vie et de ses infortunes. Fontenelle has made her a speaker in one of his witty Dialogues of the Dead.

MARGARET OF VALOIS, queen of Navarre, sister to Francis I., was born at Angoulême in 1492. She was brought up at the court of Louis XII., and married the duke of Alençon in 1509, became a widow in 1525; and in 1537, was espoused to Henry d'Albret, king of Navarre. She joined with her husband in every effort to make their small kingdom flourish, by encouraging agriculture and the useful arts, and by improving knowledge and civilization. She was fond of reading, and had been led by curiosity to make herself acquainted with the principles of the reformers, to which she became partially a convert, and not only afforded protection to reformed divines, but used her influence with her brother Francis to the same purpose. She also read the Bible in the French translation, and formed mysteries for representation, from the New Testament, which she caused to be performed at court. She wrote a work entitled Le Miroir de l'Amé plechereuse, printed in 1533, which incurred the censure of the Sorbonne. She was saved from a marriage on this account, and might have suffered more, but for the interposition of her brother, Francis I., who was much attached to her, and in complaisance to whom she, externally at least, became more strict in her attention to the ceremonial of the ancient religion. It will appear extraordinary in the present day, that a princess so contemplative and pious as Margaret of Valois, should be author of a book of tales as free in their tendency as those of Boccaccio. Such is Heptameron, ou sept Journées de la Regne de Navarre, which was written during the gaiety of youth, but not printed until after her death. She died in 1549, leaving one child, Joan d'Albret, afterwards mother of Henry IV. In 1547, a collection of her poems and other pieces was printed, under the title of Marguerites de la Marguerite des Princesse.

MARGARET, called Madame de Parma, duchess of Parma and Piacenza, was born in 1522, and married first to Alexander of Medicil, and afterwards to Octavio Farnese, duke of Parma and Piacenza. Philip II., of Spain, appointed her to the government of the Netherlands, in 1559, where she acted, under the advice of Granvelle (q. v.), with considerable prudence, and, perhaps, might have restored quiet, had not the king sent the duke of Alva to aid in suppressing the disaffection. Alva brought such powers, that nothing but the title of sovereign was left to Margaret, who returned, indignantly, to Italy, to her husband, and died at Ortona in 1586. She was the famous Alexander Farnese, duke of Parma.

MARGARET of Farnese, wife of Henry IV., daughter of Henry II., was born in 1552, and was one of the greatest beauties of her age. Her talents and accomplishments corresponded to the charms of her person. She was married to Henry, then prince of Béarn, in 1572; but the king of Navarre had been the object of her affections, and notwithstanding her amiable qualities and brilliant beauty, she never possessed the heart of her husband. (See Henry IV.) The gallantries of Henry, which he never pretended to conceal from his wife, could not excuse nor authorize, but doubtless contributed to increase, her own irregularities.

On the escape of Henry from Paris, she demanded permission of Henry III. to follow him, but was not, for a long time, allowed to depart. After living several years with the king of Navarre, she returned to Paris, on account of some disgust at the restrictions to which she was subjected. There was in the religion, and while there was guilty of the greatest licentiousness. Rejected at once from the court of Navarre and that of Paris, she maintained herself in the Agenois, in open defiance of her husband and brother.

On the accession of the former to the throne of France, he proposed to dissolve their marriage, to which she consented, on condition of receiving a suitable pension, and having her debts paid. In 1605, Margaret returned to Paris, where she lived in great splendour, retaining her beauty, wit, and habits of dissipation, and died in 1615, at the age of sixty-three. The house of Margaret was frequented by the wits of the day, and she knew how to unite excessive indolence with in pleasure with attention to study. Some very agreeable poems by her are extant, and her Mémoires (1601 and 1713) are extremely curious.

MARGATE; a watering place in the isle of Thanet, Kent, 71 miles E. of London, with which it has frequent communication by steam vessels. It has several pleasant promenades, among which the pier is the favourite. It is much resorted to for sea-bathing. Population, in 1831, 10,339.

MARGRAVE (from the German, Markgraf, count of the mark; in Latin, Marchio; see Marches); a title which often signified the protection of a mark, or a country on the frontier. As early as the times of Charlemagne, marks and margraves appear; for instance, the mark of Austria. The margraves stood immediately under the German kings and emperors, and not under the dukes, in whose country the margravate was situated; yet there were also some margraves dependent on dukes. In the twelfth century, margraves became hereditary, and, at last, the margraves acquired the rank of princes of the empire, and stood between counts and dukes in the German empire. The word mark signifies, anciently, a landmark, and was then taken for countries on the frontier; as the mark Brandenburgh.

MARIA LOUISA, queen of Spain, daughter of Philip duke of Parma, born in 1751, was married to Charles IV., against his wishes, but in obedience to the express commands of his father, in 1765. Maria was prudent and cautious, but addressed to her husband superior to her husband in understanding. She soon overcame the violent temper of Charles, which at first broke out into acts of personal outrage, and so far prevailed over the formality of the Spanish court as to have unrestricted access to the king. Every thing was submitted to her approval. For her
favourites she took care to secure the favour of the king previously to avowing her own inclinations, and thus had the merit of appearing to yield to the wishes of her husband. Even while princess of Austria, and therefore under the king of France, she had already, through the intervention of her younger brother, don Manuel Godoy (q. v.), who became equally the favourite of Charles. (See Charles II.) Their intrigues led to the affair of the escorial, in which Maria acted a most unnatural part against her son. 

In 1709, the revolution of Aranjuez took place, Charles abdicated, and Maria threw herself into the arms of the French. Charles was obliged to retract his abdication, and that celebrated correspondence with Murat followed, in which Maria Louisa, in a letter written with her own hand, accuses her son of heartlessness, cruelty, and want of affection for his parents. After the well-known proceedings at Bayonne, Maria Louisa remained in France a short time with Godoy and the ex-king, and finally went to Rome, where she died in 1819. See Spain.

MARIA THERESA, queen of Hungary and Bohemia, arch-duchess of Austria, and empress of Germany, daughter of the emperor Charles VI., was born at Vienna, 1717, and, in 1736, married duke Francis Stephen of Lorraine (who, in 1737, became grand-duke of Tuscany, by virtue of the treaty of Vienna, October 3, 1735); the day after the death of Charles (October 21, 1740), ascended the throne of Hungary, Bohemia, and Austria, and, on October 21, declared her husband joint ruler. She found the kingdom exhausted, the people dissatisfied, the treasury empty, and the army (with the exception of the troops in Italy) only 30,000 strong. The elector, Charles Albert of Bavaria, supported by France, laid claim to the Austrian hereditary territories, and the electors of Cologne and the Palatinate would likewise not acknowledge the succession of Maria Theresa. Charles Albert of Bavaria was descended from Anna, elder daughter of Ferdinand I., who, by will, had appointed that, upon the extinction of the Austrian male line, the succession to the throne of Bohemia, and of the archduchies and their heirs. Meanwhile Prussia, Poland and Saxony, Russia, the States-General and England, declared for the queen. France only delayed to make an express acknowledgment. Just in this situation of the Austrian court, Frederic II. renewed his claim to four Silesian principalities, and offered, if he received them, to defend the young queen against her enemies. At the same time (December 23, 1740), he marched with an army into Silesia. Maria Theresa was as much surprised as enraged at this step of the king, and Frederic's offers were refused altogether. Meanwhile, the king made rapid progress in Silesia, where the Protestants, who were much oppressed by the government of Austria, received him with joy. The queen of Hungary, although she could nowhere find an ally, with great resolution refused any kind of submission, and collected an army in Moravia, under general Niepperg. But the want of magazines, and the bad roads, prevented Niepperg from acting effectively. The Austrian army, and his command that April 10, took the Marshal Belle-Isle, in the name of France, now negotiated with the king of Prussia, at Molwitz, upon the dissolution of the Austrian monarchy. Philip V., king of Spain, as a descendant in the male line of the house of Hapsburg, by virtue of the family contract, and the creation of Charles Emmanuel, King of Sardinia, a descendant of Catharine, second daughter of Philip II., demanded Milan: Augustus III., notwithstanding the treaty just concluded by him with Maria Theresa, made similar demands on account of his wife, eldest daughter of Joseph I. France had already contrived a plan of division; however, Frederic would not accede to it, lest Prussia should become too powerful in Germany, but turned to George II. of England, hoping, by his means, to induce the queen of Hungary to compliance. But she remained determined to defend the whole kingdom of her fathers, and England promised her a subsidy of £250,000. She had even already formed the design of dividing the states of the king of Prussia, and invited the king of England first to invade them. But Great Britain sought merely to negotiate a peace. Bavaria, in July, 1741, having begun the war against Austria, and two strong French armies having crossed the Rhine and the Meuse; Frederic, likewise, having conquered almost all Silesia; the attempt at mediation, on the part of England, proved fruitless. Maria Theresa considered herself not warranted in giving up the smallest part of her kingdom. She became still more fixed in this determination, by the birth of the archduke Joseph. Her husband had little influence, and intrigues were rife in the imperial council. Hardly had the negotiations with Frederic been broken off, when Belle-Isle with a French army, and the elector of Bavaria, marched into Austria. Lintz was taken, and the elector acknowledged archduke. The Bavarians and French marched to St Polten, and Vienna was summoned to surrender. The king of England, who wished to claim the support of Maria Theresa, was compelled, by a second French army, to conclude a treaty of neutrality, in respect to Hanover, and to promise not to oppose the elevation of the elector of Bavaria to the imperial throne. The electors of Saxony, of Cologne, and of the Palatinate, acceded to the union against Maria Theresa. Spain, on the point of entering Italy, had secured the neutrality of the pope and the remaining Italian princes, and the king of Sardinia was prepared to join his troops to those of the house of Bourbon. In Silesia, Frederic was master of the capital, and on the point of uniting himself with the French and Bavarians. Joseph I. saw Maria Theresa moderate; forsook by her allies, without troops, or money, and good ministers, she was preserved only by her courage, by the attachment of the brave Hungarians, and by the help of England. In this necessity, she summoned a diet at Presburg, and appeared before the assembly in mourning, clothed in the Hungarian fashion, the crown of St Stephen on her head, and girt with the Kingly sword. She addressed a speech, in Latin, to the states, in which she described her situation, and committed herself and her children entirely to the protection of her Hungarians. The youth, the beauty, and the misfortunes of the queen, made a deep impression. The magnates drew their sabres and exclaimed, "Muriamus pro rege nostro Maria TIlerae." Till then she had preserved a calm, majestic demeanour; now she melted into tears, and the interest was still more increased. The troops furnished by Hungary, by their manner of fighting, and by their ferocity, spread terror through the German and French armies. In the mean time, the allies quarrelled among themselves. The pride of Belle-Isle much contributed, who wished to treat the German princes as vassals of France. Bavaria and Saxony contended for the supremacy. The king of Prussia therefore concluded, under British mediation (October 9, 1741), a secret treaty with the English ambassador (who was invested with the tolorcity, for this purpose, by the queen of Hungary), according to which Lower Silesia was to be surrendered to Prussia. Soon after (October 20), Prague
was conquered by the French and Bavarians, and
the elector (November 19) was crowned king of
Bohemia. He was likewise crowned emperor of
Germany, at Frankfort, February 12, 1742, and took
the name of Charles VII. But his troops were
defeated near Scharding (January 23, 1742), and the
electorate occupied by Khevenhilfer, who gave up
the land to be plundered by his army, and entered
Munich upon the same day upon which Charles was
crowned emperor. Frederic II., alarmed for Silesia,
in consequence of the progress of the Austrians, put
an end to the truce, pressed forward to Ignaü, and
invaded Austria, and his hussars spread terror even
to Hungary, but his attempts to retake Prague, and
Maria Theresa rejected his renewed proposals
for peace; but the victory of Frederic at Chotusitsa
(May 17) hastened the conclusion of the preliminaries
of peace, at Breslau (June 11, 1742). The queen
ceded Upper and Lower Silesia and the county of
Glatz, with the exception of the principalities of
Teschen, Jagerndorf, and Troppau, and the moun-
tains on the other side of the Oppe. The definitive
peace was signed the 28th July, under the guarantee
of England. From this time, the arms of Austria
were victorious; prince Charles of Lorraine drove
back the French to Braunau, and blockaded Prague. The
army of Spain was well supported by the English, who
depended upon the continuance of the house of Austria,
excused England to arm for Maria Theresa, and
Holland paid her subsidies. In Italy, the king of
Sardinia, injured by Spain, became reconciled to
Maria Theresa (who ceded to him a part of Milan),
and supported the Austrian arms against Spain and
France. The internal condition of the latter coun-
try, and the age of the prime minister, cardinal
Fleury, induced this statesman to think of peace.
Maria Theresa rejected the proposed conditions.
Maillébois, the French commander, received, there-
fore, orders to press forward from Westphalia to
Prague. But prince Charles of Lorraine went to
meet him with a part of his army, and Maillébois
was compelled to give up his intention of relieving
Prague. Belle-Isle, however, escaped by artifice
with the greater part of his garrison, out of the
famished city, and marched to Eger. The whole of
Bohemia was now in the power of the Austrians,
and Maria Theresa was (May 12) crowned
queen of Bohemia.

After the death of Fleury (January 9, 1743), the
cause of Austria triumphed throughout Europe.
England granted new subsidies, and Sardinia re-
ceived £200,000 in order to support the queen of
Hungary. The States-General supplied 6000 aux-
iliary troops. The French were now driven out of
the Upper Palatinate, by prince Charles of Lorraine,
and the Bavarians, beaten in their own territories a
short time before, conquered by him. The emperor,
Charles VII., concluded, therefore, with the queen
of Bohemia, according to the terms of which he delivered to her, until a general
peace, his hereditary states, and renounced his right
of succession to the Austrian territories. The vic-
tory of the so called pragmatice army, consisting of
English, Hanoverians, Austrians, and Hessians, over
the French, at Dettingen on the Main (June 27, 1743),
where George II. of Britain fought in person,
confirmed the queen and her allies still more in
the determination to humble France. But through a
want of unanimity, the plan, that prince Charles of
Lorraine should enter France, was frustrated. The emperor, Charles VII., stipulated his states, but
settled, with George II., the preliminaries of peace,
according to which he broke off his connexion with
France, and agreed to other stipulations favourable
for the court of Vienna. In return for these, he was
to be recognised as emperor, and, for the support
of his dignity and for the recovery of his states, was to
receive subsidies. George promised to obtain Maria
Theresa's consent, but she insisted on the deposition
of Charles, and wished to retain Bavaria. As little
was she inclined to transfer to the king of Sardinia the provinces promised him in the Milanese. Sardini
assumed, therefore, a threatening position. This and
the representations of Britain compelled the queen,
at length, to comply. She gave up to Sardinia the
province of Vigevano, together with some other
districts, relinquished her claims on the margravate
of Finale, and gave to king Charles Emmanuel III., the
chief command of his troops, to retake Savoy. But
in spite of this, as well as of the previous victory
of the Austrians near Campo Santo, over the Span-
iards (Feb. 8, 1743), the Spanish and French, under
the Infant don Philip, subjected all Savoy. As now
prince Charles of Lorraine could not effect his en-
trance into France, he returned to Vienna, where he
married the archduchess Maria Anna, the sister of
Maria Theresa, and received, as the reward of his
service, the general government of the Netherlands.
Until 1744, Britain and France had fought against
each other as auxiliaries to the chief contending
parties. Now followed a formal declaration of war
on the whole area of the empire, though, on the
15th of March (April 11), France conquered the
most important fortresses in the Netherlands,
and marshal Saxe threatened to subdue the
whole country, when prince Charles of Lorraine fell
upon Alsace. Already the Austrian light cavalry
had spread terror to the gates of Luneville, and king
Stanislaus was compelled to fly from the place.
The king of France, nevertheless, prepared a great force
to meet the prince, and Charles was recalled, in
order to oppose the king of Prussia, who had again
taken up arms. The proud and passionate Maria
Theresa had refused to acknowledge the emperor at
the diet of Frankfort. Moreover, she let her pur-
pose be too plainly seen of holding Bavaria, of
making conquests in France and Italy, of again
taking Silesia, and, in connexion with Saxony and
Britain, of dividing the Prussian states. Frederic,
therefore, in order to anticipate her, and for the
defence of the empire, pressed forward, and, with
the emperor, with France, the elector of the Palatine,
and the king of Sweden, as landgrave of Hesse,
a union at Frankfort. Accordingly, in August, he
made an irruption into Bohemia, with 80,000 men,
conquered Prague and the whole province upon the
east side of the Moldau. The Bavarian and Hessian
troops, at the same time, pressed forward into Bav-
aria, and placed the emperor again in possession of
his capital. The terror of their spread even to
Vienna, but Maria Theresa remained unshaken. She
animated her Hungarians at the diet of Breslau, and
these, assisted by Saxony and the Austrians, hurried
to the delivery of Prague. Charles VII. hastened also hastened out of Alsace and Lorraine, to the
borders of Bohemia, and the Prussians were again
compelled to quit the kingdom. On the other hand,
France conquered Freiburg, the Austrian bulwark
on the west, and pressed forward into the Netherlands.
Even in Italy, the Austrian commander, prince
Lobkowitz, after he had driven back the Spaniards,
and almost made prisoner don Carlos, king of Naples,
neighbouring, was compelled to retreat to Lombardy,
on account of a want of troops. But the death of
Charles VII. (Jan. 20, 1745) opened a new field to
the ambition of Maria Theresa. France endeavoured
again to wrench from the house of Austria the imperial
throne. But the cause of Austria prevailed, in
spite of French artifice, at the Russian court. Bril-
tain also assisted the queen, Maria Theresa, again
with troops and money. The object of the union of Frankfort having failed, Frederic II. sought the intervention of Great Britain, in order to be reconciled with Austria.

During this time, Maria Theresa concluded a treaty (April 22, 1745) at Füssen, with the new elector of Bavaria, by which the latter recognised the pragmatic sanction, and pledged himself to remove the foreign auxiliaries from his states, and to vote for the accession of the duke of Lorraine, the husband of Maria Theresa, to the imperial throne. The queen of Hungary had, besides, concluded a quadruple alliance with the king of Poland, with Holland and England (June 8, 1745), at Warsaw, as well as a treaty at Leipsic (May 18), in which secret articles were introduced respecting the division of the Prussian states between Austria and Saxony. During these proceedings, the French made some progress. After the victory of marshal Saxe over the allies, near Fontenoy (May 11, 1745), the most important places of the Austrian Netherlands fell into the hands of the French. In Italy, where Geneva united itself with Spain, the French and Spaniards took Genoa (May 11). The Miltia was defeated, and the king of Sardinia was compelled to withdraw to his capital.

In Germany also, Frederic delivered himself from a critical situation by his victory over the Austrians and Saxons, at Hohenfriedberg (June 4, 1745). Soon after, the British cabinet concluded, at Hanover, a secret treaty with Frederic, in which Silesia was guaranteed to him, in conformity with the peace of Breslan. But the queen of Hungary and the elector of Saxony showed no inclination to negotiate.

Meantime, Charles of Lorraine was defeated near Sorr, by Frederic II., and Maria Theresa had merely the consolation of having her husband, Francis Stephen, chosen emperor (September 19). October 4, he was crowned with the title of Francis I. At this solemnity, Maria Theresa was the first to exclaim, from a balcony, "Long live the emperor Francis I." Notwithstanding her finances were entirely exhausted, and even the silver vessels of the churches had been sent to the mint, the imperial queen was unwilling to consent to peace. The Russian proposals were altogether rejected, revenge was sought for, and Maria Theresa embraced the bold plan of marching an army, composed of Saxons and Austrians, against Berlin. Besides, she expected powerful support from Russia; but Frederic was beforehand prepared to defend this attack. At Hemmersdorf (November 23), upon which Charles of Lorraine drew back, from Lützen to Bohemia, and the defeat of the Saxons, near Kesselsdorf (Dec. 15), made the Prussians masters of the whole electorate of Saxony. The imperial queen did not yield to her own misfortunes, but, moved by the fate of her allies, concluded, under the British mediation (Dec. 25, 1745), the peace of Dresden, in which Frederic received Silesia, and Maria Theresa was recognised as queen of Bohemia, and her husband as emperor. This peace was so much the more necessary for Austria, as Britain, on account of the landing of the Pretender in Scotland, had been obliged to withdraw her auxiliary troops from the Netherlands, by which means the French had gained a superiority there.

May 4, 1746, Louis XV. made his entry into Brussels, and, with the exception of Luxembourg, all the Austrian Netherlands was in the hands of the enemy. The Austrians gained a battle near Rocou (October 11), increased the loss of the Pretender, and his quarters were invaded. On the other hand, the army of the emperor was victorious in Italy, under the prince of Liechtenstein, at San Lorenzo, over the Spaniards and French; and when, after the death of Philip V., his successor, Frederic VI., withdrew his troops from Italy, the Austrians obtained a complete superiority, and, particularly, blockaded Genoa. The British blockaded the same by sea, and the city surrendered, almost without a resistance. Under these circumstances, to exasperate the citizens drove the imperial general Bottia (who lost 8000 men, his whole artillery and baggage) from Genoa and its territories (December 5—9). Meantime Britain, as well as France and Spain, wished for peace. But the imperial queen had made an alliance with Russia (May 22, 1746), to which also Holland and Britain had acceded. The French, nevertheless, drove the Austrians from Provence, which they had laid waste, and freed Genoa (1747), which had been besieged anew. In the Austrian Netherlands, they made still greater progress. But the advance of the Russians into Germany, and the victory of admiral Hawke over a French squadron, by which the naval force of France was destroyed, hastened the peace. April 30, 1748, the preliminaries were signed by France, Great Britain, and Holland; then followed the peace of Aix-in-Chapelle (November 18), by which, among others cases, the Austrian title to Silesia, which Maria Theresa was acknowledged as the heiress of her father's kingdom; the Infant don Philip obtained only the duchies of Parma, Piacenza, and Guastalla; several provinces also ceded to the king of Sardinia by the treaty of Worms, were left to him.

Maria Theresa now turned all her attention to the restoration of her finances and the improvement of the army. The yearly income, which, in the time of Charles VI., had amounted only to 50,000,000, rose, by prudent management, to 36,000,000 guilders, although Parma and Silesia, which last alone produced 6,000,000, were lost. The army consisted of 108,000 men, besides the troops in Italy and the Netherlands, and the whole military department, under the direction of Daun, was placed upon a better footing. Maria Theresa also made great changes in the administration of justice, of the finance, and of the police. Though she unwillingly allowed herself to be governed, yet, from her inexperience, she did not rely upon herself, and sought to procure exact information by consultations with her ministers, her husband, and others. The difference of opinion of two of her counsellors, Wasner and Bartonstein, frequently led her to waver between opposite measures until she at length confided to the count (afterwards prince) Kaunitz, the chief direction of public powerful affairs. Soon after, the relations between Britain and Austria, induced the latter to think of a reconciliation with France; and Maria Theresa, in spite of her pride and her strong principles, consented, upon the advice of Kaunitz, to write very kindly to the marchioness of Pompadour, who, encouraged by this concession, of the greatest queen of Europe, exerted all her influence to effect the connexion which Maria Theresa desired. Yet her endeavours were foiled, at this time, by the counter representations which the friends of Frederic II. and the enemies of Austria made to the cabinet of Versailles.

In 1755 arose dissensions between Britain and France, respecting their possessions in America, and Great Britain demanded aid of Austria. This was refused, and thus the foundation for the dissension of these powers, hitherto friendly, was laid. Frederic II. made use of this opportunity, and concluded with George II. (Jan. 16, 1756) a treaty, which, mutually栗 ordered the entrance of foreign troops into Germany. The marchioness of Pompadour, in this year, effected a change in the French ministry, and this made it possible to establish friendly relations between the courts of Vienna and
Versailles. Maria Theresa concluded now (May 1) the union with France against Frederic the Great, which occasioned the seven years' war (q. v.; also Frederic II). After the conclusion of this unfortunate war, Maria Theresa's son, the archduke Joseph, was chosen Roman king, March 27, 1764, by which means she gained over him the possession of the German imperial dignity. Her husband, the emperor Francis, died Aug. 28, 1785, and his death caused her deep and lasting distress.

Joseph II. was now emperor, but, although declared by his mother, her colleague in his hereditary possessions, he mingled as little as his father had done in the government. Originally, the direction of the army was given to him. Maria Theresa founded and improved schools, universities, and academies, and granted prizes to the students. She rewarded also those who made any important improvements in the arts, and turned her attention particularly to agriculture, which was denominated, upon a medal that she caused to be struck, the support of all the arts. Still greater was her merit in the abolition of many abuses of the church. She forbade the presence of the clergy at the making of wills, deprived the church and the convents of their sanctuaries, and suppressed the inquisition at Milan. She abolished the Jesuits, and prohibited the admission of individuals of both sexes as members of convents before the age of twenty-five years. She also abolished the rack in all her states. Apparently through the influence of Kaunitz, she concluded at Petersburg (Aug. 6, 1772), with Russia and Prussia, the agreement for the partition of Poland. In this partition, she received Galicia and Lodomeria (27,000 square miles, with 2,500,000 inhabitants). To induce her to abstain from farther demands, the Porte was compelled to give up Bukowina to her (Feb. 25, 1777). Austria was now in a prosperous situation. It had 260,000 troops, and an income exceeding its expenditures. The political Choiseul therefore sought, by the marriage of the dauphin with the daughter of Maria Theresa (1770), the afterwards so unfortunate Maria Antoinette, to form a closer union between France and Austria; and the court of Vienna acceded to the proposal, hoping, on the conversion of the French king, to obtain a powerful influence over the cabinet of Versailles. About this time, the death of the elector of Bavaria (Dec. 30, 1777) produced the Bavarian war of succession. (See Tschchen, Peace of.) Austria received, on this occasion, the Inviertel; but the decline of her influence over Germany was perceptible. After this peace, the court of Vienna sought to unite Britain as well as Russia more firmly to itself, in order to procure for the archduke Maximilian the electoral dignity of Cologne and the bishopric of Munster, which was at last effected, in spite of the opposition of Frederic II. Thus had Maria Theresa obtained for her son the title of the government of important states; for Leopold, the grand duchy of Tuscany; for Ferdinand, a marriage with the daughter of the duke of Modena, the succession to that duchy; and for Maximilian, the dignity of elector and bishop of Cologne and Munster. Of the younger unoffended sons, the eldest, Charles, became king, namely, of France and Naples; and the house of Austria, which, in 1740, seemed on the brink of ruin, was now, by the internal situation of its states, as well as by its foreign family and other connections, at the very summit of power.

Maria Theresa died Nov. 29, 1780, at the age of sixty-eight. She had been exceedingly active. She loved her children with the deepest tenderness. To her servants she was very kind. The welfare of her subjects was her highest aim. But she lent an ear too easily to spies and informers, and endeavored to introduce them into the privacy of families. Her great piety bordered upon enthusiasm, and made her intolerant; hence the pernicious restraint of the press, &c. She wrote two or three books of devotion, of which one was published at Vienna (1774).

She accompanied him to Vienna, and there sometimes tried to teach him how to control herself quickly. When young, she was one of the handsomest women of her time. In advanced age, she became very corpulent. The small-pox, in 1767, and, soon after, a fall from a carriage, which nearly deprived her of sight, destroyed her beauty. After the death of her husband, she appeared in death mask, and neglected her appearance entirely. She deserves to be recorded as an instance of conjugal love. Of sixteen children, which she bore the emperor, ten survived her. The four sons and the two younger daughters, we have noticed above. Of the four elder ones, the first was abbess of Prague and Kalenfurt; the second, Marie Christine (the favourite of her mother), was married to duke Albert of Saxe-Teschen, a son of Augustus III., king of Poland; the third was abbess of Innspruck, and the fourth, wife of the duke of Parma.

MARIANA, Jean, or John, one of the first Spanish historians. Born at Talavera, 1536, devoted himself to the clerical profession, and entered the society of the Jesuits. At the university of Alcala, he acquired that pure taste and that eloquence which are found in his writings. He then journeyed, and taught theology, for thirteen years, with distinction, in Rome, Sicily, and Paris. The climate of the latter city, however, and still more his indefatigable industry, undermined his health, so that he returned, in 1574, into the Jesuits' college at Toledo. He now wrote his Historia de Rebus Hispaniae (first ed., Toledo, 1592), in elegant Latin, that the great deeds of his countrymen might become known to all nations. His tone is impartial, though he ardently loves Spain, and admires Spanish virtue. Though a Jesuit, he complains of pope Alexander VI., and says that he caused Cesar to leave the clerical order contra fas, contra aequiopra, contra omnia equitatus furo. Though a Spaniard, he is not blindly prejudiced for his king. He describes, in the course of events, and his censure of Ferdinand is moderated only by considering his good qualities as personal, his bad ones as common to all princes. His style is elegant, and often beautiful and concise. His freedom excited the suspicions of the inquisition. He has not, however, much claim to originality. Ranke, in his Zur Kritik neuerer Geschichtskreber (Leipsic and Berlin, 1824), says that, having made excerpts of Marianna and Zurita throughout, he hardly found a single instance in which Marianna followed sources peculiar to him. Every thing important appears to have been taken from Zurita, because they agree entirely; and in this work proceeded Marianna's. He, however, not indiscriminately, having been dedicated to the deputies of Arragon, in 1579, while the five last books of Marianna's History appeared in 1605. Ranke concludes, therefore, that Marianna cannot maintain a place among the sources of modern history, but admits that his nature and spirit have a tendency to reading. The great success of Marianna's work, and the fear of seeing it badly translated, induced the author to translate it into the Castilian idiom himself, with those improvements which the progress of years had suggested to him. Four editions of the translation appeared during his lifetime, each with corrections and additions. The most complete version of the work appeared at Valencia (1785 to 1796, nine vols., folio) and at Madrid (1819, eight vols.). An English translation was made by captain Stephens, the conti-
MARIANA—MARINO.

Marini, or Marino, Giambattista, stands at the head of a school of Italian poets—the Marinists. (See Italy, division Italian Poetry.) He was born, 1630, at Naples. Against the wish of his father, who intended him for the law, he was allowed his inclination for poetry. The duke of Bovino took him into his palace, and the prince of Conca, high admiral of the kingdom, into his service. Here he became acquainted with Torquato Tasso, and, in intercourse with him, his powers were developed. At a later period, he found a patron in the cardinal Pietro Aldobrandini at Rome, with whom he went to Turin, where a flattering poem, on the duke of Savoy, entitled Il Ritrovato, procured him a kind reception, an order, the title of the duke's secretary, &c. The envy of his enemies, and his satirical humour, involved him in various disputes. Margetts, the divorced wife of Henry IV., had invited him to Paris. After her death, Maria de' Medici became his patroness there. He showed his gratitude in a poem—Il Tempio—for which new rewards were bestowed upon him. Towards the end of 1622, he returned to Italy, was elected president of the Accademia degli Umoristi at Rome, and, after some years, president of that institution, which in 1697, he chose the incomparably beautiful Possilipo for his residence, and hoped to enjoy the fortune he had acquired; but death removed him in 1625. Marini's most famous work, the epic Adone, was first published in Paris, 1623, and has been equally praised and blamed, both for its plan and execution. The voluptuousness of many passages has procured him among the prohibited books. The other works of Marini are a narrative poem La Strage degli Innocenti, and a great collection of miscellaneous poems (published at various times, under the titles of La Lira, and La Zampognate); also Lettere grave, argute, facete, and other compositions in prose and verse. Some of his sonnets are among the most perfect in the Italian language. He who has read Marini—and there are many who condemn him without having done this—will readily admit that nature endowed him with the gifts of a poet, but ambition made him fail. He was jealous of the laurels of Ariosto and Tasso, and strove after a new distinction, attempted to penetrate deeper into the nature of poetry, and combine with a natural lightness and elegance of proportions. The ruins have lately been secured from further decay. Much has been written on them: Jacob's Das Schloss Marenburg (1819); professor Bisching's Das Schloss der Deutschen Ritter in Marenburg (Berlin, 1823, 4to, with seven engravings); and professor Volgi's Geschichte Marburgens, mit Ansichten des Ordenshauses (Konigsberg, 1824).

MARIETTE, Pierre Jean, born at Paris, 1694, died in 1774, was instructed by his father in the art of engraving, and, by his travels in Germany and Italy, rendered himself familiar with the fine arts. In 1735, he purchased the post of royal secretary and contriver of the chancellery, and devoted himself entirely to his collection of engravings. His works are Traité du Cabinet du Roi (1750); Lettres à M. de Caylus; Lettres sur la Fontaine de la Rue de Grenelle; Architecture Française; Descriptions d'Agulles's and Count's collections, &c. His taste and learning procured him the friendship of Caylus, Diderot, and Diderot, by whom he was invested with the supervision of the Recueil des Peintures antiques, from drawings by Pierre Santo Bartoli.

MARIGNANO, or MELEGNO; a town in Italy, three leagues and a half south-east of Milan; rendered famous by the victory of Francis I. over the Sforzas, and of Milan. See Francis I.

MARINE. See Navy.

MARINE LAW. See Commerciel'law.
MARIONETTES—MARIUS.

Statuta Illustrissimo Reip. S. Marini.—See Valli, Origine e Governo di San Marino (1650); Delicò, Memorie di S. Marino (1804); Simond’s Travels in Italy.

MARIONETTES. See Puppetshows, Maritime Law. See Commercial Law.

MARIUS, CALL.; a Roman of Arpiniun, in the territory of the Volsci, born of obscure parents, whom he assisted in the labours of the field. With strength of body he united much understanding, firmness of purpose, and a spirit of enterprise. His character was rough, ambitious, and unyielding. Marius devoted himself to a military career, and gave the first proofs of his courage at Numantia, under Scipio Africanus. His merits successively raised him through the different ranks, and Scipio foresaw in him a great general. During the consulship of Caecilius Metellus and L. Aurelius Cotta, he was made tribune by the influence of the former. In order to check the abuses at the Comitia, he proposed the law making the出席ance to the place of voting narrower, so as to prevent the influence of the solicitation of the candidates and their friends (see Maria). The patricians, indignant at a law so injurious to their influence, demanded of Marius an explanation of his motives. The two consuls declared against him; but Marius threatened them with the weight of his name, and, having declared to his obligations to Metellus, ordered the lictor to conduct the consul to prison. His firmness triumphed, and gained him the favour of the people. He afterwards modified the law proposed by Gracchus for the division of corn among the poor citizens, so as to spare the public treasury. He then stood candidate for the censorship, but without success. He was, however, appointed praetor. Having been charged with procuring his election by bribery, he was acquitted, and discharged the duties of his office to general satisfaction, supplying the deficiencies of his education by the natural strength of his understanding. The office of propretor of Spain, which was conferred on him the following year, he discharged with great reputation. He delivered the country from robbers, and endeavoured to civilize the yet savage natives. On his return, he again devoted himself to political affairs; and by his marriage with Julia, the aunt of Julius Caesar, connected himself with the illustrious Julian family. A wider career was now open to him. He accompanied the consul Q. Caecilius Metellus, as his lieutenant, to the Jugurthine war. His courage and his patience in hardships, in which he placed himself on a level with the meanest soldier, gained for him the esteem of Metellus and the love of the army. But Marius was so ungrateful as to vilify the man who had raised him from obscurity, in order to rise by his fall. Their hatred increased daily. At length Marius asked permission of Metellus to return to Rome, in order to seek for the consulship. Metellus, not without ridicule, retained his request; but Marius continued his importance, till he obtained his object, a few days before the election of the consuls. In six days he hastened to Rome, and, by calumnies against Metellus, and the most extravagant promises, he gained over the minds of the people so completely, that he was chosen unanimously; and, after having triumphed over Catulus, he led the army into Spain, and, by his victorious campaign, united the people of Numidia for the third time, he obtained the command in that province (B. C. 108). L. Cassius Longinus was his colleague in the consulship. As Marius perceived that his plebeian origin would never permit him to gain the support of the patricians, and that he must expect the support of the people, and, among the common people, he declared himself the enemy of the nobles. In proportion to the violence with which he attacked the nobility in his public speeches, was the favour of the populace. As the rich refused to enrol themselves in his legions, in order to complete the number, he had recourse to the lowest class of citizens, who had previously been employed only in cases of the most pressing necessity, and taught the Roman people to enrich themselves by the service. With the speed of lightning, he appeared in Ticinum, and began the campaign. In the mean time, Jugurtha had found an ally in Bocchus, king of Mauritian. Two armies opposed Marius. Marius avoided a general engagement till he was forced to yield to the impatience of his men. He then directed his march through the deserts of Numidia to Capua, the capital of the country, which he stormed and destroyed. Terrified by this cruel example, every place which he approached surrendered. While Marius was prosecuting the war, L. Cornelius Sylla, the questor, arrived with a reinforcement of cavalry, and, by his courage, his perseverance against obstacles, and his manner of living, procured the friendship of his commander. After the capture of Mulucha, Marius led his troops back to the sea-coast, in order to place them in winter quarters. On this march, Bocchus and Jugurtha attacked him, and surround him in his intrenchments. The Romans seemed to be lost; but, during the night, Marius, exhastted with dancing and revelry, and almost entirely destroyed them. After this defeat, Bocchus made his peace with the Romans, and was persuaded by Sylla to betray Jugurth to them. Marius divided a part of Jugurtha’s territory between Bocchus and Hiempsal I., or Mandresat, and made the remainder a Roman province. Before his return to the capital, he received the unexpected information that he was chosen consul the second time. The people, terrified by the approach of the Cimbri and Teutones, had chosen him contrary to the laws. Marius received in Rome the honour of a triumph. He then marched over the Alps to Gaul, where C. Fulvius Flaminia, his colleague, went to Upper Italy. The Cimbri and Teutones, instead of passing into Italy, had invaded Spain, and thus given Marius an opportunity to discipline his army. As the terror of the Cimbri was unabated, he was made consul a third and fourth time in succession, and, at length, returned to Gaul, invaded Spain, and threatened to invade Italy from two sides. Marius stationed his army at the confluence of the Rhone and the Isère, while his colleague Latinius Catulus was to take his position at the foot of the Norican Alps. As it was impossible for ships to enter the mouth of the Rhone, he constructed a canal, the Passa Mariana, uniting the waters of the Rhone with the Mediterranean, to supply the army with provisions from the sea. This work was scarcely finished, when the Teutones, with the Ambrones, pitched their camps opposite to the Romans. Marius hesitated to meet in the open field so superior a force, and, by cutting off their means of subsistence, he hoped, if not to destroy, at least to weaken them. But the barbarians determined to continue their course, without regard to the Roman army. Marius pursued and overtook them at Aquae Sextiae. He first attacked the Ambrones, and, on the next day the Teutones, and destroyed both armies (B. C. 102). On the march of the victorious army from the north, the victors were sent from Rome, to inform him that he was appointed, for the fifth time, to the consulship, and that the honour of a second triumph was decreed to him. However, he would not accept until he had made himself worthy of it by the defeat of the Cimbri. The victorious armies, however, refused to march east; Marius united his forces with those of Latinius, and marched against them. They then sent an en-
bassy, requesting a grant of territory in which they might reside. But Marius scornfully announced to them the total destruction of their allies. Exasperated by this news, the Cinibrini advanced to meet him. Before his king, called upon Marius, to desist from his suddenness, and for a decisive engagement. He selected a plain called Campi Raudini, not far from Vercelli, which would not allow the Cinibrini army (300,000 foot and 15,000 horse) to avail themselves fully of their superiority of numbers. The Roman army was 52,000 strong. Marius reserved to himself the chief attack, but the battle was decided by Lutatius and Sylla. The defeat of the barbarians was complete: 150,000 fell, 60,000 surrendered, and the remainder preferred a voluntary death to slavery (B. C. 101). Marius and Lutatius entered the city in triumph.

This glorious general was appointed consul for the sixth time, although the noble Metellus Numidicus was his rival. He now entered into a combination with the tribunes of the preceding year: Apuleius Saturninus and the praetor Servilius Glauca, and, in connexion with them, employed every means to gain the people, and deprive the patriots of their power. His success was effected not only by the law that every order of the people should be confirmed by the senate, within five days after its promulgation. The senators were compelled to swear obedience to this law; and Metellus, refusing to do it, was punished with exile. In the mean time, Marius had become an object of suspicion to both parties, by his ambiguous conduct, and on the next consul election, he was not rechosen. Saturninus and Glauca were the victims of popular fury.

Chagrined at the recall of his enemy Metellus, Marius went to Asia, under pretence of performing a vow to Cybele, but, in reality, to gain new importance by kindling a new war. On his return, he was astonished to find himself almost entirely forgotten, and Sylla the favourite of the people. His lustre was excited, and a civil war would have been the consequence, if the consuls had not checked it in its commencement. Soon after this, the social war broke out. Marius gained a few victories in an inferior command, but acquired less reputation than misfortune. He was disgraced. His health was broken by age and sickness, and, in the midst of the war, he resigned his office. This dangerous contest was hardly closed, when the civil war broke out between Marius and Sylla. They were both candidates for the command against Mithridates. The consuls favoured Sylla. P. Sulpicius, tribune of the people, who favoured Marius, attacked them sword in hand, and drove Sylla from Rome. Marius received the chief command; but the army marched to Rome under his rival, where Marius was committing the greatest violations against the friends of Sylla. Sylla entered the city without resistance. Marius and his son died, and were proscribed. Separated from his son, Marius wandered about on the coasts of Italy, and, after escaping several times the pursuit of his enemies, was found by some horsemen in a marsh. He was conducted naked to Minturnae, where the magistrate, after some deliberation, resolved to obey the orders of the senate, and of Sylla. But the consuls and people, who were joined against Sylla, were aiding the execution of Marius, dropped his sword, and the people of Minturnae, moved with compassion, conducted him to the coast, whence a vessel conveyed him to Africa. He landed amid the ruins of Carthage, and joined his son, who had the same misfortune. In Numidia in vain. They spent the winter together in the island of Cerbere. When they received information that their party had once more triumphed in Italy, by means of Cinna, Marius hastened to return. He declined the honours offered him, and united himself with Cinna and Sertorius. They resolved to attack the city, which was defended by Octavius. Provisions and soldiers failing in the city, the senate, therefore, offered to throw open the consular elections; Marius should be put to death without trial. This was granted. Marius was at first unwilling to enter the city, till the act of prescription against him was repelled. But while the citizens were assembled to rescind the act, he entered with his infuriated followers, and in violation of the conditions, a dreadful massacre took place, to which Sertorius and Cinna finally put an end. He had given orders for the death of every one whose salvation he did not return. Almost all the senators, who were opposed to the popular party, were put to death, and their estates confiscated. When the term of Cinna’s consulsipship was completed, he declared himself and Marius consuls. Marius was now seventy years of age, and enjoyed this dignity for the seventh time; but seventeen days after he died (B. C. 86), exhausted by his preceding sufferings, and by the anxiety which the threats of Sylla occasioned.

MARIUS DE CHAMBLY, a novelist and dramatic writer, born in Paris, 1688. He was led by his inclinations to write for the theatre; and, thinking that nothing new was to be done in the way of character pieces, he wrote comedies of intrigue. At the time of their appearance, his dramas were popular; but a few only have remained on the stage. His characters want life, his plots variety. The development of the intrigue is so simple, that the denouement is discoverable from the beginning. He is so far-fetch’d and affected, that the French have given his name to a conceit and affectation of manner or expression (marivaudage). Among his other productions, the best is his Vie de Marianne, which abounds in interesting situations, faithful delineations, and tenderness of sentiment; Le Payen parvenu; Le Philosophe indigent, &c., are not of much merit. The same forced and conceived style that disfigures his theatrical productions, prevails in these romances. He became a member of the French academy in 1743, and died there in 1772.

MARJoram (origanum); a genus of labiate plants, two or three species of which are cultivated in gardens, and used for culinary purposes. They are very agreeable aromatics, and diffuse a sweet and pleasant odour.

MARK, COUNT OF, in the former circle of Westphalia, at present in the Prussian province of Westphalia, government of Minden, contains 657 square miles. Part of it is extremely fertile, part mountainous. It affords much iron ore and coal, which furnish fuel for the many manufactories in all kinds of wares of metal. About 5000 people are here engaged in manufacturing. In 1801, the inhabitants amounted to 135,000. In 1807, the county of Mark was added to the grand duchy of Berg, and formed the greater part of the department of the Buhr. In 1813, it reverted to Prussia.

MARK. See Marches.

MARK ANTONY. See Antonius.

MARK, THE EVANGELIST; according to the old ecclesiastical writers, the person known in the Acts of the Apostles by the name of John Mark, who was, for many years, the companion of Paul and Peter on their journeys. His mother Mary was generally in the train of Jesus, and his house at Jerusalem was a centre of the reception of the apostles. He was himself present at a part of the events which he relates, and received his information partly from eye-witnesses. His gospel is
MARK—MARMONTEL. 691

plainly intended for Christian converts from pagan

ism. It is not certain, however, whether it was first

read at Rome or Alexandria, where he had estab-

lished churches, or at Antioch. He is distinguished

from the other evangelists by his brevity, passing

over many passages which other more calculous

Messiah, which could be important only to Jewish

converts. The genuineness of his gospel has never

been questioned on any good grounds.

MARK, or MARC, denotes a weight used in

several parts of Europe, and for several commodi-

ties, especially meat and fish. When gold or sil-

cer are sold by the mark, it is divided into 24

carats.—Mark is also, in England, a money of ac-

count, and in some other countries a coin. The

English mark is two thirds of a pound sterling, or

13s. 4d., and the Scotch mark is of equal value in

Scotch money of account. For the mark-bance of

Hamburg, see Cohn.

MARK, LIBRARY OF St. See Venice.

MARK, Order of St.; a Venetian order, the origin

of which is not known. The doge, as well as the sen-

ate, elected knights of St Mark, who enjoyed a pension.

Foreigners, also, particularly scholars, were elected.

MARKLAND, JEREMIAH, an eminent critic, was

born in 1693, and received his education at Cam-

bridge. In 1717, he obtained a fellowship in that

university, which he held until his death in 1776.

His time was devoted to his favourite studies, un-

interrupted by any avocations but those of a college

and travelling tutor. His principal works are, an

edition of the Sylva of Statius; Notes on Maximus

Tyrius; Remarks on the Epistles of Cicero to Brutu-

us, and of Brutus to Cicero; with a Dissertation

upon four Orations ascribed to Cicero; an edition of

the Supplyes Matieres of Euripides; to which was

annexed a tract De Graecorum quinta Declinatione,

and other philological works.

MARLBOROUGH, DUKE OF. See Churchill.

MARL. Compact limestone (q. v.), by increase

of argillaceous matter, passes into marl. Marl is

essentially composed of carbonate of lime and clay,

in various proportions. But some marls are more or

less indurated, while others are friable and earthy.

In some, the argillaceous ingredient is comparatively

small, while in others it abounds, and furnishes the

predominant characters. The calcareous and argil-

laceous marls unite by imperceptible degrees, and the

latter sometimes pass into clay. Marl frequently

contains sand and some other foreign ingredients.

Some divide marls into calcareous and argillaceous,

others into indurated and earthy. The hardness of

indurated marl is inconsiderable. In most cases, it

may be scratched by the finger nail, and may always

be easily cut by a knife. It has a dull aspect, like

chalk or clay, often with a few glimmering spots aris-

ing from sand or mica. Its fracture, usually earthy,

may also be splintery or conchoidal. It is opaque;

its colour commonly grey, often shaded with yellow,

blue, brown, black, &c. It also presents shades of

green, and is sometimes reddish or yellowish-

brown. Specific gravity usually between 2·3 and

2·7; and the mineralogical analysis is as follows:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbonate of lime</td>
<td>90%</td>
</tr>
<tr>
<td>Clay</td>
<td>10%</td>
</tr>
</tbody>
</table>

The marl is used for manure, and, when mixed with

its organic remains, as shells, fish, bones of birds and

of quadrupeds, and sometimes vegetables. The organic

remains are numerous and extremely interesting in

the marly strata examined by Cuvier and Brognart

in the vicinity of Paris. Marl is found more or less

in most countries. Its most general use is as a

manure. The fertility of any soil depends in a great

degree on the suitable proportion of the earths which

it contains; and whether a calcareous or an argilla-

ceous marl will be more suitable to a given soil, may

be determined with much probability by its tenacity

or looseness, moisture or dryness. To employ marls

properly, the farmer should be thoroughly acquainted

with the chemical properties or constituent parts of

the marl itself, and with the ingredients of the soil.

He may, in general, determine the existence of marl by

its falling into powder, when dried, after exposure to

moist air. To ascertain the proportion of its ingredients, the calcareous

part may be extracted from a given weight of the marl, by solution in acids, and the residue, being dried and weighed, will give the quantity of clay with sufficient accuracy. See Manures.

MARLOWE, CHRISTOPHER; an eminent English

poet and dramatist of the Elizabethan age, was edu-

cated at Cambridge, whence he proceeded M. A. in

1587. He afterwards settled in London, and became

an actor, as well as a writer for the stage. Besides

six tragedies of his own composition, and one written

in conjunction with Thomas Nashe, he left a transla-

tion of the Rape of Helen, by Coluthus; some of

Ovid's Elegies; the first book of Lucan's Pharsalia;

and the History of Mithridates, by George Chapman.

The exact time of his death is not known; but, according to Anthony Wood, it took place previously to 1593, and was owing to a wound received from the hand of a servant man, whom he had attacked on suspicion of being rivalled by him in the favours of a mistress.

MARLY, MARLY-LE-ROI, or MARLY-LA-

MACHINE; a village of France, 13 league from

Versailles, on the edge of the forest of the same

name. It still contains some fine country seats; but

the royal castle built by Louis XIV., and the beauti-

ful gardens attached to it, no longer exist, having

been destroyed during the Revolution. It is now re-

markable only for its water-works for supplying

Versailles with water. The celebrated machine,

which conducted the water over the Seine, having

fallen to decay, its place is supplied by a forcing

pump, which raises the water 500 feet, and an aqua-

duct of thirty miles in length.

MARMONTEL, JOHN FRANCIS; a distinguished

French writer, was born in 1733, at Bort, a small

town in the Limousin. He was the eldest son of a

large family, the offspring of parents in a humble

situation of life; but his mother, a woman of sense

and attainments, much superior to her rank, favoured

his ardour for mental cultivation; and by her in-

fluence he was sent to the Jesuits' college of Mauriac.

At the age of fifteen, his father placed him with a

merchant at Clermont; but having expressed his

dislike of this occupation, he was enabled to obtain

2 x 2
MARMORA

admission into the college of Clermont, where he gradually acquired pupils; and his father soon after dying, he showed the goodness of his heart, by taking upon himself the care of the family. He subsequently engaged as a teacher of philosophy, in a seminary of Bernardines, at Toulouse, and became a distinguished candidate for the prizes at the Floral games, which acquired him the notice of Voltaire, who recommended him to try his fortune at Paris.

He accordingly arrived there in 1746, and, after experiencing some vicissitudes, brought out a tragedy in 1748, which at once raised him into competence and celebrity; and, having been recommended to the king's mistress, Madame Pompadour, he was appointed secretary of the royal buildings, under her brother, the marquis de Marigny. Having distinguished himself by writing some of his well-known tales, to assist his friend Boissy, then intrusted with the Mercure de France, on the death of the latter, it was given to him, and resigning his post of secretary, he took up his abode with madame Géofrin. He subsequently lost the Mercure de France, by merely replacing, to start a joke a duke de Miramont, and was committed to the Bastile, because he would not give up the real author. In 1763, after much opposition, he succeeded Marivaux as a member of the French Academy. His next literary production was Béliveau, which, in consequence of its liberal sentiments in favour of toleration, was censured by the government, and widely read in every country in Europe. In order to benefit Grétry, he worked up several little stories into comic operas, which were all acted with great success. On the death of Duclos, he was appointed historiographer of France. He took part in the celebrated musical dispute between Gluck and Piccini, as a partisan of the latter. He died in April, 1793. His son, Alember, was elected secretary to the French academy.

On the breaking out of the revolution, he retired to a cottage in Normandy, where he passed his time in the education of his children, and the composition of a series of tales of a more serious cast than his former ones; together with his amusing Memoirs of his life.

He died in April, 1797. He was a member of the council of elders; but, his election being subsequently declared null, he again retired to his cottage, where he died of an apoplexy, in December, 1799, in the seventy-seventh year of his age. Montesant holds a high place among modern French authors. He was a farm and eloquent on elevated subjects; easy, lively, inventive, and ingenious on light ones, he addresses himself with equal success to the imagination, the judgment, and the heart. His Contes Moraux, in general, inculcate useful and valuable lessons, but their morality is sometimes questionable. Some of his didactic works in prose, continue to be highly esteemed, and more especially his course of literature inserted in the Encyclopédie. Since his death, besides his own memoirs, there have appeared Memoirs of the Regency of the Duke of Orleans (printed from his MS., in 2 vols., 12mo.). The works of Marmontel have been collected into an edition of thirty-two volumes, octavo.

MARMOTA, or, anciently the Proponents; a sea between Europe and Asia, about sixty leagues in length, and twenty in its greatest breadth. It communicates to the S. W. with the Archipelago, by the Dardanelles, and with the Black sea to the N. E. by the straits of Constantinople. Constantinople lies on its western shore. The tides are hardly perceptible. In spring and summer, a current sets from the Black sea into the sea of Marmora, which, in turn, runs into the Archipelago.

MARMOT (aretomya); a genus of small quadrupeds, somewhat resembling the rat, with which they were classed by Linnaeus. They have two incisors in each jaw, and ten grinders in the upper, and eight in the lower jaw; six long toes, and a tunnel in place of a thumb, on the fore feet, and five on the hinder.

There are several species, the most striking of which are the Alpine marmot (A. Alpinus) about the size of a rabbit, with a short tail; of a grayish-yellow colour, approaching to brown towards the head. This species inhabits the mountains of Europe, just below the region of perpetual snow, and feeds on insects, roots, and vegetables. When these animals (which live in societies) are eating, they post a sentinel, who gives a shrill whistle on the approach of any danger, when they all retire into their burrows, which are formed in the shape of the letter Y, and well lined with moss and hay. They remain in these retreats, in a torpid state, from the autumn till April. They are easily tamed.

The Quebec marmot (A. empetro) inhabits the northern part of the American continent. It appears to be a solitary animal, dwells in burrows in the earth, but has the faculty of ascending trees. Its burrows were always uppermost, and situated in dry spots, at some distance from the water. When full, it is sometimes eaten. Its fur is of no value.

Woodchuck (A. monax). This species, which is also known by the name of ground-hog, is common in all the Middle States of America, living in societies, and making burrows in the sides of hills, which they ornamented with white gravel and white ashes. They are classed in the same genus of Marmota, and live the greater part of the year in their burrows, and only come out in May to gather vegetables. They feed on vegetables, and are very fond of red clover. They are capable of being tamed, and are very cleanly. The female produces six young at a birth.

There are many other marmots inhabiting North America which have been considered as belonging to this genus; but these are the sub-genus Thamnomys. The most celebrated of these is the Prairie dog, or Wistomish (A. tudoviensia). It has received the name of prairie dog from a supposed similarity between its warning cry and the barking of a small dog. They live in large communities; their villages, as they are termed by the hunters, sometimes being many miles in extent. The entrance to each burrow is at the summit of the mound of earth thrown up, during the progress of the excavation below. The hole descends vertically to the depth of one or two feet, after which it continues in an oblique direction. This marmot, like the rest of the species, becomes torpid during the winter, and, to protect itself, the ground of the season, stops the mouth of its hole, and constructed a nest globular cell at the bottom of it, from dry grass, so compactly put together, that it might be rolled along the ground almost without injury. The other American species of this sub-genus are, Parryi gattatus, Richardsoni, Frankliniti, Beecheyi, Douglasti, Carteri, Hoodi. See Richardson, Fum. Am. Bor. and Goodman's Nat. Hist.

MARNE, a river of France, rises near Langres, runs about 220 miles, and enters the Seine a few miles above Paris.

MAROCO. See Morocco

MARONITES; a sect of Eastern Christians, whose origin was a consequence of the Monothelite controversy. In the seventh century, the opinion that Christ, though he united in himself the divine and human nature, had but one will (Monothelitism), arose among the Eastern nations, and was supported by several emperors, particularly Heraclius. But when their last patron, the emperor Philipp Bardanes, died, in 692, Monothelitism was condemned and banished by his successor, Anastasius. The remnant of this party survived in the Maronites, so named from their founder Maron—a society of monks in Syria, about mount Lebanon, which is mentioned

MARONITES.
early as the sixth century. Another monk, John Maro, or Marum, also preached Monotheism there in the seventh century. Regarded by the Melchites, or Christians who adhered to the opinions of the emperor, they became, in the country of Lebanon, which is now called Kessroun, a warlike mountain people, who defended their political as well as their religious independence boldly against the Maronites, and, it is said, the Tyrolian government resisted the payment of a tribute, like the Druses. The political constitution of the Maronites is that of a military commonwealth. Governed by their ancient customary rights, defended from external attacks, they support themselves, among the mountains, by husbandry and the produce of their vineyards and mulberry-trees. A common spirit unites them. In simplicity of manners, temperature, and hospitality, they resemble the ancient Egyptians. Revenge for murder is permitted among them, and, as a sign of nobility, they wear the green turban. Their church constitution resembles very much that of the old Greek church. Since the twelfth century, they have several times submitted to the pope, and joined the Roman Catholic church, without giving up their own peculiarities. At last, Clement XII. induced them to accept the decrees of the council of Trent, at a synod held in 1736, at their convent of Marashnna. Till that time, they had received the same treatment as the Maronites. In the same period, their priests still retained the right to marry, after the manner of the Greek church. The use of the Arabic language was preserved in the church service. Mass, only, was read in the ancient Syriac. Their head is called the patriarch of Antioch, although his residence is in the monastery of Kanahin, upon mount Lebanon, and he gives an account, every ten years, to the pope, of the condition of the Maronite church. Under him are the bishops and other clergymen, who form seven degrees of rank. In Kessroun are over 200 Maronite convents and nunneries, which profess the rule of St Antony, and devote themselves to agriculture and gardening. Since 1548, there has been a Maronite college established at Rome, for the education of clergymen; yet neither this establishment, nor the mission of papal nuncios, has effected an entire incorporation of this sect with the Roman church; and those in Kessroun, as well as the large numbers in the island of Cyprus, still retain their ancient habits, and some even their ancient liturgy.

MAROONS; the name given to revolted negroes in the West Indies and in some parts of South America. The appellation is supposed to be derived from Maroney, a river separating Dutch and French Guiana, where large numbers of these fugitives reside. In many cases, by taking to the forests and mountains, they have rendered themselves formidable to the colonists, and sustained a long and brave resistance against the whites. When Jamaica was conquered by the English, in 1655, about 1500 slaves retreated to the mountains, and defended themselves by the aid of hawks, owls, fowls, plantains, yams, and other roots; likewise bread-fruit and coco-nuts; but of these not many. The inhabitants are men of great activity and resource, and have the faculty of language to that spoken in Otahite and the Society isles, shows that they are of the same nation. The men are punctured or tattooed from head to foot. Lieutenant Paulding, in his account of the cruise of the United States' schooner Dolphin among the islander peoples of the Pacific ocean (New York, 1831), says, "The men of the chief runs are generally quite naked; but few ornaments were worn by either sex. A few were tattooed all over; others but slightly. Some had pricked into their flesh, fish, birds, and beasts, of all kinds known to them. Others were tattooed black, even to the inner part of their lips. There are men who pursue tattooing as a regular business. The men are finely formed,
large, and active. Their teeth are very beautiful. A plurality of wives is not admitted among them. The only arms now generally used are muskets."

Population of the group, vaguely estimated at 50,000. Lat. 13° 40' to 14° 30' W.; int. 8° 30' to 9° 30' S.

**MARQUETRY** (French, marquerie, marquer, to inlay); inlaid cabinet work, in which thin slices of different coloured wood, sometimes of ivory, pearl, shell, or metal, are inlaid on a ground. Works in which black and white only are employed, are called *Morescoes.* Marquetry in glass, precious stones, or marcasites, is more commonly called *Mosaics* than the others, except the *Moresco.* A curious custom existed in Assyria (according to Melas, also in Tircace): the marriageable girls were sold by public auction, and the money thus received furnished marriage portions for those whose charms were not sufficient to attract purchasers.

With the ancient Hebrews, the wedding followed ten or twelve months after the betrothment, and was called *mikveh* (i.e. festival meal.) From the time of Moses, polygamy was prohibited, and, if Solomon and others took several wives, they rendered themselves guilty of a violation of the laws, particularly if these wives were foreigners. The Hebrews continued this custom, and, as the women did not always lose sight of the time until they were again brought into notice by La Salle. (q. v.) Marquette's relation was published by Thévenot (1681), in a supplement to his *Receuil de Voyages.*

**MARQUIS, MARQUESS** (in middle Latin, mar-quis; Italian marquese; French, marquis; German, markgraf); a title of honor, next in dignity to that of duke, first given to those who commanded the marches (q. v.). Marquises were not known in England, till King Richard II., in the year 1377, created his great favourite, Robert Vere, the earl of Oxford, marquis of Dublin. The title given a marquis, in the style of the heralds, is most noble and potent prince.

**MARRIAGE.** No social relation is more universally established than matrimony, resting, as it does, on the fundamental principles of our being, and giving rise to the primary element of all social order and civilization—the domestic connexions. Misguided philosophers, following their separate ideas, indeed, at different times, preached against it, and even suspended its exercise, in a limited circle, for a limited time; but such a violation of the order of nature was necessarily brief. As marriage is a connexion existing in all ages, and probably in all nations, though with very different degrees of strictness, it constitutes one of the most interesting phenomena for the inquirer into the various manifestations and different developments of the common principles of our nature. In almost all nations, the day of marriage is celebrated with religious ceremonies. Nothing is more natural than to pray for the blessing of Heaven on such a union, and the prayer of a priest is generally esteemed, in the early ages of nations, as most efficacious. With the most ancient inhabitants of the East, the bride was obtained by presents made, or services rendered, to her parents. (See Jacob.) To this day the same practice prevails among the Circassians, and the poorer Turks and Chinese. Rightly so; for the customs of the ancient Persians, Babylonians, Indians, and other inhabitants of Asia, the ancient writers have left us little or no information. It is only known that polygamy was customary with them. The women lived in harems, yet they were probably not so restricted as at present; at least, it was customary for every woman in Babylon, once in her life, to give herself up to any stranger, in the temple of the goddess of love. In Syria and the other countries of Western Asia, girls served, for several years, in the temple of the Asiatic Aphrodite, and bestowed their favours on the visitors to the temple. In India, and other countries of Upper Asia, the first enjoyment of a woman, immediately after marriage, belonged to the Bramins. This connexion with the priests was even sought for with prayers and gifts. Whether the Egyptians practised polygamy is uncertain. Dio-

*For the local relation between husband and wife, in modern civilized countries, see the article Husband and Wife.*
most, perhaps all, Oriental nations, and perhaps might say, all nations living in a state in which the natural feelings are unchecked. After the suitor has obtained the consent of the girl and her guardians, the betrothment takes place with certain ceremonies. The bridegroom pays (or, at least, formerly paid) a morning gift, so called—a remnant of the custom of paying the bride dowry to the father. The wedding is not allowed to take place on Saturday (Sabbath), and was usually performed on Wednesdays, because Thursday was a day of justice, and the husband would immediately go to court, and ask for a divorce, in case the signs of virginity had been wanting. At present, the marriage takes place sometimes on Friday. The eve before the wedding, the bride goes into the bath, accompanied by her female friends, who make a great noise. The ceremony of the wedding generally takes place in the open air, seldom in a room. The couple sit under a canopy, generally carried by four boys. A large black veil covers both, besides which, each of them has a black cloth (tailed), with tassels at the four corners, upon the head. The rabbi, the pres- entor of the synagogue, or the nearest relation of the bridegroom, offers to the couple a cup of wine, and says, "Praised be thou, O God, that thou hast created worthy vessels for the multitude of mankind." Both drink. The bridegroom then puts a gold ring, without a stone, on the finger of the bride, and says, "With this ring I take thee as my wedded wife, according to the custom of Moses and the Israelites." Then the matrimonial contract is read (see Jewish Law), and the bridegroom shakes hands with the parents of the bride. Wine is brought once more, in a vessel easily to be broken; six prayers are spoken; the couple drink of the wine, and the cup is thrown violently to the ground, according to some, in remembrance of the destruction of Jeru- salem; according to others, to admonish the company to orderly behaviour. The company then proceeds into the dwelling of the bridegroom, where they sit down to dinner, and he chants a long prayer. After the meal, men and women perform a certain dance, each sex separate. In presence of ten persons of advanced age, another prayer is pronounced over the bride, and she is led into the bridal-chamber, from which moment the marriage is considered to be complete.

Of the multifarious ceremonies accompanying the wedding, with the later Greeks, the germs are to be found as early as the time of Homer, viz., the leading of the bride veiled to the shoulders, from the house of her father to that of her husband, with torches, the singing of joyous songs, playing on the flute and harp, dancing, bathing of the bride, orna- menting her, conducting of the couple to their apartment by the thatamepodos, a female guardian of the bride chamber. At later periods, the ceremonies of the festival were carried on for several days before the wedding, which was celebrated particularly in the month Gamelion, or on the fourth day of each month, the betrothed parties each cut off a lock of hair, and dedicated it to all the patron gods of marriage (Judith, Juno, Diana, the Fates); the bide of the victims was thrown away; the entrails were burned; there were the prophecies of the oracle. The custom of a mimic repetition of the first marriage of the gods (gamos hieros). On the day of the wedding, the couple put on wreaths of flowers or leaves, sacred to Venus, or having some other relation to marriage. The house was also orna- mented with wreaths; and last but not least, the bridegroom took the bride from her father's house, generally in a chariot, accompanied by a para- nymphos. If he had been already married, the

MARRIAGE. 695

ceremonies alone conducted her, and was then called nymphaegymnos (who wore a vessel containing barley, and carried phlygeton) was preceded by torch-bearers, music and song, also by females who carried symbols of domestic life, as a sieve, a spindle, &c. When the couple arrived at home, fruits were poured over them, as a symbol of plenty; the axle of the vehicle in which they had ridden was burnt, to indicate that the bride could not return, after which the meal fol- lowed, in apartments adorned for the occasion, for which friends and relations assembled, dressed in festival dresses. In Athens, a boy appeared during the meal, crowned with thorns and acorns, holding a basket, which contained bread, and calling out "I left the bad and found the better" (φέρειν κακόν, ἵππος σαφόν)—an allusion to the life of the primitive inhabitants of Attica, without bread and maternity. Dances and songs diverted the guests. After the dance, followed the procession into the bride chamber, where the bed was generally covered with a white cloth, and strewed with flowers. Another bed was also placed in the same room, for the bridegroom, in case evil omens should prevent the consummation of the marriage. Here the bride washed her feet (in Athens, in water from the fountain Callirhoe), served by — (See Theocritus, 15th Idyl.). A thyron (door-keeper) prevented the women from entering to assist the bride. The next morning, the same boys and girls sung epitalthamia ergusonica (awakening songs). The festival lasted for several days, each having its proper name.

Very different from all this was the custom of the Lacedaemonians. They retained the ancient form of carrying off the bride by force. After the bride- groom had carried off the girl, and put them in her place, the hands of her name dress- seated her in a dark room, upon a carpet; the bride- groom then came clandestinely, unbound the zone, placed the bride upon the bed, and, soon after, stole away to the common sleeping room of the youths, and repeated these visits several times before the marriage was made known. After this, the solemn conducting home of the bride, accompanied by sacri- fices, took place.

The Romans had, in a legal sense, three different ways of concluding a marriage—coeinio, confarreatio, and usus—of which the confarreatio was the most solemn and most conclusive. At the betrothal (sponsalia), the day of marriage was settled, great care being taken not to fix upon one of the atric dies (unlucky days), viz., the month of May, the calends, nones, and ides, and the days following them, the feast of the Sabines, the parentalia, &c. On the other hand, a particular prediction was entertained for the second half of June. The day before the wedding, the bride sacrificed the virgin-like toga praeexta to the Fortuna virginalis; her bulla aurica, her strophion and toys to the Lar familiaris, or to Venus, after she had first sacrificed to Juno jugae, the goddess of marriages, and after her hair had been divided (in a calicis libellaria) into six locks (in allusion to the rape of the Sabines), and arranged according to the fashion of matrons. On the day of the wedding, the bride was ornamented. She
covered her hair with the *vitta recta*, put on a wreath of flowers, the union of matrons, and encircled her waist with a woollen zone, tied in a *Hercules knot* (so called), at which moment she implored the *Juno castivat*. A red or fire-coloured veil now covered her face (allusion to bashfulness); shoes of a like colour were put on. After the auspices were taken, and sacrifices had been offered to the gods of maternity, particularly to Juno, the bier being thrown away, the couple seated themselves upon the fleece of the victim, in allusion to the original dress of men, and to the domestic duties of the wife. In the evening, the bride was led home by the bridegroom. The bride rested in the arms of her mother, or one of the next relatives, and the bridegroom carried her off, in allusion to the rape of the Sabinas. The bride was led by boys; others preceded her, bearing torches. The bride (or female slaves) carried dis- taffs, wool, &c. The music of the lyre and the flute accompanied the procession, during which the bridegroom threw walnuts among the people. The bride was lifted, or stepped gently over the threshold of her parents’ house, and of that where she entered, this part of the dwelling being sacred to Vesta, the protectress of virgins. These thresholds were ornamented with flowers, &c. She was followed, or, accompanied by a bride’s train (Camilla). Relations and friends accompanied the procession, where jokes and merriment abounded. Arrived at her new house, she hung woollen bands, as signs of chastity, at the door-posts, and rubbed the posts with the fat of hogs and wolves, to guard against enchantment. Her first step in the house was made on a fleece (symbolic of the household). The keys were handed over to her, and both she and the bridegroom touched fire and water, as signs of chastity and purity. With the water the feet were washed. In the times of the republic, the bride carried three pieces of the coin called *as*. One she held in her hand, and gave to the bridegroom, as if purchasing him; another, lying in her shoe, she put on the hearth of the new house; the third, which she had in a pocket, she put on a cross-way. After some more ceremonies, followed the wedding meal, accompanied by *epithalamia*. The bride was then conducted by matrons, only once married (*pronuba*), into the chamber (bedchamber). The bride then lay on her bed (*genitalia secta*). Virgins now sung *epithalamium*, in praise of the couple, and, in order not to excite Nemesis by such praises, boys used to sing indecent songs. After the husband had given another feast, (*rejoitia*), the wife entered on her new duties.

Of the marriage rites of the ancient Celtic and German tribes, as little is known as of the ancient Asiatic tribes; and in the little which is recorded, the ancient authors contradict each other. They are almost unanimous, however, in stating that the ceremony of buying the wife was customary with them; but it is doubtful whether polygamy existed among them or not. Caesar says it prevailed among the Britons; others say the same of the inhabitants of Spain. The Germans and Gauls seem to have had, generally, but one wife; yet exceptions are known (for instance, Ariovistus). According to the historian Adam, of Bremen, polygamy was common with the ancient Saxons and people of Ditmarsh. Among the ancient Germans, the marriage of a free person with a slave was not permitted; and if the slave had a free husband, he was beheaded, and she burned. They married late: marriage was prohibited before the twentieth year. The suitor paid a price to the father of the girl; from which, afterwards, the *morning gift*, so called, originated. If a girl was betrothed, she was watched by the friends of the wooer; if the latter delayed the marriage longer than two years, the engagement was dissolved. After marriage, the wife was inseparable from the husband: she followed him to the chase, in war, &c., and often betrayed herself with his consent. Divorce was very rare; violation of maternity was punished by death.

The Mohammedans consider matrimony as a mere civil contract. They practise polygamy. The Mohammedans may have four regularly married wives; they may, besides, purchase slaves (generally Circassian and other slaves); they have, also, hired wives, whose obligation to live with a man lasts only for a certain time. Generally, the Mohammedans have but one wife; the wealthier sort have two; the very rich, still more. With the Turks, the marriage is concluded upon between the parents, and at the most, the contract is only confirmed before the cadi. Generally, the bridegroom has to buy the bride; most commonly, they do not see each other before marriage. The bride is conducted on horseback, closely veiled, to the bridegroom. Entertainments follow, and, in the evening, the bride is led, by a eunuch (or, with the poorer classes, by a maid servant), into the bridegroom’s bed. It is a real misfortune for a Turk to be obliged to marry a daughter of the sultan. He prescribes the present to be made to his daughter; the husband is obliged to follow her will in all things. He must give so many presents, that he is frequently ruined.

In Arabia, if a young man is pleased with the appearance of a girl in the street, where the women appear always veiled, he endeavours to get a sight of her face, by procuring admission into a house where she frequently comes, and remaining concealed there by the aid of some kind relatives. If he is pleased, he makes a bargain with the father; the contract is signed before the sheik. After several ceremonies, baths, entertainments, &c., the Arab awaits his bride in his tent. Matrons conduct her there, where the bride bows, and receives a gold piece pressed on her forehead. She is then carried by him into the interior of the tent. The bride and other women dance around it all night.

In Hindostan, the marriage just laid on is concluded with the father or some relation, or, in default of them, with the cadi, a price paid for the bride, and a sum assigned for her support in case of divorce. The evening before the marriage, the bridegroom proceeds, on horseback, accompanied by many friends, to the house of the bride. The bride is then carried on a mule, covered with a sort of box (or among the wealthier classes, on a camel, bearing a sort of tent), to the house of the bridegroom. The bridegroom and his friends accompany her, the latter expressing their joy by the discharge of fire-arms. The bride is then conducted to the bridegroom, in a dark apartment, and it is not till after the completion of the marriage that he obtains a sight of her face. He cannot go out of the house for eight days; she, not for two months. Formerly the bridegroom, at the end of the eight days, played the king, and decided a number of petty disputes; but since the middle of the eighteenth century, when the emperor of Mor-

* His office was to carry the bride’s ornaments, and the amulets for the future offspring, in a small box.
sioned before a cadi, in a solitary place, so that en-
chanters may not deprive the bridegroom of his vir-
ginity.

As it is considered, with all the Mohammedans, a
matter of the greatest importance to find the signs
of maidenhood in the bride, and as the whole relation
between the two sexes is such as not to enable the
bridegroom to take the girl into his home trust, it is
often the custom by the point of the marriage contract, that
the marriage shall be null if satisfaction is not re-
ceived on this point. So much attention is paid to
this subject, that, in case an accidental injury, as by
a fall from a camel, &c., might bring it in question, fathers
not unfrequently have an attested record made of the cause of the accident. The Circassians, who sell their daughters to the Turks, use mechanis-
tical means to prevent the loss of their virginity, from
the age of puberty.

With the heathen Hindoos, any one who marries
out of his caste, loses its privileges, and becomes
little better than a Paria (q. v.). The Hindoos be-
roth their children very early, often in the seventh
year. When the marriage is agreed on, gifts are
sent, with song and music to the bride. Similar
ones are returned to the bridegroom. On the day
before the marriage, the bridegroom, adorned with
a crown and flag, proceeds through the city,
accompanied by music, and attended by the young
men of his own occupation, in palanquins, carriages,
and on horseback. The bride does the same, on
the day of the wedding, attended by her young fe-
nale acquaintance. In the evening, the wedding
takes place. A fire is lighted between the couple,
a silk cord wound round them, and a kerechief, folded
up, is placed between them, after which the Bramin
pronounces a certain formula, the purport of which is,
that the husband ought to give sufficient support to
the wife, and that she ought to be faithful; the
blessing follows. The Buddha religion prescribes
other ceremonies and rules.

In Pergu, the women are bought, and generally
only for a certain time.

In Siam, the husband may have, besides the legi-
timate wife, others, whose children, however, are
not legal, and are sold as slaves.

In China, the wife is bought; poor people ask
wages for dragging houses. The young
couple do not see each other before the contracts are
exchanged. The bride is then conveyed, with music,
torches, &c., to the husband. She is carried in a
chair, securely enclosed, the key to which is given,
on her arrival, to the bridegroom. Here she sees her
for the first time. Formerly, the wife was sent
back immediately, but at present this is generally
prevented by the contract; the relations also con-
trive to get a pretty accurate description of the bride
beforehand. The bride is then led into the house,
where she bows low before the family idol. Ente-
rainments then follow, each sex being separate.
After marriage, the wife sees only the husband, and,
on particular occasions, the father or some other rela-
tive, unless express provision is made for more
liberty in the contract.

In Japan, the bridegroom avoids the bride in
the temple of Po, where the bane is blessed there, during
which ceremony the couple bear a torch or lamp.
The festival then lasts for seven or eight days.

The Parsees, or worshippers of fire, consider ma-
trimony a holy state, conducive to eternal felicity,
and betroth children very young. Matrimony be-
tween cousins is most esteemed. Betrothment is,
with them, a religious ceremony. At the
wedding, the priest asks the parties whether each
will have the other; if they say yes, he joins their
hands and strews rice over them. Weddings
among them are celebrated with much public fest-
vity.

Among the Indians of North America, the wed-
dings are very simple.—See the article Indians.

Among Christians, marriages, of late, are cele-
brated with much less ceremony than formerly.
In England, among the wealthier classes, it is custom-
ary for the couple to go, in a horse carriage, to church,
and, immediately after the marriage, to set out on a journey. With the Catholics, matrimony
is a sacrament, and dissolvable by the pope only.
With Protestants this is not the case. In Scotland
and the United States of America matrimony in the
eye of the law is a mere civil act; justices of the
peace may perform the ceremony; yet such in-
stances are rare. Marriages concluded by clergy-
men simply are valid also, and, in so far, the law
differs from that in the former French republic and
empire, where the contract, in the presence of the
civil officer, could not be omitted.

MARRIAGE—MARS.

MARS, MAVORS (with the Greeks Ares); the
god of war. According to the oldest poets, he was
the son of Jupiter and Juno; according to later ones,
of Juno alone, and the first of all the gods. Ares
or Mars is, originally, a Pelasgian deity, whose wor-
ship was first celebrated in Thrace, and afterwards
transferred to Greece. In the earliest times he was
the symbol of divine power, and with the Greeks,
the symbol of war, so far as regards strength, bravery
and fierceness, or, in other words, was the god of
battles. Minerva, on the contrary, as the goddess
of war, was the symbol of courage joined with wis-
dom and military art. In later times, he is always
represented in the human form, and is the protector
of innocence. The Romans early adopted his wor-
ship from the Greeks. According to tradition,
Romulus and Remus, the founders of Rome, were
the fruit of his intercourse with Rhea Sylvia. Sev-
eral temples in Rome and the Campus Martius were
dedicated to him. His service was celebrated by
particular flaminines devoted to him, and by the col-
lege of the Sali, whose duty it was to preserve his
shield (ancile), said to have fallen from heaven.
The month of March was sacred to him, and his
festivals were celebrated on the 19th and 20th of
12th of October. He was likewise the god of spring.
Among the Romans, soldiers, and gladiators, and
fire were sacred to him; also horses, birds of prey,
vultures, cocks, woodpeckers, and wolves; the
suovetaurilia were also in honour of him. In peace,
they called him Quirinus; in war, Gradius (the
striding). They considered Bellona as his wife and
sister. The Greeks, on the other hand, assigned
him no wife, although he had children by Venus and
several other mistresses. His intrigue with the
former was betrayed to Vulcan by Sol. Vulcan im-
mediately made a fine iron net, which he threw over
the two lovers, whom he found in bed together; he
then called together all the gods, and exposed his
captives to the scorn of Olympus. He was the father
of Harmonia, by Venus; Deimos (Terror) and Pho-
bos (Fear) were his sons. Simonides also calls Cupid
the son of Mars and Venus. Phobos is his constant
companion in war; Phobos and Deimos harness the
steeds to love in the process of the Night. To fight,
Elyo, the destroyer of cities (Bellona), and Éris,
always hover around him in battle. The fables relate
many of his exploits. He is mentioned in the ac-
count of the war of the giants only by the later poets.
According to Claudian, he was the first who attacked
the giants: he was struck by Peloriamus, the giant,
who compelled to flee, with the other gods, before Typh-
hes, and, to escape his fury, changed himself into a
fish. In the fight with Ourus and Ephialtes, the sons
of Alcous, he was taken and confined in a brazen prison, where he languished thirteen months. But the mother of the Alcous, discovered the place of his confinement to Mercury, by whom he was delivered. He afterwards engaged in combat with Hercules, for the protection of his sons. In one of the combats, the god was wounded; in the other, Jupiter separated the combatants by hurling his thunderbolts between them. Mars having slain Hallirholus, the son of Neptune and the nymph Euryte, for offering violence to his daughter Aleippe, Neptune accused him before the twelve gods, who judged the cause on a hill near Athens (Areopagus, Mars' Hill), and acquitted him. As Mars was the first who was tried in this place, it derived its name from that circumstance. In the Trojan war, he assisted the Trojans against the Greeks. Diomedes wounded him, and he bellowed like 10,000 men united. He fought also against Minerva, and hurled his spear against heregis: she smote him to the ground with a rock. Mars is represented as a young warrior in full armour, of a strong frame, broad forehead, sunken eyes, thick and short hair. His attributes are a helmet, a spear, a sword, and a shield.

Mars is also the name of a planet. See Planet.

In chemistry, Mars was formerly put for iron; in both cases, it is marked by this sign: ♂

MARS' HILL. See Areopagus.

MARS DEN, WILLIAM, born in 1754, at Vervain, in Ireland, was sent out, early in life, as a writer, to the island of Sumatra, where he rose to be chief, and gained much information respecting the language, manners, and customs of the Oriental archipelago, a part of which he communicated in articles sent by him to the royal and antiquarian societies. The chief of these are, On a Phenomenon observed in the Island of Sumatra; Remarks on the Sumatran language; Observations on the Language of the People commonly called Gipasies; On the Hejira of the Mohammedans; On the Chronology of the Hindoos; and On the Traces of the Hindo Language and Literature extant among the Malays. His separate publications are, the History of Sumatra (1802); a Dictionary of the Malayian Language, in two parts, Malayian and English, and English and Malayian, (1812); a Grammar of the Malayian Language; to which is prefixed an interesting Discourse on the History, Religion, and Antiquities of the Oriental Islands.

Marseillaise Hymn, the celebrated song of the patriots and warriors of the French revolution, was composed by M. Joseph Rouget de l'Isle, while an officer in the engineer corps at Strasburg, early in the French revolution, with a view of suppressing the vulgar songs then in vogue, relative to the struggle then going on. He composed the song and the music in one night. It was at first called L'Ouffrande à la Liberté, but subsequently received its present name, because it was first publicly sung by the Marseilleses under the escort of the mayor and council of the French patriots and warriors, and was famous through Europe and America. The tune is peculiarly exciting. It was suppressed, of course, under the empire and the Bourbons; but the revolution of 1830 called it up anew, and it has since become again the national song of the French patriots. The king of the French has consecrated it on this occasion, who is about seventy years old at the time of the last revolution, having been born in 1760, a pension of 1500 francs from his private purse. M. Rouget de l'Isle had been wounded at Quiberon, and persecuted by the terrorists, from whom he had escaped by fleeing to Geneva. The celebrity of the Marseillaise hymn and the important influence which it has exercised, induce us to give it at length.

MARS' HILL—MARSEILLES.

Aliens, enfans de la patrie; Le Jour de gloire est arrive; Que veut cette horde de relieves, De traitres, de rois conjures? Pour quel ces ignobles entrefumes, Ces fers d'a long-toms preparies? O Francais, c'est nous, ah! quel outrage! Quels transports il doit exister! C'est nous qu'on ose menacer De rendre a l'antique esclavage! Aux armes, &c.

Que! des cohortes estrangeres Feront la loi dans nos foyers! Quoi! ces phalanges mercenaires Terrassent nos fiers guerriers... Grand Dieu! par des maistres duinclusion Nos fronts sous le joug se plieferont! De vilis despotes deviennent Les maistres de nos destinieux! Aux armes, &c.

Tremblez, tyrans! et vous, perfides L'opprobre et de tous partis! Tremblez—vos projets parricides Voicent envin recevoir leur prix. Tous est soit pour votre conventre, S'ils tombent, ses jeunes hiers La France en produit de nouveaux, Contre vous tous prêts à se bataille. Aux armes, &c.

Français, on guerriers magnanimes, Portez ou retenou vos coupe; Raparchez les tristes victimes A regret armant contre nous; Mais ces despotes sanglantissim, Mal leurs complices de Bonaparte Tous ces tigres qui, sans pitié, Dechirent le sein de notre mère! Aux armes, &c.

Amour sacré de la patrie, Conduis, soutiens nos bras vengeurs: Liberté, Liberté chérie, Comba ta avec tes defeunres; Sous nos drapeaux, que le drapeau Accorde a tes maîtres acces; Que tes lois, nos ennemis, Voient ta triumphe et notre gloire. Aux armes, &c.

MARSEILESSES (properly Marseille), the ancient Massilia; a city of France, capital of the department Bouches du Rhone, on the lion's gulf; lat. 43° 17' N.; lon. 5° 25' E.: sent of a bishop, and of many civil and military authorities. The port is safe and spacious, capable of accommodating 1200 vessels, but not admitting a ship of larger size than a frigate. A new port has recently been constructed, sufficient to receive ships of the line, and is used for quarantine ground. The lamartre is the finest in Europe. The old city is very small. It is built on a crooked, narrow, and steep streets, lined with high houses. The new city has wide, straight streets, with foot-walks. The houses are in general huddlesomely built, and there are several agreeable promenades and squares. The cathedral is one of the oldest in France; the Hotel de Ville is one of the most beautiful buildings in the city. There are an observatory, several hospitals, a mout de piété, a savings bank, twenty-one churches, an academy of arts and sciences, a royal college, a public library of 60,000 volumes, and numerous other literary, scientific, and charitable institutions. The principal articles of export are Napes soap (made at Marseilles), olive-oil, wine, the Marseillois hymn and the important influence which it has exercised, induce us to give it at length.
parts of the world, particularly with Italy, Spain, Barbary, and the Levant. In 1529, 82,956 bales of cotton (the largest import into France) were carried into Marseilles. Sugar (for its refineries), dye-wood, and other colonial articles, from its imports. In 1824, 5723 vessels, with a burden of 392,966 tons, were entered at this port. The inhabitants are laborious, intelligent, and honest; but quick and ardent; they are very fond of music, dancing, and shows. Population, 115,943.

Marseilles was founded, 600 B.C., by a colony of Phoceans, and formed, at an early period, a flourishing republic, celebrated for the wisdom of its institutions. Cicero calls it the Athena of Gaul. Under the monarchy, and was equivalent to the comes stabuli or Alexandria and Constantinople in commerce. During the middle ages, it again became a republic, but, in 1521, was reduced by the counts of Provence. In 1482, it was annexed to the crown of France. In the revolution, its inhabitants were at first distantly related to the French race, and adopted the new doctrines; but, in 1793, it was found on the side of the Girondists.

MARSHAL (in ancient German, Marschalk); derived, according to some, from the ancient German word Mer, a horse of the nobler kind, and Shalk, originally known at the Hanseatic season (in Dutch, Salek); hence Marschalk, a man appointed to take care of the horses. Marschall, in French, still designates a farrier, though it also denotes a high dignity. As the word came, in the sequel, to designate high officers of state and war, this derivation of the word proved unacceptable to some persons, and it was attempted to derive it from mar, mare, from the Latin major, as in major-domo; but the first derivation is the most probable, and it is by no means the only instance in which the names of high dignities originated with low employments. A similar instance is the French connotable, from comes stabuli. Marshal signifies at first a person intrusted with the charge of twelve horses under the comes stabuli. In France, the title sunk still lower, so as to designate, as we have said, every farrier; but in other parts of Europe, it rose in dignity, as horses were highly valued at courts, so that it came to signify the person appointed to the care of all the horses of a prince; and, these persons being at length appointed to high commands in the army, and important posts in the state, the title came to signify one of the highest officers of the court. The marshal of the German empire derived his origin from the Frankish monarchs, and was equivalent to the comes stabuli or connotable. He was bound to keep order at the coronation of the emperor, and to provide lodgings for the persons connected with the ceremony. He was called arch-marshall, a dignity belonging to the electorate of Saxony. At the coronation it was his duty to bring out, in a silver vessel, from a heap in the open market-place, and to present the vessel to the emperor. His duties were discharged by a hereditary marshal (Erbmarschall). In France, maréchal de France is the highest military honour: maréchal de camp is equal to major-general, in Austria to field-marshal. In Prussia, general-field-marshal is the highest military honour. In England, field-marshall means the commander-in-chief of all the forces. It is also given as an honorary rank to general officers who have no immediate command—Marshall was, and in many countries of Germany is, the title of the president of the diet of the estates. His office is sometimes hereditary. Marshall also signifies a person who regulates the ceremonies on certain solemn celebrations. Marshall is also used for some inferior officers in England. The marshal of the king's bench has the custody of the prison called the King's bench. He attends on the court of the same name, and takes into custody all prisoners committed by it.


MARSHAM, Sir John, a learned writer on ancient history and chronology, born in 1605, in London, was educated at Oxford, and entered upon the study of the law at the Middle Temple. In 1638, he was made one of the six clerks in chancery, which place he lost; and suffered in his estate for his attachment to royalty during the civil wars. At the restoration of Charles II., he recovered his office, was knighted, and became a member of parliament. Thirty years after he obtained a baronetcy. He died in 1685. His Canon Chronicus Aegyptiacus, Etruriacus, Grecus (London, 1676, folio), displayed much erudition and some ingenuity. He also published a work on the difficulties in the chronology of the Old Testament, and wrote the preface to the first volume of Dugdale's Monasticon.

MARSII; 1. a tribe in Samnium, on the northern bank of the lacus Fucinus, in the present Abruzzo ulteriore. They had the same language with the Sabinus. They distinguished themselves in the social war, which, from them, is also called the Marsian war.

2. A German tribe belonging to the Istavones, a member of the Cheruscan league. (See Cherusca.) They pressed forward after the defeat of Varus, and settled chiefly on the banks of the Lippe, but retreated during the succeeding wars with the Romans.

MARSIGLI, Lodovico Fernando, count of, was born in 1658, of an illustrious family at Bologna, and, after having received a good education, went to Constantinople in 1679, with the Venetian ambassador. On his return, he entered into the imperial service, and was employed as an engineer in the war with Turkey. He was taken prisoner at the passage of the Rahn, and sent as a slave to Bosnia. On obtaining his liberty, he was again employed, and, having been made a colonel of infantry, was sent, with his regiment, to garrison the fortress of Brac; and, that place being taken by the French in 1702, was there accused of misconduct, and ignominiously dismissed from the Austrian service. Retiring to Switzerland, he published a justiciary memoir, and afterwards took up his residence at Cassis, near Marseilles, where he occupied himself with the study of marine botany, and other scientific pursuits. In 1709, pope Clement XI., who had made him commander of his troops; but he soon relinquished this office, and retired to his native place, where, in 1712, he founded the institute of Bologna. He Afterwards travelled in England and Holland, and, in 1726, published, at Amsterdam, his Histoire Physique de la Mer (fol.); and, in 1726, his most valuable work, the Danubius Passannico-Mysicus (6 vols., fol.), containing the natural history of the Danube, in its course through Hungary and Turkey. He died at Bologna in 1730, at the age of seventy-two.

MARSTON, John; an English dramatic author, who lived in the reign of James I., was educated at Corpus Christi college, Oxford, and was entered at the Middle Temple, of which society he became lecturer; but little more of his personal history is known, except that he was at one time upon terms of friendship with Ben Jonson. He was the author of eight plays, all based at the Black Friars, with applause. Six of these were printed in one volume, in 1633, and dedicated to the viscount Falkland. He also wrote three books of satires, entitled the Scourge of Villany (1590), reprinted in 1764.

MARSTON Moor in Yorkshire, England;
celebrated for the battle between the royal forces under prince Rupert and the troops of the parliament under Fairfax and Cromwell (1644), in which the latter were victorious. See Charles I. and Cromwell.

MARSUPIALS, in zoology; a singular family of the order carnivora, in the class mammalia, so called from a pouch (marsupium), in which the young remain immediately after birth, and into which they retreat in case of danger, while older. See Kangaroos, Opossums.

MARSYSAS, a son of Olympus, Oagrus or Hyagnis. Fable relates that, after Minerva had thrown away the flute which she had invented, dispensed because it disfigured the countenance in playing, and had pronounced the severest maledictions against any one who should take it up, Marsyas accidentally found this instrument, on which he soon acquired such skill, that he dared to challenge Apollo to a contest. The Muses were invited to be the umpires. At first, the stronger music of the flute drowned the softer tones of the lyre, on which the god played; and Marsyas was on the point of winning the victory, when Apollo accompanied his instrument with his voice. Marsyas was unable to do the same with his flute. The Muses determined that Apollo should put to death his rash competitor by flaying him alive. In this way was the curse of Minerva accomplished. This fable is emblematic of the preference given by the inventors of the fable to the art of singing to the lyre above that of performing on the flute. Many ancient and modern artists have represented the contest, as well as the punishment of Marsyas.

MART, or MARQUE, LETTER OF. See Letter of Mart or Marque.

MARTELLO TOWERS, so called, by corruption, from Mortella, in Corsica, where a strong tower maintained a determined resistance to a superior English force in 1704. In consequence of the great strength exhibited by this fort, the British government erected twenty-seven similar towers on the Kentish coast, at intervals of about a quarter of a mile, as a defence against the threatened invasion from France. They are circular, with walls of great thickness, and roofs bomb-proof. One traversing gun is carried on each floor. In the men it is secured by a lofty parapet. They are surrounded by a deep dry fosse: the entrance is by a door several feet from the ground, approach to which is then cut off by drawing up the ladder. The ordinary guard consists of six to twelve men.

MARTENS, or WASTEL. The term martens is sometimes applied to the whole weasel tribe. The European marten (M. foina) inhabits most parts of Europe. It is most an elegant and lively animal, exceedingly agile and graceful in its motions. The female breeds in hollow trees, and produces from three to seven young at a time, which, in winter, have sometimes been found sheltered in magpies' nests. These animals are very destructive to poultry, eggs, &c., and also feed on rats, mice, and moles; they are also very fond of honey, and will sometimes eat seeds and grain. They have a musky smell. They are capable of being tamed, but generally require to be kept chained.

The pine marten (M. martes), is an inhabitant of the woody districts in the northern parts of America, from the Atlantic to the Pacific. This species is also found in Northern Asia and Europe. It very closely resembles the marten of Europe, but may be distinguished by its smaller size, longer legs, finer, thicker, and more glossy fur, and from the throat being marked by a broad yellow spot, while the American is pure brown. The pine marten preys on mice, rabbits, and partridges, &c.

A partridge's head, with the feathers, is the best bait for the log traps in which this animal is taken. When this animal is pursued, and its retreat cut off, it shows its teeth, erects its hair, arches its back, and hisses like a cat. It will seize a dog by the nose, and bite so hard, that unless the latter is a large and powerful dog, it is often the means of the animal's escape. It is easily, but never thoroughly tamed. It burrows in the ground, carries its young about six weeks, and brings forth from four to seven in a litter, about the latter end of April. The fur is fine, and much used for trimming. Upwards of 100,000 are collected annually in the fur countries. The marten is one of the most useful of furbearing animals. It is a larger and stronger animal than the last mentioned species; climbs with facility, and preys principally on mice. It lives in the woods, preferring damp places in the vicinity of water. It inhabits a wide extent of country, from Pennsylvania to the Great Slave lake. It brings forth once a year, from two to four young. It is sought for its skin, of which considerable numbers are every year exported by the fur traders.

MARTENS, GEORGE FREDERIC; professor at Gottingen, and Hanoverianpalette counsellor, one of the most eminent modern writers on the laws of nations. His earliest work, which has become a standard book on the subject, was published at Gottingen, in 1789, and has been translated by Cobbett. It bears the title of a Compendium of the Law of Nations, founded on the Treaties and Customs of the Modern Nations of Europe. He afterwards published a Collection of the principal Treaties of Peace and Alliance since 1761 (14 vols., 8vo); and several other works. The merit of these works caused the services of the author to be sought for by the German sovereigns. In 1807, Jerome Bonaparte appointed him a councilor on peace, in the financial department, and he was retained in it after the fall of Jerome. In 1814, he was employed, at the congress of Vienna, to draw up the reports of the conferences between the ministers, and was afterwards sent on a mission to prince Christian, in Norway. In 1816, he was nominated minister from Hanover to the diet at Frankfort (1816-1821).

MARTHA, Sister, was long deservedly admired for her active and impartial humanity. Anne Biget, known by the name of Sister Martha, was, before the French revolution, what is called a tournière in a convent; that is, a nun who has the care of the turning box fixed on pivots in the wall, by means of which messages and articles are conveyed to and from the convent, without any of the nuns being seen. When the dissolution of the convents compelled her to return into society, she dedicated her time and her means to the consoling of the poor, and particularly of prisoners. Though her pecuniary resources were small, her kindness was unbounded. In 1806, when she was between sixty and seventy years of age, six hundred Spanish prisoners arrived at Besançon, the place where she resided. She hastened to their assistance, did her utmost to supply their wants, and watched over those who were sick. She was often employed by them to solicit the governor of Besançon, when they had any thing to request; and one day, when she was visiting him on this kind of errand, he said, "Sister Martha, you will be much grieved to hear that your good friends the Spaniards are going to leave Besançon." "Yes," replied she, "but the English are coming, and all the unfortunate are my Friends." Her impartial benevolence, indeed, continued till her death, which occurred in 1814, its utmost powers were called forth to comfort and assist the wounded French and allied soldiers. "It was on the field of battle," said the duke of Reggio to her,
“that I became acquainted with your character. Our soldiers, when they were wounded, far from being free, ‘Oh, where is Sister Martha? If she were here, we should suffer less.’” After the conferred sovereigns obtained possession of Paris, they were desirous of seeing this admirable woman, and did not forget to reward her virtues. The emperor of Russia gave her a gold medal, and a silver cross; the emperor of Austria, the cross of civil merit, and 2000 francs; and the king of Prussia, a gold medal. The Spanish monarch sent her a cross. She was also presented to Louis XVIII., who received her graciously, and conferred honours upon her. She died at Besançon, in 1824.

MARTHA, SANTA, a city of Colombia, on the northern coast, with a large, safe, and commodious harbour, strongly fortified; lat. 11° 19’ N.; lon. 78° 48’ W.; population, 5000. The heat is great, and the houses are liable to be filled with a fine sand, blown up by the south-west winds. It has considerable commerce.

MARTHA’S VINEYARD; an island of Massachusetts, on the south side of Cape Cod, twelve miles west-north-west of Nantucket, nineteen miles long, and from two to ten broad; lon. 70° 40’ W.; lat. 41° 40’ N. The greatest part of the island is low and level, and but a small part of the land is good. The principal village is Vineyard Haven, where he also councils, and sits in court. The island contains three towns, Edgartown, Tisbury, and Chilmark. On the north side of the island is the harbour of Holmes’ Hole.

MARTIAL, MARCUS VALERIUS, the most celebrated of the epigrammatists among the Romans, was born at Dibilis, in Ciliciberia, A.D. 40, and educated at Calaguris (Cadizcoro), the birth-place of his friend Quinctilian. He went to Rome when young, during the reign of Nero, and lived under the reign of Galba and the following emperors; from some of whom he received marks of esteem and favour. Domitian appointed him tribune, and made his circumstances more easy by presents. Trajan, who was no friend to satirists, witheld the favour which Martial had received from his predecessors. This induced the poet to retire to his native city. Pliny the Younger gave him a sum of money to pay the expenses of the journey. While in Italy, he married a woman of high family, and had a son. He died in the year 101. His celebrity is founded on fourteen books of epigrams, of which he himself modestly says, “Sunt bona, sunt quaedam mediocre, sunt mala plura.” The number and value of his epigrams give a high idea of the wit of the poet. Most of them are ingenious and cutting; many are full of grace and aptitude; and many, in which he chastises the vices of his age, are extremely indelicate and immodest. He is the true father of modern epigram, which is distinguished from the simple Greek epigram, by the convergence of all its parts to one witty point. The best editions of his works are that of Paris, 1670 ; of Scriberras (Leyden, 1618 and 1619, 3 vols. 12mo); of Schrevelius (Leyden 1650); and Rader (Menz, 1627, folio); an expurgated German translation has also been published by Willmann, Cologne, 1825.

MARTIAL LAW. The law martial applies to such as the military service, and in Britain, is founded upon particular statutes. Chief-justice Hale, in his History of the Common Law, chapter ii. says, it is a body of rules, and a jurisdiction rather indulged by the law than constituting a part of it. But it does not appear why it is not a part of the law of the land, as it is evident that it is the other branch of law. It is true it applies only to persons in actual military service, and only to their conduct in such service; but so the maritime law applies only to persons engaged in maritime trade, and has reference only to acts done, or obligations arisen in that trade. The jurisdiction under the law martial is a distinct tribunal, and the mode of proceeding is different from that which prevails in the common law and in equity jurisdiction; the tribunal for the trial of offences against the military law being a court-martial appointed by some superior officer. A military code, and a jurisdiction under the law martial, by the provisions of which the public welfare might be preserved, are absolutely necessary for the government and regulation of an army, since the offences to which such a code relates, are quite different from those cognizable by the common law, and are such that the ordinary tribunals are not fitted to have jurisdiction of them; the proceedings, too, must be more summary than is practicable before the standing judiciary.

MARTIN, Sr, the most famous of this name, was born of heathen parents at Sabaria, in Pannonia (now Stein, in Lower Hungary), about the year 316. He attended the catechetical school at Pavia. His father was a military tribune, and compelled him, in his sixteenth year, to take up arms. He is said to have early escaped from his father, and received instruction in a Christian church. While a soldier his life was marked with the rigour of a monk. He served under Constantius and Julian, and went to Gaul, where he made a journey among the tribes of the Elveti and others. He also, at other times, went to Egypt, and took part in the struggle against the Arians. As a result of these and other acts, he divided his cloak with a poor man, whom he met at the gates of Amiens. The legend says that Christ appeared to him in the following night, covered with the half of this cloak. Soon after this vision, Martin was baptized in 357, and lived many years in retirement, till St Hilarius, bishop of Poitiers, appointed him exorcist. While on a journey to visit his parents, he was attacked in the Alps by two highway robbers; the axe of one assailant was already hovering over his head, when the other, touched by his look of innocence, saved him, and he was immediately converted. In Pannonia, to which he returned, as was alleged, at the command of the Divinity in a dream, he converted his mother, and opposed, with zeal, the Arians who prevailed in Illyria. For this, he was scourged from the country, on which occasion he manifested the firmness of a martyr. He now established a monastery in Martin, which was later enlarged by the bishop Auxtontius, founded another on the island of Gallinaria, in the Ligurian sea. He next settled at Poitiers, where he assembled a number of religious persons, and is said to have wrought many miracles; for instance, to have raised one of his pupils from the dead. In the year 376, the bishopric of Tours was conferred on him against his will. In order to withdraw himself from the world, he built the famous convent of Marmonet, between the Loire and a steep rock, where he finished his life in the year 400. This is regarded as the oldest abbey of France. St Martin was the first to whom the Roman church offered public adoration. His exertions in spreading the true belief, and exterminating paganism in France, are deserving of all commendation. The anecdote, that the emperor Maximinus, at a banquet, to which he invited Martin, offered him the goblet in order to receive it from his hand, has made him a model of many poets. His festival, which takes place on the 11th of November, was formerly celebrated with banquets and carousals, where the hilarity was frequently excessive (as is shown by the French expression Martiner, and le mat de St Martin). The Professo Fidei de Trinitate, attributed to St Martin, is regarded as spurious.

MARTIN. Of five popes of this name, the most important are, Martin I., of Todi, in Tuscany, who was educated
with care, and elected pope in 649. At a synod of Italian bishops in the Lateran church at Rome, he caused the Monothelites and the emperor Heraclius to be solemnly condemned. He was therefore carried captive to Constantinople, and condemned to death by the patriarch Paulus, the punishment of death was transmuted into that of banishment. Martin was deprived of all marks of his dignity, exposed to the contumely of the people and soldiers, and banished to the Chersonese, where he died in 655. On account of these sufferings, he was allowed to send requests to the Papal courts.

We have eighteen epistles of his, of little value.

Martin V., of the ancient family of Colonna, was chosen pope in 1417, after the abdication of Gregory XII., and the deposition of Benedict XIII., during the council of Constance. No one of his predecessors followers has ever been consecrated with such solemnity. He rode on a white horse, which the emperor of Germany and the elector of the Palatinate, both on foot, led by the bridle. A number of princes, and a whole council, formed his retinue. His first act was to promulgate a bull against the Hussites, which is remarkable from the circumstance that it is the pope seems to recognise the supreme authority of the councils. In 1418, he dissolved the council of Constance, though a number of difficulties were not adjusted, and dissensions continued in the church. Benedict XIII. still lived; and, at his death, in 1424, a new antipope was elected in Clement VIII., who first renounced his pretensions in 1423, when he received the bishopric of Mlinara as an indemnification. A council which Martin V. convened at Pavia, and thence removed to Siena, was dissolved, without having established any thing. He died soon after, in 1431. He has the merit of having restored unity to the church, and pacified Italy. We yet possess some works of his.

MARTIN, DON JUAN, EL EMPERADOR. See Dios.

MARTIN, LOUIS CLAUDE, St., a mystical writer, of noble descent (marquis), was born at A mboise, in Touraine, Jan. 18, 1735, entered early the military service, travelled over Europe, served during the reign of the enlightened policy, and retired to solitude. He died at Antry, near Chatillon, Oct. 14, 1803. He was modest and pious: his works are full of symbolic mysticism. He found a number of adherents, who called themselves Martinistes. He translated Jacob Bohme's Aurora (Morgenrothe). His apocryphal work Les Erreurs et la Verité (Lyons, 1775) is famous. He further wrote Tableau naturel des Rapports qui existent entre Dieu, l'Homme, et l'Univers (Edinburgh, 1782, 2 vols.); De l'Esprit des Choses (1800, 2 vols.); Etre Homo; Le nouvel Homme (1796); Ministère de l'Homme d'Esprit (1802); L'Homme de Désir (new ed., Mets, 1803, 2 vols.); Le Crocodile, ou la Guerre du Bien et du Mal, Poème épique-magique, in C.I. Chants (1800); De Dieu et de la Nature, &c.

MARTINET; a word frequently used to signify a strict disciplinarian, who sometimes gives officers and soldiers unnecessary trouble. It is supposed to have originated from an officer of that name, who was in high repute as a drill officer, during the reign of Louis XIV. The word also signifies, in French, a sort of scourgé, used by schoolmasters; and perhaps this instrument may have been the true source of the above military term.

MARTINI, JOHN BAPTIST, a skilful composer and musician, born in Mantua, 1706, entered early into the order of Minim Friars, and travelled for some time in Asia; and it was not until his return, that he entirely devoted himself to music. His progress was so rapid, that, at the age of seven-

ten, he was appointed chapel-master to a convent of his order in Bologna, which situation he filled until his death, in 1754, exercising, at the same time, the functions of professor; and from the school of Martini issued some of the most eminent composers in the northern part of Italy, in 1787, 101,956; 9997 whites, 10,786 free people of colour, and 81,142 slaves; chief towns, St Pierre and Fort Royal; lon. 61° to 61° 26' W.; lat. 14° 24' to 14° 50' N. It is very uneven, and intersected in all parts, by a number of hillocks, which are mostly of a conical form. Three mountains rise above these smaller eminences. The highest bears the indelible marks of a volcano. The woods with which it is covered, continually attract the clouds, which occasion noxious damps, and contribute to make it hort und inaccessible, while the two others are in most parts cultivated. From these mountains, in rainy seasons, the yellow fever made great ravages in 1825; hurricanes, in 1818, 1817, 1823, were destructive: the earthquakes of 1823 and 1828 did but little damage. Of 75,381 hectares,* the superficial area of the island, 17,682 are employed in raising sugar-cane, 3861 coffee, 719 coca 391 cotton; 17,191 is pasture, 19,997 woods. The annual production is valued at 21,000,000 francs. The island consumed French products to the value of 16,000,000 in 1824, and exported to the mother country 18,000,000 in value. The tonnage engaged in this commerce was 33,500 tons. The revenue, in 1823, was 4,000,000. It was a garrison, and the admiral general there was then a council, at the head of which is the governor. Martinique was discovered by the Spanishiards, in 1493, and occupied by the French in the middle of the seventeenth century. The British captured it repeatedly; for the last time, in 1809, and restored it to France in 1814.

MARTYR, HENRY, an able missionary, was born in Cornwall, in 1781; in 1797, entered St John's college, Cambridge, of which society he was chosen fellow, in 1802. The following year, he took orders, and, in 1805, went to India, as a chaplain to the East India company. In the East, he distinguished himself by his rapid acquittance of the native languages. He became master of Sanscrit, translated the Common Prayer into Hindoostanee, and performed divine service publicly in that language. From India, he proceeded to Shiraz in Persia, and translated the Psalms and New Testament into the Persian tongue. He also held conferences with the learned Muslims, and contributed much towards the return to Christianity. He died of a decline, in Persia, October 16, 1812.

MARTYR, PETER, (more correctly Pietro Martire d'Anghiera), an Italian writer, who, after having attached himself to the cardinal Visconti, and to the archbishop of Milan, went to Spain (1473), distin-

* A hectare is nearly two and a half English acres.
MARTYR—MARY

705

affairs, and created him counsellor of the Indies. Charles V. also treated him with favour. He died in 1526, at the age of seventy-five years. His principal works are De Redus Oceanici et Orbis Novo Decades,—a history of the discoveries of Columbus and his successors, from their own records; De Insula invenitis (1521); De Legatione Baltonica,—an account of his embassy to Egypt, whither Ferdinand had sent him, in 1501; and his Opus Epistolarium.

MARTYR, Peter (whose family name was Vermigli), one of the earliest Protestant divines, distinguished for learning and abilities, was born at Florence, in 1478, and, in the age of sixteen, into the order of the regular canons at St Augustine, at the monastery of Fiesole. In 1519, he removed to Padua, where he studied Greek and philosophy. In 1526, he commenced preacher, and attracted great applause in several cities of Italy. After receiving numerous important offices in his order, his religious opinions were considered as savouring too much of the doctrine of the reformers, and it became necessary for him to quit Italy, and, at Zurich, in Switzerland, he was received in a friendly manner by the Protestant clergy (1542). Soon after, he became professor of divinity at Strasbourg, and, in 1547, accompanied Bucer to France, and other learned reformers, on the invitation of archbishop Cranmer, to England. Martyr had followed the example of Luther, in marrying a nun, who had renounced her vows. He was appointed to the theological chair at Oxford, in 1549, and became a very efficient assistant to the English reformed clergy, in carrying on their plans of innovation in the church. On the accession of Queen Mary, being commanded to quit the country, he returned to Strasbourg, and resumed his former situation. In 1556, he removed to Zurich, to occupy the office of theological professor. In 1557, he assisted at the famous conference between the Catholics and Protestants held at Poissy, in France; and died at Zurich, in the following year. Peter Martyr was the author of many works on divinity, including commentaries on some parts of the Old and New Testaments. He is said to have excelled Calvin in erudition, and the knout of his pen was superior, and his personal character was extremely amiable.

MARTYRS (from the Greek martys, a witness); a name applied, by the Christian church, to those persons, in particular, who, in the early ages of Christianity, and during the great persecutions, suffered ignominious death, in order to renounce their faith; and thus testified their unshaken confidence in the truth and divine origin of the new doctrines. The animation which faith inspires in noble minds, wherever it is opposed and oppressed, has given to the Christian church many heroic examples of this sort; and, in all ages and countries, religious tyranny has aroused the spirit of martyrdom, which leads to the sacrifice of life and worldly good for faith. An account of the life, persecutions, and death of the Christian martyrs, is called martyrology. Clement I., bishop of Rome, was the first who attempted a work of this kind. The Roman martyrology, the world's first, is continued on the worship of martyrs, see the article Saints.

Martyr, in a wider sense, is used for any innocent person who suffers in a good cause, or in a cause which he considers so; thus we say, to be a martyr to the truth, to a cause, &c. For further information, see Persecution.

Martyrdom. See Epoch.

Martyrs, Festivals of the; seem to have been observed as early as the second century. The Christians offered prayers at the tombs of the martyrs, and thanked God for the example which they had given to the world. The rite was concluded with the sacrement of the Lord's supper and the distribution of alms. Eulogies were also delivered, and accounts of the lives and actions of the deceased read. These festivals were called the birth-days of the martyrs, because on this day of their death they were born to the joys of eternal life. The churches or chapels consecrated to the martyrs were styled martyria. They sometimes, though not always, contained their bones, and sometimes were particular rooms in the great churches.

MARVELL, Andrew, was born at Kingston-upon-Hull, in 1621, and at Trinity college, Cambridge, whence he was inveigled away by some Jesuitical emissaries, and was found by his father in a bookseller's shop in London, and induced to return to college. On the death of his father, in 1640, he made the tour of Europe, and distinguished himself by some humorous satires against Richard Flecknoe, an English poetaist, resident at Rome, which circumstance induced Dryden to give the name of Mac Flecknoe to his satire against Schadwell. He afterwards acted as secretary to the English legation at Constantinople, and, on his return, was appointed to the presidency of civil and religious liberty. Although he rarely spoke, his influence was great. The earl of Devonshire was intimate with him, and prince Rupert often followed his advice. He had the character of being the wittiest man of his time and wrote a number of poetical effusions, of the humorous and satirical kind, which were very effective as party pieces. Marvell was the author of several tracts, one of which, entitled an Account of the Growth of Popery and Arbitrary Power in England, gave so much offence, that a reward was offered for the printer and publisher. Notwithstanding the earnestness with which he opposed the court, his conduct made him little afraid with Charles II., who deputed the lord treasurer Danly to wait upon him, with the offer of £1000, and a promise of future favour. He rejected the bribe without hesitation; and was obliged, on the departure of the courtier, to send to a friend for the loan of a guinea. The life of Marvell was more than once threatened by his irritated enemies; and his death, which happened in August, 1678, without much previous illness, has been attributed, with no support from direct evidence, to poison. He was buried at St Giles's in the Fields, at the expense of his constituents, who voted a sum to erect a monument to his memory; but it was not admitted by the rector. The most complete edition of his works is that by Thompson, with an account of his life (3 vols. 4to, 1776).

MARY is probably derived from the Hebrew Miriam, (strife, disobedience). Mary, the mother of Jesus, in the language of the church, Our Dear Lady, or the Virgin Mary (in Italian, Madonna; English, Our Lady), is described in the gospel history as a virgin in humble circumstances, but of the stem of David, who lived in obscurity in Nazareth, a city of Galilee, and was betrothed to Joseph, a carpenter. A heavenly messenger broke in upon her solitude with a salutation of the deepest anguish. The Virgin was astonished at the appearance; her modest feelings could not account for such a mark of distinction. The angel saluted her as the highly-favoured of God, and announced to her that she should bear a son, who
should be called the Son of God, the long expected Saviour of the Jews. "How shall this be?" she replied, "seeing I know not a man?" The angel informed her that the power of God should overshadow her, and that she should not only conceive, but also watchful for her son, that he might be like her aged friend Elizabeth, who was barren. She bowed in submission to the will of the Supreme,—"Behold the handmaid of the Lord: be it unto me according to thy word. The feelings excited by her high and wonderful destiny raised her above doubt, and the song of praise into which she bursts forth at her meeting with Elizabeth expresses the joy which she felt at her destination. The little we learn of her feelings at the birth of Christ, the salutations of the shepherds, and his presentation in the temple, show that the emotions which were excited by the announcement still remained. She saw the connection between the vision of angels, which the shepherds related, and what she already knew: she was not astonished when she heard the prophetic blessing of Simeon. At the wedding in Cana, she sought the miraculous power of her Son to relieve the embarrassment occasioned by a want of wine. She doubtless nourished the thought that her Son should feed the world with ever-watchful anxiety; for we find her absorbed in silent sorrow at his cross, with the beloved disciple John. To his care, Jesus intrusted her as to a son, after which she disappears from history.

Towards the end of the fourth century, parties were formed among the Christians, which paid her too little or too much reverence. Some Thraco-Scythian and Syrian women, having a very slight knowledge of Christianity, carried into Arabia their pagan feelings towards a mother of the gods, and established a formal worship of the Virgin Mary. They worshipped her as a goddess with prayers, processions, and sacrifices, and, among other ceremonies, offered her, on a carriage consecrated to her service, small cakes (Greek, kolyptria), whence they were called Collyridians.

Even orthodox theologians began to maintain the opinion that Mary always remained a virgin as a doctrine of faith; and a party in Arabia, which regarded her as the actual wife of Joseph and the mother of the Saviour, was called by the name of idtikonarianites, that is, the adversaries of Mary. At the end of the fourth century, Helvidius in Palestine, and bishop Bonusus in Illyria were declared heretics for the avowal of similar opinions. Poetry and the Catholic church readily adopted the image of Mary for an ideal of female beauty. With the worship of saints, the veneration of the Virgin Mary is naturally connected. In the sixth century, the Christian church began to celebrate festivals in her honour, of which the Purification, the Annunciation, and the Visitation (the visit of Mary to Elizabeth) are still retained in many Protestant countries. The Greek and Catholic Christians, and the schismatic churches in the East, observe several feasts besides the above in honour of the Virgin; for instance, the birth of Mary, and her ascension to heaven; that is, her death and reception to heaven (by the Catholics called the Assumption). The festival of the immaculate conception is celebrated only by the Catholic church. It was first introduced in 1145: it was not received, however, universally, on account of the violent opposition of the Dominicans. These disciples of St Thomas Aquinas (q. v.) refused to admit that Mary was conceived and born without original sin. The council of Trent left this dispute undecided, notwithstanding the violence with which it had often been renewed. The worship of Mary gave rise to a belief in the miraculous power of several old images of the Virgin. Those at Loreto, in Italy, and Caustochow, in Poland, are particularly celebrated for their healing powers, both in diseases of mind and body. To such images, the Catholics have been accustomed to perform pilgrimages to obtain the indulgence promised to pilgrims by the papal bulls.

Several of the French kings venerated the image of the Virgin and offered it several honours, which are the mendicant order of Servites, and all the orders of females called by her name; for example, the nuns of the Conception, of the Annunciation (see Francisca), of the Visitation. For the Catholic worship, of the Virgin, so important in history, and for its influence on the fine arts, see Mary, the Virgin.

Sacred history mentions several Marias:  
1. Mary of Bethany, the sister of Lazarus, the ready scholar and tender worshipper of Jesus, to whom he vouchsafed his peculiar friendship and an imperishable name (Matthew xxvii. 13).
2. Mary of Magdala, or Mary Magdalen, who was cured by Christ of an invertebrate disease, and proved her gratitude by the most devoted adherence to him. She served him with her property, attended him on his journeys, and wept at his crucifixion. She was the last to leave his grave, and the first to visit it on the morning of the resurrection, and to behold his ascension. She was the first to relate the miracle to the apostles, and to the Church at large (John xx. 1-18).
3. Mary, the wife of Cleophas, the mother of the apostle James, and 4. Mary, the sister of Mary the mother of Jesus, both of whom we find at his cross and his sepulture, and who had probably been in his train.

MARY OF MEDICI, daughter of Francis II of Medici, grand duke of Tuscany, was born at Florence, in 1575, and married to Henry IV., king of France, in 1600. After his death, in 1610, she became regent. The duchy of Epernon had obliged the parliament of Paris to confer on her the regency. Mary, at the same time regent and guardian of her minor son, Louis XIII., dismissed the great Sully, and allowed herself to be guided by Italian and Spanish favourites. The state lost its respect abroad, and was torn by the dissensions of the great within. A treaty, concluded in 1614, granted to the malcontents everything which they had asked for; but party spirit rose anew, as Mary's conduct a sol konnte or universe was called by the name of tidikmariantes, that is, the adversaries of Mary. At the end of the fourth century, Helvidius in Palestine, and bishop Bonusus in Illyria were declared heretics for the avowal of similar opinions. Poetry and the Catholic church readily adopted the image of Mary for an ideal of female beauty. With the worship of saints, the veneration of the Virgin Mary is naturally connected. In the sixth century, the Christian church began to celebrate festivals in her honour, of which the Purification, the Annunciation, and the Visitation (the visit of Mary to Elizabeth) are still retained in many Protestant countries. The Greek and Catholic Christians, and the schismatic churches in the East, observe several feasts besides the above in honour of the Virgin; for instance, the birth of Mary, and her ascension to heaven; that is, her death and reception to heaven (by the Catholics called the Assumption). The festival of the immaculate conception is celebrated only by the Catholic church. It was first introduced in 1145: it was not received, however, universally, on account of the violent opposition of the Dominicans. These disciples of St Thomas Aquinas (q. v.) refused to admit that Mary was conceived and born without original sin. The council of Trent left this dispute undecided, notwithstanding the violence with which it had often been renewed. The worship of Mary gave rise to a miracle in the miraculous power of several old images of the Virgin. Those at Loreto, in Italy, and Causchow, in Poland, are particularly celebrated for their healing powers, both in diseases of mind and body. To such images, the Catholics have been accustomed to perform pilgrimages to obtain the indulgence promised to pilgrims by the papal bulls. Several of the French kings venerated the image of the Virgin and offered it several honours, which are the mendicant order of Servites, and all the orders of females called by her name; for example, the nuns of the Conception, of the Annunciation (see Francisca), of the Visitation. For the Catholic worship, of the Virgin, so important in history, and for its influence on the fine arts, see Mary, the Virgin. Sacred history mentions several Marias: 1. Mary of Bethany, the sister of Lazarus, the ready scholar and tender worshipper of Jesus, to whom he vouchsafed his peculiar friendship and an imperishable name (Matthew xxvii. 13). 2. Mary of Magdala, or Mary Magdalen, who was cured by Christ of an invertebrate disease, and proved her gratitude by the most devoted adherence to him. She served him with her property, attended him on his journeys, and wept at his crucifixion. She was the last to leave his grave, and the first to visit it on the morning of the resurrection, and to behold his ascension. She was the first to relate the miracle to the apostles, and to the Church at large (John xx. 1-18). 3. Mary, the wife of Cleophas, the mother of the apostle James, and 4. Mary, the sister of Mary the mother of Jesus, both of whom we find at his cross and his sepulture, and who had probably been in his train. Mary, the wife of Cleophas, the mother of the apostle James, and 4. Mary, the sister of Mary the mother of Jesus, both of whom we find at his cross and his sepulture, and who had probably been in his train. Mary, the wife of Cleophas, the mother of the apostle James, and 4. Mary, the sister of Mary the mother of Jesus, both of whom we find at his cross and his sepulture, and who had probably been in his train. Mary, the wife of Cleophas, the mother of the apostle James, and 4. Mary, the sister of Mary the mother of Jesus, both of whom we find at his cross and his sepulture, and who had probably been in his train. Mary, the wife of Cleophas, the mother of the apostle James, and 4. Mary, the sister of Mary the mother of Jesus, both of whom we find at his cross and his sepulture, and who had probably been in his train. Mary, the wife of Cleophas, the mother of the apostle James, and 4. Mary, the sister of Mary the mother of Jesus, both of whom we find at his cross and his sepulture, and who had probably been in his train. Mary, the wife of Cleophas, the mother of the apostle James, and 4. Mary, the sister of Mary the mother of Jesus, both of whom we find at his cross and his sepulture, and who had probably been in his train. Mary, the wife of Cleophas, the mother of the apostle James, and 4. Mary, the sister of Mary the mother of Jesus, both of whom we find at his cross and his sepulture, and who had probably been in his train. Mary, the wife of Cleophas, the mother of the apostle James, and 4. Mary, the sister of Mary the mother of Jesus, both of whom we find at his cross and his sepulture, and who had probably been in his train. Mary, the wife of Cleophas, the mother of the apostle James, and 4. Mary, the sister of Mary the mother of Jesus, both of whom we find at his cross and his sepulture, and who had probably been in his train.
MARY.

which was taken in 1558, after it had been in the hands of the English for 200 years. This disgrace sank deep in the heart of Mary, who was already declining from a dropical complaint, and preyed upon by a consciousness of the hatred of her subjects, and the indifference or aversion of her husband. She terminated her short and dark reign, of little more than five years, in November 1558, in the forty-second year of her age. Mary was the type and personification of the characteristic vigour and ability of her family; but her natural capacity was clouded by bigotry, and the prejudices fostered by the connexion of her mother's divorce and ill-treatment with the separation from the see of Rome. Hateful as was the severity really displayed, it has not unfrequently been highly exaggerated, and censured with too little regard to the intolerance prevalent in that age. With Mary I. ended the dominion of popery in Great Britain.

MARY II., queen of England, born in 1662, was the daughter of James, duke of York, afterwards James II., by his wife Anne Hyde, daughter of lord Clarendon. She was married, in 1677, to William, prince of Orange, and, when the revolution was effected, which dethroned her father, Mary was declared joint-possessor of the throne with her husband, king William, on whom all the administration of the government devolved. This arrangement cost Mary no sacrifice, for her being unoccupied by any cares save those for, her consort being always conspicuous. She was strongly attached to the Protestant religion and the church of England. During the absence of William in Ireland, in 1690, Mary managed parties at home with extreme prudence, and acted with equal ability during his various visits to the continent. The unfriendly terms on which she lived with her sister Anne have been regarded as a blemish in her character; but political jealousies, and the weak attachment of the latter to overbearing favourites, may sufficiently account for it. Mary died of the small-pox, at Remington, in the year 1694, in her thirty-third year. See William III.

MARY STUART, queen of Scotland, celebrated for her beauty, her accomplishments, her errors, and her misfortunes, was born at Linlithgow palace, December 8, 1542, and was the daughter of James V. of Scotland, by his queen, Mary of Lorraine, a French princess, of the house of Guise, whom, which, although suppressed, formed sufficient excuses for immuring the princess Elizabeth in the Tower, and dooming the youthful and unfortunate Jane Grey and her husband, Guildford Dudley, who had been hitherto spared, to execution. Philip arrived in England in 1554, when the nuptials were celebrated; but the attempts of Mary to secure him a paramount authority in England were unsuccessful. She succeeded better in a reconciliation of the kingdom to the pope, which was effectuated, in great form, by the legate cardinal Pole. The sanguinary laws against heretics were revived, and those shocking scenes of cruelty followed, which had fixed upon this prince the hateful epithet of bloody queen Mary. The legate Pole disapproved of this severity; but the arguments of Gardiner and others were more congenial to the gloomy bigotry of the sovereign, and 277 persons were committed to the flames, including prelates, private clergymen, laymen of all conditions, and even children. Her union with Philip II. was, however, unproductive of herself and the nation. Eleven years younger than the queen, he treated her with great neglect; and, to prevent the fulfilment of his threat of desertion, England was forced into a war with France, and the assistance of English troops facilitated the Spanish victory at Poictiers. As a result, when the one which was of no service to England, was quickly counterbalanced at her expense, by the loss of Calais,
murdered in her presence, and offered her man other indignities, which produced an open quarrel between them. The apparition took place in April, 1567, at Dunley, where he had continued to reside separately from the queen, was assassinated, and the house he had inhabited was blown up with gunpowder, in February, 1567. This barbarous transaction was but very imperfectly investigated; and, in the month of May following, the imprudent Mary wedded the end of Bothwell, who was openly accused as the murderer of the late king. Scotland soon became a scene of confusion and civil discord. The people rebelled against the authority of the queen. Bothwell, a fugitive and an outlaw, took refuge in Denmark; and Mary was made a captive, treated with insult and contempt, and committed to custody in the castle of Loch Leven. After some months confinement, she effected her escape, and, assisted by the few friends who still remained attached to her, made an effort for the recovery of her power. She was opposed by the earl of Murray, the natural son of James V., who had obtained the regency in the minority of the queen. The battle of Langside was the triumph of her enemies; and, to avoid falling again into their power, she fled to England, and sought the protection of Queen Elizabeth. That princess treated her with all the jealousy of a personal and political rival; and, after keeping her a prisoner during eighteen years, she caused her unhappily murdered in the Tower. The murder of Bothwell was committed for an alleged conspiracy against her government. Mary received the news of her destined fate with great serenity; wrote her will, and, having prepared herself for death, by presenting the ceremonies enjoined by the Catholic faith, to which she was devotedly attached, suffered decapitation, February 8, 1567, in the castle of Stirling, in the presence of her friends. She was committed, and, August 1, was interred, with great pomp, in the cathedral of Peterborough. Her body was subsequently removed, by her son, James I., to Henry VII.'s chapel, Westminster, where a magnificent monument was erected to her memory. She wrote with elegance in the Latin and French languages, and many of her compositions have been preserved, consisting of poems, letters, and a discourse of royal advice to her son. The character and conduct of Mary, queen of Scots, have been made the subject of much controversy. In the list of her partisans may be mentioned Gooschal, W. Tyler, Whitaker, H. G. Bell, and James Rennie; while the Scottish historians, doctors Robertson and Lving, have exhibited the evidence against her. "No inquiry," says Sir Walter Scott, in his History of Scotland, "has been able to bring to that clear opinion upon the guilt of Mary which is expressed by many authors, or to guide us to that triumphant conclusion in favour of her innocence of all accession, direct or indirect, to the death of her husband, which others have maintained with the same obstinacy. The great error of marrying Bothwell, stained as he was by universal suspicion of Darnley's murder, is a spot upon her character for which we in vain seek an apology. What excuse is to be derived from the brutal ingratitude of Darnley; what from the perfidy and cruelty of the fiercest set of nobles who existed in any age; what from the manners of a time in which assassination was often esteemed a virtue, and revenge the discharge of a debt of honour; must be left to the charity of the reader." Clamer's Life of Mary (1813) and Miss Beverley's Memoirs of Mary (1819) may be consulted. The misfortunes of Mary have furnished a subject for the tragic muse of Schiller, Alberi, and others.

MARY'S COLLEGE, Mount St., is situated in a romantic spot at the foot of a branch of the Blue Ridge mountains, two miles from the town of Emmetsburg, in Frederic county, Maryland; distant from Baltimore, fifty miles, and sixty from Washington city. It was established in 1818 by the Rev. John Dupuis, now Catholic bishop of New York. In 1830, it was raised to the dignity of a college, by the general assembly of Maryland, and named Mount St. Mary's college. Only twelve students have been graduated; but the number of students for the year beginning with July, 1851, is 170. The government of the college is vested in a council of directors. There are nine professors, and sixteen associate professors and tutors. The philosophical apparatus is very good, and the library consists of 7,000 volumes. There is only one vacation, viz., from July 1 to August 15. Commencement is in the last week of June.

MARY'S COLLEGE, Sr. See Baltimore.

MARY'S FALLS, Sr.; rapids on the river St. Mary's, between lake Superior and lake Huron. The water descends twenty-two feet ten inches in three quarters of a mile. Canoes and barges descend the falls with a full load, and ascend with load. MARY'S RIVER, Sr.; a small river which separates Georgia from Florida, and runs into the Atlantic ocean; lat. 30° 43' N.; lon. 81° 40' W.

MARYLAND; one of the United States of America, bounded north by Pennsylvania and Delaware, east by Delaware and the Atlantic ocean, south-west and west by Virginia; lon. 73° 10' to 79° 20' W.; lat. 38° to 39° 44' N.; square miles, 13,950; population in 1700, 319,781; in 1800, 340,639; in 1810, 380,546; in 1820, 407,350; in 1830, 446,913. The number of slaves included in this last number was 122,878; and of free people of colour, 52,012. The increase of population for the last forty years has been confined to 2 per cent. per annum. The proportion between the coloured population and the white is as 1 to 1.87. The seat of government for Maryland is Annapolis. Baltimore is much the largest city. Fredericktown, Hagerstown, Easton, and Cumberland, are considerable towns. Chesapeake bay divides the state from north to south. The part of the state east of the bay is called the eastern shore, the part west, the western shore. The country on the eastern side of the Chesapeake, with the exception of a small part of the northern extremity, is an extensive plain, low and sandy, much intersected by rivers and creeks, having few springs, and the soil is very fertile. In this part, the air, in summer, is moist, sultry, and disagreeable, and the inhabitants are subject to agues and intermittent fevers, and many of them have a sickly appearance. The Maryland part of the peninsula included between the Delaware and Chesapeake bays, is much lower and more uniformly level than the Delaware part. The soil is well adapted to corn, wheat, tobacco, and sweet potatoes. The genuine white wheat, which is said to be peculiar to this state, is raised in some of the counties on the eastern shore. The country on the western shore of the Chesapeake, below the falls of the rivers, resembles th at on the eastern shore. Above these falls, the country becomes hilly, and in the western part of the state, it is mountainous. The western parts of the state are crossed by several ridges of mountains. All the uneven country abounds with springs of excellent water, and the climate is highly salubrious and agreeable. There are excellent orchards of apples, pears, peaches, plums, and cherries. The forests abound in nut-bearing trees, which feed great numbers of swine. These swine run wild, and when fattened, are killed, barreled, and exported. Beef and mutton are also plentiful. Some cotton for domestic use is raised in Maryland,
but its quality is not good. The principal rivers are the Potomac, which divides this state from Virginia; Susquehanna, PatapSCO, Elk, Sassafras, Chester, Choptank, NanTicoke, and Pocomoke. The most considerable export from this state is that of flour; next in importance is tobacco. There are principally iron, Indian corn, pork, flax-seed and beans. The trade of Maryland is principally carried on from Baltimore with the other states, the West Indies, and various parts of Europe. The value of exports of domestic produce during the year ending December 31, 1823, was $1,259,520; of imports, $2,655,159. The tonnage of vessels owned December 31, 1826, was 170,945. The tonnage of steam-boats, in 1827, was 2207. The most numerous denomination of Christians in Maryland is the Roman Catholic. There are also many Presbyterians, Methodists, Episcopalians, Baptists, and Friends, and several denominations having less numbers. The legislative power is vested in a senate of fifteen members, and a house of delegates, consisting of eighty members; and these two branches are styled the general assembly of Maryland. The members of the house of delegates, from each county annually by the people, on the first Monday in October. The members of the senate are elected every fifth year, on the third Monday in September at Annapolis, by electors who are chosen by the people on the first Monday of the same month. These electors choose by ballot nine senators from the western shore, and six from the eastern, who hold their office for five years. The executive power is vested in a governor, who is elected annually on the first Monday in January, by a joint ballot of both houses of the general assembly. No one can hold the office of governor more than three years successively, nor be eligible as governor until the expiration of four years after he has been thrice elected. The governor is assisted by a council of five members, who are chosen annually by a joint ballot of the senate and house of delegates. The general assembly meets annually at Annapolis, on the last Monday in December. The council of the governor is elected on the first Tuesday in January; the governor nominates to office, and the council appoints. The constitution grants the right of suffrage to every free white male citizen, above twenty-one years of age, having resided twelve months within the state, and six months in the county, or in the city of Annapolis, or of Baltimore, next preceding the election at which he is to vote. The state is divided into six judicial districts, for each of which there are three judges. Each court is constituted of one of the judges of the court of appeals, and two associates. The chancellor and judges are nominated by the governor, and appointed by the council; and they hold their offices during good behaviour. The principal literary seminaries of Maryland are the university of Maryland, St Mary's college, Mt. St Mary's college and Baltimore college in Baltimore, and St John's college at Annapolis. There are several academies, which receive 800 dollars a year from the state treasury. A law in favour of primary schools was passed in 1825, and has been partially carried into effect in two or three counties. The state has a school fund of 75,000 dollars, together with a tax for the same purpose on bank capital, of twenty cents on each 100 dollars.

Maryland was granted, in 1632, by Charles I. of England, to Sir George Calvert, lord Baltimore, a Roman Catholic, and an eminent statesman, who had been secretary to James I.; but, before the patent was completed, lord Baltimore died, and the patent, dated June 20, 1639, was given to his eldest son, Cecilius, who succeeded to his titles, and who, for upwards of forty years, directed, as proprietor, the affairs of the colony. Leonard Calvert, brother of Cecilius, lord Baltimore, was appointed the first governor; and he, together with about 200 persons, commenced the settlement of the town of St Mary's, in 1634. A few months subsequently, they were principally iron, Indian corn, pork, flax-seed and beans. The trade of Maryland is principally carried on from Baltimore with the other states, the West Indies, and various parts of Europe. The value of exports of domestic produce during the year ending December 31, 1823, was $1,259,520; of imports, $2,655,159. The tonnage of vessels owned December 31, 1826, was 170,945. The tonnage of steam-boats, in 1827, was 2207. The most numerous denomination of Christians in Maryland is the Roman Catholic. There are also many Presbyterians, Methodists, Episcopalians, Baptists, and Friends, and several denominations having less numbers. The legislative power is vested in a senate of fifteen members, and a house of delegates, consisting of eighty members; and these two branches are styled the general assembly of Maryland. The members of the house of delegates, from each county annually by the people, on the first Monday in October. The members of the senate are elected every fifth year, on the third Monday in September at Annapolis, by electors who are chosen by the people on the first Monday of the same month. These electors choose by ballot nine senators from the western shore, and six from the eastern, who hold their office for five years. The executive power is vested in a governor, who is elected annually on the first Monday in January, by a joint ballot of both houses of the general assembly. No one can hold the office of governor more than three years successively, nor be eligible as governor until the expiration of four years after he has been thrice elected. The governor is assisted by a council of five members, who are chosen annually by a joint ballot of the senate and house of delegates. The general assembly meets annually at Annapolis, on the last Monday in December. The council of the governor is elected on the first Tuesday in January; the governor nominates to office, and the council appoints. The constitution grants the right of suffrage to every free white male citizen, above twenty-one years of age, having resided twelve months within the state, and six months in the county, or in the city of Annapolis, or of Baltimore, next preceding the election at which he is to vote. The state is divided into six judicial districts, for each of which there are three judges. Each court is constituted of one of the judges of the court of appeals, and two associates. The chancellor and judges are nominated by the governor, and appointed by the council; and they hold their offices during good behaviour. The principal literary seminaries of Maryland are the university of Maryland, St Mary's college, Mt. St Mary's college and Baltimore college in Baltimore, and St John's college at Annapolis. There are several academies, which receive 800 dollars a year from the state treasury. A law in favour of primary schools was passed in 1825, and has been partially carried into effect in two or three counties. The state has a school fund of 75,000 dollars, together with a tax for the same purpose on bank capital, of twenty cents on each 100 dollars.

Maryland was granted, in 1632, by Charles I. of England, to Sir George Calvert, lord Baltimore, a Roman Catholic, and an eminent statesman, who had been secretary to James I.; but, before the patent was completed, lord Baltimore died, and the patent, dated June 20, 1639, was given to his eldest son, Cecilius, who succeeded to his titles, and who, for...
mistress ascended the throne, and, by her assiduity and complaisance, acquired a great degree of influence over her. The high church principles in which she had been educated, contributed to increase her credit with the queen, who was secretly attached to the tory party, though obliged, in the beginning of her reign, to favour the whigs. The marriage of Miss Hill with Mr Masham, in 1707, occasioned an open quarrel with lady Marlborough, who was, in consequence of it, deprived of her majesty's confidence. Harley, afterwards earl of Oxford, connected himself with the new favourite; a change of ministry now took place, and, in 1711, Mr Masham was raised to the peerage. He and his wife appear to have been actively engaged in the intrigues of the Tories in favour of the exiled house of Stuart. Lady Masham lived a long time in retirement after the death of the queen, and died herself at an advanced age. The title of baron, bestowed on her husband, became extinct on the death of her only son, June 14, 1776.

MASINISSA, King of the Massilians, in Numidia, the son of King Gula, was educated at Carthage. While yet young, he defeated Syphax, king of the Massesylans, an ally of the Romans. He then served in the Roman armies against the Romans. Fortune at first favoured his enterprises; but, having been totally defeated by Scipio Africanus at Batula, with Asdrubal and Mago, he capitulated, and became an ally of the Romans. In the mean time, his father died, and Mezentius, an enemy to his family, usurped the dominion, under the name of a King of the Massesylans. Wishing to recover his kingdom, he hastened back to Africa, and re-conquered his paternal kingdom. During this period, the enmity between Syphax and Carthage had ceased, and Asdrubal had given to Syphax his daughter, Sophonisba, who had already been betrothed to Masinissa. Syphax, at the instigation of Asdrubal, attacked Masinissa, with such success as to compel him to flee, with only a few horsemen. He then conquered the country of the Massesylans, and Bochor, one of his generals, pursued Masinissa so closely that he escaped with a few attendants, and severely wounded. They concealed themselves in a cave, and supported themselves by plunder, till Masinissa recovered from his wound. He then proceeded towards frontier Massylia, and, aided by the inhabitants, not only recovered his patrimony, but invaded Massylia itself. Syphax, however, again defeated him, and he escaped to the Syrtis Minor, with only seventy horsemen. He awaited there the arrival of his allies, the Romans. Syphax was now persuaded, by the Carthaginians, to restore Masinissa his kingdom; for they hoped to gain him thus to their interests; but they were disappointed. The junction of his Numidian cavalry with Asdrubal was only to save appearances; he kept up a secret connexion with Scipio, and acquainted him with all the plans of the enemy, and at last openly went over to him. After the death of his father, he continued his vengeance on Syphax. With the assistance of the Romans, he defeated him several times, pursued him into his own territories, and finally made him prisoner, with his son. By the capture of the metropolis, the conquest was completed, and Sophonisba now fell into his power. Although he had resolved to punish her infidelity, his chief regret was the loss of his prisoner; and, at his feet, she begged for death, as the only deliverance from the shame of Roman bondage. He took her for his wife, expecting thus to evade the claims of the Romans; but Scipio demanded her as the prisoner of the Romans. The unhappy prince, who was now in their power, found that nothing but death could deliver her from their hands. He therefore sent her a poisoned chalice, which she willingly drank off, declaring that she died with pleasure, since it was by his command, and that he was the first and only object of her love. Scipio strove to soothe the grief of Masinissa by the highest marks of honour. He conferred on him the title of king, and, as king of the army, granted him a crown of gold, a curule chair, &c., and procured from the senate the confirmation of his regal dignity. Masinissa continued in the Roman army, and gained fresh laurels in the battle of Zama, against Hannibal. At the conclusion of peace with Carthage, he recovered not only all his former possessions, but also a part of the territories of Syphax. His hatred against Carthage remained unabated, and he took from this republic a number of provinces, which the Romans confirmed to him. This led to an open rupture between Masinissa and Carthage. The king then eighty years old, was victorious. Towards the close of his life, the third Punic war broke out. When Masinissa felt death approaching, he sent for the young Scipio Aemilianus, and gave him full power to take any measures in regard to his kingdom, which he thought would be most conducive to the good of his children. He died at the age of ninety years, and left behind him the title of King; but the war against Carthage had introduced a higher degree of civilization among his subjects, and taught them the advantages of agriculture.

MASK, THE IRON, or, THE MAN WITH THE IRON MASK. This is the name by which is designated an unknown prisoner, who has excited so curious a story so much the more lively as it has appeared improbable that it should be true. A French friar, whose name is unknown, and whose personage was above the middle size, and of the finest and most noble figure. (See Voltaire's Age of Louis XIV., ch. 25.) He was carried, about the year 1662, with the greatest secrecy to the castle of Pignerol, of which Saint Mars was governor. He were, during the journey, a black velvet mask, and orders were given to kill him if he discovered himself. In 1686, he was carried by Saint Mars to the isle of St Marguerite; and on the passage, the same precautions were observed as upon his first journey. The marquis of Louvois went to see him, and spoke to him standing, and with deference. The governor himself placed the plates with the floor, and, afterwards retir'd behind the door, of which he kept the key. One day, it is said, the prisoner wrote with a knife upon a silver plate, and threw the plate from the window towards a boat, which was moored almost at the foot of the tower. A fisherman picked up the plate, and carried it back to the governor. The latter, astonished, inquired of the fisherman if he had read what was upon the plate, or if any one had seen it in his hands. "I do not know how to read," answered the fisherman; "I have just found it; no one has seen it." He was, nevertheless, detained for several days; and the governor, when he dismissed him, said to him, "Go; you are very fortunate in not knowing how to read." * Saint Mars was not appointed governor of Pignerol until 1778, and it is probable that the facts related by the fisherman, did not take place Dec. 20, 1664. (Saint Felix's Answer to P. Grifflie, page 126.)

* This date is subject to some difficulties. Saint Mars was not appointed governor of Pignerol until 1778. In 1778, the time of the action, the prisoner, in which the fisherman made his discovery, was very likely dead, and therefore could not have written the note. It therefore appears that the fisherman made a discovery, which was not known to the governor, and which the governor did not take any notice of. If this was the case, the fisherman must have lived after the period of Saint Mars, which is impossible. The fact is, that the prisoner died at the time of the governor's death, and that the fisherman had the note written by the prisoner, and that he did not read it, and that the governor did not think it necessary to have it read. The story is, however, very remarkable, and is certainly true.
having been appointed governor of the Bastile, in 1698, carried the prisoner with him there, but still masked. An apartment had been prepared for him, more convenient, and furnished with more care than those of the beings who had reserved this cell above. He was not permitted to cross the court, and he could not take off his mask even before his physician. In other respects, the greatest attention was shown him, and nothing which he requested was refused him. He was fond of fine linen and lace, and was very attentive to his whole personal appearance. In short, attention appeared to have been constantly fully attended to; and he amused himself by reading, and playing upon the guitar. The physician of the Bastile related that this unknown person was admirably formed, and that he had a very fine skin, although rather brown. He interested by the mere sound of his voice, never complaining of his situation, and never giving any hint of his character. This unknown person died Nov. 10, 1703, at ten o'clock in the evening, without having undergone any severe sickness. He was buried the next day, at four o'clock in the afternoon, in the cemetery of the church of Notre Dame de l'Assomption, in the sixtieth year of age, although the record of his decease, in which he is mentioned under the name of Martholi, makes him only about forty-five. Orders were given to burn every thing which had been employed in his service. The walls of the chamber which he had occupied were rubbed down and white-washed. The precautions were carried so far, that the tiles of his room were removed, in the fear that he might have displaced some of them, to conceal a letter behind them. Voltaire, from whom the greater part of these particulars is borrowed, remarks, that at the period when the prisoner was confined, no person of importance disappeared from Europe; and yet it cannot be doubted that he must have been one. The marks of respect which Louvois showed him, prove this sufficiently.

Conjecture has exhausted itself to discover who this mysterious personage might be. Labord, first enel de chambre of Louis XV., and who had received from this prince many proofs of confidence, showed a desire to discover him. The king replied, "I pity him, but his detention injures only himself, and has prevented great misfortunes; you cannot know him." The king himself had not learned the history of the iron mask till his majority, and he never intrusted it to any of his confidential officers. "He served for the History of Persia (Pecquet), is the first writer who has attempted to raise the veil which covers the unknown prisoner. In this book, published in 1745, he pretends that it is the count of Vermandois, who was arrested, it was said, for having given a blow to a dauphin; but it is known that the count of Vermandois died in 1683, at the siege of Courtrai. Lagrange Chancel, in a letter to Fréron, attempts to prove that the prisoner is the duke of Beaufort, and that he was falsely reported to have been killed at the siege of Candia. Saint Foix, in 1768, wished to prove, in his turn, that it was the duke of Arenberg, who was said to have been beheaded at London, but who had been withdrawn from punishment. Le P. Griflet, who held the office of confessor to the prisoners of the Bastile, from December 3, 1745, to 1764, has examined these different opinions in the Treatise upon the Proofs which serve to establish the History, chapter xvi; and he adds that all the probabilities are in favour of the count of Vermandois. Voltaire has proved (Philosop. Dict., art. And Antecolotes) that the unknown prisoner could be no one of the personages just mentioned, but does not declare who he was. "The writer of this article," adds he, "knows, perhaps, more of him than P. Griflet, and will not say more of him." Voltaire, doubtless, knew that the report was spread that the prisoner was a count Girolamo Magni, or Mattioli, first minister of the duke of Mantua, who had been removed from Turin in 1685, or rather 1670, by fear, because it was feared that his dexterity might defeat the negotiations entered into with the court of Piedmont. Delort, Hist. du Masque de Fer, published at Paris, 1825, likewise maintains this opinion. Dutens, nevertheless, reproduced it in 1789, in his Tableau du Comédial, and again in 1806, in the Memoirs of a Traveller in Repose, vol. ii. p. 204—210; and two other writers, in 1801 and 1802, endeavoured to establish this opinion, with a great array of evidence. The abbé Soulavie, editor of the Memoirs de Richelieu, inserted in them, vol. iii. p. 75, a History of the Iron Mask, written by his Keeper. This account was said to have been given by the regent to his daughter, who communicated it to the marshal. According to this account, the Iron Mask was a twin brother of Louis XIV. Before the birth of this prince, two heaven-born children, Louis and Joseph, were born in 1674, and were given to the count of Foix, who would occasion a civil war, which would convulse the whole kingdom; and this prince immediately formed the resolution of removing him who should be born second, in order to prevent these troubles. The opinion entertained by a certain party, that the unknown prisoner was the offspring of a criminal intercourse between the queen and the duke of Buckingham, has been sufficiently disproved. At the time of the destruction of the Bastile, in July, 1789, there were not wanting curious persons, who sought, in the archives of this fortress, to discover some notices which might throw light upon this historical problem. In the last number of the journal entitled Leisure Hours of a French Patriot, p. 386, dated August 13, 1789, is mentioned a note written upon a card, which a man, inspecting the Bastile, took up at random, with several papers. The card contains the number 64,380,000, an unintelligible cipher, and the following note—"Pouquet, arriving from the island of Marguerite, with an iron mask." Afterwards X... X... X..., and below "Kersadwin." The journalist declares that he has seen this card. The romance of M. Regnault Warrin, entitled The Man with the Iron Mask (in 4 vols., 12mo, published in 1804, and the second edition in 1816), is preceded by a dissertation of twenty-eight pages, in which the author endeavours to prove that this mysterious personage was the son of Buckingham and Anne of Austria. He goes so far as to give the portrait of the prisoner. The Mélanges d'histoire et de Littérature (Paris, 1817, 8vo) contains a Dissertation upon the Man in the Iron Mask, pp. 77—156, in which the various hypotheses are judiciously discussed, even that of the chevalier de Taulès, French consul in Syria, in the year 1777, who, in a memoir (published in Paris, 1829), seeks to prove that the man in the iron mask was a patriarch of the Egyptians, named Aenobrates, derived from Constantineople at the instigation of the Jesuits, several years after the death of cardinal Mazarin. He has no difficulty in refuting this fable, and finishes by saying—"After an impartial investigation, and having weighed all the circumstances, I cannot doubt that he was a dauphin, and a fine man, but without being able to determine at what period he was born." It has also been maintained that this prisoner was don John of Gonzaga, natural brother of Charles Ferdinand, duke of Mantua. A letter of Barbesieux, of November 17, 1697, in which he says to Saint Mars—"without explaining yourself to any
one whatsoever with regard to what your ancient prisoner has done,—seems to overturn all the hypotheses, according to which this unhappy man owed his misfortune only to the accident of his birth.

MASKS, or LARVÆ (q. v.), were used in the most ancient times, particularly in the processions and ceremonies attending the orgies of Bacchus. As there were in the ceremonies three degrees, those of Satur, Sile, and the bearded Bacchus, so each degree had its peculiar and characteristic mask. These are often found represented on ancient vases. On account of this religious signification, it is not strange that they were used in connexion with the Phallus, the symbol of fruitfulness, as an effectual defence against witchcraft. An old writer explains the power of the mask to protect against enchantment, in this way: that its ridiculous distortion, drawing upon itself the perversity of the sorcerer, averts it from the person for whom it was intended. It was natural that the Greeks, whose highest aim was beauty, should elevate the character of the mask; thus, at length, there sprung from this fashion of misshapen masks the more pleasing Sileni and Satyr masks, and other sportive fancies of artists, which, in time, produced the grotesque and arabesque. As the origin of Grecian tragedy was closely connected with the worship of Bacchus, masks were used in it even in the beginning. Who first introduced them into comedy is unknown. We shall err if we consider the Grecian and Roman masks exactly like those of the modern Italian; these latter only cover the face; the former were a covering for the whole head, and represented, with the features, the head, hair, and eyes. The following cuts represent two Roman masks:—

They were, at first, made of the bark of trees, then of leather, afterwards of wood, which the artist fashioned according to the design of the poet. Tragic masks were distinguished by great, open mouths, and a frightful appearance; comic, by a laughing countenance: there were, also, Satyr masks and orchestrie, or those with regular features, for dancers. They had the eye very large, open mouths, within which were metallic bars, or other sounding bodies, to strengthen the voice of the speaker—a cautiveness which was required by the construction and immense size of the old theatres. Many critics (so called), ignorant of the peculiarities of the Grecian stage, are un sparing in their censures of the ancients for the introduction of masks into their plays, because, say they, all imitation of nature, and even the flexibility of voice necessary for the expression of passion, were thus rendered impracticable. They do not remember, that the tragic imitation of the ancients aimed at the highest dignity and grace, that is, was ideal, and the close representation of individual character, in which the moderns are accustomed to place the chief merit of the actor, would have seemed to them the last thing to be admitted in their tragic theatre. "The Greeks preferred beauty to liveliness of representation. The introduction of the mask was, on account of this feeling, not merely allowable, but essential, since without it, appearance should have been less than profanation an actor, with common, ignoble features, bearing the stamp of his individual character to have played Apollo or Hercules." To this may be added, that, from the colossal size of the Grecian theatres, the minute imitation of nature, in tone and countenance, which the moderns applaud, would have been lost. As the Roman theatre was, in almost all its parts, formed upon the Grecian, it differed little in the use of the mask. The work of Francesco de' Ficoroni, upon the stage masks and comic personages of ancient Rome, is instructive and highly interesting, from the copperplate illustrations.

The Italian popular theatre, called Commedia dell'Arte, which has a close resemblance to the old Roman mime and pantomime, still retains the use of the mask; for these drolleries of the old Roman stage, requiring no particular learning, or high cultivation, continued even under the government of the bar bers. As early as the twelfth century, when Irnerius established a new school of law in Bologna, we find the Bolognese doctor, also called Gratiano. He has a mask with a black nose and forehead, and red cheeks; his character is that of a pedantic and tedious prosor. The Pantalone came upon the stage about the end of the fourteenth century. His part is that of the father; he represents a rich Venetian trader; his dress, was, formerly, the zimarr, a sort of mantle with short sleeves and a small collar. This garment was worn by Venetian traders in their shops, and is still worn by lawyers. It was likewise a part of the costume of Pantalone, that the breeches and stockings should be in one piece; hence the origin of the name pantaloons. They were in the old costume, always red, and the zimarr always black. When the republic of Venice lost the kingdom of Negropont to the Turks, the fashion of the under dress was changed from red to black, as a sign of mourning, and has remained the same since. In the mask there was roving unmask; the beard was still worn, and the representation was that of a common old merchant. The beard of the new Pantalone mask is different: it passes round under the chin, and terminates at a point in the middle. The vest was lengthened, and the full pantaloons were tightened at the knee. The zimarr and slippers remained the same. The character of Pantalone is usually that of a good-natured, simple, old man. He is generally in love, and is continually imposed upon by a rival, son, or servant. In modern times, he is often a good father of a family, full of honour, and conscientiously
observant of his word, and very strict to his children; but in the particular of being continually imposed on, he remains the same. He speaks in the Venetian dialect, the doctor in the Bolognese. Buffoons are likewise among the oldest masks of the Italian stage; one is Harlequin (q. v.), the other is Scapin, cunning and knavish servant of Pantalone and the Doctor. Brighella is not so old, as his garment, garnished with green ribbons, and made in the fashion of the middle ages, proves. Sismondi gives them all the kind of masks on the History of the Chronicles of Malvezzi: "1200 of the nobility of Brescia wished to compel the citizens to take up arms against the people of Bergamo, and they resisted. A bloody battle ensued, in the streets of Brescia, in which the nobility were beaten; they fled to Cremona, where they formed a military band; the popular party formed a similar band, under the name of Brugello or Brighella." The name has been preserved on the stage, in a mask, which represents a proud, bold, and crafty plebeian of Brescia. This derivation is opposed to the common account, according to which, Brighella sprung from Ferrara. The Doctor of Bologna, Pantalone, and the Doctor of Ferrara, and all the personages, who are best comprehended under the name Zanzeledi, the captains Spavento, Tracasso, Tempesta (who call to mind the Pyrgopolynices of Plautus), Trufaldin the Bergamask, have, therefore, all been on the stage from the fifteenth century. Besides these, the Romans had the don Pasquale and the Gelseni; the Florentines, the Pasquelle; the Calabrians, the Giangurgolo; the Sicilians, the Travaglini; the Messenians, the Giovanelli; the Neapolitans, the Coviello, Pasquariello; the Milanese, the Girolo; the Piedmontese, the Gandighi. Of the female masks, the Colombine of the Italian theatre is to be mentioned. Of the other characters may be mentioned Pedronilo, Bertolino, Trivelino, Mezzolino, and D. Plione Balanzoni. (Respecting the mask of Pulcinella, see this article.) Ruzzante, in 1530, is said to have introduced the masked characters into the higher comedy. Accurate representations of these masks are to be found in Riccoboni's History of the Italian Theatre (Paris, 1728, 2 vols. 8vo). See also the Franc. Valentini's Trattato sulla Commedia del Arte, ossia improvvisa, Maschere Italiane ed alcune Scene del Carnevale di Roma, Berlin, 1826, 4to, with twenty coloured engravings. The Scarpas are still used.

The mask used at masked balls, or masquerades, is a covering for the head and face made from a light stuff, with which a man may disguise himself and remain unknown, or perhaps represent some other character. There are whole and half masks; for example, masks for the nose and the eyes. The best are of wax and fine linen; the poorer, of paper. The former are made very well in Berlin and Italy, particularly in Venice; the latter in France, at Paris and Rouen. There are natural masks, caricature masks (maschere-raccap), &c. Catharine of Medicci is said to have first introduced masked balls. A similar mummery was in fashion at the court of Henry VIII. (1510-47), who liked the disguise.

Mask; a species of drama. See Masque.

MASKELYN, NEVILLE, an eminent mathematician and astronomer, born in London, in 1732, educated at Westminster and Cambridge, was chosen a fellow of the Royal Society; he was one of the first to proceed to the island of St Helenas, to observe the transit of Venus. During the voyage, he employed himself in making lunar observations, with a view to ascertaining the longitude. In 1763, he went to Barbadoes, to try the accuracy of Harrison's timekeeper. On the death of Mr Bliss, he became royal astronomer; and, in 1767, commenced the publication of the Nautical Almanac, for which he published a volume of accompanying tables. See Mason, Charles.) In 1774, doctor Maskelyne was employed in making observations on the eclipses of Jupiter's satellites at Greenwich; he was also sent to Scotland, to ascertain the gravitational attraction of the mountain Schelulien, in Perthshire, of which he published an account in the Philosophical Transactions. He died in 1811. He was the author of the British Mariner's Guide, containing complete and easy instructions for the discovery of the longitude at sea and land (1763, 4to); and Astronomical Observations made at the Royal Observatory at Greenwich (1784—88, 3 vols., fol); besides many papers in the Philosophical Transactions.

MASON, CHARLES, an English astronomer, an assistant of doctor Bradley at the royal observatory at Greenwich. He was employed to examine the lunar tables of Mayer, and the result of his labours appeared in Mayer's Lunar Tables, improved by C. Mason, published by order of the Commissioners of the Board of Longitude (London, 1787). Mr Mason was sent to America with a grand tour, to determine the transit of Venus of 1769, in Carolina and Pennsylvanian. He was accompanied by Mr Dixon, in conjunction with whom he measured a degree of the meridian; and an account of their operations was published by doctor Maskelyne in the Philosophical Transactions for 1768. Mason died at Pennsylvania, in February, 1787. He communicated to the royal society an account of observations on the transit of Venus, June 3, 1769, made at Cavon in Ireland, and other papers, which may be found in the Philosophical Transactions.

MASON, WILLIAM, an eminent English poet, was the son of a clergyman in Yorkshire, where he was born in 1725. He studied at Cambridge, where he received a fellowship. His first appearance in the literary world was by the publication of Isis, a poem (1748), in which he satirized the Jacobitism and high church principles which prevailed in the university of Oxford. This piece provoked a reply from Thomas Wariton, entitled the triumph of Isis. In 1752, he published his Elfrida, a tragedy with choral odes on the ancient Greek model. Having taken orders in the church, he obtained the living of Aston in Yorkshire, and was appointed one of the royal chaplains. In 1759, appeared his Caractacus, a drama, on a subject with the same plan, with his friend Gray. Mr Mason was made prector of York. One of his principal works, the English Garden, a poem, in four books, appeared in 1772, 77, 79, and 81 (4to); and a second edition, with a commentary and notes, by W. Burgh, was printed in 1785 (8vo). This work was translated into French and German. In 1778, he published the poems of his friend Gray, with memoirs of his life. His principal subsequent publications are, Odes; a translation of Du Fresnoy's Art of Painting, with Sir Joshua Reynolds's notes (1783, 4to); the Life of William Whitehead, with his poems (1768, 3 vols., 8vo); and an Essay on Church Music. Besides his acknowledged work, Mason has been supposed to have been the author of the Heroic Epistle to Sir William Chambers, and other satirical pieces, which were published under the signature of M'Gregor. At the beginning of the American war, Mr Mason became so active an advocate for freedom as to give offence at court, and he was excused from his chaplainship; but alarmed by the French revolution, his zeal cooled in the latter part of his life. He died April 7, 1797.

MASON, JOHN MITCHELL, D. D., an American theologian and pulpitor, was born in the city of New York, March 19, 1770. He entered Columbia College, in that city, and was graduated in May, 1789,
with the reputation he ever afterwards sustained, of a thorough classical scholar. Under his father, a learned man, belonging to the Presbyterian denomination, he prepared himself for the sacred ministry, until the year 1791, when he left his native country, in order to complete his education at the university of Edinburgh. Here he attended the most celebrated courses of lectures connected with divinity, and formed valuable and distinguished acquaintance. In the theological societies he made himself conspicuous by the vigor of his understanding, the energy of his elocution, and the rigour of his doctrines. Towards the end of the year 1792, he was obliged to return to New York, by the death of his father, whom he soon succeeded in the Scotch Presbyterian church in Cedar street. In this situation, he confined his attention almost entirely to the benefit of his immediate flock, until the year 1798, when he composed and published a series of Letters on Frequent Communion. In 1800, he conceived the idea of a public theological seminary, to be established by the authority, and to continue under the superintendence, of the general synod of the associate reformed church. The plan which he digested was carried into operation, by his own agency and influence, in 1801. The synod appointed him their prosector, and with their sanction, he visited Europe for the purpose of procuring a library. After his return, he busily discharged the duties of his calling, until he was constrained to leave it by the decline of his health. In 1810, he dissolved his pastoral relation with the Cedar street church, and formed a new congregation, with whom he took possession of the Murray street church, when it was opened, in 1812. In 1811, he accepted the appointment of professor of Columbia college—a station which he filled for five years. The variety and severity of his labours at length affected his health so seriously, that he resigned his provostship, and, in 1816, repaired to Europe to recruit his debilitated frame. He returned towards the end of 1817, in better condition, and preached and taught again with characteristic force and success. In 1821 he undertook the charge of Dickinson college, in Pennsylvania, but in this his strength soon failed. In the autumn of 1824, he returned to New York, where he died in 1829, in the sixtieth year of his age. The principal works of Doctor Mason, his Letters on Frequent Communion, are a Plea for sacramental Communion on Catholic Principles (1816), Essays, Reviews, &c., which are to be found in the Christian's Magazine, together with a number of Sermons, Orations, &c., published at different times.

MASON'S AND DIXON'S LINE. See Mason, Charles.

MASONRY, Free: a term applied to the organization of a society, calling themselves free and accepted masons, and all the mysteries therewith connected. The society, if we can treat as one a number of societies, many of which are unconnected with each other, though they have the same origin, and a great similarity in their constitution, extends over almost all the countries of Europe, many of America, and some other parts of the globe. According to its own peculiar language, it is founded on "the practice of social and moral virtue." Its character is charity, in the most extended sense, and "Brotherly love in practice."

Like every other society of any magnitude, it has been the object of hyperbolical encomium from its friends, and obloquy from its enemies. Like every other society of any duration, it has been subject to the influences of human frailties, among which vanity always takes a prominent part. Like any other society founded on general principles, and, at the same time, well organized, it has, at particular times, been subservient to the production of much good, and at others, liable to the abuse of the most execrable purposes for which it has been employed, and, like every other society, which ever flourished, must sink with the lapse of years and the changes in the spirit of society. For about twenty years, much has been written for and against free-masonry, and illustrative of its history, ritual tendency, benefits, and dangers; from a view of all these, many of the initiated think they themselves justified in maintaining that there neither are secrets preserved in the society, nor any moral principles inculcated, which are not of universal obligation, particularly as several of such works have been published by seceded members themselves; whilst most masons, on the other hand, maintain that the true secret was never yet divulged. There are, however, even masonic writers, who warmly defend the society, and yet call the secret signs and rites of masonry accidental and unimportant.

No well informed mason will believe that the history of his society begins with the creation, as Mr W. Preston gravely asserts, any more than a reflecting Catholic of the present time will believe that the double power of the pope, spiritual and worldly, is proved from St Peter's having two swords at the time of Christ's capture, or from the ground on which it lies put by Boniface VIII. His history begins "in the beginning," and not "at the beginning." Nor does the well informed mason credit the stories that his society originated with the Greek mysteries, or even the Egyptian, or that it descends from the Dionysian architets, from the Pythagorean society, or from the Essenes. These institutions had little of the character of a continued and connected whole, and nothing appears to indicate that free-masonry can be considered as descending from any one of them. In Lawrie's History of Free-masonry (Edinburgh, 1804), more may be found respecting this point. As little can it be proved that the masons sprang from the Templars, or any other order of the middle ages, or, at a later time, from the Jesuits, or indirectly from the Rosicrucians. Part of these stories have been caused by the histories of the order (historia ordinis), purposely invented for the sake of the rites of the society, in which, however, is also concealed, under ciphers, the true history of the (so called) College of Craft Masons. It is evident that the free-masons originated from the common corporation of masons, for long before the origin of the corporations of the separate crafts in any part of modern Europe, there existed corporations or societies of artificers, who united all the crafts necessary for building (and we must keep in mind what the building of the middle ages was) under the direction of one or more leaders, the architects. Protected by the charters of the clerical and secular powers, and united in one great society for the construction of each great building, as the cathedrals, &c., these societies erected, in all countries of Europe, those gigantic structures of which we generally are so much the more to admire the magnitude, which excite our amazement, and, as has been remarked by Dr Henry, in his History of Great Britain, with an economy of time and expense truly surprising. We find these societies of architects everywhere. They were composed of members from Italy, Germany, the Netherlands, France, England, and other countries (including from Greece), and united under very similar constitutions; for instance, at the erection of the convent of Batalha, in Portugal, about 1400; of the minister of Strasburg, 1015 to 1439; that of Cologne, 950 and 1211 to 1565; of the cathedral of Meissen, in the tenth century; of the cathedral of Milan, the convent of Monte Cassino, and of the most remarkable buildings of the
British isles. That these societies of architects at last gave rise to one not occupied with actual building (speculative masonry, as it is called by some), appears, from a critical investigation of the history of free-masonry.

The first societies of antiquity with which free-masonry appears to stand in historical connexion are the corporations of architects, which, with the Romans, existed under the name of collegia and corpora. It is related that Numa established the first corporations (if we may so term them) of architects (collegia fabrarum, with many other societies of mechanics and artificers (collegia artificum), after the model of the Greek societies or colleges of artificers and priests: he also instituted for them proper meetings and certain religious rites. According to the laws of the twelve tables, the collegia had the right to make their own laws, and could conclude certain treaties with each other, if nothing was contained in either contrary to the public laws, which was conformable with Solon's legislation. Such corporations of all kinds, particularly the crafts connected with hydraulic, naval, and civil architecture, excepting barely those of intaglio, were not mentioned in the Roman state, went on continually increasing, and co-operated most powerfully in propagating the Roman customs, sciences, arts, and laws. They, as it were, cultivated the soil, which the sword had gained. The useful arts are, of course, among the most important gifts which a civilized race can confer on the rude tribes who may be dependent on it. When an Indian tribe first concludes a treaty with the United States, one of the points has often been a stipulation that the latter shall send a blacksmith among them. If we now remember that the Romans were pre-eminently an architectural race (like most conquering nations, who have already attained a considerable degree of civilization), and that the sciences and arts, connected with architecture, include a vast range, and are intimately connected with the other attainments of an advanced civilization, we shall easily comprehend that the colleges of architects must have been of great importance. As the collegia were established in those early times when states were formed after the model of a family, and the religious and political constitution confusedly mingled, they had, besides their character of a society of artificers, that of a civil and religious institution. They were, therefore, peculiarly the collegium of architects, to the end of the Roman empire, and transplanted into the corporations of architects of the middle ages, already mentioned, because the constant mingling of religion in law, politics, and science, by no means ceased in the middle ages; on the contrary, in some particulars, a still closer union was effected. As the Roman collegia held their meetings with closed doors, nothing was more natural than that they should become, in times of violent political agitation, the place of political parties and religious mysteries, secret worship, and doctrines of all sorts. The Roman emperors of the first centuries limited the collegia as much as possible, but the later governments favoured them so much the more. In the corpus juris are contained several lists of the mechanic arts, legally existing, and free from taxation, in the third and fourth centuries, among which we find those of architects, which is, however, entitled of bathhouse, painters, sculptors, workers in marble, masons, stone-cutters, carpenters, &c. There was no town at all important, no province ever so distant, where some of the collegia, just mentioned, did not exist, to the downfall of the Western and Eastern empires, with their peculiar constitutions, and having more or less of a political and a religious character.

The corporations of artificers, whose occupations were connected with architecture, were called upon, by imperial orders, to come from all parts of the empire, to assist in the building of large cities, palaces, churches, &c. None of the artificers accompanied each Roman legion. Such corporations also existed in Britain (where the Romans, during their conquests, built a great deal), both in the legions there stationed and in the cities. The same was the case in Spain, France, on the Rhine, and on the Danube. It is true that the collegia vanishing with most of their works, when the Picts, Scots, and Saxons devastated the country; but, in France, Spain, Italy, and in the Greek empire, they continued to flourish, and from these countries the Christian Saxons rulers of Britain, particularly Alfred and Athelstan, induced a number of artificers and architects to come to England in order to build the castles, churches, and convents. Although these foreign artists, and the few who had survived the ravages of the barbarous tribes, were Christians, and though most of their leaders or directors were clerics, yet the corporations which they formed had no other constitution transmitted from the ancient Roman colleges, which were spread over all Christian Europe, and the character of which is still to be learned from the corpus juris Romani. As the members of these corporations of architects of the tenth century belonged to different nations, and at the same time publicly or secretly to sects, widely differing in their tenets, and often condemned as heretical; in short, as they were very different in faith, customs, and manner of living, they could not be induced to go to England, and to remain there, without receiving from the pope and king satisfac-
tory liberties and letters of protection, especially jurisdiction over their own bodies, and the right of settling their own wages. They then united, under written constitutions, founded upon the ancient constitution of the Roman and Greek colleges, and the provisions of the civil law. The different tenets of the members, the scientific occupation and elevated views of their leading architects and clergymen, naturally gave rise to a more liberal spirit of toleration, a purer view of religion, and stricter morals, than were common in those times of civil feud and religious persecution. The lofty notions of Vitruvius (their constant manual), in regard to the dignity of an architect, and the importance of having control of their character. Their religious tenets being often objects of suspicion to the orthodox, they were obliged to keep them secret. Secrecy, moreover, was the character of all the corporations of the middle ages, and, down to the most recent times, the corporations of mechanics on the continent had what they called secrets of the craft—certain words, or sometimes absurd ceremonies, by which they pretended to know each other. To this we must add, that the corporations of architects, in the middle ages, were descended from the times of antiquity, so that their societies had received, in the times when Rome adored all gods, and listened to all philosophical systems, impressions derived from the Greek philosophical schools, particularly the Stoic, united with some fragments of the Greek and Egyptian mysteries, and subsequently modified by notions acquired in the early times of Christianity, particularly from the Gnostics, which abolished mysteries and sacred ceremonies, clothed, according to the spirit of the time, in symbols, and constituting their esoteric mysteries. The watchful eye of the popes induced them to keep these doctrines closely concealed, in connection with the real secrets of their art, and its subsidiary branches, their rule chemistry, their metallurgy, and natural philosophy, and to
MASONRY.

preserve their knowledge in forms otherwise foreign to it, if they wished to escape persecution. The great importance which architecture assumed in those times, is to be accounted for from the enthusiasm for splendid houses of worship, in which the religious spirit of those times displayed itself to an unparalleled degree. The history of these corporations, as before given, and their connexion with the present society of free-masons, appears from what we know of antiquity, from the history of England, and from the agreement of the constitutions, symbols, and customs of the present free-masons with those of the above corporations.

Three documents have also been preserved, which furnish additional light, and show us historical, as well as the doctrines and customs of those corporations of the middle ages, in great perfection, and which must be considered as valuable portions of the history of that period. See Die drei ältesten Kunststukken der Freimaurerbruderschaft (2 vols., Dresden, 1810.)

Before we speak of these documents, we may mention that some writers talk of the Cudeles as having formed a Christian church in England for some centuries before the Saxon conquest (in 449), and sent bishops to the most ancient councils. This church was, together with the Roman civilization, suppressed by the Frics and Saxons. The Cudeles were the poets and orators of Wales and Scotland, in Ireland, and in the small islands between Great Britain and Ireland, chiefly in Anglesey and Mona, where they continued their apostolic institutions and usages, related to those of the Oriental church. They tried in vain to convert the rude Saxon kings, but they had not the same number of years as the pope, were forty monks, in 597, to Britain. The Cudeles were now again bloodily persecuted by the adherents of the pope. In their persecution, they maintained the spirit of Christianity, and studied in solitude. They at last found access to Alfred and Athelstan. The latter gave employment to many architects, in building convents, castles, &c., and the Cudeles made use of their organization, and the independence guaranteed by the king, to teach them their truly apostolic principles. Usher, Ledwith, and Grose treat of this subject. The old writers on the papal side of the question, are said to have purposely avoided making mention of the Cudeles. A further cause is thus assigned for the inferior mortification and diminished the architectural societies in the middle ages.

The eldest of the documents above mentioned, is the constitution confirmed, in 926, to all the corporations of architects, by king Athelstan, through his brother Edwin, at York, the original of which, in Anglo-Saxon, is still preserved in York. The beginning reminds the reader immediately of the most ancient Oriental church. Then follows a history of architecture, beginning with Adam, and comprising quotations from some rabbinical tales, respecting the building of Babel, the temple of Solomon, with mention of Hiram, limited, however, to the information contained in the Bible; then passing over to the Greeks and Romans; mentioning particularly Pythagoras, Euclid, and Vitruvius. Then the history of architecture, and the oldest corporations in Britain, is told, agreeably to the accounts of the best historians, and ancient records. As an example, it is mentioned, that St Albanus, an honourable Roman knight, patronised the art about A. D. 300, settled the fundamental institutions of the masons, procured them employment, wages, and a charter from the emperor Carausius, according to which they should form a society in Britain, under the government of architects. The devastation of the country, and the destruction of the edifices by the northern tribes and the Angles and Saxons, is related, and how the pious Athelstan had resolved to restore the ancient and venerable society. After this follow the sixteen most ancient laws, which agree exactly with every thing that careful investigation can discover. The constitution is appended to the college of architects. This constitution was preserved in England and Scotland, in its essential features, until the fourteenth century, when the societies passed over into the stationary corporations in cities. It is proved by historical documents, that in Scotland and England, lodges, labouring according to these constitutions, continued unbroken series, and often admitted, as members, learned or influential men, who were not architects, including even kings (accepted masons). The society of masons decreased, and sank more and more, as the times changed. In 1717, we find four lodges existing, in which the old symbols and customs were still preserved; most of their members were merely accepted masons. So far extends the first period of masonry. In 1717, an essential change was made by three members belonging to some of the four lodges just mentioned, Desaguliers, James Anderson, and George Payne. They changed the society into one which had nothing to do with building. "Brotherly love, truth, and relief" were to be the essential characteristics. By retaining the name and customs of the ancient fraternity, the new lodges retained the privileges and charters of those societies. They further thought it well to establish a centre of union and harmony in one grand-master, the eldest mason, who, at the same time, was a master of a lodge; to constitute themselves, pro tempore, one grand lodge; to renew the quarterly communications of the brethren; to hold the annual meeting and the festival; and to elect a grand-master from among them, until they should have a brother of high rank at their head. In 1731, James Anderson was charged to remodel the old constitutions, and to form thus a general book of constitutions, which alone should be valid for all the special lodges, in future to be established under the authority of this grand lodge. The constitution of York was made, by him, the basis, though he compared a number of other constitutions, and that it remained in force with some changes, acknowledged, and printed in 1733. In 1738, a new edition was printed. In the editions of 1756, 1784, and in the latest book of constitutions of the grand lodge of old masons at Lon-

* It is by no means improbable that, in these barbarous ages, their secret doctrines may have degenerated, and become mixed with corrupt notions, as was the case with the Society of Templars.

† The architects, with their assistants and pupils, formed communities, called Initii, or lodges. At an assembly held at Ipswich, in 1659, the brethren agreed that the lodge should be formed at Strasbourg, as the place of general assembly, and that the architect of that cathedral, for the time being, should be the supreme master of the society, with all the other members, the custodians, and apprentices, who had a secret word, with signs of recognition. In 1645 and 1646, there were general assemblies at Strasbourg; but they were afterwards neglected for some time, until the emperor Maximilian I, being at that city in 1589, granted by certain grants, diploma, which were renewed and confirmed by subsequent emperors. The constitutions, together with the regulations and statutes were kept in the house of the architect of the cathedral, in a chest with triple locks, of which the two oldest masters kept the key, till such a time as it required before the chest could be opened. These documents were in existence until the French revolution, when they were destroyed, with many other papers, to prevent their falling into the hands of the Jacobin commissioners. Their rules included the objects of leading masons to submission to the masters, whom the companions served for five or seven years; attention to their religious duties; and charity to the poor. Among the articles were the square, the plum-bob, and the compasses, which are distinguishing marks of the officers of a free-mason's lodge at this day.
MASONRY. 715

don, united in 1813 (of which the second part appeared in 1815), the traits of the ancient York instrument are always to be recognised. The following are the most important duties (charges) of the masons, as they appear in the edition of 1784, and, with few alterations, in the constitutions of 1807 and 1813. Their principles are to obey the laws of morality, and if he understands the principles of the society, he will neither be an atheist nor a profane. Though the masons of ancient times were obliged to profess the religion of their country, whatever that might be, it is considered now more beneficial to bind them to that religion alone in which all men agree, and they are not compelled to observe them; they are to be men of probity and honour, whatever may be their differences in name or in opinion. By this, says the constitution, masonry becomes the central point of union, and the means of establishing friendship among persons who, without it, would live in continual separation. The mason is to be a responsible subject or citizen, and never to allow himself to be involved in riots or conspiracies against the public peace and the welfare of the nation. No private hatred or feud shall be carried to the threshold of the lodge, still less political or religious disputes, as the masons, in this capacity, are only of the above character as members of nations and tongues, and decidedly against political feuds, which never have been favourable to the welfare of the lodges, nor ever will be.

The second of the above mentioned documents was written under Henry VI. of England, first printed in the Gentleman's Magazine, in 1755, p. 417 et seq., and, since then, has been repeatedly reprinted.

The last of the three documents is the ancient mode of admitting masons, as it is still exercised by all the masons of the ancient English system. It contains some customs of the Roman colleges, and of the most ancient Christian monks and asctes. From this ritual, that of the new English grand lodge, contained in Browne's Master Key (London, 1802), differs in some important particulars, though they agree in spirit.

The first lodge in France, after the English system, was founded in Paris, in 1725; in Germany (in Hamburg), in 1735; in America, 1750. The more the order was extended, the less intimate became the connexion of the lodges; secessions took place; new systems were established; rivalry often occurred; to the three first degrees, of apprentice, companion, and master, additional ones were added; in fact, it would be difficult at present to give a general character of masons, so numerous are their lodges, and so various their characters. They have, in many places, done much good, by assisting the poor, establishing schools, &c. In some countries, they have excited the suspicions of the government, have been prohibited and persecuted, as in Spain and the Papal States. Pope Clement XI. communicated them to us. We have already said, the society has been sometimes used for bad purposes. These, however, are declared, by the members, to be foreign from its spirit. According to some masons, the society requires a toleration of a general nature, in order that there may be no difference of opinion between the members of the society. The activity of the masonic societies, in the French revolution; the use of their forms by the Carbonari; their titles and ceremonies, which have too often been made mere instruments of ostentation, we have not room to describe. Of late, the society has attracted a number of all classes; during the war, the Masons of America, in consequence of the abduction of a certain William Morgan, attributed to some of its members. The opponents of masonry ascribe this act to the fundamental principles of the society, and therefore consider its existence as inconsistent with the security of the community. The subject has given rise to a violent contest. A brief statement of the facts of the Morgan case will be found in a note below.

* We refer the reader, for further information on the subject of Free Masonry to Preston's Illustrations of Masonry (5th edition, London, 1812); Lawrence's History of Freemasonry in the United States (New York, 1885).

MASORA; a collection of remarks, critical, gramatical, and exegetical, on the books of the Old Testament, by the Jewish doctors of the third and succeeding centuries. After they had long been transmitted orally (hence the name, signifying tradition), they were formed into this collection, at the beginning of the sixth century, in Tiberias, where there was a celebrated Jewish school, and, from time to time, additions were made. It is divided into the great and little: the former contains the whole collection, in separate books; the latter is an extract from the observations, which were written in the margins of the biblical manuscripts. It is important for the criticism of the Old Testament, on account of its indications of the various readings; and it contains the best illustration of many passages. It is to be regretted that the authors and collectors (the Masorites) spent their time in the most laborious and useless trifling.—counted the verbs and words, and even the consonants, in the Old Testament; found the middle word and letter of each book, and marked the verses which contain all the consonants of the Hebrew word. Masora was gradually brought into a state of the greatest con- fusion by successive additions, and the errors of transcribers: but, in the beginning of the sixteenth century, it was once more reduced to order by Rabbi Jacob Ben Chajim, for Daniel Bomberg, a printer in Venice (Biblia rabinica Hebr., Venice, 1518, 1521, 1522—28, folio); and, a century after, John Buxtorf the elder completed the work of his predecessor (Bale, 1618, folio).

MASQUE, or MASK; a theatrical drama, much in favour in the courts of princes, during the sixteenth and seventeenth centuries, in the latter particularly in England. They are the most brilliant and often the most extravagant of all the entertainments of the English ancestors, and are traced, with much probability, to the religious processions of the church of Rome, in which various scriptural characters were represented with some occasional tinge of burlesque solemnity. The masque, or, as we should rather call it, in its infancy, the masquerade, in order to distinguish it from the species of drama into which it ultimately ripened, early became a prevalent fashion among the princes and nobles of Europe. The court of Henry VIII., before the tyrant's sanguinary licen- tiousness had deluged it with blood, presented many of these gorgeous spectacles. According to Holin- shed's chronicle, the first masque performed in England was in 1510, in the first year of Henry's reign. In 1530, a masque was performed at White- hall, "consisting of music, dancing, and a banquet, with a display of grotesque personages and fantastic dresses." Shakespear, Beaumont, and Fletcher have frequently introduced masques into their plays. The English masques bear some resemblance to operas, as they are in dialogue, performed on a stage, orna- mented with machinery, dances and decorations, and have always music, vocal and instrumental. The parts in the masques of the sixteenth and seventeenth centuries were usually represented by the first per- sons of the kingdom: if at court, the king, queen, and prince; and at home, the lord mayor. James I. carried to its height the glory of the masque. It had hitherto consisted of music, dancing, gaming, a banquet, and a display of grotesque personages and fantastic dresses; but it now assumed a higher character, and became "married to immortal verse." Previously, "their chief aim," says Warton, "seems to have been the ridiculous and exaggerated oddity of the visors, and by the singularity and splendor of the dresses. Everything was out of nature and propriety. Frequently the mask was attended with an exhibition of some gorgeous machinery, resembling the wonder of a modern pantomime; for instance, in the great Will of the prince, the usual place of performance, a vast mountain, covered with tall trees, arose suddenly, from whose opening caverns issued hermits, pilgrims, shepherds, knights, damsel, and gipsies, who, being regaled with spices and wine, danced a morisco or morris dance. They were again received into the mountains, which, with a symphony of rebecs and recorders, closed its caverns, and, tumbling to pieces, was replaced by a ship in full sail, or a castle besieged." (History of English Poetry, sec. 44.) This glittering chaos was reduced to order by the genius of Ben Jonson: not that he was the first who united poetry with music, dancing and scenery, but he was the first who combined his masque with his masquerade. This time in this branch of the drama. In his masques, along with much that is frigid, wensomnse, and ped- antic, may also be found much fine poetry. The masques; though they make a great show on paper, were probably not a little defective in exhibition. Sir Dudley Carleton, an eye-witness, writes to Win- wood as follows: "At night, we had the queen's maske in the banqueting-house, or rather the pageant. There was a great engine at the lower end of the room, which had motion, and in it were the images of sea-horses, and other terrible fishes, which were ridden by Moors. The indecorum was, that there was all fish and no water. At the further end was a great shell, in form of a skillet, wherein were four seats, on which sat the queen and her ladies. Their apparel was rich, but too light and courteznse-like for such great ones. Instead of vizards, their faces and arms, up to the elbows, were painted black, which was disguise sufficient, for they were hard to be known; but it became them nothing so well as their red hair. And I cannot imagine a more ugly sight than a troop of lean-faced Moors." (Winwood's Memorials, II. 44.) Milton's Comus is the most beautiful of the productions which bear the name of masque. This exquisite specimen of lofty thought, beautiful imagery, and splendid versifica- tion, is said, by Gifford, to be defective as a masque, and, by D'Israeli, not to be a masque at all, refer- ring, probably, to the deficiency of music and machin- ery; but Warton says, with truth, "The intrinsic graces of its exquisite poetry disdaind assistance; and, whether Comus be or be not deficient as a drama, I am of opinion that our author here is inferior only to his own Paradise Lost." Puritanism banished the Masque, and the masques in their train.

MASS; properly speaking, the prayers and ceremo- nies which accompany the consecration of the eucharist. The word is used generally for all that part of the Catholic service in which the eucharist is offered. The Latin word is missa, which, in early times, designated the public service of the Christians, celebrated under the direction of a leitourgos (see Liturgia), generally the bishop himself, with the assistance of several servants of the altar (the elders, deacons, and others), in pre- sence of the whole community. According to the example given in the verses of the Apostles (ii. 41—42), and other passages, this service con- sisted of prayers, singing (chiefly psalms), read
ing of portions of the Bible, preaching, and the celebration of the Lord's Supper. The people not only understood what was done, but also sung, responded, prayed, and received bread and wine in the Lord's supper. Very early, however, through the so-called 'transubstantiation' (the Catholic part of the 'Mass', or Lord's Supper), it became customary, and, according to many, universal, during the first three centuries, to divide the divine service into two chief parts, by separating the rest of the service from the celebration of the eucharist. Only the faithful, who lived actually in communion with the church, were allowed to be present at the liturgy: the people, also, the catechumens (q.v.), the penitents, and even unbelievers; but these classes were dismissed before the celebration of the eucharist was begun, by the words Catechumeni, exite, missa est (i.e. consent, the meeting), or Si quis catechumenorum reminiscent, absent or. Thus they were dismissed (dismissio, missio, missa), from which circumstance, in the sequel, the whole service received its name; hence, again, the division of missa catechumenorum, and missa fidelium. In the article Lord's Supper, the reader will find the Protestant and Catholic views respecting the eucharist, the sacrifice of mass, the Holy mysteries of the altar, and the decrees of the Council of Trent respecting this, the most essential point of Roman Catholic service. It remains, therefore, to give here an account of the celebration of the mass only.

When the number of the faithful increased, and communities of Christians rose, not merely in the cities, but also in the villages, the celebration of divine service was intrusted also to priests, who at first officiated only before the whole community, and on days appointed for the purpose; at a later period, also, on ordinary days, and even alone, for their own benefit, with the assistance of one altar-servant only. Thus originated, with the high, or solemn mass, also the low or private mass, performed by the priest, assisted by one altar-servant only. The Protestants consider this, even according to the Catholic doctrine of the mass itself, a great abuse; and many Catholic authors have concurred with them, while others maintain that it is indispensable, as it would be impossible otherwise to administer the hosts both for the sick, &c.; and, besides, say they, the hermits in the deserts must have celebrated private mass. This, of course, is arguing on the ground that the mass, in the times of the early anchoress, was already developed. If the mass is of such supernatural efficacy as a great part of the Catholics consider it; if it is an actual and repeated sacrifice of Christ for our sins,—private masses may also be admissible, though the form of the celebration, founded on the supposition of the presence of the people, may be inconsistent with them. The celebration of the eucharist or the mass separate from the preaching, became more and more common, and the actual participation of the people in it gradually lessened. The responses, &c., were made by a servant of the altar, and the priest alone took the sacred elements,—changes to which the people accustomed themselves the more readily as the knowledge of the ancient languages, in which the masses were performed (in the Oriental church, the Greek, and in the Latin church the Latin), became more and more limited. The choir of priests and servers, including, at a later period, the singers and musicians, took the place of the people, and the whole difference of the solemn and the private mass came to consist in this circumstance only, the people having to take the part of it, and the whole service being delivered separate from this ceremony. This state of things has remained to this day, at least in by far the greater number of Catholic countries.

The mass, then, at present consists of four or three chief parts: 1. the introduction, which forms its chief part, is called the evangelium, and formerly constituted, with the sermon, the mass of the catechumens; 2. the offertorium, or sacrifice; 3. the consecration, in which the elements of the sacrifice are consecrated; 4. the celebration of mass, of which the latter part is usually divided into several small parts, each having its proper denomination;—they are prayers, songs, shorter and longer passages of the Holy Scriptures, and a number of ceremonies, which, as the essential point of the mass is the sacrifice of the Lord, consist partly of symbolic ceremonies, commemorative of important circumstances in the Saviour's life, or signs of devotion and homage paid to the presence of the Lord in the host. The order of these ceremonies, and of the whole celebration of the mass, is given in the missal, or mass-book. The masses are modified according to many circumstances. Thus certain parts are changed according to the saint in honour of whom the mass is celebrated, or the seasons of the year connected with different events in the Saviour's life, or the purpose for which the mass is said, as the missa pro defunctis (mass for the dead), or that intended for the invocation of the Holy Ghost, and others. Thus divided, the established rites gave rise to the missa bifissa, trifissa, multifaodia, formed by uniting two, three, and more masses under one canon. Missa prae sacramento is that in which the host has been consecrated one or several days beforehand, which is more common in the Greek church than in the Latin. Missa sices, or dry mass, is that which was celebrated without wine; for instance, on board of vessels, in order to prevent the spilling of the blood. It is no longer in use. The mass of the day is such as is proper to the season, or to the feast which is celebrated. Votive mass is an extraordinary mass, besides that of the day, rehearsed on some extraordinary occasion. High mass is celebrated by a deacon and sub-deacon, and sung by the choristers. Besides these, there are different masses according to the different rites: the Greek mass, the Latin mass, the Roman and Gregorian mass, Gallican, Gothic mass, &c.

One of the greatest objections of the Protestants against the Catholic religion is the doctrine of the mass. They are offended with the doctrine that the sacrament of the Lord's supper is made in the mass, a sacrifice continually repeated for the reconciliation of sins, this appearing to them as the application of Jewish and heathenish ideas of sacrifice to the Lord's supper, while the Bible declares that Christ has offered himself by his death on the cross, once for all, for the atonement of sins, and the Lord's supper is no sacrifice to God, but the offering of God's grace to men. To this the Catholics reply that, according to Scripture and tradition, the eucharist is a sacrifice; that the body and blood of Christ are actually present in the eucharist (see Lord's Supper), and that they do not offer a sacrifice different from that of the cross; that it is Jesus Christ himself, who offers himself through the hands of the priests; that he therefore is the principal priest or pontiff and victim, as he was likewise on the cross. Can we,' continues the Catholic Dictionary de Theologie (Toulouse, 1817), from which the foregoing passage is also taken—"can we testify our gratitude to God better than by offering to him the most precious of all the gifts which he has made to us—his only Son, whom he deigned to grant us, and who gave himself as a victim for our redemption? We then say, with David, for all things are thine, who hast given us all things: blessed be the name of the Lord (Ps. D. xxii. 5)."...
Intimately connected with the dogma that the mass is a sacrifice is the dogma of the masses for the dead, which is equally offensive to the Protestant. As the priests are chained night and day from 1700, 3887 persons who depart from this world without having sufficiently atoned by suffering for their sins, are obliged to suffer in the other world a temporary punishment; it also believes that the sacrifice of the mass, that is, of Jesus Christ, may be made efficacious for the remis-
sion of this punishment. Catholics admit that the masses which have been connected with the mass are enormous; but, say many of them, they have been abolished by the council of Trent. Protestants, however, cannot find that these masses have been eradicated, though they may have diminished. In the Catholic countries—perhaps without exception—masses for the dead can be procured for a certain fee, so that the persons for whom they are said are either entirely released from purgatory, or many years of their pain remitted, this special application of the great offering of Jesus seems to them to devi-
ate most essentially from the true meaning of the scriptures. In Italy, for instance, it was very com-
monly the custom to resign a certain number of souls for a certain number of years, attributed to a number of masses, said at particular altars; and the cheapness of the price for which this great benefit could be procured for the souls of the departed was not unfrequently extolled.

The dispute relative to the mass is by no means restricted to the two parties, the Protestants and Catholics. Not a few of the Catholics are desirous of essential changes, particularly the disuse of a lan-
guage which is not understood by the people, and of many masses connected with legends, evidently and acknowledg-
dedly fictitious. Thus Mr von Reichlin Melchior of Freiburg, in his work on composition of masses, espouses a number of souls for a certain number of years, attributed to a number of masses, said at particular altars; and the cheapness of the price for which this great benefit could be procured for the souls of the departed was not unfrequently extolled.

The dispute relative to the mass is by no means restricted to the two parties, the Protestants and Catholics. Not a few of the Catholics are desirous of essential changes, particularly the disuse of a lan-
guage which is not understood by the people, and of many masses connected with legends, evidently and acknowledg-
dedly fictitious. Thus Mr von Reichlin Melchior of Freiburg, in his work on composition of masses, espouses a number of souls for a certain number of years, attributed to a number of masses, said at particular altars; and the cheapness of the price for which this great benefit could be procured for the souls of the departed was not unfrequently extolled.

The dispute relative to the mass is by no means restricted to the two parties, the Protestants and Catholics. Not a few of the Catholics are desirous of essential changes, particularly the disuse of a lan-
guage which is not understood by the people, and of many masses connected with legends, evidently and acknowledg-
dedly fictitious. Thus Mr von Reichlin Melchior of Freiburg, in his work on composition of masses, espouses a number of souls for a certain number of years, attributed to a number of masses, said at particular altars; and the cheapness of the price for which this great benefit could be procured for the souls of the departed was not unfrequently extolled.
cember, 1829, employed in the foreign and coasting trade, and in the fisheries, was 424,507 tons. The fisheries are chiefly of three kinds, viz. the whale fishery, which is carried on in distant seas, by ships fitted out chiefly at Nantucket and New Bedford; the cod fishery, which is carried on partly on the north-west coast of this United States, and those of Newfoundland and Labrador; and the mackerel fishery, which is carried on chiefly along the coast. A large number of vessels and seamen are employed in these fisheries, and the produce is very great. The manufactures of cotton and woollen cloths are carried on chiefly by large and opulent companies, with small loans of the capital employed by water power. The capital of the state, and of all the New England states, is Boston. It has 61,392 inhabitants. The towns next in size, are Salem and New Bedford. They are rich towns, extensively engaged in foreign commerce, the former particularly in the India trade, and the latter in the whale fishery. Nantucket is a town also largely engaged in the whale fishery. The other chief commercial and fishing towns, are Newburyport, Marblehead, and Plymouth. The chief manufacturing towns are Lowell, Taunton, Springfield, and Waltham. There are many other handsome and flourishing inland towns, amongst which the ancient towns, with a population of 50,000 to 60,000 inhabitants, when the towns exercise their full privilege of choosing members. The judiciary consists of a supreme judicial court of five judges, and a court of common pleas of the same number of judges, who hold their appointments during good behaviour. Both courts are held, at stated periods, in each county. The university at Cambridge is the most liberally endowed literary institution in the United States, and has given to the country the greatest number of literary men. It has a president, eight professors, and six tutors and other teachers, besides four professors of the medical school, three of the theological school, and the principal of the grammar school. It has a library of 36,000 volumes of choice books. There are two other colleges in the state, viz. Amherst college, near Northampton, and Williams college, at Williamstown, each of which has a president, three or four professors, and two tutors. There is a richly endowed and flourishing theological seminary at Andover. It has four professors, who are supported by the income derived from permanent funds, and has commodious buildings for the residence of the professors and students, and for other purposes. There are in the state forty-three incorporated academies, where more than half of the female pupils are educated. There are several well-conducted private schools of considerable celebrity. The most distinguished of these is the Round Hill school, at Northampton, which has been highly successful, from the enlightened views and varied accomplishments of its proprietor, and the liberal provision which he has made for the support of the institution. The means of common education are provided at the public expense throughout the state. Public schools for instructing all children whose parents choose to send them, are supported in all the towns. In the large towns these schools are of a high character. They are not regarded as charity schools, and public donations, but as the rudiments of learning are acquired from the same sources by the children of the rich and of the poor. Many public improvements of various kinds have been made, chiefly by companies incorporated by the state legislature. A great number of turnpike roads, bridges, canals, rail-roads, &c., have been made by such companies, and the means of communication in the state have been thereby greatly improved. For the history of Massachusetts, see New England.

MASSACHUSETTS BAY, a large bay, situated east of the central part of Massachusetts, and bounded on the north by Cape Ann, and on the south by Cape Cod. For the former province of this name see New England.

MASSAGETS; a collective name given by the ancients to the known tribes of Northern Asia, who dwelt to the east and south of the Caspian sea, as far as the frontiers of the Persian monarchy. This region is at present the residence of the Turkestans and Karakalpaks. The name often occurs in the Scythian and Persian histories; in the latter, particularly in the campaigns of Cyrus. The Alans were a tribe of the Massagets.

MASSALIANS. See Massaliites.

MASSANIELLO, properly THOMAS ANIELLO, the celebrated Neapolitan insurgent, was born at Amalfi, and gained a livelihood in Naples as a fisherman, and a dealer in fish and fruit. Although very poor and poorly educated, he had a purer and more enterprising spirit. His love of freedom, and the boldness with which he expressed himself respecting the oppression which the kingdom of Naples had long endured from Spain, procured him a large faction among the common people, who admired his boldness. As he was destitute neither of eloquence nor courage, nothing but opportunity was wanting for him to appear as the head of the populace. Such an opportunity offered in 1647. Massaniello had brought a basket of fruit to the city, for which the collectors demanded the tax. He refused, and, using force, he threw himself on the earth, and implicated the people to aid him against their violence. An insurgent multitude immediately assembled, at the head of which he advanced to the tax-office, with the cry—"Long live the king, but down with the bad government." Thence the insurgents repaired to the castle of the vicerey, the duke of Arco, and demanded that he should receive Massaniello, as a commonplace man, and not the cardinal Filomino, ambassador of Naples, seek to appease their fury; in vain did John of Austria, a natural son of Philip IV., appear in the harbor with twenty-two galleys; the insurrection only increased the more, and the nobility became the object of its rage. Massaniello, who had become governor of the city, caused sixty of the principal palaces to be reduced to ashes, without the least thing being saved. All marks of the royal government disappeared. Every body was suspected by Massaniello, and death followed immediately his slightest apprehension. Seven days elapsed amid these horrors, and the people began to talk of capitulation. It was agreed that the tax on fruit should be abolished, and the ancient liberties restored. The assent of the king of Spain was promised within a certain time. Massaniello, on this assurance, laid down his arms, and returned, without demanding any recompense or distinction, to his former station. But the great mass of the people, who were possessed, making him appear dangerous to the vicerey, who was no ways disposed to fulfil his promises, this ruler resolved to get rid of him. He invited Massaniello to his own house, and probably mingled poison with his wine. This did not, indeed, kill him, but made him delicious, and his passions and hating licentious may also have contributed. In this manner the unfortunate man ran through the streets of Naples shooting his best friends, and committing the
greatest excesses. The people, who now regarded their deliverer as a new oppressor, and were excited against him by his enemies, poured forth in crowds against him, shouted applause to the victors, and the discredited Massena was banished. He sought safety to a Carmelite convent; but four conspirators, formerly his friends, shot him dead, with several balls, July 16, 1647. His body was shamefully maltreated by the populace. But the true sentiments of the victory were soon manifested; and the people, fearing a renewal of the former oppression, again became turbulent. The martyr of liberty was now remembered; Massaniello's murderers became victims to the popular rage, his body was buried with the highest marks of respect, and even, for some time, held as sacred. Naples remained still convulsed, but nothing further was effected by the People.

MASSENA, ANDRE, Duke of Rivoli and prince of Esslingen, marshal of France, &c., was born in 1758, at Nice, and rose from a common soldier to the rank of commander. At the commencement of the French revolution, he was an inferior officer in the Service, in 1792, when the new republic had ascended mount Cenis, he joined their ranks, soon distinguished himself by his sagacity and courage, and was made a commissioned officer, and, in 1793, general of brigade. Here he learned, without a master, the science of war, in the skirmishes. In April, 1794, he was appointed general of division, and took command of the right wing of the Italian army. He was the constant companion in arms of Bonaparte, who, after the successful battle of Rovereto (1796), against Beaulieu, called him the favourite child of victory. The commander-in-chief sent him to Vienna to conclude the negotiations for peace, and, in 1796, to Paris, to procure the ratification of the treaty. While Bonaparte was in Egypt, Massena and Moreau were the hope of France. In 1799, Massena displayed his ability as commander-in-chief in Switzerland. After having opened the war with success, he was forced to fall back to the Alps, on account of the ill fortune of Jourdan on the Danube. Here he took a strong position, watching his opportunity, and, by the battle of Zurich (September 25), prevented the junction of Korsakoff and Suwaroff, who had already ascended Mount Gothard. This battle, the first that the Russians had lost in the open field for a century, decided the separation of Russia from Austria, and saved France. After Massena had received the eleving title of Duc d'Esslingen, he was sent to Italy to check the victorious career of the Austrians. He hastened, with the small force which could be assembled, to the support of Genoa, his defence of which is among his most remarkable achievements. Ten days before the battle of Marengo, when all his resources were exhausted, Massena obtained an honourable capitulation. The consul Bonaparte, who now returned to Paris, gave him the chief command of the army. Peace soon followed. Massena was chosen member of the corps législatif, by the department of the Seine, and, in 1804, was created marshal of the empire. In 1805, he received the chief command in Italy, where he lost the battle of Caldiero. When the archduke Charles was compelled, by the ill success of the German armys at Ulm, to retire to Inner Austria, Massena pursued him, but was unable to gain any advantage over him. After the peace of Presburg, Massena was sent by Napoleon to take possession of the kingdom of Naples; and, after the assault and capture of the city of Naples, he was rewarded with the dignity of prince of Esslingen. After the peace he hastened to Spain, to deliver Portugal from the hands of the British. Wellington retired before him, and took a strong position at Torres Vedras, for the defence of Lisbon, till what appeared to be a possibility for the French forces to hold out longer. Massena was at length obliged to retire. Napoleon recalled him from Spain, and, in 1812, left him without a command. In 1814, he commanded at Toulon, declared for Louis XVIII., and was created commander of the order of St. Louis. At the landing of Napoleon, in 1815, his conduct in Toulon was by no means doubtful. When the emperor was re-established, he swore allegiance to him, and was made peer and commander of the national guard at Paris, and contributed much to the preservation of tranquillity in the city, during the turbulent period which preceded the return of the king. He lived after the fall of the empire, and his desires was hastened by chagrin at the conduct of the royalists. He died April 4, 1817.

MASSILLON, JEAN BAPTISTE, one of the greatest pulpit orators of France, was born, in 1663, at Hiers, in Provence, entered, in his seventeenth year, the congregation of the oratory, and became a general favourite by his pleasing manners, which, however, excited envy. He was accused of some amours, and attempts were made to exclude him from the congregation, and it is said that he retired, for some months, to the abbey of St. Fons. The applause with which his funeral sermon on the archbishop Henri de Villars was received, induced the general of his congregation, La Tour, to call him to Paris. He was obliged to obey, and, against his inclination, to ascend the pulpit, where his genius soon showed itself, in all its power and peculiarity. According to some, an answer to a pastoral letter of the cardinal Noailles, which Massillon drew up in the name of his convent, attracted the attention of the cardinal, in compliance with whose order he returned to the oratory. The applause which he met with in Paris, even at court, was almost without example. The effect of his sermon du petit Nombres des Etus was almost miraculous. Massillon spoke with that powerful simplicity which can be resisted only by utter want of feeling. After he had celebrated his fiftieth anniversary, at the age of forty, the empress Josephine, of the house of Austria, gave him the title of Petit-Carême, who was famous for the happiness of his compliments, addressed him with the words, "On hearing other preachers, I have often been much pleased with them, but having heard you, I was much displeased with myself. His delivery contributed much to the effect of his eloquence. With apparent artlessness, nay, even negligence, he produced a greater effect than others with studied art. The famous actor Baron once exclaimed, after hearing one of Massillon's sermons, "There is an orator; we are but actors," On account of his amiable temper and manners, he was chosen to reconcile cardinal Noailles with the Jesuits; but he found that it was much easier to convert sinners than to reconcile theologians. The regent appointed him, in 1717, to the see of Clermont, which he could not have accepted, had not a friend of his paid the expenses connected with it. In the year following, he was chosen to preach before Louis XV., then nine years old, and was so successful, that he was created a cardinal under the title of Petit-Carême, which are masterpieces of pulpit eloquence. They are remarkable, also, for the political truths which they contain; among others that the monarch is made for the people, who
appointed him, in conformity with the order of God; that not the prince, but the laws, should rule, of which the monarch is but the minister and guardian. In 1719, Massillon was chosen a member of the academy. Cardinal Dubois procured him the prelacy of Sevigny. His last discourse at Paris was the funeral discourse of the duchess of Orleans. From that time, he never left his diocese, where his virtues, particularly his charity, had procured him the reverence of all. He died in 1742. His sermons are distinguished for clearness, knowledge of the human heart, an artless flow of eloquence, natural and lively imagination, and, in his oratory, great adoration. They awaken virtuous feeling, and not controversial ardour. The nephew of this distinguished man published a complete edition of his uncle's works (1745 et seq.; reprinted at Paris, in 1762, in 13 vols., 8vo; and at Lyons, Leroy, and Lusaud, in 15 vols., 12mo).

Massinger, Philip, a distinguished English dramatist, in the beginning of the seventeenth century, was the son of a retainer of the earl of Pembroke, and was born at Salisbury, in 1588. He studied at Oxford, but quitted the university without taking a degree, in consequence, perhaps, of his having become a Roman Catholic. Little is known of his personal history, yet he appears to have been intimately connected with the wits and poets of his time, in conjunction with some of whom, as Fletcher, Middleton, Rowley, and Dekker, he composed some of his dramas. He died in 1609. As a dramatist, Massinger is more natural in his character, and poetical in his diction, than Jonson or Carraught, and some critics rank him next to Shakspere. In tragedy, however, he is rather eloquent and forcible than pathetic; and in richness and variety of humour, his comedy can by no means vie with that of his great master. His plays were published collectively, by Mr. J. M. Mason and Mr. T. Davies, in 1779, 4 vols., 8vo; but the best edition is that of Mr. W. Gifford, with notes and a life of Massinger (4 vols., 8vo, 1805).

MAST. See Ship.

MASTER AND SERVANT. In legal acceptation, a servant is one who owes his services to another for money, and is thereby rendered totally dependent on him; and the word servant, as it is used in such a sense, is not a slave. Servants consist of two classes, namely, those who receive wages, and apprentices. The contract for service, in the respective cases, is quite different: in each, the servant is bound to render service, but in one the master is bound to pay the stipulated wages; in the other, to give instruction. The master is answerable for the acts of his servant, done by authority of the master. If the servant does an injury to another, directly consequent upon the employment about which he is set by the master, the latter, as well as the servant, is answerable in damages to the party injured, whether the injury arise from want of honesty, skill, or care. But the master is not answerable for any mischievous, fraudulent, or negligent act of one who is his servant, if it is not done in the employment or by the authority of the master. Thus where a servant wilfully drove his master's carriage against another, and injured it, it was held, after much deliberation, that the master was not answerable, for it was stepping aside from the employment about which the servant had been set, and was not authorized by the master. Where one servant employs another, the master is answerable for the one so employed by his authority. The contract for hire gives the master or employer no authority whatever over the servant employed by the servant or person employed. If he is negligent, or in any respect in fault, the remedy is on the contract. (As to the other description of servants above mentioned, see article Apprenticeship.) The terms of apprenticeship entitle the master to the services of the apprentice for the time limited in the indentures of apprenticeship, and impose upon the master the duty of providing for and instructing the apprentice. The master has the right of moderately correcting the apprentice; but, in case of ill treatment by the master, or neglect of the apprentice, or if the latter, or any one in the trade or business proposed to be taught, the law ought to provide some immediate remedy, in case of the stipulations in the articles of apprenticeship being insufficient to meet the case; and such provisions are introduced into many codes of laws, though other rights may be also conferred. They arise from the nature of the case, and the apprentice is condemned to suffer years of bondage and cruelty, and arrives at manhood without instruction, or the habits likely to render him a useful or happy member of the community. On the other hand, the apprentice may be perverse, vicious, idle, and ungovernable; and the laws of some states make provision that, in such case, the master may be discharged from his obligations. As to the liability of the master for the acts of the apprentice, they are the same as in respect to other servants.

MASTER IN CHANCERY. The masters in chancery are assistants to the lord chancellor and master of the rolls, and are of these, as there are many and others extraordinary: the masters in ordinary are twelve in number, some of whom sit in court every day during the term, and have referred to them interlocutory orders for stating accounts, and computing damages, and the like; and they also administer oaths, take affidavits, and acknowledgments of deeds and recognisances: the masters extraordinary are appointed to act in the country, beyond ten miles' distance from London.

MASTER OF ARTS. In the German universities, the title of magister artium is an academical honour, conferred by the philosophical faculty, after a previous examination in the general sciences, particularly philosophy, philology, mathematics, physics, and history. The word magister, connected with a qualifying phrase, was used among the Romans as a title of honour; as, for instance, magister equitum (see the next article), but its present meaning must be derived from the institution of the master of arts in the universities. Regularly organized faculties were not then known, as they now exist in the universities of the continent. The whole circle of academic activity was limited to the seven liberal arts (see Art); the teachers were called artists; the body of teachers, the faculty of artists; and they who received public honours on the completion of their course of studies, for their diligence and knowledge, and had already received the degree of baccalauraeus, were called magistri artium (masters of the liberal arts)—a title with which that of doctor of philosophy was afterwards joined. As the origin of this dignity is more ancient than that of doctor, it is still placed before it in most of the German universities. The precise period of its introduction is not known; but even in the twelfth and thirteenth centuries, the honour was so highly esteemed in France, that the most distinguished men were eager to obtain it. Since that time its dignity has been greatly diminished. This title is to be distinguished from the magister legis, that is, one who has obtained the right, by public disputations, to deliver lectures. In the English and American universities, the title of master of arts is intermediate between those of bachelor of arts and doctor.

MASTER OF THE HORSE (magister equitum); the commander of the cavalry among the Romans. He was among the high extraordinary magistrates, and was appointed by the dictator immediately after his own election. He was next to the dictator in
rak, in the army, and had almost the same insignia with him. He was also permitted to mount his horse in the city.

**MASTER OF THE ORDINANCE;** a great officer, who has the chief command of the king's ordnance and artillery.

**MASTER OF THE ROLLS;** a patron officer for life, who has the custody of the rolls of parliament, and patents which pass the great seal, and of the record; they were formerly the absence of the chancellor, he sits as judge in the court of chancery; at other times, he hears causes in the rolls chapel, and makes orders; he has a writ of summons to parliament.

**MASTER-SINGERS.** Between the slavery of the Eastern class, which binds men immutably to the occupations of their fathers, and the perfect freedom of pursuit with us in the West, stand, as it were, the corporations of the middle ages. The lawlessness of the times compelled men of the same occupation to unite in societies for their mutual protection; and, being so united, their disgust at the wild disorder of the law was the cause of the establishment of these orders. The master-singer is not even of a minute and pedantic strictness. These habits of constraint extended their influence beyond the useful arts to the fine arts, and even to poetry itself. In the thirteenth century, poetry was a favourite occupation at courts and among the knights; but, at the beginning of the fourteenth century, this peacable disposition ceased almost entirely, and incessant feuds almost everywhere ensued. Industry and the arts, however, grew up behind the walls of the cities (q. v.), and the corporations of citizens were established. During the long evenings of winter, the worthy burghers of the German cities assembled to read the poems of the minstrels. Some of the hearers were naturally led to try their own skill in verse; others followed; and the spirit of the age soon imbodied these votaries of the muse in corporations, or, at least, societies after the fashion of corporations. Like the other corporations, they laid claim to a very early origin. It is well settled that the emperor Charles IV. gave them a charter and a coat of arms. They generally called twelve poets, mostly of the time of the war on the Wartburg (q. v.) their masters; hence their name master-singers. They preferred, however, the more modest name of friends of the muse and song. They met at certain days, not always the same; each other, as often as possible, in very formal external correctness seem to have appeared to them the chief object; few, indeed, had an idea of the difference between poetical and prosaical ideas or expressions. Their attempts in the lyric style were limited to spiritual songs; in the epic, to rhymed versions of the scriptural narratives. They were also fond of the didactic style. The rules by which the members of the societies were to be guided, as to the metre, &c., of their compositions, were written on a table, and called Tabulatur, for the sake of enforcing a strict observance of purity in language and prose; the chief faults to be avoided were collected; they were thirty-two in number, and distinguished by particular names. He who invented a new metre, invented also a new tune; the names of which were the drollest, and sometimes the most senseless imaginable. Besides their stated meetings, they held public meetings, generally on Sundays, and festivals in Nuremberg, where the master-singers flourished particularly, such meetings were opened with free-singing, in which any body might sing, though not belonging to the corporation. In this, the choice of the subjects was left comparatively uncontrollable; then followed the chief singing, in which these brave men sung to their proper metre, the corporation were allowed to sing, and only on scriptural subjects. The judges were called Merker, and sat behind a curtain. There were four: one watched whether the song was according to the text of the Bible, one, the lay open before him; the second whether the prosody was correct; the third criticised the rhymes; the fourth, the tunes. Every fault was marked, and he who had fewest received the prize—a chain with medals. Whoever had won a chain was allowed to take apprentices, to have many of his own; the following rules were observed: the master never took apprentices. After the expiration of his poetical apprenticeship, the young poet was admitted to the corporation, and declared a master, after having sung, for some time, with acceptance. These strange societies originated towards the end of the fourteenth century at Mentz, Strasburg, Augsburg, and, lastly, in several free cities of the empire, until the seventeenth, in Nuremberg to the eighteenth century, where, probably, the renown of Hans Sachs (q. v.), the famous shoemaker and poet, kept them longer in existence. Some of the most famous master-singers were Henry of Meissen, called Freundschaft der Laien, who was one of the earliest. Many of them were trained at Mentz; master Regenbogen (Rainbow), a smith; master Hadlaub and Muscabult.

**MASTIC;** a resinous substance obtained from incisions made in the branches of the *pistacia lentiscus*, a small tree, or rather shrub, growing in the Levant and other countries, on the Mediterranean. This tree belongs to the natural family *terebinthaceae*. It attains the height of fifteen or twenty feet; the leaves are alternate and pinnate; the flowers are small, inconspicuous, disposed in axillary racemes, and are succeeded by an ovoid drupe, containing an oosseous nut. It forms one of the most important products of Scio, and has been cultivated in this and some of the neighbouring islands from remote antiquity. Heat seems to exercise a great influence on the resinous product. Mastic is consumed in vast quantities throughout the Turkish empire, and is there used as a masticatory by women of all denominations, for the purpose of cleansing the teeth and imparting an agreeable odour to the breath. It was formerly in great repute as a medicine throughout Europe, but at the present time is very little used.

**MASTIFF** (canis, fam. vilivbicae). This noble variety of the canine race is distinguished by a large head, deep-set eyes, and ears, not long, nor short, and of his form. Like most of the larger kinds of dogs, although extremely vigilant over any thing committed to his charge, he is by no means savage; he will not abuse the power with which he is intrusted, nor call it into action, unless provoked by injuries. As early as the time of the Roman emperors, mastiffs were held in high estimation at Rome, for their strength and courage, especially those from Britain, where an officer was appointed, for the purpose of breeding them, and transmitting to the imperial city such as he thought capable of sustaining the combats in the amphitheatre. Manwood, in his work on the forest-laws, says this variety of dog derives its name from the Saxon masse theofone, or thief-frightener. See Dog.

**MASTODON;** an extinct genus of the order *pachydermata*, or thick-skinned animals, often, but improperly, confounded with the mammoth (q. v.) or fossil elephant. It is found only in a fossil state, several nearly entire skeletons having been discovered in the United States. Single bones had been early disinterred, but it was not until 1801, that a considerable portion of two skeletons was obtained by Mr Peale, near Newburgh, New York, and others have since been dug up in different parts of the country. There is one with the missing parts
supplied in the Philadelphia museum, another at Baltimore, and another belonging to the New York lycée. The mastodon in Philadelphia measures eighteen feet in length, and eleven feet five inches in height. The tusks are ten feet seven inches long. It seems to have been provided with a trunk, and in its food and manner of living to have much resembled the elephant. There are no traces within the period of tradition or history of the existence of these animals as a living genus. When and how they perished, if ascertained at all, must be revealed by geological data. See Godman’s American Natural History, vol. 2d.

MASTOLOGY (from μαστός, breast); that branch of zoology which treats of the mammary animals.

MASTRICIT, or MÆSTRICIT (Tractusum ad Museum); a strong place in the kingdom of the Netherlands, on the left bank of the Meuse, capital of the province of Limburg; fifteen miles north of Liege, and forty-six east of Bruges; lat. 50° 31’ N.; population, 18,140. It is one of the most ancient towns of the Netherlands, and belonged formerly to the duchy of Lorraine. It contains ten Catholic and Protestant churches, and several literary and charitable institutions. It is tolerably well built, surrounded by walls and ditches, and is one of the most beautiful capes of the Meuse. Near it large stone quarries, in which are subterraneous passages of great extent, where the farmers frequently store hay, corn, and other articles. It has hitherto carried on a brisk trade through its port on the Meuse, and regular packet-boats ran to Liege and other places on the river. (For the effects of the Belgian revolution on this navigation, see Netherlands.) Mastic has been rendered famous by the numerous sieges which it has sustained. In 1673 and 1748, it was taken by the French, who bombarded it without success in 1793, and again captured it in 1794.

MATADOR (Spanish, one who kills). This word is used in some games with cards. In ombre and quadrille, it signifies one of the three principal cards, which are always the two black aces, the deuce in spades and clubs, and the seven in hearts and clubs. This application is probably taken from the Spanish bull-fights (q. v.), in which the man who gives the death blow to the bull is called mata dor. They derive the name from a band of volunteers, who were established by the inhabitants of Barcelona, when they fought against Philip V., and whose duty was to punish with death those who murmured against the government.

MATANZAS; a seaport on the coast of Cuba, 30 leagues from the coast of Florida, and twenty from Havana; lon. 81° 36’ W.; lat. 23° 2’ N.; population, 11,341, or including the garrison and strangers, 14,340; 1941 free blacks, 3067 slaves. It is situated on a bay of the same name, which affords one of the largest, safest, and most convenient harbours in the West Indies, having a good castle for its defence. It has considerable commerce, exporting sugar, molasses, and coffee. The situation is healthy.

MATAPAN CAPE (anciently Tenerum). This cape and Maleas, or Cape St Angelo are the two most southern points of the former in lat. 36° 23’ 20” N.; lon. 22° 20’ 36” E. the latter in lat. 30° 25’ N.; lon. 23° 12’ 8” E.

MATERIA MEDICA, are the materials with which physicians attempt to cure or alleviate the numerous diseases of the human body, and comprehend a great variety of substances taken from the mineral, animal, and vegetable kingdoms—such as, silver, copper, bismuth, mercury, lead, iron, antimony, tin, arsenic, and zinc, from amongst the metallic bodies; sulphur, lime, soda, nitre, magnesia, borax, and several salts from amongst the minerals; and nearly two hundred substances belonging to the animal and vegetable kingdoms. All these articles are susceptible of an infinite number of combinations, and upon the skill and promptitude with which these are made and applied, hinges the whole system of the practice of physic. In early times, the articles of the materia medica were still more numerous and complex than at present; but as many substances were then employed from fanciful and superstitious motives, modern physicians have discarded these, and adopted a few others, much more valuable and certain in their effects. Thus in ancient times, neither antimony, nor Peruvian bark, nor jalap, nor ipecacuan, nor sarsaparilla, were known to exist; but the progress of chemistry, and the discovery of America, have put us in possession of these simples, which have proved of the greatest value to mankind. Antimony, when formed into James's powder, and bark, in all its combinations, have preserved many thousands of lives annually from fevers. Jalap, next to senna leaves, is the most efficacious of purgatives, and ipecacuan is by far the best and safest emetic, which has been yet discovered. To chemistry also mankind are indebted for many valuable remedies, such as the preparations of mercury, and the knowledge of the efficacy of acid-gases and the natures of the powers of contagion. The spirit of commerce, too, has added its share to the stock of valuable drugs. Egypt sends us senna, borax, and opium; Russia, rhubarb; from India we derive cinnamon, cloves, cajeta, ginger, gamboge, &c.; while from South America and the West Indies we import many of the most active vegetables employed in physic. Unfortunately, however, the wealthy inhabitants of Great Britain are too fond of taking drugs, and unwilling, generally, to employ abstinance and abstemiousness in the cure of their maladies; so that they are very frequently sick or ailing, and seldom give themselves that fair chance of living to an advanced age, which the salubrity of their climate would otherwise entitle them to expect. If it were more the fashion to fast, and use the warm bath, fewer persons would experience disease. See Medicine.

MATERIAL AND MORAL; two terms used in military language, and derived from the French. The former means everything belonging to an army except the men and horses; the latter means the spirit of the soldiery, as to cheerfulness, courage, and devotion to their cause. Thus it is said: Though the material of the army was in a wretched condition, yet in respect to its moral it was superior to the enemy.

MATERIALISM, in philosophy; that doctrine which considers matter or corporeal substance the primitive cause of things. He who adopts this doctrine is called a materialist. In respect to psychology, in particular, materialism is the system which maintains that the soul is a material substance. Materialism is opposed to the doctrine of the spiritual nature of the soul, or immaterialism. Both may be either empirical or transcendental. Materialism is of the first sort, if it founds all its positions and reasonings on experience and the former in lat. 36° 23’ 20” N.; lon. 22° 20’ 36” E. the latter in lat. 30° 25’ N.; lon. 23° 12’ 8” E.
In regard to the soul, the materialist maintains that matter produces in itself spiritual changes, or that the soul is a consequence of the whole bodily organization, by which matter is refined and embodied into mind. Among the advocates of this doctrine we may mention Priestley. This theory, however, does not explain how the mind can think, and how physical motion can produce mental changes, which we do not observe in so many organic beings; how, in particular, a notion of its own activity can originate. Numerous auxiliary hypotheses, therefore, have been devised, as that of the vibration of nerves by Hartley. In decided opposition, however, to materialism, is our present theory of the identity of body and soul, which would be annihilated by it, because matter is governed by the necessity of nature, and free will therefore excluded. Materialism is a very ancient view of nature, and the predominant one in the most ancient Greek philosophy, poetry, and mythology, surrounded, however, by all the graces in which the poetical spirit of this imaginative people could array it.

MATHEMATICAL GEOGRAPHY is the application of mathematics and astronomy to the measurement of the earth. The ancients had made no considerable progress in this science. This science is founded on two principal principles; 1. that the earth is to be considered as a sphere; and, 2. that the points and circles, imagined on the heavens, correspond with points and circles on the earth. See Earth, Pole, Equator, Tropics, Meridians, Degree, Latitude, &c.; see, also, Geography.

MATHMATICS. If we call everything, which we can represent to our mind as composed of homogeneous parts, a magnitude, mathematics, according to the common definition, is the science of determining magnitudes, i. e. of measuring or calculating. Every magnitude appears as a collection of homogeneous parts, and may be considered in this sole respect; but it also appears under a particular form or extension in space, which originates from the composition of the homogeneous parts, and to which belong the notions of situation, proportion of parts, &c. Not only all objects of the bodily world, but also time, powers, motion, light, tones, &c., may be represented and treated as mathematical magnitudes. This scientific and mathematical character of mathematics has to do only with these two properties of magnitudes, the quantity of the homogeneous parts, which gives the numerical magnitude, and the form, which gives the magnitude of extension. This is one way, and the most common, of representing the subject: there are others more philosophical, but less adapted to the limited space which can be allowed to so vast a subject, in a work like the present. In investigating these two properties of magnitudes, the peculiar strictness of the proofs of mathematics gives to its conclusions and all its processes a certainty, clearness, and general application, which satisfies the mind, and elevates and enlarges the sphere of its activity.8 (See Mathematics.) According as a magnitude is considered merely in the respects above mentioned, or in connexion with other circumstanes, mathematics are divided into pure and applied. Pure mathematics are again divided into arithmetic (q. v.), which considers the numerical quality of magnitudes, and geometry, which treats of magnitudes and their relations to space. In the solution of their problems, the common mode of numerical calculation, and also algebra (q. v.), and analysis (q. v.), are employed. To the applied mathematics belong the application of arithmetic to political, commercial, and social calculations; of geometry to surveying (q. v.), levelling, &c. Of the powers and effects, the gravity, the sound, &c., of the dry, liquid, and aeriform bodies in a state of rest, in equilibrium or in motion, in one word, its application to the mechanic sciences, (see Mechanics, Hydrodynamics, &c.;) to the rays of light in the optical sciences (see Optics, Dioptries, Perspective, &c.;) to the position, magnitude, motion, path, &c., of heavenly bodies in the astronomical sciences (see Astronomy), with which the measurement and calculation of time (see Chronology) and the art of making sun-dials (see Dial) are closely connected. The name of applied mathematics has sometimes been given to the mathematics which pertain to the arts. In this sense science to architecture, navigation, the military art, geography, natural philosophy, &c.; but in these connexions it may more conveniently be considered as forming a part of the respective sciences and arts. It is to be regretted that there is as yet no perfectly satisfactory work, treating of the history of this science, at least a part of it. These are the leading thoughts, which are not a clear idea of the ancient arithmetic. The numerical calculation was limited and awkward, sufficient ground for which might be found in their imperfect way of writing numbers, if there was no other reason. Euclid's famous Elements, a work of unrivalled excellence, considering the time of its origin, the ingenious discoveries of Archimedes, the deep investigation of Apollonius of Perga, carried the geometry of the ancients to a height which has been the admiration of all subsequent times. Since then it has been made to bear more on astronomy, and has become more connected with arithmetic. Among the Greek mathematicians are still mentioned Aristotle, Eudoxus, Conon, Nicomedes, Hipparchus, Nicomachus, Ptolemy, Diophantus, Theon, Proclus, Eutocius, Pappus, and others. It is remarkable that the Romans showed little disposition for mathematics; but the Arabians, who learned mathematics, like almost all their science, from the Greeks, occupied themselves. Algebra and trigonometry owe them important improvements. Through the Arabians, mathematics found entrance into Spain, where, under Alphonso of Castile, a lively zeal was displayed for the cultivation of this science. After this, it found a fertile soil in Italy; and in the convents a monk would sometimes follow out its paths, without, however, adding to its territory. This was reserved for later ages. Mathematics owes much to

8 As a branch of intellectual culture, mathematics has great excellencies and great defects. Its certainty—the precision of it—though varying more or less than the mere term—intended—is completeness in itself, and independence of all other truths, distinguish it from every other science, and nothing short of the most sacredtruth gives a higher conclusion and exactness of thought and expression than the study of mathematics. On the other hand, these very excellencies render it liable to give a partial direction to the mind, to withdraw it from, and unfit it for pursuits of a different character. Hence so many wild speculations in the young mind of children. Mathematics, therefore, can never be dispensed with in a liberal education. Nothing excuses the study of mathematics more than the acquisition of a mathematical truth, a law which is confirmed and universal. The study of the mathematical sciences affords a fine illustration of this influence; and there are few instances in which there will be much danger of the pupil being unduly absorbed in the study.
Gnienden, Peuterbach, Regionamausias, Pacciolo, Tar-
taglia, Cardanuis, Macrobius, Vieta, Ludolphus de Celen, Peter Nunez, Justus Byrge, and others. To this period, however, all mathematical operations of any extent required a weary length of detail; when, in the seventeenth century, Napier, by the introduction of logarithms, immensely facilitated the process of calculation, and Leibniz, by their infinitesimal calculus, opened the way into regions, into which, before them, no mathematician attempted to penetrate. From this time, the science obtained a wonderful extension and influence, by the labours of such minds as Galileo, Torricelli, Pascal, Descartes, L'Hôpital, Cassini, Halley, Halley, Wallis, Bar-
row, Halley, James and John Bernoulli, and others. Thus it became possible for Manfredi, Nicoli, Nic. and Dan. Bernoulli, Euler, Maclaurin, Taylor, Bradley, Clainmt, D'Alembert, Lambert, Tobias Mayer, Kastner, Hindenburg (the inventor of the combinatoric analysis) Lagrange, Laplace, Legendre, Gauths, Bes-
zel, and the latter mathematicians in the eighteenth, and in our century, to make great advances, and to give us satisfactory conclusions, not only respecting our earth, but also the heavenly bodies, the phenomena and powers of nature, and their useful application to the wants of life, to establish firmly so many notions, previously vague, and to correct so many errors. (See the articles on these mathematicians, and the works mentioned in the articles on the various branches of mathematics.) The number of mathematical manuals increases daily, without, however, much surpassing the best of the earlier ones in perspicuity, novelty, and method, or rendering them unnecessary to the thorough student.

MATHER, Increase, D. D., one of the early presidents of Harvard college, was born at Dorches-
ter, Massachusetts, June 21, 1639, and graduated at Harvard, in 1656. He was ordained a minister of the gospel in 1651; but had preached before with great success at the North church in Boston. In June, 1685, he was called to preside over Harvard college, which he continued to do until 1701. His learning, zeal, and general abilities were of great utility to the institution. He distinguished himself also as a very skilful and efficient political servant of the commonwealth. When king Charles II. signi-

fied the first part of the seditious books which he resigned into his hands, in 1683, doctor Mather contended against a compliance. In 1688, he was deputed to England, as agent of the province, to procure redress of grievances. He held conferences with King James on the situation of the province, and, when William and Mary ascended the throne, urged his suit with them in audiences and by memo-

rials. In 1692, he returned to Boston, with a new charter from the crown, which some of his old friends condemned; but the general court accepted it, with public thanks to the reverend agent, for the industry and ability with which he conducted his negotiations for settling the governor and council, who resigned their offices. He died at Boston, August 23, 1723, in the eighty-fifth year of his age, having been a preacher sixty-six years. He is said to have commonly spent sixteen hours a day in his study, and his sermons and other publica-
tions were proportionally numerous. During the witchcraft delusion, which he laboured to mitigate, he wrote a book on the devil itself. He died in the shape of an innocent man, "by means of which a number of persons, convicted of witchcraft, escaped the execution of the sentence of death." By some of the biographers, he is styled the father of the New England clergy. An octavo volume entitled "Remarks of the Author, from which the following contains a catalogue of eighty-five of his publications, not including "the learned and useful preface", which

MAHTHEW—MAHTHEUS.

the publishers of many books obtained from him, as a beautiful porch unto them, and which, collected, would make a considerable volume."

MATHER, Cotton, D. D., the eldest son of Increase, railed or surpassed his father in learning, influence, and the variety and multitude of his productions. It is recurred in his diary, that, in one year, he preached seven twenty-two sermons, seventy-two fasts and twenty vigilis, and wrote fourteen books. His publications amount to 382, some of them being of huge dimensions. His reading was prodigious; his research exceedingly diversified and curious. He was born in Boston, Feb. 12, 1653, and graduated at Harvard college in 1675. In 1684, he was ordained minister of the North church in Boston, as colleague of his father. He died in 1728, aged sixty-five years, with the reputation of having been the greatest scholar and author that America had then produced. His piety and benevolence were almost commensurate with his learning. Credulity, pedantry, quaintness, and eccentricity, are blended, in most of his works, with marvellous erudition, and instructive details of history and opinion. He was a fellow of the royal society of London. His largest and most celebrated work is his Magnalia Christi Americana, or the Ecclesiastical History of New England, from 1625 to 1698, in seven books, folio. His Life is set out in an occa-
sional volume, written by his son and successor, Samuel Mather, D. D., also a learned divine and author.

MAHTHEWS, Charles, see Matthew.

MAHTHIA, Thomas James, a distinguished scholar, was educated at Eton, and at Trinity college, Cambridge, where he took the degree of B. A. in 1774, and, in 1775 and 1776, gained some academical prizes. His first publication was odes, chiefly from the Norse tongue (4to., 1781). This was followed by a pamphlet on the Evidence relating to Rowley's Poems (1783). For several years after the publication of the list of these works, he did not again come forward as an author. He was elected fellow of his college, but, after taking the degree of M. A., was called away from his fellowship, to be clerk to the treasurer of the queen. In time, he rose to be vice-
treasurer—a place he held for many years—and afterwards, on the queen's death, he had a pension assigned him. In 1794 came out, anonymously, the Poems of Literature, attributed to the author Mr Mathias. The poetry does not often rise above mediocrity; the notes, however, prove great learning, with keen criticisms on public men and opinions. Three more parts were subsequently published, and a volume was added containing translations of the notes. Some of the persons assailed were so highly indignant, that it would scarcely have been safe for any man at that time to have avowed himself the author. In 1794, Mr Mathias gave to the press the Imperial Epistle from Kien Long to George III., and, in the following year, the Political Dramatist of the House of Commons—a satire on Mr Sheridan. In 1796, appeared his Letter to the Marquis of Bosc-
ingham; in 1797, a Pair of Epistles to Doctor Randolph and the Earl of Jersey, occasioned by the loss of some letters which the princess of Wales had addressed to her mother, and, in 1798, the Shade of Alexander Pope on the Banks of the Thames—a satirical poem, which bore the title of those lines: They were all published without his name. Mr Mathias, in 1814, removed from England to Naples, where he resided until his death, which took place in August, 1835. He there made excellent Italian versions of the Lect-
idas of Milton, and the Sappho of Mason, and has published, in a uniform and elegant manner, the following volumes: Commentaria in Aenidem Horatianae, en-
pio illustri Poeti d'Italia (3 vols.); Aggiunta ai Componimenti (3 vols.); Commentarij intorno all'
MATTILDA. Marchioness of Tuscany, famous for her connexion with Gregory VII., was a daughter of Beauface, marquis of Tuscany. She was born in 1046, and married Godfrey the Hump-backed, son of the duke of Lorraine, but always lived separate from him, being unable to exchange the mild climate of Italy for a northern sky. Being left a widow in her thirtieth year, she engaged devotedly on the side of Gregory VII. and Urban II. Against the emperor Henry IV., her cousin. She was almost the inseparable companion of Gregory, always ready to assist him in every thing that he needed. This close connexion gave rise to many unfavourable suggestions, which were, however, groundless, although it is certain that their friendship was founded not only on political, but a mutual inclination and esteem. Matilda had been accustomed by her mother, to see in the pope a saint, while, at the same time, she reverenced the saint as a father. Gregory had, therefore, found much opportunity to influence the formation of her character. Her mind, moreover, was susceptible of a very high tension, and had been disciplined by her mother's exhortations and esteem of the saint. There were, therefore, good grounds for explaining how she should be able to endure and do so much for Gregory. The donation of all her goods and possessions to the Roman church (in 1077 or 1079, for the original records are lost), was, probably, but the least sacrifice. This sharing with him every danger that she could not avert, and her exhortations to him to encounter that which was unavoidable with steadfastness and courage, show her energy and resignation. She alone stood by him against the emperor in 1081, sustaining him with her treasures, while Rome was besieged; and, even after the death of Gregory, she prosecuted open war against the emperor. She died at Polirone, in 1115, in the Benedictine convent built by herself. Her death gave rise to new feuds between the emperor and pope, Pashal III., on account of the donation above-mentioned. These feuds, finally, resulted in the cession to the pope of a portion of the estates of Matilda. The causes consisted of Fieschi, Parma, Reggio, Piacenza, Ferram, Modena, a part of Umbria, the duchy of Spoleto, Verona, and almost all that constitutes the present patrimony of the church, from Viterbo to Oviedo, together with a part of the March of Anconia. See Popes, and Gregory VII.

MATSYS, QUINTUS; a painter, who was originally a blacksmith, born at Antwerp, in 1460. Different accounts are given of the occasion of his quitting the forge for the pencil; but most of his biographers agree that it was in consequence of becoming enamoured of the daughter of a painter, whose hand was to be obtained only by a master of the same profession. He chiefly painted portraits and half figures in common life; but sometimes undertook great works, of which a descent from the cross, in the cathedral of Antwerp, is a favourable specimen. His picture of the two misers, at Windsor, is also much admired. He died in 1529.

MATTHEW, that which occupies space, or that which the human mind considers as the substratum of bodies occupying space. As matter is perceived by us only in as far as it affects us, we must consider it as something effective in space, which, by its extension and motion, operates according to laws. From early times, the most various notions have been maintained of the essence of matter and the mode of its operation on the mind. In the most ancient times, by nature or by our mind, and conceived extension to be the only essential property of matter. According to him, matter is not simple, but composed of parts, which, in reality, are indivisible atoms, but, in idea, are still divisible, and have still extension. Newton, who did not enter into metaphysical investigations on the subject, only states that he considers matter as an aggregate of the smallest parts, which again are material and extended, and, by an unknown power, are strongly connected with each other; whence it follows, that he also belongs to the atomists. The dualism of Descartes involved the metaphysicians, on account of the union of the material and the spiritual, and to them are, therefore, the same difficulties, and thus caused different metaphysical systems. One of the most remarkable is the ideal theory (q. v.), which absolutely denies the existence of matter, and declares all our notions of material things to be but ideas or images, which the Deity implanted in the soul of man; whereupon, Malebranche, who founded the system, says, that we are, therefore, in one sense, in God, and that we are authorized to deny the existence of all things except God and the spirits in general. He considers the effect of matter on our mind as an influence of God. Spinoza and Hume went still further in the ideal theory. The former supposed a single substance, whose properties constitute the infinite power of thought and extension, and explained all spiritual and material phenomena as states of this one power of thought and extension. Hume, who neither allows substances, nor subjects, nor any independent beings, considers all things, spiritual and material, as a series of passing phenomena. Leibniz, who felt how very difficult it was to explain the action of the mind by dualism, idealism, or materialism, proposed the doctrine of monads. (q. v.) Priestley developed further the opinion of Boscovich, that matter consists merely of physical points, which attract and repel each other, and said that matter is a mere attraction and repulsion, which has a relation to certain mathematical points. We should find the many systems, which have existed, matter is still the great riddle of mankind. It will always be asked, If mind and matter are essentially different, how could they possibly influence each other? and, on the other hand, we cannot reason away the many phenomena which indicate such a difference. In philosophy, matter is also opposed to form. Material is that which belongs to matter, as impenetrability, motion, extension, and divisibility, and is opposed to spiritual.

MATTHEW (called also Levi), an evangelist and apostle, son of Alpheus; previous to his call, was an officer of the Roman customs, and, according to tradition, a native of Nazareth. The accounts of his life are imperfect and uncertain. Tradition represents him as having suffered martyrdom in Persia. His Gospel has been supposed, by some critics, to have been originally written in Hebrew, for the use of converted Jews, about A. D. 60. If this is the case, we have now only a Greek translation of it, the original having been lost. His narrative is according to the chronological order of events, and in his report of the teachings of our Saviour, he appears to give them not precisely as they were delivered, but to arrange and group them according
to the subject. The genuineness of the two first chapters has been called in question.

MATTHEW OF WESTMINSTER, an ancient English chronicler, was a Benedictine monk of the abbey of Westminster, who lived in the fourteenth century. He compiled a chronicle, commencing with the creation, and extending to the year 1307, which he entitled Flores Historiarum, whence he had the name of Florilegus. This work chiefly relates to English history, and is very freely transcribed from Matthew Paris. It was published in London, 1567, and at Frankfurt, 1601.

MATTHEWS, Charles, a celebrated comedian, was born in London, June 28, 1776, and at the age of fourteen was bound apprentice to his father, Matthew Matthews, a bookseller in the Strand, who died in 1804. By reading plays he imbibed a strong partiality for them, and his first performance was in a private play. At length, he resolved to make the stage his profession, and performed at Richmond and Canterbury. His father, from religious motives, was adverse to his son's playing, and, being informed that he was at a certain town for that purpose, went there with the determination of hissing him off the stage; but on his return, he told his friend, that, though Matthews saw his name in large letters in the play-bills, and was resolved to check his career, yet the people so laughed at his performance, that he could not help laughing himself; and they so applauded that he was obliged to do the same. In 1803, he was engaged at the Theatre Royal, Haymarket, where he appeared in Jalal, in the Jew, and Lingo, in the Agreeable Surprise, Buskin, Old Wiggins, Sir Fretful Plungary, and other similar characters, with so much applause that he soon came to be considered one of the best mimics that ever appeared on the stage, and, in 1804, was engaged at Drury-lane. When that house was burned down, in 1809, the company performed at the Lyceum theatre, and Matthews took the parts in which Bannister had hitherto appeared. His success in Somo, in the Sleep-walker, at the Haymarket theatre, ensured him an engagement at Covent-garden theatre, where, however, he remained only three sessions. In 1817, he played his celebrated character of Multiple, in the Actor of all Work, thirty nights, to full houses, in the London, and afterwards with equal success, in the provincial theatres.

Feeling conscious that he possessed within himself, individually, the power of attracting and entertaining the spectators, he determined to form himself into the character of the Lyceum, in the establishment of a monodramatic entertainment, called "Matthews at Home"; Mr Arnold finding the house, and Matthews furnishing the amusement. Never, perhaps, did a project of such a nature so decidedly succeed; night after night, and season after season, the theatre was thronged with all the beauty, rank, fashion, and talents of the metropolis. Nor was this to be wondered at. Whatever merits Matthews possessed as an actor on the stage, his qualities of description, imitation, and illustration, off the stage, far transcended them; in the one he shared the talents and success of many, in the other he stood alone and unrivalled. His was not the mere mimicry of voice or manner; he possessed a peculiar power of copying the minds of the persons he imitated; and his greatest efforts were produced by imagining conversations between men which had never taken place, but in which he depicted with a master hand their minds, characters, and dispositions. The story of the anecdote, the quickest possible perception of the ridiculous, an unequalled talent for singing comic songs of a species which he himself originated, in which speaking is combined with singing, and his genteel manners, naturally rendered him a popular member of private society. It was not surprising, therefore, that when the public were permitted to participate in the gratification which had been confined to his personal friends, they should eagerly avail them of the opportunities of witnessing an exhibition combining all the strength of his various and varied resources.

The names of his various entertainments were as follows:


After five years' success with these entertainments, Mr. Matthews went to America, and arrived on the 4th of September, 1829, at New York, where he was extremely well received by the public. Being labelled in the Philadelphia Gazette, he brought an action, and was awarded 3000 crowns damages. He returned to England in July, 1823; and on the 23rd of March following, produced his "Trip to America." This, and his "(During his stay in England," one year in Mr. Arnold's regular season, became the subject of much ill-natured remark here and across the Atlantic. Mr. Matthews published an expository letter in the "European Magazine." When Terry's intellect began to fail, Yates (who owed his introduction to the stage to Matthews) applied to him; and the consequence was, the name of Matthews, instead of Terry, appeared as joint-manager of the Adelphi theatre. They entered into a partnership, the term of which expired just five days after Matthews's death. By the agreement, when either of them acted, he received ten pounds. There Matthews subsequently gave his entertainments, there he (in the dramatic season) performed; his first appearance being on the 29th of September, 1828, in "Wanted a Partner," and "My Absent Son." Latterly, a coolness arose between him and Mr. Yates, and he declined acting there at all.

We continue the list of his entertainments:


It was affirmed that Mr. Matthews would not dare to cross the Atlantic again, after his vivid sketches of our American brethren; but he formed a jester estimate of his friends, and the consequence was, he paid America a second visit, and for the first time gave his "At Home" in the United States. He subsequently acted his round of theatrical characters; and was, as before, received with the greatest applause.

Circumstances, however, induced him to shorten his stay in America, and he returned to England. He became ill on the voyage, which was very stormy and dangerous; and when he reached Liverpool his weakness was such that he was unable to quit the town for some weeks. He then removed to the house of a friend, near Daventry, where he seemed to rally; but it was deemed advisable as speedily as possible to remove him to the West of England, where, in spite of the mildness of the air, and unremitting attention, symptoms of a fatal disorder exhibited themselves; and after several weeks of protracted suffering, on the 28th of June, 1835, being his fifty-ninth birthday, he expired; the immediate cause of his death being water in the chest.

As an actor, the rapidity with which Matthews seized upon all prominent and eccentric points of character, and the felicity with which he portrayed them, were wonderful. His field of observation was
human nature in all its endless variety, and no man ever observed it to greater advantage. The designs for all his "At Homes" were given by himself, though written by others; hence came, perhaps, in a great measure, the spirit of his performance, as in this respect Matthews might be compared to a great musician playing his own music. He was the satirist and reformer—a gentle and an amusing one—of the vices, the follies, and the extravagances of the day. He did not distort his character, but his incidents. He chose those circumstances under which the peculiarities of his characters could be best displayed—a privilege which every novelist and dramatist has claimed, and which, within those bounds he was always true to nature. The finish of his sketches was as surprising as their vigour, and his extreme versatility more extraordinary than both. No man since Garrick ever went through such a range of character, whilst his occasional touches of exquisite tenderness and pathos mingled with his rich comic humour in strange yet harmonious combination. Matthews was the only actor of our day who could suffuse the eye with tears of emotion, and convulse the features with laughter at one and the same moment. Nothing could exceed the correctness of his ear; he spoke all the dialects of Ireland, Scotch, and Welsh. He was not yet, however, the emulator of his patron, which he seemed to follow the accent, the mutual relations of the different Ridings of Yorkshire, and speak French with the Parisian accent, the patois of the South, or the guttural tone of the Flemish.

In person, Matthews was about five feet eleven inches in height; his countenance was pleasing on the stage, though a singular twist was always perceptible about the mouth, and seemed the latent token of his irresistible drollery.

MATTHIAS CORVINUS, king of Hungary, second son of the gallant Hunimades, a man of great ability, who, by his wars against the Turks, excited the interest of Europe, and in Hungary, was esteemed the first of her kings. The enemies of his father kept him imprisoned in Bohemia, but, in 1458, at the age of sixteen years, he was called to the throne of Hungary. Several Hungarian magnates opposed the election, and invited Frederic III. to accept the crown. The Turks, profiting by these dissensions, invaded the country, and overthrew Hungary; but Corvinus, having compelled Frederic III. to return, hastened to meet the Turks, and drove them from the country. Between 1468 and 1478, he conquered Silesia, Moravia, and Lusatia; he was also victorious over the Poles, and took part of Austria, including Vienna, from Frederic III. These wars obliged him to levy heavy taxes on his subjects, and he governed arbitrarily, but must be allowed to have been a man of extraordinary powers. During the whole of his disturbed reign, he not only encouraged science, but cultivated it himself. It is much to be regretted, that the great library, which he collected at Buda, was destroyed by the Turks, twenty years after his death. At Buda, he reposéd from the toils of war, and collected scholars around him. In 1488, at a diet at Buda, he established laws against duels, for the better administration of justice, &c. He died in 1490, at Vienna, when occupied with preparations for a new war against the Turks. He left only a natural son, John Hunyadi, who was made heir to the crown. The candidates for it were numerous. The Hungarians elected king Vladislaus VII. of Bohemia.

MATTHIAS, John van Harlem. See Ana-
baptism.

MATURIN, Charles; an ingenious but eccentric clergyman of the established church, curate of St Peter's, Dublin, and author of several popular romances, many of which, especially his family of Montorio, evince great powers of imagination, with a richness of language, but exhibit an almost equal degree of carelessness in the application of both. Besides the one just mentioned, the principal are the Milestone Chief; Fatal Revenge; Woman; Melmoth, &c. Bennet, a tragedy performed at Drury Tate, with Keen as the representative of the principal character, was the first production which, by its singular success, brought him into notice as an author. This effort is said to have produced him £1000.

In a subsequent dramatic attempt (Manuel), he was not so fortunate as anticipated, though, without contemplating the possibility of a failure, he contracted embarrassments, from which he was seldom entirely free till his death, in October, 1825. He published, in 1821, a poem, in blank verse, entitled the Universe, which brought him more profit than reputation; and, in 1824, appeared six of his Controversial Sermons, preached at St Peter's, during the Lent of that year. These exhibit him as a well-read scholar, and an acute reasoner, and are, perhaps, the best foundation on which to rest his claims to the notice of posterity. He was remarkably felicitous in their delivery, and attracted by his eloquence unprecedented esteem.

MAUBECUE; a French fortress, on the Sambre, department Du Nord. The Sambre traverses Maubeuge, and becomes navigable here, seven leagues and a half east-south-east of Valenciennes. Maubeuge has considerable commerce in wines, spirits, &c.; manufactures,—arms, nails, soap, &c.; and contains 6044 inhabitants. It dates its origin from the foundation of a chapter of canoneses, in 618, by St Aldegonde. It was the capital of the former province of Hainault. Louis XIV. took it, in 1649, and the peace of Nimiguen, in 1678, confirmed it to France. The Prussians took it in 1815.

MAUBREUIL, Margins de. Connected with the history of this personage, there are some curious circumstances, which have not yet been explained, but which seem to reflect no great credit on the partisans of what is denominated, in politics, the principle of legitimacy. He was born in Brittany, of a noble family, about the year 1780, entered into the French army in which he had served as a volunteer; and was subsequently taken into the service of the king of Westphalia, who appointed him his equerry. Maubreuil was employed in Spain, as a captain of Westphalian light-horse, and his bravery gained for him the cross of the legion of honour. He, however, quitted the army to become a contractor; but the ministry having broken some of the contracts entered into with him, he fell into embarrassments, and his property was seized by his creditors. His enemies say that, in 1814, he exulted beyond measure at the downfall of the imperial government, and rode through the streets, pointing out to the passengers the star of the legion of honour, which he had never worn, and which, if he had worn it, would have been a great triumph. If this be true, it was probably the cause of his being employed, in conjunction with a M. Dasis, on a very extraordinary mission, by the provisional government. The ostensible purpose of this mission, for which he was authorized to call in the assistance of the armed forces, and the territories, was to recover jewels, which were said to have been carried away by the family of Napoleon. The marquis and his companion took the route of Fontainebleau, from which place the emperor had just set out for Elba; and they stopped the ex-queen of Westphalia, the wife of Jerome Bonaparte, who was travelling to Germany with a passport from the Czar. They seized eleven chests, containing valuables belonging to the
princess, and sent a part of them to Versailles, and a part of them to the king's commissioner at Paris. The chests were claimed by the princess; and, on
their being opened a large quantity of diamonds, and a sum of money, were found to have been stolen from them. Maubreuil and Dasies were accused of the theft. Dasies was afterwards tried and acquitted, but Maubreuil was not allowed to escape so easily. One of the tribunals declared itself incompetent to try him, and he remained in prison till the 18th of March, 1734. The days between the arrival of Napoleon at Paris, when the minister at war set him at liberty. A few days after this he was arrested by the imperial government, but was soon discharged. He is said to have gone under an assumed name, to Brussels, and there he was arrested and conducted to Ghent, on suspicion of intending to assassinate Louis XVIII. It does not appear that an iota of proof existed against him. Driven to despair, perhaps, by the persecution which he endured, he opened his veins in prison, but was saved from death. He was next put into the custody of a party of gardeliers, and conducted to Aix-la-Chapelle, where the Emperor Napoleon was staying. Then he escaped on the road; and it is a singular fact, that he went back to Paris at the same time that Louis arrived from Ghent, and remained un molested in the French capital for nearly twelve months. In June, 1816, however, the police seized him, on a charge of his having intrigued against the royal government, and formed the project of carrying off the French princes from St Cloud. This accusation, too, seems to have been calumnious, for it was dropped; but, in April, 1817, he was once more prosecuted for the theft of the money and diamonds. One of the subordinate courts having again refused to take cognizance of the cause, he was sent before the royal court. His patience was at length exhausted; he addressed the judges in strong terms, and disclosed the important secret, that he had not been employed to recover the crown jewels, but to assassinate Napoleon,—a mission which he accepted, he told them, only for the purpose of saving the emperor. From his prison he repeated this avowal, in a very severe letter to the ambassadors of the allied powers. The cause was now referred to the tribunal of Rouen, and from thence to that of Douay. The latter tribunal is said to have been on the point of pronouncing sentence, when Maubreuil escaped from prison. He made his way to the south, and when he had made his escape, the tribunal sentenced him to five years' imprisonment, and a fine of 500 francs. He first went to Brussels, and then passed over to Britain, where he published a vindication of himself. In 1825, he returned to France, and was again imprisoned until 1827, when, having been released, he made an attack on Talleyrand, whom he beat severely. On his trial for this offence, he accused the prince of having been the cause of all his sufferings, by employing him to assassinate Napoleon. Maubreuil was condemned to five years' imprisonment. Talleyrand was not allowed to press to clear up the mystery, and the matter still remains unexplained. Bourriche, in his memoirs of Napoleon, has some remarks relating to the circumstances of this transaction.

MAUMEÉ, or MIAMI OF THE LAKES; a river that rises in the north-east part of Indiana, and flows through the States of Ohio and Pennsylvania into Lake Erie. It is formed by the confluence of St Joseph's, St Mary's, and Great and Little Auglaize. It is navigable only eighteen miles, on account of rapids. For this distance, its breadth is from 150 to 200 yards.

MÂNDAY-TUESDAY is the Thursday in the Passion week; called Maunder, or Mandate Thursday, from the command which our Saviour gave his apostles to commemorate him in the Lord's supper, which he this day instituted; or from the name of a new commandant that was stationed at Poitiers, another, after he had washed his feet, in token of his love to them. It was instituted by pope Leo, in 692.

MAUPEURTUIS, PIERRE LOUIS MOREAU DE, a celebrated French mathematician and philosopher, was born at St Malo, in 1698, and studied at the college of La Madeleine at Paris, where he discovered a strong predilection for the mathematics. At the age of twenty, he entered the army, in which he served four years. In 1725, he was received into the academy of sciences, and soon after visited England and Switzerland, where he became a pupil and admirer of Newton, and formed lasting friendship with the celebrated John Bernouilli (q. v.) and his family. On his return to Paris, he applied himself to his favourite studies, with greater ardour than ever, and, in 1736, formed one of the scientific party appointed to measure a degree of the meridian at the polar circle. In 1740, he received an invitation from Russia to visit that country. On his return to Paris, in 1742, he was chosen director of the academy of sciences, and, the following year, received into the French academy. He returned to Berlin in 1744, and, in 1746, was declared president of the academy of sciences at Berlin, and, soon after, received the order of merit. His unhappy restlessness of temper was a source of continued disquiet to him, and a controversy with König, which subjected him to the satire of Voltaire, completed his unsuccesses. At this time, his health, injured by his northern expedition, and incessant application, began to give way, and he sought relief by repeated visits to his native country. His disorder, however, seems to have uniformly revived with his return to Berlin; and he at length died, on his return from one of these excursions, at the house of his friend Bernouilli, at Basel, in 1750, in the sixty-first year of his age. His works, collected in four 8vo volumes, were published at Lyons, in 1766, and reprinted in 1768. Among them are Discourse on the different Figures of the Stars; Reflections on the Origin of Languages; Animal Physics; System of Nature; On the Progress of the Sciences; Elements of Geography; Expedition to the Polar Circle; On the Conic of 1742; Discourses on Commercial Transactions; Academic Discourses; Upon the Laws of Motion; Upon the Laws of Rest; Operations for determining the Figure of the Earth, &c.

MAURA, SANTA. See Leonadia.

MAUREPAS, JEAN FREDERIC PHILIPPEAU, COUNT DE, born in 1701, was, at the early age of twenty-four years, minister of the French marine. At his suggestion, cardinal Fleury named Amelot minister of foreign affairs, and the latter undertook nothing important without the concurrence of Maurepas, who finally administered the foreign department himself. He was hasty in his decisions, without system or foresight, but quick in conception, amiable, flexible, artful, and penetrating. He made up in dexterity what was wanting in reflection, and was one of the most agreeable of ministers. An epigram on madame de Pompadour, of which he was accused of being the author, led to his banishment from the court. Louis XIV. restored him, and placed him at the head of his ministry. Removed from public affairs for the space of thirty years, Maurepas had lost whatever requisite he had ever possessed for the administration of government. With the imprudence of his youth was now united the feebleness of age. He retained the confidence of the king till his death, Nov. 21, 1781; but he was desti-
tate of the vigour necessary to avert the troubles which soon after shook the kingdom. France was, however, induced to ally herself with Maurice, to improve her hold on the seas and to make her influence felt in the marine. The Memoirs of Maurepas, composed by Sale's, his secretary, and edited by Soulavie, are amusing, but carelessly written. See Louis XVI. MAURI, and MAURITANIA. See MAURE.

MAURICE; count of Saxony, commonly known as Maurice of Saxony. MAURICE, Duke, and, after 1548, elector of Saxony (of the Albertine line), born in 1521, displayed, from his early years, great talents, united with a restless, active, and ardent spirit. In 1541, the death of his father, Henry the Pious, placed him at the head of the government, at the moment when the religious disputes had divided the German princes. Although a favourer of Protestantism, he refused to join the Smalcaldic league of Protestant princes, for the defence of the new doctrines, either out of attachment to Ferdinand, king of Hungary and Bohemia, against whose brother Charles V. (q. v.) the league was organized, or because he foresaw that it could not stand. In 1546, he concluded a secret treaty with the emperor, and was obliged to execute the ban of the empire against John Frederic, elector of Saxony (of the Ernestine line), and take possession of his territories. In 1548, the emperor conferred on him the electoral dignity of Saxony, and the greater part of the hereditary estates of the late elector. Charles now thought the moment was come to execute his project of annihilating the rights and privileges of the German princes, and rendering himself absolute master of Germany; and, although he artfully maintained a show of protecting the Catholics, laboured only for his own selfish interests. Maurice was not slow to penetrate the crafty policy of the ambitious monarch. Convinced that a forcible resistance would become necessary, he made his preparations, in 1550, under the pretence of executing the decree of the diet against Magdeburg, concluded a secret treaty with Henry II. of France, and some of the German princes (1551), and behaved so warily, that he had nearly succeeded in making Charles, who lay sick with the gout at Inspruck, his prisoner (1552). In justification of this unexpected act of hostility, Maurice alleged the detention of his father-in-law by the emperor, contrary to solemn promises, and the emperor upbraided it free to the prince whom he held captive, and proposed terms of accommodation by his brother Ferdinand. The result of this negotiation was the famous treaty of Passau (q. v.), July 31, 1552. Maurice, who had thus recovered the favour of the Protestants, now thought proper to give the emperor likewise, a proof of his attachment, by serving against the Turks. Nothing, however, was effected, and he soon after returned to Saxony. July 9, 1553, he defeated Albert, margrave of Brandenburg-Kulmbach, who refused to accede to the treaty of Passau, at Sievershausen, and died of a wound received in that battle, the next day. Maurice, by his audacity and the talent of a great prince and general, with a prudence that enabled him to take advantage of circumstances, Notwithstanding the shortness of his reign, Saxony is indebted to him for many useful institutions. MAURICE OF NASSAU, prince of Orange, the youngest son by a second marriage, of William I., prince of Orange; born at Dillenburg, in 1667, while studying at Leyden, in 1584, when his father was assassinated. The provinces of Holland and Zealand, and, soon after, Utrecht, immediately elected the young prince stadtholder, and his talents, as a general, surpassed all expectations. In 1590, he took Breda by a stratagem, and delivered Gelderland, Over- ryssel, Friesland, and Groningen from the Spaniards.

With the chief command, by land and sea, of all the forces of the United Provinces, he also received the stadtholdership of Guelders and Gelderland, in 1591, and the vice-admirals of the republic, on the coasts of Spain and Flanders. Thus become the object of general affection and respect to his countrymen, his ar"bulous spirit now aimed at the sovereignty. To effect his purposes, he took advantage of the religious quarrels of the Arminians and Gombrists, or the Remonstrants and Counter-Remonstrants. (See Arminians.) He supported the Gombrists, even to acts of violence (see Barneveldt), but, notwithstanding all his efforts, he was compelled to abandon his project. He died at the Hague, April 23, 1625, and was succeeded by his brother Frederic Henry. The life of this stadtholder was an almost unbroken series of battles, sieges, and victories. War he understood as a master, and conducted like a hero. His army was considered as the best school of the military art. The generals educated under him have contributed to extend his fame. Like Montecuculi, he possessed the art of conducting a match, and pitching a camp; like Vauban, the genius of fortification and defence; like Eugene, the skill to support the most numerous armies in the most pro"ductive and exhausted country; like Vendome, the good fortune to obtain more from the soldiers than he had a right to expect; like Condé, that unerring coup d'oeil which determines the issue of the battle; like Charles XII., the power of rendering the troops insensible to cold, hunger, and sufferings; like To"renne, that of sparing human life. In the opinion of Folard, Maurice was the greatest infantry general that had existed since the time of the Romans. He had learned the art of war from the ancients and extended it by the results of his own and others' experience.

MAURITIUS. See France, Isle of.

MAUROKORDATOS. See MAVRORODETOS.

MAUROMICHALIS. See MAUROMICHALIS.

MAUVRIKOS, a German name of the age of Charlemagne, who did much to promote the improvement of his nation, was a native of Mayence, received his education in the Benedictine monastery at Fulda, and subsequently went to Tours, to complete his studies under Alcuin. After his return, in 804, he became superintendent of the monastic school at Fulda, from which proceeded many distinguished scholars. After many adversities, who the diffusers of light, in the dark ages, always had to encounter, he was consecrated, in 822, abbot of Fulda, and during the twenty years that he held this office, the beneficia"l influence of his literary school, and of his truly Christian church discipline, increased. Dissatisfied with the turbulence of the times, he was desirous of finishing his life as a hermit; but King Louis the German obliged him, in 847, to accept the archbishopric of Mayence. In this dignity he died in 866. His Latin writings, mainly of a philosophical character, appeared at Cologne in 1627, in folio. In the diffusion and formation of the Ger"man language he was very active, and so far succeeded as to introduce preaching in German. He also compiled a Latin and German glossary of the Bible, preserved in several manuscripts,—a valuable monument of the old Ger"man language, which has been printed in Schiller's The.APPLICATION and in Eckardt's Commentarii de Heb. Fran.

MAURY, Jean Suffren, born at Vénus, in
Provence, in 1746, of obscure parentage, took holy orders, and soon received several benefices. His eulogy on Fénelon, and his talents as a preacher, attracted the public notice, and, previous to the breaking out of the war, was so great that he was appointed for him the place of a court-preacher, the priory of Lyons, the dignity of abbé of Frénaud, and a seat in the French academy. He showed his gratitude for this patronage of government, by exercising his courage and his eloquence in defence of the throne. In 1789, the abbé Maury was chosen one of the ecclesiastics of the States-General, and became a formidable antagonist to the opposition by his eloquence, his extensive and profound knowledge, and, particularly, by his presence of mind, and his imperturbable firmness. The union of the three estates in a national assembly met with the most vigorous resistance from him, and, after it was determined upon, he quitted the assembly and Versailles, but afterwards returned, and took an active part in that body. He defended the necessity of the royal veto, and opposed the conversion of the church property into national domains. When the latter subject was discussed for the third time, November 18, 1791, Maury, representing the papal interests, made a deep and eloquent protest in the assembly by his speech, and, leaving the house, was saluted by the crowd with the cry, A la lanterne l'abbé Maury! Eh bien, replied he coolly, le voici, l'abbé Maury; quand vous mettriez à la lanterne, y verriez-vous plus clair?

This reply produced a general laugh, and the abbé was saved. On the dissolution of the assembly, in 1792, he retired to Rome, and received a bishopric in apostolic nuncio at the coronation of Francis II. He was soon after (1794) created bishop of Montefiascone and Corneto, and cardinal. During the revolutionary storm, Maury remained at Rome, devoted to the duties of his charge and to study. His pastoral letters contained expressions of his abhorrence of the cruelties committed in France, and of his adherence to the Bourbons. Thus far he had displayed a consistency of character, as even his declared enemies acknowledged. But when Napoleon usurped the imperial dignity, in 1804, Maury considered the cause of the Bourbons as hopeless, and thought it an act of prudence on his part to submit to the government, which was recognised by the French nation, and by nearly all the powers of Europe. He might justify this course on the ground of political principles, and might hope to be useful in extending the papal prerogatives in France, which had been much limited by the concordate of 1801. Perhaps, also, his ambition was fluttered with the prospect of thus reaching the highest spiritual dignity in Catholic Christianity. However this may be, he wrote in terms of the highest admiration to Napoleon, and professed his allegiance as a French subject. In 1804, he accompanied the pope to Paris, and was present at the coronation of the emperor. In 1806, he was created archbishop of Paris, and was the foremost in the most devoted servant of his master. All his pastoral letters, and his discourses, recommended the most unconditional obedience to the decrees of Napoleon, and his addresses to the emperor abounded in the most absolute terms of adulation. In 1814, he was obliged to leave the archiepiscopal palace in Paris, and was deprived of his nomination as archbishop, since he had no papal brief to procure. He hastened to Rome, but there was thrown into the castle of St. Angelo, for having accepted the archbishopric without the consent of the holy see. After subjecting himself to various humiliations, he was again reinstated as cardinal, but died at Rome, in 1817, without recovering his archbishopric, or his former consideration.

MAUSOLEUM (Μαύσωλεον) from Mausolus, a king of Caria, to whom a sumptuous sepulchre was raised by his wife Artemisia. King Mausolus is said to have expired in the year 353 B. C.; and his property was divided among his four sons. Laughter was taken in the place of a court-preacher, the priory of Lyons, the dignity of abbé of Frénaud, and a seat in the French academy. He showed his gratitude for this patronage of government, by exercising his courage and his eloquence in defence of the throne. In 1789, the abbé Maury was chosen one of the ecclesiastics of the States-General, and became a formidable antagonist to the opposition by his eloquence, his extensive and profound knowledge, and, particularly, by his presence of mind, and his imperturbable firmness. The union of the three estates in a national assembly met with the most vigorous resistance from him, and, after it was determined upon, he quitted the assembly and Versailles, but afterwards returned, and took an active part in that body. He defended the necessity of the royal veto, and opposed the conversion of the church property into national domains. When the latter subject was discussed for the third time, November 18, 1791, Maury, representing the papal interests, made a deep and eloquent protest in the assembly by his speech, and, leaving the house, was saluted by the crowd with the cry, A la lanterne l'abbé Maury! Eh bien, replied he coolly, le voici, l'abbé Maury; quand vous mettriez à la lanterne, y verriez-vous plus clair?

This reply produced a general laugh, and the abbé was saved. On the dissolution of the assembly, in 1792, he retired to Rome, and received a bishopric in apostolic nuncio at the coronation of Francis II. He was soon after (1794) created bishop of Montefiascone and Corneto, and cardinal. During the revolutionary storm, Maury remained at Rome, devoted to the duties of his charge and to study. His pastoral letters contained expressions of his abhorrence of the cruelties committed in France, and of his adherence to the Bourbons. Thus far he had displayed a consist
To supply the defects of the German laws and prevent the gross abuses of justice, he adopted, at the same dict, the Roman and canon laws, as subsidiary authorities, in the decision of differences, and instituted the imperial chamber, as the supreme tribunal of the empire. He put a stop to the monstrous abuses of the Welfs, and was the author of a circuitous but romantic account of his own life, first published in 1775, under the title Der reiss Konig, by M. Treistssuwein (his private secretary), with Wood-cuts by Hanno Burgmair. He was, for a long time, considered the author of the Theuendank (q. v.), of which he is the hero; but his secretary Frimudder, in a later edition, has since written that Maximilian died in 1519, and was succeeded by Charles V.

MAXIMILIAN II., German emperor, son of Ferdinand I., born at Vienna in 1557, was chosen king of the Romans in 1592, and succeeded his father in the imperial dignity in 1594. He was a pattern of a virtuous and temperate prince, though he did not join the Lutherans, yet he favoured some of their opinions, and granted to his subjects, in his hereditary dominions, a greater religious freedom than they had previously enjoyed. His toleration was extended to all his territories, and led him to promote the religious peace of 1556. Soliman II., the Turkish sultan, made war upon him, in support of the designs of John Sigismund, prince of Transylvanía, to Hungary, but the death of the sultan put an end to the war in 1567, his successor, Selim, having agreed to a truce of eight years. The latter renewed the war in 1576, in which year Maximilian died. He left two daughters and six sons, the eldest of whom (Rodolph) succeeded him, not only as emperor, but also in the Austrian hereditary estates. See Austria.

MAXIMILIAN THE GREAT; elector of Bavaria. See Bavaria.

MAXIMILIAN I., Joseph, late king of Bavaria, was born May 27, 1756, in Schwebtingen, a village not far from his father's estate at Freudenfels. He was called the 'Prince of the Princes,' and the 'Shrewd,' by the Austrians, for his cunning and double-dealing nature. He was a monster of all passions, and was the worst man in Europe. He was the greatest and most cruel of all the great men of the age. He had a good heart, and was beloved by his subjects. Education, agriculture, the finances, and the administration in general were improved under his reign. His daughter Augusta Amalia, born June 21, 1788, is the widow of the duke of Leuchtenberg, (Eugene Beauharnais); his daughter Charlotte Augusta, born February 8, 1792, married, in 1816, to Francis I., emperor of Austria. Maximilian was succeeded by his son Louis I., born August 25, 1786.

MAXIMINUS, Caligula Julius Verus, the son of a peasant of Thrace, was originally a shepherd, and, by his head, so his countrymen against the frequent attacks of the neighboring nations, and robbed himself to the labours and to the fatigue of a camp. He entered the Roman armies, where he was generally raised to the first offices. On the death of Alexander Severus, slain in a mutiny of his troops excited by Maximin, he caused himself to be proclaimed emperor, A. D. 235, and immediately made his son his colleague. The popularity which he had gained when general of the armies, was at an end when he ascended the throne. He was sighted with acts of cruelty, and not only 400 priests lost their lives on the false suspicion of having conspired against the emperor's life. Some were exposed to wild beasts; others expired by blows; some were nailed on crosses; while others were shut up in the bellies of animals just killed. The patricians were more particularly the objects of his cruelty, as they were more conscious than others of his mean origin. In an expedition in Germany, he cut down the corn, and laid waste about 450 miles, with fire and sword. Such a monster of tyranny at last provoked the people of Rome. The Gordians were proclaimed emperors, but their pacific virtues were unable to resist the fury of Maximin. After their fall, the Roman senate invested twenty of their number with the imperial dignity, and intrusted to their hands the care of the republic. These measures so highly irritated Maximin, that at the first intelligence he howled like a wild beast, and almost destroyed himself by despair. He then deserted the walls of Aquileia, A. D. 238. He was seen in the sixty-fourth year of his age. The news of his death was received with the greatest rejoicings at Rome; public thanksgivings were offered, and whole hecatombs flamed on the altars. Maximin has been represented by historians as of a gigantic stature: he was eight feet high, and the bracelets of his wife served as rings to adorn the fingers of his hand. His voracity was as remarkable as his corpulence: he ate forty pounds of flesh a day, and drank eighteen bottles of wine. His strength was proportionable to his gigantic shape: he could draw a loaded wagon; with a blow of his fist he often broke the teeth in a horse's mouth, and cleft young trees with his hand.

In mathematics, where an extensive application is made of the notion of greatest and smallest (maximum and minimum), by the greatest or smallest value of a variable quantity is understood that value which is greater or smaller than any preceding or following one in the series of the values of this quantity, however near either may be taken to that greatest or least value. The question of the conditions of the maximum and minimum, the determination of which belongs to the differential and in some more difficult cases to the integral calculus, is of the highest importance. In the present analytical case, let it be required to divide a number, 8, for instance, in such a manner that the product of the parts shall be a maximum; the method of maximum and minimum shows that the number must be divided into two equal parts, for 4 times 4 are sixteen, while 3 times 5 are only 15, twice 6 only 12. See according to the rules of the above the maximum in the series of numbers successively obtained.
the treatises on the differential calculus, and Tommasini's treatise De Maximis et Minimis ad Institutiones geometricas accommodatis Specimen, Pisa, 1774.

MAXIMUS TYRIUS, a celebrated philosopher of the second century, was a native of Tyre in Phoenicia, whence he took his name. It is generally supposed that he flourished under Antoninus. He appears to have adopted the principles of the Platonic school, with an inclination to scepticism. He left forty-one dissertations on various philosophical topics, still extant, and written with much elegance. The first was published in Greek, by Stephenses, in 1627; and in Greek and Latin, by Heinusius, in 1607.

May, the fifth month in the year, has thirty-one days (in Latin, Maius, from which May has been generally derived; the names of the other months being also of Latin origin). Several etymologists maintain, however, that the German May, or Mai, is not derived from the Latin, but that May and Maius may both refer to one original root. As early as in the Saxon laws, this month is called Meo, and it would appear that the idea of youthful beauty and loveliness, so naturally connected by northern nations with the name of May, was derived from the Saxon month Low Saxon, Mej, in Dutch, Mooy, is beautiful, agreeable; in Swedish, Mio, in Icelandic, Mior, small, pretty, agreeable; in ancient Swedish, M6, a virgin (connected with maid, maiden). In Lower Brittany, Mac signifies green, flourishing, and Mace, a field, meadow; German, Matte; in Lorraine, Io Mai and Mi, in ancient French Met, M6s, signify a garden. Whether all these must be referred to one Teutonic root, and whether this, again, is connected with the Indian Maya (see Magic), the goddess of nature, cannot be investigated here.

May, Cape; on the coast of New Jersey, at the mouth of the Delaware bay, its northern coast is sixteen miles N. of Cape Henlopen on the southern shore. Lon. 74° 52' W.; lat. 38° 57' N.

MAY FLY. See Ephemerides.

May, Thomas, a poet and historian, the eldest son of Sir Thomas May, was born about 1655. He studied at Cambridge, and was afterwards admitted a member of Gray's Inn; but never seems to have followed the law as a profession. His father having spent nearly all the family estate, he enjoyed but a scanty inheritance. May was much noticed by Charles I., and the wits of his early courts. He was the author of three tragedies and two comedies, also of several poems. As Virgil's Georgics, with annotations; Lucan's Pharsalia; to the latter of which he supplied a continuation of his own, both in Latin hexameters and in English. Of his original poems, the principal are Reign of Henry II., and the Victorious Reign of Edward III., each in seven books. According to lord Clarendon, disgust at being denied a small pension, induced him, on the breaking out of the civil war, to enter into the service of parliament, to which he was appointed secretary; and his well-known History of the Parliament of England, which began November 3, 1640, became extremely obnoxious to the royal party, who vilified both the author and his name. In the year that followed he made an abstract of this history, under the title of a Breviary of the History of the Parliament of England (1650, 8vo), and died a few months after its publication, aged fifty-five, 1650. He was buried in Westminster abbey, by the order of parliament, which also erected a monument over his tomb. This was removed at the restoration, and his body disinterred, and thrown with many others, into a pit, dug for that purpose, in St Margaret's churchyard.

MAYENCE. See Mentz.

Mayer, John Tobias, a celebrated astronomer, born at Marbach in Wurttemberg, February 17, 1723, passed his early years in poverty at Esslingen. By his private industry, without attending any academy, he made himself a mathematician, and became known by several original essays in this department, such as Algemeine Method zur Auffindung Gesamt-Problème (Esslingen, 1741); after which, he went to Nuremberg, and entered the establishment of Ho man, where he distinguished himself by his improve- ment of maps. At the same time, he did not neglect to improve himself in other branches of study: he acquired, for instance, an elegant Latin style, which, in his circumstances, enabled him to be entertained by various authors procured him an invitation to Göttingen, as professor of mathematics, in 1750, and the royal society of sciences of that place chose him a member. About this time, astronomers were employed on the theory of the moon, to assist in finding the longitude at sea. Mayer overcame all difficulties, and prepared the excellent lunar tables, by which the situation of the moon may at any time be ascertained to a minute, for which tables, after his death at Göttingen, February 20, 1765, his heirs received £3000 sterling, as a part of the reward promised by several British societies for the discovery of finding the longitudinal at sea. These tables have immortalized him. To the same department belong his Theoria Lunae juxta Systema Newtonianum (London, 1767, 4to) and Tabular Motuum Solis et Lunae (London, 1770, 4to). He also rendered other services to astronomy, especially by his improvement of instruments for measuring angles, and the introduction of the multiplication circle (which was afterwards made more perfect by Borda, so as to be adapted to the most delicate operations of astronomy), by the theory of refraction and eclipses, by catalogues of the fixed stars, &c. The manuscripts left by him are preserved in the observatory at Göttingen. A part of them have appeared, Opera inedita, ed. Lichtenberg (Göttingen, 1774, 4to).

Mayer, or Mayr, Simon, a distinguished German composer, born near Ingolstadt, in 1764, resided a long time in Italy. He was liberally educated, but his inclination for music seduced him from the sciences, and, at the age of twenty-five years, he went to Bergamo, where Count Pesenti assisted him, and enabled him to study at Venice, under the chapel-master Bertoni. The death of his patron obliged him to connect himself with the theatre, and in 1802 the place of chapel-master in Bergamo was given him. He composed the music for all the Italian operas, oratorios, cantatas, &c. His principal operas are Lodoiska; Misterj Eleusiani; La Giovene di Sciozia; Medea in Corinto; La Rosa bianca e la Rosa rossa; and Adelasia ed Alcmano.

Mayhew, Jonathan, D. D., son of a distinguished clergyman and successful missionary among the Indians, was born at Martha's Vineyard, in the year 1720, and educated at Harvard college, of which he received the honours in 1744. In youth he manifested talents, and great proficiency in his studies: he was ordained the minister of the West church in Boston, June 17, 1747. In this station he continued during an interval of two years, and suddenly July 9, 1766, in the forty-sixth year of his age. He published a number of sermons and some controversial tracts, by which he gained as high a reputation as was possessed by any American writer or clergyman of his time. His style is nervous and chaste; he displays mathematical and critical and extensive learning, and singular independence of spirit. Most of his writings passed through several editions in England. The university of Aberdeen sent him a diploma of doctor of divinity. He entered frequently into politics, and was termed a whig of the first magnitude, or rather a principled republican.
The transaction in Doctor Mayhew's life which attracted most attention to him was his controversy with the Reverend Mr. Apostle. A flattering the proceedings of the British society for the propagation of the gospel in foreign parts. He condemned their proceedings in a masterly pamphlet, and contended that the society were either deceived by the representations of the persons whom they employed, or governed more by a regard to Episcopacy than to charity. Several members of the society in America wrote replies, and even doctor Seeker, archbishop of Canterbury, embarked in the dispute, in favour of the society. Doctor Mayhew rejoined with much cogency, vivacity, and wit.

MAYNE, John, a Scottish poet, was a native of Dumfries, which place he left in early life for Glasgow, where he passed through a regular term of service with the celebrated printers, Messrs Foulis. He afterwards removed to London, and was, for a long series of years, the printer and a co-proprietor of the Star daily newspaper. He died on the 14th of March, 1836, at an advanced age. His principal poems were "Glasgow," a pantyric on that city, which has gone through several editions; and "The Siller Gun," a poem descriptive of an ancient festivity held at Dumfries, in which there is a shooting match for a small silver gun. This latter poem has also gone through several editions, the latest and best being that of London, 1836. Mr. Mayne was also author of several beautiful lyrics, among which may be mentioned "Logan Braes" and "Helen of Kirkconnell Lass."

MAYPU, Battle of, sealed the independence of Chile. It was fought April 5, 1817, Osorio commanding the royalists, and San Martin and Las Heras the patriots. Of the five thousand men commanded by Osorio, two thousand fled, and one thousand five hundred were made prisoners; and the victory not only gave liberty to Chile, but enabled the Chileans to send a liberating expedition against Peru. See Chile, Peru, San Martin.—Stevenson's South America, vol. iii. p. 183.

MAZARIN, Jean, first minister of Louis XIV., and cardinal, was born of a noble family, at Pescini, in Abruzzo (according to Fissan, at Rome), in 1602. He studied law at the Spanish university of Alcalá de Henares, after leaving which, he entered the military service of the pope. He was a captain in a corps in the Valteline, when he was commissioned by general Richelieu to negociate with the archduke of Rivalta, Sept. 10, 1630, between the French, Spanish, and imperial generals. The nuncio Bagni represented him as a distinguished man to Louis XIII., and cardinal Richelieu. When the war broke out respecting the succession of the duchy of Mantua, Mazarin, as papal minister, repaired to Louis XIII. at Lyons, and had a long conference with cardinal Richelieu. Having failed in his attempts to effect a peace, he returned to Italy. The French stationed before Casal were on the point of renewing hostilities, when Mazarin effected a truce of six weeks between them and the Spanish forces. On the expiration of the truce, he proposed to the French to consent to a peace, which they refused, except on the hardest conditions. He induced the Spanish general, however, to agree to them, and returned on horseback, at full speed, between the two armies, who were already engaged, waving his hat, and exclaiming "Peace! peace!" while the bullets were whizzing about his head. The action was suspended and peace established. By this negotiation, Mazarin gained the friendship of Richelieu, and, in 1641, Louis XIV. induced Urban VIII. to create him cardinal, immediately whereupon he was appointed a member of the council of state. Richelieu, on his death-bed, recommended him so strongly to the king, that, in his will, Louis nominated him a member of the council of regency. On the death of Louis XIII. in 1643, queen Anne of Austria, as regent, gave him the post of first minister. Mazarin was, at that time, generally regarded as the lover of the queen, and, from this intimacy, some have attempted to derive the origin of the iron mask. (q.v.) He at first conducted with much modesty. But, notwithstanding this moderation, which did not last long, a powerful party was formed against him. He was hated as a foreigner, and his person, his manners, his pronouncement, were made subjects of ridicule. The people, moreover, groaned under the burden of taxes. These circumstances resulted in a civil war. See Fron. This obliged the queen to fly to St. Germain with the king, and the minister, whom the parliament regarded as a disturber of the public tranquillity. Spain took part in the commotions, and the archduke, governor of the Netherlands, assembled troops. This obliged the queen, who was neither able nor desirous to wage war, in 1649, to come to a compromise with the parliament. They Parliament retained the liberty of convening itself, of which it had been attempted to deprive it, and the court kept its minister, whom parliament and people had attempted to overthrow. But the prince of Condé, to whom the state was indebted for this reconciliation, showed little moderation to either party. Mazarin was ridiculed by him, as having been treated with disdain, and the government mocked. Mazarin, forced to be ungrateful, therefore persuaded the queen to give orders for the arrest of him, with his brother, the prince of Conti, and the duke of Longueville. But, in 1651, the parliament issued an edict, banishing Mazarin from the kingdom, and obliged him to leave the country. He therefore entered Paris as if in triumph, while the cardinal fled, first to Liege and then to Cologne. But even from thence did this minister rule the court and France. In February, 1652, the king, now arrived at age, recalled Mazarin, who, as Voltaire says, came to France "less like a minister resuming his office than like a ruler taking possession again of his state." He was accompanied by a small army of 7000 men, which he kept on foot, at his own expense, that is, with the public money, which he appropriated to his own use. On the first information of his return, Gaston d'Orléans, brother of Louis XIII., who had been banished from the court, and who resided in Paris, and the parliament renewed its decrees, banished Mazarin, and set a price on his head. At the same time, the prince of Condé, in league with the Spaniards, put himself in motion against the king, whose army was commanded by Turenne, who had left the Spaniards. Several indecisive battles were fought; the war ceased and was renewed at intervals. The cardinal found it necessary again to leave the court, and repaired to Sedan, in 1652, after which the king again took possession of Paris. To restore entire tranquillity, Louis had issued a proclamation, in which he dismissed his minister, while he praised his services, and lamented his banishment. But quiet having returned, the king invited him, in Feb., 1653, back to Paris. Louis received him like a father, the people like a master. The princes, the ambassadors, and the parliament, hastened to wait upon him. The disturbances in the provinces were soon entirely quelled, and Condé, who had fled to the Spanish Netherlands, returned. Mazarin now prosecuted the war against Spain with redoubled zeal, and, for that end, formed an alliance, in 1656, with Cromwell. By this means, he obtained for France an honourable peace. He negotiated himself, in 1659, with the Spanish minister Haro, on
the isle of Pheasants. This peace of the Pyrenees was followed by the marriage of the king with the Infanta. Both negotiations did great honour to Mazarin's policy. He was now more powerful than ever: he appeared with regal pomp, being regularly attended by the Cortes, and in addition to his body-guard. The queen mother, on the contrary, lost her influence. During this time of repose, nothing was done by Mazarin for the administration of justice, for trade, naval power, and finances. Neither were his eight years of unlimited dominion marked by a single honourable institution. The story of the guillotine was first established by his testament. The finances he administered like the steward of an involved master. He accumulated above 200,000,000 livres, in doing which, he often made use of means unworthy of an honourable man. According to Flessan, he had an income of 1,800,000 livres, and a property of twenty-two millions, equivalent to about double the sum of the money of our time. This dispelled him, when he perceived his end approaching. Colbert therefore advised him to make the king a present of all his treasures, who would infallibly return them to him. The king accepted the present, and Mazarin began to feel uneasy, when the king returned it to him, after the lapse of three days. Mazarin died March 9, 1661. He left as his heir the marquis La Meillerie, who married his niece Hortensia Mancini, and assumed the title of duke of Mazarin. He had, besides, a nephew, the duke of Nevers, and four other nieces, who were married to the princes of Conti, the constable Colonna, the duke Mercure, and the duke of Boulillon. Charles II. (Stuart,) in the time of his embarrassments, had sued for one of them; his affairs having improved, Mazarin offered her to him, but now received a negative answer.

Mazarin and Richelieu have often been compared together; "Mazarin," says Hénault, "was as mild as Richelieu was vehement. One of his greatest talents was his accurate knowledge of men. His policy was characterized rather by finesse and forbearance than by force. The last he made it a rule to use only when other means were inadequate; and he never opened a man for an end which circumstances required. Bold at Casal, quiet and active at Cologne, enterprising, as when he accomplished the arrest of the princes, but insensible to the ridicule of his enemies and the boasings of his colleagues,—he heard the murmurs of the people as from the shore he would have heard the raging of the billows. In Richelieu there was something greater, more comprehensive, less constrained; in Mazarin, more adroitness, more caution, and less variation. The one was hated; the other was derided; but both ruled the state." Mazarin flattered the enemies whom Richelieu would have ordered to be beheaded. His talents were not sufficiently prominent to conceal his ambition, cupiditiy, timidity, artfulness, and meanness. His greatest merit was his skill in diplomacy. For this he possessed all the necessary finesse, pliancy, and knowledge of human nature, and exhibited them in the peace of Vienna in a company of musketeers, and in his embassy to the Holy Roman Empire. He was sent to Amsterdam, to conclude the peace of the Pyrenees between the king of France and the United Provinces. He wrote a book on the subject, which he was induced by the king to publish. Mazarin was the first Frenchman who thought of publishing his own works, and who, after the death of Maurepas, proceeded to establish such a practice. He was eminently successful in this enterprise, and acquired a large fortune by the sale of his work. He was an excellent writer, and produced many valuable works, which were not equalled in the age of Louis XIV. His great talents were not sufficient to enable him to write with the same facility and facility as Mazarin. He was, however, a good observer, and a master of the art of politics. He was a man of great ability, and possessed a considerable stock of knowledge. He was well informed on political affairs, and had a fine judgment in politics. He was a man of great ability, and possessed a considerable stock of knowledge. He was well informed on political affairs, and had a fine judgment in politics. He was a man of great ability, and possessed a considerable stock of knowledge. He was well informed on political affairs, and had a fine judgment in politics.

Mazarin's letters respecting the negotiations of the peace of the Pyrenees have been several times printed. (See Aubery's Hist. du Card. Mazarin (Amsterdam, 1751); also Retz's Memoirs.)

MAZEAPE, JOHN; hetman of the Cossacks, born in Podolia, of one of the many poor noble Polish families, who were obliged to seek for employments in the interior of the empire. He was the son of John, a poor peasant, who was fond of pleasure, but at the same time, a lover of the arts and of literature. Mazapec had therefore an opportunity of acquiring various useful accomplishments. An intrigue was the foundation of his future elevation. A Polish nobleman, having surprised Mazapec with his wife, bound him, naked, in revenge, upon a wild horse, and committed him to his fate. The horse was from the Ukraine, and directed his course thither. Some poor peasants found him, half dead, and took care of him. He remained among them, and their warlike, roving life suited his disposition. He made himself conspicuous by his bodily strength, and courage. His knowledge and sagacity procured him the posts of secretary, and adjutant to the hetman Samoilowitz, and, in 1687, he was elected in his place. He gained the confidence of Peter the Great, who loaded him with honours, and he was finally made prince of the Ukraine. His restless spirit now made him resolved to throw off the yoke of subordination. He joined with Charles XII., who had just given a king to Poland, and, aided by his assistance, to withdraw himself from his allegiance to the car, and to unite the Ukraine, under certain conditions, to the crown of Poland. These and other intrigues of Mazapec against Peter were at last revealed to the latter by Kotschubey, general of the Cossacks, and Ism, governor of Poltava. Peter put no confidence in these charges, but sent both the accusers to Mazapec himself for punishment. He had the audacity to cause them to be executed. At length the eyes of Peter were opened; the government of Mazapec was suspended and executed, and he himself was hanged in effigy. He then went over, with a few adherents, to Charles XII., and took an active part in the unfortunate campaign in the Ukraine. After the defeat at Poltava, Mazapec fled to Bender, where he died 1700. Lord Byron has made Mazapec the hero of a poem.

MAZZOLA, or MAZZUOLI, FRANCESCO (called Il Parmegiano), one of the most distinguished painters of the Lombard school, born at Parma, in 1503, was the son of Filippo Mazzola, a painter, surnamed Dall'Erbette. In his sixteenth year, he executed a Baptism of Christ, which displays his remarkable talents. Correggio's presence in Parma, in 1521, gave him an opportunity of becoming acquainted with the style of that master. In 1522, Mazzola painted, among other works, a Madonna, with the holy Children, a St Jerome, and a St Bernardin of Creton, a celebrated painting, which has been deposited in the monastery of Della Nunziata, but which has suffered from time and unskilful hands. In Rome, which the young artist visited in 1523, with the hope of attracting the notice of the pope Clement, the works of Raphael made a deep impression upon him, the influence of which is perceptible in his subsequent pictures. He painted in 1527, in the church of San Gregio's grace with Raphael's expression. On the capture of Rome, in 1527, he suffered great losses, and, after that event, went to Bologna. Among his most celebrated paintings, executed in that city, are
his St Rock, the Madama della Rosa, now at Dresden, in the possession of the Mezzochelli. He soon returned to Paris, and there executed the Cupid making a Bow, and painted several works for the church Dei Scritti, in the Monastero di S. Caterina. But his health was feeble, and he was imprisoned by the overseers of that building, who had advanced him the money for works which he neglected to finish. Being set at liberty, on condition of completing them, he fled to Cassalogna, where he died, in 1540. His works are not numerous, much of his time having been wasted in the search after the philosopher's stone. With a thorough knowledge of his art, Mazza united great correctness of drawing. Algarotti and Mengs accuse him of being sometimes guilty of affectation in his attempts at grace, and Fierillo objects to his too great use of curved lines, and to his involving the limbs. His fire, grace, correct drawing, boldness of touch, and ease of composition, are undeniable.

MAZZUCHELLI, Giammaria, count, a nobleman of Brescia, who flourished in the early part of the reign of Charles V., was the author of Notechi teoriche e critiche intorno alla Vita, alle Invenzioni ed agli Scritti di Archimede Socrate (1716). He also commenced a large and valuable biographical work, Gli Scrittori d'Italia, of which he only finished the two first letters of the alphabet, leaving a large collection of materials for the subsequent parts. He died in 1765. In 1729, he published his Museum Masonzuchellianum, sive Nemismata Vitorum Doctrina prassantum (1761, folio.)

MEACO, or KIO; a city of Japan, in Nippon, 160 miles south-west Jeddo; lon. 153° 30' E.; lat. 35° 24' N. It was once the metropolis of the whole empire: it is still the ecclesiastical capital, the residence of the patriarchal see of Japan, and is the centre of the literature and science of the empire, to which the imperial almanac being published here, and most of the books that circulate through Japan. It is situated near the middle of the south coast, in a fertile and spacious plain, surrounded by high mountains, for the most part covered with stately temples, monasteries, burying-places, and pleasure-houses. Three rivers unite their streams in the centre of the city, whence the place is divided into upper and lower towns. This twofold city appears to have been about twenty miles in length, and nine or ten in breadth, when in its full splendour, besides its large suburbs, and imperial palace, which is a city by itself, and formed from the sea, is generally narrow, but straight. Population, near 500,000, exclusive of several thousands that compose the dairi's court, and the bonzes and nuns, who amount to above 52,000. Its temples are numerous, and some of them very magnificent. Meaco, though much decayed, in consequence of the civil wars, is the grand storehouse of the manufactures of Japan, and of foreign and home merchandise, and the principal seat of its commerce. See Japan.

MEAD, Richard, a celebrated English physician, was the son of a dissenting minister, and born at Stepney, near London, in 1673. He studied at the universities of Utrecht and Leyden, and became an intimate with his fellow-pupil Boerhaave. He afterwards travelled in Italy. He returned to England in 1696, and became very distinguished in his profession. In 1702, he published Mechanical Account of Poisons, which he, long after, re-published in an improved form. On the alarm occasioned by the plague at Marseilles, in 1719, he published a Discourse of the Universal Contagion, which has passed through many editions. He interested himself much in the introduction of inoculation for the small-pox, and assisted in the preliminary experiments made on condemned criminals. In 1727, he was appointed physician to King George II. Among his later writings are his treatises De Historia Solis et Lunae, in Corpore hominum et Morbis tuberulosis (1740); De Morbis Biblicis (1749); and Monita Medicina (1750). He died in 1754.

MEADOW LARK (sturna ludovicianus, Lin.; alauda megna, Wils.) This well-known and beautiful species is found in pasture fields and meadows, especially the latter, from which its common name is derived. The meadow lark is seldom or never seen in woods, except where they are open, and, instead of underwood, the ground is clothed with grass. After the building season is over, these birds collect in flocks. When they alight, it is generally on the highest part of the tree or shrub, whence they pour forth a clear but melancholy note. Their nests are generally built in or below a thick tuft of grass, and are composed of dry grass. The eggs are four or five in number, white, marked with specks, and several blotches of reddish-brown, particularly at the larger end. Their food consists of caterpillars, grub-worms, beetles, &c. The young are about ten inches and a half in length. The throat, breast, and belly, are of a bright yellow, ornamented by an obtusely crescent of a deep velvety black, on the lower part of the throat.

MEAL-TUB PLOT. See Popish Plot.

MEAN; the middle between two extremes; thus we may have mean between 4 and 6, that is, 5. The mean in a series of quantities is the sum of the quantities divided by the number of quantities. See Mean Distance; and, in arithmetical proportion, the mean is the half the sum of the extremes; in a geometrical mean, the square root of the product of the extremes. Meantime is the time of an average or of apparent time. See Time, and Equation of Time.

MEASLES (rubella, from ruber, red); an exanthematic disease, which appears to have been unknown to the ancient physicians; the time of its first appearance in Europe is uncertain. It is communicated by the touch of infected persons or things. It is sometimes epidemic. Persons of all ages are liable to its attacks; but it is more common in infants, and rarely affects an individual a second time. The symptoms are hoarseness, cough, drowsiness, and, about the fourth day, an eruption of small red spots (hence the name measles; German, Masern, spots), which, in a week, cover the body from head to foot; more or less of fever, attended with the usual febrile affections. The measles, even when violent, are not often of a putrid tendency, although such a disposition sometimes prevails. In the case of the simple measles, the best treatment is abstinence from food, and the use of mild, mucilaginous, sweetened drinks. Bleeding is only proper in the inflammatory measles. Some writers have treated the measles as merely an inflammation of the skin; but this is only a symptom of the disease, and not the disease itself.

MEASURES. The general principle that simplicity and uniformity are the result of advancement in civilization, is strikingly exemplified in the case of measures. Formerly, every province, and almost every place of importance, had its own measures, which proved a most perplexing hindrance to commercial intercourse. In modern times, many attempts at uniformity have been made. Two modes most naturally suggested themselves,—either to declare the measures of one place or province the standard London measures and weights were declared to be the standards for weights and measures throughout the realm, and in Prussia, where
the Berlin weights and measures were made the rule for the whole kingdom, to establish new mea-
sures, founded upon unalterable principles, upon the
laws of nature, as has been done in France. The
latter is obviously the most rational and most just,
because it is arbitrary to make a whole country fol-
low the measures of the capital, or of a province, if
these measures themselves have nothing in particular
to have hunting borne to the yard measure in that
article France, division of Decimetric Measures, is given a brief account of that
admirable system, the philosophical character of which
is bringing it more and more into use among the learn-
ed of the European continent. (For more information
respecting it, see Delambre's Base du Système mé-
trique, &c.)

The British yard is determined by oscillations of a pendulum at Lon-
don. This is still an arbitrary standard, as the
oscillations vary in different parallels of latitude. It
is not, indeed, so arbitrary as the taking the foot of
Louis XIV, for a measure, yet it is not so philoso-
phical as the French. In the United States of
America the British system of measures and weights
has been followed.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.

MEASURES.
MEASURES.

portion they have to the standard measures and weights; tables of equalization of the weights are to be made by the treasury; tables, also, for the customs and excise, by which the duties will be altered so as to make them equal to what they are at present, in consequence of the alterations in the weights and measures.

The measures now in use in Britain are as follows:—

1. MEASURE OF LENGTH.

| 12 inches | = 1 foot |
| 3 feet | = 1 yard |
| 3 yards | = 1 rod, or pole |
| 40 poles | = 1 furrow |
| 8 furlongs | = 1 mile |

An inch is the smallest lineal measure to which a name is given, but subdivisions are used for many purposes. Among mechanics, the inch is commonly divided into sixteenths. By the officers of the revenue, and by scientific persons, it is divided into tenths, hundredths, &c. Formerly, it was made to consist of twelve parts, called lines; but these have properly fallen into disuse.

PARTICULAR MEASURES OF LENGTH.

1. nail = 2 1/4 inches
2. quarter = 4 nails
3. yard = 4 quarters
4. rod = 5 yards

1 fathom = 6 feet, used in measuring depths.

1 link = 29 1/100 inches, used in land measure, to facilitate computation of the content, 10 square chains being equal to an acre.

2. MEASURE OF SURFACE.

| 144 square inches | = 1 square foot |
| 9 square feet | = 1 square yard |
| 30 square yards | = 1 perch or rod |
| 40 perches | = 1 rood |
| 40 roods, or 160 perches | = 1 acre |
| 640 acres | = 1 square mile |

3 MEASURES OF SOLIDITY AND CAPACITY.

Division I. — Solidity.

728 cubic inches = 1 cubic foot
27 cubic feet = 1 cubic yard

Division II.

Imperial measure of capacity for all liquids, and for all dry goods, except such as are comprised in the third division:—

| 4 gills = 1 pint = 33 1/3 cubic in., nearly |
| 2 pints = 1 quart = 66 2/3 |
| 4 quarts = 1 gallon = 277 1/2 |
| 2 gallons = 1 peck = 554 |
| 8 gallons = 1 bushel = 223 1/2 |
| 5 Bushels = 1 quarter = 106 cubic feet, nearly |
| 5 quarters = 1 load = 518 |

The four last denominations are used for dry goods only. For liquids, several denominations have been heretofore adopted, viz., for beer, the firkin, of nine gallons, the kilderkin, of eighteen, the barrel, of thirty-six, the hogshead, of fifty-four, and the butt, of 108 gallons. These will probably continue to be used in practice. For wine and spirits, there are the ander, runlet, tierce, hogshead, puncheon, pipe, butt, and tun; but these may be considered rather as the names of the casks in which such commodities are imported, than as expressing any definite number of gallons. It is the practice to gauge all such vessels, and to charge them according to their actual content.

Division III.

Imperial measure of capacity, for coals, culm, lime, fish, potatoes, fruit, and other goods commonly sold by heaped measure:—

| 2 gallons = 1 peck = 704 cubic inches nearly |
| 8 gallons = 1 bushel = 1910 |
| 32 gallons = 1 sack = 4 1/2 cubic feet nearly |
| 12 sacks = 1 chaldron = 56 1/2 |

For measures of weights, see Weights.

5. ANGULAR MEASURE;

OR, DIVISIONS OF THE CIRCLE.

| 60 seconds | = 1 minute |
| 60 minutes | = 1 degree |
| 30 degrees | = 1 sign |
| 90 degrees | = 1 quadrant |
| 360 degrees, or 12 signs | = 1 circumference |

Formerly, the subdivisions were carried on by sixties; thus the second was divided into sixty thirds, the third into sixty fourths, &c. At present, the second is more generally divided decimally into tenths, hundredths, &c. The degree is frequently so divided.

6. MEASURE OF TIME.

| 60 seconds | = 1 minute |
| 60 minutes | = 1 hour |
| 24 hours | = 1 day |
| 7 days | = 1 week |
| 28 days, or 31 days | = 1 lunar month |
| 12 lunar months | = 1 calendar month |
| 2 calendar months | = 1 year |
| 365 days, or 1 common year | = 1 leap year |

In 400 years, ninety-seven are leap years, and 993 common. The second of time is subdivided like that of angular measure.

We shall now give a table of itinerary measures of different countries, exhibiting the number of each answering to 100 English miles; also the length of a single measure of each sort in English yards:—

<table>
<thead>
<tr>
<th>Country</th>
<th>Miles</th>
<th>English Yards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arabia,</td>
<td>81 52</td>
<td>326 05</td>
</tr>
<tr>
<td>Bohemia,</td>
<td>82 79</td>
<td>333 16</td>
</tr>
<tr>
<td>Brabant,</td>
<td>83 04</td>
<td>335 69</td>
</tr>
<tr>
<td>Burgundy,</td>
<td>83 44</td>
<td>340 14</td>
</tr>
<tr>
<td>China,</td>
<td>85 29</td>
<td>341 16</td>
</tr>
<tr>
<td>Denmark,</td>
<td>86 23</td>
<td>346 38</td>
</tr>
<tr>
<td>England,</td>
<td>86 50</td>
<td>347 15</td>
</tr>
<tr>
<td>Flanders,</td>
<td>86 91</td>
<td>348 63</td>
</tr>
<tr>
<td>France,</td>
<td>87 07</td>
<td>350 15</td>
</tr>
<tr>
<td>Hungary,</td>
<td>87 28</td>
<td>350 80</td>
</tr>
<tr>
<td>India,</td>
<td>88 63</td>
<td>354 42</td>
</tr>
<tr>
<td>Ireland,</td>
<td>89 52</td>
<td>358 05</td>
</tr>
<tr>
<td>Italy,</td>
<td>90 28</td>
<td>359 72</td>
</tr>
<tr>
<td>Littuania,</td>
<td>90 84</td>
<td>360 68</td>
</tr>
<tr>
<td>Oldenburg,</td>
<td>91 26</td>
<td>361 74</td>
</tr>
<tr>
<td>Persia,</td>
<td>91 99</td>
<td>363 89</td>
</tr>
<tr>
<td>Poland,</td>
<td>92 08</td>
<td>364 03</td>
</tr>
<tr>
<td>Portugal,</td>
<td>92 97</td>
<td>366 81</td>
</tr>
<tr>
<td>Russia,</td>
<td>93 05</td>
<td>367 00</td>
</tr>
<tr>
<td>Saxony,</td>
<td>93 57</td>
<td>369 05</td>
</tr>
<tr>
<td>Scotland,</td>
<td>94 16</td>
<td>371 73</td>
</tr>
<tr>
<td>Sweden,</td>
<td>94 67</td>
<td>373 59</td>
</tr>
<tr>
<td>Turkey,</td>
<td>95 06</td>
<td>374 19</td>
</tr>
</tbody>
</table>

* There are 25 leagues in a degree. A French post is equal to 2 leagues, or to 3.22 English miles.
### Foot Measures

<table>
<thead>
<tr>
<th>English</th>
<th>French</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amsterdam</td>
<td>Madrid</td>
</tr>
<tr>
<td>Antwerp</td>
<td>Marselles</td>
</tr>
<tr>
<td>Augsburg</td>
<td>Mentz</td>
</tr>
<tr>
<td>Barcevona</td>
<td>Moscov</td>
</tr>
<tr>
<td>Basel</td>
<td>Munich</td>
</tr>
<tr>
<td>Berlin</td>
<td>Nurnburg</td>
</tr>
<tr>
<td>Bologna</td>
<td>Padua</td>
</tr>
<tr>
<td>Bremen</td>
<td>Palermo</td>
</tr>
<tr>
<td>Brussels</td>
<td>Paris</td>
</tr>
<tr>
<td>Bresla</td>
<td>Prag</td>
</tr>
<tr>
<td>China, matheum</td>
<td>Rome</td>
</tr>
<tr>
<td>Chin, imperial</td>
<td>Stockholm</td>
</tr>
<tr>
<td>Constantinople</td>
<td>Strasburg</td>
</tr>
<tr>
<td>Copenhagen</td>
<td>Treut</td>
</tr>
<tr>
<td>Cracow</td>
<td>Turin</td>
</tr>
<tr>
<td>Danzig</td>
<td>Tyrol</td>
</tr>
<tr>
<td>Dresden</td>
<td>Venice</td>
</tr>
<tr>
<td>Dusseldorf</td>
<td>Verona</td>
</tr>
<tr>
<td>Frankfort</td>
<td>Vincenza</td>
</tr>
<tr>
<td>Hamburg</td>
<td>Vien</td>
</tr>
<tr>
<td>Leghorn</td>
<td>Ulm</td>
</tr>
<tr>
<td>Leipizg</td>
<td>Urbino</td>
</tr>
<tr>
<td>Leyden</td>
<td>Urbredo</td>
</tr>
<tr>
<td>Lige</td>
<td>Warsaw</td>
</tr>
<tr>
<td>Lisboa</td>
<td>Weit</td>
</tr>
<tr>
<td>Lyons</td>
<td>Zurich</td>
</tr>
</tbody>
</table>

### Reduced to English Feet

<table>
<thead>
<tr>
<th>English</th>
<th>Foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>French toise</td>
<td>6.356</td>
</tr>
<tr>
<td>Venice eel</td>
<td>2.489</td>
</tr>
<tr>
<td>French metre</td>
<td>3.281</td>
</tr>
</tbody>
</table>

### Ancient Measures

| Arabic foot | 300 to 400 |
| Babylonic foot | 1 | 1.007 |
| Egyptian foot | 1 | 1.027 |
| Greek foot | 1 | 1.045 |
| Hebrew foot | 1 | 1.212 |
| Hebrew sacred cubit | 1.002 |
| Roman foot | 0.916 to 0.970 |
| Egyptian stadium | 730.8 |
| Roman miles of Piny | 710.59 |

### English Measure

<table>
<thead>
<tr>
<th>English</th>
<th>French</th>
</tr>
</thead>
<tbody>
<tr>
<td>inch (1-3/4 of a yard)</td>
<td>2-335954 centimetres</td>
</tr>
<tr>
<td>foot (1-3/16 of a yard)</td>
<td>3-017944 décimètres</td>
</tr>
<tr>
<td>yard</td>
<td>0-071112 metre</td>
</tr>
<tr>
<td>foot (0.25 yards)</td>
<td>1-9215566 metres</td>
</tr>
<tr>
<td>pole, or perch (84 yards)</td>
<td>0-029511 metres</td>
</tr>
<tr>
<td>furlong (220 yards)</td>
<td>0-064346 metres</td>
</tr>
<tr>
<td>mile (1760 yards)</td>
<td>10-659349 metres</td>
</tr>
<tr>
<td>millimetre</td>
<td>0.000037 inch</td>
</tr>
<tr>
<td>centimetre</td>
<td>0.0003937 inch</td>
</tr>
<tr>
<td>decimetre</td>
<td>0.003937 inches</td>
</tr>
<tr>
<td>metre</td>
<td>0.00003933 yard</td>
</tr>
<tr>
<td>myriametre</td>
<td>6-2136 miles</td>
</tr>
</tbody>
</table>

### Square Measure

<table>
<thead>
<tr>
<th>English</th>
<th>French</th>
</tr>
</thead>
<tbody>
<tr>
<td>yard square</td>
<td>0.069907 square metre</td>
</tr>
<tr>
<td>square perch</td>
<td>0-251239 square metres</td>
</tr>
<tr>
<td>rood (1010 yards square)</td>
<td>0-1015773 acres</td>
</tr>
<tr>
<td>acre (4840 square yards)</td>
<td>0-40471 hectares</td>
</tr>
<tr>
<td>square foot</td>
<td>0-196033 yard square</td>
</tr>
<tr>
<td>square</td>
<td>0-092903 yard</td>
</tr>
<tr>
<td>square</td>
<td>0-0386104 acres</td>
</tr>
<tr>
<td>square</td>
<td>0-0000393333 acres</td>
</tr>
</tbody>
</table>

### Solid Measure

<table>
<thead>
<tr>
<th>English</th>
<th>French</th>
</tr>
</thead>
<tbody>
<tr>
<td>pint (1-4 of a gallon)</td>
<td>0-563532 litres</td>
</tr>
<tr>
<td>quart (1-4 of a gallon)</td>
<td>1-137134 litres</td>
</tr>
<tr>
<td>gallon imperial</td>
<td>4-8343974 litres</td>
</tr>
<tr>
<td>peck (2 gallons)</td>
<td>9-0865 litres</td>
</tr>
<tr>
<td>bushel (8 gallons)</td>
<td>36-347654 litres</td>
</tr>
<tr>
<td>sack (3 bushels)</td>
<td>0-563532 litres</td>
</tr>
<tr>
<td>quarter (8 bushels)</td>
<td>2-2507133 litres</td>
</tr>
<tr>
<td>chaldron (12 sacks)</td>
<td>13-095106 litres</td>
</tr>
</tbody>
</table>

### Weights

<table>
<thead>
<tr>
<th>English</th>
<th>French</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 pound</td>
<td>0-453592 kilograms</td>
</tr>
<tr>
<td>1 hundredweight</td>
<td>45-3592 kilograms</td>
</tr>
<tr>
<td>1 ton (20 cwt)</td>
<td>9071.85 kilograms</td>
</tr>
</tbody>
</table>

### English Avoirdupois

<table>
<thead>
<tr>
<th>English</th>
<th>French</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 grain</td>
<td>0-0643516 grams</td>
</tr>
<tr>
<td>1 pennyweight</td>
<td>0-003527 grams</td>
</tr>
<tr>
<td>1 ounce (12 lbs of a pound)</td>
<td>31-10336 grams</td>
</tr>
<tr>
<td>1 pound, Troy (16 of an ounce)</td>
<td>296.1234 kilograms</td>
</tr>
</tbody>
</table>

### English

<table>
<thead>
<tr>
<th>English</th>
<th>French</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ounce</td>
<td>31.10336 grams</td>
</tr>
<tr>
<td>1 pennyweight</td>
<td>0-003527 grams</td>
</tr>
<tr>
<td>1 grain (1-16th of an ounce)</td>
<td>0-0643516 grams</td>
</tr>
<tr>
<td>1 pound (16 of a pound)</td>
<td>296.1234 kilograms</td>
</tr>
</tbody>
</table>

### Measurers

- **MECENAS.** See *Mecenas.*
- **MECCA, or MEKKA:** a city of Arabia, capital of Hedjas, about fifty miles from Jidda, its port, on the Red Sea, 180 south of Medina; lat. 21° 16' N.; lon. 40° 15' E.; population, formerly, 100,000; according to Burckhardt, who visited it in the character of a devout Mussulman, now about 30,000, with accommodations for as many pilgrims. It was known to the Greeks by the name of *Mecara,* and is called, by the Mussulmans, *Omm-Alcora,* or Mother of Cities, because it was the birth-place of Mohammed. It is situated in a dry, barren and rocky country, in a narrow valley, enclosed by mountains. The water is briskish, and the pastures distant, and every thing unfavourable for the support of a large population. It is two miles long, and one broad; the streets regular and handsome, being sanded, level
and convenient; the houses of stone, of three or four stories, built in the Persian or Indian, rather than the Turkish style, being composed of besides front doors, ornamented with decorations and mouldings. Many quarters are now abandoned to ruins, and of the houses that remain, two-thirds are occupied. Mecca is a city of the greatest celebrity among the Mohammedans, and contains the three holiest things in the Mohammedan world—the well Zemzem, the Ca'ida (or house of God), and the Black Stone. Zemzem is believed, by the followers of Mohammed, to be the identical spring which gushed forth in the wilderness for the relief of Hagar and Ishmael; and marvellously efficacious is ascribed to its waters, in giving health to the sick, imparting strength of memory, and purifying from the effects of sin. The Ca'ida, or Ka'bah, is of great antiquity. (See Ka'bah.) The Black Stone, the principal wonder of the place, is said to have been brought by the angel Gabriel, and to have been originally of a dazzling whiteness. The grand ceremony through which the pilgrims pass is that of going seven times round the Ka'bah, kissing each time the stone in 1887, and again delivered is supposed to be a meteоric stone. Forty eunuchs are at present maintained there, by the revenues of the temple and the gifts of the pious. Mecca is entirely supported by pilgrims from every part of the Mohammedan world; but the number is now much less than formerly, owing partly to the decay of religious zeal, and the decline of prosperity of the Mohammedan states; and partly, also, to Mecca's being subject to the incursions of the Wahabees. The commerce, now greatly diminished, consists chiefly in the productions and manufactures of India. Notwithstanding the sacred character of the city, it has now little reputation for learning; and Burckhardt found no book shops in the place. Mecca is likewise, and its territory is regarded as sacred to a certain distance round, which is indicated by marks set up. The male Meckawalls are all tattooed at the age of forty days, to prove their origin in the holy city. Mecca was taken by the Wahabees, in 1804, but soon after recovered by the sherrif Galib. It was again captured and delivered by Mohammed Ali, pacha of Egypt, in 1818. For the ceremony which takes place on the arrival of the pilgrims, see Arafat.

MECHAIN, Pierre François André, an astronomer, born Aug. 16, 1744, at Laon, went to Paris in 1772, and was there favourably received by La planche and d'alembert. In 1781, rendered him generally known; and he was among the first to delineate the probable orbit of the newly discovered planet Uranus. In 1782, the academical prize for the best essay on the return of the comet of 1661 was awarded to him; and, when it appeared again, eight years afterwards, his calculations were proved to be correct. In the course of eighteen years, Méchain discovered fourteen comets, the orbits of which he calculated. No important celestial phenomenon escaped his notice, and his observations were recorded in the Connaissance des Temps, which was edited by him from 1788 to 1794. When the constituent assembly ordered the preparation of a new system of measures, based on the meridian of the earth, Méchain was one of the astronomers appointed to measure the arc of the meridian between Dunkirk and Barcelona. He received, for his part of this difficult operation, the portion of country lying between Barcelona and Rhodes, where no measurements had previously been made. Political causes also contributed to embarrass his progress; and the Spanish government not only interrupted his triangulation, but detained him for some time prisoner. He was enabled to resume his labours in 1809, with the intention of extending them to the Balearic isles. He died at Valencia, in 1804, of the yellow fever, a victim of his exertions in the cause of science. Besides his treatises in the Connaissance des Temps, and for his services on the comet, we find, also, the results of his observations in the Base du Système métirique décimal, by Delambre (Paris, 1836—10, 3 vols.).

MECHANICS (from μετην, a machine or contrivance) is the science which treats of forces and of motion. (See Force.) It had, probably, its origin in the construction of machines, and an important branch of it, practical mechanics, investigates their construction and effects. Forces, acting upon bodies, may either produce rest or motion. In the former case, they are treated of under statics, in the latter, under dynamics (q. v.). Hydrostatics (q. v.) and hydraulics (q. v.) respectively treat of fluids, at rest, or in motion.

When a body is acted on by two or more forces, which counteract each other, so that no motion is produced, the body and the forces are said to be in a state of equilibrium. The conditions of equilibrium form the subject of statics. 1. A body acted upon by two equal and opposite forces will remain at rest. In this case, either of the two opposite forces may be made up of several parallel forces. It is then said to be the resultant of those forces. 2. If two forces act, with reference to each other, obliquely upon a body, they may be counteracted by a third (called also the resultant). If the two forces be represented, in direction and intensity, by two contiguous sides of a parallelogram, their resultant will be represented, in direction and intensity, by its diagonal. This is called the parallelogram of forces. Thus, if a body, A, be acted upon by two forces, C and D, which urge the body, both would cause it to move from A to B in any given time, and the other would cause it to move from A to C in the same time; then if these forces act upon the body at one instant, it will move in neither of the lines AB, AC, but in the line AD, which is the diagonal of the parallelogram of which the two lines AB and AC are containing sides; and by the action of the two forces, the body will be found at D, at the end of the time that it would have been found at B or C, by the action of either of the forces separately. 3. If two forces, which urge the body, both produce a uniform motion, the resulting motion will be in a straight line; but if one of them act by impulse, which produce a uniform motion, and the other act constantly so as to produce an accelerated motion, the resulting motion will be in a curve. Thus, if the ball of a cannon were sent in a horizontal direction, it would never deviate from this straight line unless acted on by some external force. The force of gravity acts on the body constantly, so as to draw it to the earth, by an iruniformly accelerated motion; and the result is, that the ball will move in a curve, and this curve may be easily shown to be that of the parabola. The resistance of the air being taken into account together with these circumstances, constitute the bases of the science of gunnery. 4. If several forces, acting at once upon a body, can be represented, in direction and intensity, by several sides of a polygon, they may be counteracted by a single force, acting in a direction and with an intensity represented by the line which would be necessary to complete the polygon.

All the changes which come under our observation, are the consequence of motions produced by the action of a few great elementary forces. The consideration of the motions which take place among
the particles only of one or of several bodies, comes within the department of chemistry. Those motions which affect masses are the appropriate subject of the second part of mechanics.

All motions are found to take place in conformity to certain principles. Deduced from observation, and confirmed by experiment, these principles have often been placed at the beginning of treatises on mechanics, under the name of the laws of motion. If not expressed in this manner, the truths they declare, making an essential part of the principles of the science, are necessarily introduced under some other form. Their comprehensiveness suits them to our purpose, and they are here quoted in the language of Newton.

1. "Every body perseveres in its state of rest, or of uniform motion in a right line, unless it is compelled by external forces to change that state by forces impressed thereon." This is called the law of inertia, and expresses the entire indifference of matter to motion or rest. The proposition that a body will never begin to move of itself needs no proof. It is the conclusion of universal observation. Wherever we observe motion, we conclude that there is a producing cause, which we call external; and in the law of motion, we accept the law in its nature, as permanent as rest, and that it is in a right line, far from being a self-evident, or even an obvious truth. Limited observation would lead to the conclusion that all matter has a tendency to rest, and such has long been, and still is, a common error. The same limited observation led some of the ancient astronomers to imagine that all bodies, when forced into a state of motion, naturally moved in curved lines. There is, however, abundant proof of the permanence of motion; and if friction and the resistance of the air, the two most universal obstacles to the motion of bodies near the surface of the earth, could be entirely removed, instances of permanent motion would be still more numerous. In proportion as they are removed, or as bodies are beyond their influence, we observe a tendency in motions to become more and more permanent. A marble, rolled on the grass, soon stops; on a carpet, it moves longer, and on a smooth table, it continues for some time, where the wind is not unfavourable, it continues very long in motion. In a vacuum, where the resistance of air is not felt, two windmills, whose pivots have equal friction, and which are set in motion by equal forces, continue to move equally long, whatever is the division of their vanes. In the air, the one whose vanes cut the air, will move much longer than the one whose vanes are opposed to it. A pendulum in a vacuum, having only the stiffness of the ribbon by which it is suspended to overcome, will vibrate for a whole day. A spinning top, in the same situation, retarded only by the friction of its point, continues spinning for hours. In all these cases, the continuance of the motion is proportioned to the diminution of friction and resistance. We can hardly avoid the conclusion, that a body once put in motion, would, if left to itself, continue to move with unmindful velocity.

2. A few universal principles are laid down on the law of inertia, is, that motion is communicated gradually. A force which communicates a certain quantity of motion in one second, will impart double the quantity in two seconds. A ship does not yield at once to
The impulse of the wind, when the sails are set; its motion increases as new portions are successively imparted. A horse does not start at once with a carriage into his utmost speed; his force is at first spent in starting motion to the inert mass. Afterwards, with far less exertion, he keeps up the motion, being required to supply that portion only which is destroyed by the obstacles of the road. The motion communicated to a body, if not destroyed by some force, is accumulated. Thus a nail is driven in by all the force of the hand, accumulated through the whole time of the descent of the hammer. The knowledge of this fact gives the means of increasing the effective force of a moving power in a very great degree. A force of fifty pounds communicated every second to a loaded wheel, will, if not diminished by friction, or other cause of waste, enable it to overcome a resistance of 500 pounds once in every ten seconds. Such a wheel is called a fly wheel. (q. v.)

II. "The alteration of motion is ever proportioned to the motive force impressed, and is made in the direction of the right line in which that force is impressed." This is only a statement, that a double force generates a double motion; that motion cannot increase or diminish itself, nor turn to the right or left, without cause. In consequence of this, two or more forces acting at once on a body in different directions, cause it to take a direction different from that of either of them, and, if one of them is a variable or constantly acting force, to move in a curve line. This is called the composition of forces; the single motion impressed upon the body being considered as composed of the several motions which the forces acting separately would have produced. A boat rowed, at the rate of three miles an hour, directly from the point of a bank, which runs at the rate of two miles an hour, is acted on at once by the force of the rowers and that of the current, and will be found, at the end of an hour, three miles from the bank, and two miles below the point from which it started, having moved in a diagonal line between the directions of the two forces. (See Forces.) The resolution of forces is the reverse of this. A single force is considered as resolved into two or more others. A ship, sailing on a side wind, is sent forward by a part only of its force. The other part has no effect, or that only of driving her out of her course.

"In motion there is always opposed an equal reaction; or the mutual actions of two bodies on each other are equal and in opposite directions." If you press a stone with your finger, the finger is equally pressed upon by the stone. A horse drawing a load, is drawn backward by its whole weight, and if he succeed in moving it, it can only be with a velocity proportioned to the excess of his strength over the reaction of the load. A magnet and piece of iron attract each other equally; and if, when in the sphere of mutual attraction, one is fixed and the other free, whichever is free will be drawn to the other. Two equal boats, drawn towards each other by a rope, act in the same manner; if both are free, they meet in the middle. When a gun is discharged, it recoils with a force equal to that with which the ball is propelled, but with a velocity as much less as its weight is greater. If, in the side of a vessel of water, hanging perpendicularly by a cord, a hole be opened, the vessel will be pushed back by the perpendicular force by the reaction of the jet of water, and will remain so while it flows. A consequence of this law is, that the earth is attracted by each body on its surface as much as it attracts, and that when a stone falls towards the earth, the earth rises to meet it.

The force with which a body acts is estimated by its velocity and mass conjointly, and is called its momentum. Thus, if a body weighing 100 pounds, and moving with the same velocity, the larger has twice the momentum of the smaller, since each pound of the larger has the same velocity as the ball of a single pound. A body of small weight may therefore be made to produce the same mechanical effect as a large one, by sufficiently increasing its velocity. The cannon ball of modern times is not less effectual in battering down walls than the massy battering ram of the ancients.

The forces which may be employed to give motion to machines are called mechanical agents, or first movers. They are water, wind, steam, gunpowder and the strength of man or animal. They may be indirectly referred to three independent sources—gravity, heat, and animal strength. See these several articles.

Gravity. A body falling from a state of rest, descends sixteen feet, nearly (100.095), in one second; but, as all the motion which is communicated by gravitation remains in it, and it receives an accession of motion every indefinitely small portion of the first second, it is moving more rapidly at the end of this second than at any previous time, and, with that motion alone, if it continued uniform, would descend through twice 16, or 32 feet, in the next second; but, during this next second, as much motion is communicated to the body at the end of the second; it descends through three times 16, or 48 feet, in this next second. The whole of this accumulated motion would, alone, carry it through four times 16, or 64 feet, in the third second, and the continued action of gravitation carries it once 16; so that it actually descends five times 16, or 80 feet, during the third second. In the fourth second, in the same manner, descend seven times 16 feet; in the fifth, nine times 16, &c., the series of odd numbers expressing the distances passed through in the successive seconds. By adding these numbers, we find that, at the end of two seconds, the body will have descended four times 16 feet; at the end of the third, nine times 16; at the end of the fourth, 16 times 16, &c.; the whole distance fallen through at the end of any number of seconds being found by multiplying the square of that number by 16 feet. Such is the simple and remarkable law of the descent of bodies by the uniformly accelerated velocity produced by gravitation. The body acquired at the second is sufficient of itself, to carry a body through twice 16 feet; that acquired in two seconds would carry it four times 16 feet; that acquired in three seconds, through six times 16 feet, &c.; the velocities possessed at the end of any number of seconds being represented by twice that number multiplied by 16 feet. The following table exhibits, 1. the space fallen through in the successive seconds; 2. the whole space fallen through at the end of a number of seconds; and, 3. the final velocity:

<table>
<thead>
<tr>
<th>Time</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10 seconds.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Space</td>
<td>0</td>
<td>16</td>
<td>54</td>
<td>100</td>
<td>146</td>
<td>200</td>
<td>256</td>
<td>312</td>
<td>368</td>
<td>424</td>
<td>480 feet.</td>
</tr>
</tbody>
</table>

By means of this table, a traveller standing on the summit of a cliff, might ascertain its height above the plain or torrent below, with considerable accuracy, by letting fall a stone, and observing the time of its fall. It would only be necessary to make allowance for the resistance of the air, which, for small velocities, is not very great. (Of the Fall.) The same cause which communicates motion to a falling body, would gradually destroy that of a body ascending. A ball projected upwards with the velocity of 1000 feet per second, would, therefore, rise, with an uniformly retarded motion to the height from which a
body must fall to acquire that velocity. The phenomenon of accelerated and retained motion is beautifully exemplified by a body moving down any plane. It is for that purpose that... 

743 or 1 since, the velocity acquired by a body as it moves down any plane is the same as they would have acquired by falling freely from the perpendicular height of the plane. If a body be allowed to fall down the inclined plane \(C \), the velocity it acquires when it arrives at \(B\), having moved from \(C\), will be the same as it could have acquired if it had fallen freely in the perpendicular line \(C \), from \(B\). It is necessary, in the construction of machines, carriages, buildings, bridges, and ships, and in many other cases, to ascertain exactly the centre of gravity of the whole and of each part; since, if the centre of gravity, in any body or system of bodies, is supported, the body or system of bodies, may, at every possible position. (See Gravity, Centre of.) The various problems arising from this necessity have been solved with great accuracy, and on fixed principles. In all regular solids, of uniform density, whether bounded by straight or curve lines, the centre of gravity coincides with the centre of mass. If a body may be suspended, freely, from any one point of its surface, the straight line extending from that point to the centre of the earth will pass through the centre of gravity. This line is called the line of direction. The centre of gravity may, therefore, sometimes be found practically, by suspending a body successively from two of its points, and observing the point where the lines of direction cross each other. The centre of gravity of a triangle is at one third the distance from the middle of the base to the vertex; that of a cone and of a pyramid, at one fourth the same distance. Stability, in every case, depends upon the position of thecentre of gravity in reference to the base. The nearer it is to the base, and the farther the line of direction falls from each part of the perimeter of the base, the greater is the stability. The sphere rests equally in every position, because the centre of gravity is at the same distance from every part of the surface. It is unstable if the centre of gravity is not in the middle of the plane; and it yields to the smallest force, as the centre of gravity does not rise when the sphere revolves. In order that the pyramid or cone may be overturned, the centre of gravity must rise almost perpendicularly, and move for a great distance before it ceases to tend to fall back to its place. Hence their stability, and hence the propriety of giving to steeples, monuments, and other buildings of great height, a pyramidal or conical figure. Those carriages are most secure which are hang low, and have the wheels far apart. Whatever raises the centre of gravity or narrows the base, for example, the line of direction more easily to pass without it, and diminishes stability. Hence we see the imprudence of raising in carriages or bunks which are in danger of being oversteer, and hence the danger of high loads on wagons, where the roads are not perfectly level. The force of gravity is not often employed directly as a mechanical agent, or prime mover. Those must from exceptions, to give account of every example: water, wind, heat, and the strength of animals. *Water acts* by its weight and by the velocity which it acquires from falling, in consequence of its weight. *Wind acts* by its volume or mass and its velocity. Both these agents are variable, and both act in a straight line. *Heat*, as given out by combustible materials, produces steam, or gas, or gives motion to air by making it lighter, and thus causing it to rise. The force of steam, or gas, is therefore, employed in the same manner as that of every other force, or motive power, in doing work by expanding itself, resisting the sides of the vessel which contains it, and endeavours to escape with a force proportioned to the heat and pressure to which it was exposed. When allowed to escape in only one direction, it necessarily generates motion in a straight line. Steam, as usually employed, generates motion, which is alternately in one direction and the opposite. The strength of animals is commonly made to act upon some centre of resistance, by drawing, pushing, or pressing, and produces variable motions, naturally in a straight line, but often in a curve. The motions or pressures produced by all these agents are capable of being compared with those produced by weight. They might all be referred to a common standard, the unit of which should be the force required to raise a given weight a certain number of feet in a given time. The mechanical agents are employed to measure time, to move ships and carriages, to raise weights, to move and support carriages, to move carriages, to move bridges, to move bodies, fixed or movable, and to move wind, heat, and the strength of animals, as arising from the necessity of some of the operations we have described. Wherever a given power is required to perform a given action, it is called a *machine*. A machine has been defined, "a substance or body, of bodies, fixed or movable, so connected together that a movement impressed on one of them shall be transmitted to the others." The object of a machine is often vaguely supposed to be to produce or augment power. It can never have this effect. The resistance of the fixed and the friction of the movable parts will always consume a part of the power of the prime mover. The real object of every machine is to increase or diminish the velocity of the moving force, to change its direction, to accumulate its action and expend it at a single effort, to distribute the force among a great number of small resistances, or to divide the force of a resistance so that it may be overcome by a series of actions, or by the continued action of the moving power. A machine may combine the action of several movers, and employ one to regulate the others, so that the final effect shall be perfectly uniform. The pendulum, the governor, and the fly-wheel are devices for this purpose. By the mechanical powers, are signified the simple machines, to which all machines, however complex, may be referred. They are essentially three in number, but usually considered seven: 1. The lever, the wheel and axis; 2. the inclined plane, the screw, the wedge; 3. the rope and the pulley. The *Lever* is a bar, resting on a support, called a *fulcrum*, or prop, for the purpose of raising, by a *power* applied to one end, a *weight* at the other. An iron crow used by workmen to raise heavy stones, affords a good instance of a lever. The stone is the weight; the block on which the crow rests is the fulcrum; the strength of the man, the power. To gain any advantage by its use, the fulcrum must be nearer to the weight than to the power. If the distance from the power to the fulcrum be five times greater than the distance from the weight to the fulcrum, a force of one pound in the power will balance a pressure of five pounds in the weight. But in this case the end of the long arm of the lever will turn on the prop, pass through a space five times greater than that of the short arm. By such a lever a man could raise 1000 pounds with the same exertion as would be required to raise 200 without a lever, but he could raise it only a fifth part so high in the same time. What he would gain therefore in power,
would be lost in time. In theory, a lever is considered inflexible and without weight. There is an equilibrium when the power and weight are inversely as their distances from the fulcrum.—Leverage is the distance of the power from the fulcrum. The mechanical advantage or purchase is proportional to this distance, compared with that of the weight from the fulcrum. Levers are of three kinds, according to the relative position of the power, the prop, and the weight. In the first, the prop is between the power and the weight. To it belong scissors, snuffers, pincers (in which the pivot or joint is the prop), the handspike, the brake of a pump, &c. A hammer with its claw, is a bent lever of this kind. In the second, the weight lies between the fulcrum and the power. This includes the oar, where the boat is the weight to be moved; the door, of which the hinge is the fulcrum; the wheelbarrow, nut-crackers, bellows, and the knife attached at one end, used to chip dyewoods. In a lever of the third kind, the resistance lies at one end and the fulcrum at the other. To this belong the pitchfork and spade, the one hand being the power, and the other the fulcrum, sheep-shears, with a bow at one end, giving a greater facility of movement. Levers, which are levers of this kind, and are moved by muscles so attached as to give rapidity of motion at the expense of power. The ox-yoke is of this kind; the neck of each ox being the fulcrum with reference to the exertion of the other. The stronger of two oxen must have the short arm of the lever, that they may be able to pull together. A plough or beam, which is supported on a pole and borne by two men, must divide the pole unequally, if either is to be favoured.—Let $W$ represent the weight, $P$ the power, and $F$ the fulcrum, this diagram will show their relative positions in the three different kinds of levers.

1st kind, \[ \frac{W}{F} = \frac{P}{F} \]

2nd kind, \[ \frac{W}{F} = F \]

3rd kind, \[ \frac{F}{W} = \frac{P}{W} \]

The wheel and axle is a kind of lever, so contrived as to have a continued motion about its fulcrum, or centre of the power. The power is supposed on a pole and borne by two men, which unloads from the smaller cylinder, while the other end is coiled upon the larger. The elevation of the weight by each revolution is equal to half the difference of the two circumferences, the mechanical advantage depending upon the smallness of this difference. In the ship's windlass, moving beam or handspike are substituted for a wheel. The capstan is a vertical wheel and axle, used on board ships to weigh the anchor.—The wheel and axle may turn on different centres, and have their circumferences connected and made to act on each other, by means of a strap or belt, or by a system of cogs or teeth. This arrangement is called a wheel and pinion. See Wheel Work.

Wheels acting on each other by teeth or bands, may be easily calculated in the same way as the wheel and axle. Thus, if a wheel which has thirty teeth, drives another of ten teeth, it is evident, that as the larger wheel has three times as many teeth as the smaller, the smaller wheel will be turned round three times for once that the larger one is turned round; thus, the velocities of the wheels will be inversely as their number of teeth. In like manner, if the larger wheel drives the smaller not by teeth but by a band, their revolutions will be inversely as their circumferences.

The larger wheel is usually called the wheel, driver, or leader, and the smaller one is called the pinion, driven wheel, or follower. When there are a number of wheels $A, B, C, D, E,$ acting on the respective pinions, $a, b, c, d, e,$ as then the effect of the whole may be found to be: if the letters which represent the wheels and pinions be understood to signify the number of teeth of each, \[
\text{power} \times \frac{A}{a} \times \frac{B}{b} \times \frac{C}{c} \times \frac{D}{d} \times \frac{E}{e} = \text{weight}.
\]

If the velocity of the first wheel be used instead of the power applied, then this rule will give the resulting velocity instead of the weight. Thus, if the numbers of the teeth of the wheels are $9, 6, 9, 10, 12,$ and of these pinions $6, 6, 6, 6, 6,$ then if the power applied be $14$ lbs., we have

\[
14 \times \frac{9}{6} \times \frac{9}{6} \times \frac{10}{6} \times \frac{12}{6} = 105 \text{ lbs., the weight.}
\]
**MECHANICS.** 745

And, by the remark under the rule, if the first make 14 revolutions in the minute, the speed of the last will be 156 in the same time. The same rule will apply to the case where the wheels act on each other by ropes or straps, if the circumferences of the wheels and pinions are used for the number of teeth.

**Inclined Plane.**—When a drayman lays a plank from the street to the higher level of the floor of a storehouse, that he may easily roll a heavy cask, he employs the principle of the **inclined plane**; and the more gradual the inclination of the plank, the more easily will he effect his purpose. That is, the advantage gained by the inclined plane is greater, the more the length of the plane exceeds its height.

A road which is not level, is an inclined plane. When a road mounts over a hill, instead of winding round its foot, a team of horses with a load of a ton weight, must exert strength sufficient to lift the load perpendicularly into the air, to a height equal to that of the top of the hill, instead of that moderate exertion which is necessary to overcome the friction of the axis of the wagon, and the slight inequalities of a level road. Hence the absurdity of constructing roads in hilly countries to pass directly over the tops of hills, instead of winding, by small circuits, along their base.

When a power acts on a body, on an inclined plane, so as to keep it stationary, the sum of the weight, the power, and the pressure on the plane, will be as the length, the height, and the base of the plane, when the power acts parallel to the plane;

The weight, 
\[ \text{pressure on the plane} \]
\[ \frac{AC}{BC} = \frac{AB}{BC} \]

The force with which a body endeavours to descend down an inclined plane, is as the height of the plane. When the power does not act parallel to the plane, then from the angle C of the plane, draw a line perpendicular to the direction of the power's action; then the weight, the power, and the pressure on the plane, will be as AC, CB, BA.

When the line of direction of the power is parallel to the plane, the power is least.

If two bodies, on two inclined planes, sustain each other, by means of a string over a pulley, their weights will be inversely as the lengths of the planes.

The space which a body describes upon an inclined plane, when descending on the plane by the force of gravity, is to the space which it would fall freely in the same time, as the height is to the length of the plane; and the spaces being the same, the times will be inversely in this proportion. If the elevation were one sixteenth of the length, the body would roll down one foot in the first second, and four in two. It is on this principle that the equality in the vibrations of pendulums is obtained. A long vibration takes no more time than a short one, because the body begins to fall, in this case down a steep plane, and acquires great velocity. In a short vibration, the beginning of its path is a very gradual descent. A short pendulum vibrates more rapidly than a long one, because it has a shorter distance to move in a path of the same steepness. A body moving down an inclined plane, moves four times as far in two seconds as in one. A pendulum, to vibrate once in two seconds, must be, therefore, four times as long as one which bents seconds. The most remarkable instance of an inclined plane is in the construction of the marine railway, on which, with all its cargo, out of the water, high enough to allow workmen to pass under its keel.

The Screw.—An inclined plane to pass round an immense building, like the tower of Babel, affording means of ascending to the top, and you have the first idea of the **screw**. It is an inclined plane, wrapped spirally round a solid cylinder. The advantage gained by it depends on the slowness of the ascent, that is, the number of revolutions, as they are called, in a given distance. It is always used in combination with a lever. It is a machine of great power, commonly employed to produce compression or to raise heavy weights. Hunter's screw is a compound of two screws, with threads of different degrees of fineness, one moving within the other, the end advancing, at each revolution, through a distance equal to the difference of the threads.

The **Wedge** is a double inclined plane, used commonly to cleave wood or stone, and sometimes to elevate a large mass, as part of a building, or ship.

The effect of a wedge depends, apparently, upon friction, elasticity, and the slowness with which motion is communicated to a mass of matter. When a wedge is driven in, the particles immediately in contact with it are, for a moment, displaced, the friction against it prevents it from receding, and when the displaced particles endeavour to resume their relative position, the rift is lengthened. To the wedge may be referred various cutting tools, such as axes, adzes, ploughs, chisels; and nails and spikes to be driven into wood, as well as pins, needles, awls, &c. The saw and the file and rasp are modifications still more remote.

The colter of a plough, the blade of a spade, and other instruments to penetrate the earth, are in the shape of a wedge.

The **Rope** is considered, in theory, as destitute of weight, and perfectly smooth and flexible. In this case, as in that of the other mechanical powers, the allowances to be made in practice for weight, rigidity, friction, &c., are ascertained by experiment, and combined with the results of theory. If a rope be stretched horizontally between two fixed points, by equal weights attached to the ends, any very small weight applied to the rope between these points will bend the rope, and thus raise the weights. If we suppose the rope to have been perfectly horizontal, the weight applied acts upon those at the ends with a mechanical advantage which may be definite, as it acts at right angles to the directions of the opposite actions of those weights. This is a necessary consequence of the principles of the resolution of forces. The action of one or two forces can have no effect in counteracting a third, unless they act in such a direction, that their action can be resolved into two, one of which is opposite to the direction of the third force. While the rope is horizontal, the two weights counterbalance each other, but produce no further effect, until the rope is bent into an angle. A bending of the rope must, therefore, take place, in consequence of the action of any force, however small. By bending the rope, it must change the inclination of the weights, and support them at a point above their former position, thus producing an equilibrium with them, however great they may be. This arrangement is one form of what is called the **pincular machine**. A necessary consequence of the principle on which it depends is, that when a rope or chain, of any material whatever, is stretched horizontally, its weight alone will prevent its being perfectly straight, and no force is sufficient to straighten a rope unless it hangs perpendicularly. Advantage is often taken of this power by seamen in tightening ropes, which have previously been drawn as closely as possible by the direct action of their strength.

The **Pulley** is a small wheel, moving on an axis of
pin, which is fixed in a frame called a block. The circumference of the wheel has a groove for a rope to move in. The pulley is said to be fixed or moveable, according as its block admits of motion or not. A fixed pulley gives no mechanical advantage, but it enables us to apply force more conveniently, by changing its direction. A man standing on the deck of a ship is able, by means of one fixed at the top of the mast, to raise a weight to that point by drawing downwards. In the same manner, ore is raised from mines, and water from deep wells. The wheel, in the grooved circumference of which the rope passes, gives facility to its motion by preventing the necessity of its bending suddenly round a sharp edge, and diminishes the friction by transferring it from the rope to the axis of the wheel. One or more grooved wheels, called sheaves, set in a block, and moving freely round an iron axis, constitute a pulley, and the combination of pulley and ropes, a tackle. If the rope, instead of being attached to the weight, passes through a moveable pulley attached to the weight, and terminates in a hook or ring in the upper block, the tackle becomes an engine by which another advantage is gained. As, in this case, the weight is supported by two parts of a rope, each part sustaining one half, the power necessary to support one of these parts, is equal to only one half the weight supported by the other. But the rope, with a power a little greater than one half of the weight, the whole weight will be raised. It is on this principle that advantage is gained by the pulley. If the weight were supported by the four parts of a rope, which passed through two fixed and two moveable pulleys, each part sustaining one fourth of the weight, a power equal to one fourth part of the weight, attached to the free end of the rope, would balance the whole weight, and something more than one fourth would raise it. This advantage is purchased by the space through which the power must move, and the time occupied by the motion. To raise a weight fifty feet, by the combination last mentioned, the power must move over a space of 200 feet.

The nature of the different kinds of pulley will be better understood by the aid of the following illustration, taken from Grier's Mechanic's Calculator.

The accompanying engraving exhibits various forms of the pulley. A B is a beam from which they are suspended.

No. 1, is the fixed pulley in which there is no other advantage gained than that the power P and weight W move in a contrary direction. No. 2, is a moveable pulley, in which the power P by moving upwards raises the pulley, to the block of which the weight W is attached; but the one end of the string being attached to the beam A B, the power must move twice as fast as the weight, and there will be a gain of power proportional. No. 3, is a combination of two moveable pulleys, in which the gain of power will be four; and No. 4 is a combination of two fixed and two moveable pulleys, in which the gain of power will be the same as in No. 3. If in a system of pulleys, where each pulley is embraced by a cord, attached at one end to a fixed point, and at the other to the centre of the moveable pulley next above it, and the weight is hung to the lowest pulley; then the effect of the whole will be = the number 2 multiplied by itself, as many times as there are moveable pulleys in the system; thus, if there be 4 moveable pulleys, then 2 x 2 x 2 x 2 = 16; wherefore, if the weight be one lb., it will be sustained by a power of one ounce avoirdupois.

When there are any number of moveable pulleys on one block, and as many on a fixed block, the pulleys are called Sheaves, and the system is called a Muffle; and the weight is to the power inversely as the number of moveable pulleys in the system.

In all the above cases of the pulley, the strings, cords, or ropes, are supposed to act parallel to each other; when this is not the case, the relation of power and weight may be found by applying the principle of the parallelogram of forces; thus, draw ab in the direction of the power's action and of that length, taken from a scale of equal parts, which expresses the quantity of the power; next draw bd a perpendicular to the horizon, and from a draw ad parallel to be, the direction of the power at c; then the power is to the weight, as ad is to bd; and the strain on the hook at c, is as ad to db,—these lines being all measured on the same scale of equal parts. It may be further observed that the pulley is a species of lever of the second kind; where the point at which the string is fastened is the fulcrum; the axis of the pulley the place of the weight, and the place of the power the other end of the lever; or, the diameter of the pulley may be reckoned the length of the lever, the weight being in the middle.

A great many experiments made by Rondelet, have shown that, for most purposes, the best proportions for the wheel of a pulley are, 1. that its diameter should be five times its thickness; 2. that the diameter of the pin should be one-twelfth of that of the wheel; 3. that the wheel should have about one-twelfth of its thickness on each side for its play in the block.

Additions might be made to the list of mechanical powers with as much propriety as some of those enumerated are retained. The engine of oblique action, usually called the toggle joint, might be called a mechanical power. It is, however, more properly, a combination of levers, acting on the principle of the funicular machine.

MECHANICS. ANIMAL. Mechanism of the Human Skeleton. There is scarcely a part of the animal body, or an action which it performs, or an accident that can befal it, or a piece of professional assistance which can be given to it, that does not furnish illustration of some truth of natural philosophy; but we shall here only touch upon as many particulars as will make the understanding of others easy.

The cranium, or skull, is an instance of the arched form, answering the purpose of giving strength. The brain, in its nature, is so tender, or susceptible of injury, that slight local pressure disturbs its action. Hence a solid covering, like the skull, was required with those parts made stronger and thicker which are most exposed to injury. An architectural dome is constructed to resist one kind of force only, always acting in one direction, namely, gravity; and therefore its strength increases regularly towards the bottom, where the weight and horizontal thrust of the whole are to be resisted; but, in the skull, the tem-
city of the substance is many times more than sufficient to resist gravity, and therefore aids the form to resist forces of other kinds, operating in all directions. When we reflect on the strength displayed by the arched rim of an egg-shell, we need not wonder at the severity of blows which the cranium can withstand.

Through early childhood, the cranium remains, to a certain degree, yielding and elastic; and the falls and blows so frequent during the lessons of walking, &c., are borne with impunity. The mature skull consists of two layers or tables, with a soft diploe between, and is viewed sideways very tough, with its parts dovetailed into each other, as tough wood would be by human artisans; while the inner table is harder, and more brittle (hence called vitreous), with its edges merely lying in contact, because its brittleness would render dovetailing useless.

A very severe partial blow on the skull generally fractures and depresses the part, as a pistol bullet would; while one less severe, but with more extended contact, being slowly resisted by the arched form, often injures the skull by what is correspondent to the horizontal thrust in a bridge, and causes a crack at a distance from the place struck, generally half way round to the opposite side. Sometimes, in a fall with the head foremost, the skull would escape injury, but for the body, which falls upon it, pressing the end of the spine against its base.

In the lower jaw, we have to remark the greater mechanical advantage, or lever power, with which the muscles act, than in most other parts of animals. The temporal and masseter muscles pull almost directly, or at right angles to the line of the jaw; while in most other cases, as in that of the deltoid muscle lifting the arm, the muscles act very obliquely, and with power diminished in proportion to the obliquity. An object placed between the back teeth is compressed with the whole direct power of the strong muscles of the jaw; hence the human jaw can crush a body which offers great resistance, and the jaws of the lion, tiger, shark, and crocodile, &c., are stronger still.

The teeth rank high among those parts of the animal body which appear almost as if they were severed from the stem, and placed in the wrong place; so difficult is it to suppose a few simple laws of life capable of producing the variety of form so beautifully adapted to purposes which they exhibit. They constitute an extraordinary set of chisels and wedges, so arranged as to be most efficient for cutting and tearing the food, and, with their exterior enamel, so hard that, in early states of society, teeth were made to answer many purposes for which steel is now used. It seems, however, as if the laws of life, astonishing as they are, had still been inadequate to cause teeth, cast in their hard enamel, to grow as the softer bones grow; and hence has arisen a provision more extraordinary still. A set of small teeth appears soon after birth, and serve the child until six or seven years of age; these then fall out, and are replaced by larger ones, which endure for life; the number being completed only when the man or woman is full-grown, by four teeth, called wisdom teeth, because they come so late, which rise to fill up the then spacious jaw.

The spine, or back-bone, has, in its structure, as much of beautiful and varied mechanism as any single part of our wonderful frame. It is the central pillar of support, or great connecting chain of all the other parts; and it has, at the same time the office of control and resistance. Under the most external injury, a prolongation of the brain, called the spinal marrow, more important to animal life than the greater part of the brain itself. We shall see the spine uniting the apparent incompatibilities of great elasticity, great flexibility in all directions, and great strength, both to support a load and to defend its important contents.

Elasticity. The head may be said to rest on the elastic column of the spine, as the body of a carriage rests upon its springs. Between each two of the twenty-four vertebrae, or distinct bones, of which the spine consists, there is a soft elastic intervertebral substance, about half as bulky as a vertebra, yielding readily to any sudden jar; and the spine, moreover, is waved, or bent a little, like an elastic jet, as seen when it is placed in the spring and table, and is subjected to any sudden pressure operating from either end. The bending might seem a defect in a column intended to support weight; but the disposition of the muscles around is such as to leave all the elasticity of the bend and a roomy thorax, without any diminution of strength.

Flexibility. The spine may be compared to a chain, because it consists of twenty-four distinct pieces, joined by smooth rubbing surfaces, so as to allow of motion in all directions; and a little motion, comparatively, between each two adjoining pieces, becomes a great extent of motion in the whole line. The articulating surfaces are so many, and so exactly fitted to each other, and are connected by such number and strength of ligaments, that the combination of pieces is really a stronger column than a single bone of the same size would be.

The strength of the spine, as a whole, is shown in a man's easily carrying upon his head a weight heavier than himself, while each separate vertebra is a strong irregular ring, or double arch, surrounding the spinal marrow. The spine increases in size towards the bottom, in the justest proportion, as it has more weight to bear.

The Ribs. Attached to twelve vertebrae, in the middle of the back, are the ribs, or bony stretchers of the cavity of the chest, constituting a structure which solves, in the most perfect manner, the difficult mechanical problem of making a cavity with solid exterior, which shall yet be capable of filling and contracting itself. Each pair of corresponding ribs may be considered as forming a hoop, which hangs at right angles to the place of attachment in the back, and so that, when the fore part of all the hoops is lifted by the muscles, the cavity of the chest is enlarged.

We have to remark the double connexion of the rib behind, first to the bodies of two adjoining vertebrae, and then to a process or projection from the lower, thus effecting a very steady joint, and yet leaving the necessary freedom of motion; and we see the fore part of the rib to be of flexible cartilage, which allows the degree of motion required there, without the complexity of a joint, and admirably guards, by its elasticity, against the effects of sudden blows or shocks.

The muscles which have their origin on the ribs, and their insertion into the bones of the arm, afford us an example of action, and reaction being equal and contrary. When the ribs are fixed, these muscles move the arm; and, when the arm is fixed by resting on a chair or other object, they move the ribs. This is seen in fits of asthma and dyspnea.

The shoulder-joint is remarkable for combining great extent of motion with great strength. The round head of the shoulder-bone rests upon a shallow cavity in the shoulder-blade, that it may turn freely in all ways; and the danger of dislocation from this shallowness is prevented by a series of sockets or projections above and behind. To increase the range of motion to the greatest possible degree, the bone called the shoulder-blade, which contains the
socket of the arm, slides about itself upon the convex exterior of the chest, having its motion limited only by a connexion, through the collar bone, or clavicle, with the sternum. The scapula, or blade-bone, is extraordinary as an illustration of the mechanical rules for combining lightness with strength. It has the strength of the arch, from being a little concave, and its substance is chiefly collected in its borders and spines, with thin plates between; as the strength of a wheel is collected in its rim, and spokes, and nave. The bones of the arms, considered as levers, have the muscles which move them attached very near to the fulcrum, and very obliquely; so that, from working through a short distance comparatively with the resistances overcome at the extremities, the muscles require to be of great strength. It has been calculated that the muscles of the shoulder-joint, in the exertion of lifting a man upon the hand, pull with a force of two thousand pounds. The os humeri, or bone of the upper arm, is not perfectly cylindrical; but, like most of the other bones which are called cylindrical, it has ridges to give strength.

The elbow-joint is a correct hinge, and so strongly secured, that it is rarely dislocated without fracture. The fore-arm consists of two bones, with a strong membrane between them. Its great breadth, from this structure, affords abundant space for the origin and landing of the muscles that go to move the hand and fingers; and the very peculiar mode of connexion of the two bones, give man that most useful faculty of turning the hand round, into what are called the positions of pronation and supination, exemplified in the action of twisting, or of turning a gimlet.

The wrist. The many small bones forming this, have a signal effect of deadening, in regard to the parts above, the shocks or blows which the hand receives. The annular ligament is a strong band passing round the joint, and keeping all the tendons which pass from the muscles above to the fingers, close to the joint, and opening the passages of so many fixed pulleys for directing the tendons: without it, they would all, on action, start out like bow-strings, producing deformity and weakness.

The human hand is so admirable, from its numerous mechanical and sensitive capabilities, that an opinion commonly prevail'd, that man's superior reason depended on his possessing such an instructor and such a servant. Now, although reason, with hands, instead of fingers, could never have raised man much above the brutes, and probably could not have secured the continued existence of the species, still the hand is no more than a fit instrument of the god-like mind which directs it.

The pelvis, or strong irregular ring of bone, on the upper edge of which the spine rests, and from the sides of which the legs spring, forms the centre of the skeleton. A broad bone was wanted here to connect the central column of the spine with the lateral columns of the legs; and a circle was the lightest and strongest. If we attempt still further to conceive how the circle could be modified to fit it for the spine to rest on, for the thighs to roll in, for muscles to hold by, both above and below, for the person to sit on, we shall find, on inspection, that all our anticipations are realized in the most perfect manner. In the pelvis, too, we have the thyroid hole and ischiatic notches, furnishing subordinate instances of contrivance to save material and weight; they are merely deficiencies of bone where solidity could not have given additional strength. The broad ring of the pelvis protects most securely the important organs placed within it.

The hip-joint exhibits the perfection of the ball and socket articulation. It allows the foot to move round as well as to have the change of backward and forward motion exhibited in the action of walking. When we see the elastic, tough, smooth cartilage which lines the deep socket of this joint, and the similar glistening covering of the ball or head of the thigh-bone, and the lubricating synovia poured into the cavity by a proper secretion, and the strong ligaments giving strength all around, we feel how far the most perfect of man's works falls short of the mechanism displayed by nature.

The thigh-bone is remarkable for its projections called trochanters, to which the moving muscles are fixed, which lengthen considerably the lever by which the muscles work. The shaft of the bone is not straight, but has a considerable forward curvature. Short-sightness might suppose this a weakness, because the bone is a pillar supporting a weight; but the bend gives it, in reality, the strength of the arch, to bear the action of the mass of muscle called vastus, which lies and swells upon its front part.

The knee is a hinge joint of complicated structure; and it claims the most attentive study of the surgeon. The rubbing parts are flat and shallow, and therefore the joint has little strength from form; but it derives security from the numerous and singularly strong ligaments which surround it. The ligaments in the inside of the knees resemble in two circumstances, the annular ligaments of joints, namely, in having a constant and great strain to bear, and yet in becoming stronger always as the strain increases. The line of the leg, even in the most perfect shapes, bends inward a little at the knee, requiring the support of the ligaments, and in many persons, it bends very much; but the inclination does not increase with age. The legs of many weakly in-kneed children become straight by exercise alone. This inclination at the middle joint of the leg, by throwing a certain strain on the ligaments, gives an increase of elasticity to the limb, in the actions of jumping, running, &c. In the motion of passing, the tension is transferred to cartilages, which have been called friction cartilages, from a supposed relation in use to friction wheels; but their real effect seems to be to accommodate, in the different positions of the joint, the surfaces of the rubbing bones to each other.

The great strength of the thigh is considered, that man has only the attention of the surgeons to perfect the parts. The great ligaments of the thigh are contracted into a tendon a little above the knee, and have to pass over, and, in front of the knee, to reach the top of the leg, where their attachment is. The tendon, in passing over the joint, becomes bony, and forms the patella, or knee-pan, often called the pulley of the knee. This peculiarity enables the muscles to act more advantageously, by increasing the distance of the rope from the centre of motion. The patella is, moreover, a sort of shield or protection to the fore part of this important joint. The leg below the knee, like the fore-arm already described, has two bones. They offer spacious surface of origin for the numerous muscles required for the feet, and they form a compound pillar of greater strength than the same quantity of bone as one shaft would have had. The individual bones also are angular instead of round, hence deriving greater power to resist blows, &c.

The ankle-joint is a perfect hinge of great strength. There is in front of it an annular ligament, by which the great tendons of the flexors, passing downwards to the foot and toes, are kept in their places. One of these tendons passes under the bony projection of the inner ankle, in a smooth, appropriate
groove, exactly as if a little fixed pulley were there.

The heel, by projecting so far backwards, is a lever for the strong muscles to act by, which form the calf of the leg, and terminate in the *tendo achillis*. These muscles, by drawing at it, lift the body, in the actions of standing on the toes, walking, dancing, &c. The other foot is acting as a support, the head is kept steady and be to ugly in European estimation; and, its great length rendering the effort of smaller muscles sufficient for the various purposes, the calf of the leg in the negro is smaller in proportion than in other races of men.

The arch of the foot is to be noticed as another of the many provisions for saving the body from shocks by the elasticity of the supports. The heels and the balls of the toes are two extremes of the elastic arch, and the leg rests between them.

Connected with elasticity, it is interesting to remark how imperfectly a wooden leg answers the purpose of a natural leg. With the wooden leg, which always remains of the same length, the centre of the body must describe, at each step, a portion of a circle of which the bottom nod of the leg is the centre, and the body is therefore constantly rising and falling; while, with the natural legs, which, by generations of evolution, have acquired greater leverage and are longer in different parts of the step, as required, the body is carried along in a manner perfectly level. In like manner, a man riding on horseback, if he keep his back upright and stiff, has his head jolted by every step of the trotting animal; but the experienced horseman, even without rising in the stirrups, by letting the back yield a little at each movement, as a bent spring yields during the motion of a carriage, can carry his head quite smoothly along.

In a general review of the skeleton, we have to remark, 1. the nice adaptation of all the parts to each other, and to the strains which they have respectively to bear; as in the size of the spinal vertebrae increasing from above downwards; the bones of the leg being larger than those of the arm, and so on. 2. The objects of strength and lightness combined; as by the hollowness of the long bones; their angular form; their thickening and flexures in particular places, where greatest support has to be borne; the enlargement of the extremities to which the muscles are attached, lengthening the lever by which these act, &c. 3. We have to remark the nature and strength of material in different parts, so admirably adapted to the purposes which the parts serve.

There is a bone, for instance, in one place, nearly as hard as iron, where, covered with enamel, it has the form of teeth, with the office of chewing and tearing all kinds of matter used as food. In the cranium, again, bone is softer, but tough and resisting; in the middle of long bones, it is compact and little bony, to leave room for the swelling of the muscles lying there; while, at either end, it is large and spongy, with the same quantity of matter, to give a broad surface for articulation; and, in the spine, the bodies of the vertebrae, which rest on an elastic bed of intervertebral substance, are light and spongy, while their articulating surfaces and processes are very hard. In the joints, we see the tough, elastic, smooth substance, called cartilage, covering the ends of the bones, defending and padding them, and destroying friction. In infants, we find all the bones soft or gistly, and therefore calculated to bear, with impunity, the falls and blows unavoidable while in that condition. When we return, as we have been doing, to the remaining cartilage or gristle for life, where their elasticity is necessary or useful, as at the anterior extremities of the ribs. About the joints, we have to remark the ligaments which bind the bones together, possessing a tenacity scarcely equalled in any other known substance; and we see that the muscular fibres, whose contractions move the bones, and thereby the body,—because they would have made the limbs clumsy even to deformity had they all passed over the joints to the parts which they have to pull,—attach themselves, at various distances, by means of which, like a hundred sailors at a rope, they make their effort effective at any distance. The tendons are remarkable for the great strength which resides in their slender forms, and for the lubricated smoothness of their surfaces. Many other striking particulars might be mentioned; but these may suffice.

Such, then, is the skeleton, or general frame-work of the human body—less curious and complicated, perhaps, than some other parts of the system, but so perfect and so wonderful, that the mind which can attentively consider it without emotion, is in a state not to be envied.

The living force of man has been used as a working power in various ways, as in turning a winch, pulling at a rope, walking in the inside of a large wheel to move it, as a squirrel or turn-spirt dog moves his little wheel, &c. Each of these has some particular advantage; but that for low purposes, the greatest effect may be produced, is for the man to carry up to a height his body only, and then to let it work by its weight in descending. A bricklayer's labourer would be able to lift twice as many bricks to the top of a house in the course of a day, by ascending a ladder without a load, and raising bricks of nearly his own weight over a pulley each time in descending, as he can by carrying bricks and himself up together, and descending again without a load, as is still usually done.

Reflection would naturally anticipate the above result, independently of experiment; for the load which a man should be best able to carry, is surely that from which he can never free himself—the load of his own body. Accordingly, the strength of muscles and disposition of parts are all such as to make his body appear light to him.

The question which was agitated with such warmth some time ago, as to the propriety of making men and women do the same work on the same occasions, is now an easy decision here. They work by climbing on the outside of a large wheel or cylinder, which is turning by their weight, and on which they must advance just as fast as it turns, to avoid falling from their proper situation. There are projections or steps for the feet on the outside of the cylinder, and the action to the workers is exactly that of ascending an aclivity. Now, as nature has fitted the human body for climbing hills, as well as for walking on plains, the work of the tread-mill, under proper restrictions as to duration must be as natural and healthful as any other. Its effects have now proved it to be so.

As animal power is exhausted exactly in proportion to the time during which it is acting, as well as in proportion to the intensity of force exerted, there may often be a great saving of it by doing work quickly, although with a little more exertion during the time. Suppose two men of equal weight to ascend the same stair, one of whom takes only a minute to reach the top, and the other takes four minutes; it will cost the first but a little more than a fourth part of the fatigue which it costs the second, because the exhaustion has relation to the time during which the muscles are acting. The quick mover may have exerted, perhaps, twice the weight force in the first instant, to give his body the greater velocity which was afterwards continued; but the sloth supported his load four times as long.

A healthy man will run rapidly up a long stair,
and his breathing will scarcely be quickened at the top; but, if he walk up slowly, his legs will feel fatigued, and he will have to wait some time before he reach the top.

For the same reason, coach-horses are much spared by being made to gallop up a short hill, and being then allowed to go more slowly for a little time, so as to rest at the top.

The rapid waste of muscular strength which arises from continued action, is shown by keeping the arm extended horizontally for some time; few can continue the exertion beyond a minute or two. In animals which have long horizontal necks, there is a provision of nature in a strong elastic substance on the back, or upper part, of the neck, which nearly supports the head, independently of muscular exertion.

MECHELN, or MECKLENBERG, ISRAEL OF; two artists, father and son, the former of whom appears to have been a painter, the latter a goldsmith, and one of the earliest and most distinguished engravers. They lived between 1450 and 1503. The son was born at Mechelin, near Bocholt. From his drawing, we learn that he was a scholar of Van Eyck. Of the circumstances of his life, little else is known than that he lived, during his latter years, at Bocholt, and died there in 1503. His engravings are rare, and much sought after; yet they bear the marks of a rude taste and imperfect drawing, incorrect perspective, and other faults which characterize the period. They are chiefly valuable for the minute accuracy of their execution, and as monuments of the history of the art.

MEHLIN, or MECHELN (in French, Malines), a city lately belonging to the Kingdom of the Netherlands, in the Belgic province of Antwerp, five leagues south of the city of Antwerp, and four and a half north-east of Brussels, on the Dyle and the Louvain canal; archiepiscopal see; population, 18,000. The streets are broad and well paved, and the buildings handsome: the cathedral, with a tower 348 feet high; the Beguine house, which serves as an asylum for 800 widows or aged women; the arsenal, with a cannon foundry; the archbishop's palace, &c., are the principal. The lace, woollen, calico, and hat manufactures are extensive, and the tanneries and breweries are considerable. Its commerce by the Dyle, which is navigable for large ships, is important in grain, oil, flax, and hops. The time of its foundation is not known: it is an old city, and is believed to have been inhabited by man during the period. It has been repeatedly inundated by the Dyle, and captured by the Spanish, Dutch, British, and French. The latter destroyed its fortifications in 1804. See Netherlands.

MECHOACAN, or VALLADOLID; one of the states of the Mexican republic, formed, in 1824, of the former province or intendency of Mechoacan or Valladolid, bounded by the states of Guanajuato and Mexico, and the Pacific ocean; lat. 19° to 20° 30' N.; lon. 104° 20' to 109° 50' W. Its productions are cotton, corn, sugar-cane, indigo, gold, silver, copper lead, &c. Mechoacan was an Indian kingdom at the time of the arrival of the Spaniards in Mexico, and was conquered by one of the generals of Cortez, in 1524. There are, at present, three tribes of Indians, forming the greatest part of its population, within its limits—the Tarascos, the Oto-mites and Chichimeks. The population was estimated by H. de Mollinedo, in 1805, at 376,400. (See Mexico.) Capital, Valladolid (q. v.).

MECKLENBURG-SCHwerin; a grand-duchy in the north of Germany, lying between the Baltic, the kingdom of Hanover, and the Prussian territories; a member of the Germanic confederation. The population is 430,927, principally Lutherans (3035 Jews); the superficial extent of the grand duchy, 4833 square miles; revenue of the state, 2,900,000 guilders, debt, between eight and ten millions; capital, Schwerin, with 11,230 inhabitants. The grand duke has two votes in the plenun, and, with the grand duke of Mecklenburg-Strelitz, the fourteenth vote in the diet. The two duchies have also a common supreme court of appeal at Parchim.

The population of Mecklenburg-Schwerin is principally agricultural; the manufactures are inconsiderable; the foreign commerce is carried on chiefly from the ports of Rostock and Wismar; corn and cattle are the principal articles.

MECKLENBURG-SCHWETZ; a grand-duchy in the north of Germany, divided into two parts by the grand-duchy of Mecklenburg-Schwerin (q. v.). It has 75,500 inhabitants on a superficial area of 1500 square miles. It has one vote in the German plenun. The capital is Neustrelitz, with 5400 inhabitants. The productions, and the condition and employment of the inhabitants, are the same as in Mecklenburg-Schwerin.

MEDAILIONS. The term medallion is applied to those productions of the mint which, if gold, exceed the aureus in size; if silver, the denarius; and if copper, the first, or large brass. Antiquities have long differed as to the purposes for which they were designed; they are generally, however, supposed to have been struck, like the medals of our time, to commemorate some remarkable event. Yet circumstances are not wanting to render it probable that they were intended for circulation as money. Perhaps both objects were united, at least in many instances, a large number of pieces, of a definite value, being coined in memory of a great event, and thus assuming the character of medals.

The medallion of Augustus, and one of Domitian, are found prior to the reigns of Adrian and Antonine; those in brass are the largest, many of them being several inches in diameter. See Numismatics.

MEDALS. See Numismatics.

MEDEA; daughter of Aetes, king of Colchis. By some, her mother is said to be Idria, daughter of Oceanus; by others, Hecate. Mythology ascribes to her a profound knowledge of the secret virtues of plants and animals, and the tenets of the tay craft. She saved the lives of many foreigners by her prayers and the aid which she rendered them, but thereby incurred the suspicions of her father, and was thrown by him into prison, from which she escaped to the temple of the sun. Her connexion with Jason (q. v.), the leader of the Argonauts, is celebrated. For ten years she lived with him in wedlock, after having supported him in every danger, till the charms of Glauce, or Creusa, the daughter of king Creon, kindled a new passion in him, and he discarded the unhappy Medea. According to some, Jason separated from her, because of the reproaches heaped on him for having a foreign sorceress for his wife. Under the semblance of patient resignation, she brooded on revenge. With this purpose, she sent the bride, as a wedding gift, a garment which, when she put it on, enveloped her in a consuming flame, so that she died a death of the most anguish. Another account is, that she sent her rival a golden crown of gold by her stepsister. She reduced Creon's palace to ashes by a shower of fire, murdered her two children by Jason, and then mounted her dragon-chariot, and escaped. Some say that she went to Hercules, others to Athens, to king Agesus, by whom
she had Medos. From Athens, also, she was banished as a sorceress. She finally settled home, however, who had been deposed by his brother Perse, after which she died. According to later accounts, she became reconciled with Jason, and was deified by the Colchians. Medos is said to have taken possession of the kingdom of his grandfather, and to have called it, from himself, Media. The origin of Media has often been a subject of poetry, especially of tragic poetry. The tragedies of this name, by Eschylus and Ovid, have perished, as well as the Colchides of Sophocles. The Medens of Euripides and Seneca are alone extant. The story has lately been made the subject of a tragedy by Grillparzer. 

MEDIA; the largest and most important province of the ancient Persian empire, bounded east by Hyrcania and Parthia, south by Persis and Susiana, west by Assyria and Armenia, and north by the Caspian sea; so that it comprised the modern Iran, Aderbidsjan, Chillian, and the western half of Azerbaijan. According to Homer, it belonged to Aria, or Ariana, of the Zend, the land of the Medes, in its widest extent. This Aria is bounded by the ancient Bactria, the centre of the great national intercourse of Asia, of the religion of the Magi, and of the ancient Persian civilization. (See Zoroaster.) Media, on the other hand, was a collection of distinct tribes, was inhabited by warlike people, and, in part, well cultivated. Even before the Persian period, it was an independent kingdom. Its history begins with Deioces, who, according to Herodotus, collected the people in villages and towns, and accustomed them to laws. He is said to have conquered Ecbatana. Ninus, the founder of the Assyrian monarchy, conquered this country. After the downfall of the Assyrian empire, a governor of the province of Media succeeded in rendering it once more independent, and it soon became the most powerful of the states which had arisen from the ruins of the Assyrian monarchy. According to tradition, as given by Herodotus, another Deioces begins a series of Median kings at Ecbatana, which continues uninterrupted from 700 B. C. to 500 B. C. The last were Phraortes, Cyaxares, and Astyages. Respecting the then existing connexion of Media with Bactria and India, nothing certain is known. It is probable that Media was added to Parthia and the Medes. This latter people had, till then, been considered by the former as of little importance, on account of their poverty. The conquered soon became the teachers of the conquerors, not only in the arts and manners of private life, but also in their public policy. After Cyrus, Media remained connected with the other parts of the Persian empire, excepting that the northern-western parts, which, before the time of Cyrus, seem to have belonged to Assyria, were separated, for a time, from the Persian monarchy. When Alexander had conquered the Persian empire, he gave to Media a native governor, named Atropates, who remained himself in the northern mountains, even after the death of Alexander, when Media had received a Macedonian governor. His posterity inherited his power, and, in spite of their dangerous neighbours, the Parthians, Armenians, and Romans, maintained possession of it, partly by prudent alliances, partly by the use of force. Of the first Roman emperors, Media was still independent; at a later period, it came under the yoke of the Parthians. Media consisted of Southern, or Proper Media, also called Great Media, whose capital was Ecbatana; of the country of Atropates, (Atropatene,) and of the neighbours parts of the shores of the Caspian sea, called North Media. 

MEDIAN WALL, in ancient geography, also called Wall of Semiramis (not built, however, by Semiramis), is reported to have been 500 feet high, about 140 miles long, and twenty feet thick, in Mesopotamia, running from the Tigris to the Euphrates, and thirty miles distant from the present Bagdad; erected against the invasions of the Medians. It was built of brick and asphaltum.

MEDIATION, MEDIATOR. In international politics, a power which endeavours to prevent, by acceptable interference, an approaching war, or close one which has broken out, is called a mediator. Mediation is essentially different from arbitration, which takes place if two powers submit points in dispute between them to the decision of a third power, which is to confine itself strictly to the points at issue, —a provision which often affords a dissatisfied party a pretext for rejecting the decision. Mediation generally takes place in consequence of a request. In 1818, Spain asked the mediation of the powers assembled at Aix-la-Chapelle in her quarrel with her American colonies, which, however, was refused, on the ground that the aid desired would amount to assistance in making a re-conquest. The Poles, in 1831, sought for the mediation of Britain between themselves and Russia. France has been, very often, the mediator between Russia and Turkey, or Austria and Turkey, from interested motives, to prevent Russia or Austria from becoming too powerful. Several powers may act jointly as mediators. Mediation, particularly of late, has often been performed by congresses, as, for instance, in the case of the treaty of London (July 6, 1827) for the pacification of Greece, or the late mediation of the congress at London between Holland and Belgium. This kind of mediation, however, was introduced by a most arbitrary declaration at Aix-la-Chapelle, that the five great powers of Europe, Austria, France, Great Britain, Russia, and Prussia, would be the mediators in all disputes between minor powers. Their ministers in Paris, Frankfort, and Vienna were provided with the necessary authorities. This led to the adoption of the principle of armed intervention at Laybach and Verona. (See Intervention.) Napoleon took the title of mediator of Switzerland. (See Switzerland.) By a law of the German empire, disputes between the members were left to the decision of a third member — a proceeding called Mediatisierung. (See Zentralization.) A mediation chamber has been established in the Germanic confederacy. 

Mediator, in theology, is an appellation which is given in a peculiar sense to Jesus Christ, the Instruc- tor and Saviour of mankind. Divines, however, have differed in their sentiments in respect to the nature and extent of this office, and the mode of its accomplishment. 

MEDIATISATION. When the German empire, whose unity and power had been long before destroyed, was formally dissolved (in 1800), it would have been impossible to suffer such a number of small sovereignties to exist by the side of each other as remained in Saxia, Franconia, Bavaria, and on the Rhine, even after the secularizations of the ecclesiastical governments in 1803. It was a work of necessity and of duty to the subjects, to aggregate them in large masses; and, in the previous history of the empire, good precedents were found for doing so by changing small units of the old Mediation of the empire to mediate, that is, to dependencies on the larger governments. The number of the estates of the empire formerly exempted in this manner was very considerable, especially in the Austrian countries. But what made this preceding odious in 1806 was, partly that the war of all against all possessed, like Furstenberg, with 74,000 inhabitants, Leiningen, with 83,000, were mediatised, while much smaller ones retained their sovereignty;
partly the manner in which the legal relations of the former sovereigns towards their new superiors were settled. The proceeding itself, however, was unavoidable, as appeared in 1515, when it was not only found impossible to restore the sovereignty of the mediatised princes, but new ones were added to the number (Salm, Isenberg, von der Leyen). But, by the fourteenth article of the German act of confederation, provision has been made to fix the legal relations of the mediatised sovereigns.

MEDICI. It is not uncommon for families, from the common ranks of society, to attain to great opulence by industry and good fortune. But wealth imparts influence, and this, rank and distinction. In democratic states, then, it is not wonderful that we find families of originally little importance, after some generations, appearing among the rulers of the state, and even at the head of it. The histories of the Grecian and Italian republics are full of such examples. But, owing to the fluctuating nature of wealth and popular favour, such houses generally decline as rapidly as they rise into consequence. If, therefore, a family from the class of commoners flourishes for centuries amidst the continual viesi-studia between the parties, it is likely that this time gradually becomes supreme, and it maintains this power for centuries, we can confidently conclude that the heads of the family must have been distinguished for wisdom and good fortune. Such is the case with the family of the Medici. The Medici, when they first appeared in Florentine history, in the fourteenth century, were already rich and important, having recently acquired influence by commerce. Corso Donato, the head of the party of the Neri, had expelled the Bianchi from Florence, but found himself neglected by his former friends, the chiefs of the nobility; he therefore attached himself, for the purpose of forming a new party, to some wealthy families belonging to the commoners. Among these, the Medici are the first named, although, according to some, they were in favour of the recall of the banished Bianchi. However that may be, they behaved with so much sagacity, that they soon became one of those families, the heads of which, in a popular democracy, compose the signoria. They principally contributed to the elevation of Walter of Brienne, duke of Athens, to the head of the state, who, however, made use of his power to humble the ruling families, and caused Giovanni de' Medici, who had not defended Lucca against the Pisans with sufficient firmness, to be beheaded. The Medici, therefore, with some other families, entered into a conspiracy against him, which was discovered to him by Matteo di Marozzo; but, luckily for the Medici, the tyrannical duke, in a fit of caprice, to appear magnanimous, did not investigate the case. This proved his ruin; for when the dissatisfaction at last broke out into open rebellion, the Medici were among the leaders. Thenceforth we find them always in public affairs. After the banishment of the duke, the old nobility were again admitted to participate in the government, from which they had been excluded for fifty years; but abusing their new liberty, they were guilty of such violence and excesses, that Alamanno de' Medici, the oldest of the family, called to arms, and drove out the nobles. During the next ten years, when Florence was disturbed anew by the Ricci and Albizzi factions, and distracted by the Ammonizoni (as the exclusion of certain individuals and families from public honours under the pretence of their being called the Medici joined the Ricci, which was the weaker party. A son of Alamanno, named Bartholomew, entered into a conspiracy against the Albizzi about the year 1360, but escaped, on its discovery, from the fate of his accomplices, by placing himself in time under the protection of his brother Salvestro, who was a magistrate. Salvestro himself, when gonfalonier of justice, in 1378, procured a law by which the Albizzi were humbled, and the Ammonizoni were moderated. The party of the Albizzi being afterwards wholly annihilated, and the popular party having gained the supremacy, Salvestro attained the great distinction which laid the foundation for the future influence of his house. The moderation of Salvestro and his family preserved them from failing, even were a few years later, the party which had elevated him prepared its own ruin by its arrogance. Thus the Medici, undisturbed in their greatness and influence, saw the Albizzi, Strozzi, Scali, Alberti, fall round them; for they did not, like the latter, aspire to the supreme power of the state. Yet they also, at least for a period, became the victims of republican party spirit. In an insurrection of the people against the principal citizens and the revived party of the Albizzi, 1393, the furious populace obliged Veri de' Medici, Salvestro's son, and at that time head of the family, to be their leader, and to compel the signoria to grant them an assembly. They then became the master of Florence; but he made use of his influence with the people only as a mediator, and calmed the disturbance. But the signoria failing to fulfil their promises to the people, he and his adherents loudly expressed their dissatisfaction. The suspicious government took advantage of some pretenses, unapproved on the part of the Medici, to banish all those members who were lineally descended from Salvestro, with their friends. Some of these exiles, and among them Antonio, in concert with their friends in Florence, attempted, in 1397, to return and seize the government. They forced their way into the city, but found no assistance, and were obliged to take refuge in the church S. Reparata, where a part of them were killed, and a part made prisoners and executed. After the detection of another conspiracy, excited by the duke of Milan, in 1400, among the Florentine exiles in Lombardy, and in which inhabitants of Florence were to have been involved, and two op-ponents of the Medici, to the exception of a few. But these few, who continued to enrich themselves by successful commerce, restored the distinction of their house on a firmer basis. Giovanni de' Medici was, in 1402, 1408, and 1417, member of the signoria. In 1414 belonged to the council of the Ten, and, finally, when the ruling aristocracy was convinced of his moderation and of his partiality, became, in September and October, 1421, gonfalonier of justice. The people vainly expected from him the formation of an opposition party, which he was too prudent to attempt; on the other hand he was honestly devoted to the Albizzi. He died in 1429. Of his sons, Cosimo (Cosimo) and Lorenzo, the former begins the splendid series of the celebrated Medici; the latter was the ancestor of the grand duke of Tuscany. Cosimo had already a seat in the signoria, in 1416. Though he made little direct opposition to the ruling party, yet the great liberalty which his immense wealth allowed him to exercise, collected a numerous party around him, which, envying of the Medici, could not be content with the prosperity of the enemy. He was finally seized and imprisoned, without being proved guilty of any crime, except his popular affability and succeeded only by bribing the
goufflouir Bernardo Guadagni in having the sentence of death, which was preparing for him by Rinaldo Albizzi, converted into banishment to Padua (1433). Yet his friends were so numerous, that a year after, a signoria, which consisted wholly of them, recalled Cosmo, and banished Rinaldo and his adherents. By this victory, the number of his friends, and the desire of the ascendency of Lorenzo, was increased. Nevertheless, Cosmo scorned to use force against his enemies; but some suspected persons were banished in 1442. The worthy Neri Capponi endeavoured to oppose the policy of Cosmo, who was a friend of Francesco Sforza. But Cosmo was contented protecting himself against his enemies by the number of his friends, and was able to check the arrogance of the latter, which he most feared, by inspiring them with a dread of the former. The ruling party in Florence was accustomed to obtain for some of their number, from the people, the grant of full powers (baila) to appoint the magistrates for some years. Cosmo himself caused Neri to be appointed one of these commissioners, and thus attached him to his own party, which hazarded nothing in receiving the weaker one of Neri. When, after the death of Neri, the term of the baila was expired, he did not make use of his power to effect a prolongation of it, as hereofore some less sagacious chiefs had done, but waited quietly, until his greater mass of those, who vainly expected honours from the people, but might have hopes of receiving them from him, effected the renewal of the former oligarchy for eight years, in 1458. Indeed, it was always his policy to let others work for his advantage, while he remained in apparent indifference and inactivity himself. As accio lui was formerly called the head of his party, so, at present, Cosmo ruled the republic, from 1465, through Luca Pitti, he himself remaining in the back ground. From thence he observed his friends and his enemies, and endeavoured to keep the former within the bounds of moderation, which are essential to the existence of a constitutional aristocracy, and much more to that of an insecure oligarchy. He was less successful in this, in his later years, particularly on account of the impetuous character of Luca Pitti. He therefore laid it down as a rule, never to distinguish himself in his mode of living by extravagance and splendor, that would excite envy. His superficies wealth he expended in public buildings, with which he adorned Florence, and in a splendid munificence, not only towards his adherents, but especially towards artists and learned men; among whom Argyropylus, Marcus Cicero, &c., enjoyed a liberal share of his favours; for he himself was a cultivated and accomplished friend to science, without being a less active merchant, or a less sagacious statesman. It would have been easy for him, who in Europe was considered as the prince of Florence, to ally himself with princes; but he married his sons and his grand-daughters to the daughters and sons of Florentine citizens. With equal wisdom and discernment, he managed the foreign affairs of the republic, in its difficult relations with Naples, Milan, and Venice, in which his commercial connexions with all countries and his vast credit firmly supported him. (The learned Pigottini is more rigid and impartial than Rucovest, in his judgment upon Cosmo.) After Cosmo had done all that it was possible to establish his house in the popular favour, he died in 1464, with anxious thoughts respecting the future; for his kinsman, the sagacious Bernardo de’ Medici, who had gained so much honour in the war against Milan and Naples, and his son Giovanni, had both died; and a change in his country, to be the consequence of his ill health, seemed little capable of being at the head of the state; the sons of Piero, Giuliano and Lorenzo, were still minors. Piero, in the com-
MEDICI.

a footing, which, until his death, insured to her full
security and ample scope to extend and confirm
her prosperity. Great losses induced him to give
up commerce, by which the Medici had always car-
died out, though, indeed, by agents who were fre-
quently treacherous or inefficient. These losses had
reduced him to such a want of money, that he was
often compelled to borrow large sums from the
public treasury; yet, when he withdrew his pro-
erty from trade, he was sufficiently wealthy to
purchase princely domains, and not only to adorn
them with palaces of regal splendour, but also to
ornament Florence with elegant edifices. In the
long peace, which his wisdom procured for the
republic, he entertained the Florentines with ele-
gant and splendid festivals himself, with the society
of the most distinguished literati of his age, whom
(as, for instance, Demetrios Chalcondylas, Agnolo
da Montepulciano, Christopher Landini, and, above
all, the great John Pico of Miranda) his fame and
his invitation had attracted to Florence, and his
princely munificence rewarded. He increased the
Medicean library, so rich in manuscripts, founded
by Cosmo in 1471. He also opened a school of the
arts in Florence, palace-like in size, and adorned
with numerous statues and excellent paintings. All, who in
this age had gained a reputation in Florence for great
talents, shared his patronage. Lorenzo was there-
fore surnamed the Magnificent. Honoured by all
the princes of Europe, beloved by his fellow-citizens,
he died in 1492, and with him the glory of his
city, his property, his name, and his family, fell, in
fortune, and even in splendour, from his hands.
But the spirit of which the Magnificent was
the offspring, and to which he had contributed,
continued to afterwards influence Florence, and
was to be a source of dignity and power to the
state for many generations to come.

Lorenzo left three sons, Piero, murdered by Alfon-
sina Orsini; Giovanni, at the age of fourteen car-
dinal, and afterwards pope Leo X.; and Giuliano,
duke of Nemours. Piero, the new head of the state,
was wholly unqualified for the place. In two years,
he had alienated the duke of Milan and the king of
France; he was distrusted by the republic, and, by
his imprudence and weakness, his family, particu-
larly the disgraceful peace of Sereza, had made himself despised
and hated by the Florentines, who would willingly have
honoured his great father in him. He was, in conse-
quence, divested of the government, and banished,
with his whole family. After several attempts, by
fraud, or force, to return, Piero lost his life (1504) in
the battle of the Garigliano, being drowned in this
river, where he was with the French army. In 1513,
his brother, the cardinal Giovanni, by an insurrection
raised by the popular preacher Hieronymus Savon-
arola, obtained a re-establishment in his native city,
and when he became pope, in 1514; he elevated his
family again to its præstine splendour. Piero's son,
Lorenzo, created by the pope duke of Urbino, was
the head of the state, though always without the
princely title, and with the preservation of the
republican forms. He died in 1519. Julius, a
natural son of the Giuliano who was murdered in
1478, ascended the papal throne, in 1550, under the
title of Clement VII., and, in 1533, Catharine,
Lorenzo's daughter, became the wife of Henry II.,
king of France; after which events, the speedy dis-
solution of the semblance of liberty at Florence was
readily foreseen. The Florentines, indeed, seemed
on the point of recovering their ancient freedom,
while the Clement VII., and, in 1533, Catharine,
Lorenzo's daughter, became the wife of Henry II.,
king of France; for after which events, the speedy dis-
solution of the semblance of liberty at Florence was
readily foreseen. The Florentines, indeed, seemed
on the point of recovering their ancient freedom,
while the Clement VII., and, in 1533, Catharine,
Lorenzo's daughter, became the wife of Henry II.,
king of France; for after which events, the speedy dis-
solution of the semblance of liberty at Florence was
readily foreseen. The Florentines, indeed, seemed
on the point of recovering their ancient freedom,
while the Clement VII., and, in 1533, Catharine,
Lorenzo's daughter, became the wife of Henry II.,
king of France; for after which events, the speedy dis-
solution of the semblance of liberty at Florence was
readily foreseen. The Florentines, indeed, seemed
on the point of recovering their ancient freedom,
while the Clement VII., and, in 1533, Catharine,
Lorenzo's daughter, became the wife of Henry II.,
king of France; for after which events, the speedy dis-
solution of the semblance of liberty at Florence was
readily foreseen. The Florentines, indeed, seemed
on the point of recovering their ancient freedom,
while the Clement VII., and, in 1533, Catharine,
Lorenzo's daughter, became the wife of Henry II.,
king of France; for after which events, the speedy dis-
solution of the semblance of liberty at Florence was
readily foreseen. The Florentines, indeed, seemed
on the point of recovering their ancient freedom,
while the Clement VII., and, in 1533, Catharine,
Lorenzo's daughter, became the wife of Henry II.,
king of France; for after which events, the speedy dis-
solution of the semblance of liberty at Florence was
readily foreseen. The Florentines, indeed, seemed
on the point of recovering their ancient freedom,
while the Clement VII., and, in 1533, Catharine,
Lorenzo's daughter, became the wife of Henry II.,
king of France; for after which events, the speedy dis-
solution of the semblance of liberty at Florence was
readily foreseen. The Florentines, indeed, seemed
on the point of recovering their ancient freedom,
while the Clement VII., and, in 1533, Catharine,
Lorenzo's daughter, became the wife of Henry II.,
king of France; for after which events, the speedy dis-
solution of the semblance of liberty at Florence was
readily foreseen. The Florentines, indeed, seemed
on the point of recovering their ancient freedom,
while the Clement VII., and, in 1533, Catharine,
Lorenzo's daughter, became the wife of Henry II.,
king of France; for after which events, the speedy dis-
solution of the semblance of liberty at Florence was
readily foreseen. The Florentines, indeed, seemed
on the point of recovering their ancient freedom,
while the Clement VII., and, in 1533, Catharine,
Lorenzo's daughter, became the wife of Henry II.,
king of France; for after which events, the speedy dis-
solution of the semblance of liberty at Florence was
readily foreseen. The Florentines, indeed, seemed
on the point of recovering their ancient freedom,
while the Clement VII., and, in 1533, Catharine,
Lorenzo's daughter, became the wife of Henry II.,
king of France; for after which events, the speedy dis-
solution of the semblance of liberty at Florence was
readily foreseen. The Florentines, indeed, seemed
on the point of recovering their ancient freedom,
while the Clement VII., and, in 1533, Catharine,
Lorenzo's daughter, became the wife of Henry II.,
king of France; for after which events, the speedy dis-
solution of the semblance of liberty at Florence was
readily foreseen. The Florentines, indeed, seemed
on the point of recovering their ancient freedom,
drama of Tuscany (afterwards the emperor Francis I.), made a contract with the sister of John Gasto, the widow whom the Elector of Palatine, the last of the line of Medici, by which he acquired the various feudal possessions of her house, and also the celebrated works of art and antiquities collected by her ancestors. Under the twenty-six years' reign of his son, the wise and virtuous Leopold, Tuscany recovered from a decline which had lasted for more than a century. See Tuscany, and Clayton's Memoirs of the House of Medici.

Medici, Luigi, Don, minister of the king of Naples, descended from the ducal house of Ottojano, was duke of Sarto, high steward of the king of Naples, and, for some time, president of the ministry. He succeeded Acton, and rendered service, in 1805, by improving the state of the finances. During the reign of Joseph Bonaparte and Joachim Murat, he resided in England, and returned with the Bourbons to Naples, where he was minister of the police, when Murat, induced by false reports, purposely spread in orders of his brother, had returned to Vienna to the Neapolitan territory. Medici ordered the costs to be watched, and Murat was taken and shot. The minister's report on this event is contained in the papers of that time (1815). In 1818, Medici concluded a concordat with the pope. He now improved the administration, and, in 1819, took, on his proposal, order "that all judges should decide causes according to the literal meaning of the laws, and, wherever this was not clear, should follow reasonable interpretations, and not the commentaries of jurymen"; after which, the reasons of the sentence should be printed." To clear the prisons, filled with captive robberers, Medici sent 2000 criminals to Brazil, according to a treaty concluded with the court of Rio Janeiro. Yet his administration, particularly the re-establishment of convents, in 1819, met with much censure. The people were dissatisfied with the new tax on landed property (jundaria). The revolution broke out at Nola, July 2, 1820. The ministry of the police had previously been given to the prince of Canosa, who, unlike Medici, united with the secret society of the Calderari, in order to suppress the Carabonari, whilst Medici had sent the most ardent members of these societies to Versailles, and, after wards to Vienna. Medici was appointed president of the council of ministers. He saw himself obliged to contract a new loan with the house of Rothschild, for two millions and a half pounds sterling, for which, customs and other indirect taxes were pledged. Under the reign of Francis I., Medici retained his high post. He went with his King to Madrid, and is said to have been consulted respecting the regulation of the embarrassed finances of Spain. He died in 1830.

Medicine: the science of diseases, and the art of healing or alleviating them. It is founded on the study of man's physical and moral nature, in health and disease, and, for the purpose of effecting a cure, on the laws of the production of the disease, its production, its development, its relation to the constitution of the individual, and its change according to individual and external circumstances. It is divided into theory, which describes the nature of the disease, and into practice, which recommends the method of treatment. The theory of medicine is divided into anatomy, physiology, and pathology, and the practice into therapeutics and hygiene. The former deals with the causes and nature of the disease; the latter with the method of treatment. Medicine is divided into the medical, to which are included the diseases of the human body; the veterinary, to which are included the diseases of animals; and the agricultural, to which are included the diseases of crops and plants.

Medicine has been practised from the remotest antiquity. It was before the time of Moses, according to the Bible, that the Egyptians had learned the use of drugs. The Egyptians were the first to study the properties of plants and animals, and to apply them to the cure of diseases. They were also the first to study the anatomy of the human body, and to dissect the bodies of animals. The Greeks were the first to study the physiology of the human body, and to write on the subject of the circulation of the blood. The ancients were the first to study the pathology of the human body, and to write on the subject of the cause of disease. The Egyptians were the first to study the therapeutics of the human body, and to write on the subject of the cure of disease. The ancients were the first to study the hygiene of the human body, and to write on the subject of the prevention of disease.

The Greeks were the first to study the anatomy of the human body, and to write on the subject of the circulation of the blood. The ancients were the first to study the physiology of the human body, and to write on the subject of the circulation of the blood. The ancients were the first to study the pathology of the human body, and to write on the subject of the cause of disease. The Egyptians were the first to study the therapeutics of the human body, and to write on the subject of the cure of disease. The ancients were the first to study the hygiene of the human body, and to write on the subject of the prevention of disease.
science according to their notions, and left it not unimproved in respect of practical application and pharmacology. Arabic medicine reached its highest point under Avicenna (born 980), who, for some time, was esteemed even higher than Galen; the opinion of the latter is still that of the Arabs; and in fact, all the new discoveries, which were made by the doctors of that period, were applied to medicine, mostly fostered by ignorant monks, and only gradually struggling on, after suffering, perhaps, more than any other science, from every superstition and every misconception of nature. In the fourteenth century, anatomy was improved by Mondini; later, the knowledge of medicines, by the discovery of new and distant countries, practical medicine, by the appearance of new diseases, and not a little by the frightful syphilis. The love of Greek literature was revived by the scholars driven from Greece by the conquest of Constantinople (in 1453), and men having begun to read the Greek medical writers, especially Hippocrates, in the original language, the still-existing and diligent investigation took the place of slavish adherence to antiquated prejudice. Thus the fall of the Galenic system was prepared, which was completed in the sixteenth century, and forms the essential part of the reformation produced by Theophrastus Paracelsus (1520). The chemico-theosophical system of this enthusiast was refined and arranged by J. B. von Helmont (who died in 1644), until, deprived of its theosophical character, it passed over into the chemico-material system of Francis Sylvius (who died in 1672), and, at length, into the psychiatric system (from instar, cure) of Stahl (who died in 1734). Yet, soon after Harvey's great discovery of the circulation of the blood (in 1619), the iatromathematical doctrine, under Alphonso Borrelli (who died in 1670), developed itself, which finally took the shape of the dynamic system of Fr. Hoffmann (died 1742), from which the dynamic schools of modern times proceeded. Hoffmann, who may be called the morning star of the reformers, who, feeling the insufficiency of all the opinions of his predecessors, and clearly perceiving that the animal body was influenced by laws quite different from those presiding over inanimate matter, dedicated himself to a careful examination of the nature of the operations of the respective parts of the body, whereby he perceived that certain organs possessed specific actions, and that those of the brain and nerves were of all others the most remarkable, and unlike what was to be observed in the other objects of nature. To the nervous system, therefore, he referred the effects of vitality, and to the nervous influence he attributed the production of two diseased states of the system, dissimilar and opposite to each other, to which he applied the terms of spasm and atony—the first expressing the condition of increased, the second, of diminished activity.

Upon this doctrine, Dr Cullen of Edinburgh laid the foundations of his system. Discarding, in the most positive manner, the merely mechanical powers of the brain, he began for the phenomena of vitality, and resting all his opinions upon the specific properties of the living body, he taught that the great agents in all the operations either of health or disease are the minute fibres of the nerves and muscles, which, he says, are the immediate cause, not only of sensation and motion, but of all the changes gradually effected in the sensible parts of the body; that the most important of these changes are produced through the medium of the minute terminations of the arteries, and that the action of these vessels was perfectly competent to produce all the changes that occur, both in the state of the fluids and solids. He adopted the spasm and atony of Hoffmann, but refined so far upon their nature, as to conceive it possible for the two contrary effects to exist at the same time in different parts of the system.

Soon after the promulgation of this system, Dr John Brown, also of Edinburgh, proposed another equally novel and striking. He taught that every living being possesses a specific power or excitability, by which every part of the system, in every circumstance, either exterior or internal, which can affect a living animal is an excitement or stimulus, and contributes to expend a portion of its excitability; that upon the proper action of these excitements depends the due development of the vital powers; so that, whenever they are applied in an immediate degree, the excitability is too speedily expended, the animal becomes exhausted, and falls into a state of indirect debility. But that, if, on the contrary, there should be a deficiency of stimulus, the powers of life become languid from a want of being called into play, and a contrary state, or direct debility, ensues, and the excitability becomes wasted. He supposed infrastructural excitation of the body suffers from the want of food, it falls into a state of direct debility; whereas, if the system has been inordinately excited by a large quantity of wine, and a state of languor follows from it, the condition so induced is that of indirect debility—the first being from defect, and the latter from excess of excitement; that the state of the body, as to sensibility, is ever the same in kind, and can only vary in degree, being always variable in the same individual, except what may depend upon the smaller or greater quantity of excitability called into action at different periods; moreover, that the portion of excitability possessed by each individual was allotted to him at birth, and that this original stock cannot by any means be increased; but that it cannot be expended at more than a given rate without producing a diseased condition of the body, and that, if, from any cause, this rate be exceeded, acertain portion of time is requisite to restore the balance between the supply and deficiency; that any of the excitability of the body is essentially dependent upon the number of processes or functions that its quantity in the different parts of the body exists always in the same proportion as relates to each other, whereby whenever it becomes excessive or defective, in any one organ, it likewise does so in every other part, owing to the balance naturally existing between them. Hence, he concluded, that all diseases may be divided into two great classes—either of excess or defect—or, as he calls them, sotenic or asthenic—of which the principal differences in each class consist in the parts which they affect, modified by peculiarities in the temperament, sex, age, habits of life, &c., &c.

The system of the celebrated Darwin is similar, in many respects, to that of Brown. He commences by assuming the existence of a certain power or faculty attached to the living body, which is the immediate cause of all the phenomena of life, to which he gives the name of spirit of animation, or sensoria power. This resides both in the muscles and nerves, and is equally the origin of motion and sensation. It is called forth by the action of various stimulating powers, and is capable of accumulation and exhaustion, upon which states of excess or defect all the diseased trains of action depend. That there are two kinds of debility, either from defect or from excess of excitement. But he differs from Brown in not limiting the powers of the system, for he conceives that the sensorial power may be generated, from time to time, by the nervous system, exactly as it is required.
for the purposes of life, by a process resembling secretion. Darwin divides diseases into four great classes according to certain functions of the sen-
sorial power, which are irritation, sensation, volition, and association.

One of the latest train of medical reasoning, or system of medicine, which has been proposed, is that called the doctrine of plethora, and which we shall now attempt to describe. In this all the derange-
ments of the animal economy are attributed to gene-
ral or partial fulness of the blood-vessels or plethora. This system is founded more upon the results of prac-
tical experience than from any imaginary views of the nature of the animal economy. The great extent to
which the system of depletion has been carried, first by Dr Rush and other practitioners in America and
the West Indies, and latterly by others in different
parts of Europe, has had a very powerful effect upon medical opinions on all subjects, and has tended to
reduce the whole of the practice of medicine to little
more than a succession of evacuations, or an altera-
tion in the different methods of abstracting the fluids
from the human body. By this means a most ben-
eficial effect has been produced both in the theory and
practice of physic. The work in which this doctrine
is presented in the most methodical and connected
form, is written by Dr Parry of Bath, and entitled
"Elements of Pathology," and the points he at-
ttempts to illustrate and establish are:—That the
system of the blood-vessels is that which is most
frequently deranged, and from which nearly all dis-
cases originate. That partly from the natural con-
stitution of the body, partly from the present acquired
habits of civilized society, these derangements gene-

rally proceed, in the first instance, from an excess in
the quantity, or the moving force of the blood; added
to which, that our blood-vessels are peculiarly liable
to a state of local plethora, or fulness—a state of parts
which may occur even when there is a general deficien-
cy in the quantity of the fluids. That this plethora may
have its origin from two distinct causes; either from
the increased force of the heart, or from the resis-
tance of the vessels—but that, although the mechanical
effect of these causes be nearly the same, and the
mode of treatment be also in a great measure similar,
yet that the state of the vital powers of the system,
or at least of the part affected, are totally opposite to
what it is in the latter case. Lastly, that the fact that
the affections of the nervous system are entirely
secondary and subservient, and that these likewise
originate from an excessive determination of the
blood to the substance of the nerves themselves,
and that the distinction between diseases arises prin-
cipally from the parts that are affected; and that the
character of their symptoms is determined, either by
the particular structure of the organ, by the nature of
the cause producing the disease, or by the peculiar
habits or constitution of the individual.

For the newest systems, as the homeopathic system of Hahnemann (see Homeopathy), or that of M.
Hussain, or the school of Dr. Rush, and others who
trace all diseases to inflammation of the bowels, we must refer
to the publications of the authors, and to the medical
periodicals.—See Kurt Sprengel’s Gescichte der Arzneikunde (third edition, Halle, 5 volumes, 1827;
translated into French, Paris, 1810); J. F. K.
Hecker’s Geschichte der Heilkunst (Berlin, 1822,
vols. 1, 2, 3); Hecker’s Quellen der Materia Medic.
(Leipzig, 1831, 2 parts, 8vo, &c.).

The various medical sciences, or those closely con-
ected with them, and more or less requisite for a
thorough knowledge of medicine, may be thus be-
numerated—the whole range of natural sciences,
as zoology (including comparative anatomy and phys-
ology, mineralogy, geology, botany, natural philosophy,
chemistry, &c.): psychology, which teaches the various
phenomena of soul and mind: anatomy, which teaches
the human body, the chemical composition of all its parts—a
most important branch, but usually treated under general chemistry

* Some add here, anthropochemie or the chemistry of the human body, the chemical composition of all its parts—a
important branch, but usually treated under general chemistry.
a science of great interest.—See Geographical Nau-
ology (in German), Stuttgart, 1823, by Schurrer.

Medial Topography is the description of single
places or tracts of country as to the circumstances
which make them interesting in a medical point of
view; such as islands, woods, woods, plains, the
sea, woods, plains, structure of the houses, ways of
living of the people, their amusements and customs;
in short, every thing which affects the health of the
inhabitants. Geographical situation, elevation, &c.,
belong to a complete medical topography. See Metaler's
Guide for the drawing up of Medical Topo-
graphies in Germany.

Medietas Lingue; a jury or inquest, whereof
the one half consists of denizens, the other stran-
gers, in pleas wherein the one party is a stranger.

Medina, or Medina El Nebi (the city of the
prophet); before the days of Mohammed, Attarob,
anciently Antrippa; a city of Arabia, in Hejazis, 70
miles E. of Jambos, its port on the Red sea, 180 N.
of Mecca; lon. 40° 10' E.; lat. 25° 13'; popula-
tion ab. 8000. It is regarded by Mohammedans
as sacred, from its containing the tomb of Moham-
med. Most of the houses are poorly built, and the
place is of no importance, except from its containing
the shrine of Mohammed. This structure is of
dark in higneration by Mohammedans, yet the visiting
is not considered necessary or highly meritorious,
and Medina is much less visited by pilgrims than
Mecca. Neither the tomb nor the mosque in which
it is enclosed, is distinguished by any magnificence;
but it was remarkable for an immense treasure of
pearls, precious stones, &c., accumulated for ages by
the contributions of rich N. Mohammedans, until it was
pillagied by the Wahabees, a few years since. See
Mohammed.

Medina Sidonia, Alfonso Perez Guzman,
duke of; admiral of the armada. (q. v.) Philip II.
received him, after his disaster, with unexpect-
favour. Medina died in 1615.

Mediterranean Sea (Naunium Mare, Inter-
num Mare, with the Romans); the large mass of
waters between Europe, Asia, and Africa, which
receives its name from its inland position, communi-
cating with the great ocean only by the straits of
Gibraltar. Its northern shore is irregular, forming
largely the west coast of Italy and the islands of
Corsica and Sardinia, it is called the Tucan, or
Tyrrhenian sea (Mare Infernum); between Italy and
Illyria and Dalmatia, the Adriatic, or Gulf of Venice;
farther south to the west of Greece, the Ionian sea
the two latter formed the Mare Superum of the
Romans); to the north-east of Greece, between
Turkey in Europe and Natolia (Asia Minor), the
Archipelago, or Egean sea. Its southern shore is
less indented. It receives the waters of the Black
sea, by a current which sets constantly through the
Dardennes, and thus mingles the waters of the
Danube, the Po, and the Nile, with those of the
Dnieper and the Elbow. Its length from east to west
is about two thousand miles; its general breadth
varies from 7—300 to 4—500 miles; between Genoa
and Biserta it is about 375 miles; between the
southern part of Italy and cape Bon, not quite 200
miles. The principal islands of the Mediterranean
are two out little, the innumerable islands on
the Lipari islands, Malta, the Ionian isles, Candia
(Crete) and Cyprus. (See these articles.) The
winds are irregular, the tides variable and slight,
 rarely exceeding two feet of rise and fall, and the
sea is generally short and rough. A strong central
current sets itself into the Atlantic through the straits
of Gibraltar; on each shore are superficial counter
currents setting in from the ocean into the sea; but a
rapid under current sets out. In a commercial point
of view, the Mediterranean is of the greatest interest;
its shores contain numerous celebrated ports, and its
waters are covered with the ships of all the western
nations. The different maritime powers maintain a
several naval forces in the sea, which till lately has been
infested with pirates. Its coasts were the seats of
some of the earliest civilized nations, the Egyptians,
Phoenicians, Carthaginians, Greeks and Romans. See
Steel's Chart of the Mediterranean (London, 1823.)
Mediterranean Pass. In the tratheens between
Britain and the Barberry states, it used to be agreed,
that the subjects of the former should pass the seas
unmolested by the cruisers of those states; and, for
better ascertaining what ships and vessels belonged
to British subjects, it was provided, that they should
produce a pass under the hand and seal of the lord
high admiral, or the lords commissioners of the ad-
miralty. The passes were made out at the admiralty,
containing a very few words, written on parchmeent,
with ornaments at the top, through which a scollop-
ed indenture was made; the scolloped tops were
sent to Barbary, and being put in possession of their
crapers, the commanders were instructed to suffer
all persons to pass who had passes that would fit
these scollops; the others were to be set aside.

Medium (Latin, middle or mean), in science;
the space or substance through which a body moves
or acts. Thus air is the medium through which
sound is transmitted, light passes, &c. A transparent
medium is that which allows the free passage of rays
of light; a refracting medium is one which turns
them aside in their course.

Medium, in logic. See Syllogism.

Medium, Circulating. See Circulating Me-
dium.

Medlar (messipus Germanica); a small Euro-
pean tree, allied to and somewhat resembling the
quince, and belonging to the natural family rosaceae.
The flowers are moderately large, white, and solitary
at the extremeties of the branches; the calyx and
peduncles are cottony; the fruit, in the cultivated
varieties, is large, and, before it is perfectly ripe, has
an excessively austere and astringent taste. The
medlars do not ripen naturally on the tree, but are
collected in the autumn, and spread upon straw till
they become dry; they become rubber and acquire the
postion. They have now a sweet, vinous favour,
which, however, is not to the taste of most people.

Medoc; formerly a country of France, in the
western part of Guiene, between the Garonne and
the sea, in the present department of the Gironde.
A great part of it is covered with woods and marshes,
but, along the Garonne, the soil is fertile, and yields
excellent wines. See Bordeaux Wines.

Medulla, in anatomy; the fat substance which
fills the cavity of a long bone. See Bones, and
Marrow.

Medulla, in vegetable physiology; the pith of
plants, is placed in the centre or heart of the vege-
table body. In the parts most endowed with life, like
the root, or especially young growing stems or branch-
es, the medulla is usually of a pulpy substance, but
tolernably firm, though rather brittle. Its colour is
pale green, or yellowish, with a watery trans
parency, the substance being very minute. Its juices
partake the character of the sap of the plant, they being more of the nature of sap.

In branches or stems more advanced in growth, the
medulla is found of a drier, more white, and evidently
 cellular texture. In this state, it is well known in
the full grown branches of elder, the stems of rushes,
&c. In these, it is very, highly astringent, or very light and compressible, though but slightly
elastic. In the greater number of plants, no vessels
The peripeties in the pith, but in some, entire vessels, conveying proper juice, are present, as in the gum elastic fig-tree, the proper juice of which is seen exuding from different points of the pith, in an horizontal section of the stem. This discovery, with certainty concerning the functions of the pith, it appears, on the whole, to be a mere reiteration of the cellular envelope, and subservient to the vessels which surround, and occasionally pass through it.

**MEDUSA.** See Gorgon.

**MEERMAN, JOHNS.** A Dutch scholar and statesman, born at the Hague, in 1725, was the only son of Gerard Meerman, known as the author of a *Thea-saurus Juris civilis et canonici*, and *Origines Typographiae*, and who had been created baron of the German empire. The son received his early education at the Hague and at Rotterdam, and while hardly ten years old, translated and published, without the knowledge of his father, Molière's *Mariage Forcé*. He then studied at Leyden, at Leipsic under Ernesti, and at Göttingen under Heyne. After travelling through England, Italy, and France, he took the degree of doctor of laws, at Leyden. The number of his writings, which were both on his extensive knowledge, and his zeal for virtue and piety. In 1786, in company with his wife, he visited England, Scotland, and Ireland, Germany, Italy, and Northern Europe, and published full and accurate accounts of his travels, in eleven volumes. His time and labours were also employed in the service of the state, the church, and literary institutions. Under the reign of Louis Bonaparte, he was director of the fine arts and of public instruction in the kingdom of Holland. Some years before his death, the dignity of senator of France was conferred on him, and he was called to Paris. After the Restoration, he returned to his own country, and died in 1816. Besides his Travels, his History of William, count of Holland, and an edition with notes, of the *Histoire des Voyages fait sur l'Empereur Charles V.* by J. Vanden-esse, deserve mention. As director of the arts and sciences, he also rendered important assistance in the preparation of the *Jaarboeken van Wetenschappen en Kunsten* in het Koningsk Holland over de Jaren 1806–7. His widow, an esteemed poetess, has written his life. His valuable library, the catalogue of which is a literary curiosity, was sold by auction, at the Hague, in 1824, and brought 171,000 Dutch guilders, 52,000 of which were paid for the manuscripts, while the rest perished.

**MEERSCHAAM.** See Magnesite.

**MEGERA.** One of the Furies. See Eumenides.

**MAGALONYX.** See Megatherium.

**MEGALOPOLIS (i.e. large city); a city of Arcadia, one of the largest cities of Greece, on the Heils-son, containing many temples, a stoa, &c. The theatre of Megalopolis was the largest in Greece. The city was built at the suggestion of Epaminondas, after the victory of the Thebans at Leuctra, about 368 B. C., as a city of the Boeotian league, and was peopled from thirty-eight cities. It is, at present, the inconsiderable place Sinano. Philopomen, Polybius, and other distinguished men, little is yet known with certainty concerning the functions of the pith. It is seen exuding from different points of the pith, in an horizontal section of the stem, and subservient to the vessels which surround, and occasionally pass through it.

**MEGALOINOS.** See Megatherium.

**MEGALOSAURUS (Greek, giant lizard); an extinct species of lizard, of an enormous size, which, according to Cuvier (*Recherches sur les Ossuencents Fossiles*, vol. ii. part 2, p. 343), would be as large as a whale, if we assign to it the proportions which its characteristic bones would have if discovered in England, by Mr Buckland, and has also been found in France and Germany.

**MEGARA;** a daughter of Creon, king of Thebes, given in marriage to Hercules, because he had delivered the Thebans from the tyranny of the Ochomeneans. When Hercules went to hell, by order of Eurystheus, violence was offered to Megara, by Ly-ucus, a Theban exile, and she would have yielded to her ravisher, had not Heracles returned then moment and punished him with death. This murder dis-played Juno with the lawsuit. Little Hercules, so that he killed Megara and the three children he lie her by, in a fit of madness, thinking them to be wild beasts. (See Hercules.) Some say that Megara did not perish by the hand of her husband, but that he afterwards married her to his friend Iolus.

**MEGARA.** See Megaristan.

**MEGARIS, a small state of ancient Greece, west of Attica, occupied the upper and wider part of the isthmus of Corinth. The capital city, Megara, was rendered illustrious, not only by the firmness with which it maintained its independence, but also by a school of philosophy, founded by one of its citizens, Euclid, a disciple of Socrates. Pausanias (4. 40–44) enumerates its many splendid public buildings. See Reingnann's *Das alte Megaristan* (Berlin, 1825).

**MEGATHERIUM, or GIANT SLOTH; an extinct genus of the sloth family, of which fossil remains have been found only in South America. Three species have been discovered, the *M. Cuvieri* and the *M. Jeffersonii;* the latter was first described by president Jefferson, under the name of megalonyx, or great claw (*Transactions of the Amerie. Phil. Soc.*, iv. 240). The megalitherium unites some of the generic character of the armadillos with some of those of the sloth; its size must have been equal to that of the rhinoceros. Three species of the first species have been discovered in South America, and one in Georgia. The only fragments of the second species hitherto discovered, were found in Green Briar county, Virginia, in a salt petre cave. See Godman's *Am. Nat. History*, vol. ii. 173–201.

**MEGUM;** a species of headache; a pain generally affecting one side of the head, towards the eye, or temple, and arising, sometimes from the state of the stomach, sometimes from rheumatic and gouty affections. In French it is called migraine, derived from hemianorthia, from the Greek haima (signifying, in compound words, head) and anorthia (the skull). It affects chiefly persons of weak nerves.

**MEHUL, STEPHEN HENRY,** a celebrated musical composer, and member of the institute of France, born at Givet, in 1763, received his first lessons from a blind organist at his native place, and became such a proficient that at the age of twelve, he was appointed joint organist to the abbey of Valdaden. The desire of improving his talents attracted him to Paris in 1779. He there studied under Edelmann, and afterwards, under Gluck; and, after the departure of the latter for Vienna, Mehul presented to the royal academy of music the opera of *Cora and Alon-go;* but his Euphrosine and Coradin was first performed at the comic opera, in 1790. This was followed, at different periods, by Stratonice, Irato, Joseph, and many other operas, besides the ballets of the Judgment of Paris, Dansomanie, and Perseus and Andromeda. Mehul was one of the three inspectors of instruction, and a conservator of the public education, in 1795, till its suppression, in 1815. He was then appointed superintendent of music at the king's chapel, and professor of composition at the royal school of music. He was chosen a member of the institute in 1796, and of the academy of fine arts in 1816, and was also a Knight of the Legion of Honour. He died at Paris, 1817. Mehul read before the institute two reports *Sur l'Etat Actuel de la Musique en France*, and *Sur les Travaux des Éléves du Conservatoire à Rome.*

**MEIBOM, JOHN HENRY (in Latin Melibomius), a celebrated physician, was a native of Helmstadt,
where he was born in 1590. After travelling in Italy, and taking his doctor's degree at Basal, he returned home, and occupied a medical chair in the university of Helmstedt. In 1626, he was appointed physician of Lubeck, where he died in 1655. His works are A urel ci Aldi sleo Formul a Comitis Arbor et rorum (1668, 4to); De Usu figurae in Rem ed. Otto; De Alimentis. Among his writings on the middle ages, and particularly from his learned views of the progress of learning in the fifteen and sixteenth centuries, a new Bayle may find materials for attack and defence. A French translation of his history of the Origin, Progress, and Decline of Learning in Greece and Rome procured his election into the national institute. He died in 1810.

MEININGEN, SAXE (in German, Sachsen-Meiningen-Hildburghausen); a duchy in the German confederation, belonging to the ducal house of Saxe-Meiningen, of the Gotha branch of the Ernestine line. (See Saxony.) The population of the duchy is 130,500, on an area of 570 square miles, about one half of which was acquired in 1826, by the extinction of the male Saxe-Gotha line. The duke, in conjunction with the other princes of the Saxon Ernestine line, has the twelfth vote in the diet, and has by himself one vote in the plenum. The religion is Lutheran. In 1854, a new constitution was granted by the congress of the powers, the parts of the present duchy then under his government, admitting the peasants to the ducal diet as a third estate. The contingent to the army of the confederacy is 1150 men; income, 750,000 guilders; debt, 2,500,000. The capital is Meiningen, with 4500 inhabitants, containing a large and handsome ducal palace, with a library of 24,000 volumes and the state archives. (See Germany.)

MEONITE. See Scarpolite.

MEISSEN, the oldest city in the kingdom of Saxony, was built by the emperor Henry I., in 922 as a bulwark against the incursions of the Slavonians. It lies on the left bank of the Elbe; population, 4100. In the vicinity is a school, established by the elector Maurice, in 1543, in the building of the ancient Afa monastery. (Lugd. 13° 27' E.; lat. 51° 19' N. The cathedral, an old monument of German art, is a remarkable building. The porcelain manufacture on the Meissen island, which has been carried on since 1710. MEISSNER, AUGUSTES GOTTLIEB, born at Bautzen, in 1758, studied law and the belles-lettres at Leipsic and Wittenberg from 1773 to 1776, and died at Fulda, where he was director of the high seminary of education, in 1807. He was also, for some time, professor of aesthetics and classical literature at Prague. His works were, at one period, very popular in Germany. A glowing imagination, an easy style, grace, wit, and a brilliant manner, united with a delicate tone of gallantry, were the causes of his success. His principal productions are comic operas, in the French style; Sketches, a miscellaneous collection of anecdotes, tales, &c.; several historical romances, as Aelblades, Bionca Capello, &c. He also translated Hume's History of England.

MELA, POMONIUS; a geographer, who flourished during the first century of the Christian era. Little more is known of him than that he was a native of Spain, and the author of a treatise, in three books, in the Latin language, and of a geographical dictionary. He was the author of a concise view of the state of the world, so far as it was known to the ancient Romans. Among the latest and best editions of this work are that of Abr. Gronovius, (Lud. Bat. 1782, 8vo), and the very complete one of C. H. Tschackius (Leipsic, 1897, 7 vols., 8vo), the most complete one by Weichert (Leipsic, 1816).

MELAMPUS; the son of Aemyth and Idoenusa,
and brother to Bias. Fable relates many wonderful things of his skill in the healing and prophetic arts. Two serpents which, when a youth, he had taken under his protection and brought up, having licked his ears while he was sleeping, he found that they were opened in such a manner that he was able to understand their language. He found cause to reveal to mankind every thing that these voices indicated concerning the future. Bias fell in love with the fair Pero, daughter of Neleus, king of Pylos, the uncle of the two brothers, but he required as a nuptial present for her daughter, the herds of oxen belonging to Iphiclus, a Tissalian prince. Melampus undertook the task, but his skill was detected and imprisoned. He, however, succeeded, by his prophetic art, in gaining the favour of Iphiclus, who gave him his liberty, and sent the oxen as a present, to Bias. Melampus married Iphianassa, the daughter of Proetus, king of Argos, and received with her, as a dowry, a third part of the kingdom.

The time in which he lived is unknown; he is generally considered, however, as having been a wise man, who was well skilled in all the ancient mythology, and who introduced the worship of several of the gods together, with the Elusinian mysteries, into Greece, on which account he received divine honours. Melampus lived in Athens, and in the year 1365 was labourer in the reformation, was born February 10, 1497, at Bretten, in the palatinate of the Rhine. His father, George Schwartzerd, was keeper of the armoury of the count palantine, and died in 1507, and his mother, Barbara, was a near relative of the learned Reuchlin. He was distinguished at an early age, by his intellectual endowments. His rapid progress in the ancient languages, during his boyhood, made him a peculiar favourite with Reuchlin. At his advice, he changed his name, according to the custom of the learned at that time, from Schwartzerd (Blackearth) into the Greek name Melanthchon, of the same signification, and in 1510, went to the university of Heidelberg. Here he was preeminent in philological and philosophical studies, so that, in the next year, he was deemed qualified for the degree of bachelor of philosophy, and was made instructor of some young counts. But as this university denied him an appointment of master of his youth, he went to Tubingen, in 1512, where, in addition to his former studies, he devoted himself particularly to theology, and, in 1514, after obtaining the degree of master, delivered lectures on the Greek and Latin authors. His profound knowledge is proved by a Greek grammar, which he published about this time. The ability of his lectures soon gained him universal esteem, and the great Erasmus himself gave him, in 1518, the praise of uncommon research, correct knowledge of classical antiquity, and of an eloquent style. Tubingen had to lament the loss of his chief ornament, when Melanchthon, being invited, on Reuchlin's recommendation, to Wittenberg, appeared in 1517 at this university, in his twenty-second year, as professor of the Greek language and literature. His enlightened mind soon decided him in favour of the cause of evangelical truth; and his judgment, ripened by classical study, his acumen as a philosopher and orator, and the power of his loftiest ideas, which spread light and grace over whatever he discussed, the caution with which he advanced from doubt to certainty, and the steadfast zeal with which he held and defended the truth when found,—this combination of great qualities and merits, at all times rare, contributed greatly to the progress and spread of Reformation. His talents, his teacher's activity, spirit, and enterprise. Melanchthon's superiority as a scholar, his mild, amiable character, the moderation and candour with which he treated the opposite party, made him peculiarly suitable for a mediator. No one knew better than he how to soften the rigour of Luther, and to recommend the new doctrines to those who were prepossessed against them. His Loci theologici, which appeared first in 1521, opened the path to an exposition of the truth in a way at the same time easy to understand and intelligible, and became the model to all Protestant writers of dogmatics. He urged decidedly, in 1529, the protest against the resolves of the diet of Spire, which gave his party its name. He drew up, in 1530, the celebrated Confession of Augsburg. This and the apology for it, which he composed soon after, carried the point and the cause of the Protestants in Europe. Francis I. invited him to France, in 1535, with a view to a pacific conference with the doctors of the Sorbonne, and he soon after received a similar invitation to England. Political reasons prevented him from accepting either of the invitations. He went to Worms in 1541, and, soon after, to Ratisbon, to defend the cause of the Protestants, in the conferences commenced there with the Catholics. But, unfortunately, the wisdom and moderation, which he there manifested, failed, on account of the opposition of the papal legate, to produce the peace which he so earnestly desired; and while the reasonable part of the Catholic party, on this occasion, treated him more highly, he had to endure, from his own party, bitter reproaches, for the steps for effecting a compromise, upon which he had ventured after mature deliberation. The same thing happened to him, when, having been invited to Bonn, in 1548, by the elector Hermann of Cologne, he tried to introduce the elector's plans of reformation in a conciliatory spirit towards the Catholics. Meanwhile, neither Luther, nor any other of his friends, who knew his noble heart and upright piety, ever entertained a doubt of the purity of his intentions, or his fidelity to the gospel.

Much as Melanchthon had to suffer from Luther's vehemence, the friendship of these two noble-spirited men, agreeing in sentiment and belief, remained unbroken till Luther's death, whom Melanchthon lamented with the feelings of a son. A great part of the confidence which Luther had enjoyed, now fell to him. Germany, already called the Holy Roman Empire, and Wittenberg reverend in him its only support, and the restorer of its university, after the Smalcaldic war, during which he fled hither and thither, and spent some time in Weimar. The new elector, Mauricius, also treated him with distinction, and did nothing in religious matters without his advice. But some theologians, who fear might have been the sole heirs of Luther's glory, could not forgive him, that love to Wittenberg had induced him to submit to this prince, who had rendered himself suspected by the whole Lutheran church, and that the Protestants nevertheless persisted in regarding him as one of the pillars of their faith. They attacked his dogmas and raised suspicions of his orthodoxy. Melanchthon had indeed shown, in his negotiations with the Catholics, that many an ancient usage, and even a conditional acknowledgment of the papal authority, did not seem to him so dangerous as to Luther. Moreover, the great approbation of his writings (respecting the presence of Christ in the supper) to the Swiss reformers, was known, and the alteration which he had, in 1550, made in the article of the Augsburg confession concerning the supper, was censured by friend and foe. He also explained the doctrine of justification more definitely, and according to his convictions, as being an article of faith. In the editions of his Loci theologici, and in other public writings, and explicitly avowed his deviation from the Augustine system, by the assertion that the free
MELANCHTHON—MELCHITHAL.

will of man must and could co-operate in his improvement,—as all will perceive who read the works with attention. His habit of continually advancing in his researches, and correcting his opinions, had, unquestionably, a greater share in this change than his natural timidity and love of peace; although, from the last cause, he often used milder language than was agreeable to the rigid Lutherans; but that from fear of man, or a weak spirit of compliance, he ever yielded in any essential point of evangelical truth, cannot be maintained. The introduction of the Augsburg Interim into Saxony, in which, after long deliberation, Melanchthon acquiesced in 1549, under conditions which averted the danger of a relapse into ancient abuses, seemed, to the more zealous, the most fitting occasion of assailing him. The vexatious disputes respecting the greater or less importance of indifferent matters, considered in religious ceremonies, in which he was involved by Flacius; the complaints which Osianner urged against him, in 1557, on account of his doctrine of justification; and, finally, the controversies respecting the co-operation of free will in man's improvement, in which Flacius engaged him shortly before his death, brought great trouble on his over-laboured and sensitive spirit. The investigation of his orthodoxy, which was instituted at Naumburg, in 1554, resulted in his entire justification; but the reconciliation which took place there was, for his part, was, notwithstanding, only apparent, and their opposite, frustrated the last attempt, which he made in 1557, at a convention at Worms, in the name of his party, to produce a compromise with the Catholics. The unity of the church was, therefore, Melanchthon's last wish, when he died at Wittenberg, April 19, 1560, sixty-three years of age.

A son survived him, who inherited the virtues but not the genius of his father, and a daughter, married in Wittenberg. His eldest daughter died in 1547; his wife, in 1557. The over-anxious mind of this good and amiable woman had often saddened his domestic peace; but he was nowhere more amiable than in the bosom of his family. Modesty and humility were exhibited in his bodily appearance. No one, who saw him for the first time, would have recognised the great reformer, in his almost diminutive figure, which always continued meagre, from his abstemiousness and industry. But his high, arched, and open forehead, and his bright, handsome eyes, answered to the type of a good and noble man, which this slight covering enclosed, and which lighted up his countenance when he spoke. In his conversation, pleasingness were intermingled with the most sagacious remarks, and no one left him without having been instructed and pleased. He loved to see society at his table, and was so liberal towards the needy, that he sometimes involved himself in embarrassments. His ready benevolence, which was the fundamental trait of his character, embraced all who approached him. Open and unsuspicious, he always spoke from the heart; pietty, a dignified simplicity, and innocence of manners, generosity and candour, were to him so natural, that it was difficult for him to ascribe opposite qualities to any man; often deceived and abused, he was long in learning the arts and ignoble passions which so often stood in the way of his best intentions. But this unsuspecting, benevolent character, gained him the devoted love of his disciples. From all the countries of Europe, students flocked to Wittenberg in order to ascend the hill around him; and the spirit of profound and impartial investigation which he inculcated, had a beneficial influence long after his death; and his exertions to promote education in general are never to be forgotten. If, therefore, stronger energies and greater deeds must be allowed to other distinguished men of his age, he will always be considered the most amiable, pure, and learned.

MELANGES (French, signifying miscellanies) particularly used in French literature on the titles of miscellaneous works, as Melanges tirés d'une grande Bibliothèque (70 vols., Paris, 1779—1788.)

MELANITE. See Garnet.

MELAS (Greek, black); a word which, entire or abbreviated, appears in many compound words used in English, as melancholy; chiefly, however, scientific terms, botanical, zoological, mineralogical, and medical names.

MELAS; an Austrian general, who, in 1793 and 1794, was employed as major-general, and then as lieutenant field-marshal on the Sambre, and in the country of Treves. In 1795, he was removed to the army of the Rhine, and, in March, 1796, to that of Italy, which he commanded for a short time, and afterwards served under different generals, who succeeded him. In 1798, he was at the head of the Austrian army, which acted in concert with the Russians under Suwarrow. He distinguished himself at the battle of Casasso; was present at those of Trebia and Novi; beat Championnet at Genola (November 3), and took Coni. In 1800, he lost the battle of Marengo. He died in 1807.

MELASSES. See Molasses.

MELCHITUS (q.v.).

MELCHIZEDEK (i. e. king of righteousness) is called, in Genesis (xiv. 18), king of Salem, and priest of the Most High God. He is there said to have offered Abram bread and wine, after the victory of the latter over the four kings, to have blessed him, and to have received tithes of the booty. Jesus is called (Heb. vi. 25; vii. 22) a high priest, after the order of Melchizedek. The meaning of this expression, and the dignity, kingdom, &c., of Melchizedek, are not satisfactorily explained by critics.

MELCHITES (Syrian, Royalists) was the name given, in the sixth and seventh centuries, to those Oriental Christians who, in compliance with the imperial orders, submitted to the decrees of the council of Chalcedon. (q. v.) It was, at a later period, given to the Jacobites in Mesopotamia, and to the Copts in Egypt, who were united with the Roman church.

MELCHITHAL, Arnold of (so called from the place of his residence in the canton of Underwalden), one of the champions of the freedom of Switzerland. The governor of the district, under Albert of Austria, having caused a yoke of oxen to be taken from the plough of Arnold's father, a rich proprietor, the menial of the tyrant added the words, the peasants may drag the plough themselves, if they want bread. Arnold, exasperated by the insult, wounded the servant, and saved himself by flight; but his father experienced the vengeance of the governor, who deprived him of sight. Arnold now conspired with two friends, Furst and Stauffacher, and all three bound themselves by an oath, on a night of November, 1307, at Grutlin (Rutli), on the banks of the lake of Waldstetter (see Lucerne), to effect the deliverance of their country. They promised each in his own canton to defend the cause of the people, and, with the assistance of the communities, to restore it, at every sacrifice, to the enjoyment of its rights. It was expressly agreed not to injure the count of Hapsburg in his possessions and his rights, not to separate from the German empire, and not to pay any dues to the abbeys, or the nobles. They were to avoid, as far as possible, shedding the blood of the territorial officers, since their only object was to secure to themselves and their posterity the freedom inherited from their forefathers. See Switzerland.
MELEAGER—MELITA.

763

MELEAGER; the son of Æneas, king of Calydon; according to some, of Mars and Althea. After the birth of the child, the Parcae came to Althea, and determined his fate. Clotho said that he would be magnanimous, Lachesis that he would be valiant, and Atropos that he should not die until the brand which lay upon the hearth should be immediately snatched from the brand from the fire, and preserved it with the utmost care. Meleager soon distinguished himself as a hero. He accompanied the Argonautic expedition, gained the prize for throwing the discus at the funeral games established by Aeacus, and distinguished himself particularly at the Calydonian hunt. (See Calabria.) He killed the boar, and gave the skin of the animal, as the highest token of regard, to his beloved Althea, who had given the beast the first wound. The brothers of his mother, Idrus, Plexippus and Lynceus, conceiving themselves to have been injured, robbed Althea of the skin, while she was returning home to Arcadia. Meleager, unable to persuade them to restore the skin, slew them all three. Althea, furious with grief for the death of her brothers, seized the fatal brand, and cast it into the fire; upon which Meleager died in great agony. This story is differently told by other writers. Two exceptions of Meleager have come down to us from antiquity.

MELEAGER, a Greek poet, in the first century before the commencement of the Christian era, a native of Gadara in Syria, and a resident at Tyre, died in the isle of Cos, whither he had removed in the latter part of his life. His compositions, consisting of short pieces, or epigrams, are among the most beautiful relics preserved in the Grecian Anthology (q. v.), and, in the simple elegance of their style and sentiment, are finely contrasted with the productions of more recent bards in the same collection. Some of the verses of Meleager have been translated into English by the reverend R. Blund and others, in Selections from the Anthology.

MELEA, or MELITA; a small island of the Adriatic, on the coast of Dalmatia; lon. 17° 30' E; lat. 42° 45' N. From 1822 to 1825, loud explosions were repeatedly heard on the island, attended with a violent concussive sensation, and supposed to be occasioned by the escape of an underground spring, or by discharges of some kind of gas formed in the interior of the earth. (See Parthey's Account (in German, Vienna, 1826.) Some writers consider it the place of St Paul's shipwreck. See Melita.

MELETIANS; the followers of Melitius, bishop of Lyconpolis, in Egypt, who, in the year 306, during the persecution under Diocletian, had a dispute with Peter, bishop of Alexandria, on the subject of the re-admission of some lapsed Christians, whom he (Melitius) rejected. Melitius was deposed by Peter, but paid no attention to the sentence, and even assumed the right of consigning prebendaries, which, by the laws of Egypt, belonged only to the bishop of Alexandria. His gravity and eloquence drew many to his party. The dissensions thereby caused among the Egyptian clergy lasted, even after the council of Nice had forbidden Melitius to exercise the episcopal duties, till almost the end of the fourth century. Cathedral, with slight variations, Arians against the party of the orthodox Athanasius, bishop of Alexandria, but without adopting their heresy. Schisms of the same name arose at Antioch, when Melitius of Melitene, in Armenia, was chosen bishop (360) by the Arians, and was afterwards driven away from his see. Those who considered him as the true bishop, and adhered to him alone, when he returned in the reign of Julian, were called Melitians. At his death, which took place in the year 381, this name was discontinued; yet the dissensions of the church at Antioch did not cease till a later date. The Roman and Greek churches reckon this Melitians among their saints.

MELICER, MELICERTES, or MELEGERUS; son of Io, or Leucotea, who being executed by Juno, leapt into the sea. (See Io, and Althanu.) Melicertes was changed into a sea-god, and received the name of Palemon. Sailors revered him as their protector, who carried their shattered ships safely into port, whence he was called Fortunatus (q. v.) by the Romans. He is commonly represented with a large blue beard, a key in his hand, or hauling over his shoulder, and swimming. The chief deities of the sea are described riding in a chariot. In many seaport towns, temples were erected in honour of him, and, on the island of Tenedos, children were offered to him.

MELOLOT (melilotus officinalis); a leguminous plant, somewhat resembling clover, and formerly referred to that genus. It is a native of Europe, and is now naturalized in some parts of the United States. The root is biennial, and gives out one or several stems, which attain the height of one or two feet, and are provided with trifoliate leaves; the leaflets are serrated on the margin, and the flowers are small, themowes, pale yellow, and are disposed in long racemes in the axils of the superior leaves; they are succeeded by an almost globular pod, containing a solitary seed. When fresh, the plant has a slight odour, which becomes stronger, and very pleasant, after it has been dried. It seems to render hay more agreeable to the taste of cattle, who, in general, and more especially sheep and goats, are very fond of it. It is adapted to every kind of soil, but, in general, is not cultivated separately. The celebrated Gruyere cheese is said to owe its excellence partly to the flowers and seeds of this plant, which are bruised and mixed with the curd.

MELINDA; a kingdom of Zanguebar, on the eastern coast of Africa, in the Indian ocean, having the kingdom of Magadox on the north, and that of Zanzibar on the south. Little is known of the country, except its sea-coast. The mass of the population is composed of natives of the country, but the chief and principal people are Arabs. Melinda, the capital, is situated on the Indian ocean, in lat. 3° 15' S., lon. 40° 5' E. It is large, well built, and contains a great number of mosques. Its commerce is considerable, and is in the hands of Asians, being rarely visited by Europeans. The exports are gold, copper, iron, and wax; provisions are abundant, and easily obtained. Vasco de Gama was well received here, but the arrogance of the Portuguese soon became insupportable to the inhabitants; a war ensued, and the city was captured by the Portuguese, who retained possession of it till 1698, when it was retaken by the Arabs.

MELISSUS, son of Ithagone, and a native of Samos, flourished about 444 B.C. He is distinguished in the history of his country as a statesman and naval commander. As a philosopher, he is considered as belonging to the Eleatic (q. v.) school; he differed from Parmenides in many points, by developing the Eleatic system with still stricter consistency. Parmenides allowed credit to experience obtained through the senses; Melissus represented all existence as one eternal, unlimited, and immutable, yet material being, and rejected the experience obtained through the senses; he also maintained that nothing could be known, with certainty, respecting the gods.

MELITA. It is related in the Acts of the Apostles, that Paul, on his voyage to Rome, was cast
away on the island of Melita. This has generally been considered to be the island of Malta, the ancient name of which was *Melita*; but some critics have attempted to prove that it was an island on the coast of Dalmatia, in the Adriatic. See *Paul, Melodia, and Melodeon*. 

*MELITIC ACID*; discovered by Klaproth in the mellite, or honey stone. It is procured by reducing the mellite to powder, and boiling it with about seventy-two times its weight of water; the alumine is precipitated in the form of flakes, and the acid combines with the water. By filtration and evaporation, crystals are deposited, in the form of fine needles, or in small, short prisms. It is composed of carbon, hydrogen, and oxygen. In combination with the earthy alkalies and metallic oxides, it forms compounds called *mellates*.

*MELMOTH, WILLIAM*, son of an eminent advocate, author of a work entitled *The Great Importance of a Religious Life*, was born in 1710, and received a liberal education, but does not appear to have studied at either of the ancient universities. He was admitted to the bar, and, in 1756, received the appointment of commissioner of bankrupts, but passed the chief part of his life in literary retirement at Shrewsbury and Bath. He first appeared as a writer about 1742, in a volume of Letters, under the name of *Fitzzaborne*, which have been much admired for the elegance of their style, and their calm and liberal remarks on various topics, moral and literary. In 1757, this production was followed by a translation of the Letters of Pliny the younger (in 2 vols. 8vo), which has been regarded as one of the happiest versions of a Latin author in the English language, although somewhat enfeebled by a desire to give a literal rendering, like the calamine. There was, also, the translator of Cicero's treaties *De Amicitia* and *De Senectute*. These he enriched with remarks, literary and philosophical, in refutation of the opposing opinions of lord Shaftesbury and Soame Jenyns, the first of whom maintained that the non-existence of any precept in favour of friendship was a defect in the Christian system, while the second held that very circumstance to form a proof of its divine origin. His last work was memoirs of his father, under the title of *Memoirs of a late eminent Advocate and Member of Lincoln's Inn*. Mr Melmoth died at Bath, in 1799, at the age of eighty-nine.

*MELO-DRAMA* (from the Greek μῦθος, song, and δράμα); a short, half-musical drama, or that species of drama in which the declaration of certain passages is interrupted by music. It is called *monodrama* if but one person acts, *duodrama* if two act. It differs from the opera and operetta in this, that the persons do not sing, but declaim, and the music only fills the pauses, either preparing or continuing the feelings expressed by the actors. Generally, the subject is grave or passionate. The German melo-drama is of a lyrical character, with comparatively little action. Objections have been made to it on this ground, that it affords too little variety; that the music only renders it more monotonous, because it expresses only the feeling or passion already expressed in words; that the course of feeling is interrupted by the music; and that the actor is embarrassed during the music, being obliged to fill the pause in his recitation by pantomimic action. The first idea of a melo-drama was given by J. J. Rousseau, in his *Pygmalion*. The proper inventor of the idea of melo-drama, however, was a German actor named Brandes, who wished to prepare a brilliant part for his wife, who excelled in the declamation of lyric poetry. Brandes arranged a cantate of *Gerstenberg*, after the fashion of *Pygmalion*. G. Benda (q. v.) composed the music for it. This kind of performance met with general applause, and Goeller wrote his *Melodie*; others followed. But the interest in these pieces was not of long continuance, because of the want of action. In modern times, some ballads, (for instance, of Schiller) have been set to music, in a melo-dramatic way. Parts of operas have been, likewise, composed in this way, as, for instance, the scene of incarceration in Weber's *Freischütz*, and some scenes in the *Preciosa*, by the same. Schlegel, in his *Lectures on Dramatic Art and Literature*, says, "Under melo-drama, the French do not understand, like the Germans, a play, in which monologues alternate with instrumental music in the pauses, but a drama in high flown prose, representing some strange, romantic scene, with suitable decorations and machinery." Such was its character from 1790 to 1820, and this sort of exhibition became popular, also, in other countries. On the inclination for it something better might be built, for most melo-dramas are tasteless and extravagant. The new melo-dramas, which have proceeded from the boulevards in Paris, are rude dramas; music is interspersed, now and then, in order to heighten the effect.

*MELODY*; in the most general sense of the word, any successive connexion or series of tones; in a more narrow sense, a series of tones which please the ear by their succession and variety; and, in a still narrower sense, the particular air or tune of a musical piece. By melody, in its general, musical sense, the composer strives to express particular states of feeling or disposition, which, in pieces of several voices, is chiefly effected by the principal melody, or chief voice, to which the other voices, with their melodies, are subordinate. The elements by which melody is characterized are: the motion of the tones, the variety of feelings and emotions, by means of the melodic connexion of tones, are the variety of tones in themselves, and the variety of transitions from one tone to another, to which is still to be added the variety of the movements in which music proceeds (rhythm). Melody and rhythm are the true means to awaken delight, and where they are wanting, the greatest purity of harmony remains without effect. The proper essence of melody consists in expression. It has always to express some internal emotion, and every one who hears it, and is able to understand the language, must understand the feeling expressed. But as melody, in the hands of the composer, is a work of art that is, it is not the result of any other work of art, it should form a whole, in which the various means are combined to produce one

---

*In regard to the relative importance of melody and harmony, we may observe, that it is in vain to talk of such things as harmony and melody as more or less important, since an impartial judgment acknowledges the necessity of both, although they cannot be separated from the being the qualities, feelings expressed by the actors. Generally, the subject is grave or passionate. The German melo-drama is of a lyrical character, with comparatively little action. Objections have been made to it on this ground, that it affords too little variety; that the music only renders it more monotonous, because it expresses only the feeling or passion already expressed in words; that the course of feeling is interrupted by the music; and that the actor is embarrassed during the music, being obliged to fill the pause in his recitation by pantomimic action. The first idea of a melo-drama was given by J. J. Rousseau, in his *Pygmalion*. The proper inventor of the idea of melo-drama, however, was a German actor named Brandes, who wished to prepare a brilliant part for his wife, who excelled in the declamation of lyric poetry. Brandes arranged a cantate of *Gerstenberg*, after the fashion of *Pygmalion*. G. Benda (q. v.) composed the music for it. This kind of performance met with general applause, and Goeller wrote his *Melodie*; others followed. But the interest in these pieces was not of long continuance, because of the want of action. In modern times, some ballads, (for instance, of Schiller) have been set to music, in a melo-dramatic way. Parts of operas have been, likewise, composed in this way, as, for instance, the scene of incarceration in Weber's *Freischütz*, and some scenes in the *Preciosa*, by the same. Schlegel, in his *Lectures on Dramatic Art and Literature*, says, "Under melo-drama, the French do not understand, like the Germans, a play, in which monologues alternate with instrumental music in the pauses, but a drama in high flown prose, representing some strange, romantic scene, with suitable decorations and machinery." Such was its character from 1790 to 1820, and this sort of exhibition became popular, also, in other countries. On the inclination for it something better might be built, for most melo-dramas are tasteless and extravagant. The new melo-dramas, which have proceeded from the boulevards in Paris, are rude dramas; music is interspersed, now and then, in order to heighten the effect. Melody and rhythm are the true means to awaken delight, and where they are wanting, the greatest purity of harmony remains without effect. The proper essence of melody consists in expression. It has always to express some internal emotion, and every one who hears it, and is able to understand the language, must understand the feeling expressed. But as melody, in the hands of the composer, is a work of art that is, it is not the result of any other work of art, it should form a whole, in which the various means are combined to produce one
effect. This whole must be such that the hearer is kept constantly interested, and can give himself up, with pleasure, to the impressions which he receives. The particular qualities of a good melody are these:

— It is indispensable that it should have one chief and fundamental tone, which shall remain predominant by a variation adapted to the expression. This can be effected only by letting the tones proceed according to a certain scale; otherwise there would be no connexion between them. The chief tone, again, must be appropriate to the general idea to be expressed, because every kind of tone has its own characteristic emotions and movements, and the better he will always discover the tone wanted. In very short melodies, or tunes, consisting merely of a few chief passages, the same fundamental tone may remain throughout, or perhaps pass over into its dominant; but longer pieces require change of tone, that the harmony also may receive modifications according to the feeling. Thirdly, a good melody requires rhythm. A regular advance from one part to another, whether in music or motion (dancing), affects the mind agreeably, whilst irregular progress fatigue the love of rhythm is one of the most general feelings of human nature. We find rhythm everywhere, and it is equally indispensable to tunes without regularity of measure would distress and weary. Hence music is divided into portions or bars; these, again, are divided so as to prevent monotony, without disturbing the general regularity. Accents are given to certain parts, and it is possible greatly to assist the expression of feeling, by slow or quick, gay or solemn movements, and by the variety of accents, and the even or uneven time. Much might be said respecting the skill of the composer to adapt his music, not only, in general, to the idea to be expressed, but also, in song, to the single words, to the pause, which the hearer wishes here, or the speedy movement, which he desires in other places; the necessity of the repetition of words, if the feeling is long and varied, while the word is short; the childish impro priety of representing, as it were by imitative sounds, the ideas presented by particular words, which is much the same as if a deaf-mute were to try to express the emotions of a poet, the tumults of the sea, or the dreams of the god himself, were to endeavour to represent the roaring of the waves; the parts where dissonances are admissible, &c.; but it would carry us much beyond our limits.

MELOE. These insects have the elytra, or wing covers, short, extending about half the length of the body; the antennae, or feelers, are joined, of which the middle divisions are the largest. They are slow and heavy in their motions, and have a large head. They feed on the leaves and flowers of different vegetables. They do not occur in as large numbers as some of the genera closely allied to them, viz., Cachuitaria and Lyda, but have in common with these insects, the property of blustering the human skin. Linaeus included the well-known and valuable Spanish fly in this genus; but it was very properly separated from it by Fabricius, and placed in the genus Cantharis, of which it forms the type. (See Cantharis.) These insects emit an iridescent, yellowish, or reddish liquid, from some of the joints of their feet. In some parts of Spain, they are used in place of the cantharides, or mixed with them. Mr Latreille is of opinion that these are the insects spoken of by ancient writers, under the name Bupresias, and which they considered as very injurious to cattle, and as often causing their death when swallowed with their food. The M. pruinae, which is a native of Europe, exudes a large quantity of a fat, oily matter, which has been highly recommended as a stimulating application to poisoned wounds. There are many species of this genus found in the United States of America, the largest of which is the M. purpureus. Mr Say has described many of them in the Journal of the Academy of Natural Science, to which we refer for detailed accounts of them. As these insects possess the property to a considerable degree, they might, where they occur in sufficient quantities, form a very good substitute for the cantharides of the shops.

MELOM. The musk-melon is the product of the cucurbit melo, a rough, trailing, herbaceous plant, having rounded, angular leaves, and star-shaped flowers. Through originally from the warmer parts of Asia, its annual root and rapid growth enable it to be cultivated in the short summers of northern climates; but the flavour of the fruit is much heightened by exposure to a hot sun. The form of the fruit is, in general, oval, but varies exceedingly in the different varieties, which are very numerous. In some, the external surface is smooth; in others, rugged or netted, or divided into segments by longitudinal grooves. The odour of the fruit is delightful. The flesh is usually yellow, and has a sugary and delicious taste. It has been cultivated in Europe from time immemorial.

The water-melon is the product of the C. citrullus, a vine somewhat resembling the preceding, but having the leaves deeply divided into lobes. It is smooth, roundish, often a foot and a half in length, and has a thin, green rind. The seeds are black or red. The flesh is usually reddish, sometimes white, icy, and has a sugary taste; it melts in the mouth, and is extremely refreshing. It is cultivated to a great extent, in all warm countries of both continents, and even in high northern latitudes. It serves the Egyptians for meat and drink, and is the only medicine used by them in fevers. These two plants, together with the cucumber, gourd, &c., belong to the natural family cucurbitaceae.

MELOS (now Milo); an island of the Egean sea, about sixty square miles in extent, with about 500 inhabitants. The island has a wild, uncultivated appearance, sulphurous springs abound, and volcanic exhalations burst from the rocky and sterile soil. Oil, wine, and oranges, melons (which derive their name from the island), figs, &c., are produced. Lon. 24° 22' E.; Int. 36° 40' N. The chief town, Milo (formerly Melos), is now occupied by only forty families. In 1814, baron von Halter discovered on the site of the ancient city, an amphitheatre of marble, with numerous fragments of statues and columns, which were bought by the present king of Bavaria. In the vicinity, a Greek peasant has since found (1820), a statue of Venus, with three Hermes, figures three feet high, which were bought by the marquis de la Riviere, French ambassador at Constantinople, and are now in the royal museum at Paris. The Venus is of the finest Parian marble (Grechetto), to which the colour of ivory has been given; it is called by the Parisian amateurs, la Feme de Torse. Though much injured, the head is not separated from the body. As she held the apple, she was a Venus victrix; and she appears to have been modelled after the naked Venus of Praxiteles. See Clarac's and de Quincy's Descriptions (Paris, 1821); others have supposed it to be a statue of Electra. See Venus.

MELOPONE; one of the Muses, daughter of Jupiter and Mnemosyne. She presided over tragedy. Horace has addressed the finest of his odes to her, as to the patroness of the tragic muse, represented as a young woman with a serious countenance. Her garments were splendid; she wore a buskin, and held a dagger in one hand, and in the other a sceptre and crowns.
MELROSE, the name of a parish and village in Roxburghshire, Scotland. The parish is about seven miles in length, and five in breadth, and is distinguished for fertility and fertility. Population 1831, 4,539. The village (distant from Edinburgh thirty-five miles south), is small, and derives its main importance from the ruins of the celebrated abbey of Melrose, situated in its vicinity. Melrose abbey is, on all hands, admitted to be the most beautiful of all the ecclesiastical ruins in the island. It was built by King David in 1136. The public buildings were particularly drawn to it by Sir Walter Scott, in his Lay of the Last Minstrel, and it has since become a favourite subject of the poet, the painter, and the tourist.

MELUN (Melodunum); an ancient city of France, on the Seine, nine leagues from Paris; lat. 48° 20' N.; lon. 2° 30' E. It has some manufactures, and three annual fairs; population, 7,250. The Seine, here forms an island, and is crossed by two stone bridges, one of which has an arch of 169 feet ten inches span, and fourteen feet ten inches high. Louis XIV. and his court resided here some time during the winter. Abelard established his school here in the twelfth century.

MELUSINA; a well-known personage in the fairy world; according to some, a kind of female siren, according to others, the daughter of a king of Albania, and a fairy. Paracelsus makes her a nymph. She is generally considered a powerful fairy, who married a prince of the house of Lusignan. She was, like most fairies of her time, obliged, on certain days of the month, to take the shape of a fish, at least in respect to half her body; she had, therefore, strictly enjoined the prince, her husband, with whom she lived most happily in the castle of Lusignan, to leave her alone on such days, and not to dare to look at her. The prince, however, like other mortals, was curious, entered her chamber on one of the forbidden days, and saw her in her state of metamorphosis. She immediately uttered a shriek, and disappeared; but ever after, when an important death was about to take place in the family of Lusignan, and when they became related to the kings of France, also in the royal family, she appeared in a mourning dress, on a lofty tower of the castle, until, at last, this tower was demolished, in 1574, by order of the duke de Montpensier, which she strove in vain to prevent, by frequent apparitions. Various versions of this story exist.

MELVILLE, Sir James, a statesman and historian, was born at Hall-hill, in Fifeshire, in 1530; and, at the age of fourteen, became page to Mary, queen of Scots, then wife to the dauphin of France. After having travelled and visited the court of the elector palatine, with whom he remained three years, on the accession of Mary to the throne of Scotland, Melvil followed her, and was made privy counsellor and gentleman of the bed-chamber, and continued her confidential servant until her imprisonment in Loch-leven castle. He was sent to the court of Elizabeth, and maintained correspondences in England in favour of Mary's succession to the English crown. He died in 1606. He left a historical work in manuscript, which was published in 1683, under the title of Memoirs of Sir James Melvil, of Hall-hill, containing an impartial Account of the most remarkable Affairs of State during the last Age.

MELVILLE, some of the ISLANDS of the Antarctic sea; one of the north-Georgia group, between 74° and 76° 50' N., lat., and 105° 40' and 113° 40' W. lon. It is surrounded with enormous masses of ice, and the only vegetation is moss. Captain Parry discovered it in 1819, and passed the winter of 1819-20 there. Its only inhabitant in winter is the white bear. See Polar Seas.

Melville is also the name given to an island of the Indian ocean, near the northern coast of New Holland; lat. 11° 30' S.; lon. 139° 40' E. It was discovered by captain King, in 1818, and, in 1824, the British government formed a colony there, for the purpose of establishing commercial relations with the Malays. The settlement received the name of King's cove, and the harbour that of Port Cockburn.

MEMEIL; the most northern town of Prussia, at the mouth of the Dange, on the Kursiche Half; lat. 55° 40' 25" N.; population 8400, engaged in ship-building, manufactures, and commerce. The harbour is good, safe, and strongly fortified. About 600 ships enter and leave it yearly. Its exports are corn, hemp, skins, with flax seed and wood from Lithuania.

MEMEIL, See Niemen.

MEMMON, according to fable, was the son of Tithonus and Aurora, and the brother of Emunth. According to some, he was king of Ethiopia, according to others, of the Assyrians. He built a splendid palace and a labyrinth at Abijlos, in Egypt, and another palace at Susa, in Persia, which city he received from the Shah. After the expiration of Memnon, the king of Troy, induced him by the present of a golden vine, to come to his assistance against the Greeks. He performed many valiant exploits, and wounded Achilles himself, by whom he was finally killed. Jupiter, being requested by Aurora to honour her son with some peculiar mark of distinction, caused an innumerable crowd of birds to arise from his ashes (Memnonides), which annually returned to his grave, and fought with each other, thus solemnizing, as it were, funeral games in honour of his memory. After his death, he was worshipped as a hero. At Thebes, on the left bank of the Nile, in the ruins of the Memnonium (palace of Memnon), are still to be seen the remains of colossal statues of Memnon. One of these uttered a joyful sound when the sun rose and shone upon it, but when the sun set, the sound was mournful. It is also related, that it shed tears, and gave out oracular responses in seven verses. This sound was heard till the fourth century after Christ. Descriptions of this sounding statue, and accounts of the sounds heard, are to be found in the works of Pausanias and Strabo, and among modern authors, in those of Pococke and Norden. There have been many hypotheses concerning its nature, and also concerning the story of Memnon. Bottiger, in his Prints (vol. ii. p. 36), suggests that Memmon and Phamenophis were the same, and that the statue of Memnon represents a hero worshipping the sun, a king or priest saluting the god. Belzoni deposited in the British museum, in 1818, the head of such a statue of Memnon, which is called the younger Memnon.

MEMOIRS, Historical, are writings in which a person sketches the events experienced and witnessed by himself to furnish matter for his own reflection. They differ from a complete history or chronicle in the limited nature of their subject, treating only of particular events or persons; their authors, too, have either taken part, personally, in the scenes described, or have been connected with the actors so intimately as to have derived their information from the most trustworthy sources. We are not to expect from them the same precision of arrangement and style which is required in a regular history. They are, however, more valuable in proportion as this license is not abused, and the relation is easy without being negligent. They furnish the inquirer with interesting individual anecdotes, often expose the most secret, motives, disclose the whole character of events, which are often barely mentioned, entirely omitted, or merely hinted at with
a timid circumspection, in books of general history, develop details of secret plots and projects, of which the result only is noticed in history, and, under certain limitations, they are entitled to a high degree of credit. They are no less interesting on account of shaping for the bottom of the historian's mind, in manner of relating events, even supposing his views to be partial, limited, and affected by party prejudices. These qualities give them an advantage over other kinds of historical writings, since they satisfy the mere reader for amusement, as well as the student; the one by the pleasing negligence of their manner, and the other by the forcible display of their spirit. It must be acknowledged, that to the latter, the historical criticism of them is a difficult task. Xenophon's Anabasis, and Caesar's accounts of his campaigns (Commentaries) are generally considered as the oldest memoirs. But France is the native soil of mémoires, in the historical literature of which country they form a national peculiarity, and where, since the end of the fifteenth century, they have been continually becoming more numerous. The memoirs of Philip de Comines, Brantome, Sully, Joinville, and cardinal de Retz (see these articles, and French Literature) deserve particular notice. The memoirs of Sir Henry Wotton, the lord diplomatist, from 1513 to 1516 (Paris, 1509, folio, edited in a modernized form, by Lambert, Paris, 1753, 7 vols.), are distinguished for vigorous delineation and the national feeling which they display. Blaise de Monluc, in his memoirs, 1521-69, called, by Henry IV., the soldier's bible (Paris, 1744, 4 vols., 12mo), is no less frank in revealing his own faults than in commending his own virtues; lively and striking description is blended with the brevity of an old soldier. Michel de Castelnau is distinguished for the highest political honesty, for the soundness, maturity, and clearness of his judgment, as much as for his dignified and tranquil manner (Memoirs, 1520-70, Brussels, 1731, 3 vols. folio). Margaret of Valois, the wife of Henry IV., relates the history of her youth (1561-81) with much, although somewhat artificial elegance and feminine adroitness, but at the same time, evident good nature (Hague, 1715, 2 vols.). Annales de Henri IV. (_amended, and published by the national government, 1719-20_, 3 vols. folio), with all his partiality, his effrontery, his freedom bordering on calumnies, and his far-fetched and often unintelligible expressions, is an author of great importance for the history of his times, but must be consulted with caution. Rochefoucault, a nobleman of the acutest wit, and a deep knowledge of human nature, who described the disturbances of the Fronde (1648-52) with the hand of a master, has, notwithstanding his obvious partiality, great clearness and sagacity in narrating and developing events, furnishes admirable portraits of the principal personages described, and is distinguished for animation and natural colouring. His style (which is often, with little propriety, compared to that of Tacitus) is plain, manly, and sententious, and his language pure, measured, and concise (Trevoux, 1754, 2 vols., 12mo; Paris, 1804, 18mo). Among the other numerous French memoirs, those of D'Etrées, De Brienne, De Torcy, and Mouton are of especial interest for diplomatists. We may mention also those of St Simon, Duclos, and Madame D'Epinay. To these may be added also the works of the Abbé Soulavie; the Confessions of Jean Jacques Rousseau; the Correspondence of Grimm and of La Harpe; the Diary of Bachaumont; the Considerations of Madame de Genlis; the Memoirs on Suard and the eighteenth century; the Mémoires of Madame Laroche Jaquelin, &c. Within a few years there have been begun in Paris four great collections of memoirs, which are of high importance for libraries and collectors; the first is Collection complète des Mémoires relatifs à L'Histoire de France depuis le Règne de Philippe Auguste jusqu'au Commencement du dix septième Siècle; avec des Notes sur chaque Auteur et des Observations sur chaque Ouvrage (Paris, 1783-93), which collection consists of forty-two volumes, and is completed. The second is a sequel and continuation of the preceding, under the title of Collection, etc. depuis l'Avènement de Henri IV., jusqu'à la Paix de Paris, conçue en 1703, and is also arranged and edited by Petitot. The twenty-third volume of this second series appeared in 1793, and Petitot has established these two collections with the greatest typographical accuracy. The third is a collection of memoirs, published and unpublished, relating to the French revolution. This collection, edited by Berville and Barrière, may be regarded as a chef d'œuvre of its kind. Each work is preceded by a life of the author; the very correct text is accompanied by explanatory, supplementary, and critical notes, and at the close are generally the pièces justificatives, selected and arranged with great judgment and accuracy. This collection is to consist of the memoirs of Madame Roland, the marquis of Ferrières, D'Anguier, Dumas, D'Etrees, Cice, Comtesse de Membris, de Besenval, Bailly, Rabaud de St Etienne, Moutier, the marquis of Lully-Tollendal, the marquis of Rochembeau, Riouffe, Rivarol, Louvet, general Puisaye, the marquis of Montesquieu, Camille Desmoulins, St Just, Necker, Clery, Mallet du Pan, Barcaroux, Feron, Garat, general Duppe, Beaumarchais, Ramel, Aymé, Marmontel, Phelippeau, Antonelle, Courtisot, Dumouriez, madame Campon, Morellet, and many others. The fourth collection contains memoirs of the British revolution, translated and edited by Guizot. This collection is also conducted with great judgment, accompanied with introductions, notes, and documents, and deserves a place in every large library. It consists of twenty-five volumes, containing the memoirs of Thomas May, or the history of the Long Parliament, those of Sir Philip Warrick, who flourished in the reign of Charles I., Sir John Berkley, Thomas Herbert, Sir John Fulwe (Huntingdon), Sir John Holles, Sir Edward Dohm, lord Clarendon, Burnet, Temple, Reresby, and others. In German, works of this description are very rare. Among the most interesting of these are memoirs of the margrave of Bayreuth, the sister of Frederic the Great, herself, Histoire de mon Temps (History of my own Times), &c. Dohm's highly valuable Memoirs are of a different class from those of which we treat here, consisting of a series of historical treatises upon the events of our times, in which Dohm has taken more or less part, or respecting which he has made investigations. The banishment of Napoleon to St Helena, and his subsequent death, have given rise to the publication of many works of this sort, from which we have obtained valuable accounts of the most important occurrences and most prominent characters of our times. (See the works mentioned in the article Napoleon.) Among the British works of this description, we may mention Burnet's Memoirs of his own Times; Pepys's Memoirs, comprising his Diary, from 1659 to 1669; Evelyn's Memoirs, comprising his Diary from 1641 to 1705—6; Horace Walpole's Memoirs of the last four reigns of the Stuarts, from 1688 to 1731 (1671 to 1731); Life of Edward, Lord Herbert of Cherbury; Melville's Memoirs relating to the Reigns of Queen Elizabeth, Mary, Queen of Scots, and James I; Lilly's Life and Times, from
1629 to 1681; Memoirs of Gilbert Wakefield; Clar- eman's Life; Life of Richard Watson, Bishop of Lin- dad; Memoirs of William Hayley,—all written by the names they bear. Among the American works of this class are Winthrop's Jour- nal; Mather's Magnalia; Memoirs of R. H. Lee; of Josiah Quincy, Jun., &c.; Jefferson's posthumous works contain much information respecting the writer's times. Short literary treatises, especially those papers read before literary societies, are also called memoirs. The Mémoires de l'Académie des Inscripti ons et Belles-lettres (Memoirs of the Academy of Inscriptions and Belles-lettres), and other collections of this description, are well known.

MEMORIAL; in general, whatever serves to preserve the memory of any thing; also a written representation; e. g. state papers, in which the usual forms, or most of them, especially sealing, are wanting. They are much used in the negotiations of ministers, sometimes in the replies and resolutions of sovereigns, for the purpose of avoiding all disputes in regard to rank and ceremonies. There are three sorts: Ist. those containing an address, di- rected to a person; 2d. those which contain an address in the first person, and the second person is used of the individual addressee (memorials in the form of let- ters); 3d. those which also contain an address, date, and signature, but in which the writer speaks of him- self in the third person (memorials proper); 3d. those which contain no address, and often no signature, and in which the different persons are both spoken of in the third person (notes). These papers are either written and delivered by the court or by the minister. To the former belong (a.) cir- culars to the diplomatic corps, that is, to the foreign agents residing at a court, communicating or re- questing information, commonly with the signature of the secretary of foreign affairs; also (b.) the answer of a court to the memorial of an ambas- sor; (c.) notes to a foreign cabinet, or to a foreign ambassador, to be transmitted with a memo- rial to his cabinet. The communications of ambas- sadors to the courts at which they reside, are gener- ally called memorials; sometimes mere notes; letters are no longer in use.

MEMORY; that faculty of the mind which re- ceives ideas presented to the understanding, retains them, and exhibits them again. Its power of recall- ing ideas is sometimes exercised with, sometimes without, an act of volition. Its strength may be greatly increased by just ideas and good information. Memory is so prominent a faculty of the human mind, so necessary, both in the most common transactions and the highest pursuits of life, so curious in its phenomena, and, at times, so capricious, that it formed, even at a very early period, a subject of philosophical re- search; and, to a certain degree, more is known about it than about any other faculty; but, beyond this point, it is as incomprehensible as the other powers. It is easy to talk of the memory in meta- phors, to speak of impressions on the mind, store- house of ideas, recalling ideas, &c.; but what is this impression? where is it made? and what does the word signify, as applied to the mind? It is only a metaphor, taken from the physical world, to illustrate an act of the mind, which we can only represent, figuratively, and reasoning on this assumption is but a petitio principii. Without memory, the whole animal world would be reduced to a kind of vegeta- tive life, such as we observe in the lowest classes of animals, because any variety of action presupposes memory. Memory embraces all ideas received from the senses, as well as those of an abstract character; all feelings and emotions. The power of memory, in regard to ideas received from the senses, sometimes happens to be stronger in regard to the second sight. We are able to remember a temple, a picture, a landscape, a face, with great clearness and truth. The ideas of sounds are, also, very strongly retained, the memory of them being more perfect in proportion as the sense of hearing is more nice. Music may be remembered very distinctly. It is not so with the three other senses, smell, feeling, and taste. The ideas received through these senses, it would appear, cannot be remembered with the same liveliness. It is difficult to recall, with much distinc- tness, the pain of a wound; we usually retain little more than the general idea of suffering. So particular tastes are not easily recalled. Exercise, indeed, may give the memory considerable power even over these ideas. The taste of his favourite dishes dwells in the mind of the gourmand, and, without making pretensions to gourmanderie, a man may remember, with some distinctness, the flavour of a cuvass-back duck. The impressions of smell are still stronger, but are not so durable; yet even, though the unaided memory does not easily recall ideas received from the senses, yet when ex- tremal means of comparison are presented, they are immediately revived. If we smell a flower in this spring, we recollect, at once distinctly, the smell of the same flower in the last spring, and that no other flower has the same charming confused flower, and the different flowers of its kind. So with taste. These phenomena are easily explainable, from the fact that the ideas presented by sight and hearing, the two nobler senses, admit most readily of abstraction, and are, therefore, most easily repro- duced in the mind, without the physical aid of com- parison. Considerations, suggestions, and ideas are sometimes curiously associated with others, so that the recurrence of the first immediately suggests the second. The cases are more striking, of course, in proportion as the organs are more acute. If, for instance, any thing very agreeable, or disagreeable, happens to a man at the very moment of hearing a peculiar sound, or seeing a certain object, or tasting a peculiar food, the recurrence of this sound or taste, involuntarily awakens, in some organizations, an agreeable or disagreeable feeling. The writer can testify from experience, that the effect is some- times so instantaneous as to prevent the cause from being recognised till after considerable reflection. Considerations, suggestions, and ideas are sometimes presented through the senses, and how necessary it is that we should readily remember them, to avoid the necessity of moving constantly in the same circle, it is of the greatest importance that our senses should be active, means which would seem most naturally to emanate from Instinct, as the flying of fable beasts at the approach of stronger ones, appear not to be instinctive. Captain Clapperton found the cranes in the interior of Africa so tame that they showed not the slightest fear. Mr. de Bougainville found the bears and foxes devoured by a bear which he had captured on the Falkland Islands, and the birds allowed themselves to be taken by hand. Similar facts are reported by lieutenant Paulding (in his Cruise of the Dolphin, New York, 1831), and many other travellers. It would appear, then, that the fear apparently natural to many animals is not so, but that, finding themselves attacked, they have remembered the fact at the next approach of their enemy, and, by degrees, contracted their timorous habits, which they first acquired during acustom's habit. We recog- nized, indeed, observation would seem to warrant us in attributing a similar power not merely to the second sight, even the power of combining ideas to produce results. If, for instance, my dog sees, from my motions, that I am about to take a walk, and, after nothing has been done to me, steals quietly out of the room, and awaits me at a certain corner which I generally pass on my walks, with my dog or my animal, as it seems to be the memory, but also the instinct of drawing conclusions from what he recollects.

§ Pain, which is often associated with the nobler senses, may be retained with considerable distinctness, as the discords which offend a musical ear, or the sharp grating of a hard- pointed slate pencil on a slate, which offends every ear.
...and discriminating, which, undoubtedly, depends, in a great measure, upon their original organization; but they are susceptible of great improvement by exercise; and it is to be lamented that this point is so much neglected in the case of most children educated in populous cities. How dull are their lessons allowed to treat of public affairs and the impressions they give! The importance of strengthening the memory, by direct exercise of its powers, is undoubtedly great, and we may be allowed to say a few words respecting what we conceive to be a popular error at the present time. It is constantly repeated that the poets and orators of Greece and Rome are the development of the intellect, and that mere learning by heart tends to bummb the active powers; the consequence of which has been that the strengthening of memory is, generally speaking, much neglected. The suggestion is undoubtedly true, to a certain extent, and it would be well if we were ever, in some particulars, more consistently than it is. The system of recitation, for instance, whereby the repetition of the words of an author is substituted for an understanding of his meaning, is carried to an injurious extent in the United States of America and in Britain. In all branches of study where the great object is that the student should be equipped for himself, as in history, geography, natural philosophy, &c., the mere committing and reciting stated lessons cannot fail to be injurious; but, on the other land, memory is a most important instrument both for the business of life and for self-improvement; and, certainly, it is one of the chief objects of education to perfect an instrument which is capable of being strengthened by exercise almost beyond conception. Such exercise, however, is generally neglected, in the present systems of education. The books of reference which now abound make strong powers of memory apparently less necessary than formerly, but it should be remembered that the circle of knowledge is expanding every day, that the connection of the various branches of science becomes more intimate every day, and that every day more knowledge is required for a given standing in society. Classification is the great basis of memory. From early childhood we have a more idea than affords the opportunity for memory that strong memories, comparing them to wax tablets, the one harder, the other softer. The progress of philosophy has been much hindered by mistaking illustrations for arguments. Another circumstance worthy of remark is, that old people lose their memory for recent events, but retain to a remarkable degree the events of their earlier years, which shows how much remembrance is influenced by the liveliness of the original impression. It is remarkable, also, how some people, in consequence of diseases, mostly nervous fevers and apoplexies, lose the memory of everything which happened before their sickness, as if they were erased from the Platonic tablet. The editor found his memory seriously impaired after a wound which had severed several nerves in the neck, but by degrees, though slowly, he recovered it. Instances have been recorded in which some sudden and violent derangement of the system has produced a state in which a person would remember everything which happened the day before yesterday, &c., but nothing which happened yesterday, &c. The next day, the relative periods of memory and forgetfulness continuing the same, he would remember what, the day before he had forgotten. We might add to those views of the importance of memory which naturally suggest themselves to everyone, that nations, as well as individuals, often suffer from a deficiency of recollection. How often must the historian exclaim, Oh, if they would but remember! —For the various modes of considering this faculty;


8 This diversity is obvious to all, in the different sensibility of different men to the pleasures of memory and the beauty of nature. The same diversity undoubtedly exists in the senses of smell, taste, &c.; and perhaps it is not uncharitable to suppose that the insensibilities of the table are, in some instances, despised less from philosophical moderation, than from an obstinacy of the organ of taste.
see the popular treatises on intellectual philosophy. Locke's chapter on Retention is not very satisfactory. Dugald Stewart's treatise is principally valuable as a practical elucidation of its operations. For instances of persons distinguished for memory, see Mnemonics.

MEMPHIS; an ancient city of Egypt, whose very situation has been a subject of learned dispute. According to Herodotus, its foundation was ascribed to Menes, the first king of Egypt. It was a large, rich, and splendid city, and the second capital of Egypt. Among its buildings, several temples (for instance, those of Pitha, Osiris, Serapis, &c.) and palaces were remarkable. In Strabo's time (A.D. 20) it was very extensive, and one of the most populous cities of the world. Edrisi, in the twelfth century, describes its ruins as extant in his time. "Notwithstanding the vast extent of this city," says he, "the remote period at which it was built, the attempts made by various nations to destroy it, and to obliterate every trace of it, by removing the materials of which it was built, combined with the decay of 4000 years,—there are yet found in it works so wonderful as to confound the reflecting, and such as the most eloquent could not describe." Among the works specified by him, are a monolithic temple of granite thirteen and a half feet high, twelve long, and seven broad, entirely covered with red and white inscriptions, and statues of great beauty and dimensions, one of which was forty-five feet high, of a single block of red granite. These ruins then extended about nine miles in every direction, but the destruction has since been so great, that, although Poecocke and Bruce fixed upon the village of Metrahenny (Monièt-Rahinet) as the site, it was not accurately ascertained until the French expedition to Egypt, when they discovered of numerous heaps of rubbish, of blocks of granite covered with hieroglyphics and sculpture, and of colossal fragments scattered over a space three leagues in circumference, seems to have decided the point. See Joutin's account of the ruins in the Description de l'Egypte.

MEMPHIS; a town in the north-west angle of Mississippi, upon a high bluff, which used to be called Fort Pickering. This bluff is a fine, commanding elevation, rising more than 100 feet above the level of the river. At the lowest stages of the water, strata of stone are disclosed by the river bank. The situation of Memphis seems very favourable to the growth of a town, and is now rapidly increasing. Opposite, in Arkansas, is the uncommonly high, rich, and extensive bottom land of Wappanocka. Back of the town, is a fertile, rolling country, heavily timbered, and abounding in springs. The bluffs extend three or four leagues above and below the town. Here is the great road for crossing from Tennessee and Alabama to Arkansas. These facts indicate that the local situation of Memphis is peculiarly favourable to health, and to extensive commerce.

MEMPHREMAGOG; a lake in North America; the greater part of it lies in Canada, and the rest in Vermont. It is thirty-five miles long and three miles wide, and communicates with the river St Lawrence by the St Francis. It receives the rivers Black, Barton, and Clyde from Vermont. Lat. 45° N.; lon. 72° 8′ W.

MEN; an abbreviation of the Italian menù, less, used in music, as men. presto, less rapid; men. allegro, less lively.

MENACHANITE. See Titanium.

MENAGE, GILLES, a distinguished man of letters of the seventeenth century, was born at Angers, 1613, in which city his father was king's advocate. After finishing his early studies with great reputation, he was admitted an advocate, and pursued his occupa-

MENDELSSOHN, Moses, a celebrated Jewish philosopher, was born Sept. 12, 1729, at Dessau, for some time at Paris; but, disgusted with that profession, he adopted the ecclesiastical character, so far as to be able to hold some benefices, without cure of souls. From this time, he dedicated himself solely to literary pursuits; and, being received into the house of cardinal de Retz, soon made himself known by his wit and erudition. He subsequently took up residence in the instance of the learned, where a prodigious memory rendered his conversation entertaining, although pedantic. He was, however, overbearing and opinionative, and passed his life in the midst of petty hostilities. He precluded himself from being chosen to the French academy, by a writing printed in the Licencié de Notre Dame, and directed against the Dictionary of the academy. He died in Paris, 1692, at the age of seventy-nine. His principal works are Dictionnaire étiologique, ou Origines de la Langue Francaise; Origines de la Langue Italiennes; Miscellanées, a collection of pieces in prose and verse; an edition of Diogenes Laertius, with valuable notes; Remarques sur la Langue Francaise; Anti-Baillet, a satirical critique; Historia Multierum Philosophorum; Poesies Latinus, Italiennes, Grecques, et Francaises. After his death, a Mélanges was compiled from notes of his conversation, anecdotes, remarks, &c., which is one of the most lively and entertaining works that have been written.

MENAI STRAIT, and BRIDGE. Menai strait is a strait about half a mile across, between the island of Anglesea and the coast of Wales. For an account of the celebrated bridge over this strait, see Bridge.

MENANDER, the most celebrated of the Greek writers of the new comedy, born at Athens, 342 B.C., is said to have drowned himself on account of the success of his rival Philemon (q.v.), at the age of fifty-two years, though some accounts attribute his death to accident. The superior excellence of his comedies, the number of which exceeded 100, acquired him the title of prince of the new comedy. We have, unfortunately, nothing but a few fragments remaining of them. Leclerc collected them (Menan-
dri et Philoménes Relique, Amsterdam, 1700). They are also contained in Brunck's Poète Greciens. Terence imitated and translated him, and, from his comedies, we may form some idea of the character of the taste of Menander. See Drama, and Greek Literature.

MENASSEH BEN ISRAEL, a celebrated rabbi, was born in Portugal, about 1604. His father was a rich merchant, who, suffering greatly, both in property and person, from the inquisition, fled into Holland. At the age of eighteen, the son was made preacher and expounder of the Talmud, at Amsterdam. In 1628, he published, in the Spanish language, the first part of his work entitled Conciliator, &c., of which, the next year, a Latin version was printed by Dionysius Vossius, entitled Conciliator, sive de Convenien-
tia Locorum S. Scripturae qua pugnare inter se vel-
centur, Opus ex vetustis et recentioribus omnibus Rab-
bits magna Industria ac Fide congregatum. He also published three editions of the Hebrew Bible. In the time of Cromwell, he went to England, and obtained for his nation more privileges than they ever before enjoyed there. He died at Amsterdam in 1639. His other works are the Talmud Corrected, with Notes; De Resurrectione Mortuorum q.v.; and on Clement of Alexandria, dedicated to the parliament of England, in 1650, one object of which is to prove that the ten tribes are settled in America; and an Apology for the Jews, in the English language, reprinted in vol. ii. of the Phenix.

MENDELSSOHN, Moses, a celebrated Jewish philosopher, was born Sept. 12, 1729, at Dessau,
Germany. His father, Mendel, a schoolmaster, though very poor, gave him a careful education. He himself instructed the boy in Hebrew and the rudiments of Jewish learning; others instructed him in the Talmud. The Old Testament also contributed to his education. The whole art of the Jewish people, the books of those ancient records attracted the boy particularly. The famous book of Maimonides, More Nebuchin (Guide of the Eting), happening to fall into his hands, excited him first to the inquiry after truth, and so a liberal way of thinking. He studied this work with such ardor zeal, that he was attacked by a nervous fever, which, carelessly treated, handicapped him for the rest of his life a crooked spine and weak health. His father was unable to support him any longer, and he wandered, in 1742, to Berlin, where he lived several years in great poverty, dependent on the charity of some persons of his own religion. Chance made him acquainted with Israel Moses, a man of philosophical penetration, and a great mathematician, who, persecuted everywhere on account of his liberal views, lived also in utter poverty, and became a martyr to truth. This man often argued with Mendelsson on the principles of Maimonides. In 1754 he decided to publish a translation of Euclid, and thus awakened in the youth a mighty interest in mathematics. A young Jewish physician, named Kisch, encouraged him to study Latin, and gave him some instruction in this language; doctor Gumpury made him acquainted with modern literature. Thus he lived without any certain support, all the time occupied with study, until a silk manufacturer of his tribe, at Berlin, Mr Bernard, appointed him tutor of his children. At a later period, he took him as a partner in his business. In 1754, he became acquainted with Lessing (q. v.) who had a decided influence upon his mind. Intellectual philosophy became now his chief study. His Letters on Sentiments were the first fruit of his labors in this branch. He became now also acquainted with Nicolai and Abbt, and his correspondence with the latter is a fine monument of the friendship and familiarity which existed between these two distinguished men. Mendelsson contributed to several of the first periodicals, and now and then appeared as a public with philosophical works, which acquired him fame, not only in Germany, but also in foreign countries. He established a new system, but was, nevertheless, one of the most profound and patient thinkers of his age, and the excellence of his character was sufficiently attested by his writings, and amiable disposition. His disinterestedness was without limits, and his beneficence ever ready as far as his small means would allow. He knew how to elude with delicacy the zealous efforts of Lavater (q. v.) to convert him to Christianity; yet his grief at seeing himself so unexpectedly proscribed, brought on him a severe sickness, which long incapacitated him for scientific pursuits. In his Jerusalem, oder über religiöse Macht und Judenthum, he gave to the world, in 1783, many excellent ideas, which were much misunderstood, partly because they attacked the prejudices of centuries. In some morning lessons he had expounded to his Jewish youths, the elements of his philosophy, particularly the doctrine of God. He therefore gave the name of Morning Hours (Morgenstunden) to the work containing the results of his investigations, of which his death prevented him from completing more than one volume (von), and was addressed to him a treatise On the Doctrine of Creation, by himself obliged to defend his deceased friend Lessing against the charge of having been an advocate of Spinosa’s doctrines. Without regarding the exalted state of his health, he hastened to publish his piece entitled Moses Mendelssohn to the Friends of Learning. In the preface of this work, already mentioned, he wrote Philosophische Schriften (Berlin, 1761 and 1771, 2 vols.); his masterpiece, Phedon, or On the Immortality of the Soul, which has gone through several editions since 1767, and has been translated into most modern European languages; and his translation of the five books of Moses, the Psalms, &c.

MENDEZ-PINTO, Ferdinand, a celebrated traveler, was a native of Portugal. In 1537, he embarked in a ship bound for the Indies; but, in the voyage, it was attacked by the Moors, who carried it to Mocha, and sold Ferdinand for a slave. After several adventures in the world, he proceeded to the Indies, and returned to Portugal in 1558. He published a curious account of his travels, which has been translated into French and English. Mendez-Pinto, from his excessive credulity, has been classed with the English Sir John Mandeville, and both are now chiefly quoted for their easy belief and extravagant fiction.

MENDICANT ORDERS. See Orders, Religious. MENDOZA, Don Diego Hurtado de; a Spanish classic, distinguished, likewise, as a politician and a general, in the brilliant age of Charles V. He was descended from an ancient family, which had produced several eminent scholars and statesmen, and was born at Granada, in 1505. As a poet and historian, he contributed to establish the reputation of Castilian literature; but his public life displayed nothing of the finer feelings of the poet, the impartial love of truth of a philosopher, or the clear discernment of the experienced statesman. Stern, severe, arbitrary, haughty, he was a formidable instrument of a despotic court. When don Diego left the university of Salamanca, where his talents, wit, and acquirements had rendered him conspicuous, he served in the Spanish army in Italy, and, in 1538, Charles V. appointed him ambassador to Venice. In 1542, he was governor of the Castilian council of Trent, and in 1547, ambassador to the court of Rome, where he persecuted and oppressed all those Italians who yet manifested any attachment to the freedom of their country. As captain-general and governor of Sicilia, he subjected that republic to the dominion of Cosmo I. of Medici, under Spanish supremacy, and crushed the Tuscan spirit of liberty. Hated by the liberals, held in horror by Paul III., whom he was charged to humble in Rome itself, he ruled only by bloodshed; and, although constantly threatened with the dagger of assassins, not only for his abuses of his power, but also on account of his love for intrigue in Rome, he continued to govern until 1554, when he was recalled by Charles V. Amidst the schemes of arbitrary power, Mendoza employed himself in literary labors, and particularly in the collection of Greek and Latin manuscripts. He sent learned men to examine the monastery of Mount Sinai, for this purpose, and took advantage of his influence at Soliman’s court for the furtherance of the same object. After the abdication of Charles V., he was attached to the court of Philip II. An affair of gallantry involved him in a quarrel with a rival, who turned his dagger upon him. Don Diego threw
him from the balcony of the palace into the street, and was, in consequence, thrown into prison, where he spent his time in writing love elegies. He was afterwards banished to Gavarni, where he observed the progress of the Moorish insurrection in the Alpujarras mountains, and wrote the history of it. This work is considered one of the best historical writings in Spanish literature. He was also engaged till the time of his death (1575) in translating a work of Aristotle, which he undertook in his commentary. His library he bequeathed to the King, and it now forms one of the treasures of the Escorial. (For a criticism on his writings, the reader may consult Bouterwek and Sismondi.) His poetical epistles are the first classical models of the kind in the literature of his country. They are mostly imitations of Horace, written in an easy style, and with much vigour, and show the man of the world. Some of them delineate domestic happiness and the tenderer feelings with so much truth that we can with difficulty recognise the tyrant of Siemens. His sonnets are deficient in elevation, grace, and harmony. His canzoni are often obscure and forced. In the Spanish forms of poetry, redonda and estancia were adopted, and used by his predecessors in elegance of diction. His satires, or burlesques, were prohibited by the inquisition. As a prose writer, he forms an epoch; he has been called the father of Spanish prose. His comic romance, written while he was yet a student.—*Vida de Lazarillo de Tormes* (Tarragona, 1536, continued by Luna, Saragossa, 1554), is by far the best in the world. A master of foreign languages. The hero is a cunning beggar, and the life of the various classes of the people is described in it with great spirit and truth. The numerous imitations of Lazarillo de Tormes produced a peculiar class of writings in Spanish literature—*gusto picaroresco*, so called. (See Spanish Literature.) His second great work, the *History of the War of Granada*, may be compared with the works of Livy and Tacitus. Though Mendoza does not pronounce judgment, yet it is easy to see, from his relation, that the severity and tyranny of Philip had driven the Moors to despair. The Spanish government would not allow, therefore, permit the printing of it till 1610, and then only with great omissions. The first complete edition was published in 1776. His complete works also appeared at Valencia, in 1776.

MENEDEMUS, in Etruria; founder of the Etrurian school of philosophy, which formed the basis of the philosophy of Plato and Stilpo, and ascribed truth only to identical propositions. Diogenes Laertius wrote his life. He is said to have starved himself to death because he could not engage Antigonus to restore freedom to his country.

MENELAUS; son or grandson of Atreus, and brother of Agamemnon. From his father-in-law, Tyndareus, whose daughter Helen he married, he received the kingdom of Sparta. He was at Crete, for the purpose of dividing the inheritance left by his paternal grandfather, Creitus, when Paris carried off his wife Helen, with a part of his treasures, and seven female slaves, and conveyed them to Troy. On learning this, Menelaus, with Palamedes, went to Troy, to demand satisfaction; and this being refused, he summoned the Greeks to revenge the affront, according to their promise. He himself led sixty ships to Troy, and showed himself a brave warrior. Homer gives him the title of bas arhakhs, on account of the loneliness of his arms and the absence of his friends. He first went to Tenedos, then to Lesbos and Euboea but, being tossed about by storms and tempests, he had to land in Cypria, Phœnicia, Egypt, and Libya, and was, in several instances, detained for a long time. When on the island of Phænissia, he was surprised by the Moors, and his wife, Helen, was carried off by Antiphantes, a soldier of the Moors. In Carthage, on the island of Phænissia, he was surprised by Telamon, an Egyptian, and depicted Protes asleep, by the aid of Eidothea, his daughter, and compelled him to disclose the means which he must take to rescue Helen. Protes likewise informed him that he should not die, but would be translated alive into Elysium, as a demigod and the husband of Helen.

MENGES, Anthony Raphael, one of the most distinguished artists of the eighteenth century, born at Aissig in Bohemia, 1726, was the son of an indifferent Danish artist, who had settled in Dresden. From the sixth year of his age, the young Raphael was compelled to exercise himself in drawing, daily and hourly, and a few years later was instructed by his father in oil, miniature, and enamel painting. The father hardly allowed him a moment for play, set him tasks, which he was required to accomplish within a given time, and severely punished him if he failed. In 1741, he accompanied his father on a Grand Tour to Rome, and studied the remains of ancient statuary, the works of Michael Angelo, in the Sistine chapel, and finally, the immovable productions of the divine Raphael in the Vatican. He was left to pass the day there with bread and water, and in the evening his studies were examined with the greatest severity. In 1744, his father returned with him to Dresden, and Augustus soon after appointed him court-painter. A second visit to Rome was occupied in renewing his former studies, studying anatomy, &c. His first great compositions appeared in 1748, and met with universal admiration. A holy family was particularly admired; and the young peasant girl who served him as a model became his wife. On his return to Dresden the king appointed him principal court-painter. In 1751, he was engaged to paint the altar-piece for the Catholic chapel, with leave to execute it in Rome. At this time, he made a copy of Raphael's School of Athens for the duke of Northumberland. The seven years' war deprived him of his pension, and, in 1754, he received the direction of the new academy of painting in the Capitol. In 1757, the Celestines employed him to paint the ceiling of the church of St Eusebius, his first fresco. He soon after painted, for cardinal Albani, the Parthenon in his villa, and executed various oil paintings. In 1761, Clement XIII, cardinally Albani, who had been his principal works at this time were an assembly of the gods and a descent from the cross. Returning to Rome, he executed a great allegorical fresco painting for the pope, in the camera de' papiri, and, after three years, returned to Madrid. At this time, he executed the apotheosis of Trajan, in fresco, his finest work. He died in Rome, in 1779, leaving seven children, thirteen having died previously. His expensive manner of living, and his collections of drawings of masters, vases, engravings, &c., had absorbed all his gains, although during the last eighteen years he had received 180,000 scudi. A splendid monument was erected to his memory by his friend the cavalier d'Arma, at the side of Raphael, and another by the empress of Russia, in St Peter's. Menges's composition and grouping is simple, noble, and studied; his drawing correct and ideal; his expression, in which Raphael was his model, and his colouring, in every respect, are excellent. His drawings are particularly esteemed. Among his best writings, in different languages (published, in Italian, by Amara, 1783), particularly his Remarks on Correggio, Raphael, and Titian, are highly instructive. His friend, the celebrated Winckelmann, rendered him valuable
assistance in the preparation of them. See Goethe's Winckelmann and sein Jahrhundert.

MENILITE. See Opat.

MENINSKI, or MENIN, FRANCIS (Francis a Mensuani), a celebrated Orientalist, was born in Lorraine, in 1623, and studied at Rome, under the leadership of the Jesuits. As the age of thirty, he accompanied the Polish ambassador to Constantinople, and, applying himself to the study of the Turkish language, became first interpreter to the Polish embassy at the Porte, and, soon after, was appointed ambassador plenipotentiary to that court. He was named peculiarly distinguished for his erudition, and peculiarly skilful in the family name of Menin. In 1661, he became interpreter of the Oriental languages at Vienna, and was intrusted with several important commissions. In 1669, going to visit the holy sepulchre of Jerusalem, he was created a knight of that order, and, on his return to Vienna, was created one of the emperor's council of war. His principal work was his Theaurus Linguarum Orientalium, published at Vienna in 1680. A new edition of this valuable work was begun in 1760, but remains still unfinished. Meninski died at Vienna in 1698.

MENIPPUS, the cynic, and disciple of Diogenes, was a native of Gadara, in Palestine. His writings were chiefly of a satirical kind, insomuch that Lucian styles him "the most snarling of cynics," and, in two or three of his dialogues, introduces him as the vehicle of his own sarcasms. It appears that his satires were composed in verse; on which account those of Varro were denominated Menippean; and, for the same reason, that of satiric Menippus was given, in France, to the celebrated piece written against the league.* Menippus is said to have flanged himself, in consequence of being robbed of a large sum of money. He had been originally a slave, but purchased his freedom, and was made a citizen of Thebes. None of his works is now extant.

MENNO, SIMON, (i.e. the son of Simon), born in Friesland, in 1505, joined the Anabaptists in 1537, having been previously a Roman Catholic priest. After the suppression of the disturbances at Munster, Menno collected the scattered remnants of the sect, and organized them into the Brethren of the Grote, a body, under the name of the Grote, a body, under the name of the Mennonites, and the church of which they formed a part, was named the Grote or Great Church of the Brethren. Menno died at Oudehooghe, in Holstein, 1561. His followers are called Mennonites, an account of whom has been given in the article Anabaptists.

MENOLEOGRIFUM (from μενος, the moon, and νοης, discourse, report, &c.), in the Greek church, has about the same signification as naturallogium (q. v.) in the Roman church. The Menologium is a book, in which the festivals of every month are described, with the names and biographies of the saints and martyrs, in the order in which they are read in the masses, the ceremonies of the day, &c.

MENONYMENIES, MENOMENIES; a tribe of Indians, residing in the North-West Territory, to the south of Lake Superior and west of Green bay, called by the French Munagea de Folte-Avine or (Eaters of Wild Oats). They belong to the great Chippe- way family. See Indians, American.

MENOU, Jacques Francois, baron de, born in Tournaine in 1727, was called to general service at an early age, and rose rapidly to a high rank. In 1789, the noblesse of Tournaine chose him their deputy to the states-general, where he was one of the earliest to unite with the third estate. Menou turned his attention particularly to the new organization of the army, and prepared a draft of the installation of the young men, in the room of the old manner of recruiting. His subsequent votes and propositions, in favour of vesting the declaration of war in the nation, of arming the national guard (1791), &c., were generally on the revolutionary side; but when the more violent opinions began to prevail, he joined those who endeavoured to moderate the excitement. In 1792, he resumed his military duties, and was second in command of the troops of the line, stationed near Paris. In this capacity, he accompanied the king to the assembly, and was afterwards repeatedly denounced to the Convention as an enemy to the revolution. He, however, escaped condemnation, and, in May (2 prairial), 1795, commanded the troops who defended the convention against the insurgents of the faubourg St. Antoine. On the 13th Vendémaire, he was likewise in command, but would not allow his troops to attack the section opposed to the convention, and Bonaparte first gained celebrity by undertaking that attack. Menou afterwards accompanied general Bonaparte to Egypt, and distinguished himself by his courage on several occasions. After the return of Bonaparte, he married the daughter of a rich bath-keeper of Rosetta, submitting to all the ceremonies of the laws of Mahomet, and adopting the name of Abdallah. On the death of Kieher (q. v.), he took the chief command, and, after a gallant defence in Alexandria, was obliged to capitulate to the English. Bonaparte received him favourably, on his arrival in France, and appointed him governor of Piedmont. Menou was afterwards sent to Venice in the same capacity, and succeeded in mediating between the duchies.

MENSKHOFF, ALEXANDER, the son of a peasant, born near Moscow, in 1674, was employed by a pastry-cook to sell pastry in the streets of Moscow. Different accounts are given of the first cause of his rise. According to some statements, he overheard the project of a plot of the palace, for the murder of Peter I, and communicated it to the czar; other accounts represent him as having attracted the notice of Lefort (q. v.), who took him into his service, and, discerning his great powers, determined to educate him for public affairs. Lefort took the young Menskhoff with him on the great embassy in 1697, pointed out to him whatever was worthy of his attention, and instructed him in military affairs, and in the maxims of politics and government. On the death of Lefort, Menskhoff succeeded him in the favour of the czar, who placed such entire confidence in him, that he undertook nothing without his advice; yet his passion for money was the cause of many affairs, and he was three times subjected to a severe examination, and was once also condemned to a fine. The emperor punished him for smaller offences on the spot; but much of his selfishness and faithlessness was unknown to his sovereign, who was much indebted for support, to the emperor Catharine. He was baron and general field-marshal, baron and prince of the German empire, and received orders from the courts of Copenhagen, Dresden, and Berlin. Peter also conferred on him the title of duke of Ingrin. On the death of Peter, it was chiefly through the in-
fluence of Menschikoff that Catharine was raised to the throne, and that affairs were conducted during her reign. (See Catharine I.) When Peter II. succeeded her on the throne, Menschikoff grasped, with a bold and sure hand, the reins of government. In 1727, when his power was raised to the highest pitch, he was suddenly hurled from his elevation. Having embezzled a sum of money which the emperor had intended for his sister, he was condemned to perpetual exile in Siberia, and his immense estate was confiscated. He passed the rest of his life at Berezov, where he lived in such a frugal way, that, out of a daily allowance of ten roubles, he saved enough to erect, on a site which he himself worked as a carpenter. He sunk into a deep melancholy, said nothing to any one, and died in 1729. Menschikoff was selfish, avaricious, and ambitious, implacable, and cruel, but gracious, courageous, well informed, capable of large views and plans, and persevering in the execution of them. His services in the promotion of civilization, commerce, the arts and sciences, and in the establishment of Russian respectability abroad, have been productive of permanent effects.

MENSES. See Catamenia.

MENSURATION, is the art of ascertaining the contents of superficial areas, or parts of solids; the lengths, breadths, &c., of various figures, either collectively or abstractedly. The mensuration of a plane superficies, or surface, lying level between its several boundaries, is easy: when the figure is regular, such as a square, or a parallelogram, the height multiplied by the breadth, will give the superficial content. In regard to triangles, their bases, multiplied by half their heights, or their heights by half their bases, will give the superficial measure. The height of a triangle is taken by means of a perpendicular to the base, let fall from the apex or summit. Any rectangular figure may have its surface estimated, however numerous the sides may be, simply dividing it into triangles, by drawing lines from one angle to another, and taking care that no cross lines be made; thus, if a triangle should be equally divided, it may be done by one line, which must, however, be drawn from any one point to the centre of the opposite face. A four-sided figure, or polygon, divided into two triangles, by one oblique line connecting the two extremities; a five-sided figure (or pentagon) by two lines, cutting, as it were, one triangle out of the middle, and making one on each side; a six-sided figure (or hexagon) will require three diagonals, which will make four triangles; and so on, to any extent, and however long or short, the several sides may be respectively measured.

The most essential figure is the circle, of which mathematicians conceive it impossible to ascertain the area with perfect precision, except by the aid of logarithmic and algebraic demonstration. It may be sufficient in this place to state, that 8; of the diameter will give the side of a square, whose area will be the fourth of the square of the circle, having ten for its diameter. Many circular or cylindrical figures come under the measurer's consideration—mirrors, arched passages, columns, &c. The contents of a pillar are easily ascertained, even though its diameter may be perpetually varying; for if we take the diameter in different parts, and strike a mean between every two adjoined measurements, and multiply that mean area by the depth or interval between the two, the solid contents will be found. The contents of pyramids are measured by multiplying the areas of their bases by half their lengths, or their lengths by half the areas of their bases. Cones, whose diameters are right, are equal to one third the solid contents of cylinders, equal to them in base and altitude. Solids having a certain degree of regularity, may be easily measured; thus a cube is computed by multiplying first its width by its length; then their product by its height; thus a cube, measuring four feet each way, would be 4 x 4 = 16 x 4 = 64. This is the meaning of what is called the cube, root. (See Cube.) Parallelopipedons, or solids of a long form, such as squared timbers, are measured by the same means. For the mensuration of growing timber, various modes have been devised. After a tree has been felled, its girth is usually taken at each end, and at the middle, when there is no particular swell, or the top extremity does not suddenly decrease. But when it is so great, it is necessary to take many more girths, and, summing up the whole, to divide their amount by the number of girths taken, so as to establish a mean measurement. Divide that mean measurement by four, to find the side of a square to which the tree will be reduced when prepared for the sawyer. If the whole solid contents are to be estimated, divide by three, instead of by four, and taking the third part, thus given, for a diameter, proceed in the way already shown, to find the side of a square, equal to the circle of which that ascertained third part is the diameter. Solid bodies, or areas, such as hay-stacks, interiors of barns, granaries, &c., consist of cylinders and cones. Cubes, &c., many sides fall in regularly, as in garrets, &c., the inclined part must be treated as a pyramid, or as a quoin (or wedge), and the whole be summed up together. The contents of casks, tubes, &c., are found by the process of guaging. For that part of the subject which appertains to the admeasurement of lands, as also to the distances, heights, &c., of remote objects, accessible or otherwise, see Surveying.

MENTAL DERANGEMENT. See Insanity.

MENTCHIKOF. See Menschikoff.

MENTOR, son of Aleimus, the confidential friend of Ulysses, who intrusted to him the care of his domestic affairs, during his absence in the war against Troy. The education of the young Telemachus fell to his charge, and when the latter set out on his voyage in search of his father, Minerva accompanied him under the form of Mentor (Odyssey, ii. 390; iii. 12, &c.), acting the part of a prudent and experienced counsellor to the young hero, and advising him to build a ship and fully develop it in the Telémachus of Fénelon, in which Mentor plays a conspicuous part. Mentor has thence acquired the metaphysical sense of a wise and faithful counsellor or monitor.

MENTZ, or MAYENCE, or MAINZ; a city of Germany, in Hesse-Darmstadt, formerly capital of an electorate and archbishopric, situated at the confluence of the Rhine and Main, called in Latin Magnantia, or Moguntiacum; lon. 8° E.; lat. 49° 59' N.; population, 25,251. It is the strongest town in Germany: towards the river less defence is necessary, but on the land side the works are extensive and complicated. The fortress belongs to the Germanic Confederation. The town is built nearly in the form of a semicircle, the Rhine forming the base. The interior is by no means handsome. The streets are crooked, narrow, and gloomy, and the houses mostly old fashioned. It contains a cathedral, a lyceum, schools of medicine, and a cabinet of natural history, a gallery of paintings, and a library of 90,000 volumes. The trade consists partly in wine, and partly in commission business, connected with the navigation of the river. The town is famous for the beauty of its environs and prospects. A university was founded here by Charles of Lorraine, 800, and re-established in 1689, by the archbishop Dietrich, of the house of Isenburg, but has been since
converted into a lyceum. The honour of the invention of printing was claimed by John Faust (q. v.), a goldsmith of Mentz, and by John Gutenberg. (q. v.) The archbishopric of Mentz was an extensive eleemosynary, and also elec-
tor, and ranked as the first archbishop in Germany. The archbishopric was suppressed in 1802, and the city of Mentz is now only a bishop's see. See Germany.

MENÜ. The Hindoo mythology abounds four-
teen of these mystical personages, of whom seven have already reigned on the earth. The celebrated code of laws, or the Manava Dharma Sstra, which goes under the name of Menu, is attributed to the first of the name, or Swayambhouna, the son of Brana. The name is derived from men, signifying intelligence (Latin mens, mind), and Sir W. Jones suggests that it is connected with Menes, the name of the first king of Egypt and Minos (q. v.), the Cretan lawgiver. The code, which has been translated into English by Sir W. Jones (Works, vol. iii.), is the basis of the whole civil and religious policy of the Hindoos. Menu appears in it relating the history of the creation,ology of the world, the origin of the human race, and the destiny and attainments of the human beings; then commands Brigu to repeat the divine laws of Brahma. These laws relate to the divisions into castes, education, marriage, diet, purification, devotion, private and criminal law, penances and expiations, transmigration, &c. The last Menu, whose reign is not yet over, was Satyavrata, or Vaivavswas, whose history is given as follows, in the Bhagavat, or Brahma, being inclined to slumber, the demon Hayagriva stole the Vedas from his lips. Here, the preserver of the universe, discovering this deed, assumed the shape of a small fish, and appeared to the holy king Satyavrata, who was so devout that his only sustenance was the fish. This intelligence, after an enormous size in a few days, was recognised by the pious king, to whom he declared that in seven days the earth should be plunged in an ocean of death, and promised to send a large vessel for his deliverance; into which continued the god-fish, thou shalt enter with seven saints and pairs of all brute animals; and thou shalt fasten it with a large sea-serpent to my horn, for I will be near thee. Satyavrata complied with these directions, and the primeval male, speaking aloud to his own divine essence, pronounced for his instruction a sacred purana, explaining the principle of the soul, the external being. Here then slowly the demon transmuted into books, and Satyavrata was appointed the seventh Menu; but the appearance of the horned fish was Maya (or delusion).

MENZABANO; a town of Italy, on the Mincio. On the 28th of December, 1801, a bloody battle was fought here between the French and the Austrians; the French conquered, and made 8000 prisoners.

MENZALEH, or MENZALA; a large lake in Egypt, running parallel with the Mediterranean, from which it is divided by a narrow slip of land, sixty miles in length, and from two to twelve in breadth, overflowered by the waters of the Nile. It was anciently called Tonis, from the town of that name. Its waters are soft in the time of inundation, and become brackish as the river retreats within its channel. Numerous boats continually fish on the lake. Length of the lake from north-west to south-east 43,000 fathoms, breadth from 12,000 to 26,000. In 1749 the Wanzen of Saxony, secretary in the royal cabinet at Dresden, whose treachery hastened the breaking out of the seven years' war. Frederic II., suspecting that negotiations were going on against him between the courts of Petersburg, Vienna and Dresden, directed his minister at the court of Saxony to procure information on the subject. Chance made the ambassador acquainted with Menzel, whose expensive and dissipated habits had plunged him into embarrassments, to relieve which he had been induced to purloin from the public treasury. The unhappy minister acquitted himself by a greater crime, and, in consideration of a large sum of money, delivered to the Prussian ambassador copies of the secret correspondence between Saxony, Russia, and Austria, relating to Prussia. His conscience, indeed, was awakened, but he could not turn back without forfeiting the protection of the ambassador for detection. During a retreat to Warsaw, in the retinue of the king, traces of his guilt were at length discovered. Menzel himself was surprised by the report of the discovery of his treachery in a social party. He attempted to save himself by flight, but was arrested at Prague, on the demand of the court of Saxony, and imprisoned, first at Brunn, but after the conclusion of the peace of Hubertsburg, in the castle of Konigstein. Here he lived thirty-three years, at first in the strictest custody. During his imprisonment at Brunn, he cherished the hope that Prussia would stipulate for the return of the papers. Through the favour of king Frederic Augustus I., his condition was somewhat alleviated in the latter part of his life; he received better food, and permission to take the air now and then; he was also relieved of the heavy chains which he had worn many years. He died in May, 1796, at the age of seventy years.

MENZIKOFF. See Menschikoff.

MEPHITIC (from the Latin mephitis, an offensive odour) is used to signify those kinds of air which will not support combustion or animal life, or, more generally, offensive exhalations of any sort. Modern chemistry has given particular names to many of these. (See Carbon, and Sulphur.) There was a Roman goddess called Mephitis, who was worshiped as a protectress from such exhalations.

MEQUINEZ; a city of Morocco, in Fez, situated in a plain surrounded with fertile valleys and eminences, watered by a number of rivers; 35 miles south-west of Fez, 165 north-east of Morocco; long. 5° 30' W.; lat. 35° 6' N.; population stated by Jackson at 110,000; by Hassel at only 15,000. It is frequently the residence of the emperor. It is surrounded with walls, and the palace is fortified with bastions. The Jews have a quarter appropriated to themselves, walled in and guarded. The Moors at this place have many more men as slaves than in the southern provinces.

MERCANTILE SYSTEM, in political economy, is one that prevails to a greater or less extent in every country of Europe. It was introduced in France by Colbert. As originally understood and acted upon, it embraces some fallacious doctrines, and carries some just ones to excess. The notion, for example, that wealth is derived mostly from foreign commerce, and depends upon an annual importation of specie, called the balance of trade, is erroneous. This balance was understood to be the bullion or coin received by a country in exchange for a part of its exports, and the bullion or specie importation. It will depend upon the wants of the community whether the importation of one or another article will most promote the national wealth. It would be quite absurd, therefore, to attempt, by legislation, to force trade to yield a balance in specie. As far as this was a direct object of the commercial system, it was accordingly mis-
taken. If a nation needs other things more than species, such prices will be offered as will induce their importation. But this notion of the importance of the balance of exports and imports is not without its truth in a certain respect. It is undoubtedly an evil for one nation to be constantly indebted to another. It will be found true between individuals, different districts of the same country, and also between different nations, that the indebted party is the one most liable to make sacrifices. If a people or district, or an individual, will keep in advance of their means, and anticipate the income of the coming year, the consequence will be a perpetually straitened and embarrassed state. This was always the case with the British American colonies, and even of the states for many years past the part of the American independence. The liberal credits in England enabled them to anticipate their income, and they were, accordingly, always largely indebted to England, and thus constantly straitened and distressed, notwithstanding the country was, during the same time, rapidly growing in population and wealth. It is any other branch of industry, so as incidentally and consequently to affect the kind and amount of exchanges with foreign nations, are much agitated questions. The practice of the whole civilized world is to legislate with a reference to national industry, and such it always has been. The real growth of commerce to refer to the proper objects and extent of this legislation.

MERCATOR, GERARD, a mathematician and geographer, born at Rupelmonde (not, as usually stated, at Ruremond), in the Low Countries, in 1512, studied at Louvain, applying himself with such intensity as to forget the necessary food and sleep. His progress in the mathematics was very rapid, although without a teacher, and he soon became a lecturer on geography and astronomy, making his instruments with his own hands. Granvela (q. v.), to whom he presented a terrestrial globe, recommended him to Charles V. Mercator entered into the emperor's service, and executed for him a celestial globe of crystal, and a terrestrial globe of wood. In 1559, he retired to Duisburg, and received the title of cosmographer to the duke of Juliers. His last years were devoted to theological studies. He died in 1594. Mercator published a great number of maps and charts, which he engraved and coloured himself. He is known as the inventor of the method of naming the meridians and parallels of latitude cut each other at right angles, and are both represented by straight lines, which has the effect of enlarging the degrees of latitude, as they recede from the equator. His first maps on this projection were published in 1569; the principles were first explained by Edward Wright, in 1590, in his Corrections of Errors in Navigation, whence the discovery has sometimes been attributed to him. His Tabula Geographicæ (Cologne, 1578) is the best edition of the maps of Ptolemy, and has been merely copied by his successors. His Atlas has been often republished.

MERCER, Henry, a brigadier-general in the American revolutionary army, was a native of Scotland. He was liberally educated, studied medicine, and acted as a surgeon's assistant in the memorable battle of Culloden. He emigrated from his country, not long after, to Pennsylvania, but removed to Virginia, where he settled and married. He was engaged with Washington in the Indian wars of 1756, &c.; and his children are in possession of a medal which was presented to him by the corporation of the city of Philadelphia, for his good conduct in the expedition against an Indian settlement, conducted by Colonel Armstrong. On his return from this engagement with the Indians, general Mercer was wounded in the right wrist, and being separated from his party, he found that there was danger of his being surrounded by hostile Indians, whose war-whoop and yell indicated their near approach. Becoming faint from loss of blood, he took refuge in the hollow trunk of a large tree. The Indians came to the spot where he was concealed, seated themselves about for rest, and then disappeared. Mercer left his hiding-place, and pursued his course through a trackless wild of about one hundred miles, until he reached Fort Cumberland. On the way, he subsisted on the body of a rattlesnake, which he met and killed. Upon delivering himself to the protection of the colonists and the mother country, he immediately joined the American standard, relinquishing an extensive medical practice. Under Washington, whose favour and confidence he enjoyed beyond most of his fellow-officers, he soon reached the rank of brigadier-general, and, in that command, distinguished himself, particularly in the battles of Trenton and Princeton, in the winter of 1776-7. In the affair of Princeton, general Mercer, who commanded the van of the American army, after exerting the utmost valour and activity, had his horse killed under him; and, being thus dismounted, he was surrounded by some British dragoons, with whom he was engaged, and, little did he know of his misfortune, until he was completely overpowered. They stabbed him with their bayonets, inflicted several blows on his head with the butt-end of their muskets, and left him for dead on the field of battle. He died in about a week after, from the wounds in his head, in the arms of major George Lewis, the nephew of general Washington, whom the uncle commissioned to watch over his expiring friend. The mangled corpse was removed from Princeton, under a military escort, to Philadelphia, and exposed a day in the coffee-house, with the design of exciting the indignation of the people. It was followed to the grave by at least 50,000 of the inhabitants. General Mercer, though a lion in battle, was uncommonly placid, and almost indifferent in private life. He was beloved and admired, as an accomplished, polished, and benevolent gentleman. Some interesting anecdotes of him are related in the 5d chapter, 1st vol. of general Wilson's Memoirs. That which is most related to this general Mercer, we lost; at Princeton, a chief, who, for education, talents, disposition, integrity, and patriotism, was second to no man but the commander-in-chief, and was qualified to fill the highest trusts of the country. General Mercer
was about fifty-six years of age when he thus perished.

MERCIA, the largest kingdom of the Saxon heptarchy, comprehended all the middle counties of England, and, as its frontiers extended to those of the other six kingdoms, as well as to Wales, it derived its name from a well-contrived (Anglo-Saxon Merk, marches, q. v.). It was reduced by Egbert (q. v.), king of Wessex. See Turner's Hist. of the Anglo-Saxons.

MERCIER, LOUIS SEBASTIAN, a French writer, remarkable for the eccentricity of his sentiments. He was born at Paris in 1740, and, at the age of twenty, published a volume of heroical pieces, after which he renounced poetry for criticism. In his Essai sur l'Art dramatique, he attacked the reputation of Corneille, Racine, and Voltaire, proposing to replace their works by his own productions; and, as the comedians paid no attention to his diatribe, he published a virulent manifesto against them. In 1771 appeared, under the title L'An 2440, a declamatory tract, which was suppressed by authority. In 1781 was published, anonymously, the two first volumes of his Tableau de Paris; after which he removed to Switzerland, and at Neuchâtel printed ten more volumes of that work, which was favourably received both in France and in the other countries. Returning home at the beginning of the revolution, he declared himself a friend to liberty, and, in concert with Carra, published Les Annales Politiques, and Chronique du Mois,—journals which displayed both moderation and spirit. He became a member of the convention, in which he voted for the detention, instead of the death of Louis XVI. In 1795, he passed into the council of five hundred, and was subsequently professor of history at the central school, and a member of the institute at its formation. Mercier died at Paris in 1814. Among his numerous works are Mon Bonnet de Nuit (Neufchâtel, 1783, 4 vols., 8vo); De l'impossibilité des Systèmes de Copernic et de Newton (1806, 8vo); and Satire contre Racine et Boileau (1808). See Ersch's France Littéraire.

MERCURE DE FRANCE; a remarkable journal for its antiquity. It is a continuation of the Mercure Galant, and forms 1800 small volumes. The Mercure Galant was established in Paris by J. Dornau de Viscé, in 1672, and continued until 1716 (forming 571 12mo volumes). The periodical then took the title of Mercure de France, and appeared, uninteruptedly, from 1717 to 1778, in 605 volumes. Panckoucke edited it from 1779 to 1792 (174 volumes 12mo). It then became a daily, and sometimes a weekly paper. A new series, until 1797, comprises forty volumes, 8vo. It was continued, though once interrupted, to 1803. At a later period, the Minerve Francaise appeared, as a continuation. Another periodical adopted the title Mercure de France. So long a continuance must necessarily prove due to the contents of a journal, although they may not have been of the most interesting character at the time of their publication. Mercure is, in France, as well as in Germany, a very common name for periodicals.

MERCURIALE; the first Wednesday after the great vacations of the French parliament. On this day, they held a full session, in order to discuss the deficiencies in the administration of justice, and particularly in the course of business, and to take measures for correcting them. The first president and the crown-advocate had alternately the duty of speaker; delivered by the order of assembly, their speeches were called mercureials. This name was also given to a reproof or rebuke, because the members, on this day, received their reprimands. See Crown-Advocate, Parliament, and France.

MERCURY (called, by the Greeks, Hermes) was the son of Jupiter and Maia, the daughter of Atlas. According to tradition, Arcadia was his birth-place. Four hours after his birth, he left his cradle, and, on the following night, he invented the lyre, which he made by kicking the go- toise, and stringing the shell with seven strings. He then sang to the loves of Jupiter and his mother Maia. Having concealed the lyre in his cradle, he began to seek for food; for which purpose, he went, in the evening, to Pieria, and stole fifty oxen of the Thracians, which he drove backward and forward to confound their tracks; but, in the morning, himself, he drove them backward also; and, after having killed two of them near the river Alpheus, roasted them by a fire procured by rubbing two sticks together, and sacrificed a part to the gods. He concealed the remainder in a cavern. He also carefully destroyed all traces of them. The next morning Apollo missed his oxen, and went in search of them; but he could discover no traces of them until an old man of Pylos told him that he had seen a boy driving a herd of oxen in a very strange manner. Apollo now discovered, by his prophetic art, that Mercury was the thief. He hastened to Maia, and accused the infant, who, instead of being furious, was not terrified by the threat of the god, that he would hurl him into Tartarus, steadily maintained his innocence. Apollo, not deceived by the crafty child, carried his complaint to the god of gods. Mercury lied even to him. But Jupiter penetrated the artifice of the boy, and perceived him to be the offender; yet he was not angry with him, but, smiling good-naturedly at his cunning, ordered him to show the place where the oxen were concealed. To secure him, Apollo bound his hands; but his chains fell off, and the cattle appeared, bound together by twos. Mercury then began to play upon his newly-invented lyre, at which Apollo was so much enraptured, that he begged the instrument of the inventor, learned of him how to play on it, and gave him a whip to drive the herds, thenceforth belonging to both in common. Apollo was still more astonished when the ingenious god also gave the flute its tones. They then concluded a contract with each other: Mercury promised never to steal Apollo's lyre or bow, and never to approach his dwelling; the latter gave him in return, the golden wand of peace, the caduceus. The ancients represent Mercury as the herald and messenger of the gods. He conducts the souls of the departed to the lower world (whence he is called Psychopompos), and is therefore the herald of Pluto, and the executor of his commands. His magic wand had the power to close the eyes of mortals, to cause dreams, and wake the slumbering. The qualities requisite for a herald he possessed in the highest perfection, and bestowed them on others—grace, dignity, honor and insinuating manners. He was also the symbol of prudence, cunning and fraud, and even of perjury. We must remember that rude antiquity did not, as we do, associate any thing dishonourable or base with these ideas. Whoever was distinguished for artifice and deceit, as, for example, Ulysses, was a favourite of Mercury, and enjoyed his assistance. Mercury was also distinguished as the great thief of the ancients, especially when fraud and cunning were employed. The exploits of his childhood have this symbolical signification. Among the actions of his manhood, the following are examples of his cunning: He accompanied Hercules when he carried off Ceres; delivered the Mother of Corinth; when Typhon had cast him; rescued Mars from the prison in which the Alodes, Ous and Ephialtes had confined him; killed Argus, the keeper of the unhappy
Io; assisted Perseus, when he went to kill Medusa, and lent him the helmet of Pluto, which rendered him invisible; he wounded Mars; to Nephelus, the mother of Phyxus and Hele, he gave the ram with the golden fleece, upon which she carried off her children, when they were about to be sacrificed to the gods, at the instigation of their step-mother Ino. In the wars of the giants, he wore the helmet of Pluto, which rendered him invisible, and slew Hippolytus. When Typhon compelled the gods to fly before him, and conceal themselves in Egypt, he metamorphosed himself into an ibis. He is also mentioned by Homer as the patron of eloquence, and still more particularly by Hesiod. Of his inventions Homer makes no mention. Last writers ascribe to him the invention of dice, music, geometry, the interpretation of dreams, measures and weights, the arts of the palestra, letters, &c. He was also regarded as the patron of public treaties, as the guardian of roads, and as the protector of travellers. (See Hermes.) Fable relates many of his amours. His children were numerous; among them were Pan and Heraclidus. Mercury was worshipped in all the cities of Greece, but Arcadia was the chief place of his worship. His festivals were called Hermata, and were solemnized in various ways. He had several temples in Rome, and his festival took place on the 15th of May (which month received its name from his mother Maia). At this festival the merchants publicly offered sacrificial sacrifices, that he might prosper them in their trade, and render them successful in their enterprises. Art has variously represented Mercury; first, in the rude Hermes. (q.v.) In the monuments of the more ancient style, he appears with his beard just beginning to grow; at a later period, the prevailing representations of him were as an adroit herald and athlete, and he acquired the appearance of extreme youth. In this character, also, room was allowed to fancy. He was represented as a boy, in the prime of youth, and also in the full power of early manhood. Among the curled locks of the boy appear two projecting wings. His dress consisted of a short leather tunic. In his left hand he bears a purse, and, holding his right forefinger against his chin, smiles archly at some device in his mind. As a youth, we find him represented in a variety of attitudes, sometimes with the purse in his hand, sometimes with the caduceus, sometimes with his wings in his standing, sitting, or walking. The artists of later times placed him among the youthful and beardless gods. The most prominent traits of his character are vigour and dexterity. His short hair lies curled over his head and forehead; his ears and mouth are small; his positions, whether standing or sitting, always simple and easy; his head inclined forwards, and his look thoughtful. In his beautiful and vigorous frame, we see the inventor of gymnastics; in his attitude, air, and aspect, we see the prudence, cunning, and good nature of one who can easily gain every body, and accomplish every thing. In the representation of Mercury, there is nothing corporeal beauty and mental dexterity are wonderfully preserved. He is either entirely naked, or clad only in the chlamys, which is not often put on with any regularity, but is merely thrown over his shoulders or wound round his arms. His head is sometimes bare; sometimes he has a pair of wings fastened on his temples, and sometimes the cap is fastened on his head, or occasionally on his added wings (petasus). The hat, which particularly denotes a wanderer, has, in works of statuary, a flat top and narrow brim; upon vases, however, his hat is represented with wide, hanging flaps, and a pointed top. If the wings are not attached to a band about his head, they are fastened, either to his ankles or the soles of his feet, or to the caduceus alone.

Artists made the cock his symbol, on account of its vigilance, or love of fighting (in allusion to gymnastics); the ram, on account of its golden fleece; the lyre, because he was the god of traffic; a ram and a goblet, because he was the director of religious ceremonies and sacrifices; the trunk of a palm-tree, upon which his statues lean, because he was the inventor of arithmetic and writing (upon palm-leaves); the harpegon, or sickle-shaped knife, because he was the slayer of Argus; and the hound (only upon Alexandria coins), to indicate sagacity and vigilance.

**MERCUry; a planet. See the article Planets.**

**MERCUry, or QUICKSILVER; the hydrargyrum of the Latins, from ὑδραργύρον, silver, in allusion to its fluidity and silvery appearance. The name quicksilver is derived from the alchemists, who regarded this metal as silver in a fluid state, quickened by some inherent principle, which they hoped either to fix or expel. It was known to the ancients, especially to the Greeks and Romans, who employed it in gilding and in the extraction of the precious metals. It is distinguished from all other metals by its extreme fusibility, which is such that it does not take the solid state until cooled to the 30th degree below 0 (Fahrenheit), and, of course, is always fluid in the temperate climates of the earth. Its colour is white, and rather bluer than that of silver. In the solid state, it is impossible to find a perfectly uniform specimen; it is volatile, and rises in small portions at the common temperature of the atmosphere. At the temperature of 656°, it boils rapidly, and rises copiously in fumes. When exposed to such a heat as may cause it to rise quickly in the vaporous form, it gradually becomes converted into a red oxide, provided oxygen be present. This was formerly known by the name of precipitatum per se. A greater heat than 600°, however, revives this metallic oxide at the same time that this oxygen is again liberated. Mercury, if quite pure, is not tarnished in the cold by exposure to air and moisture; but if it contain other metals, the amalgam of those metals oxidizes readily, and collects as a film upon its surface. It is said to be oxidized by long agitation in a bottle half full of air, and the oxide so formed was called, by Boerhaave, *Ethiops per se;* but it is very probable that the oxidation of mercury, observed under these circumstances, was simply owing to the presence of other metals. The oxides of mercury are two. The protoxide, which is a black powder insoluble in water, is best prepared by mixing calomel briskly in a mortar with pure potassa in excess, so as to effect its decomposition as rapidly as possible. The protoxide is then to be washed with cold water, and dried spontaneously in a dark place. It consists of one equivalent, or 200 parts of metal, and one equivalent, or eight parts of oxygen. The peroxide, which is commonly known under the name of red precipitate, is prepared, as already mentioned, from the combined agency of heat and air, or by dissolving mercury in nitric acid, and exposing the nitrate so formed to a temperature just sufficient to drive off the whole of the nitric acid. It contains double the quantity of oxygen found in the protoxide. It is acrid and poisonous, and carries these qualities into its saline combinations; whereas the protoxide is relatively bland, and is the basis of all the mild mercurial medicines. It is occasionally occasioned by the addition of phosphorus, and the air, exalts vapours of phosphorus. There are two
sulphures, the black and the red, or the proto sulphur-est and the deuto-sulphur-est. The first is formed by rubbing vigorously in a glass or porcelain mortar three parts of sulphur and one of mercury, or by adding mercury at intervals, and with agitation, to its own weight of melted sulphur. The second, which is commonly called black, is obtained after the calcined European isocyanate has been sublimed from the proto-sulphuret. Large quantities of it are manufactured in Holland. The ordinary process consists in grinding together 150 pounds of sulphur and 1080 of quicksilver, and then heating the mixture in a cast-iron pot, two and a half feet in diameter and one foot deep, precautions being taken that the mixture does not take fire. The calcined European isocyanate is then ground into powder, and introduced into pots capable of holding twenty-four ounces of water each, to which are attached subliming vessels, or bolt heads of earthenware. The sublimation usually takes thirty-six hours, when the sublimers are taken out of the furnace, cooled, and broken. The acids sustain an important relation to mercury. All of them either dissolve the metal or unite with its oxides. Sulphuric acid exerts little or no action upon it in the cold, but, if heat be applied, it is decomposed, the mercury is oxidised, sulphurous acid is disengaged, and the oxide combines with the remaining acid. This proto-sulphate of mercury is a white, powdery, extremely fine powder, possessing a compact mass, soft, and partly liquid. It is very acid, deliquescent, and soluble in water. If it is urged with a heat gradually raised until the mass becomes dry, the metal is more highly oxidised, and a portion of the acid is diisipated. On pouring boiling water on this dry mass, it acquires a lively yellow colour, forming an insoluble powder, known by the appellation of turshith mineral, or yellow sulphate of mercury. The water, in this process, produces the usual effect which it has when it decomposes metallic salts. Exerting a stronger attraction to the acid than to the metallic oxide, it combines principally with the former, but, from the influence of quantity on chemical affinity, the acid carries with it a portion of the oxide, and conversely, from the operation of the same force, the oxide which is precipitated retains a portion of the acid combined with it. The neutral sulphate is thus resolved into a super-sulphate, which the water dissolves, and a sub-per-nitrate of mercury, sub-per-nitrate of mercury; whereas, in the case of this sub-sulphate, it is chiefly used in preparing corrosive sublimate and calomel. Nitric acid acts on mercury with facility, oxidising it, and combining with the oxide, forming a perfect solution. The product of this action varies considerably, particularly with regard to the state of oxidation, according to the circumstances under which it is exerted. If the acid is diluted with rather more than an equal part of water, and if the action is not accelerated by heat, the protoxide only is formed, and the salt is the proto-nitrate of mercury. If the acid is less diluted, and if its action on the metal be promoted by heat, the peroxide is also formed, and this peroxide forms a portion of a concretion of silver prussiates. Both salts are corrosive, deliquescent, and soluble in water. If the solution of the per-nitrate is poured into water, a partial decomposition happens, similar to that of sulphate of mercury, and a yellow insoluble sub-per-nitrate of mercury is precipitated. Nitrate of mercury is decomposed by the alkalies and earths; and in these decompositions are well displayed the differences which arise from different states of oxidation of the metal. By potash, soda, or lime, added to the solution of the per-nitrate, a greyish, with a tinge of yellow, is thrown down; from the solution of the per-nitrate the precipitate is yellow, more or less bright. These precipitates are sub-nitrates, the oxide, separated by the alkali retaining a portion of the acid combined with it. The action of ammonium on these solutions is more peculiar. From the solution containing the mercury at a high state of oxidation, it throws down a white precipitate, which is a ternary combination of the oxide, nitric acid, and the alkali. From the solution at which the metal exists at the minimum of oxidation, it throws down a precipitate of a dark grey or blue colour. The grey precipitate by ammonium (oxidum hydrargyri cincrum of the pharmacopoeias) is a preparation much used in medicine. It is a mild astringent, and is very similar to the actions of the tonics of the system, to the mercurial preparations formed by trituration. To obtain it of uniform composition, it is necessary to use every precaution to moderate the action of the nitric acid on the metal, as by free dilution with water, and by avoiding the application of heat. A fulminating preparation of mercury is obtained by dissolving 100 grains in one and a half ounce by measure of nitric acid. This solution is poured cold into two ounces by measure of alcohol in a glass vessel, and heat is applied till effervescence is excited, though it ordinarily comes on at common temperatures. A white vapour unulates on the surface, and a yellow precipitate, which is immediately collected on a filter, well washed, and cautiously dried. This powder detonates readily by gentle heat or slight friction. It has been very much used of late as the match powder, or priming, for the percussion caps of the detonating locks of fowling pieces. Two grains and a half of it, mixed with one sixth of that weight of gunpowder, form the quantity for one percussion cap, according to the researches of Aubert, Pelissier, and Gay-Lussac. In preparing this powder in quantities, the fulminating mercury should be moistened with thirty per cent. of water, then triturated in a mortar, and thereafter mingled with the sixth part of its weight of gunpowder. Matches of this kind resist damp very well, and take fire after several hours' immersion in water. The detonating match, or priming powder, made with chloride of potash, sulphur, and charcoal, has the inconvenience of rusting and soiling the fowling pieces, and hence causing them to become unserviceable. The fulminating powder, a hundred shots may be discharged successively. The mercurial percussion caps are sold now in Paris for three francs and a half per thousand. The acetic and most other acids combine with the oxide of mercury, and precipitate it from its solution in the nitric acid. Muratic acid does not act on mercury. When mercury is heated in chlorite, it burns with a pale-red flame, and the substance called corrosive sublimate is formed. This deuto-chloride may also be formed by mixing together equal parts of dry blento-sulphate of mercury and common salt, and subliming. The corrosive sublimate rises, and incrusts the top of the fowling powder, a hundred shots may be discharged successively. Its specific gravity is 5.14. Its taste is acrid, stypto-metallic, and eminently disagreeable. It is a deadly poison. Twenty parts of cold water dissolve it, and less than one of boiling water. It is composed of 75-53 mercury and 24.47 chlorine. It may be recognised by the following characters: It volatilizes in white fumes, which seem to tarnish a bright copper-plate, but really communicate a coating of metallic mercury, which appears glossy white on friction. When caustic potash is made to act on it with heat in a glass tube, a white deposit is formed, and the approach of metallic mercury is then found to line the upper part of the tube in minute globules. Solution of corrosive sublimate
MERCURY.

reddens litmus paper, but changes sirup of violets to green. Bicarbonate of potash throws down from it a deep brick-red precipitate, from which metallic mercury may be decomposed, by boiling it in a tube. Lime-water causes a deep yellow precipitate, verging on red. Water of ammonia forms a white precipitate, which becomes yellow on being heated. With sulphurated hydrogen and hydrosulphuret, a black, or blackish-brown precipitate appears. Nitrate of silver throws down the curdy precipitate characteristic of muriatic acid; and the proto-muriate often gives a white precipitate. From six to twelve grains were the mortal doses employed by Orfila, in his experiments on dogs; they died in horrible convulsions, generally in two hours; but when with a larger quantity, the whites of eight eggs were thrown into the stomach, the animals soon recovered after vomiting. The effect of this antidote is to convert the corrosive sublimate into calomel. Sulphurated hydrogen may also be employed along with emetics. The proto chloride of mercury (mercurius dulcis, or calomel), is usually formed from the deuto-chloride, by triturating four parts of the latter with three of quicksilver globules, and then subjecting the mixture to a sublimating heat. By levigating and edulcorating with warm water the sublimed grayish-white cake, the portion of soluble corrosive sublimate which had escaped decomposition is removed. It may also be made by adding solution of proto-nitrate of mercury, to solution of common salt; the protochloride, or calomel precipitates. The following is the process used at Apothecaries' Hall, London:—Fifty pounds of mercury are boiled with seventy pounds of sulphuric acid to dryness, in a cast-iron vessel; sixty-two pounds of the dry salt are triturated with forty pounds and a half of mercury until the globules disappear, and thirty-four pounds of common salt are then added. This mixture is submitted to heat in earthen vessels, and from ninety-five to one hundred pounds of calomel are the result. It is washed in large quantities of distilled water, after having been ground to a fine and impalpable powder. When proto-chloride of mercury is very slowly sublimed, four-sided prisms, terminated by prisms, are obtained. It is nearly tasteless and insoluble, and is purgative in doses of five or six grains. Its specific gravity is 7.176. Exposure to air darkens its surface. It is not so volatile as the deuto-chloride. Nitric acid dissolves calomel, converting it into corrosive sublimate. Proto-chloride of mercury is composed of mercury 84.746, hydrogen 4.946, oxygen 8.308. There are two iodides of mercury; the one yellow, the other red; both are fusible and volatile. The yellow, or protiodide, contains one half less iodine than the deutiodide; the latter, when crystallized, is a bright crimson. They are both decomposed by concentrated sulphuric and nitric acids. The metal is converted into an oxide, and iodine is disengaged. They are likewise decomposed by oxygen, at a red heat.

Mercury, on account of its fluidity, readily combines with most of the metals, to which it communicates more or less of its fusibility. When these metallic mixtures contain a sufficient quantity of mercury to render them soft at a mean temperature, they are called amalgams. It very readily combines with gold, silver, lead, tin, bismuth, and zinc; more difficulty with copper, arsenic, and antimony; and scarcely at all with platinum or iron. It does not unite with nickel, manganese, or cobalt; and its action on them is unknown. (See Silvering.) The medicinal uses of mercury have already been alluded to. The amalgamation of the precious metals, water gilding, the making of vermillion, the silvering of looking-glasses, the construction of barometers and thermometers, are the principal uses to which this metal is applied. (See also under Mercury.) It has a specific property of dissolving completely some of the baser metals. This union is so strong, that they even rise along with it in vapour when distilled. Its impurity, however, can generally be detected by its dull aspect; by its tarnishing, and becoming covered with a coat of oxide, on long exposure to the air; by its adhesion to the surface of glass; and, when shaken with water in a bottle, by the speedy formation of a black powder. Lead and tin are frequent impurities, and the mercury becomes capable of taking up more of these, if zinc or bismuth be previously added. In order to discover lead, the mercury may be agitated with a little water, in order to oxidize that metal: pour off the water, and digest the mercury with a little acetic acid; this will dissolve the oxide of lead, which will be indicated by a blackish precipitate, with sulphurated water; or to this acetic solution, add a little sulphate of tin, which will precipitate the tin dioxide, and thus disclose the presence of lead, containing from seven to seventy per centum of metal. Bismuth is detected by pouring a nitric solution, prepared without heat, into distilled water; a white precipitate will appear, if this metal be present. Tin is manifested, in like manner, by a weak solution of proto-muriate of gold, which throws down a purplish sediment; and zinc, by exposing the metal to heat.

Ores of Mercury. The native mercury and the sulphuret are the only two ores explored for the extraction of this metal. The first of these is found in globules, disseminated through different rocks, adhering to the sides of cavities and fissures in the form of the rhombic doedechidron. The sulphuret is the common ore, which furnishes nearly all the mercury of commerce. It occurs, crystallized, in rhomboids, and six-sided prisms and tablets; colour cochinical red; lustre adamantine and splendent; translucent; streak scarlet-red, shining; harder than gypsum, sectile, and easily frangible; specific gravity 12.254. The mercury of commerce is also occurs, massy, compact, and often blended with bituminous matter, which communicates to it a liver-brown or black colour, whence the name of hepatic cinnabar. This ore is very rich, and affords, by analysis, eighty-four or eighty-five per centum of mercury; that which is bituminous gives eighty-one per centum. The muriate of mercury, or horn quicksilver, is so rare, and presents itself in such small quantities in the mines, as scarcely to receive the attention of the miner, and it is sought after only by the mineralogist. It occurs in incrustation, and rarely crystallized in quadrangular prisms, terminated by pyramids. It is translucent, with a lustre between adamantine and vitreous, and is sectile. It consists of 76 oxide of mercury, 16.4 muriatic acid, and 7.6 sulphuric acid. The ores of mercury are more frequent in secondary than in primitive rocks, and are found particularly in sandstones, bituminous shales, and argillite, often accompanied by organic remains. In general, mercury is not abundant in veins, and is not known by any particular distribution, and the mines which furnish it in quantity are few. The principal are those of Irida, in the Austrian dominions, discovered in 1497, and which chiefly afford a bituminous sulphuret of this
MERCY—MERIDIAN.

781

metal. These mines have already been explored to a depth not far from 1000 feet. They are capable of furnishing annually 6000 quintals of metal; but the Austrian government, in order to maintain the value of the metal, have limited their produce to 1500 quintals per annum. Their total produce from 1809 to 1813, a period of fifty-six months, was 1,419,425 pounds, or 20,619 quintals. They contained 76,226 pounds of lump cinna¬bar; 6,400 pounds of calomel; 2,867 pounds of red precipitate, and 2,450 pounds of corrosive sublimate. The memorable con¬figuration of these mines in 1803 was extinguished only by filling their chambers and galleries with water, and the mercury which was sublimed during that catastrophe, occasioned the most dreadful dis¬asters among more than 900 persons. Next to the mines of Idria come those of Almaden, in the prov¬ince of Manche, in Spain, and which are nearly as rich as those of Idria. Their mean annual product is about 5000 quintals of quicksilver. These cele¬brated mines, near which are also those of Cuelas and Almadenegus, were known to the Romans, and, it is presumed, are those alluded to by Pliny, under the name of the mines of the territory of Sisampum. After having been, for a great number of years, leased out to the merchants of Alsace, they are now carried on by the government, and their product is exported to the various manufacturers for amalgama¬tion of gold and silver in the mines of Mexico and South America. The mines of the palatinate, situ¬ated upon the left bank of the Rhine, approach next in importance to those of Idria and Almaden. Their mean annual product is estimated at about half that of the Spanish mines. There exist in Hungary, in Bohe¬mia, and in many other parts of Germany, small exploitations for mercury, of which the total yield is about 400 quintals per annum. The mines of Guanaca Velica, in Peru, have afforded an immense supply of quicksilver for the purposes of amalgama¬tion in the new world. Between the years 1570 and 1800, they are said to have furnished 537,000 quintals of this metal; and their actual product is, at present, rated at 1800 quintals. The ores of mercury are found in several places in Mexico, but are nowhere wrought to any extent. In 1590, mer¬cury was sold in Mexico at £4 10s. per cwt.; in 1644, the price was raised to 15s.; in 1734 a further reduction had taken place, the price then being £8 17s. 6d. The consumption was estimated in the year 1803 (for Mexico), when the mines were in full work, as being 2,000,000 pounds per annum.

MERCY, François de, one of the most distin¬guished generals in the thirty years' war, was born at Longwy, in Lorraine, and rose in the service of the elector of Bavaria, through the successive ranks. After having defeated general Rantzau at Tuttlingen, he was appointed, with the rank of Bavarian lieute¬nant-general and imperial field-marshal, to the com¬mand of the combined forces, and captured Rotweil and Unterlinden. On the death of his uncle, at Freiburg, he fell into his hands, and he threw up a forti¬fied camp in its vicinity. The great Condé attacked him in this position, and, after a combat of three days, compelled him to retire. Turenne pursued him, but the retreat was so ably conducted, that the French lost a large portion of their baggage over him. May 5 (April 25), 1645, he defeated Turenne, at Marienthal (Mergentheim), and fell, August 3, in the battle of Allersheim, near Nord¬lingen. He was buried on the field, and a stone was raised with the inscription Stu, viator, heroem caelis. Parentes. In a jury justly remarks, that the simple name of one of his titles would have been preferable to this pompous sentence, bor¬rowed from antiquity.

MERCY, FLORENCIO CLAUDE de, a grandson of the preceding, born in Lorraine, 1666, entered the service of the emperor Leopold, 1682, and distin¬guished himself as a volunteer in the defence of Vienna against the Turks. His gallantry, particu¬larly in the battle of Zenta, 1697 (see Eugene), was rewarded with the rank of major. He afterwards served in Italy and on the Rhine. In 1705, he stormed the lines of Pfaffen¬hofen, and compelled the French to retreat under the cannon of Strasburg. In 1706, he covered Landau by his skilful manoeuvres, and supplied it with provisions and troops. In 1707, he defeated general Vivans, at Offenburg; but, in 1709, having penetrated too far into Alsace, he was entirely defeated at Rumersheim. In 1716, he commanded against the Turks, as field-marshal, and took part in the victories of Peterwardein and Belgrade. In 1719, he commanded, with equal success, in Sicily, against the Spaniards, and, during the peace, exerted him¬self in improving the condition of the Bannat. In 1734, he received the command in Italy, and occu¬pied the duchy of Parma; but fell, while leading the attack, in person, on the village of Croisetta. His remains were interred at Reggio.

MERGANSER (mergus); a genus of aquatic birds, consisting of five species. These birds are wild and untamable, migrating, according to the season, from cold to temperate climates. They keep in flocks, the adult males usually by them¬selves, leaving the young with the females. They are extremely voracious, destroying immense num¬bers of fish. They build among grass, near fresh water: the nest is lined with down, and contains from eight to fourteen eggs. The male keeps near the nest, though the female alone incubates. They swim with the body very deep in the water, the head and neck only appearing; dive by plunging, and remain under water for a long time. They walk badly; fly well, and for a long time. Their flesh is dry, and of a bad flavour.

MERIAN, MATTHEW, senior, born at Basle, in 1593, studied at Zurich, under Dietrich Meyer, and at Oppenheim, under Theodore de Bry, settled at Frankfort on the Main, and died in 1651. His prin¬cipal engravings consist of views of the chief cities of Europe, particularly that had Germany, with de¬scriptions, and are remarkable for the excellence of their perspective. His other works are landscapes, historical scenes, the chase, &c.

His son Matthew, born at Basle, 1621, was a good painter of portraits. He studied at Rome, 1644, travelled in England, the Low Countries, France, &c., and died in 1687.

Maria Sibylla, a daughter of the elder Matthew, was born at Frankfort, in 1647. She studied under her step-father Morefels, and Mignon, and was dis¬tinguished by the taste, skill, and accuracy with which she painted flowers and insects in water colours. Here, for this description, she induced her to make a voyage to Surinam, for the purpose of observing the metamorphosis of the insects of that country; and, after a residence of two years, she returned with a large collection of drawings of insects, plants, and fruits on vellum. Her works are: Insectorum Sive Entomologiae, or, Metamorphosis; History of the Insects of Europe; and Metamorphosis Insectorum Surinamensis, with sixty plates. She died at Amsterdam, 1717. One of her daughters published a new edition of the last named work, which her mother was preparing at the time of her death.

MERIDA, or YUCATAN; one of the states of the Mexican confederacy. See Yucatan, and Mexico. MERIDIAN, in astronomy (from the Latin meri-
dies, mid-day), is a great circle of the celestial sphere, passing through the poles of the earth and the zenith and nadir, crossing the equator at right angles, and dividing the heaven into two hemispheres. When the sun is on this circle, it is noon or mid-day, to all places situated under that meridian, whence the derivation of the word, as above stated.

Meridian, in geography: a corresponding terrestrial circle in the plane of the former, and which, therefore, passes through the poles of the earth. All places distant from the same meridian have their noon or mid-night at the same time; but, under different meridians, it will arrive sooner or later, according as they are situated to the eastward or westward of each other; via. the sun will be upon that meridian soonest which is most to the eastward, and that at the rate of an hour for every fifteen degrees.

First Meridian is that from which all the others are reckoned, which, being totally arbitrary, has been variously chosen by different geographers. Ptolemy makes his first meridian pass through the most western of the Canary islands; others have chosen the Verd; some the Peak of Teneriffe, others the island of Ferro, &c.; but most nations now consider that the first meridian which passes over their metropolis, or their principal observatory. Thus the British reckon from the meridian of Greenwich; the French from Paris; the Spanish from Madrid; the Americans from Washington, &c.

Meridian of a Globe is the great circle in which it turns, and by which it is supported. The Brazen Meridian is divided into 360 equal parts, called degrees. In the upper semicircle of the brass meridian these degrees are numbered from 0 to 90, or from the equator towards the poles, and are used for finding the latitudes of places. On the lower semicircle of the same meridian, they are numbered from 0 to 90, from the poles towards the equator, and are used in the elevation of the poles.

Meridian Line is a north and south line, the exact determination of which is of the greatest importance in all cases relating to astronomy, geography, dialing, &c., because on this all the other parts have their dependence. The most celebrated meridian line is that on the pavement of the church of St Petronio, in Bologna, which was drawn to the length of 120 feet, by the celebrated Cassini. Without knowing the meridian line of a place, it would be impossible to make a dial, set a clock, or measure the degrees of the earth’s surface. For the measurement of degrees of the meridian, see the article Degrees, Measurement of.

Meridian Line, on a dial, is the same as the 12 o’clock hour line.

Magnetic Meridian: a great circle passing through the magnetic poles. See Magnetism.

Meridian Altitude: the altitude of any of the heavenly bodies when they are upon the meridian.

Merino Sheep. See Sheep.

Merlin, Ambrose, a British writer, who flourished about the latter end of the fifth century. The accounts we have of him are so mixed up with fiction, that to entangle his real life from the mass would be impossible. He was said to be the son of a demon and a daughter of a king of England who was a nun. His birth-place was Carnarthen, in Caledonia. He was instructed by his father in all branches of science, and received from him the power of working miracles. He was one of the greatest judges and mathematicians of his time, the counsellor and friend of four English kings, Vortigern, Ambrose, Uther Pendragon, and Arthur. Vortigern, at the advice of his magicians, had resolved to build an impregnable tower, in order to secure himself against the Saxons; but the foundation was scarcely laid, when the earth opened by night and swallowed it up. The magicians informed the king, that to give firmness to the foundation, he must wet it with the blood of a child born without father. After much search the young Merlin was brought to the king. After Merlin had heard the dictum of the magicians, he disputed with them, and showed them that under the foundation of the tower was a great lake, and under the lake two great raging dragons, one red, representing the earth, the other white, representing the Saxons. The earth was the same open, and no sooner were the dragons found, than they commenced a furious battle; whereupon Merlin began to weep, and to utter prophecies respecting the future state of England. The miracles ascribed to him are numerous. He is said to have escaped from the Saxons in a ship of glass. Instead of dying, it was supposed that he fell into a magic sleep, from which, after a long period, he would awake; and to this fable Spenser alludes in his Faery Queen.

In the British museum is Le Compte de la Vie de Merlin et de ses Faits et Compte de ses Prophecies (2 vols., folio, on vellum, without date or place of publication), a work of Merlin, surnamed Ambrosius, by T. Heywood. See War- ton’s History of Poetry, and Spenser’s Faery Queen, &c.

Merlon, in fortification, is that part of a parapet which is terminated by two embrasures of a battery. It’s height and thickness are the same with that of the parapet; but its breadth is generally about nine feet on the inside, and six on the outside. It serves to cover those on the battery from the enemy; and it is better when made of earth, well beat and close, than when built with stones, because they fly about, and wound those they should defend.

Mermaid (from the Anglo-Saxon mare, sea); a fabulous creature, from which several have described as having the head and body of a woman with the tail of a fish. Mermaids are represented as having long green hair, breasts, and arms, and as sometimes seen floating on the surface of the ocean. Shakespeare gives them a voice:

I heard a mermaid on a dolphin’s back,
Uttering such dulcet and harmonious breath,
That the rude sea grew civil at her song.
Oberon, in Midsummer Night’s Dream.

This reminds us of the ancient syrens, who, however, were winged and clawed. (See Syrens.) Merlin has also the ancient priestesses, or priestesses of Earth, that were anciently called, and which existence has been plainly proved.

The stories have probably arisen from the appearance of Phocee, and similar creatures.

Meroe; a city and state of ancient Ethiopia, in the north-easterly part of Africa, upon a fruitful peninsula, surrounded by sandy deserts, and bounded by the Astapus (Bahr el Ahid), the White river, or properly the Nile, on the west, and the Astaboras (now the Tancouza) on the east, as far as the modern province of Gojum. It now forms the district of Athar, between 13° and 18° north latitude, with a town of the same name, and lies in the kingdom of Semanar, which constitutes a part of Nubia. The people of the ancient priestly state prevailing to Herodotus, were negroes, and are the only black nation of which we have any account, that has made much progress in intellectual cultivation. They had a fixed constitution, a government, laws, and religion. The government was in the hands of a caste of priests, which chose a king out of their own number, to be either obliged to live and act according to certain prescribed rules. The priests at Meroe could doom the king to death in the name of the gods, and he must submit. It was customary for the friends (ministers) of the king to share the same fate with their master, even death. Irgemnets, king of Meroe, in the third century B.C., during the reign
of Ptolemy II., in Egypt, first made himself independent of this oppressive priesthood by murdering the priests in the golden temple. Meroe was the centre of the caravan commerce between Ethiopia and Egypt, Arabia, Northern Africa, and India. Several colonies were from Meroe, and the first civilized state in Egypt, that of Thebes, which, as a resort for the caravans, always remained intimately connected with Meroe, and was governed by priests, must have originated there. The inhabitants of Meroe and the Ethiopian coast must have received their first inhabitants. Ammonium (see Ammon, and Oasis) also was a small priestly state, with a king, founded by Egyptians and by Ethiopians from Meroe. Meroe and Axum (in Abyssinia) which appears to have been also a colony from Meroe, remained the centre of the southern commerce till the time of the Arabs. The existing monuments of their architecture, and many other vestiges of them, prove their early religious and social cultivation. Frederic Cailliaud, 100 leagues above Semnán, and 300 leagues farther from the southern boundary of Egypt, than Gau, into a new country hitherto unknown to the geographers. He made observations and collections illustrating the physical geography and natural history, besides obtaining materials for an authentic map of the country through which he passed; but he attended particularly to the monuments and ruins of the most ancient architecture.

His work, edited by Jomard, therefore forms a sequel to that of Gau, since Cailliaud begins where Gau finished. Cailliaud was well prepared for this second journey, and kept an accurate journal. With his companion he planned to visit and to take vengeance on Polyphontes. She pretended secrets to Messene, with the determination of revenging his father's death. He there demanded Polyphontes who assumed the government under the title of Ephytus, the youngest of the Meroe, and he disappeared. She did not therefore doubt that the stranger was actually the murderer of her son, and she determined to kill him while he was asleep. She was on the point of executing her design, when she recognised his hand, and concerted measures with him to bring vengeance upon Polyphontes. She pretended reconciliation with him, and promised to reciprocate his love. Polyphontes immediately prepared a sacrifice; but, while he was at the altar, Ephytus killed him, and ascended his paternal throne. This story has been dramatised by Voltaire, Maféi, Alfiéri, &c.

MEROVINGIANS; the first dynasty of Frankish kings, which ruled in the northern part of Gaul, since called France. They derived their name from Merowig (Merowen), the grandfather of Hlodowig (Clovis). They roused from 496 till 752, when they were suppressed by the Carolingians (Carlouingiens). Thirry (Lettres sur l'Histoire de France) has shown that this personal change was accompanied by a revolution, the change being eastern Franks (Austrasiens), who had become predominant over the Neustrians, or Western Franks, to whom the Merovings belonged. See France.

MERSCH, VAN DER, leader of the Brabant patriots, in 1789, was born at Menin, and entered the French service, in which he acquired the title of the brave Fleming. He afterwards served in the Austrian army, in which he rose to the rank of lieutenant-colonel. In the beginning of the opposition to Austria in the Low Countries, the command of a hastily raised body of troops was given to him, with which, though undisciplined and inferior to the enemy, he made a successful attack on the imperial forces near Hoogstraten, near Antwerp. After some other successful operations, which placed Ghent and Brussels in his hands, the chief command of the Belgian troops was intrusted to him. Party divisions soon, however, found their way into the government, and the enemies of Mersch and the naturalists doctor Ehrenberg and doctor Hemprich, who, in 1823 et seq., under royal patronage, examined the coasts of the Red sea as far as Nubia and Semnân. Hemprich died at Massauah, the principal port of Abyssinia, June 30, 1825. Ehrenberg returned, in 1827, to Berlin. Kaspar Karl Rüppel, a native of Frankfort on the Maine, in 1828, penetrated as far as Don- goila, in the upper part of Nubia, and, in 1825, returned to Cairo from an excursion in Nubia. He then visited the coasts of the Red sea, went thence to Abyssinia, and, in June, 1827, returned to Cairo. A Russian by the name of Szenkowski, who, since 1820, has travelled over some parts of the East and Africa, returned to St Petersburg in 1822, and published his travels in the Russian language, which, among many other things, probably contain good accounts of Nubia.
name, in the Prussian duchy of Saxony, with 8800 inhabitants. It is an old, badly built town. It has a good gymnasium, an obstetrical institute, several religious establishments, and some manufactories. The town is encircled by four handsome towers, and an organ of a remarkable size. The bishop Ditmar (died 1018), one of the best historians of the middle ages, lies buried here. Merseburg is celebrated for its beer. Lon. 12° 0' E; lat. 51° 21' N.

**MERU-MESOPOTAMIA.**

**MESCHID, or MEGHID, or İMAN ALI, or MESCHED ALI;** a town of Arabian Iraq, ninety miles south of Baghdad; lon. 43° 54' E.; lat. 32° 5' N.; population stated at 50,000. Five of its twelve quarters are now in ruins. The city is surrounded by a strong wall, seven miles in circumference, but the houses are mainly built of brick. Velveteen, one of the finest qualities, and fur pelisses, much esteemed, are manufactured here. There is also a manufacture of beautiful pottery. In time of peace, caravans pass continually through this town, from Bukhara, Balk, Candahar, Hindoostan, and all parts of Persia.

**MESENTERY (mesenterium, from the Greek mesen, middle, and enteron, intestine):** a membrane in the cavity of the abdomen, attached to the lumbar vertebrae, and to which the intestines adhere. Its uses are to sustain the intestines in such a manner that they may possess both mobility and firmness to support and conduct the blood-vessels, lacteals, and nerves, to fix the glands, and give an external coat to the intestines.

**MESMER, FREDERIC ANTHONY;** a German physician, author of the famous doctrine of animal magnetism, called also Mesmerism. He was born at Mersburg, in Suabia, in 1734. He first made himself known in 1760, by the publication of a thesis De Planctorum Influenza, in which he maintained that the heavenly bodies exercised an influence on the bodies of animals, and especially on the nervous system, by means of a subtle fluid diffused through the universe. But this whimsical association of the Newtonian philosophy with the reveries of astrologers being too abstruse for general reception, he added the notion of curing diseases by magnetism, and went to Vienna to put his ideas in practice. Father Hell had previously performed some pretended cures by the application of magnets, and he considering Mesmer as a rival, charged him with borrowing, or rather stealing, his invention. The new empiric thought it prudent, therefore, to remove himself temporarily from Paris, and declare that his operations were conducted solely by means of the magnetism peculiar to animal bodies. He had little success at Vienna, and his applications to the academies of sciences at Paris and Berlin, and the royal society of London, were treated with neglect. After an abortive attempt to cure Mlle. Paradis, a celebrated blind musician, by the exercise of his art, Mesmer quitted Vienna for Paris, in 1773. There he found a great many people, who with great facility, made the public aware of his pretended discoveries; and the baron de Breteuil actually carried on a negotiation with this pretender, offering him a large pecuniary reward, if he would establish a magnetic clinicum, and instruct three persons chosen by government, in his process. The latter condition induced him to reject the proposal, and he removed, with some credulous patients, to Spa. A subscription was opened, to induce him to return to Paris and reveal the principles of his confessed discovery. He consequently went thither, gained a number of proserlyes, and received 340,000 livres. Government at length appointed a committee of physicians and surgeons, together with some other persons, to determine the truth of these assertions. Among those who was Franklin, to investigate the pretensions of Mesmer; and the result of their inquiries appeared in an admirable memoir, drawn up by M. Bailly, which completely exposed the fallacy of animal magnetism, and the quackery of his author. He afterwards resided some time in England, under a disguised name, and then retired to Germany, and, in 1799, published a new exposition of his doctrine, which attracted no notice. He died at his native place, in 1815. He was the author of Mémoire de F. A. Mesmer sur ses Découvertes, and other pieces. See Magnetism, Animal.

**MESNE;** he who is lord of a manor, and has tenantry holding of him, yet himself holds of a superior lord.

**MESNE PROCESS;** an intermediate process which issues pending the suit, upon some collateral interlocutory matter. Sometimes it is put in contradistinction to final process, or process of execution; and it signifies all such processes as intervene between the beginning and end of a suit.

**MESOPOTAMIA** (Greek, signifying the land between the rivers, called, by the Arabians, At Gezira, or the island). The Greeks called by this name the extensive region enclosed by the Tigris and Euphrates, and bounded on the north by the Tauro-Ituraean or Taurus, and on the south by the country was mountainous, and rich in grain, wine, and pasture; but the southern part was flat, dry, and unfruitful. The principal cities were Charma, or Charrane, Edessa, Zoba (Nisibis), Antioch, Mygdonia, and Singara. This country has always been inhabited by husbandmen, who lived a settled life, and by shepherds, who processes from place to place. The Mesopotamians sprang from the Chaldeans, the primitive inhabitants, from the Cushites, who, in the reign of Nimrod, built the cities of Edessa and Nisibis, and from the descendants of Shem, of the tribe of Thara. The latter first inhabited the region around Ur Chasum, and then dwelt in and around Haran or Charrane; but, in process of time, they spread throughout the whole country, even into Chaldea and Syria, so that the Cushites were compelled either to retire before them or submit to them. It was originally a part of Nimrod's dominion. After an interval of more than 700 years (B. C. 2000), it passed out of Mesopotamia, to whom extended his dominion over the Euphrates. The Israelites, who then possessed Palestine, were compelled to pay him tribute for the space of eight years. In the golden age of the Assyrian...
power (570 years B.C.), Mesopotamia was entirely subjected to that empire, and suffered the fate of its subsequent conquerors. Trajan subjected it to the domination of Rome, A. D. 106, but the Persians did not suffer her to remain long in undisputed possession of it. When the Arabs, in 651, established a new empire upon the ruins of the kingdom of the Sassanides, Mesopotamia was also obliged to submit to the storm. In the year 1040, it fell into the hands of the Seljouks. From that time it had many rulers, in rapid succession. Genghis Khan made himself master of it in 1218, but, in the year 1360, it fell into the hands of Turg Ali Bey. Forty years afterwards, Mesopotamia was conquered by Tamerlane, and, in 1514, Ismael Sophi incorporated it with the Persian empire. The Persians were, however, in 1554, compelled to cede more than half of it to the Turks; and though they again, in 1613, recovered the lost portion, they were unable to withstand the attacks of Amurath IV., who united this, in 1657, with many other provinces, to his empire. The present extent of this country is estimated at about 36,000 square miles, with 800,000 inhabitants. The capital, Diarbekr, situated on the Tigris, with 38,000 inhabitants, a considerable manufacturing and commercial city, is the seat of a sunniq. See J. S. Buckingham's Travels in Mesopotamia [Alep- pe, Diarbekr, Meros, Bagdad, the Ruins of Babylon, &c.]. London, 1827, quarto.

MESS, in sea language, denotes a particular company of the officers or crew of a ship, who eat, drink, and associate together, whence messmate, one of the number thus associated. In military language, mess denotes a sort of military ordinary, for the maintenance of which every officer, who takes his meals there, gives a certain proportion of his pay. These associations of officers, in the British armies, exist not merely in time of peace, but even in the field; and foreigners are surprised at the degree to which the national love of comfort prevails, even amidst the fatigues of service, leading the officers to carry with them loads of table equipage, thereby adding to the cumbersome baggage of a British army. In all the descriptions of the British military life, the mess is conspicuous; and it may easily be imagined that these social meetings, when the toils of service are suspended, and the pleasures of the table are heightened by the restricted social etiquette, are relaxed, and a soldier-like frankness prevails; when the young express their hopes, and the older relate their experiences—are among the bright spots of British military life. Several armies, particularly the Prussian, have attempted, in time of peace, to imitate the British mess, but without being able to copy it fully.

Messa di voce (Italian) signifies, in music, the gradual swell and diminishing of the tones. It takes place in notes of long duration, especially upon fermatas (q. v.), and in the preparation of a cadence. On the drum, the gradual swelling in the piano, crescendo, forte and decrescendo must depend. In shorter notes, less gradation takes place. The messa di voce requires the singer to have his breath entirely under his control. If well executed, it has a very fine effect; but it is not to be confounded with the erroneous practice of many singers, to begin every word of the sentence in crescendo in strength; neither ought it to occur too frequently.

MESSALINA, 1. Valeria. This notorious Roman empress, the daughter of Messala Barbatus, and wife to the emperor Claudius, has left behind her the infamy of having surpassed, in licentiousness, the most abandoned women of any age. She had all the graces belonging to the household of the emperor for her lovers; of her husbands, she said, there was too low for her. Not satisfied with her own shame, she even compelled the most noble Roman ladies to commit, in her presence, similar excesses. Whosoever did not comply with her wishes she punished with death. She at length went so far as, during the lifetime of her husband, publicly to marry Catus Silus, a senator. Narcissus, a freedman and favourite of the emperor, formerly a paramour of the empress, discovered to Claudius, who was then absent from Rome, this new act of infamy on the part of Messalina. But Claudius delayed to punish her, and Narcissus, seeing that his own life was at stake, if the empress should succeed in recovering the favour of her weak and indolent husband, gave orders to his friends to murder her secretly (A. D. 46).—2. Statilia Messalina; the third wife of Nero, on whose death she returned to private life. She then devoted herself to the study of eloquence and the fine arts, and acquired some celebrity.

MESSANA. See Messina.

MESSE CONCERTATE (Italian); masses in which the recitation is interspersed with choruses.

MESSE DI CAPELLA; an expression applied by the Italians to masses sung by the grand choruses. In these compositions, various figures, double counterpoints, and other elaborate qualifications, are always required.

MESSENIA; a country of ancient Greece, in the southern part of the Peloponnesus. Its capital was Messene (Mavromat), with the mountain fortress Ithome; Mothone (Modon), Korone (Coron) and Tyllos (Navarin) with the stronghold Phene, now Calamata, were its principal ports. On its southern coast lay the Messenian gulf (now the gulf of Coron). A ridge of mount Taygetus separated Messene from Sparta. Messenia is celebrated for the long struggle of its inhabitants with the Lacedaemonians, in defence of their liberty. In the time of Demosthenes (745-724 B. C.), the Lacedaemonians with the Athenians invaded Messenia, notwithstanding the proposal of the Messenian king to submit their differences to the arbitration of the Areopagus, or the Amphictyonic council. For twenty years, the Messenians defended themselves valiantly, under their king Aristocles, fighting the wars of their country and the cause of the Delphic oracle, which promised them the victory on condition of the sacrifice of a virgin of the
royal family, offered his own daughter as the victim. Her lover, to save her life, declared her to be the wife of himself, and Aristodemus, to prove her innocence, stabbed her with his own hand, and caused her to be opened and sacrificed. The Messenians, though for some time successful, were finally obliged to submit by the loss of Ithome. About forty years after, they again rose; and thus commenced the second Messenian war (683 B.C.), which ended in their subjugation. (See Aristonemès.) A part of the Messenians are said to have emigrated to Sicily, and there to have founded Messana (see Messina), on the site of the ancient Zanee (683 B.C.). After 200 years of servitude, the Helots (q.v.) and Messenians took up arms. This third Messenian war lasted ten years (683—455 B.C.), and resulted in the expulsion of the Messenians from the Peloponnesus. Epaminondas restored them. They rebuilt Messene (369 B.C.), and maintained their independence till the country was conquered by the Romans. The Messenians remained true to their customs, manners, and language, through all changes of fortune. Delavigne has published a history of Messenia. In modern Greece as organized since the revolution, two of the seven departments of the Morea, in the south-western part of the peninsula, have received the names of Upper Messenia and Lower Messenia.

MESSENIUS, John, born at Wadstena, in East Glandh in, 1534, was a Swedish historian. He was in the confidence of the great Gustavus Adolphus, and became professor of law and politics at Upsal. His fame exposed him to envy, and his enemies accused him, in 1615, of corresponding secretly with the German emperor Sigismund, on which he was sentenced to imprisonment for life. He died in confinement in 1653. Of his writings, the principal is Johan, Messenijur Sconsia (not Scandia) illustrata, seu Chronologia de Rebus Scociis, hoc est Sueciae, Daniae, Norvegiae, &c., (Stockholm, 1710, 14 vols., folio). His son Arnold was executed in 1634, on account of a libel against the queen and the senate. This libel was written by John, son of Ar- nold, who was then but seventeen years old. The father, however, had been accessory to it. John shared his fate.

MESIAH; a Hebrew word, signifying the "anointed;" in the Greek translation Χριστός, whence Christ. In the Old Testament, the word is applied to the whole Jewish people, to the priests, to the kings, and to the Messiah, the "Messiah," and even to Gentile kings. In the books of the prophets, however, it began to be applied, by way of eminence, to the Saviour and Re-deemer of the Jewish nation, and, in this sense, is used in the New Testament, with the extension of its meaning so as to signify the Saviour of all men. The Jews deny that the Messiah is yet come, and still expect the restoration of their state and nation from his arrival. See Jesus, and Jesus.

MESSIER, Charles, an astronomer, born at Ba-çonville, in Lorraine, in 1739, went to Paris at the age of twenty, and was employed by the astronomer Delille, in copying and drawing maps. Delille, who was struck with his zeal in the study of astronomy, obtained a situation for him, and, in 1758, the observation of the comet, which then occupied the attention of astronomers, was intrusted to him. He was one of the first to discover the comet whose return Halley had predicted in 1759; and he carefully observed the newly discovered planet Uranus, a telescope, a quadrant, and a pendulum, were his only instruments. His sight was remarkably keen, and enabled him to discover objects of search before other observers. The revolution deprived him of his former appointments, but he continued his observations through the reign of terror, and was afterwards appointed a member of the institute, of the board of longitude, and of the legion of honour. He died in 1817, at the age of eighty-six. His observations are contained in the Mémoires of the academy, and in the Connaissance des Temps.

MESSINA (anciently Messana); a city on the eastern coast of Sicily, lying on the strait called the Phæreus of Messina, with a safe and commodious harbour; lat. 38° 11′ N.; lon. 15° 34′ E. It is the see of an archbishop. The streets are broad, well laid out, and paved with lava, cut into blocks two feet square. Since the earthquake of 1753, the houses have been rebuilt, of fewer stories. The population is 55,000; thirty convents and about sixty churches, four seminaries of education, several asylums for the poor, hospitals, and monti di pièta, a senate-house, a royal and an episcopal palace, are among the public buildings. It has an extensive transit trade between Italy and the Levant, and exports silks, wines, oil, fruits, wool, &c. The cathedral is dedicated to the virgin, who is the patroness of the city, under the title of Madonna della Lettera, and contains a fresco in the hand-writing of the virgin to the Messinians, a lock of her hair, an arm of St. Paul, and the skull of Mary Magdalen! The city was ravaged by the plague in 1743, and almost entirely destroyed by an earthquake in 1783. See Sicily.

METATEXIS, or MESTIZOS, (Spanish, mixed). In countries where Spanish Europeans have settled and intermingled with the natives, the descendants are called Mestizos. In Mexico the European Spaniards were called Chupontes, or Gachupines. The pure descendants of Europeans are called Creoles (q.v.), in similar countries. The Mestizo is described as having a transparent skin, a thin beard, small hands and feet, and a certain obliquity of the eyes. If a Metis marry with a white, the fruit of the union differs but slightly from a European.

MESTO (Italian); a term signifnicative of a pathetic and melancholy style of performance.

MESTRE DE CAM; formerly the title of the commandant, or head of a regiment of cavalry in the French service. He was distinguished by this appellation on account of there being a colonel-general in the cavalry. The chief of a regiment of infantry was also formerly so called.

MESUE; a name given to the author of several ancient Arabic works on medicine, which were early translated into the Syrian, and thence into the Arabic, and subsequently into Latin, and were published in numerous compounds, which have been adopted in English, and, in this case, generally means with, over, beyond, after.

METAL; the most numerous class of undecom- pounded chemical bodies, distinguished by the fol-
METALLURGY—METAPHOR.

lowing general characters: 1. They possess a peculiar lustre, which continues in the streak and in their smallest fragments. 2. They are fusible by heat, and in fusion retain their lustre and opacity. 3. They are all (except selenium) good conductors of both heat and electricity, and many of them may be extended under the hammer, and are called malleable; or under the rolling press, and are called laminable; or drawn into wire, and are called ductile. 5. When their saline combinations are electrified, the metals separate at the negative pole. 6. When exposed to the action of oxygen, chlorine, or iodine, at an elevated temperature, they generally take fire, and combining with one or other of these three elementary dissolvents, in definite proportions, are converted into earthy, or saline-looking bodies, devoid of metallic lustre and ductility, called oxides, chlorides, or iodides. 7. They are capable of combining in their melted state with each other, in almost every proportion, constituting alloys. 8. Most of them combine, in definite proportions, with sulphur and phosphorus, forming bodies frequently of a semi-metallic lustre; and others unite with hydrogen, carbon and boron, giving rise to peculiar gaseous or solid compounds. These, of course, may be subdivided into the following groups: 1. gold, 2. silver, 3. palladium, 5. mercury, 6. copper, 7. iron, 8. tin, 9. lead, 10. nickel, 11. cadmium, 12. zinc, 13. bismuth, 14. antimony, 15. manganese, 16. cobalt, 17. tellurium, 18. arsenic, 19. chromium, 20. molybdenum, 21. tungsten, 22. columbium, 23. selenium, 24. osmium, 25. rhodium, 26. iridium, 27. uranium, 28. titanium, 29. cerium, 30. potassium, 31. sodium, 32. lithium, 33. calcium, 34. barium, 35. strontium, 36. magnesium, 37. yttrium, 38. glucinium, 39. aluminium, 40. zirconium, 41. silicium, 42. thorium.* The first twelve are malleable, and so are the 30th, 31st, and 32d, in their congealed state. The first 10 yield oxides, which are neutral saltifiable bases. The metals 17, 18, 19, 20, 21, 22, and 23 are acidifiable by combination with oxygen. Of the oxides of the rest, up to the 30th, little is known. The remaining metals form, with oxygen, the alkaline and earthy bases.

METALLIQUE; a kind of Austrian stocks, so called because the interest is paid in the precious metals, and not, like the interest of other stocks, in paper money. The name was afterwards used for other kinds, in other countries, for instance, in Russia, for stocks of a similar kind.

METALLOID, in chemistry; a name given at first to those elements of the Periodic Table, formed from the fixed alkalies and some of the earths. These bodies, having been found to be completely metallic, are now classed with the other metals, and no distinction is necessary.

METALLURGY, METALLURGIC CHEMISTRY, is that part of chemistry which teaches the combinations and analyses of metals. It has been much cultivated of late.

METAMORPHOSIS (from the Greek μετά, over, and μεταφέρω, the form); a change of the form, used also for an entire change of the subject. The active imagination of nations in an early stage of history, in art, poetry, or religion, representing metamorphoses of men, beasts, plants, stones, &c., and these productions of youthful imagination enter into their religion, philosophy, poetry (generally at first identical). Surrounded by the constant metamorphoses of nature, and seeking, as man always does, to connect effects and causes, yet unable, from his limited knowledge, to reason the connection, he lived in an equipoise of many changes, which riper ages find to be the consequence of eternal laws, to sudden metamorphoses. To these he resorts to explain the mysteries of his present condition (which perplex the mind of man in the infancy of society as well as in advanced cultivation), and, by a series of metamorphoses, accounts for the unexplainable occurrence of certain events, which seem to proceed from the hand of providence. To all this we must add the great interest which attends the story of metamorphoses. Even in this reflecting age, in which cool understanding seems to have acquired the ascendency, who can read, without interest, the tales of strange transformations contained in the Arabian Nights or other productions of a creative imagination? Of the metamorphoses of the Greek mythology, while some startle the sober taste of our age, others belong to the sweetest productions of poetry. The popular belief in metamorphoses has by no means subsided entirely in all Christian countries. In natural history, the word metamorphosis is used sometimes for any change in the organization of matter, as, for instance, the transformation of food or rain into animal or vegetable organic substances, but more particularly for those sudden changes in the form of things, which are obvious and interesting even to ordinary observation, as the changing of the form of gold, silver, platinum, &c., into a different substance. METAPHOR (Greek, μετάφησις, from μετα, a proposition often signifying in compound words, over, and φέρω, I carry); a figure of rhetoric, by which a word is transferred from the subject to which it properly belongs, and applied to another which has some similarity to its proper subject, with a view to give impressiveness to the latter. The metaphor may be merely in an epithet or an auxiliary term, as "winged haste," the "spring of life," &c., or in the main subject of a sentence, as when a hero is called a lion, a minister a pillar of the state, &c. In respect to the points of comparison, the metaphor may either put something animate or intellectual for something inanimate and material; for instance, "the wrath of the sea," "the bountiful earth," to represent nature as if endowed with will; or, vice versa, may substitute the physical for the spiritual, as, "the stars of his merits will shine from the night of the grave." As the impressions which we receive through the five senses are the deepest, the clearest, the most spiritual by images taken from the material world, may often produce a striking effect. Thirdly, a metaphor may consist in the transfer of a term from one thing to another, falling under the same great division of material or spiritual, but substituting the one more familiar for the less, as when we speak of the "silver moon." Beauty and power are the characteristic excellencies of the metaphor; novelty shows the original wit. Unexpected contrast may produce an effect sublime and ridiculous in the highest degree. Jean Paul, in his Vorschule der Aesthetik says, "The metaphor is the proof of the unity of both worlds (spiritual and physical.) The metaphors of all nations are similar, and none calls error light, or truth darkness." Liveliness of conception, comprehensiveness of view, and activity of imagination, are necessary to produce good metaphors, which often produce great effects, sometimes to the prejudice of sober reasoning. He who wishes to study metaphors must read the Old Testament and Shakespeare. A slight consideration will show us how constantly we speak in metaphors, and that we convey most abstract ideas by metaphors of the second kind; thus, He is cold towards me, He is large minded, &c. It is maintained by many, that all language began by the designation of things by names that were metaphors, and that when the mind began to abstract, man was obliged to use his stock of words for abstract ideas, so that all words, if we had the means to trace them, would be found to refer originally to

---

* To this list we must now add vanadium, a new metal lately discovered by Sestrom, director of the iron mines of Falun, in Scandinavia.
things material, which, it cannot be denied, is often the case. In the speculative sciences, morals, metaphysics, politics, &c., metaphors, instead of being confined to the rank of illustrations, have often been treated as if they had an independent meaning, and have been made the foundation of reasonings. No philosophy deserves this reproach more severely than the most recent philosophy of Germany, which often takes ingenious metaphors as explanations of truth.

METAPHYSICS. What am I? What is all that surrounds me? What is mind, soul, existence, perception, feeling, thought? What is evil? What is space, time, causality? What is freedom? What is natural? Can we know anything with certainty? Questions of this character are continually suggesting themselves to the mind of man. It is one of his distinguishing characteristics to look for causes, and to establish relations among the numberless phenomena around him, and within him; to separate the generic from the special, and to reduce the whole system of things to harmonious order. His acquisitions and advancements are all owing to this disposition, meretriciously planted in his soul by his Creator. The rudest speculations of uncivilized man, and the profoundest systems of philosophy, are alike proofs that this desire cannot be satisfied. The anxious mind cannot be satisfied into apathy. All investigations relating to these great questions belong to what has been called, though arbitrarily, metaphysics. Such speculations it is neither possible nor desirable to check, though they may result in but distant approximations to truth. Revealed religion does not attempt to repress them, and can never be explained as evil. We should be the more satisfied, on the contrary, to know that the search was vain, this itself would be a fact of the highest interest. A man who contemplates metaphysics must think his own nature unworthy of examination. Metaphysical inquiries, indeed, have often been disfigured with overstrained subtlety and revolting sophistry, and too often arbitrary analogies, bold comparisons, and unmeaning mysticism have claimed and received homage as having unlocked the long hidden truth; but the same has taken place in regard to religion and politics, and all the great subjects which strongly stir the soul of man. In an historical point of view, all these aberrations, and even the fallacious and the promising, are interesting. Among the writings of Aristotle, on natural subjects, are some which treat particularly of the original causes of all existence. When the various treatises of that philosopher were first arranged by his commentators, the latter received a place after the others, and, not having a special title, were designated in the older manuscripts as en metra en phōnai, that is, after the treatises on nature; and of this the schoolmen formed the barbarous word mete-

philosophy; and as the subjects which Aristotle treats in these chapters are purely speculative, metaphysics was considered the science of general speculation, and of things placed beyond the reach of the senses. This science was not new; its elements were spread through all philosophical systems; and that which bears the name of Aristotle, being but a collection of considerations on the principles of things, on general terms, axioms, causes, the properties of existence, substance, matter, motion, space, time, God, the im-

material and eternal intelligences that preside over the material and temporal world, forms but part of it; for metaphysics comprehends every thing which can occupy the human mind, God, nature, the soul, and all the conceptions which result from the rational exercise of our faculties. Few philosophers have embraced the whole of the vast domain of metaphysics; generally they have attached them-

selves to one of its parts, and have treated it accord-

ing to their different genius. Some have abandoned themselves to the promptings of a lively and exalted imagination; others have devoted themselves to a cool analysis; some have employed themselves in speculation, others in observation; and in regard to observation, some have confined themselves mostly to the facts of the senses; some to the pheno-

mens within us, moral and intellectual. We do not mean that any class has exercised itself exclusively in either of these ways, but each has had a favourite path, to which the others were subordinate. Thus the Oriental philosophy observes little, reasons freely, and imagines constantly. It creates and sets in action speculations which suggest mysterious causes and arbitrary analogies, and peoples space with spirits standing between God and men. The dogma of the two principles and the system of emanations, form the basis of this theological philosophy. Traces of these sublime visions appear in the metaphysics of Pythagoras and Plato. Aristotle, in the treatises above mentioned, generally gives what other philosophers have said respecting subjects lying beyond the reach of our senses, and often only hints at what is to be sought, without declaring that it is found. The great authority which Aristotle enjoyed in the middle ages, and the subtle acuteness of his reasoning, did not prevent the man of science, induced his pretended followers to form from his philosophical fragments what they thought a connected and well founded system, which served as a canon for the philosophy of the time. Even the oldest commentators of Aristotle directed their endeavours to this point; but metaphysics, as an independent science, was developed by the schoolmen of the middle ages (Thomas Aquinas, Duns Scotus, William Occam, and others), and was cultivated (if, indeed, this word can be given to their way of treating science) so much the more as all other sciences had been forgotten. Not until the seventeenth century was the metaphysics of the schoolmen undermined by the introduction of a critical spirit of investigation. Lord Bacon, More, Hobbes, appeared in England; Th. Campanella, in Italy; Descartes, in France, as adversaries of the Aristotelian school-

philosophy. More details and a continuation of the his-

torical sketch will be found in the article Philoso-

phy. In this article in particular, are enumerated the most important systems of metaphysics. It has become customary to designate the theoretical prin-

ciples of any branch of knowledge as the metaphysics of a science. The French, in particular, have con-

sidered metaphysics in this light, and have been in the habit of despising abstract speculation, though a different spirit seems to have arisen among their lat-

est philosophical writers.

METAFOUNTUS; a son of Sisyphus, who married Theana. See Theana.

METASTASIO, PIETRO ANTONIO DOMENICO BUONAVENTURA; born at Assisi, 1698. His true name was Traspassi, and his father was a common soldier. His poetical talents were early awakened, particularly by the reading of Tasso, and, while yet a child, were displayed in making rhymes, and in improvisations: the latter, however, he was soon obliged to renounce, on account of his sensibility to nervous excitement. The celebrated Orsìvina, who accidentally became acquainted with him under his protection, called him (by a translation of his name into Greek) Metastasio, paid great attention to his education, and, on his death, in 1717, left him his whole estate. The young poet, being thus placed in an easy condition, devoted himself to his favourite study, and, under the guidance of the cele-

brated singer Maria Romanina (afterwards Gar-

garelli), created the modern Italian opera. He had
already produced an opera, Il Giustino, in his fourteenth year. In 1794, he began his career as a dramatic poet, with the Didone abbandonata, which was covered with laurels by the Sarti music, and in which he is thought to have depicted his own connexion with Romanini. His success was such that Charles VI. invited him to Vienna in 1729, and appointed him poet laureate (poeta cesareo) with a pension of 4000 guilders. Thenceforward no gala took place in which he was not graced by his verses. Ferdinand VI. of Spain, who was delighted with his operas, in which Farinelli (q.v.) performed, sent the poet a flattering token of approbation. Metastasio constantly declined all the distinctions which Charles VI. and Maria Theresa were desirous to confer on him, and died in 1782. Pius VI., who was then at Vienna, visited him in person, and sent him his apostolical benediction in articulo mortis. The most important of Metastasio's works are his operas and musical cantatas, which have appeared in numerous editions. A ninth edition of his Opere drammatiche (Venice, 1777, 14 vols.) contains his complete works, published in Venice (1781, 16 vols.) and contain his life. His Opere posthume appeared at Vienna (1795, 3 vols.). Metastasio's purity, clearness, elegance, and grace of style, the harmony, smoothness, purity, and expressive rhythm of his verse, canzonets, and sonnets are the closest in the minds and among the Italians. No poet, perhaps, has ever possessed in a higher degree the power of embracing the most essential circumstances of a poetical situation in a narrow compass. The songs, with which his personages retire, are almost always the most concise and natural expression of the state of the feelings. His representations of the passions are, however, general; his passions equally destitute of individual character, and of general contemplation. He is throughout musical, and never picturesque. His melodies are light and pleasing, but are frequently repeated with little variation; when one has read several of his pieces, he is acquainted with all. The gallantry of his heroes and the fondness of his heroines are, perhaps, less to be blamed than the choice of subjects whose serious character makes trifling out of place. His tragic attempts failed. His admirers, success, spread throughout all Europe, and particularly at courts, was owing partly to his being not only in office, but in manner, a court poet. Brilliant and superficial, arraying prosaic thoughts in a poetical style, always preserving a courtly elegance, with a constant observance of the conventional proprieties of high life, he could not fail to please in the curiously world. Few of his operas have maintained a place on the stage, on account of the change in the musical taste. METASTASIS, in medicine; the transfer of a disease from one part of the body to another, or such an alteration of its local effects as is in itself productive of a change. METEORUS; a town with a small river of the same name in the country of the Bruttii. The river Meteuros falls into the Adriatic. METELAN. See Lesbos. METELLA; the wife of Sylvia. METELLUS; the surname of the family of the Cæciliæ, at Rome, the most known of whom were a general, who defeated the Achæans, took Thebes, and invaded Macedonia, &c. Q. Cæcilius, who rendered himself illustrious by his successes against Jugurtha, the Numidian king, from which he was summand Numidicus. He took, in this expedition, the city of Carthage (as his lieutenant, and soon had cause to repent of the confidence he had placed in him. Marius raised himself to power by defaming the character of his benefactor, and Metellus was recalled to Rome, and accused of extortion and ill-management. Marius was appointed his successor to finish the Numidian war, and Metellus was to acquit Claude's soldiers of the charge of the trial of the Roman knights, who observed that the probity of his whole life, and the greatness of his exploits, were stronger proofs of his innocence than the most powerful arguments.—Another, who saved from the flames the Palladium, when Vesta's temple was on fire, was the priest. He lost his sight and one of his arms in doing it, and the senate, to reward his zeal and piety, permitted him always to be drawn to the senate-house in a chariot, an honour which no one had ever before enjoyed. He also gained a great victory over the Carthaginians, &c. Q. Cæcilius, a general who conquered Crete and Macedonia, and was summand Macedonius. METEMPSYCHOSIS (Greek, from μέτεπτερον, beyond, in., in, and ἐπαναλήπτερον, name), transmigration; the passage of the soul from one body to another.—Metempsychosis (from μεταναστευμονισμος, such, from μεταναστευμονιον, the body), a being (of which no one can be assigned), has a similar meaning. Generally the doctrine of transmigration of souls implies some change in the soul itself for better or worse, for purification or punishment. See Transmigration of Souls. METEMPTOSIS. (from μετα, after, and ϖαινω, I fall); a term in chronology expressing the solar equation necessary to prevent the change from happening a day too late.—Proempsitosis signifies the lunar equation necessary to prevent the new moon from happening too soon. METEOR. (Greek, μετεωρα, in the air.) The term meteors is often applied to all the phenomena which take place in the atmosphere, but is sometimes restricted to the appearance of luminous bodies flying or floating in the atmosphere, or in a more elevated region, including those brilliant globes or masses of matter which are occasionally seen moving rapidly through our atmosphere, and which throw off with loud explosions fragments that reach the earth, and are called falling stones; also those fireballs which are usually denominated falling stars, supposed to be owing to gelatious matter, inflated by phosphureted hydrogen gas (see Falling Stars); also the lights which appear over moist grounds and in the air. They are interpreted to the gods, as well as to the same cause. Falling stars appear under a variety of circumstances, but particularly in autumn and spring, when the sky is clear. Their size and brilliancy are variable. They always move with great celerity. They are higher than the region of clouds, because they are never seen in a cloudy sky. Electricity, spontaneous combustion of matter in the atmosphere, or the incandescence of little globes of a nature similar to that of the bolides, are the agents to which philosophers in general, though without sufficient reasons, attribute the origin of these meteors. It is very probable we shall not become acquainted without more numerous and exact observations. Meteors, in the most general sense of the word, may be reduced to four classes—igneous or fiery meteors, including, besides those above mentioned, lightning, St Elmo's fire; luminous meteors, as the rainbow, halos, aurae borealis, zodiacal light, parhelia, or morgans, paracelsens, or mock-moons; aqueous meteors,—dew, hoar frost, mist, clouds, rain, snow, hail, &c.; and aerial meteors, as winds, water-spouts. It will be seen that these phenomena are of very different natures, and owing to different causes. The only connexion between them is that they are the effects of a common medium, and we therefore refer to the separate articles for information concerning them; also to Electricity. See also the articles Meteoric Stones, and Meteorology.
METEORIC IRON. See Iron, Native, and Meteoric Stones.

METEORIC STONES, or AEROLITES, are solid, semi-metallic substances, which fall from the atmosphere. The descent of such bodies had been long reported; but the fact was not considered authentic till within a few years. The larger stones have been seen as luminous bodies moving with great velocity, descending in oblique directions, and frequently with a loud, hissing noise, resembling that of a mortar shell when projected from a piece of ordnance; they are sometimes seen to be in flame, tapering off to a narrow stream at the hinder part, are heard to explode, and seen to fly in pieces. Of course, these appearances have been observed only in the night; when the stones have fallen in the daytime, the meteor has not been observed, but the report and the show of stones only have been noticed. The same meteoric mass has often been seen over a great extent of country; in some instances, a hundred miles in breadth, and five hundred in length, which implies that they must have had a great elevation. Indeed, from various calculations, it appears, that during the time in which they are visible, their parabola is equivalent to two or three hundred miles; and their diameter has, in some instances, been estimated to be at least half a mile. Their velocity is astonishing. Though rarely visible for more than a minute, yet they are seen to traverse many degrees in the heavens. Their rate of motion cannot, according to calculation, be generally less than between thirty and forty miles in a minute. From the dimensions of these moving bodies, which certainly have not been overrated, since they have been known to illuminate, at once, a region of one or two hundred miles in extent, we are warranted in the conclusion that the stones which come to us from them, form but a very small portion of their bulk, while the main body holds on its way through the regions of the heavens. The velocity with which the pieces strike the earth is very great, frequently penetrating to a considerable depth, and when taken up, they have been found, in some cases, still hot, and bearing evident marks of recent fusion. Such falls have happened in cloudy as well as in clear weather, which leads us to conclude that these phenomena are connected with the state of the atmosphere. The most remarkable circumstance respecting them is, that they invariably resemble each other in certain easily cognizable characters, both as respects their external properties and chemical composition, so as to render it possible for a mineralogist or a chemist to recognize them with certainty, though he should have no information of their origin or fall. Those specimens in which earthy matter preponderates, resemble pretty closely certain varieties of the trachytic rocks, or ancient lavas, but they invariably contain disseminated through their substance, an alloy of iron and nickel, which has as yet never been discovered among the productions of our earth. The earthy minerals of which they are composed, are feldspar, olivine and augite—the former greatly preponderating; and of metallic substances besides the native iron, magnetic iron pyrites is a frequent ingredient. The alloy of iron and nickel often contains chrome, manganese and cobalt in minute proportions. This alloy varies in the proportions of these metals, according to the earthy matters, in stones which have fallen at different times; sometimes it is scarcely to be detected without the aid of the microscope; at other times it forms more than one half the bulk of the stone, and immense masses are found consisting entirely of native iron. Such masses are called meteoric iron, while the expression meteoric stones is applied more strictly to those in which the earthy minerals preponderate. These last are invariably coated, on the outside, with a thin, black incrustation, and have in general a spherical figure, in which we often observe indentations, similar to those which are presented by a mass that has been impressed with the fingers. These constant characters, as respects their fall, and chemical and mechanical composition, indicate a common origin, and have given rise to a variety of hypotheses to account for their phenomena. We can only hint at these hypotheses. Some attribute them to terrestrial, and others to lunar volcanoes. They have again been supposed to be concretions formed in the regions of our atmosphere; while others have considered them as small planets revolving about the sun or earth, which, coming in contact with our atmosphere, take fire from the resistance and friction which they meet with in passing through it.* With regard to the first supposition, viz., that these stones proceed from terrestrial volcanoes, it will be sufficient to observe, that no remarkable eruption has been known to have happened at or near the time of their fall, and that such bodies have been found at the distance of some thousand miles from any known volcano; besides, the immense force that would be necessary to project such bodies of the extent of twenty feet in diameter are known to possess, far exceeds any force that we can conceive of, not to notice the want of similarity between meteoric stones and ordinary volcanic exuviae. As to the theory that they proceed from volcanoes in the moon, it has a greater degree of probability. The same force that would project a body from one of our earth, would not, if it were exerted at the earth's surface, send the same body to the distance of ten miles, in consequence of the superior gravity of our planet and the density of the atmosphere. It is computed that a body projected from a favourable spot on the moon's surface,—say the centre of her disk opposite the earth,—with a velocity about four times that commonly given to a cannon ball, or 8220 feet per second, would carry it beyond the centre of attraction, and consequently into the sphere of the earth's activity; whence it must necessarily either fall to the surface of the earth, or circulate about us as a satellite. A body so projected from the moon to the earth, would take three days if it projected with its parallel; and when its motion is unconfined, it may have time to retain its heat, particularly as it is doubtful whether in passing through a vacuum, or very attenuated medium, it would be possible for the caloric to escape, not to say that it might acquire a fresh accumulation of heat, by passing through the denser parts of our atmosphere. Besides, eruptions, resembling those of our volcanoes, have been frequently observed in the moon; and her atmosphere is extremely rare, presenting but little resistance to projected bodies. This theory might perhaps be tenable if we had only to account for these showers of stones which come to our earth's surface; but these, it has been seen, are a very trifling part of the main masses from which they descend, and which are believed to be in some instances more than a mile in circumference. And since it is conceived that we experience a shower of these stones every few months in some part of the world, it is obvious that at this rate the whole mass of the moon must soon be shot away. Nor is this all. Among a number of bodies, thrown at random from the moon, it is not probable, that one in 10,000 would have precisely that direction and that rate of motion which would be requisite to cause it to pass through our atmosphere, without falling to the earth. Since the discovery of Sir H. Davy, that the earths are metallic oxides, it has been suggested that the bases of the earths are originally composed of metallic iron, so that when the body arrives within our atmosphere, a sudden and violent combustion is produced by the strong affinity of these metals to oxygen.

* Since the discovery of Sir H. Davy, that the earths are metallic oxides, it has been suggested that the bases of the earths are originally composed of metallic iron, so that when the body arrives within our atmosphere, a sudden and violent combustion is produced by the strong affinity of these metals to oxygen.
ground. With regard to the theory of these bodies being concretions formed in the air, there is one principal objection, viz., that the velocity with which they strike the earth, estimated by the depth to which they have been known to penetrate, is so great as to indicate that the bodies must have approached the earth within the limits of the terrestrial atmosphere. The remaining theory, especially that modification of it which conceives these meteoric masses to be terrestrial comets, appears encumbered with fewer difficulties than either of the others. The solar comets, it is well known, revolve round the sun in very eccentric orbits. In part of their revolution, they sometimes come so near as almost to strike his body. They then move off, far beyond the orbits of all the planets; and in some instances are gone hundreds of years, before they return. The earth, it is imagined, in like manner, is furnished with its system of comets, whose size and periods of revolution are proportioned to the comparative smallness of the primary body about which they revolve, and which, like the solar comets, fly off in very elliptical orbits; and during the greatest part of their circuit are too far distant to be visible. In their approach to the earth, they fall within our atmosphere; by friction of the air they are heated, and finally their velocity, so that the earth is disengaged with a very violent report, accompanied with the detachment of a portion of the mass, which descends in fragments to the earth. This hypothesis certainly accounts, in a very happy manner, for most of the phenomena attending the fall of novelties. The velocity of the meteor corresponds with the motion of a falling star, passing through the atmosphere in an elliptical orbit. A body moving near the earth with a velocity less than three hundred miles in a minute, must fall to its surface by the power of gravitation. If it move in a direction parallel to the horizon, more than four hundred and thirty miles in a minute, it will fly off in the curve of a hyperbola; and will never return, unless disturbed in its motion by some other body besides the earth. Within these two limits of three hundred miles on the one hand, and of four hundred and thirty on the other (some allowance being made for the resistance of the air and the motion of the earth), the body will preserve its elliptical path, returning in regular periods. Now, the velocity of the meteors, which have been observed, has generally been estimated at rather more than three hundred miles in a minute. In some instances it is perhaps too great to suffer the body ever to return; but in most cases, it is calculated by finding the velocity, which, if continued, would lead the body to the lower part of an elliptical orbit.—Various lists of the periods, places, and appearances of these showers of stones have been given from time to time in the scientific journals. One of the latest and most complete is that published in the first volume of the Edinburgh Phil. Journ., compiled partly from a printed list by Chladni, and partly from a manuscript one of Mr Allan, read some years ago at the Royal Society of Edinburgh.

METEOROLOGY (from μετέωρός, raised in the air, and λέγω, discourse); the science which treats of the phenomena which occur in the atmosphere, of their causes and effects. Man, in all conditions of society, are led by motives of necessity or comfort to study the indications of the weather in the different appearances of the skies. The mariner, the shepherd, the husbandman, the hunter, have the strongest motives to examine closely every varying appearance which may precede more important changes. The farmer, the manufacturer, in all the different pro- ducts, in which facts are often stated correctly, but mixed with erroneous deductions and superstitious notions, such as the credulity of ignorant people always renders them ready to adopt. Hence the disposition to refer the ordinary changes of the weather to the influence of the moon, and even the stars, and to look for signs of approaching convulsions, even in the moral world, in horrid comets and strange meteors. The progress of science, which tends to separate the causes of the phenomena from the phenomena, refutes these false reasonings, dissipates the empty terrors to which they give rise, and aims, by more patient, long continued, and wide extended observations, to deduce the general rules by which the phenomena of the atmosphere appear to be regulated. Meteorology begins from the mechanical analysis to determine the composition of the air itself, and of the substances which it contains, and by which it is acted upon; the manner in which the different processes of evaporation, freezing, thawing, &c., go on, and how they affect the state of the atmosphere; the action of these invisible agents, light, heat, electricity, &c., and their tremendous effects. From physics meteorology takes the mechanical action of these and similar powers and substances, the weight and velocity of the air, the laws of the reflection, refraction, and motion of light, &c. By these aids this science explains the formation, fall, or deposition of hail, snow, rain, dew, and the circumstances which modify those on Clouds, Evaporation, Freezing, and Calorifer; the action of thunder and lightning (see Electricity); the prevalence and properties of certain winds (q.v.); the effect of the position of a country and the nature of its surface on its climate and productions (see Climate, Temperature, and Mountains); the nature and causes of meteors, (see Meteorology, and Meteoric Stones), &c. To prepare the way for these and similar inquiries, it is necessary previously to determine the extent and constitution of the medium in which the phenomena take place (see Air, and Atmosphere), and to indicate with precision, and observe with minuteness and accuracy, its precise condition at the time of their occurrence, by philosophical instruments. Some of these have long been known, but others are either of recent origin, or have received a more delicate construction from recent observers. The ordinary observations are generally confined to the weight and temperature of the air (see Barometer), or the formation, or the state and temperature of the atmosphere; the quantity of rain which falls is to be registered by the anemometer, or rain-gauge (q.v.); the amount of dew deposited should be observed (see Drosometer), and the direction, force and velocity of the wind indicated by the anemometer and anemoscope. (See Sauussure’s Essais sur l’Hygrométrie; De Luc’s Idées sur la Meteorologie; Cotte’s Traité de Meteorologie; Lamondin’s Géographies des Atmophéres; and Meteorology in the Encyclopædia Metropolitana (1830, second division); Danieli’s Meteorological Essays and Observations. The value of a meteorological register depends on the accuracy with which it is kept. The observations should be made in a place neither elevated, nor exposed from the result of any of the phenomena it should and should be repeated either at equal intervals during the day and night, or, at least, at those hours which represent most nearly the mean state
of the atmosphere. The position and exposure of the place should also be made known. These requisites are seldom attained, and very few registers of the weather are entitled to much confidence. Accurate observations, made in all parts of the world, and in a regular and scientific manner, are yet necessary for the systematic classification of all meteorological phenomena into a complete science.

**METHOD**; a convenient arrangement of things, proceedings, or ideas; in logic and rhetoric, the art or rule of disposing ideas in such a manner that they may be easily comprehended, either in order to discover the truth, or to demonstrate it to others. Method is essential to science, and gives to our knowledge its scientific character. Scientific authors make use of different methods, according to the object which they have in view. The apparently strictest is the mathematical, which is capable of giving the greatest possible clearness to its theorems by a series of explanations and deductions; but it ought to be observed that this method is only adapted to a science which has to do with numbers and magnitudes, and has had unfortunate consequences when nothing was considered true but what could be mathematically proved, and when the method of analysis was the end and only philosophy. Methods have made epochs in philosophy, proceeding from the spirit of the systems to which they were applied. Thus there are the **sceptic** method (see Scepticism), the **critical** method (see Kant), and the **dogmatic** method, which, in philosophy, is the method that starts from acknowledged general principles, and is therefore limited and partial. The truly philosophical method is determined by the nature of the science. As to the way of proceeding, the method may be analytical (i.e. it starts from particular cases, and seeks from them to deduce general causes) or synthetic (i.e. it infers the consequences from the causes); but it must always proceed from elementary principles admitted by all, with logical strictness, in order to remain scientific. The popular method starts from the well known and the individual, and is generally analytical. Orators, both lay and clerical, and teachers of youth, make use of this less scientific method. As to external form, the teacher may speak from the pulpit (for morning and evening lectures), or proceed by way of interrogation. In those branches the elements of which lie in the operations of human reason, as in morals, mathematics, and religion, the catechetical method will be found best, because it addresses the reason or heart of the pupil directly, and by questions calls into action the powers of his understanding. The catechetical method preserves the name of Socratic only when the teacher limits himself to directing, by his questions, the course of the pupil's thoughts, but allows the conclusions to be formed by the operation of the scholar's own mind. Every art and science requires its own method of teaching, which, indeed, should be accommodated to the individual characters of the teacher and pupil. In order to teach the first elements to many pupils, Lancaster's method will be always found useful. (See Mutual Instruction.) Pestalozzi strives, in his method, whatever the branch of instruction may be, always to keep in view the elevation of the whole being, the strengthening of the whole, and, as far as possible, to make the pupil's own powers co-operate in the work of instruction. (See Pestalozzi.) A mistaken benevolence has at times undertaken to make all study amusing, and to beguile the pupil into knowledge without the necessity of laborious exertion. Such a method, however, tends to prevent the development of the faculties, and to unfit the mind to cope with difficulties. Private instruction requires different methods from public instruction; in fact, circumstances will constantly vary the methods of a skilful teacher.

**METHODISTS**; those defenders of the Popish church who, in the seventeenth century, were induced to bring in close the controversy with the Protestants, by new methods of reasoning; in later times, a religious sect which arose in the bosom of the English church in the early part of the eighteenth century. Some young men at Oxford united themselves together, in 1729, for the purpose of strengthening each other's pious resolutions, and observing the religious services with strictness. They aimed particularly at a more rigid compliance with the precepts of the New Testament than was usual in the church, and devoted themselves to works of love, such as instructing poor children, visiting the prisons, &c. Their more worldly fellow-worshippers, among other names indicative of their peculiarities, called them Methodists, on account of their methodical observance of the rules of religion and the regularity of their lives. This name was adopted by themselves, and has since been continued to their followers. Of the members of this small society, the principal were Whitfield, John Wesley, and George Whitefield, and George Whitfield (q. v.), who joined it in 1735. In 1735, Wesley went out to Georgia, to engage in the conversion of the heathens. There he remained two years, and, becoming acquainted with some of the Moravian Brothers, was much struck with their severe simplicity and pious devotion. (See United Brotherhood.) He then visited Herrnhut, after his return to England, and determined to model his own society somewhat after the same plan. Whitfield's preaching had already prepared the people for this undertaking. Wesley collected a small society in London, which held its conferences in a private house, without any disposition, at this time, to secede from the church. But the clergy of the establishment having refused their pulpit to the Methodist preachers who endeavoured to gain over their hearers to their society, and the concourse of auditors being too great to be accommodated in any church, they began to preach in the open air, and to organize a separate church on the primitive apostolic model, both for social and church services, and for preaching, which was distinguished from the philosophical indifference of that of the established clergy by its vehemence, religious enthusiasm, and popular style, and which dwelt more on the fall and depravity of man, on the atonement, on the restoration through the merits of a crucified Saviour, on repentance, and on regeneration, with all the eloquence which a sincere zeal could inspire, had a great effect in increasing the numbers of the society. Whitfield, the boldest and most zealous apostle of Methodism, in eloquence, courage, and fire the Paul of his sect, often collected hearers to the number of 12,000 in the fields, churchyards, and even at fairs, and, by the strength of his eloquence and the terror of his denunciations, produced such an effect upon his audience, that many of them were thrown into convulsions, and, amidst cries and groans of anguish, were turned to faith and holiness on the spot. These sudden conversions were considered as the outpourings of grace, and came to be considered by the Methodists as desirable results of their preaching. Though Whitefield gave up the practice of field-preaching, and built houses of worship (tabernacles), partly to protect themselves from exposure to the weather, and partly to avoid the outrages which they experienced from the rabble. Although they suffered much from the violence of the populace, yet, as the government made no opposition, they now proceeded to the regular establishment of their church.
constitution, which was modelled on the plan of the Moravian Brothers, but divided into two distinct parties, the Wesleyans, or Arminians, and the Whitfieldians, or Calvinists. Their liturgy was that of the established church, with some alterations. It appears, from the Sunday service of the Methodists of 1736, that the offices for the ordination of priests and deacons, and for the consecration of bishops, are all held in common with the church of England, the bishops, elders, and superintendents; the thirty-nine articles are, by omission, reduced to twenty-five; the Nicene and Athanasian creeds are rejected, the apostles' creed only being retained; and the apocryphal books of the Old Testament are rejected. In 1797, the New Connexion, as it is called, arose out of a separation from the Wesleyan establishment; it grounds of church discipline and government, and not of doctrine. Alexander Hilliam was their head and founder. The steps by which the Wesleyan Methodists became a distinct religious body might have been anticipated. The societies collected in London and other places were divided into little companies of from ten to twenty persons, called classes, and given in charge to a leader. The leader presided in a weekly meeting of his class for spiritual conversation and prayer, and received their contributions. General meetings of the society were called body bands; and, as the persons who were employed to preach to the public were not chosen in common, the society was divided into circuits, consisting of the societies of a certain district. These circuits were under two or more preachers, one of whom was at the head of the circuit, with the name of superintendent. The conference consists of a certain number of the preachers, who meet annually to discuss the affairs of the connexion. The distinctive character of Methodism is to be sought for, not so much in its doctrines as in the application of them, which it endeavours to make for the purpose of producing strong excitement; and those whom it has awakened to a sense of their sins, it subjects to a course of discipline intended to unite them closely with the connexion. The fruits of Whitfield's preaching were, perhaps, not less than those of Wesley's, his followers being as numerous in England as those of the great patriarch of Methodism. The rise of Methodism, though it cannot be denied to have been attended with some irrelevancy and an occasional abuse, was a cure for the religious decay in England. Since the reformation there had been no such efforts made in the cause of religion; no preaching so awakening, so little sectarian; no preachers with more zeal, singleness of purpose, and power of exhortation. It awoke the slumbering church from its lukewarmness, and dissenter to more bold and united efforts of Christians zeal. It addressed the ignorant, the poor, the hardened, in such a manner as to interest their feelings and command their attention. It has done, and is doing, much to instruct as well as to excite them. It made its way at first through persecution and outrage, and, after spreading over its native country, it has destinalished missions in the most distant parts of the old and new world, among the slaves of the West Indies and the savages of the South sea. See Southey's and Moore's Life of Wesley; Crowther's Portraiture of Methodism; Gillie's Life of Whitfield; the works of Wesley and Whitfield.

At an early period of the history of the connexion, the attention of Mr Wesley was directed to the British colonies of North America. In the Southern and Middle States, where sufficient provision had not been made to supply the spiritual wants of an increasing population, Methodism was particularly calculated to be adapted. It was introduced into those parts by preachers ordained by Wesley, and has spread extensively. Some difference in discipline and government was introduced into the American connexion, among which that of the Episcopal government was the principal. The first Methodist society was established at New York, in 1766, by preachers from Ireland, and after the revolution, the first bishop was consecrated. There are, however, some modifications in the church discipline of the Methodists in different parts of the United States.

METIS (Greek, μητης, wisdom); the mother of Minerva, daughter of Oceanus and Tethys, the wisest of gods and men. (See Jupiter and Minerva.) Ritter thinks that the name of the Paus Mecotis is derived from her, and places her sanctuary at the mouth of the Borysthenes, where she was worshipped as the great mother.

METO or METON, was a celebrated mathematician of Athens, who flourished 439 B.C. In the first year of the eighty-seventh Olympiad, he observed the solstice at Athens, and published his cycle of nineteen years, by which he endeavoured to adjust the course of the sun and moon, and to make the lunar and solar years begin at the same point of time. This is called the golden number, from its great use in the calendar. Meton was living about 412 B.C., for, when the Athenian fleet was sent to Sicily, he escaped a share in that disastrous expedition by counterfeiting insanity.

METONYMY. A figure in rhetoric, by which the name of an object or thing is substituted for that of another, to which it has a certain relation. Such relations are substance and quality, cause and effect, precedence and subsequence, &c.; thus if we say, the tears of "joy," instead of the "joyous person," or respect for "gray hair," instead of "old age," or "olive-branch" for "peace," or "stage" for the whole establishment connected with theatrical performances, &c. It is one of the most common figures in rhetoric.

METOPE (mīpē, between, and ἑρχα, a hole), in architecture; the interval or square space between the triglyphs, in the Doric frieze. The ancients were in the habit of ornamenting these parts of their buildings with carved works, or with paintings representing the heads of oxen, vessels, and other articles used in heathen sacrifices. The difficulty of disposing the triglyphs and metopes in symmetrical proportion may have been the reason of their omission in the Ionic and Corinthian orders.

METEOSCOPY (from the Greek μετοχας, the forehead, and κύκλος, I observe); the pretended art of divining from the wrinkles of the forehead. The Romans, believing in every kind of divination, practised this, but not so much as the people of the middle ages. It seems singular that meteoscope never was so much in vogue as chiroiomy (q. v.), though there might be some possibility of divining, in part, the character of a man from his forehead and its wrinkles, while the lines in the hand have no connexion with it.

METRE; the French unit of measure. See France, division Decimal System.

METRE, in versification. See Prosody and Rhythm.

METROPOLITAN is the Greek name of an archbishop. The chief place of a province is called, in Greek, metropolis, as the bishops of the chief places, or capitals, were distinguished by superior rank (see Bishop), they also received a distinguished title. The metropolitan is above the bishop, but below the patriarch. The title of patriarch, however, is in use only in the Eastern churches. Metropolitan church is the archiepiscopal church. It was introduced into those parts by preachers ordained by Wesley, and has been extensively. Some difference in discipline and government was introduced into the American connexion, among which that of the Episcopal government was the principal. The first Methodist society was established at New York, in 1766, by preachers from Ireland, and after the revolution, the first bishop was consecrated. There are, however, some modifications in the church discipline of the Methodists in different parts of the United States.

METZ (anciently Diodurum; later, Mediolanum, and Metta); a strongly fortified city, in the western
part of France, on the Moselle, thirty leagues northwest of Metz, sixty-one north-east from Paris; population, 45,276; lat. 49° 7' N.; lon. 6° 11' E. It is the seat of military, religious, and civil authorities, and contains numerous literary, scientific, and charitable institutions. It is a military place of the first class, highly important both for offensive and defensive purposes. It was a free city of the German empire from the eleventh century, but was occupied by the French troops, in 1552, and confirmed to France in 1648. About a league from the city, are the ruins of a Roman aqueduct, called, by the people, the devil's bridge. In 1822, some remains of antiquity were discovered in the ancient city, which have been described by Dersir (Metz, 1823).

METZU, Gabriel, a painter, born at Leyden, in 1615, lived in Amsterdam, where he died in 1658. His models were Douw, Terburg, and Mieris. His style, however, was nobler. He painted subjects from common life,—fruit-women, chemists in the alehouse, beggars, etc., in a realistic manner and of nature true. His colouring was admirable. A lady tuning her lute, and another washing her hands in a silver basin held by her woman, are among his best pieces. His works are scarce, as he spent much time on them, and highly valued. METZU DON, a young and clever, two leagues from Veuvilles, and the same distance from Paris. The old castle, built in the fifteenth century, and which, in the seventeenth, belonged to Louvois, was demolished in 1804. The chateau, built by Louis XIV., is situated on a rising ground, and commands a view of Paris, the Seine, and the environs. There is a fine terrace in front, and a small park planted by Lenore. Napoleon improved the works, and assigned it as the residence of his son, while at the breast. During the expedition to Russia, the empress resided there.

MEULEN, Antony Franciscus van der, a Hague painter, born at Brussels, 1634, was a pupil of Peter Snayers. Some of his compositions, having been carried to France, attracted the notice of Lebrun, and Colbert invited the young artist to Paris, with a pension of 2000 livres, and a residence at the Gobelin manufactory. His talents as a battle painter recommended him to Louis XIV., who always took him on his expeditions, and often pointed out the subjects which he desired him to represent. The painter had thus an opportunity of perfecting himself in his department of the art, and is considered, on account of his truth of expression, one of the best battle painters. He was also distinguished in the representation of scenes from common life, and in landscape painting. Among his most celebrated works are the entrance of Louis XIV. into a conquered city; the entrance of the same prince into Arras; the siege of Maestricht; a horseman with a glass in his hand speaking to a young girl, who is tuning her guitar, &c. He also executed many exquisite studies, from which he relied on his memory to furnish his pupils with works, among which those of his pupil Baudouin, which now form the sixteenth, seventeenth, and eighteenth volumes of the great collection called Cabinet du Roi, are distinguished.

MEUN or MEUN, John de, a French poet, surnamed, from his lameness, Clopinet, was born at Meung sur Loire, about 1250. He was well informed, and, by his poetical talents and vivacity, rendered himself a favourite at the court of Philip le Bel. He was so much inclined, and exercised his wit upon the ladies of the court, who were so irritated against him, that a party of them seized him, and resolved to give him a severe flogging; but his wit came to his assistance, and he escaped castigation by desiring the most unchaste to give the first blow. He died about 1292, directing, by his will, that he should be buried in the church of the Dominicans at Paris; per leaving to that order a heavy chest, not to be opened until after the funeral. The friars, expecting a treasure, opened the chest, but found only some old slates, scarred with sums and figures. In revenge, they disinterred the body; but the parliament of Paris obliged them to bury it again with fresh honours. His principal work was his continuation of the Roman de la Rose, begun by William de Lorris, which comprises more than three parts of the whole. It is not so poetical as the other, but has more satire and knowledge of the world. He was also the author of a translation of Boethius de consolatione; the letters of Abelard on the Caesars, &c.; the Dialogues, and a satirical piece, styled the Codicil of John de Meung, prefixed to Lentel de Fresnay's edition of the Roman de la Rose, &c.

MEURSIUS, John, a Dutch critic, born in 1579, at Losdun, near the Hague. At sixteen, while a student in the university of Leyden, he published his first work, an edition of Lyceophon's Cassius. He was afterwards selected by the celebrated Barneveldt, as travelling tutor to his sons, whom he accompanied over great part of the continent. On his return to Holland, after a ten years' absence (1610), he was elected professor of history and of Greek at Leyden, with the title of historiographer to the states general. The fall of Barneveldt (q. v.) obliged him to resign his situation; and, accepting an invitation of the court of Denmark, he proceeded to Copenhagen. Here he soon became established at the college erected for the education of the young nobility at Sora, in a similar post to that which he had occupied on Holland; and being a native of Athens; on the Athenian Archons; On the people of Athens; On the Festivals of the Greeks; On the Dances of the Ancients; new editions of several classics; a History of Denmark, &c. The only complete edition of his works is that of Florence, in twelve folio volumes, 1743. Meursius died in 1639, leaving a son, who died at an early age, in 1658, the author of several valuable antiquarian treatises.

MEURTHE; a department in the north of France. (See Lorraine, and Department.) The chief place is Nancy.

MEUSE, in Dutch, Maas, (Mosa); a navigable river, which rises in the department of Upper Marne (Champagne), in France, passes through the provinces of Namur, Liege, and Limburg, separates those of Gelderland and Holland from South Brabant, and divides, at Gorcum, into two branches, the northern and southern, which empty into the North sea by several mouths. It passes by Namur, Liege, Maestricht, Rotterdam, and Gorcum, Dordrecht, and Rotterdam, in the Low Countries.

MEUSE; a department in the north of France, with 306,339 inhabitants; chief place, Bar-le-Duc. See Lorraine, and Department.

MEUSEL, John George, was born in 1743, at Eyrichsof, in Franconia, and, in 1764, entered the university of Rottenburg; in 1766, that of Halle,
in a large valley, or basin, 7000 feet above the sea.

Some of the haciendas, or residences, are about 10,000 feet high, and, in some instances, carriage roads pass over them. The principal summits are, Popocatepetl, 17,881 feet; Orizava, 17,373; Cerrn de la Leona, near Catorce, 19,645; and Ixtaccihuatl, 15,704. There are five volcanoes in activity, all near the nineteenth parallel of latitude—Orizava, Popocatepetl, Tuxtla, Colima, and Popocatapetl. Earthquakes are frequent, but not destructive.

The inhabitants designate these successive climates by appropriate names: the low, hot country is called tierra caliente; the higher regions, tierra fria (cold country); and the intermediate regions, tierra templada (temperate country). Our division of the year into four periods, is there unknown, the only distinction being into the rainy season (estacion de las aguas), which commences about the end of May, and lasts four months, and the dry season (el estio), which comprises the rest of the year. Mexico suffers for want of water. The rivers are few and insignificant, if we except the Colorado, the del Norte, and the Grande. The lakes, which abound, appear to diminish gradually; the principal are, Chapala, Zumampico, S. Christoval, Tezcuco, &c., in the valley of Mexico; Cayman and Parras, in the Bolson de Mapii; and the Timpanogos, further north. Among the various productions are maize and manioc, the last being more generally cultivated than the former. Local fruits, coffee, sugar, tobacco, indigo, vainilla, cochineal, &c. Maize is produced in almost every part of the country, and in great abundance; its four forms the chief food of the bulk of the inhabitants. Wheat succeeds very well on the table-land, but in the tierra caliente, the ear will not form, and the difficulty of communication between the coast and upper country is such, that the former may be supplied at a cheaper rate from the United States of North America. Sugar is raised in great quantities; enough is raised on the plateau, for the supply of its inhabitants, and the producers on the coast depend upon a foreign market; but, since 1822, the amount produced has much diminished. Coffee has been more recently introduced; the use of it has not been general in the interior till within a few years; extensive plantations were laid out in 1818 and 1819, near Cordova and Orizava, to which colonies are now added on the coast. Textile fabrics are still found among the indigenous productions of Mexico, and was generally used by the inhabitants. Up to the close of the last century, the annual amount of the cotton manufactures was estimated at 5,000,000 dollars. They have, however, gradually disappeared, but the raw material may be an important article of export, if properly attended to. The domestic animals are the same as in other parts of North America. The wool of the Mexican sheep is of inferior quality. It has recently been discovered that the silk worm is indigenous in some parts of the country, and the silk produced is of an excellent quality, similar to that of the Bombyx mori of China. The cultivation of the mulberry, and the breeding of silk worms, were introduced by Cortez, but were afterwards prohibited by the mother country. The total agricultural produce of Mex- ico was estimated, by Humboldt, at 29,000,000 dollars. The total value of the mineral products has been differently estimated. Mr. Ward calculates the total annual produce, from 1796 till 1810, at about 24,000,000 dollars, of which 22,000,000 were exported. The registered coinage, in that period, was 342,114,285 dollars. In a second period of fifteen years (1811 to 1825 inclusive), the total amount of coinage was 153,276,075 dollars; and the capital invested in mining having been much dimin-
ished by the emigration of capitalists during the revolution. The whole amount of circulating medium, in 1810, is estimated by Mr. Ward to have been about 75,000,000 dollars, the average annual export since 1810, at 13,587,052. Mexico will not probably, at least during the present century, become a manufacturing country, her mineral and agricultural wealth being sufficient to obtain for her all the necessary articles from other countries. Neither will she be a great maritime power. The Mexican ports on the Atlantic side are most of them insecure, and many of them are mere roadsteads. On the western coast there is, however, a series of magnificent ports, from Acapulco to Guaymas, many of which have never yet been entered. The commercial intercourse, on the western side, is much less important than that of the eastern coast, most of the countries with which it can be maintained on the Pacific (Columbia, Peru, Chile, China, and Calcutta), producing nearly the same agricultural articles. Hides, tallow, and wheat are, however, exported in considerable quantities. The returns are so imperfect, and the state of the country has been so fluctuating, that it is not easy to determine any thing with regard to the amount of the exports and imports, for any recent period.

The Spanish colony of Mexico was, for a long time, divided as follows: 1. the kingdom of Mexico; 2. the kingdom of New Galicia; 3. the new kingdom of Leon; 4. the colony of New Santander; 5. the province of Texas; 6. the province of Coahuila; 7. province of New Biscay; 8. province of Sonora; 9. province of New Mexico; 10. province of Old and New California. In 1776, a new division was established, into, 1. the viceregency of New Spain, consisting of the intendancies of Mexico, Puebla, Veracruz, Oaxaca, Merida or Yucatan, Valladolid, Guadalaxara, Zacatecas, Guanajuato, S. Luis-Potosi, and the two provinces of Old California and New California; 2. the internal provinces depending on the viceregency (Provincias internas del Vicerreyato), comprising the province of the new kingdom of Leon, and the province of New Santander, and 3. the internal provinces dependent on the governor of Chihuahua (Provincias internas de la commandancia general) consisting of the intendancies of New Biscay, or Durango, and Sonora, and the provinces of Coahuila, Texas, and New Mexico. This republic is now divided into nineteen states and five territories. The states are, Yucatan, or Merida, Tabasco, Las Chiapas, Oaxaca, Veracruz, Tamaulipas (New Santander), San Luis-Potosi, New Leon, Coahuila and Texas, La Puebla, Mexico, Valladolid (Mexochacan), Guadalaxara (Nalcisco), Sonora and Cinaloa, Queretaro, Guanajuato, Zacatecas, Durango, Chihuahua, Old and New California, Colima, Tlaxcala and New Mexico are territories, their population not being sufficient to enable them to return members to the congress. The first census, which was taken in 1793, gave a population of 4,483,529. As the natives suspected the object to be taxation, Humboldt thinks that it exceeded 5,000,000, and estimated the number, in 1803, at 6,500,000, which agreed very well with the results of the census of 1806. Ward estimates it at about 8,000,000, in 1827. Previous to the expulsion of the Spaniards, in 1829, the population was composed of Europeans (Chapetones or Gachupines); Creoles, or native whites of pure European descent; Indians, or the indigenous races; Mestizoes, a mixed breed of whites and Indians; Mulattoes, or descendants of whites and negroes; Zambos, or Chinos (Chinese), descendants of Negroes and Indians; and African Negroes. The descendants of mulattoes and whites were called quarte-

No less than twenty languages, entirely distinct from each other, are found among them, and of fourteen of them grammars and dictionaries have been compiled. The Catholic religion is the religion of the state. No other is tolerated. The old ecclesiastical divisions are retained, forming one archbishopric (that of Mexico), and nine bishoprics, comprising 1073 parishes. The clergy is composed of about 8000 individuals, including 4000 monks and nuns, in 206 convents. The clergy are not well educated, and the great mass of the Mexican population is in a.
state of deplorable ignorance. The policy of the mother country was calculated to keep down all that portion of the inhabitants who now form the population of the republic. All civil, military, and ecclesiastical dignities were in the hands of Europeans, and any attempt towards instructing even the higher classes was disapproved of. The few that were taught, never have been cultivated with any success. The moral state of the country is also far from being favorable. An attempt was made, at one time, to establish a navy, and, in January, 1827, it consisted of one ship of the line, two frigates, five corvettes and brigs, and a few smaller vessels; but it has never been kept up in operation. The army, in 1827, consisted of 58,955 men, of whom 32,101 were actually under arms. The confusion which has prevailed for some time in the country, renders it impossible to give much statistical information of a recent date. The revenue, under the old government, was 20,000,000 dollars; during the revolution, it became exceedingly embarrassed, and did not exceed 4,000,000 or 5,000,000 dollars. In 1825, it was 10,500,000 dollars, and the expenditure was nearly 18,000,000. Several loans were made in 1823, and succeeding years, but at an enormous rate of interest.

Under the government of Spain, Mexico was one of the four great viceregalies of Spanish America. The viceroy was endowed with all the prerogatives of the king. The only checks upon him were the residen
cia, or investigation into his conduct on his return home, and the audiencia, composed of Europeans, and of which he was himself president. The recopilacion de las leyes de las Indias was the name given to the heterogeneous mass of decrees by which the colonies were governed. Special fueros, or privileges, were conferred on different professional and corporate bodies, which rendered the confusion complete. All the higher officers, in church and state, were Europeans. A system of dilapidation, beginning with the chiefs, extended through all the offices of government, and a monstrous corruption perverted the whole administration. The colony was not allowed to manufacture any article which could be supplied by the mother country, the whole trade of the country being confined to a small number of Spaniards, and all foreigners were rigidly excluded. Books were prohibited, schools discouraged or suppressed, and every measure taken to prevent information from being spread among the inhabitants. The present form of government is that of a federal republic (republica representativa popular federal), each member of which manages its own internal concerns. The legislative power is vested in a congress, divided into two chambers, the house of representatives (camara de diputados), and a senate (senado). The former is composed of members elected for two years, by the citizens of the states, one member for every 80,000 inhabitants. The senate is composed of two senators for each state, elected by the state legislatures, the one first named for four years, and the other for two years. The congress is a high court of impeachment, and its powers are to maintain the union, regulate commerce, promote information, open roads and canals, lay taxes and imposts, declare war, approve treaties, &c. The supreme executive power is vested in a president, chosen by the legislatures of the states for four years. He has powers very similar to those of the president of the United States. The council of government (consejo de gobierno) exists only during the sessions of congress, and is composed of one senator from each state, with the vice-president of the republic at its head. Its duties are to watch over the observance of the federative act and the federal laws, to advise the president to call out the militia, to approve the nomination of officers, &c. For the despatch of business, the government is divided into departments, with secretaries at their head. The judicial power is lodged in a supreme tribunal of justice, and in inferior courts, as determined by law. Thus the supreme court takes cognizance of all matters between different states, or individuals of different states, admiralty cases, treason, construction of the constitution, &c. It may itself be called to account, by a tribunal constituted for the purpose by the chamber of deputies. The states are organized in a similar manner, and much the same rights as those of the North American Union.—See Acta Constitutiva (Jan. 31, 1824), y Constitucion Federal de los Estados Unidos Mexicanos (Mexico, 1828). This constitution was sanctioned Oct. 4, 1824. For information on subjects connected with Mexico, see Bullock's Six Months' Residence, &c., in 1823; Hall's Journal on the Coasts of Chile, Peru and Mexico, in 1820—22; Lyon's Journal of a Residence in Mexico; Beaufay's Sketches; Poinsett's Notes; the works of Robison, Brackenridge, and Hardy; Ward's Mexico (2d ed., London, 1829); Humboldt's Esquisse Politique du Royanne de la Nouvelle Espagne; 2d ed., 1829.

History. Numerous remains of antiquity which have been discovered in different parts of the country testify to the state of civilization at which the natives had arrived previous to the arrival of the Spaniards. In 1519, Cortez discovered the country, and having landed on the western coast, founded the city of Veracruz, and penetrated into the country of Anahuac, occupied by the Aztecs. Montezuma then reigned over the country. The capital Tenochtitlan, bore the title of Mexico, which signifies the residence of the god of war, and which was finally extended to the whole region. (See Mexico, Antiquities.) After the death of Montezuma, the capital was taken by the Spaniards (1521), and the whole country fell into their hands. Cortez called it New Spain, and was created captain-general, but, in 1535, was displaced by a viceroy. We have already given some account of the colonial policy of Spain, and the condition of the country under the viceroyalty. Such was the condition of the country for three centuries (see Robertson's History of America; Clavigero's Storia Antica del Messico, translated into English; Solis's Historia de la Conquista de Mexico; new edition, with notes, Madrid, 1825), when the events of 1828 in the Spanish peninsula led to a change in the state of affairs. The Mexicans were, in general, loyally disposed to their sovereign, but the assumption of authority by a new body, the cortes, and their wise and inconsistent proceedings tended to alienate their feelings of attachment. Don Jose Iturriaga, the viceroy, in order to conciliate the Americans, proposed to constitute a junta, formed of representatives from each province, and composed equally of natives and Europeans, which should organize a provisional government. The latter, however, fearful of losing some of their former superiority, arrested the viceroy, and sent him out of the country. The new viceroy, Venegas, distrusted the loyalty of the Spaniards, and exasperated the Creoles by the severity of his measures. An extensive conspiracy was organized, and the insurrection broke out in September, 1810. A priest, Hidalgo, a man of strong mind and great firmness, put himself at the head of the insurgents, but, after some fighting, and the commission of great atrocity on the part of Hidalgo was captured and put to death in 1811. Morelos, a priest in the southern part of the country who had been named captain-general of the southwest by Hidalgo, had meanwhile raised a consider-
able force, and, meeting with a series of successes, he advanced (in January, 1812) to within a short distance of the capital. In this expedition, Victoria first distinguished himself. Morelos was obliged to retire, but Capitulación de la Huerta, a national congress was assembled at Chilpancingo, September, 1813, which declared Mexico independent. The forces of the insurgents were afterwards almost annihilated by Iturbide, and Morelos was himself shot in 1815. Victoria retired to the mountains, where he remained concealed eighteen months. Guerrero went into exile, and took refuge in the south. In 1817, general Mina landed with a small body of foreigners, and gained some temporary success; but he was made prisoner in July of that year, and shot. Thus in 1819 all the insurgent chiefs had been pardoned or executed, except Guerrero. In 1820, the cortes having ordered the sale of the church property, Apodaca, the viceroy, refused to acknowledge the cortes; he employed Iturbide to reduce Guerrero, but that general joined the insurgent chief, proposed the plan of Iguala, and proclaimed the independence of his country, February 24, 1821. At this time, the constitutional viceroy, O'Donnel, arrived in the country, and convened the Cortes of Cordova, by which it was stipulated that the Spanish army should evacuate Mexico. The viceroy and Iturbide were associated in the government, and the army was called the army of the three guarantees, the objects to be maintained being the independence of Mexico as a separate monarchy under a Bourbon prince, the maintenance of the Catholic religion, and the union of all classes. A congress was assembled February 24, 1822, to settle the principles of the constitution. But the cortes having declared the past proceedings null, Iturbide caused himself to be proclaimed emperor May 18, 1822, under the title of Augustus the First. A powerful party opposed the new state of things. After a bloody struggle, the emperor offered to abdicate in March, 1823, and was allowed to depart for Europe. A new form of government, on federal republican principles, was now established. Iturbide returned to the country in 1824, but was instantly arrested and shot. On the abdication of the emperor, a poder ejecutivo, or executive, was formed, consisting of Vittoria, Bravo, and Negrete, and, in 1824, the constitution was adopted and proclaimed. Vittoria was chosen president and Bravo vice-president of the new republic. The first constitutional congress convened January 1, 1825, and held an adjourned session in December of the same year. In December (20th), the castle of Ulloa was surrendered by the Spaniards, and the whole Mexican soil was now delivered from European hands. The prospect of tranquillity which was held out by the complete liberation of the country and organization of the government was soon interrupted by the violence of parties. The animosity of the Escoses and Yorkinos resulted in acts of outrage and bloodshed, and the land has been distracted with civil war. The Escoses (Scotch) was a masonic society of Scottish origin, composed of large proprietors and persons of distinction, who were mostly men of moderate principles, but decidedly favourable to the cause of independence. Many of them had, at one time, been in favour of a Spanish prince as constitutional king of Mexico, and they were therefore often styled Borbonistas by their adversaries. The Yorkinos constituted a masonic society, which derived its origin from a masonic lodge in New York, through the hands of Mr. Pomponius, American minister at Mexico. These two political parties (for such they had become) were arrayed against each other on occasion of the choice of the second president in 1828, and also differed as to the policy to be pursued in the treatment of the Spaniards who resided in the country, the Yorkinos being in favour of their entire expulsion from the country. The result of the election, after an arduous contest, was the triumph of the Escoses party, whose candidate, general Pedraza, was chosen by a majority of two votes, over general Guerrero, the Yorkino candidate. General Santana, at the head of a body of troops, declared that this vote was not an expression of the will of the majority, and proclaimed Guerrero president. This movement was unsuccessful, but another was soon formed, by a majority of two, demanding the expulsion of the Spaniards. After some fighting, the government was obliged to yield, and general Pedraza, to avoid bloodshed, advised his friends to submit, and expressed his determination to leave the country. Guerrero was accordingly inaugurated president in April, 1829, and a law was passed ordering all Spanish residents to quit the country. In the summer of 1829, an expedition was fitted out in the Havana, under the command of general Barradas, to undertake the conquest of the Mexican republic. A force of 4000 men was landed at Tampa, July 27, but on the 10th of September surrendered to the command of thesuccessor of Iturbide, by which a majority of two, demanded the expulsion of the Spaniards, and issued a proclamation denouncing the abuses of the executive. He immediately advanced upon the capital, and was joined by the forces there. Guerrero, finding himself deserted, abdicated the presidency, and Bustamente was elected by the army his successor. In the latter part of 1829, new disturbances commenced, and a civil war ensued. Guerrero, who was made prisoner in February, 1831, was condemned to death for bearing arms against the established government, and shot. After this period, Bustamente remained at the head of the government, as vice-president. Besides the works previously referred to, the reader may consult don Carlos Marìn Bustamente's Cuadro Históríchico, or Mendibíl's Resumen Histórico de la Rev. de los Estados Unidos Mexicanos, extracted from it.

**Antiquities.** Our knowledge of the early condition of the country is, since called derived, in part, from the Mexican pictures, many of which were destroyed by the Spaniards. They contain chronological histories, and copies of some of them were made by native Mexicans at the time of the destruction of the originals. The greatest of these was a celebrated table in the possession of Siguenza y Gongora, professor of mathematics in the university of Mexico, in 1698. The original is lost; but a copy of undoubted authenticity exists, of which Humboldt has given an account. It begins with the deluge of Cochox, or, according to the Aztec cosmogony, the fourth destruction of the world. Cochox, the husband of his wife, was saved from the deluge, their descendants received the gift of speech, and fifteen families arrived in Mexico. According to a Mexican author, who wrote soon after the conquest (Litiozochitl), the first age, Tlatoaninah, or age of giants, lasted 5206 years; the second, Tlatoaninah, or age of fire, 4804; the third, Eleguaat, or age of the earth, 2020; the fourth, age of water, described in the above-mentioned painting, 4008 years. The Toltecs migrated from a country north of Mexico, in A.D. 544, and in 1051, their monarchy was destroyed. The Aztecs arrived there, from Aztlán in 1178, and, in 1325, founded Tenoch-
MEXICO. | 799

tidian, or the city of Mexico. Clavigero enumerates the collections of paintings which have been preserved; they were executed on skins, cotton cloth, and the leaves of the maguey or agave. At the time of the arrival of the Spaniards, the Aztecs had adopted the Roman calendar, and the right to private property was understood, cities built, professions and distinctions of rank existed, the arts were cultivated with considerable success, &c. Among the most remarkable monuments of architecture are the tecollis, or pyramids. The pyramid of Cholula comprises a square, of 1775 feet, and is 177 feet high, its mass consisting of one hundred million and a thousand tons of clay, and is attributed to the Toltecs, who preceded the Aztecs in the country. The object is unknown. About two miles from Pueblo are a number of pyramids, described by Humboldt. The first, the house of the sun, has a base of 682 feet in length, and is 180 feet high. The second, or house of the moon, is 150 feet high. They are both truncated, as is that of Cholula, and are also of Toltec origin. A group of little pyramids surrounds them, which are supposed to have been tombs. In the wall of the cathedral at Mexico is fixed a circular stone, covered with hieroglyphical figures, by which the Aztecs designated the revolutions of the sun. It is believed that human sacrifices were performed. In the Dominican convent is a large idol, representing a serpent devouring a human victim. Mr Bullock obtained leave to examine another, which was concealed under the gallery of the university; it represented the god of war, and was six feet nine inches high, and nine feet nine inches broad, and was composed of a deformed human figure, a tiger, and a rattle-snake. For information on the subject of this article, the reader may consult the works of Robertson, Clavigero, Humboldt, &c., mentioned in the article Mexico; also Ringk's Conquest of Peru and Mexico by the Mongols (London, 1827), and Antiquities of Mexico (7 vols., folio, London, 1830), containing facsimiles of the Mexican paintings in the royal libraries of Paris, Dresden, Berlin, the imperial library of Vienna, the Vatican, the Bodleian library, Oxford, &c., with inedited Mexican history.

Mexico, or Mejico, one of the states of the Mexican confederacy, with a population of about 1,000,000 inhabitants, is divided into eight districts; between 10° 30' and 20° N. lat., and 102° 50' and 107° 20' W. lon. It lies principally on the central plateau, but its western coasts on the Pacific are low. It is bounded north by Queretaro, east by Puebla, south and south-west by the Pacific, and west by Valladolid. Its capital is Tezcoco, Mexico, the chief city, having been declared a federal city. The magnificent port of Acapulco lies on its western coast. A great number of valuable mines lie within its territories, and its rich soil yields a valuable agricultural produce. The legislative assembly is composed of nineteen deputies; and the districts are placed each under a prefect, whose duty it is to establish village schools, form a census, &c. Its constitution was adopted in 1827. The former intendency of Mexico comprised the states of Mexico and Queretaro.

Mexico, Nueva; a territory of the Mexican confederacy, lying north of the state of Chihuahua, between 31° and 38° N. lat., 107° 50' and 111° 50' E. lon. It is traversed by the Rio del Norte, which flows into the gulf of Mexico. The population is not more than 50,000, of whom about half are Indians; capital, Saltillo.

Mexico, formerly Tenochtitlan, capital of the Mexican confederacy, see of an archbishop, lies 7400 feet above the level of the sea; lat. 19° 25' 45" N.; lon. 108° 45' 30" W. The streets are broad, airy, and run at right angles; the houses spacious, but low, rarely exceeding one story, with flat roofs; it is the most magnificent city of America, and among the capitals of Europe, there are few that can support a comparison with it. It is situated at about an equal distance from Yucatan to the northeast, and the Acapulco, in an extensive valley, surrounded with lofty mountains, and several lakes, among which are Texcoco and Xochimilco. It is on the site of the ancient city of Tenochtitlan, but the waters of lake Texcoco, on which it borders, have so far subsided that the islands on which the old city was built are now confounded with the main land. The thirty islands which form the site still remain, and four have since been built, which are well paved, and bordered with trees, forming avenues to the city. Humboldt estimated the population, in 1803, at 137,000; Poinset, in 1822, at between 150 and 160,000, and later estimates have stated it at 168,000. The principal public buildings are the cathedral, about 500 feet in length, the palace of government, the college of mines, a noble building, but now somewhat dilapidated; the mint, with a front of 350 feet by 250 feet in depth, the Franciscan and Dominican convents, &c. There are, besides, forty-eight convents, hospitals, churches, theatres, &c. The public works are the Alameda, and the Pasco. The rides to the Chapultepec, or summer palace of the viceroys Galvez, beautifully situated on an eminence, near which is an aqueduct of 900 arches, and to Tacubaya, a village about four miles from the capital, which contains the country residence of the archbishop, are very pleasant. The canal of Chalco, which extends from the lake of that name to the capital, is covered, morning and evening, with canoes of the peasants, conveying fruits, flowers, and vegetables, to market; near it are the remains of the Chinampas, or floating gardens, which are surrounded with a broad ditch, and are now, if they were not always, finely fixed. The inhabitants display a good deal of splendour in their dress and equipages, but many of the wealthiest have been obliged to leave the country by the wars of the revolution. The lazaroni population, which, in 1824, amounted to 20,000 individuals, called by the Mexicans leperos, is supported by Ward, the most disgusting appearance of filth and rags. Measures have since been taken by the government to reform them, by compelling them to labour. Mexico enjoys a mild climate, and a pure and healthy atmosphere; it is subject to inundations from the lakes, and numerous works, such as canals, dikes, &c., have been erected as a protection against such a calamity. Tenochtitlan was founded by the Aztecs, in 1325, and was a rich, flourishing, populous, and active city, the seat of government and of religion, at the time of its discovery by the Spaniards. It was taken by Cortes, in 1521, after a siege of seventy-five days, and a most dreadful slaughter of the inhabitants. The besiegers razed the buildings as they advanced, in order to approach the principal quarter with safety. The ancient city was thus entirely destroyed, and the present city arose on its ruins.

Mexico. Gulf of; a large bay or gulf of the Atlantic, extending north and south, from the coast of Florida to the coast of Tabasco and Veracruz, about 600 miles, and from the island of Cuba westward to the coast of Mexico, about 700 miles. Cuba divides it into two straits, one to the south, between cape Antonio and cape Catoche, forty-five leagues wide, through which it communicates with the Caribbean sea, and another, the north, forty leagues wide, called the gulf or strait of Florida. It receives the waters of the del Norte, Sabine, and Mississippi. The Mexican ports on this gulf are mere roadsteads. The principal are Tampa, and Veracruz. Havana and
Pensacola are magnificent harbours. The principal current in the gulf is the Gulf stream, which takes its name from that circumstance; it is produced by the equatorial current from east to west, enters the gulf between the capes Antonio and Catorce, winds round the Florida Keys, and flows out into the Atlantic Ocean, where Humboldt found its velocity to be five feet a second, against a strong north wind. See Current.

MEYER, Jonas Daniel, born at Arnheim, in Guelderland, 1780, studied at Amsterdam and Leyden. He was at first an advocate in Amsterdam, in 1811 he took order, occupied several important judical offices, and, in 1817, retired to private life. Doctor Meyer is a distinguished writer on law, politics, and legislation. His Ésprit, Origine et Progrès des Institutions judiciaires, &c. (Hague, 1819—23, six vols.) is a valuable work. He has recently published a work On Codification, particularly in England.

MEZZO; an Italian adjective, which means half and is often used in musical language, as mezzo forte, mezzo piano, mezzo voce, which imply nearly the same thing, viz., a middle degree of piano or soft—Mezzo soprano; a pitch of voice between the soprano or treble and counter-tenor.

MI; one of the six monosyllables adapted by Guido to his hexachords, and which was applied to the third and seventh notes of the natural diatonic scale.

MIAMI OF THE LAKES. See Maumee.

MIAMI; a river of Ohio, which rises in Hardin county, and runs south-westerly into the Ohio river at the south-west corner of the state. Its length is about 100 miles. Its navigation is not easy, but it affords numerous sites for mills and manufactories.

MIASMA (from the Greek μιασμα, any thing polluting); a term used in the doctrine of contagious and epidemic diseases, with different meanings. Some authors use it precisely like contagion; with others, as the contagious matter of chronic diseases; with others, that contagious matter which collects in the atmosphere—flying contagion. Some understand by miasma, the vehicle of contagion; for instance, the pus of small-pox, which contains the proper contagious matter. Miasma also signifies certain matter, in the atmosphere, owing its origin to putrefaction animal or vegetable bodies, or to the exhalation of animal bodies, and producing specific diseases. It would be well to confound miasma from contagion, and designate by the former term all the poisonous matter of diseases, which is not generated in living animal bodies, but has, in some other way, entered the atmospheric air. One of the most powerful correctors of miasmatic effluvia is chloride of lime, which is getting much into use among navigators and other persons exposed to such effluvia.

MICAH, the sixth of the minor prophets, was a Morashite, of the tribe of Judah. He prophesied in the reigns of Jotham, Ahaz, and Hezekiah, from 749 to 721 B.C. Nothing is known of his life or death. His prophecy collected against Samaria and Jerusalem, whose sufferings, he declares, shall be greater than those of Babylon and the other gentile cities. The village of the Saviour's birth is designated by him (v. 2)—"But thou, Bethlehem Ephratah, little among thousands of Judah, out of thee shall come forth a ruler in Israel, whose generation is of old, from everlasting." His style is pure and correct, his images bold, his denunciations full of strength and bitterness.

MICHAEL (Hebrew, he who is equal to God) is spoken of in Daniel (x. 13 and 21. xii. 1) as one of the "chief princes," and the "great prince." In the Apocalypse (xv. 1), the "mover of the four winds of the earth" is said to be "divested by the angel with the sword of the Spirit, and to be girded with the head of the dead, he fought with the devil about the body of Moses." In the Revelation (xii. 7), it is said "there was war in heaven: Michael and his angels fought against the dragon." From this expression, it has been inferred that he was the chief of the celestial hierarchy, and it is in this character that the Catholic church pays him religious honors. Milton (xiv) calls him "of celestial armies prince," and "prince of angels," and attributes to him the command of the heavenly forces in the war with Satan.

MICHAEL, Sr (S. Miguel), the largest of the Azores, was discovered in 1444, and taken possession of by Cabral, in the name of Portugal, to which power it now belongs; lat. 37° 50' N.; lon. 30° 30' W.; twenty-five leagues S. E. from Terceirn. In the interior it is mountainous, some of the peaks rising to a height of more than 7000 feet, and evidently of volcanic origin. Earthquakes are frequent, and the soil is in many places composed of volcanic products. There are at this place, or nearby, some coal, which is still ferous, and produces corn, potatoes, oranges, grapes, pears, and chestnuts, which are exported to the coasts abroad with fish, and there are many mineral springs in the interior. The climate is mild and agreeable. The commerce is considerable, principally with Britain, Portugal, and the United States. The population is about 80,000; capital, Ponta Delgada. (See Azores, and Portugal. See also Webster's Description of St Michael, 1821.) In August (1831), the troops of Donna Maria took possession of St Michael.

MICHAELIS, John David; professor at Göttingen, a celebrated theologian and Orientalist, born at Hall, Feb. 27, 1717, where his father, Christian Benediet, was a distinguished professor of the same branches. John David received his first instruction from his father, and afterwards studied in the orphan house at Hall. After taking his degrees, he made a journey to England and Holland, where he formed connexions with several learned individuals in London and Oxford, and in Leyden. After his return to Hall, he was chiefly occupied with the study of languages and economy, and, in consequence of the death of professor Ludwig, was intrusted with the preparation of a catalogue raisonné of the Halle university library. Through the influence of the baron von Münchhausen, Michaelis, in 1745, was made professor of philosophy at Göttingen, where in 1751, he was appointed, with Haller, to draw up the constitution of the new royal society of sciences, of which he was secretary and director, until some differences with one of his colleagues induced him to resign his posts and leave the society. From 1753 to 1770, he was one of the editors of the Göttingen Literary Notices, and from 1761 to 1765, librarian to the university. After the death of Gesner (1761), he undertook the direction of the philological seminary, from which so many eminent philologists have proceeded. During the troubles of the seven years' war, Michaelis was employed in making preparations for an exploring expedition into Arabia, which was afterwards undertaken by Jahn and Petrie, and which produced many important explanations to obscure passages of scripture. He died in 1791. His labours in biblical criticism and history are of great value. His principal works are Mosesches Recht (6 vols.; second edition, 3 vols., 1776—80, translated into English, under the title of Commentaries on the Laws of Moses; addition to the Study of the Old and New Testaments (the latter has been translated by Marsch); Spicil.
MICHAUX—MICHIGAN.

801

gium Geogr. Hebreorum; Translations of the Old and New Testaments, with grammatical and lexicographical productions. Heyne and Eichhorn have furnished tributes to his memory, and he himself left an autobiography.

MICHAUN, ANDRE, a celebrated traveller and botanist, born at Sartrou, near Versailles, in 1746, was early led by the example of his father and his own inclinations to devote himself to agricultural pursuits, but at the same time did not neglect to cultivate the sciences and polite literature. The loss of his wife, soon after an early marriage, interrupted his prospects of domestic happiness, and carried him to Paris, where he became acquainted with Léon- nier, and acquired a taste for botany. He attended the lectures of Jussieu, and, in 1780, visited Avenuegne, the Pyrenees and Spain, in company with Delamarck and Thouin, on a botanical excursion. In 1782, Léonnier obtained for him permission to accompany Rousseau, who was appointed Persian consul, to Persia, and after spending two years in those parts, Michaux returned with a fine collection of plants and seeds. In 1786, he was sent to America for the purpose of sending out trees and shrubs for the establishment at Rambouillet, landed at New York, and visited New Jersey, Pennsylvania, and Maryland, &c. In 1787, he formed a new establishment at Charleston for the procuring and preserving plants, and, in 1793, visited Michigan. In 1792, he examined the more northern parts of the continent, to the vicinity of Hudson's bay. The two gardens which he had established at New York and Charleston were now in a flourishing condition, and had done much towards advancing arboriculture in the United States. Soon after his return to Philadel- phia, Michaux was sent to Louisiana by the French government on a public mission, and in July, 1793, crossed the Alleghanies, and descended the Ohio. The project in relation to which he had been sent having been abandoned, he returned, in December, to Philadelphia, by the way of Virginia. The next year, he again crossed the mountains, and ex- amined the western parts of the United States. The difficulties which he had to encounter in these expeditions may be easily imagined. In 1796, he returned to Europe, was shipwrecked on the coast of Holland, but saved the greater part of his valuable catalogue finished, and sent him out of 60,000 stocks which he had sent out to Rambouil- let, only a very small number had escaped the ravages of the revolution. Michaux was unable to obtain the arrears of his salary for seven years, or any employment from the government, and occupied himself in preparing materials for his works on North America. In 1800, however, he was attached to the expedition of Baudin to New Holland; but, after visiting Teneriffe and the Isle of France, he left the party, and went to Madagascar, where he soon after died of a fever (November, 1802). His works are Histoire des Chênes de l'Amérique Septentrionale (1800, 2 vols., folio, with maps in 4 parts, comprising thirty-two species and sixteen varieties); and Flora Bororei-Americana (2 vols., 1803, with fifty-two plates, comprising 1700 plants, and about forty new genera).

MICHAUX, FRANÇOIS ANDRE, son of the preceding, was the author of the North American Sylvia (5 vols., 8vo, Philadelphia, 1817, 150 coloured engrav- ings); and of Travels in Ohio, Kentucky, and Ten- nessee (London, 1805.)

MICHEL ANGELO, or MICHELANGELO. See Angelo.

MICHIGAN; a territory of the United States of America. This territory may be viewed in two aspects—one, as presented by its political limits, established by the acts of congress of January, 1805, and April, 1818; the other as exhibited by the na- tural boundaries by which it will probably be defined when it enters upon an independent existence. It is bounded on the north by the Great Lakes, excepting a small portion of the west shore of Lake Michigan, lying between 41° 38' 58" and 48° 30' N. lat., and 84° 3' 15" and nearly 95° W. long. from Greenwich. That portion lying W. of 87° 10' W., comprises the extensive district attached to Michigan, and contemplat- ed to be set off and organised as a new territory. This latter region, bordering east on lake Michigan, north on lake Superior (nearly half of which it embraces), and the chain of small lakes connecting that Mediterranean with the heads of the Mississippi, and west and north-west on the Upper Mississippi, has been little explored. Judging from known portions of it, however, it must gradually assume, as its resources are developed by the progress of improve- ment, great interest and importance. The country included between the Fox and Wisconsin rivers, and the western shore of lake Michigan, bears a highly inviting character. The soil is a rich alluvial, irrigated by innumerable veins of water. The face of the country is unbroken by hills of any magnitude. From its northern extremity south to the Milwau- kie and the heads of Rock river, it is covered with a dense forest, opening, as traced farther down to the southern bend of the Mississippi, to extensive prairies. It is not marked by that sterility which usually distinguishes mineral regions. Explorers have noticed, as a feature of geological interest, the entire absence of pebbles upon the sur- face of these prairies, and to a depth of two or three feet. The succeeding stratum is of clay. More than 36,000,000 pounds of lead were yielded, by the mining district, from the autumn of 1824 to that of 1829. The southern shore of lake Superior affords strong indication of copper. By the treaty of Prairie du Chien, 1829, the United States purchased of the Winnebagos, Chippewans, Ottawas, and Potawam- ities, a tract of about 6,000,000 acres of land, of which 2,500,000 are supposed to be within the limits of the contemplated territory. About 125,000 in the vicinity of Green bay have also been ceded. The former cession comprehends nearly all the mining district of the Upper Mississippi. It is occupied principally by the Chippewa and the Kickapoos, tribes of Indians. The white population, confined chiefly to Green bay and the mining district, is esti- mated at 6000. Military posts are established at Green bay, Prairie du Chien, fort Snelling, on the St Peters, and Fort Winnebago, at the portage of the Fox and Wisconsin rivers. Settlements are formed, more or less extensive, at Green bay; Pembina, on Red river of lake Winnipeg; Prairie du Chien, on the Mississippi, and the lead mine, bounding on the Michigan and Wisconsin.

Michigan Proper lies between 41° 38' 58" and 48° 30' N. lat., and 84° 3' 15" and 95° W. long., and is bounded by lake Superior, E. by St Mary's river, lake Huron, St Clair river, lake St Clair, Detroit river, and lake Erie; S. by Ohio and Indiana; and W. by a line dividing lake Michigan N. and S. to Big Beaver island; and thence running due N., to the national boundary in lake Superior. These limits comprehend about 60,500 square miles, of which a third, perhaps, is covered with water. They comprise two peninsulas—the larger, being the peninsula of Michigan, bounded E. by lakes Erie, St Clair, and Huron, and W. by lake Michigan, containing about 56,000 square miles; the smaller bounded S. by the Rocky river St Mary, N. by lake Superior; containing about 2000 square miles. The former is about 250
The average characteristics, they heat; resemble, farther prairies name Mackinac and Huron, from those passing westward into lake Michigan. Its elevation is estimated to be 300 feet above the level of the lakes. South of a line drawn due west from the southern corner of Lake Huron, the country consists of open land, known by the name of Oak plains. The soil is a loam, with varying proportions of clay. It becomes fertile by cultivation, and is good farm land. In the country bordering on the Kalamazoo and St Joseph rivers, prairies of a black, rich, alluvial soil and unusual productiveness, frequently occur. The northern part of the peninsula is in the occupation of Indians, and has been little explored, except along the borders. The land is in many places more elevated than that farther south, and is covered with the trees usually found in those latitudes. The Indians raise corn in abundance. The peninsula between the straits of Mackinac and lake Superior, as far as is known, resembles, in its soil, forests, form and climate, the northern part of the peninsula of Michigan. In the southern part of the territory, the climate is temperate; in the northern, cold. Snow falls at Detroit from six to eighteen inches deep, and remains two or three months. The length of the growing season, which has a cold of spring, to the heat of summer is rapid; from summer to winter, gradual and prolonged. As general characteristics, the spring is wet and backward; summer, dry; autumn, mild; winter, cold and dry. The average temperature is, in the spring, 50° of Fahrenheit; summer, 90°; winter, 20°; autumn, 60° to 65°. The rivers, with the exception of St Mary's, St Clair, and Detroit, which form connecting links in the great chain of lakes, are small. They rise near the dividing ridge, and run, with a rapid current, E. or W. Their numerous branches furnish abundance of mill seats in all parts of the country. From the greater proximity of the ridge to the head of the peninsula, the streams running E. are of course shorter than those which take a contrary direction. They are also, in general, smaller, and navigable to less extent. Thunder bay river, emptying into Thunder bay, and Cheboygan river, into the straits of Mackinac, are the only considerable streams N. of Saginaw bay.

The animal and vegetable productions are such as are usually found in the same latitudes. Game, fish, and aquatic birds, are in great abundance and variety. The civil divisions of the territory are those of counties and townships. The legislative power is vested in a bicameral legislature; the latter of which is elected biennially, and restricted to annual sessions of sixty days each; the executive, in a governor appointed for terms of three years; the judicial, in a supreme court, consisting of three judges, whose terms of office and qualifications are four years; circuit courts, held by two of the superior judges; and subordinate jurisdictions, as county courts, magistrates, &c. Detroit is the seat of government. It is situated on the right bank of the river, eighteen miles from lake Erie, and seven miles from lake St Clair. It contains about 3000 inhabitants. With every facility for becoming a place of importance, the condition of Detroit has hitherto depended on the precarious support afforded by the fur trade, the disbursement of public moneys, while a military post, and the liberal operations by government for public objects. The increase and settling of the country was wanting. This, though recent in Michigan, has commenced, and is rapidly increasing. A strong and increasing tale of immigration has set in. The causes of prosperity once in action, their results will probably be shown here, as they have usually been manifested elsewhere. The population of Michigan Proper exceeds 40,000. Regular settlements were first made in the beginning of the last century. The government, under the dominion of the French was arbitrary, uniting the civil and military authority in the power of a "commandant." Lands were haled of the king, and undergrants, were made to such persons as were named by his governor-general, to which feudal rent was usually incident. The rules regulating the rights of property, particularly in regard to the marriage relation, succession, and devises, were those of the French customary law, called coutume de Paris, as far as applicable to the circumstances of the country. These were abrogated, as to further recognition in the territory, in 1810. In 1763, the French possessions in Canada were ceded to England. By the treaty of Paris, 1783, this country was transferred to the United States. From this period, the British government ceased to exercise a criminal jurisdiction over it. In 1796, under Jay's treaty of 1794, possession of these upper posts was delivered to the American government. The North-western territory was ceded by Virginia, New York, Massachusetts, and Connecticut to the United States, and, in 1787, congress passed an ordinance for its government; amended in 1803, to adapt it to the new government of the United States. The country was divided into counties, and the two greatest of them contained the land claimed by the United States as a domain. A delegate to congress is elected biennially, who may debate, but not vote. The qualifications necessary to suffrage are—to be a free white male of age; citizenship; a year's residence in the territory; payment of a county or territorial tax. By the articles of compact, slavery is prohibited. The number of Indians within the peninsula, is estimated at 9000; within the territory of Michigan, at 40,000. Those in the peninsula are Chippewas, Potawatomies, and Ottawas, and are kindred tribes. The Potawatomies live on reservations of land in the St Joseph country. The Ottawas and Chippewas of Thunder bay, Saginaw, and the border of the peninsula north and west of a line drawn from the forks of Grand to the source of Thunder bay river. They are hunters and trappers. The Ottawas are the most agricultural in their habits, and a band of this tribe have a flourishing settlement at L'Aube Croche, on the west shore of lake Huron, and near St Clair river and lake, rivers Detroit, Raisin, Clinton, and Piasance bay, at the mouth of the Raisin, are settled by French inhabitants. They occupy a belt of land on the borders of these streams, three miles broad. They are civil, honest, unobtrusive, and industrious, with little education, and essentially deficient in enterprise. "MICHIGAN, LAKE; one of the five great lakes in
the northern part of the United States, and wholly within the territory of these states. It has the Michi-
gan Territory on the east, Indiana on the south, and is connected on the north-east with lake Huron, by
the strait of Mackinac. Its length is nearly three hundred miles, its breadth about sixty miles, and its
average depth of water, with the exception from the southern extremity to the Mississippi is 161 miles.
Lon. 84° 40' to 87° 8' W.; lat. 41° 15' to 45° 35' N.
It contains, according to Hutchins, 10,868,000 acres.
The waters are clear and wholesome, and contain many kinds of fish. In the north-west part there are two
large islands.

MICHI LIMACKINAC, or MACKINAC; a post-town and military post in Michigan. It is situated
upon an island in the strait connecting lake Huron and lake Michigan; the best authorities now give
to the town and island the name Mackinac, and to the county of which the town is the capital, and the
strait in which it is situated, that of Mackinilacinae. The common pronunciation is Mack-i-ne, and
the name is not unfrequently written in this manner. The island is about nine miles in circuit. The population
of the county, in 1830, was 877. It is much resorted to by trappers, and during the summer is visited by
thousands of the inhabitants of Green Bay, and the vicinity around Green Bay and Drummond's
island.
On a cliff above the town is the fort. Lon.
84° 40' W.; lat. 45° 54' N.

MICHLIMACKINAC, STRAITS OF; a channel
connecting lake Michigan with lake Huron, forty
miles long from east to west, and four miles wide in the
narrowest part.

MICKLE, WILLIAM JULLIS, an English poet. the
son of a Presbyterian clergyman, was born in Dun-
frisshire, Scotland, in 1734, and received his edu-
cation at Edinburgh. At first he engaged in business
as a brewer, but not succeeding, he devoted himself
to literature, and removing to London, was noticed by
lord Lyttleton. In 1765, he was employed as cor-
rector of the press in the Clarendon printing-office
at Oxford, where he published a poem entitled the
Con
cubine, in imitation of Spenser, republished with the
title of Sir Martyn. He afterwards edited Peach's
Collection of Poems, 4 vols. supplementary to that of
Defoe. In 1772, appeared his principal produc-
tion, a translation of the Lusiad of Camoens.
Pre-
fixed to the poem is a historical and critical Introduc-
tion, including a life of Camoens; and the work it-
self is executed in a manner highly creditable to the
talents of the translator. In 1778, Mr Mickle accom-
panied Vaucluse, and was appointed a second secre-
tary to the mission to Lisbon; and died in 1788. His
poetical works were published collectively, in 3 vols. 8vo, 1807, with a biographical memoir.

MICROMETER; an instrument fitted to tele-
scopes in the focus of the object-glass, for measuring
small angles or distances, as the apparent diameters
of the planets, &c. Various forms have been given
to this instrument by different authors, and various
claims have been urged for the honour of the inven-
tion. It seems, however, to belong to Gascoigne, an
Englishman, though it is doubtful whether Huygens
did not also invent the one which he used, without
any knowledge of that of the former. Under all the
forms of this instrument, the principle of operation
is the same, which is, that it moves a fine wire parallel
to itself, in the plane of the picture of an object,
formed in the focus of the telescope; and with such
accuracy as to measure with the naked eye, without
its perpendicular distance from a fixed wire in the
same plane, by which means the apparent diameters
of the planets, and other small angles, are exactly
determined. This may be illustrated as follows:—
Let a planet be viewed through a telescope, and
when the parallel wires are opened to such a distance
as to appear to touch exactly the two opposite
extremities of the disc of the planet, it is obvious that
the perpendicular distance between the wires is then
equal to the diameter of the object in the focus of
the object-glass.

MICROSCOPE. The history of the microscope is
veiled in considerable obscurity, and among the
moderns the discovery of this instrument has been
claimed by several individuals. The ancients appear
to have been acquainted with it in one of its forms;
for Seneca says, "Letters, though minute and ob-
scure, appear larger and clearer through a glass
bubble filled with air." Indeed, the same knowledge
was lost. The invention of the modern instrument
is attributed by the celebrated Dutch mathematician
Huygens, to a countryman of his, named Drebell, who constructed them about 1621, or thirty-
one years after the invention of the telescope.
Borelli attributes it to Jansen, the reputed counter of
the telescope; Viviani to Galileo. The first micro-
scope, consisting of two double convex lenses, seems
to have been made by F. Fontana, a Neapolitan, who
dates his invention from 1618. The numerous forms
of microscopes may be included under the heads of
single, compound refracting and compound reflect-
ing microscopes. Microscopes of the first class may
be thus explained. We all know that at a small dis-
tance we see more distinctly than at a large.
If we look at two men, one 200 feet distant, the other
100 feet, the former will appear only half the height
of the latter, or the angle which the latter subtends
to the eye of the observer will be twice that subtended
by the former. Hence we must conclude, that the
nearer we can bring an object to the eye, the larger
it will appear. Now if to render the parts of a
minute object distinguishable, we bring it very near
the eye (suppose within one or two inches), it will
become very indistinct and confused, in consequence
of the great divergence of the rays of light from the
object, and the power of the crystalline lens of the eye
not being sufficient to collect the rays whereby an
image of the object may be formed on the retina at
the proper distance on the back of the eye. Now if
we employ a single microscope, which consists of a
convex lens (the virtue of the glass being in the
transparent substance would have the same power in
a greater or less degree), and mounted in a brass
setting, and place it between the object and the eye,
the former being in the focus of the glass, the diver-
ging rays from the object will be refracted and rendered
parallel by it, and as the space is so small
between eye and object, the image will be
indistinct and near view of the object. The increase or
apparent magnitude obtained by the employment of
lenses, is proportioned to the difference of the dis-
tance of an object from the lens and the distance
when seen without its assistance. This latter distance
(distance of distinct vision of minute objects with
the naked eye) varies in different persons, and at dif-
f erent periods of life. Some measure therefore must
be assumed as a standard, before we can express the
amplifying power of a lens so as mutually to have the same
idea of the magnitude of an object. Some authors
adopt ten inches as the standard of the focus of the eye,
under ordinary circumstances, and its decimal charac-
ter makes it a convenient multiplier or divisor. With
this decimal standard we can determine the magnify-
ing power of lenses of any focal length, or formed of
any substance (media). Thus if we have a lens
which requires one inch from its centre (in a double convex), we
must divide the standard ten by one which will give ten
as the magnifying power. If the lens require the
object to be 1-25th of an inch distant, its magnifying
power will be 250. We have called the magnifying
power in the first instance ten, because the length of

3e2
The object is increased ten times; but as its breadth is also increased ten times, the real magnifying power of the lens is ten times ten, or a hundred. The common form of the magnifiers employed for microscopes is double-convex, and they should be made as thin as possible; for the wandering and spreading out of the rays proceeding from an object when refracted by the lens with spherical surfaces, whereby an indistinctness is produced in its image, will be decreased, as the square of the thickness of the lens employed, and the loss of light in passing through the lens is less in proportion as it is thin.—Within a few years diamonds have been formed into lenses in which the high refractive power, whereby we can obtain lenses of any degree of magnifying power with comparatively shallow curves, and as the dispersion of colour in this substance is as low as in water, the lens is nearly achromatic. Next to the diamond the sapphire possesses all the powers requisite for the formation of perfect magnifiers, and presents less difficulty in their construction; hence the expense of employing it is considerably less.

M. M. Trecourt and Oberhausen lately presented to the Academy of Sciences at Paris, microscopic lenses formed of diamond, sapphire, and ruby, all ground to the same curvature. One diamond lens magnifying 245; and with a compound eyepiece, the power is extended to 245; the power of the sapphire, with the same eye-piece, is 255; and that of the ruby 235. The grinding and polishing of these lenses is very laborious. The polishing of the diamond occupied twenty-four hours, the wheel making not less than 200 revolutions per second.

A compound refracting microscope is an instrument consisting of two or more convex lenses, by one of which an enlarged image of the object is formed, and then by means of the other employed as an eyeglass, a magnified representation of the enlarged image is obtained. The distance at which the two lenses of a compound microscope are placed from each other must always exceed the sum of their focal lengths, in order that the image may be formed by the object-glass in the interior focus of the eyeglass. Compound microscopes have been constructed of almost all possible dimensions, from a few inches in length to that of twenty feet; but for the convenience it and the power of the magnification is augmented beyond a certain point, the effect is diminished, though we suppose the amplifying power of both microscopes the same.

The solar microscope consists of a common microscope connected with a reflector and condenser, the former being used to throw the sun's light on the latter, by which it is condensed to illuminate the object placed in its focus. This object is also in the focus of the microscopic lens on the other side of it, which transmits a magnified image of it to a wall or screen (sometimes a combination of two magnifying lenses is used). The magnifying power will be greater in proportion to the focal distance of the object-glass, compared with the distance of the wall or screen from the object-glass is less. The principle of the internal microscope is the same, except that a lamp is used instead of the sun to illuminate the object; this lamp is encased in a lantern, to screen the light from the spectators.

MICRO COSM (from μικρός, little, and κόσμος, the universe); the name given to man in the times when astrology flourished, as it was supposed that his organization accurately corresponded to the organization of the universe, called in this case macrocosmos (from μακρός, meaning great, and κόσμος, the universe); this was not made to correspond to the different parts of the universe; and engravings are found in works of that time, in which man stands in the centre of the universe, surrounded by lines indicating the various connections of the heavenly bodies with his limbs. This idea owes its origin partly to the importance which early ages attributed to the position of man in the universe. The earth is at first always conceived as low, though its compass was and, with the sun a mere dome over the earth, to give light, &c.; and man, the present lord of the earthly creation, is considered actually the lord of all creation. Close relations between him and the vast cosmological phenomena are then imagined. But the progress of science and reason has removed these views.

Microcosm is still used in a figurative sense for man.

MICROSCOPICAL ANIMALS, or ANIMAL-CULES. See Animaletula.

MIDAS, the son of Gordius and Cybele, was an ancient king of Phrygia, of whom many fables are related. His story has the notável of a nursery tale. While he was yet in the cradle, the ants put corn in his mouth, and the soothsayers prophesied that he would acquire great riches. When he was king, and Bacchus was travelling through Phrygia, Silenus lost his way, and strayed to the court of the king. Midas unsuitably entertained him, and conducted him back to Bacchus, who, not satisfied Midas to be served with the best of life, never recompense he pleased. Midas requested that every thing he touched might become gold, and the god granted his wish. But when even his food was transformed into gold at his touch, he implored Bacchus to take back the fatal privilege. The god then commanded him to go up the river Pactolus, and to dip his head in the sources of the stream, and after-words to bathe in it. The property of transforming every thing into gold was then transferred to the waters of the Pactolus. Pan and Apollo appointed Midas and Timoæus their umpires in a musical contest. Midas gave to the syrinx of Pan the preference over the lyre of Apollo, and was therefore punished by the latter with a pair of ass's ears. Hence the phrase ears of Midas, often bestowed upon igno- rant critics. Midas now exerted himself to conceal this ornament of his head by his royal cap; but he was obliged to uncover his head under the hands of his hair-dresser; and, although the king ordered secrecy under severe penalty, Midas was much weighed upon the barber so heavily that, to unburden his mind, he dug a hole in the ground, and whispered in it, "King Midas has ass's ears," and then covered up the hole. Soon after weeds sprang up on this spot, which, when moved by the wind, murmured the words of the barber. Thus the secret was divulged.

MIDDLE AGES; that period in the history of Europe, which begins with the final destruction of the Roman empire, and, by some historians, is considered to end with the reformation; by others, with the discovery of America; others, with the conquest of Constantinople; finally, by some, with the invention of the art of printing; all of which may be right, according to the special purpose of the historian. In general, it may be said, the middle ages embrace that period of history in which the feudal system was established and developed, down to the most prominent events which necessarily led to its overthrow; though its consequences are still very observable in the states of Europe. (See Feudal System, and Chivalry.) The first centuries of the middle ages are often termed the dark ages—a name which they certainly deserve. Still, however, the destruction of the Roman institutions, as by the irruption of the barbarian tribes, was not immediately followed by its consequences; and the beneficial consequences attending it overlooked. True it is, that many of the acquisi-
tions, which had cost mankind ages of toil and labour, were lost in the general wreck, and only regained by the efforts of many successive generations; the flowers of civilization were destroyed, and the manuscripts in which the civil development of society suffered a most severe shock; those nations to which Roman civilization had extended previous to the great invasion of the Teutonic tribes, were thrown back, in a great measure, to their primeval barbarism, and the unruly passion for individual independence in the northern tribes, greatly retarded the development of public and private law, and, in some countries, has entirely prevented a regular civil constitution. Though we admit all this, we ask whether those who deplore the irruption of the barbarians, are well aware of the enormous degree to which Roman civilization had degenerated? While, however, the injury which the world suffered from the destruction of Roman civilization has been often over-rated, there is, on the other hand, a class of persons who laud the condition of Europe during the rudeness of the feudal ages, in a spirit of romantic enthusiasm, and despise those who have treated the savage state as that best fitted to nourish and preserve virtue, the one showing ignorance of history, the other of man. Any one may speculate as he pleases on such subjects, but such speculations are foreign to the spirit of history, whose proper office is to follow the influence of past ages on the succeeding. The feudal system filled Europe with powerful barons, possessing large landed estates, and commanding the services of numerous armed adherents, and with inferior lords, protected by the former. They were all possessors of land, with arms perpetually in their hands, too proud to follow any laws except those of honour, which they had themselves created, and despising all men of peaceful occupations as ignoble, created to obey and to serve. If, therefore, the classes not belonging to the military caste wished to preserve their independence, they could succeed only by union, which would afford them the means of mutual protection, and enable them to exercise their various callings unmolested, and thereby acquire wealth in money and goods, which would serve as a counterpoise to the landed possessions of the feudal aristocracy.

The Feudal System gave rise to cities. Small cultivators, at first under the protection and superintendence of the counts, bishops, and abbots, to whom they subsequently became so formidable, arose, and attained (particularly in the eleventh century) through their own industry and skill, to a state of prosperity, which enabled them to purchase their freedom, and soon to obtain it by force. They did not remain stationary; but small states began to grow into great ones; and the most of them became so bold as to acknowledge no superior except the highest authority of the country to which they belonged. Strong, high walls, impenetrable by the rude military art of the time, and the union with the valour of the citizens, the freedom of the cities, and protected them from the tyrants of the land; well-ordered civil institutions preserved peace and prosperity within, and were secured by the wealth acquired by trade and manufacturing industry. By the good order and prosperity of the cities, established themselves there, and were ambitious of obtaining the offices of government in these commonwealths.

In fact, they soon usurped the exclusive possession of them, in many of the cities. The looser the social organization in any state, and the more intolerable the pride of the nobility, the greater became the prosperity and power of the cities, which grew, at length, so great that, in Germany and Italy, these republics were formidable even to the emperor. In Arragon, the third estate was fully developed as early as the twelfth century. In England the cities, in conjunction with the great barons, obtained the Magna Charta, in 1215, and, in France, they increased, in consequence, from the circumstance that Louis the Fat and his successors, particularly Philip the Fair, 200 years after him, found it their best policy to protect them against the nobility, and thereby increase their own means of resisting that order. But the cities of these countries never attained the importance of those of Germany and Italy. What single cities could not accomplish, was effected by the union of several; as the league of the Lombard cities in Italy; the Hanseatic, Rhenish, and Sambian leagues in Germany (see Italy, and Hanseatic League), appeared, and were formed as formidable powers. Under the protection of such associations, and sheltered by the walls of the cities, all arts and trades, and every kind of civilization, made rapid progress. Many of the important inventions, which we now prize so highly, originated among the cities of Europe, or were suggested by their active commercial and manufacturing spirit. With constitutions similar to those of antiquity, the same spirit appeared to be awakened; all the virtues and vices of Athens, Sparta, and Rome, are found in the free states of Italy, where even the climate resembled that of the republics which had perished 1500 years before. There was the same love of country, strict morals, and valour, the same (though differently directed) love of arts and knowledge. But the communities were not exempt from the influence of the domineering spirit of the times, which they opposed. The overwhelming power of individuals, so dangerous to all free states, became, through this spirit, doubly formidable, and compelled the oppressed portion of the citizens, in the same distress which had given rise to their parent city, to reconstitute themselves into the same manner, and to bind themselves together for the protection of their rights. Such associations, usually formed among people of the same trade, and having for their object, next to security from external enemies, the maintenance of internal order in these stormy times, were called corporations, or guilds, and were under the direction of a master. The strictest regulations appeared necessary for the attainment of this object. No one, without serving an apprenticeship of years, and advancing through certain degrees, could become a member. At a later period, admission into the corporation was purchased by individuals who did not reconstitute themselves into the same manner, and who wished to share in the advantages of the associations. For in the fourteenth century, the corporations became so powerful as to obtain almost exclusive possession of the government of the cities, which until this period, the nobility had mostly retained in their own hands. The corporations in consequence, and by the good order and prosperity of the cities, established themselves there, and did not become the only means of security from the disorders of
the time, became so universal, that, almost everywhere, persons of the same trade or profession were closely united, and had certain laws and regulations among themselves. The householders, the trade, and the guilds, was obliged to do homage to this spirit, and the liberal arts themselves, in the latter part of the middle ages, were fettered by the restraints of corporations (see Master-singers), so that knowledge as well as arts was prevented from attaining that perfection which the nature of life seemed to promise them; for nothing more impeced their progress than that pedantry, those prescriptive and compulsory rules, that idolatrous veneration for old institutions, which are inseparable from such associations.

So also the most remarkable institution of that time, its characteristic production—chivalry—exhibited all the peculiarities of the corporations. War was the profession of the nobles. No one of their order, who was not a knight, could bear a lance or command cavalry; and the services of years, as an attendant or squire, were necessary to entitle even one of the highest order to be dubbed a knight. But squire, knight, and baron were all inspired with the same spirit of honour, pride, love, and devotion. The religious zeal of the middle ages produced actions almost inconceivable to the cooler spirit of our time. We see hundreds of youths and maidens, in the flower of their age, shutting themselves up in gloomy walls; or retreating to wild deserts, and spending their lives in prayer and penance; we yearly see thousands barefoot and fasting, travelling many hundreds miles, over sea and land, to pray at the grave of their Master; we see hundreds of thousands thronging thither, from age to age, with the cross and sword, at the risk of life, to deliver the Holy Land from the pollution of infidels.

This enthusiastic spirit was peculiarly suitable to soften the ferocity of the age; but ambitious men artfully turned it to their own selfish purposes. Intolerance, the destruction of the Jews and heretics, the luxurious splendour of the papal court, and the all-embracing system of the hierarchy, were the unhappy fruits of this mistaken spirit. In opposition to the secular power, resting on the feudal system, and supported only by armies of vassals, the pope, formed from the archbishops, bishops and priests, still more from the generals of religious orders, provincials, abbots and monks, an immense army, invincible, for it was an army of sorts, one through the spiritual weapons which belonged to it and to its head. From the general belief in his possession of the power to make happy and unhappy in both worlds, to bind and loose for eternity, the pope ruled, with absolute sway, the minds of Christians. All the kings of the West acknowledged him as the living viceroy of Christ. Many were vassals to him; many tributary; almost all obedient and subject to him, or, in a short time, victims of a vain resistance. At the time in which little idea was entertained of restraining princes by constitutional laws, and when the spirit of the times allowed them to dare whatever they could do, it was an inestimable advantage that the pope aided the people for centuries in opposition to their usurpations; but the luxury, cruelty, ambition, and hostility to the diffusion of knowledge, which pervaded the clergy, from the pope down to the lowest mendicant friar, has left a deep stain on the character of the times. Arnold of Brescia and the Waldenses, Wickliffe, Huss, and their followers, endeavour to overthrow the hierarchy by reminding the people of the simplicity and purity of the primitive church. They found their contemporaries accustomed to the superfluity of the church, not yet ripe for freedom of mind, and inattentive to their renunciations; and their noble endeavours, in a great measure, failed. The hierarchy was able to erect new bulwarks against new enemies; mendicant orders of friars were instituted, which diffused the glistening light of the thirteenth century from entering the kingdom of darkness; excommunications and interdicts held Christendom in terror; till at length, when the signs of the times, the diffusion of a free spirit of investigation, the establishment of a more rational order in the monasteries, the decay of the monarchical spirit in Germany announced that the middle ages were drawing to a close, Luther proclaimed that Europe would no longer be held in leading-strings.

The ages of which we have been speaking, so full of battles and adventures, of pride and daring, of devotion and love, must have been poetic times. The knights were particularly disposed to poetic views by lives spent between battle and love, festive pomp and religious exercises. Hence we see poets first appearing among the knights in the twelfth century. In southern France, where chivalry was first established, we see the first sparks of modern poetry. The Paris Trouvères (ménestriers) were particularly sung at the court of Berengarius of Toulouse, are the founders of it. Soon after them, the French Trouvères (ménestriers) and the German Minnesingers sang in their mother tongue; the Italians at first, from mistrust of their vulgar tongue, in the Provençal, and then the English, from the same cause, in the French language. But the minstrels soon formed, among the latter also, a national poetry; and the Italians, at a later period, after the great Dante brought the Tuscan dialect into honour, obtained, by the improvement of it, a high poetic fame. In Spain, the Catalonian poetry was the same as the Provençal, but the Castilian and Portuguese borrowed more from the Italians. With lyric poetry the epic was also developed in great beauty and power. Its mystic tone, its indefinite longing for something more elevated, than the realities of earth, entitle us to distinguish this epic from the ancient, by the name of romantic. See Romantic.

The romantic epics of the middle ages are mostly confined to three cycles of stories. Italy remained a stranger to these, but her great Dante was worth them all, and stood high above them, though the tone of love and devotion which predominates in his poem sprang from the character of the times. The first of these three cycles, the most remarkable, is the truly German Niebelungen, and the stories of Siegfried, Attila, Dietrich of Berne, Otaut, Hugdietrich and Wolfdietrich, and other heroes of the time of the general migration of the nations, which belong to it. Next to these stories stand the equally old tales of the British king Arthur, his Round Table, and the Sängrund, which, in accordance with old British or Cymric fables, were sung in France, and afterwards by German minstrels, and to which Titurel, Parsival, Tristan, Ivan, Lohengrin, Gawain, Daniel of Blanckenhal, the Enchaanter Merlin, and others belong. To these was added a third, originally French, collection of stories, of Charlemagne and his Peers, of Roland, the Enchaanter Malegys, and the Four Sons of Huymon. The romance of Amadis de Gaul belongs peculiarly to the Spanish, and to neither of these three collections. See Chivalry. Besides these subjects, the poetic appetite of the middle ages was fed upon the historic events of ancient and modern times, particularly the stories of Alexander under the Great, and the crusades, likewise upon Scripture history, and even upon the subjects of the ancient epics of Homer and Virgil, for new poetical works. But whether from political causes, or, as we believe, from the downfall of chivalry, and from an increasing spirit of reflection, the last centuries of the middle...
 ages were highly unfavourable to poetry. The voice of the minstrel was almost entirely silent in Germany, France, and Spain, even in the fourteenth century; but Italy had now its Petrarch and Boccaccio, and England its Chaucer. In the thirteenth century, there was not a story in the cycles above-mentioned, which was not of ancient composure; and more than 1,400 love-songs, by 136 poets of this century, are contained in the Manesse collection alone (see Manesse); but hardly a single poet appeared among the knights, after the fourteenth century.

The epic poems of former times gave place to prose romances, and the lyric poetry, in France and Germany, fell into the rude hands of the Master-singers (q. v.), who, by a studied observance of rules, preserved its formal existence. So did it continue till the fifteenth century, which, attentive only to the great events that were in preparation, and the struggles which preceded them, and actuated by the spirit of reflection from which they proceeded, was far removed from that free flow of feeling which had given birth to the poetry of the past time. It was not till the end of the middle ages, when the early spirit of poetry lived only in remembrance, that Ariosto took the stories of Chivalry, turned them into poetry, and gave them a new dignity. Spain and England received a new national poetry from Cervantes and Shakspeare. But how great is the difference between these creative geniuses, complete masters of their subjects, who poured forth their whole souls in their poetry, so that one knows not which most to admire, the feeling which inspires, the fancy which adorns, or the understanding which regulates them, and whose humorous (often ironical) tone proclaims them the offspring of modern times, and those simple poets of the middle ages, who took the world as it was, and were rather the organs of the spirit of poetry in the people than independent poets?

Among the arts of the middle ages, architecture was distinguished by its peculiar character. In the noblest buildings of antiquity, the form of the first rude dwelling-houses is not to be mistaken; they appear only as the ornamented forms of abodes which no man can call his own; but the Gothic architecture of the middle age was founded on a deep and great conception. This conception, which appears in the union of the grandeur of great masses with the most finished delicacy of parts, was the representation of the world. The other arts, which, in the fourteenth and fifteenth centuries, came from Greece into the Western world, attained their greatest splendour, in the middle ages, upon the Lower Rhine and in Italy. See German Painting, and Italian Art.

The weak side of the middle ages is the scientific. The youthful spirit of the time, bent upon action, could not devote itself to a sedentary life and continued study. The efforts of Charlemagne, to encourage science and instruct the people, hardly produced any effect beyond his life; for they were not in the spirit of the time. Several centuries after him, the German tribes considered no knowledge of use, but that of managing the lance and the sword. The barbarian was content that most of the ladies, even the most distinguished, could scarcely read or write. He who was instructed in these, was considered a distinguished scholar, and he who obtained more knowledge, particularly in mathematics or natural science, exposed himself to the danger of being burned as a sorcerer. In literature, ambition was to acquire and the leisure which they enjoyed, as well as by the necessity of some knowledge of the Latin language, which the Roman Catholic ritual required, were driven to a more literary employment, to which they were educated in the schools of the cathedrals and convents. But their literary labours were confined to the copying of the old writers, particularly the fathers of the church, and to accounts of the occurrences of the times in meagre chronicles. Nevertheless we are indebted to them. Through their activity the valuable remains of ancient literature and incitements to new improvements, have been, in a great measure, preserved to us; and from their annals we gather our only knowledge of the events and manners of that time. Moreover, the Latin literature, which was common to all the people of the West, not merely from the monks, but also from the men in science and public transactions, produced a certain agreement in their general character, which contributed much to promote intercourse and improvement.

The East has no middle age, like that of Europe; yet the introduction of Mohammedianism and the Arabic literature, make epochs there. But as the spirit of man is hostile to a partial development, in the eleventh century the need of thinking was again felt in Europe; the taste for knowledge awoke, here and there, partly by means of the monasteries, but afterwards through the arts and industry which prevailed in the cities; and gave them a new dignity. Spain and England, the Hohenstaufen, St Louis, the Alphonsos, and other intellectual princes. From these times (the periods of Lanfranc, Abelard, John of Salisbury, and others), the middle ages produced distinguished individuals, whom the coldness of their contemporaries in the cause of science only urged to a more ardent pursuit of it. Meantime the necessity was felt of defending the doctrines of the church against unbelief and heresy. This led to the sharpening of the intellect by dialectics; hence the church dogmatics, or theology, was formed, from which philosophy at length proceeded. As, in scholastic theology, the dogmas of the church were early received as authority; so, in the domain of laws, the Roman code soon obtained a complete ascendancy; and the jurisconsults of that time were never weary in studying it, learning it by heart, and explaining it by glossaries and illustrations. The students of philosophy pursued the same course with the monks. The doctrine of these was, whom the middle ages, although acquainted with him only through Arabic translations, or riscacentos, had an unbounded respect. Unfortunately, however, for the progress of philosophy, these commentaries, glosses and abridgments, occasioned the neglect of the original. When the union of scholars, in particular places, gave birth to universities, these received the stamp of the time, both in the corporate character which was given them, and the absorbing interest which was taken in the study of dialectics. Only jurisprudence, theology, and what was called philo sophy (which was, in fact, the art of disputing with subtilly upon every subject), were taught; and these sciences, especially since the middle of the twelfth century, had degenerated into a mere tinkling of scholastic sophistry. Medicine, as regards any useful purpose, was taught, at this time, only by some Arabs, and students of Salerno who had been instructed by them; in other respects, it was a slave of astrology, and an object of speculation to ignorant impostors, principally of the Jewish nation.Philology flourished in the time of Lanfranc and Abelard, but was again forgotten in the eleventh and twelfth centuries. Notwithstanding the unprofitable character of what was taught at this time, teachers stood in high esteem, and the highest professional situation was that of knighthood. The universities, on their side, showed themselves worthy such honour by their independence of pope and prince. With all its worthlessness, the disputations of the time had
this good effect, that truths were advanced and maintained in the universities, which were alarming to the vigilant hierarchy; and Luther's theses, in Wit- tegenstein's day, were to bring about the reformation, and thereby to the shedding of new light upon science. Yet the reformation did not (as many are inclined to believe) give the first signal for higher intellectual endeavours and freedom of thought; it was rather produced by this striving and this freedom, which had originated some centuries before, with the flight of the Greek scholars from Constantinople, and the invention of the art of printing, having been encouraged by the lovers of science among the princes of Italy, and had shone forth, even in Germany, in the brotherhood of Deventer, in Wesel, Erasmus, Celtes, Reuchlin, and others. But with the appearance of these men, with the rise of the sun of the new day, the romantic twilight of the middle ages faded away.

We shall now give briefly the chief epochs of the history of the middle ages, leaving more copious details to the articles on particular countries and on the formation of separate Germanic states, which succeeded the general irritation of the barbarians, and was followed, after some hundred years, by the universal monarchy of Charlemagne. This had only a short continuance; but it left the idea of the unity of the whole of Christendom under a spiritual head, and under the temporal protection of the newly-revived Roman empire—a power which had a powerful influence during the whole of the middle ages. New modifications of the European states after the fall of the Carolingians: the devastations of new tribes of barbarians; of the Saracens in the south, of the Normans in the north and west, and the Hungarians in the east, all of whom, at length, became subject to the Germanic states. The new Normans in France, Italy, and England. From these romantic adventurers especially proceeded the spirit of chivalry which made its way through all Europe. Christianity gained a footing among the Slavonian tribes. Struggles between the spiritual and secular power convulsed Christendom. The idea of their unity, as well as of knighthood, is ennobled in the crusades, whose success these discordions frustrated. Origin of the cities and of the third estate. Commerce with the East, by means of Italy and the Hanse towns. Corruptions of the clergy, at two epochs, after Charlemagne and after Gregory VII. Meliorations in the organization. The decline of the imperial dignity in Germany and Italy. Desolation of these countries by private warfare. Other kingdoms are now enabled to obtain more solidity. The flourishing of new arts and knowledge. Universities. The popes humbled by their dependence upon France and the great schism. Councils at Constance and Basle. Subjection of the Greek empire; hence the formidableness of the Turkish power to the west of Europe; and hence, also, the diffusion of learning by the fugitive scholars of Constantinople. Printing. The discovery of the New World, and of a way by sea to the East Indies. Reformation. See Hallam's View of the State of Europe during the Middle Ages (3d ed., London, 1822); Berrington's Literary History of the Middle Ages, etc. (London, 1814); Sismondi's Hist. des Républiques Italiennes (3d ed., Paris, 1825); Ruh's Handbuch der Geschichte des Mittelalters (Berlin, 1818); Rehbruch der Geschichte des Mittelalters (Marb., 1821 seq. vol.

MIDDLESSEX: the smallest county (except Rutland) in England, yet the most important, as containing within its limits the metropolis of the British empire, is bounded on the north by Hertfordshire; on the south by the river Thames, which separates it from the county of Surrey; on the west by Buckinghamshire and Northamptonshire; and on the east by Essex, from which it is divided by the river Lea. Its length, from north-east to south-west, is about twenty-three miles, and in breadth it does not exceed fifteen. The name is supposed to be derived from the Middle Saxons, the people inhabiting it lying between the east, west, and south Saxons. The prevailing soils of Middlesex are loam and clay; much of the clay in the vicinity of London has been dug up for brick-making. A great portion of the county is laid out in gardens, nurseries, and pasture-grounds; in the art of lay-making, the Middlesex farmers are said to be superior to any in the island. Middlesex contains 197 parishes, two cities (London and Westminster), and six market towns. It returns eight members to parliament; namely, two for the county, four for the city of London, and two for Westminster. Population, in 1801, 818,129; in 1831, 1,358,541. See London.

MIDIANITES; an Arabian tribe, represented, in the Old Testament, as the descendants of Midian, son of Abraham by Keturah (Gen. xxv. 2), and described as engaged at an early period in a commerce with Egypt. They dwelt in the land of Moab (Arabia Petræa), to the south-east of Canaan. One portion
of them inhabiited the country to the west of mount Sinai; another portion dwelt on the east of the Dead Sea. The Midianitish women having entered the Jewish camp, the chief of the midwives, (Shemiram, or Miriam,) was directed by the Lord to send 12,000 men into their country, and cut off all the inhabitants, except the virgins. This order was executed, and the victors brought back a rich booty of 32,000 virgins, 675,000 sheep, 72,000 oxen, and 61,000 asses.

In childbirth, the art of assisting and facilitating childbirth, and of providing for the preservation of the health and life of the mother during and after her delivery. It is founded on physiological and pathological science. Midwifery, in some form, has been employed from the most ancient times, even among the rudest nations, although it was at first very defective, and consisted, probably, only in the most obvious and indispensable manual applications and aids. Even in the most cultivated nations of antiquity, this art was in a low state. The Israelites had their midwives. The first accounts of scientific male midwifery are to be found among the Greeks of the age of Hippocrates (who died 357 B.C.). From the writings of that period, we learn that the obstetrical art had then reached a higher degree of cultivation among the Greeks than in most parts of Europe during the last century. Notwithstanding, there was much that was injudicious in their system, and only a small part of the labour was assisted; hence, interference was made use of. They often contented themselves with invoking Lithia, the goddess of childbirth. Among the Romans, midwifery was confined to a few simple aids, and sacrificing to Juno Lucina was not till a later period, that the Roman women commonly employed midwives; but, in difficult cases, the physicians were called in. These were either Greeks living in Rome, under the dominion of the Roman emperors, or they drew their knowledge chiefly from Greek authors. To this epoch belongs particularly Soranus (100 A.D.) and Moschion, who composed the first manual of midwifery which has come down to us. In the middle ages the science was very much neglected: it was confined to the cutting of the fetus from the body of the mother, in case of her death before delivery. In consequence of the importance in the arts of the popes, who conferred the professorships in the newly established schools on the monks, and gave them the privilege of practising physic, while they strictly prohibited the practice of surgery and anatomy, both to the physicians and laity (1215), the obstetric art became more confined to internal and superstitious applications, and, indeed, generally sank into the hands of women, monks, peasants, and other ignorant persons. When they had exhausted their medical skill, the saints were invoked, images and relics were hung upon the woman in labour, &c. The art continued in this state till the sixteenth century. At this time, the improve-ments in the sciences introduced a better era, since the surviving works of the Greeks, Romans and Arabians were multiplied, the intellectual intercourse among men became more general, and the spirit of inquiry was awakened, and found a wider field. At this period, the business of midwifery was so exclusively in the hands of women, that it was disgraceful for a man to engage in it. Such an undertaking was considered as an abominable attempt on the virtue and honour of the female sex, and he who ventured upon it, as a magician. In Hamburg, in 1521, one Veitzen was condemned for this offence to the flames. Several books, however, were published for the better instruction of midwives in their profession. The first was by Eucharis Roslein, at Worms, called the Rose-Garden for Midwives and Pregnant Women (1513). The science of anatomy, which was now more freely studied and patronized, also contributed much to the improvement of midwifery, and such physicians, as particularly distinguished himself. The physicians and surgeons turned their attention only to the theoretical part of the science, but the latter gradually proceeded to the practice of it, by performing the Cesarean operation on women who had died in childbirth (which Veitzen had performed on command by law), and gradually undertaking other operations on women pregnant and in labour. Francis Rouset, a surgeon in Paris, published a treatise, in 1581, in which he brought several proofs of the possibility of safely performing the Cesarean operation on the living mother, and it was he who first gave this operation its present name. After the publication of this treatise, the operation was frequently performed on the living subject, both in and out of France, and sometimes even when it was not unavoidably necessary. Pinau, a surgeon in Paris, first suggested, in 1589, the section of the pubes, by the observations which he communicated on the separation which takes place between the bones of the pelvis, for the purpose of facilitating birth, when made difficult by the extreme narrowness of the pelvis. In Germany, midwifery long remained in an imperfect state: the midwives were generally ignorant, and men were seldom called; when, however, it was already a common thing to call in the aid of physicians and surgeons. A surgeon of Paris, Clement, distinguished in the practice of midwifery, who had attended La Valiere, the mistress of Louis XIV., in her delivery, first received the name of acooneur as a title of honour. The surgeons were so well pleased with the name, that they gradually adopted it as a general appellation. Henry of Deventer, a surgeon of Holland, was the first who, in 1701, endeavoured to establish midwifery on scientific principles. In France, where the art had risen to higher perfection than in other countries, a school for midwives was established in the Hotel Dieu, in 1745. The history of the origin and invention of the forceps, this highly useful instrument in midwifery, is involved in some obscurity. Between 1660 and 1670, Charles I., of England, established a school for midwives, and a faculty of midwives was maintained, which was afterwards transferred to the University of Cambridge. In about the year 1672, the operation of forceps was introduced into France by Dr. Leclerc, under the name of forceps. The art of midwifery was also perfected by the writings and instructions of these men. Germany, too, produced several men of eminence in this department of the medical art, who were not only famous for their operative skill, but contributed much to the advancement of midwifery by their observations, and to the diffusion of correct principles on the subject by their lectures and writings. The establishment of several schools of midwifery also facilitated the study of the art, and brought it to the degree of perfection which it now boast. Those physicians of recent date, who
have contributed most to this art in Germany, are the two Sturks in Jenm, Osinander, in Got
tingen, Siebold in Wurzburg, Wignard, Nagele, Boer, Jorg, &c. The course now adopted seems to be the true one, viz., by the cultivation of all the branches of knowledge connected with this depart-
ment, to determine the cases in which art may and ought to be passive, and leave the work to nature, and those in which nature is insufficient to accomplish the delivery alone, or at least without injury to the mother or child.

Mieris, Francis, a very celebrated painter of the Dutch school, was the son of a jeweller at Leyden, where he was born in 1635. He was the pupil of Vlieet, Gerard Douw, and Van den Tempel, and he is generally considered as the principal scholar of the second. His works consist of portraits, and scenes in country life. He possessed the delicate finish of Gerard Douw, with more taste in his designs; his colouring, too, is more clear, and his touch more spirited. He usually worked for a ducat an hour; but, through his intemperance, he always remained in poverty. One of his finest productions was the picture of a young lady painting, a physician attempt-
ing to write her name on an old woman's standing by, and for this 3000 florins were vainly offered by the grand duke of Tuscany. An engraving from this painting will be found in the "Republic of Letters," a literary miscellany, published at Glasgow, in 1832. Mieris died at Leyden, in 1681. He had two sons, —John, the elder, who gave great promise of excellence, but died in 1690, at Rome; his son, William Mieris, was the pupil of his father, and adopted his style, in which he showed great talent. He died in 1741. —His son, Francis Mieris, the younger, was also a painter, but was not very successful. He published several works relating to the history of the Low Countries, and the lives of their sovereigns.

MIGNARD, Pierre; a French painter, born at Troyes, in 1610. His father discovering early indi-
cations of his talent for painting, placed him, when eleven years old, at Bourges, in the school of Jean Boucher; and the young artist next studied the works of Rubens, and of the celebrated Van Leen. He went to Fontainbleau. He afterwards became a pupil of the celebrated Vouet, and, in 1636, went to Rome, where he formed himself by the study of the master-
pieces of Raphael and Titian. His historical paint-
ings and portraits, among which were those of Urb.

VIII. and Alexander VII., soon gained him reputation; and he also painted a great number of portraits in Venice. In 1658, Colbert engaged him to return to France in the service of Louis XIV., and Mignard was placed at the head of the academy of St Luke, and, after the death of Lebrun, with whom he was constantly at war, became chief painter to his majesty. At this time, he executed one of the greatest fresco paintings which France possesses—the dome of the Val-de-Grace. It represents the region of the blessed; in the centre of a great number of saints, martyrs, prophets, &c., is queen Anne (of Austria) presenting to God the model of the new church. He also adorned the palace of St Cloud with numerous mythological paintings, executed several of the works at Versailles, and painted portraits, &c. Be-
sides the posts already mentioned, the direction of the royal collections of art, of the academy of painting, and of the Gobelin manufactory, was conferred on him. He continued actively engaged in his art until his death, in 1695. In respect to invention and com-
position, Mignard, viz., by the cultivation of all the found and original geniuses; yet the grace and loveliness which characterize his works, particularly his Madonna's, the brilliancy and harmony of his col-
ouring, and the ease of his pencil, alone for many defects. His talent for imitation of other masters was remarkable; he deceived the ablest judges, and, among them, his rival Lebrun, by a Magdalene in the manner of Guido.

MIGRATION OF ANIMALS. The migration of animals, that is, the travelling of a large number of the same species toward a certain place of desti-
tination, or in a certain direction, is one of the most remarkable phenomena in natural history. Migration takes place with quadrupeds, fishes, birds, and insects. As to the first, it does not appear that any of them migrate periodically and regularly, like many species of fish and birds, for which a sufficient reason may be found in the almost uninterrupted passage which air and water permit, whilst the land offers many impediments to change of place. Yet some quadrupeds are suddenly seized by the desire to migrate. The lemming rat, which is found in the northern parts of Europe, migrates at regular periods, when a severe winter is approaching, in incredible numbers, and always in a straight line, stopping not for rivers or lakes. Some other quadrupeds, also, occasionally move in large numbers, and for con-
considerable distances, in the hope of finding a warmer place at regular periods, and seem to be owing to accidental causes. The buffaloes (properly bisons), in the western wilds of North America, and the wild horses sometimes take long journeys in large bodies. Some fishes, also, remove into warmer situa-
tions during winter; thus the salmon leaves the rivers and shores and approaches winter, to seek the warmer waters of the deep sea. Other fish do the same. The cod-fish move in great numbers, about the month of May, from the northern seas to-
ward Newfoundland. The shoals of herrings which periodically traverse the ocean, are innumerable. The same is the case with the mackerel, pilchard, anchovy, &c. That insects migrate is well known, for instance, locusts, ants, &c., and move, with sur-
prising obstinacy, in a given direction. The animals, however, with whose migrations man is most familiar, and which appear to migrate most regularly, are some species of birds. The facts are known which prove their winter and summer quarters, and the way of migration is a vast field of interesting observation. Some birds regularly return, after a certain absence, not only to the same country, but to the same spot where they built their nests before, or where they were bred. Many storks, which become half tame in Germany, have been marked, and found to return regularly to their old nests, built on a wheel, which the peasants of that country, particularly in the north, place, for that purpose, on the corner of the roofs of their houses. The same is related of swallows, and other birds of passage. Other birds do not return to a particular country, but travel, according to circum-
stances, from one to another. Among the former are some which remain in the country of their nativity only as long as is necessary to breed and bring up their young; others are absent but for a very short time. The loriots remains but three months in the middle regions of Europe, whilst the lark is absent but for a very short time.

Mr Brehm, a German, has collected many interest-
}
MIGRATION—MILAN.

The drought, in 1819, made the meadows around Altenburg, in Saxony, very dry, and no landrains (in general frequent there) were seen during that season. They had fled to the valley of the Rhine, where the drought had been less. The cold in the winter, also, had prevailed in the south of Saxony. The winter of 1821–1822 was very mild in Middle Europe, whilst in the north, it was unusually cold, in consequence of which many birds were seen in Germany which hardly ever quit the northern regions. Some birds of Bohemia went to Switzerland, and some to the Rhine and the Saale; but none were seen there before. The contrary took place during the following winter, when the mercury stood, in Germany, much lower than in Sweden. Hunters, and other people living much in the open air, know that certain birds do not migrate, except on the approach of a severe winter. How are these birds led to migrate at such seasons? The general and easy answer is, by instinct. But what is instinct? Certainly we cannot mean, by this term, a constant direct interposition of Providence, which drives the birds away because a severe winter is coming on. Instinct, whatever it may be, must be guided by general laws. It is the practice in nature to struggle against the severity of the approaching season, whether by a peculiar sensibility to the causes from which its severity will proceed, or in other ways, we know not. In the article Instinct, it has been maintained, that much of the conduct of animals necessarily implies reflection. The vicissitudes of the atmosphere, on the arrival of the migrating time, have also a great influence upon them. Most birds perform their migration during the night; some species, however, by day. Others stop not either by day or night. To the class which fly by day belong the birds of prey which obtain their food by day—the crow, pie, titmouse, wren, woodpecker, chaffinch, goldfinch, lark, swallow, and some others. Those which travel by night are the owl, blackbird, &c., and a great number of aquatic birds. Those which stop not, day or night, are the heron, wagtail, yellow-hammer, plower, stork, crane, wild goose, swan. It is very remarkable, that individuals of those species which travel day and night, and which, by some cause, are prevented from migrating, remain, during all the time of the migration of their species, awake, and only occupy themselves with taking food. These birds like particularly to travel in bright moonlight. Many birds obtain their food on the wing. The common crane was said to feed on the wing. Fishing birds catch fish, whilst they continue their journey. If the titmouse, wren, woodpecker, and pie rest, for some time, on the branches of trees, they soon resume their flight, after having fed. Those birds which habitually alight on spots where they find nourishment in abundance, never remain longer than two days in succession, if nothing opposes the continuance of their flight. It is a curious fact, that, at these times, many birds utter cries such as they are never heard to make at any other time. Unless obliged by fogs to keep near the ground, birds generally fly very high during their migration.

Of the birds of Milan, the crane, perhaps, is the most remarkable. They seem to be most endued with foresight. They call each other by certain cries, several days before they depart, assemble, and make a great noise, as if consulting; after which they range themselves in two lines, forming an angle, at the meeting of which is the leader, who appears to exercise authority and give orders, for instance, to form a circle in a tempest, or to be watchful if engulfs approach, &c.; he also gives the sign to descend and take food. If he is tired, he places himself at the end of the line, and the bird next behind him takes his place. They utter, during the night, more piercing cries than during the day, and it seems as if orders and answers were given. Wild geese and ducks travel in a similar way.

To enable birds to fly with ease, and to continue long on the wing, they must fly against the wind, in which respect flying is directly opposite to sailing. Sportsmen are acquainted with this fact. If the wind is unfavourable for a time, the migration is retarded, yet never entirely given up, only the birds arrive much longer, fatigued by their efforts. It is astonishing how tender birds of the hemisphere for instance, are brought out from the extremity of Norway, and brave a long journey even over the ocean. The quails, who are heavy in their flight, wait on the shores of the Mediterranean, often a long time, for a favourable wind, of which they immediately avail themselves, halting on all the islands. If the wind suddenly changes, many are drowned in the sea. Certain birds, as the moor-hen, rail, &c., being unable to fly for any considerable distance, travel partly on foot. Some (as the great auk, or penguin, diver, and guillemot) even migrate by water. Ornithologists have observed, that, on the old continent, birds migrate in autumn and in spring towards the south-west and south-east; yet the courses of rivers and chains of mountains exercise considerable influence on the direction of their flight. On the new continent, the points of direction are not the same. Captain Parry has satisfied himself that the birds of Greenland go to the south-east. It is remarkable, also, that the young of certain species do not make the same journey as the old birds; they go more to the south, so that it is very common to find, in the south of Europe, only the young birds of a certain species, whilst the older ones remain more to the north. In other species the females go further south. It was formerly believed that the birds of the tropical regions never migrate, and that they never pass the line; but Humboldt has shown that this is not the case. He observed, moreover, that the migration there took place with the periodical rise of rivers.

MILAN, DUchy OF; or THE MILANese; formerly a duchy in the north of Italy; one of the sixteen most fruitful countries in Europe; bounded on the west by Piedmont and Montferrat, south by the Genoese territory, east by the territories of Parma, Mantua, and Venice, and north by Switzerland. Its extent was 3820 square miles; principal productions corn, rice, wine, fruits, and silk. The first duke of Milan was Gian Galeazzo Visconti, brother to Filippo Visconti the second, who was invested to that dignity by the emperor Wenceslaus, in 1395. The duchy was composed of a number of the most flourishing cities of Lombardy, in which the Visconti acquired the sovereignty, partly by means of feuds, and partly through the favour of the citizens and the emperor. The male line of the Visconti became extinct in 1447, and, although the rightful claim then fell to France, Francesco Sforza, the husband of a natural daughter of the last duke, obtained possession of Milan for himself and his family, and they held it until the end of the fifteenth century. Louis XII. and his successor, Francis I., then attempting to enforce their claims, the duchy was alternately in the hands of the French and the Sforzas. Francis I., by the peace of Madrid (1526), was obliged to give up all his Italian possessions; and, the male line of the Sforzas having become extinct in 1535, Charles V. granted the duchy to his son, Philip II. of Spain; and it continued to be held as an appanage by the crown till the war of the Spanish succession, in 1706, when it came into the possession of Austria. By the peace of Vienna (1738) and the convention of Worms (1745), portions of it were ceded to the king of Sardinia. In 1796, the French occupied the country,
and by the peace of Campo-Formio (1797), it was annexed to the Cisalpine republic. Although the Austrians and Russians annihilated this republic in 1797, the Sangarios of Lombardy by the battle of Marengo, changed the name into the Italian republic (1801), and into that of kingdom of Italy (1806), of which the duchy of Milan constituted an important part until the events of 1814. Austria then united Milan and Mantua with the Lombardo-Venetian kingdom, the western part of which, the government of Milan, contains 2,874,000 inhabitants, and 8,437 square miles. Sardinia also recovered its former portion of the Milanese territory, (3,095 square miles), by the treaty of Paris, in 1814. See Austria, Italy, Lombardy, and Sardinia.

MILAN (Milano, in German Mainz, anciently Mediolanum); capital of the Lombardo-Venetian kingdom, situated in a fertile and pleasant plain, on the left bank of the Oiona, 140 leagues from Vienna, 110 from Rome, 160 from Paris; lat. 45° 28' N.; lon. 9° 11'E.; population, 129,000. It is one of the richest, most splendid and populous cities in Italy; and, in spite of time and wars, has preserved a great part of its ancient magnificence. Of the ancient remains are the ruins of the Therma, which are usually called the colonne di S. Lorenzo. Milan is rich in architectural monuments of modern times, among which the celebrated cathedral is the most remarkable; the foundation was laid in 1386, and, after St Peter's, it is the largest church in Italy. It is built entirely of white marble, and its interior and exterior produce an indescribable effect. The oldest architects, who worked upon it, adopted the latter Gothic style; but in the middle of the sixteenth century, Pellegrino Tibaldi erected the front in a more ancient style, and thus destroyed the unity of the work. The dome, which is almost complete at an immense expense, the emperor Francis appropriated 12,000 ture monthly to finish it. While the exterior dazzles and astonishes the beholder by the pure brilliancy of the marble, the Gothic ornaments and the statues (of which there are 4000), he is not less strongly affected by the interior, which rests upon fifty-two marble columns. It is described by Franchetti in Descrizione storico del Duomo di Milano, with engravings. Rupp and Bramati also published a description in 1825, under the title Descrizione storico-critica del Duomo di Milano. One of the oldest churches in Milan, that of St Ambrose, into which you descend by several steps, is remarkable for a number of columns, which are dark, and without beauty. Of the numerous other churches, many are splendid. The former Dominici convent, Madonna delle Grazie, contains, in its refectory, the celebrated fresco of Leonardo da Vinci, the Last Supper, now much injured, but yet beautiful. The former Jesuits' college of Drena, a magnificent building, remarkable also for its observatory, still contains several establishments for the arts and sciences; among them a picture gallery and a library. The former is particularly rich in works of the masters of the Lombard and Bolognese schools; the latter is valuable. The Ambrosian library, founded by the cardinal Borromeo (who was bishop of Milan in 1565, and died in 1631) contains, beside the books, a treasure of valuable manuscripts (among them, those of Leonardo da Vinci), paintings, sketches (Raphael's cartoons of the school of Athens), antiques and casts in plaster. The abbate Angelo Maio, who was appointed librarian in 1819, has made some important discoveries among these manuscripts. (See Library) The military geographical institute of Milan, founded in 1801, has published an atlas of the Adriatic sea and other charts. Among the charitable institutions, the great hospital is the most remarkable, on account of its architecture, magnitude, and the care paid to the patients (4000). The Lazzaretto, a large quadrangular building, formerly used during the prevalence of the plague, has now a different destination. The theatre della Scala of Milan, is one of the finest in Italy, and perhaps in Europe. It was built by Piemarini, in 1778, and is superior to all others in its accommodations. The operas and ballets are here exhibited in a style not surpassed for brilliancy and completeness in Italy. Besides this, there are the theatres Re, Canobiana, Corso, &c. Milan contains a great number of palaces, and other handsome buildings, but the streets are not in general broad or straight. The Corso (the Porta Orientale), with which the public gardens form a beautiful promenade, is particularly fine. The gardens are not so much frequented as the Corso, in which the fashionable world parades afoot and on horseback, but principally in rich equipages, every evening. The principal articles of commerce are corn, rice, silk and cheese. The number of manufactories is considerable. The arts and sciences are held in high esteem, and the Milanese school of engraving is favourably known. The environs of the city are fertile; two large canals are connected with the Ticino, and the Adda, and the Alps of Switzerland are visible.

MILESIAN TALES. See Romance.

MILDEW. See Fungi.

MILE. See Measures.

MILETUS; a city of Asia Minor, on the Menander, the Ionian Athenian (see Ionia), and, next to Ephesus, Smyrna, the most celebrated and important commercial city of Ionia. It early acquired wealth and power, founded a great number of colonies, and carried on long and expensive wars with the Lydian kings. After the conquest of Lydia by Cyrus, Miletus, with the rest of Ionia, was also reduced under the Persian dominion, but enjoyed, under Persian clemency, and continued to enjoy its former prosperity, although often shaken by internal dissensions, until the Ionian war, when it was razed to the ground (B.C. 494). The inhabitants rebuilt the town, but it never recovered its ancient importance. Miletus was the birthplace of Thales, of Anaximander, Eudoxus, and the celebrated Aspasia. The Miletian woollen manufactires were famous in ancient times.

MILFORD HAVEN; a deep inlet of the sea, in Wales, county of Pembroke. Several plans have been proposed, at different times, for improving its accommodations. These plans have given rise to the name of Militia in Milford Haven: a town which was founded in 1790, on the northern shore, six miles west by north of Pembroke, and has risen with great rapidity. The houses are built with neatness, and even elegance. It has a church with a lofty tower, a custom-house, a plain but commodious building, and a dock-yard, which forms a principal feature in the plan. A line of packet have been formed here, under excellent regulations, for conveying the mail and passengers to Waterford in Ireland. An establishment has been also formed for the southern whale-fishery. There is also an extensive establishment of quarantine.

MILITARY ART. See Army, Military Sciences, Militia, and War.

MILITARY FEVER; a name given to fevers of every description, when accompanied by an eruption of millet or vesicles, so called from resembling millet seed.

MILITARY COLONIES OF RUSSIA. See Colonies.

MILITARY DISTRICT, or MILITARY FRONTIER (in German, Militairgrenze); a district of the Austrian monarchy, containing 18,230 square miles, with 1,010,878 inhabitants; which stretches 920 miles along the Hungarian and Transylvanian frontiers, as
MILITARY DISTRICT—MILITARY SCHOOLS. 813

as far as they border on the Turkish territory. It has a military constitution, and the inhabitants are soldiers and peasants at the same time. They have received the hereditary use of the land, for which they are obliged to render certain services to the government, amongst which the military is the most important. They form thus an uninterrupted cordon against the Turks, and the Austrian government has an army always ready without great expense. The soldiers actually in service belonging to this district amount, in peace, to 45,000 men. In 1815, they amounted to 92,000 men. They were, to a certain place, their country against the Turks and the plague, without pay. When they are marched against enemies in a different quarter, they have the common pay of other soldiers. In the thirty years' war, in the Austrian war of succession, and in the seven years' war, their services were important; and still more so in the repeated contests between Austria and Turkey. At the beginning of the French revolutionary war, no less than 100,000 of them appeared in the field. They have shown themselves undeviatingly faithful to their monarch. Their military officers exercise also the civil and judicial authority. The highest office is called the General. There was established in the commandos of the regiments. The whole country is divided into five generalships (generalate), which, in 1815 contained three fortresses, eleven cities (or, as they are called, military communities, which have their own magistrates), twenty-four market-towns and staff quarters, and 1955 villages. In the generalship of Carlsstadt and Warsadin, the most important places are Karlbag, Zengh and Bellowar; in the generalship of Banat, Petrinsia, and Kostaniaca; in the Sclavonic generalship, or that of Peterwarden, Old and New Gradica, Peterwarden, Carlowitz, and Semlin; to which the belongs the Hungarian Banat generalship, Pancowa, Weisskirchen, and Karansebeo. In the Transylvanian generalship there are no places particularly worthy of notice. Next to agriculture and the raising of cattle, the cultivation of wine and garden fruits is carried on extensively. Flax, hemp, tobacco, and many other important plants are cultivated. The country is rich in valuable minerals. Mining, particularly in the present Banat and the Transylvanian frontiers, was in a flourishing condition even in the time of the Romans; but these mines are, at present, little worked. Manufactures are in a low condition. The manufacture of tobacco is carried on extensively in Hungary. The manufacture of tobacco is carried on. The inhabitants belong principally to four races. The most numerous are the Sclavonians; after these, the Walachians; then follow the Hungarians and Saekler; after these, the Germans. The majority belong to the Greek church; the Roman Catholics, however, are almost equally numerous. There are also Greek Catholics, Calvinists, Lutherans, and Unitarians. In the time of the Romans, this country belonged partly to Illyria and Pannonia Savia, partly to the kingdom of Dacia, and shared the changes of those countries. Sigismund of Hungary laid the foundation of the military frontier when he founded the capitanat of Zengh. In the middle of the sixteenth century, the frontier seems to have been already divided into two chief districts. The Croatian frontier was the first; the others were established much later, when, by the peace of Basle, Hungary was divided into several provinces entirely unpeopled. In no part of Hungary does the population increase so rapidly; and yet the frontier has to furnish many troops in all the wars of Austria, and many young people, unable to obtain land for the support of a family, emigrate into other parts of the monarchy. The Transylvanian frontier was established the latest. See Statistik der Militärgrenze des österreich. Kaiserthums, by Hietzing, Vienna, 1822.

MILITARY GEOGRAPHY. See Military Sciences, and Geography.

MILITARY ORDERS. See Orders.

MILITARY ROADS, 1. such roads as are destined chiefly to facilitate the movements of military bodies; for instance, some of the superb roads which Napoleon constructed in Italy, to effect an easy military connexion with France; 2. roads on which, according to treaty, foreign troops may march out of or into a state, and thus of determination, in traversing the states of a friendly power.

MILITARY SCHOOLS and ACADEMIES; schools in which soldiers receive instruction, or in which youths are educated for the army. Among the former are the soldier-schools, in which, as is the case in many armies, particularly in the Prussian, the private soldiers learn reading, writing, and arithmetical; they are also, in the last named country at least, often instructed in singing, so that it is common, in the Prussian army, for a battalion to have its choir, which sings during divine service, and on other occasions. Instruction has become so general in the Prussian army, by the generalship and by the community of regimental and battalion schools, that during the last years of peace, the army was considered an institution for the instruction of the whole country, as every Prussian is obliged to serve for a short time in the standing army. In some armies conversazioni have been introduced, in which the officers hold discourse with the sergents and privates, on subjects connected with the service. When the officers in the armies of the European continent were taken from the nobility only, academies were established by government to educate young noblemen. They were called in Germany Ritterakademien, and sometimes were of a high character. These establishments must be distinguished from the cadet-houses, so called, where, generally speaking, the children of officers only are educated for the army. In many countries, noblemen only are admitted into these also. In several French cities, companies of cadets existed when Louis XV., in 1751, first established an école royale militaire for 300 young noblemen, from eight to eleven years old. The principal features of its organisation have been retained in most similar institutions. —See Recueil d'Édits, Déclarations, Règlements et Ordonnances du Roi, concernant l'Hôtel de l'École roy. militaire (Paris, 1762). The establishments were called Ritterakademien orignating later. Frederic the Great established the école militaire at Berlin, for the further accomplishment of young officers. Even before the seven years' war, every French city in which a regiment of artillery was garrisoned, had its artillery school. Saxony followed in 1766, Austria and Prussia later. At present, the two last have excellent artillery schools, as well as others in the department of engineering. Since 1815, the standard of scientific education of officers has been much raised in several armies; in none, however, so high as in the Prussian, in which no person can be promoted without a severe examination. Besides the regimental schools in this army, mentioned above, every division has its school, to which young sergeants, &c., are admitted (if they appear, on examination, to possess the necessary elementary knowledge), in order to prepare themselves for examination for a lieu tenancy in the higher military service and for promotion in the army. The schools in the army, are, are the chief subjects of study. The artillery corps and engineer corps have their separate schools for young officers, to prepare themselves for examination for the rank of captain. The captain must continue his studies by himself, to stand an examination
for the rank of major. Of the troops of the line, every regiment is allowed to send a few of its young officers, who must have shown great diligence, talent, and considerable acquirements, to the general military school in Berlin— an institution of a very high character. Here the highest branches of mathematics, geology, and mineralogy, chemistry and natural philosophy, history, politics, the military sciences, languages, &c., are taught in a course which occupies three years. The officers also attend such lectures in the university as they choose. It is evident how much such establishments must promote a scientific learning in the whole army, and, indeed, the corps of officers contains some of the most accomplished men in Prussia. In France, the former cadet houses have been called, since the revolution, military schools.

MILITARY SCIENCES have, by some of the latest writers been divided into the following heads:

1. Tactics, i.e., the science of the drilling of an army, as well as of disposing and directing it in battle, requiring, of course, an acquaintance with the different kinds of arms. The artillerist devotes himself exclusively to the cannon, and the various branches of science requisite for a proper management. The lower, or elementary tactics, treats of the drilling and formation of soldiers, and accustoming them to the movements of small and large divisions, and varies in character with the different regulations of different armies. Tactics proper treats of the mode of disposing troops in the actual combat, and of the peculiar use of each species of force, cavalry, infantry, both heavy and light, and artillery. With them is nearly connected the choice of camps, or casemate (q. v.), though, since the introduction of the system of requisition, this branch of military science has become almost entirely out of use. The knowledge of the employment of pontoon seems also to fall within this department.

2. Strategy, the science of forming the plans of operation, and of directing armies accordingly. It has been but lately treated as an independent branch, since von Bulow wrote on the subject. Many military writers will not as yet admit such a division; but little doubt can exist that it will be universally adopted. See, among other works, Principles of Strategy, elucidated by the Description of the Campaign of 1796, in Germany, by the archduke Charles.

3. The branch which treats of the just understanding and proper use of the surface of the earth for military purposes. The tactics of our time can overcome a number of obstacles, arising from the character of the ground, which were formerly considered insurmountable; still, however, this department of military science, embracing, as it does, a knowledge of the usual character of the ground under given circumstances, the course of rivers, of mountains, valleys, geological formations, &c., remains indispensable for a useful officer. To this branch belongs, or, at least, with it is intimately connected, reconnoitring, surveying, drawing of topographical maps, &c.

4. Military Architecture, or Fortification, which teaches how to fortify any given point by artificial means, so that a few persons may be able to defend themselves against the attacks of many. It embraces the construction of proper fortresses (fortification permanente ou royale), the attack and defence of fortified places, and the knowledge of field fortification (fortification passagère), which treats of the construction, attack and defence of redoubts in the field, raised for transitory purposes, and not so solid as in standing fortifications.

5. Military History and Biography, which embraces a knowledge of all important wars, and also of the various organizations of armies, the principles upon which war has been carried on, the different arms used, and the consequences attending their rise, &c.; a knowledge of which is a very high character.
of general militia. The army consisted of twenty-one regiments, of which each owner of landed property was bound to maintain one man. They assembled every year for three weeks, and, during this time as well as at war, relieved the crown, either by the cultivation of their estates. In Germany, similar plans were adopted. The private and non-commissioned officers of the militia followed their agricultural or mechanical pursuits, and were generally under the command of officers out of active service. They were only obliged to serve within the country.

Frederic the Great used them to garrison the fortresses; the same was the case with the Austrian militia during the war of succession. The bad organization and unmilitary spirit of these troops rendered them the butt of the troops of the line. In some cases, it was even considered allowable, by the laws of war, to destroy them, although they were employed out of the limits of their country, and were taken prisoners. They became extinct almost everywhere on the European continent.

Similar, but better organized, was the English militia. The origin of this national force is generally traced back to Alfred. The feudal military tenures succeeded, and although the personal service which this system required degenerated by degrees into pecuniary commutations, or aids, the defence of the kingdom was provided for by laws requiring the general arming of the citizens. Under Edward III., it was provided that no man should be compelled to go out of the kingdom at any rate, nor out of his shire, but in cases of urgent necessity, nor should provide soldiers, unless by consent of parliament.

We first find lord-lieutenants of counties, whose duty was to keep the counties in military order, mentioned as known officers in the fifth year of Philip and Mary. When Charles I. had, during his northern expeditions, issued commissions of lieutenantcy, and exerted certain military powers, which, having been long exercised, were thought, by one party, to belong to the crown, it became a question, in the long parliament, how far the power over the militia did extend, and if this, after long agitation, ended by the two houses denying the crown this prerogative, and taking into their own hands the entire power of the militia. After the restoration, when the military tenures were abolished, the sole right of the crown to govern and command the militia was recognized. The most characteristic features of the English and Scottish militia at present are, that a number of persons in each county is drawn by lot, for five years (liable to be prolonged by the circumstance of the militia being called out and embodied), and officered by the lord-lieutenants and other principal land owners, under a commission of the crown. They are not compellable to leave their county, unless in case of invasion or actual rebellion within the realm, nor, in any case, to march out of the kingdom. When drawn out, they are subject to military law. In all cases of actual invasion, or imminent danger thereof, and in all cases of war, the company of artillery is paid for by the crown, and directed to be led into any part of the kingdom, having communicated the occasion to parliament, if sitting, or, if not sitting, having declared it in council, and notified it by proclamation.

In Tyrol, a general arming against the French was effected in 1799. When, in 1806, the archduke Charles was placed at the head of military affairs, a

general Leandwehr was organized throughout the Austrian provinces. In 1809, these troops fought well, and amounted, at that time, to 300,000 men; after 1811, only to 71,500; but, after 1813, the Leandwehr was placed on its old footing, and quite lately, parts of it have been called out to increase the army, which stands ready to overrun Italy. In Hungary, the common law obliges every nobleman to serve himself and to bring his vassals into the field, if called upon. This lessee is called an insurrection of the nobility. In 1813, this insurrection consisted of 17,000 horse, and 21,000 foot. In 1807, a general militia was organized in Russia, which, in 1812, was of considerable service against the French.

Prussia has carried the Leandwehr to greater perfection than any other country: in that country, the militia forms the main body of the army. In 1813, every male person under forty-eight years was obliged to serve against the French in the militia. The national militia, at that time, included both infantry and cavalry. The lower commissioned officers were elected by the militia-men, and the higher by the estates of each circle. When Napoleon was first returned from Elba, he had 60,000 militia, and 20,000 cavalry of the militia under arms. After the peace of 1815, the Leandwehr was established on its present footing. Every Prussian, with the single exception of mediatesplified princes, is obliged to serve for three years in the standing army, between his seventeenth and twenty-third year. Part of this time, however, he is generally on furlough. If a person equips himself and undergoes an examination, by which he proves that he has received a certain education, he has to serve one year only in the standing army. After this time, every Prussian belongs, until his thirtieth year, to the first class of the Leandwehr, attends frequent drills on Sunday afternoons, and has to serve for three weeks every year, when the Leandwehr is called together for great manoeuvres. Every man is in the Leandwehr what he was in the standing army—foot-soldier, horseman, or artilleryman. Government hires horses for the time of manoeuvring, and, as they are well fed and ridden by experienced men, the owners generally like to let out their horses for the occasion. Every Prussian, from his thirtieth year until his fortieth, belongs to the second class of militia. This is not called together in time of peace, and, in war, only in time of the greatest emergency, and then for the service of the provincial service. Thus Prussia is enabled to assemble a very large army in proportion to its population, whether to the injury of the nation is a question not to be discussed here.

In regard to the militia of the United States of America, it is provided, by act of congress of 1792, that all able-bodied, white male citizens, between the ages of eighteen and forty-five, with certain exceptions (officers of government, members of congress, mariners in service, &c. &c.) shall be enrolled in the militia. The persons so enrolled are to provide themselves with the common arms of infantry, and with ball cartridges, &c. at their own expense. These are arranged into brigades, regiments, companies, &c., as the legislatures of the several states may direct. Each battalion is to have at least one company of grenadiers, light-infantry or riflemen, and each division at least one company of artillery. Every man in the militia, and ordnance and field artillery is to be provided by the government of the United States. The cavalry and artillery troops are to consist of volunteers from the militia at large, not exceeding one company to each regiment, and are to equip themselves, with the exception of the ordnance above mentioned. Whenever the United States shall be invaded, or in imminent
MILITIA.

The militia is the armed force of a state, consisting of all able-bodied men who are not enrolled in the regular military. They are called up in times of war or emergency to support the regular forces. The militia is organized into regiments, battalions, companies, and occasionally smaller units.

In case of insurrection or rebellion, the militia is called upon to maintain order and protect property. The governor may call forth the militia to suppress any insurrection within the state. However, the militia is not authorized to act without the consent of the legislature.

The state governors have authority to call forth the militia in time of war or other public necessity. The number of men called up is determined by the governor, subject to the approval of the legislature. The governor may call forth the militia of any other state upon the application of the governor of that state.

In case of rebellion, the legislature may call forth the militia of any state to suppress the rebellion. The legislature is also authorized to call forth the militia of any state in pursuance of the United States acts for suppressing rebellion.

The military service is divided into three periods: the first, second, and third. The first period is for four months, the second period is for six months, and the third period is for the duration of the war or emergency.

In case of insurrection or rebellion, the governor may call forth the militia in any state to suppress the insurrection or rebellion. The governor may also call forth the militia of any other state upon the application of the governor of that state.

The legislature is authorized to call forth the militia of any state in case of need, to be used in the service of the United States.

The governor is authorized to call forth the militia of any state to suppress any insurrection within the state. The governor may also call forth the militia of any other state upon the application of the governor of that state.
and field-officers of their respective divisions, until otherwise directed by law. General and field-officers appoint their staff-officers. The governor appoints an adjutant-general, and all other militia officers whose appointments are not otherwise provided for. In Maine the system of appointing major-generals is continued, except that the major-generals are elected by the senate and house of representatives. The constitution of some of the states exempt from militia duty, with more or less qualification, persons conscionably scrupulous about bearing arms. This is the case in the states of New York, Pennsylvania, Tennessee, Indiana, Missouri, Illinois, Alabama. See Army, and Army, Standing.

MILK; a secretion peculiar to the females of the class mammalia, or those animals which feed their young from their teats, and which takes place, in some of them, only during and after the time of gestation. It differs as procured from different animals, but its general properties are the same in all. When this fluid is allowed to stand for some time, it undergoes spontaneous changes, and is resolved into its component parts; a thick yellowish substance collects on the surface, which is called cream, and the milk remains thinner than before, and is of a pale bluish colour. When cream is kept for some days without being disturbed, it gradually becomes thicker, till at last it acquires the consistence of cheese; and hence one method of making cream-cheese, merely by putting cream into a linen bag, and leaving it there till it becomes solid. When cream is taken, it is resolved into its component parts. The process by which this is accomplished is called churning, by which two substances are obtained, butter and butter-milk. In the making of butter, cream is allowed to stand for some time, during which an acid is generated. It is then put into a churn and shaken, by which the butter is gradually separated. What is left (the butter-milk) has a sour taste, but by no means so much so as that of the cream before the churning. Butter is sometimes also made from cream which has not become sour, but the process is much more tedious, the acid formed in the other case favouring its separation. Butter is merely an oil, solid at a natural temperature, but having in solution in milk, by some of the other substances. As thus procured, it is not pure, but may in a great measure be freed from its impurities, by washing it with cold water; and though apt to become rancid, yet, when mixed with salt, may be kept any length of time. Butter-milk is taken, when milk undergoes spontaneous changes. It becomes much sourer, and congeals into a mass of the consistence of jelly. When hented, the fermentation of this conglutinum is hastened, and by the addition of certain substances, it very soon takes place; thus acids and spirit of wine curdle it, which is owing to the albumen it contains being acted on by them, in the same way as blood or white of eggs. By far the most powerful coagulator, however, is the substance called rennet, which is the decoction of the stomach of animals, as a calf. When the milk is previously hented, and rennet added, it is almost instantly coagulated. If after this it is cut, a thinnish fluid oozes from it, and if it be put into a bag and squeezed, the whole of this is forced out, and a whitish, tough matter is left; the former is whey, the latter curd. On this depends the process of making cheese, which varies in richness, according to the mode followed in preparing it. The simplest is by heating gradually, and merely to the temperature at which it curdles, and if the curd be freed gently from the whey, it retains almost the whole of the cream, which adds to its richness and flavour. But when it is curdled quickly, and the whey is speedily removed by cutting the curd, a great deal, or nearly the whole of the cream is carried off, and the cheese is poor, and has not the rich flavour of that made in the other way. In making cheese, having obtained the curd, and freed it from its whey, the remaining part of the process is merely to squeeze the whey out of it, when the whole of the whey is forced out, the colour being communicated by the addition of colouring matter; that generally used is annotta, which is mixed with the milk. Whey has a pleasant taste, and contains a considerable quantity of a sweetish substance, called sugar of milk; hence it is frequently used as a salad, and for its nutritious quality, it is administered to delicate people; hence the use of asses' milk, which contains a large quantity of it. It is from its containing this saccharine matter, that it is sometimes, as in some of the northern counties of Scotland, made to undergo fermentation, by which a very weak spirituous fluid is obtained. By evaporation it affords a minute quantity of saline matter and a considerable portion of sugar of milk. When whey or milk is exposed to a temperature between 60° and 80° it undergoes a spontaneous change, attended by the production of an acid, which was originally examined by Scheele, and has been termed lactis.

MILKY WAY. See Galaxy.

MILL; originally, a machine, adapted to divide, crush, or pulverize any substance; but more extensively applied, in modern times, to almost all machinery consisting of wheel work, whether intended to change the form, or merely the position of the substance operated upon. The term is thus used is very indefinite, both in regard to the moving power and the application of the power or the process. Mills therefore take different names, from the process, as stamping-mills, saw-mills, fulling-mills, grinding-mills, &c.; from the moving power, as wind-mills, water-mills, hand-mills, steam-mills, &c.; or from the material operated upon, as cotton-mills, flour-mills, sugar-mills, oil-mills, &c. This great variety in the nature and uses of mills renders it impossible to give descriptions of them under one head. The general principles of the machinery and the moving powers will be found described under the heads Mechanic, Hydraulics, and Mechanical Machines, Steam, Wheels, &c., and their particular applications to different materials will be treated of under the appropriate heads. One of the earliest and most universal applications of machinery of this kind is to the comminution of grain. Among the rudest nations we find this practice in some form or other, but with the first advances of art, a simple hand-mill is constructed, composed of an immovable nether-stone (Gr. μολές) and an upper-stone (μολίς or μολις), put in motion by the hand. These machines were used by the Hebrews and Greeks, and commonly moved by slaves or criminals. Asses were afterwards employed. According to the Greek mythology Plutonius, Myles, or Mylantes, invented the mill. Water-mills (molæ aquaria) seem to have been used by the Romans. Wind-mills were invented in the time of Augustus. Among the moderns the common mill for grinding grain is constructed with two circular stones placed horizontally. Buh-stone is the best material of which mill-stones are made, but sienite and granite are frequently used. The lower stone is fixed, while the upper one revolves with considerable velocity, and is supported by an axis passing through the lower stone, the distance between the two being proportionable. It is protected by a brim, or canopy, and the diameter is five feet. The stone may make about ninety revolutions in a minute without the flour becoming too much heated. The corn or grain is shaken out of a hopper by means of projections from the revolv-
ing axis, which give to its lower part, or feeder, a
vibrating motion. The lower stone is slightly con-
vex, and the upper one somewhat more concave, so
that the corn, which enters at the middle of the stone,
passes outward for a short distance before it begins to
be ground. After being reduced to powder, it is dis-
charged at the circumference, its escape being fa-
voured by the centrifugal force, and by its convec-
tion on the lower surface. The surface of the stones is cut
into grooves, in order to make them act more readily
and effectually on the corn; and these grooves are
cut obliquely, that they may assist the escape of the
meal by throwing it outward. The operation of
bolting, by which the flour is separated from the bran,
or coarse particles, is performed by a wooden
sieve placed in an inclined position and turned by
machinery. The fineness of flour is said to be greatest
when the bran has not been too much subdivided,
so that it may be more readily separated by bolting.
This takes place when the grinding has been per-
formed more by the action of the particles upon each
other, than by the motion of the stones. This sort of
grinding, the buhrstone is peculiarly suited. The
patent improvements of Evans consist of a series of
machines calculated to save hand-labour, by perform-
ing every movement of the grain and meal from one
part of the mill to another, or from one machine to
another, by the power of the water. MILLAR.

JOHN, professor of law in the university of
Glasgow, was born in the parish of Shotts, Lanark-
shire, 1736, and after being educated for the bar,
was called to the vacant chair of civil law in Glasgow col-
lege, in 1761. This situation he filled with great suc-
sess for forty years; and under him, many who have
since distinguished themselves in public life—e.g.,
Brougham, lord Jeffrey, lord commissioner Adams,
the earl of Lauderdale, and others—received their first
lessons in political science. He died in 1801. The
interest which his lectures on jurisprudence excited,
particularly those which referred to the government
of nations, induced him, in 1771, to publish a short
treatise on the subject, which was favourably receiv-
ed. This led him, some years afterwards, to the com-
position of a more elaborate work, which appeared
in 1787, under the title of "Historical View of the
English Government, from the settlement of the
Saxons in Britain to the accession of the House of
Stuart." This history he intended to bring down to
the time of the revolution, and published a new and posthumous edition in 1803, four
vols. 8vo, comprised that period. A fourth edition,
with a memoir of his life by his nephew, Mr John
Craig, was published in 1808. The work is written
with great force and distinctness, and is highly
esteemed, as one of the few standard English works
which we have on political science.

MILLENNIUM (a thousand years); generally
taken for the thousand years in which some Chris-
tian sects expected, and some still expect, the Messiah
to found a kingdom on earth, full of splendour and
happiness. This opinion originated from the expec-
tations of the Jews, in regard to a Messiah. Excited
and nourished by their prophets, endorsed to them
by their sufferings, during and after the Babylonish
capitvity, and by the national pride, which their
misery served to increase, those expectations took a
more and more decidedly sensual turn in the time of
Jesus, particularly under the oppression of the Ro-
man government. (See Messiah.) Jesus declared him-
self to be the expected Messiah, announcing his new
doctrine to his apostles, that a lasting happiness
could only be expected in a better world, the new
Christians could not refrain from expecting the
glorious return of Jesus, as described by the apostles,
on earth, and from interpreting the expressions of
Jesus, which seem to favour such a hope, according
to their wishes, bent on worldly happiness. These
expectations, which were evidently fostered by the
return of many Jews to Jerusalem after the upris-
ing against the Romans, set the mind of the people,
Chriftians, or the expectation of the blessed millennium,
began, therefore, a universal belief among the
Christians of the first centuries, which was
strengthened by the prophecies contained in the
Revelation (chap. xx. xxi.) of the signs which are to
precede and indicate the happy times of the mil-
leum. This belief was characterized in still more
colourful terms than by the descriptions of such a state in some pseudo-prophetical writings, forged towards the close of the first, and the beginning of the second century,
under the names of personages of the Old Testament
and apostles (as the Testament of the twelve Patri-
quarchs, the Testament of Enoch, the Testament of
Elias, &c.), and in the Sibylline books of the Christians,
the Epistle of Barnabas, the Pastor of the Pseudo-
Hermas, and in the Talmud. How eagerly such
descriptions were received, is shown by the unani-
mity with which the doctrine of the millennium was
adopted and promulgated by the Christian teachers
of the first centuries. Not only the heretic Cerin-
thus, who had imbibed this doctrine from Judaism,
but also orthodox teachers, as Papias of Hierapolis,
Irenæus, Justin the Martyr, &c., delighted in the
dreams of the glory and happiness of the millennium.
Before it began, human misery, according to their
opinion, was to rise to the highest degree; then the
overthrow of the Roman empire would follow, and
from its ruins would proceed a new state of things,
in which the faithful who had risen from the dead, with
those still living, would enjoy ineffable happiness.
At that blissful period, every ear would produce
10,000 grains, and every grain ten pounds of wheat
flour, every vine would yield millions on millions of
grapes, and the treasures of the earth would be
united to every intellectual and sensual pleasure, the
victory of the faithful over the unbelievers be com-
plete, and the blessed reside in the heavenly Jerusa-
lem, which would descend from heaven in extraor-
dinary splendour and grandeur, to receive them in its
magnificent habitations. The Millenarians founded
their belief on the Mosaic history of the creation.
Considering this history as a prototype of the fate of
the world, and concluding from Psalm xc. that 1000
years make with God one day, they beheld in the six
days of creation, 6000 years of terrestrial labours and
sufferings, and in the seventh, the day of rest, a
period of 1000 years, in which the reign of Christ
should be established. The Gentiles, despising
matter, were adversaries to the dogma of the mil-
leum, and the more zealously it was defended by the
Montanists (for instance, Tertullian), the more
suspicious did it gradually become to the orthodox
also. The philosophic school at Alexandria, partic-
ularly Origen, opposed it in the third century, by
arguments, which were soon adopted by all the
fathers. Lactantius was the last distinguished
teacher of the primitive church who adhered to the
idea of a millennium. When Christianity became the
predominant religion of the Roman empire, the doc-
trine lost its interest for the multitude; the victory,
liberty, and security, which the millennium was expected to bring, being now actually enjoyed by the Christians. The belief of the resurrection of the body, however, which could not be dispensed with in the pleasures which the Millenniumians promised themselves, passed from them into the dogmas of the church, though the fathers of a later period supported it on different grounds from the Millenniumians. Jerome and Augustine zealously opposed the gross ideas of the few enthusiasts, who, in the fifth century, were still expecting this period. Since that time, the church has rejected the dogma of the millennium, together with other Jewish notions. The expectation of the last day in A.D. 1000, gave it some weight for a short time only, and similar hopes excited by the crusades were soon disappointed by the event. At the time of the reformation, the doctrine of a millennium was in some degree revived, by its application to the overthrow of the papal dominion. But it was only some sects of fanatics, such as the Anabaptists, and some mystical enthusiasts, in whom the seventeenth century was rich, that adhered to these notions. During the religious and civil wars in France and Britain, the persecuted sought consolation in the dreams of a millennium: the raptures of the Mystics and Quietists among the Catholics led to a similar result, and the most learned and orthodox of the Calvinists among the Lutherans during and after the thirty years' war. The disciples of Weigel and the adherents to the religious principles of Petreus, went the farthest; yet even many moderate and sober theologians, misled by idle speculations on the prophetical books of the Bible, particularly on the book of Revelation, which, up to the middle of the eighteenth century, formed a favorite occupation among a certain class of divines, indulged themselves in the ideas of a millennium. As the philosophical vindication of this doctrine, which was attempted in England by Thomas Burnet and Whiston, could not satisfy the orthodox Christians on account of the scepticism of its authors, several apocalypses, among whom Bengel (q. v.) formed a separate school, exhausted their efforts in endeavours to calculate, at least, the time in which the kingdom of Christ should commence. Bengel is of opinion, that this period will begin in the year 1850, and that within this century his countrymen will flattery themselves with very sensible descriptions of the kingdom of Christ, Lavater and Jung Stilling, who possessed more imagination, but even less coolness and learning, indulged similar visions and predictions, with which they entertained their adherents up to the nineteenth century. Of all the vagaries of a disordered fancy, the doctrine of a millennium is one of the most useless, and, at the same time, one of the most dangerous. Aversion to all that exists, hatred of contemporaries, indolence and spiritual arrogance—these are its fruits; and the exercises of penitence, to which it leads, are nothing but the effects of terror and without moral worth. Quite lately a sect (if this name can be given to the Mormonites) has sprung up in the United States, believing, as far as we are informed, in the near approach of the millennium, whose enjoyments are to be of a sensual and worldly character.

MILLER, Ensign, M.D., an eminent physician and surgeon of New York, was born at Dover, in the state of Delaware, May 9, 1760. In 1778, he undertook the study of medicine. He began practice in Delaware, but made himself advantageously known in other states, by a dissertation on the Origin of the Yellow Fever, one of the earliest and ablest publications in support of the doctrine of its origin. In 1796, doctor Miller removed to the city of New York. Within a few weeks after, he formed, in con-
cert with doctor S. Mitchell and doctor E. H. Smith, the plan of a periodical work, to be devoted to medicine. The first number was issued in 1797, under the title of the Medical Repository. No work of a similar kind had appeared in America. It excited medical inquiries, and recorded their results. It occasioned the establishment of similar journals in other parts of the United States. Doctor Miller, to see its fiftieth volume brought nearly to a close. In 1803, he was appointed resident physician for the city of New York. He witnessed, as such, several pestilential seasons. The fruits of his observation and reflection he embodied in a Report on the Rise, Progress, and Termination of the Yellow Fever, to which a high premium was awarded. In 1807, he was elected professor of the practice of physic in the university of New York. In 1809, he became clinical lecturer in the New York hospital. Notwithstanding the laborious duties of those offices, and the calls of an extensive practice, he kept up an extensive correspondence with many distinguished physicians and men of letters in the principal parts of Europe and America. Professional honors were conferred upon him from all quarters. He died of typhus fever, March 17, 1812, in the fifty-second year of his age. His printed works have been collected and published in one large volume.

MILLER, Joseph, a witty actor, whose name has become proverbial in the English language, was born in 1684, it is supposed in London, and was a favourite low comedian about the time that Congreve's comedies were fashionable, to the success of which, it is said, his humour much contributed. In these he performed Sir Joseph Wittol, in the Old Bachelor, and Ben, in Love for Love. Another of his favourite characters was Teague, in the Committee. He died in 1738. The jests which have immortalized his name, were collected by John Moitley, author of the Life of Peter the Great, and other works. Joe Miller's Jests had run through eleven editions in 1751. A copy of the original edition was lately valued at ten guineas, in the catalogue of an eminent bookseller.

MILLET is a coarse, strong grass (holcus sorgum), bearing heads of a fine round seed, a little larger than a mustard seed. The pods of the plant, also the root, is good food for horses and cattle, and the seed is equally good for them; it is excellent for fattening poultry, and is sometimes made into bread. It is also used for making puddings, for which purpose it is by some preferred to rice.

MILLIARD (French), one thousand milliares. MILLIN, Alexis Louis; professor of antiquities at Paris, member of the academy of inscriptions and of the legion of honour, and, after the death of Barthélémy, conservateur of the imperial (royal) cabinet of medals and antiques. Millin was born in Paris, in 1759, and at first devoted himself to the study of natural history, but afterwards to that of philology, and finally to canonology. In his earlier writings he appeared as a partisan of republican principles; among these are his Almanach Républicain, and other works, which he did not include in the later catalogues of his publications. In the reign of Napoleon, he made two antiquarian excursions in France and Italy, where he discovered several remains, which had been overlooked by the Italians. He was one of the most learned archaeologists that France has produced. He edited the Magazine Encyclopédique nearly twenty years. Among his principal works are his Dictionnaire des Beaux Arts; Monumentes Antiques inédits; Géographie Mythologique; Peinture des Peuples Antiques; l'angoûtre dans les Dérartments du Sud de la France; Histoire Métallique de la Révolu-

3 v 2
MILLOT—MILTIADES.

Irish Catholic hierarchy. His solicitude for the interests of religion in both countries induced him to take a journey to Rome in 1814, and he remained there about twelve months. In 1818, he published a treatise entitled the End of Religious Controversy, containing a defence of those articles of the Catholic faith usually regarded as objectionable by Protestants. This was succeeded by his Vindication of the End of Religious Controversy against the Exceptions of the Bishop of St David's and the reverend Richard Grier; and a Parting Word to Reverend R. Grier; with a Brief Notice of Doctor Samuel Parr's Posthumous Letters to Doctor Milner. His death took place in 1826.

MILO; an island in the Greek Archipelago; the ancient Melos. See Melos.

MILO, a native of Crotoma, in Italy, was a scholar of Pythagoras, and one of the most celebrated Grecian athletes. He bore off the prize six times in the Olympic games. Of his prodigious strength many instances are cited. When the temple in which Pythagoras was teaching his pupils was on the point of falling, Milo seized the main pillar, and delayed the destruction of the edifice until all present had escaped. He once carried a bull to the sacrifice on his shoulders, and returned in the same manner. His death took place in 785.

MILLS, CHARLES, an historian, born at Greenwich, in 1788, was articled to an attorney in London. Ill health and the attractions of literature prevented him from engaging in practice; and, in 1817, he published a History of Mohammedanism, which met with a favourable reception. He afterwards produced the History of the Crusades (1819); Travels of Theodore Ducas, at the Revival of Letters and Arts in Italy (1821), and the History of Chivalry (1825). He died October 9, 1826.

MILNER, JOHN, a celebrated Catholic divine and writer on theology and ecclesiastical antiquities, was born in London, in 1722, and finished his studies at Douay. In 1777, he was ordained a priest, and, in 1779, appointed pastor to the Catholic chapel at Winchester. Doctor Milner's study of ancient ecclesiastical architecture procured for him admission into the royal society of antiquaries in 1790. He contributed to many periodicals the memoirs which he wrote of the Antiquities and History of Winchester, which were published in their original form in 1825. In 1791, he published his History of Winchester, and in 1811, his History of Winchester, and the History of the Island of Wight. He also published a Disquisition on the Antiquities of the University of Oxford, and a treatise on the Antiquities of Ireland. At the peace, he was appointed military commander of the Irish Catholic hierarchy. His solicitude for the interests of religion in both countries induced him to take a journey to Rome in 1814, and he remained there about twelve months. In 1818, he published a treatise entitled the End of Religious Controversy, containing a defence of those articles of the Catholic faith usually regarded as objectionable by Protestants. This was succeeded by his Vindication of the End of Religious Controversy against the Exceptions of the Bishop of St David's and the reverend Richard Grier; and a Parting Word to Reverend R. Grier; with a Brief Notice of Doctor Samuel Parr's Posthumous Letters to Doctor Milner. His death took place in 1826.

MILO, an island in the Greek Archipelago; the ancient Melos. See Melos.

MILO, a native of Crotoma, in Italy, was a scholar of Pythagoras, and one of the most celebrated Grecian athletes. He bore off the prize six times in the Olympic games. Of his prodigious strength many instances are cited. When the temple in which Pythagoras was teaching his pupils was on the point of falling, Milo seized the main pillar, and delayed the destruction of the edifice until all present had escaped. He once carried a bull to the sacrifice on his shoulders, and returned in the same manner. His death took place in 785.

MILNER, JOHN, a celebrated Catholic divine and writer on theology and ecclesiastical antiquities, was born in London, in 1722, and finished his studies at Douay. In 1777, he was ordained a priest, and, in 1779, appointed pastor to the Catholic chapel at Winchester. Doctor Milner's study of ancient ecclesiastical architecture procured for him admission into the royal society of antiquaries in 1790. He contributed to many periodicals the memoirs which he wrote of the Antiquities and History of Winchester, which were published in their original form in 1825. In 1791, he published his History of Winchester, and in 1811, his History of Winchester, and the History of the Island of Wight. He also published a Disquisition on the Antiquities of the University of Oxford, and a treatise on the Antiquities of Ireland. At the peace, he was appointed military commander of the
contrary, wished to wait for the auxiliaries from Lacedemon. The general-in-chief (polemarch), Callimachus, however, concurred with the proposal of Miltiades, and the attack was determined upon. The chief miserableness under which the generals alternately, was unanimously conferred on Miltiades, who nevertheless made no use of it, but waited for the day which regularly called him to the head of the army. He then drew up his troops at the foot of a mountain in a wooded plain, to impede the action of the fleet and to facilitate the advance of the land forces. He compelled the Athenians to fight under arms on the mountain. This was unanimously called the centre of the army. Miltiades himself was in every part where his presence was necessary. The Greeks began the attack at full speed; the Persians defended themselves with coolness, but with obstinacy, until, after a contest of several hours, both their wings gave way. In the centre, Datis, the Persian general, with his best troops, pressed Aristides and Themistocles hard; but being attacked in the rear by the Greeks, he was compelled to forego his advantages. The rout was not general. Those who escaped the sword were obliged to take shelter of a mountain of a lowlying manner of into the lands of the Greeks. The Persians lost 6400 men, the Athenians 192. Miltiades himself was wounded. Glorious as this victory was, it would have been fatal to Athens, had it not been for the activity of Miltiades. Datis determined to fall upon Athens in his retreat, and his fleet had already passed Cape Sunium, when Miltiades, receiving information of it, immediately put his troops in motion, and arrived under the walls of the city in time to compel the enemy to return to the coast of Asia. Miltiades was then highly honoured, but was soon both envied and persecuted. His enemies represented that he might easily be tempted to possess himself of absolute power. An unsuccessful enterprise, of which he was the projector, facilitated their success. He had desired that a fleet of seventy ships should be placed at his disposal, and promised, by means of it, to put the Athenians in possession of great wealth and advantages. His design was probably to plunder some of the Persian cities on the coasts, and to punish those islands of the Egean sea which had taken part with the Persians; but he failed in his attack on Paros, and was compelled to refund the expenses of the expedition, and died of his wounds in prison.

Milton, the eldest of English poets, was descended from an ancient family, formerly proprietors of Milton, near Thame, in Oxfordshire. His grandfather who was under-ranger of the forest of Shotover, being a zealous Roman Catholic, disinherited his son, the father of Milton, for becoming a Protestant, on which account he was obliged to quit his studies at Oxford, and settle in London as a scrivener. This gentleman, who was a good classical scholar, and remarkable for his skill in music, had two sons and a daughter: John, the poet, Christopher, who became a judge in the court of common pleas, and Anne, who married Edward Phillips, secretary to the crown office. John Milton was born at his father's house in Bread-street, December 9, 1608. He received his early education from a learned minister of the name of Young, and was afterwards placed at St Paul's school, whence he was removed in his seventeenth year to Christ's college, Cambridge, where his author called the ''only child of Christ's college, Cambridge, who, by the grace of God, distinguished himself by the purity and elegance of his Latin versification. The original purpose of Milton was to enter the church; but his dislike to subscription and to oaths, which, in his opinion, required what he termed "an accommodating conscience," prevented the fulfilment of this intention. On leaving college, therefore, he required to his father's house, who, having retired from business, had taken a residence at Horton, in Buckinghamshire. Here he passed five years in a study of the best Greek and Roman authors, and in the composition of some of his chief poems, including the Lycidas. Milton and Pensenoso, Comus and Lycidas. That his learning and talents had by this time attracted considerable attention, is proved by the production of Comus, at the solicitation of the Bridgewater family, which was performed at Ludlow castle, in 1634, by some of his youthful pupils. He also composed, part of an entertainment, performed before the countess dowager of Derby, in the same manner, at Harefield. In 1638, having obtained his father's consent to travel, he visited Paris, where he was introduced to Grotius, and thence proceeded successively to Florence, Rome, and Naples, in which latter capital he was kindly entertained by Manso, marquis of Villia, the patron of Tasso. His general reception in Italy was also highly complimentary, although he would not disgrace his religious opinions. After remaining abroad for fifteen months, he returned to England, giving up his intention of visiting Sicily and Greece, and set out for England in consequence of his appointment to govern his own country. "I esteemed it dishonourable," he writes, "for me to be lingering abroad, even for the improvement of my mind, while my fellow-citizens were contending for their liberty at home." He settled in the metropolis, and undertook the education of his two nephews, the sons of his sister, Mrs Phillips. Other parents being also induced by his high character to apply to him, he engaged a house and garden in Aldersgate-street, and opened an academy for education. However engrossed by tuition, he soon found time to mingle in the controversial struggles of the day, and published four treatises relative to church government, which produced him antagonists in bishop Hall, and archbishop Usher. A fifth production followed, entitled Reasons of Church Government urged against Prelacy, in which he promises to undertake something, but yet he knew not what, which might be of use and honour to his country; a calm anticipation of great performance, which he amply redeemed by his Paradise Lost. About this time, his father, who was disturbed in his residence by the king's troops, came to reside with his son John, who, in 1643, united himself in marriage with Mary, daughter of Richard Powell, Esq. a monument in the churchyard of Milton. In respect, this was an unsuitable connexion; for the father of the lady being a zealous royalist, who practised the jovial hospitality of the country gentlemen of that party, the residence of her husband so disgusted the bride, that in less than a month, under the pretence of a visit, she left him, and remained for the rest of the summer with her parents. His letters and messages for her to return home being treated with neglect, Milton at length became incensed, and regarding her conduct as a desertion of the marriage contract, he sought to punish it by repudiation. To this matrimonial disagreement is to be attributed his treatises, the Doctrine and Discipline of Divorce; the Judgment of Martin Bucer concerning Divorce; and Tetrachordon, or Exposition upon the four chief Places in Scripture which treat of Marriage. The Presbyterian assembly of divines, then sitting at Westminster, alarmed at this reasoning, had the name of the work added to it, as an effort to propagate the cause of the Covenant; and, however, instituted no process. Convinced by his own arguments, Milton began to pay attention to a young lady—a step which alarmed the parents of his wife, who, having become obstinately to the ruling powers, had need of the good offices of their son-in-law with his party. Thus disposed, they surprised him into an interview with Mrs Milton, whom, on
her expression of penitence, he not only received again with affection, but also took her parents and brothers, in the most generous manner, into his own house. He continued to employ his pen on public topics, and, in 1644, published his celebrated Tractate on Education. The Presbyterians, then in power, having continued the subsisting restraints upon the press, he also printed, in the same year, his Areopagitica, a Speech for the Liberty of Unlicensed Printing, in a spirited and energetic defence of a free press. In 1645, he published his juvenile poems, in Latin and English, including, for the first time, the Allegro and Penseroso. Milton's notion of the origin and end of government carried him to a full approbation of the trial and execution of Charles I., which he sought to justify in a tract, entitled the Tenure of Kings and Magistrates. Even in the title-page he asserts the right to put "a tyrant or wicked king" to death on due conviction, "by any who possess the power," should the ordinary magistrates have no means to do so. He further employed his pen in the same cause by the composition of a History of England, of which, however, he had only completed a part intended to have been nominated Latin secretary to the new council of state. He had scarcely accepted the appointment, when he was requested to answer the famous book, attributed to Charles I., entitled Deo Basilike. This task he accomplished in a work, which he called Iconoclastes, or the Image-breaker, which is considered as the best part of his series of political tracts. His celebrated controversy with Salmasius soon after followed, which originated in the latter's defence of Charles I., and of monarchs, under the title of Defensio Regia, written at the instigation of the exiled Charles II. Milton entitles his reply, Defensio pro Populo Anglicano. It was published in 1648, in its first part, and is distinguished by the violence and the incredible personal acrimony which distinguished the controversies of the times, exhibits a strain of fervid eloquence, which completely overwhelmed the great but inadequate powers of his opponent. He acquired by this production a high reputation both at home and abroad, and was visited by ambassadors from the Low Countries, and even in London; he also received from the government a present of £1000. He, however, bought this triumph dear, as an affection of the eyes, previously produced by intense study, terminated, as his physicians predicted, by an irreparable gula serena, owing to his exertions on this occasion. It is unnecessary to observe how nobly and feelingly he has alluded to his blindness in more than one passage of his exalted poetry. His loss of sight did not, however, impede his facility of composition, and in 1652 he wrote a second Defence of the People of England, against an attack by Du Moulin, under the name of More, similar to that of Salmasius. In 1652, Milton lost his wife, who had born him three daughters, and soon after married another, who died in childbirth the same year. To divert his grief for this loss, he resumed his History of England, and also made some progress in a Latin dictionary, and still composed much of the Latin correspondence of his office. On the death of Cromwell, he employed his pen with great acuteness to check the increasing feeling in favour of the restoration. On the restoration, Milton took refuge for some time in the house of a friend. His Defences of the People and Iconoclastes were called in, and ordered to be burned; but the author was reported to have abscended; and in the act of indemnity which followed, his reputation, however, to have been some time in the custody of the sergeant-at-arms, but was at length discharged, as it is said, owing to the friendly interposition of Sir William Davenant, who had received similar kind offices from Milton, when endangered by his adherence to the royal cause. In reduced circumstances, and under the discountenance of power, he now removed to a private residence, near his former house in the city, and, his infirmity requiring female aid, was led, in his fifty-fourth year, to take, as a third wife, Elizabeth Minshull. He now resumed the poetical studies which he had for some years laid aside, and, left in repose to meditate upon the lofty ideas that filled his mind, produced his immortal Paradise Lost, which was finished in 1665, and first printed in 1667, in a small 4to. The sum which he obtained for it was five pounds, with a contingency of fifteen dependent upon the sale of two more impressions, the copyright, however, remaining his own. Paradise Lost long struggled with bad taste and political prejudices, before it took a secure place among the few productions of the human mind which continually rise in estimation, and are unlimited by time or place. In 1670, appeared his Paradise Regained, which he is said to have preferred to its predecessor. With Paradise Regained, he also appeared the Comus, intended as an emendation upon the ancient model, and abounding in moral and descriptive beauties, but exhibiting little pure dramatic talent, either in the development of plot or delineation of character, and never intended for the stage. In 1672, he composed a system of logic, after the manner of Ramus; and the following year his Defence of True Religion, Heresy, Schism, Toleration, and the best Means of Preventing the Growth of Popery. A publication of his familiar epistles, in Latin, and of some academical exercises, occupied the last year of his life, which repeated fits of the gout were now rapidly bringing to a close. He sank tranquilly under an exhaustion of the vital powers in November 1674, when he had nearly completed his sixty-sixth year. His remains, with a numerous and splendid attendance, were interred in the church of Cripplegate, where the elder Samuel Whitbread has erected a monument to his memory. Dr Sprat, bishop of Rochester, as dean of Salisbury, denied him a monastic burial in his abbey, where, however, in 1757, one was erected to his memory by auditor Benson.

Milton was distinguished in his youth for personal beauty; his habits of life were those of a student and philosopher, being strictly sober and temperate; his chief relaxation being religious meditation. His temper was serene and cheerful; and although warm and acrimonious in controversy, he appears to have indulged no private enmities, and to have been civil and urbane in the ordinary intercourse of society. Of the sublimity of the genius, and the depth and variety of the learning of Milton, there can be no difference of opinion; and in respect to the first, his own countrymen, at least, will scarcely admit that he has ever been equalled. Had he never even written Paradise Lost, his Allegro, Penseroso, and Comus, must have stamped him a poet in the most elevated sense of the word. In his prose writings his spirit and vigour are also striking, and his style, although sometimes harsh and uncouth, is pregnant with energy and imagination. Moving in the ranks of party himself, no man's fame has been more rancorously attacked than that of Milton, by political animosity; but after all the deductions it has been able to make, as a man of genius he will ever rank among the chief glories of the English language.

The best editions of the poetical works of Milton are those of Newton, Hawkins and Todd (6 vols., 8vo, with his life in one volume). His prose works
have been published by Symonds, with an account of his life (7 vols., 8vo.) Thomas War ton published an edition of the minor poems, with a valuable commentary. In 1823, an unpublished work on the Christian Doctrine was discovered among some scattered papers, by M. Schonemann, the original Latin, and in an English translation, by Mr Sumner, a royal chaplain. This publication led to a new discussion, not only of the theological tenets, but of the general merits of Milton, in the periodical works of the time. The most celebrated treatises thus produced were the one in the Edinburgh Review by Mr Macaulay, and the other in the Christian Examiner (Boston, America) by the Rev. Dr Channing.

MIMES (μῆμες, imitation). The Greeks gave this name to short plays, or theatrical exhibitions, the object of which was to represent some action of a simple nature. They consisted merely of detached scenes, generally of a comic character, and often of a dialogue composed extemporaneously; they were commonly exhibited at feasts, but appear to have also been occasionally represented on the stage. The mimes of Sophron of Syracuse were a kind of comic scenic declamation. Doric Prose, which Theocritus imitated in his Idyls. Among the Romans, the mimes were, at first, irregular comedies, calculated to amuse the people by their broad humour; they afterwards assumed a more artificial form. The actors who performed them were also called mimes, and differed from the pantomimes (q. v.), who represented every thing by action. Decimus Laberius (50 B. C.) and Publius Syrus, his contemporary, were the principal mimographers, or authors of mimes. See Ziegler, De Minis Romanorum, Gottingen, 1780.

MIMIC. See Pantomime. MIMITES; the name of an ancient Greek poet and musician, known, according to Athenaeus, as the inventor of the pentameter measure in versification. Strabo assigns Colophon as the city of his birth, which took place about six centuries before the commencement of the Christian era. Homer speaks in the highest terms of his love elegies, which he prefers to the writings of Callimachus, while Propertius places him before Homer in the expression of the softer passions. Both he and his mistress, Nanno, are said to have been musicians by profession, and to have been celebrated for their perfection in the four Persian, and French, and Italian, Plutarch, in a particular air, called Kradias, used at the Athenian sacrifices. A few fragments only of his lyric poems have come down to posterity, as preserved by Stobaeus; they are, however, of a character which leads us to suppose that the high reputation he enjoyed was not unmerited. Nothing is known of the time or manner of his death. See Schonemann's De Vita et Carne: Minnermi, Gottingen, 1824.

MIMOSA. See Sensitive Plant.

MINA (μῆνα), among the Greeks; a weight of a hundred drachmai; also a piece of money valued at a hundred drachmai; sixty of them were equivalent to a talent.

MINARET; a round tower, generally surrounded with balconies, and erected near the mosques in Mohammedan countries, from which the macezin summons the faithful to prayer. It is generally a place of great beauty and utility, and is considered as the most noble of buildings, and as well known, not being in use among the Mohammedans. (See Mosque.)

MINAS GERAI5; a province of the central part of Brazil, so called from the richness and variety of its mines. It is between 14° and 25° south latitude and 37° and 55° west longitude, containing the richest part of the province of Pernambuco and Bahia. It is in general, mountainous, with an agreeable and healthy climate, and a fertile soil, yielding a great variety of fruits, aromatic plants, &c. Its mineral productions are gold, iron, lead, quicksilver, arsenic, bismuth, antimony, diamonds, and other precious stones, salt, sulphur, &c. It contains a population of 514,500 Mohammedans, and 214,000 Infidels, under 20 years of age. The rich soil of the province is remarkably fertile, and are celebrated by Virgil, who was a native of this country, for the beauty of their scenery.

MINDANAO, or MAGINDANAO; one of the Philippines islands, and next to Lagon in point of size, of a triangular form, about 300 miles long, and 106 broad, with many deep bays; discovered by the Spaniards who accompanied Magellan, in 1521. It lies south-east of Manila, at the distance of 600 miles. All the country, except upon the sea-coast, is mountainous, yet it abounds in rice, and produces many nourishing roots. There are infinite numbers of the palm-trees, of the large species, (q. v.) The island likewise produces all sorts of fruits that are to be found in other islands of the archipelago, but the cinnamon-tree is peculiar to Mindanao, and grows on the mountains without cultivation. In the sea between this island and that of Xolo, very large pearls are taken. Lon. 129° to 126° 27'; lat. 5° 40' to 7° 35' N. The population is about 1,000,000. — Mindanao, the principal town and the residence of the sultan, is on the Pelangy, about six miles from its mouth; lon. 124° 40' E.; lat. 7° 0' N. The town properly called Mindanao contains only about twenty houses, but Selangan, opposite to it, makes with it but one town. See Philippines.

MINDEN; a town of Prussia, in the province of Westphalia, government of Minden, on the left bank of the Weser; lat. 52° 17' N.; lon. 8° 53' E.; population, 8960. It is one of the oldest towns in Germany, and was formerly the see of a bishopric, secularized in 1648. Its fortifications have been repaired since 1814; the stone bridge over the Weser is 600 feet long by twenty-four wide. It lies partly on a plain and partly on a mountainous ridge, in which is a singular opening, called Porta Westphalian, through which the Weser flows. Minden was twice captured, according to French tradition, Plutarch, in a particular air, called Kradias, used at the Athenian sacrifices. A few fragments only of his lyric poems have come down to posterity, as preserved by Stobaeus; they are, however, of a character which leads us to suppose that the high reputation he enjoyed was not unmerited. Nothing is known of the time or manner of his death. See Schonemann's De Vita et Cvm. Minnermi, Gottingen, 1824.

MINDOBO. See Philippines.

MINE, in military language; a subterraneous passage dug under the wall or rampart of a fortification, or under any building or other object, for the purpose of blowing it up by gunpowder. The gunpowder is in a box, and the place where the powder is lodged is called the chamber (in French, fourreau). The passage leading to the powder is termed the gallery; the line drawn from the centre of the chamber perpendicular to the nearest surface of the ground is called the line of least resistance. It has been found, by experience, that the figure produced by the explosion is a parabola, the distance of whose curve from the horizontal line, or charge, occupies the focus. The pit, or hole made by springing the mine, is called the excavation. The fire is communicated to the mines by a pipe, or hose, made of coarse cloth, whose diameter is about an inch and a half, called a sacusson (for the filling of which near boats, or on the shore, or on horseback, extending from the chamber to the entrance of the gallery, to the end of which is fixed a match, that
of Chota now furnish about 42,000 pounds troy of silver every year. The quicksilver mine of Guanajuato, in Mexico, is the only one of this kind in the new world. There are rich provinces of silver in Peru, Chota, Tarma, and Huanay. In the province of Huanay, rock-salt mines are also found. North of the province of Chota, the Cordilleras are not so rich in metals. In New Grenada there are several silver mines; at Aroa, in Caracas, a copper mine exists, which yields 1500—1600 cwt. of metal yearly, and at Santa Fe rock-salt, and pit-carbon are found. Although Mexico contains various metals, very little except silver has been obtained from that country. Almost all the mines are situated in the Cordilleras, and consist of 3000 pits, which comprise 4—5000 beds, or layers, and may be divided into eight large districts ( realms), beginning from the south—e. the district of Oaxaca, on the southern boundary of Mexico, which, besides the silver mines, contains the only gold mine of this state; b. the district of Tlaxco, fifty to seventy miles south-west from the city of Mexico; c. the district of Biscanica, about fifty miles north-east from the capital, contains the mines of Pachuco, Real del Monte, and Moron, all of which are very important; the Zinc mine contains, besides many silver mines, beds of bismuth and arsenic; e. the district of Guanaxuato, contains the richest mines of Mexico, and among others of Guanaxuato, Catorce, Zacatecas, and Sombrerete. This district produces half of all the silver of Mexico. In the neighbourhood of this district copper and lead are also worked, yielding annually about 4000 cwt. There are also mines of tin and quicksilver.

f. The district of New Galicia, where the rich mines of Bolanos are. g. The district of Durango and Sonora. h. The district of Chihuahua. Besides the mines contained in these districts, there are several others in Mexico. The working of all the mines of Spanish America has been very imperfectly carried on until the present times. Some years ago several joint-stock companies were established in England and on the Rhine, for the purpose of conducting them better. Many of the companies suffered large losses. The produce of silver in Spanish America at the beginning of the present century, according to A. von Humboldt, was 3,250,153 marcs, about 2,036,570 lbs. troy, of the nominal value of about 31,120,000 dollars. Of this sum, Mexico yielded 2,196,140 marcs; Peru, 575,958 marcs; Buenos Ayres, 403,098 marcs, and Chile 29,257 marcs. Gold is principally obtained in Mexico by washing. In the United States the gold-washings are on the western side of the Cordilleras; in New Grenada, from the province of Barba- coa to the isthmus of Panama; in Chile, and on the shores of the Gulf of California; or on the eastern side in the upper valleys of the Amazon. The washings of New Grenada also furnish platinum.

2. The mines of Hungary, including those of Transylvania, and of the Banvit of Temeswar, compose four great districts: a. the north-western, which includes the mines of Schemnitz, Kremsnit, Kениigsberg, Neuosohl, Schmelzmitl, Bethler, Rosenau, &c., which chiefly furnish gold, silver, copper, lead, &c.; b. the north-eastern, containing the mines of Nagybay, Kapnick, Felserbany, Wisbany, Olaposbanya, and Olapos, which all yield gold, besides the mines of Marmarosch, which furnish great quantities of iron; c. the eastern district, in which the mines of Nagyay, Korosbanya, Verespatak, Bötz, Cseresd, Pataley, Almay, Porkum, Bötschum, and Storreich contain chiefly furnish gold and copper; near Vayda-Huniad and Gyálar are important iron mines; d. the south-western district, or the mines of the Banvit of Temeswar, yields silver and copper in Ormvita, Moklava, Szanka and Dognacza, while in Dombrava and Ruchersberg, iron, quicksilver, and cobalt are obtain-
MINES.

ed. Hungary contains also mines of pit-coal and rock-salt, the latter especially on the banks of the Danube, the Marmarosch and the Nera. The whole produce of Hungary, however, is very inconsiderable (3620 lbs. troy) of gold, 85,000 marcs (53,125 lbs. troy) of silver, 36,000—40,000 cwt. of copper, 6—8000 cwt. of lead, and about 60,000 cwt. of iron.

3. The mines of the Altai mountains (q. v.) are very important; they constitute the districts of Koly- van, Zmeof, Tchepepenskowy, Smolensky, Philipovsky, &c., with a yearly produce of upwards of 3000 marcs (1875 lbs. troy) of gold, (in later times more), 60,000 marcs (57,600 troy lbs.) of silver, and a considerable quantity of copper, iron, and lead.

4. The mines of the Ural (q. v.) are dispersed, at different distances, around Ekaterinburg; those of Tourinsky produce about 20,000, and those of Gou- mechfsky 40,000 cwt. of copper yearly. The iron, which is obtained in the regions of Balgodat and Keskamar, amounts to more than 1,000,000 cwt. yearly. Near Beresov, 500 marcs (312 lbs. troy) of gold, 12,000 marcs of silver; but the quantity is too far more considerable.

5. The mines of the Voges and the Schwarzwald (Black-forest). In the former, nothing but iron is found; in the latter, silver, at Badenweiler, Hochberg and Wolfach, amounting to 1800 marcs (1125 lbs. troy); at the first of these places, moreover, 500 cwt. of lead are obtained yearly, and at Wittichen, cobalt; besides iron in different places.

6. The mines of the Hartz: a. the silver, lead, and copper mines, &c., of the Upper Hartz, in the environs of the mining towns of Clausthal, Zellerfeld, Lautenthal, Wildenau, Grund and Androeburg; b. gold, silver, and copper mines, near Goslar; c. copper mines in the neighbourhood of Lauterberg; d. iron mines at Lauterberg, Walkenried, Elbingersoda and Blankenburg; e. silver, lead, and iron mines, in the vicinity of Magdeburg: annual produce, about 10 marcs (6 lbs. troy) of gold, 30,000 marcs (18,750 lbs. troy) of silver, 2000 cwt. of copper, 50,000 cwt. of lead, 30,000 cwt. of litharge, 200,000 cwt. of iron.

7. Mines in the eastern part of Germany: a. in the Saxon Erzgebirge, at the towns of Freiberg, Marienberg, Annaberg, Ehrenfriedersdorf, Johann- georgenstadt, Schneeberg, annual yielding of 59,000 marcs (32,600 lbs. troy) of silver; at Altenberg, Gey- er, 13,000 marcs (7552 lbs. troy) of tin; at Schnecken- wald, &c., 2000 cwt. of copper, 5000 cwt. of lead; b. Bohemia: silver, at Joachimsthal, Mies, Przibram, &c., 13,500 marcs (8025 lbs. troy); tin, at Schaken- wald, &c., 2000 cwt. of cobalt, 4000 cwt. of copper, 1800 cwt. of lead, 190,000 cwt. of copper, 1200 cwt. of sulphur, 20,000 cwt. of vitriol.

8. Mines in the middle and north-western parts of France. Those at Villefort, in the department of the Lozère, yield 2000 cwt. of lead, and 1600 marcs (1000 lbs. troy) of silver; at Pouloaun and Huel- goat, in Bretagne, 10,000 cwt. of lead, 2000 marcs (1250 lbs. troy) of tin, and 1500 cwt. of silver.

9. Mines of Great Britain: iron, in Wales, 150,000 tons; Shropshire and Staffordshire, 180,000 tons; Yorkshire and Derbyshire, 50,000 tons; Scotland, 20,000 tons; total, 400,000 tons; copper, 10—11,000 tons; lead in Northumberland, 12,000 tons; North Wales and Shropshire, 80,000 tons; York- shire, 4500 tons; Derbyshire, 4000 tons; Scotland, Devon, Cornwall, South Wales, 3000 tons; total, 31,500 tons: tin, in Cornwall and Devon, 2800—5000 tons.

10. Mines of Scandinavia: Norway produces 1600 marcs (1000 lbs. troy) of silver; at Kongsberg, in 1763, 40,000 marcs (25,000 lbs. troy), 7200 cwt. of copper, 140,000 cwt. of iron, 4000 cwt. of smalt, 10,000 cwt. of alum; Sweden, 2—3000 marcs (1250 —1875 lbs. troy) of silver, 18—2000 cwt. of copper, 1,600,000 cwt. of iron.

11. Mines of the Alps: these are insignificant, and iron only need be mentioned.

12. Mines of the Alps: they are not, by any means, proportioned to the immense masses of those mountains; the silver mines of Allemont, in Dauphine, annually produce 2000 marcs (1250 lbs. troy); the iron mines of Allevard, in the department of the Isere, the lead and silver mines of Pexe, in Savoy, formerly produced 4000 cwt. of lead, and 2500 marcs (1562 lbs. troy) of silver annually; the iron mines of Cogna and Travessuire, in Piedmont, annually yield upwards of 200,000 cwt. of iron; the copper mines at Falkenstein and Schwatz, in the Tyrol, formerly produced of iron, 2000 marcs, and of copper, at Gastein and Muerwinkel, in Salzburg, annually yield 118 marcs (74 lbs. troy) of gold; the iron mines in Salzburg and the Tyrol, annually produce 60—70,000 cwt. the iron mines in Sibria, 450,000 cwt. those in Carinthia, 280,000 cwt.; and those in Carniola, 100,000 cwt. of copper mines at Schahmning in Sibria, at Kirschdorf in Carinthia, at Agarado in the territory of Venice, and at Zamabor in Croatia, furnish copper containing silver; the zinc mines at Raibel in Carinthia, annually produce 3400 cwt.; the lead mines at Villich and Bleiberg, &c., about 50,000 cwt.; the quicksilver mines at Idria, about 550 cwt.; the rock-salt mines, at Hallein, Berchtesgaden, Aussee, Ischel, Hallstadt, &c., upwards of 3,000,000 cwt. of salt.

13. Mines of the countries bordering on the Rhine, and of the Ardennes: copper is obtained from the mines of Rheinbreitenbach and Dillenburg, about 1200 cwt. yearly; lead and silver, from the mines of Holzpfalz, Pfengstwiese, Lawenburg, August- bach, Ehrenthal; of the former, 12,000 cwt.; of the latter, 3500 marcs (2187 lbs. troy); iron of an excellent quality, and in great quantity, is procured in the Stahlberg, in the environs of the town of Siegen, on the banks of the Lahn and Saar, in the Harz, in Hesse, on the banks of the Lippe, on the Eifel, in the territories of Luxembourg, &c.; coal, in the vicinity of Limburg, in the Netherlands, 14—15,000 cwt. yearly; in the neighbourhood of Aix-la-Chapelle, 30—40,000 cwt.; in the county of Mark, 2600 cwt.; lead, at Veldin, not far from Namur, 4000 cwt., together with 700 marcs (457 lbs. troy) of silver.

14. Mines of various countries: the environs of Nertschinskoi in Siberia, are very rich in useful minerals, and yield 30—35,000 marcs (18,750—21,750 lbs. troy) of silver. The mineral wealth of Spain and Portugal is now almost exhausted; the quicksilver mines of Albañiza formerly furnished 20,000 cwt., the lead mines only are still productive, yielding annually more than 90,000 cwt. There are copper mines in Japan, China, Persia, Arabia, in Tartary, in the islands of the Indian Sea, in Barbary, Morocco, Abyssinia, &c; tin is produced in China, Pegu, the peninsula Malaya, Sumatra, Borne, &c., lapis lazuli, in the latter country alone, 70,000 cwt.; zinc is said to be abundant in India; quicksilver, in China and Japan; Brazil furnishes 28,000 marcs (17,500 lbs. troy) of gold yearly, which is more than is obtained from any other country; Africa at least 7000 marcs (4375 lbs. troy), and Southern Asia at least 2000 marcs (1250 lbs. troy) similarly. The island of Elba contains a great deal of iron.
MINES-MINERALOGY.

II. The mines in Flataz mountains are highly important, above all, the coal mines—the principal wealth of Britain—this country alone furnishing 404,000 cwt. 200,000 cwt. of coal to the Nether- lands and the countries along the Rhine, 82,000,000; Silesia, 6,000,000; Saxony, 1,200,000; Austria, 680,000; Bavaria, 500,000; Hanover, with the rest of Germany, 6,000,000. The greater part of the iron that is procured in Britain, is from the coal-mine. The same is the case in other countries, for instance in Silesia. The lead mines in the vicinity of Aix-la-Chapelle, which annually furnish 15,000 cwt. of lead, and upwards of 20,000 cwt. of lead ore, called alquifous, used for glazing earthen ware, are in Flataz mountains; also the copper mines in the territory of Mannsfeld, at Frankenberg, Bie- ber and Riegelsdorf in Hesse, the former yielding 10,000 cwt. of copper and 8000 marcs (5000 lbs. troy) of silver; the important iron mines on the Stuhlberg, in the Hessian seignory of Schnallkaden; the lead mines at Tarnowitz, in Upper Silesia, annually yielding 8500 cwt. of lead and 1500 marcs (957 lbs. troy) of silver; the same is the case of other mines in Upper Silesia and Poland, which annually afford 50,000 cwt. of calamine and 25,000 cwt. of zinc; the zinc mines of Britain and other countries already mentioned; the rock-salt mines in the southern part of Germany, in Cheshire, at Vic in France, at Wieliska and Bockina, the latter affording almost 15,000,000 cwt.

III. Of no less importance is the mineral wealth of the alluvial regions. Pluton, the greater part of gold, a considerable quantity of tin and iron also, diamonds and most of the other precious stones, are concealed in sand, clay, &c., and obtained by wash- ing. (q. v.)

The science of mining includes the scientific knowledge requisite for opening and working mines, as well as for preparing ores for use. It requires a knowledge of mineralogy and geology (q. v.), and of the different processes requisite in mine working, for searching after useful minerals, bringing them to the surface, mechanically and chemically separating them, and removing all difficulties that occur in the course of the work, the sinking of shafts, propelling up the superincumbent earth, so as to give security to the miners, &c. This security is obtained partly by the form of the pits, by propelling with stones, by suffering pillars of stone to remain in the ground, and by means of machinery. Mining also includes the building of machinery, the preparation of the ore for smelting, or the mechanical separation of the useless minerals from the useful, as well as of the different kinds of the latter from each other. The preparation of the ore consists, in the first place, in breaking asunder the larger pieces, and then purifying them, by means of water, from the earth which adheres to them; in the separation of the coarser substances from the finer, by means of a sieve, that moves up and down in water; in the breaking of the ore in stamping-mills, which consist either of hammers or iron cylinders, driven up and down, and in the separation of the finely interspersed metal from the stone or earth, with which it is sur- rounded, by washing the broken ore in troughs or on inclined tables crossed by a current of water; the heavier ore remains, while the lighter earthy and stony substances are carried away by the water. Mining also includes the final purification of the ore, by means of the furnace, and of other machines.

Mining Academies. In Germany, where the science of mining had its origin, academies exist, in which young men are instructed in the science of mining, and educated as superintendents of mines, foundries, or salt-works. These institutions have been imitated in other countries. Such academies exist at Freiberg in Saxony, at Schenmizitz in Hun- gary, at Petersburg, at Paris, at St Etienne, &c.

MINERALOGY, or THE NATURAL HIS- TORY OF THE MINERAL KINGDOM, con- sidered as a pure science, is of very recent date. The observations made at first related simply to the usefulness of minerals to the purposes of society, and it was not before the lapse of many ages that they came to be investigated on account of their great variety and the beautiful arrangements of which they are susceptible. The opuscula and metallorum of Aristotle evince no valuable observations on the part of that philosopher concerning minerals, and are chiefly mentioned by him because he believed the former to be derived from the earth, and the latter from water. The allusions to mineral sub- stances found in the writings of Theophrastus, Pliny, Dioscorides, and Galen, are of more interest to the antiquarian and philologist than to the natural his- torian. No attempt to classify these bodies was made previous to the introduction of alchemy into Europe by the Arabians; and to Avicenna belong the merit of the first arrangement. He divided minerals into stones, metals, sulphureous fossils, and salts—a division which was generally adopted by the chemists of those times, though opposed by the naturalists, who confined their investigations to the characters derived from the external forms of minerals and their supposed medicinal virtues, but without deriving from them any just grounds of classifi- cation. According to one or the other of these vicious methods was the science of mineralogy treated, down to the sixteenth century, its cultivators either implicitly adopting the ideas of the chemists, or announcing themselves as far better than mere empirical collectors of curiosities.

Agricola (who was born in 1490, and died in 1555) directed his views to the uniting these two classes, though he inclined more strongly to the side of the scholars than to that of the chemists. All minerals (corpora subterranea) are divided by him into simple, or such as consist of homogeneous particles, and compounded, or such as are formed of heterogeneous parts, taken in a mineralogical acception of the terms. The minerals belonging to the former of these divisions are found in four different forms, viz., 1. terra; 2. succus concretus; 3. lapis; 4. metal- lum. Terra consists of the stone itself, aut manu subjicit, cum fuerit asperum humore, aut quod cum fuerit malefactum, fit lumen. These earths he divides partly according to some external charac- ters, partly after their localities, in cases where their names are derived from the countries or places in which they are found:—Succus concretus est corpus fissile siccum et durum, quod aut aut non mollitur, sed liqueascit, aut, si mollitur, multum vel pinguidinitur differet una terra, vel materia ex qua cons- tavit. The fossils of this class Agricola divided into macra et pinguita. The former consists of a juice, partly mixed with earth (sul nitrum), partly with metal (chrysocolla, orpborum, ferrum, corundum), partly mixed both with earth and metal (aubeuran, sutorium, alumnum, &c.); to the latter he refers sulphur, bitumen, sardarach, and auripigmentum. The stones are the third class of Agricola's system. Lapis est corpus fissile siccum et durum, quod aut aqua longinquae tempore vit multae, ignis vehementius agitatur, sed ad fusion, & malleation, lapis aliquantum liqueascit calore. The stones are subdivided into lapis, gemma, marmor, and saxum. His defini- tion of metals, being his fourth class, is, corpus fissile natura vel liquidiun vel durum quidem, sed quod ignis liqueascit calore. He enumerates ten metals. The
MINERALOGY.

827

last class of Agricola's system comprises mixed and compound fossils:—1. Mixtures of stones and juices (sucus); 2. of earth and metal; 3. of stone and metals. It is based on specific gravity, and divided into four main, and third divisions he refers the various ores. A translation of Agricola's system into German was published, with considerable additions, by Lehmann, at Freyberg, in 1809.

Most of the writers on mineralogy who succeeded Agricola, including the following century, adopted his system, occasionally making some trifling alternations, in conformity to the slow progress of chemistry. Becher (whose Physica Susterrae was published in 1667) made the first important innovation upon the classification of Agricola. He considered water and earth as the remote, and vitreous, inflammable and mineral earths (sal, sulphur, mercurius), as the proximate constituent parts of all minerals, which he accordingly arranged under three classes; the first comprehending those stones in which the vitreous earth constitutes the principal ingredient; the second and third class containing the solid and the metallic earths respectively predominant. Bramelius, who published a book entitled Catalogus Rerum Curiosarum (Gothenburg, 1698), referred sulphur and the bituminous substances to the same class, which he called sulphurea and pinguita. Magnus von Bromel, a Swede, who was a pupil of Boerhaave, published a system of mineralogy—Inleiding til Kvensch om Mineraliter, &c. (Stockholm, 1730), in which he not only availed himself of all the improvements made by his predecessors, but also proposed a new chemical division of stony substances into such as are refractory (apyrif), or calcineable, or vitreous in the fire, to which were added the figured stones (figuratae).

After Von Bromel, the great Swedish reformer in natural history appeared, whose admirable views respecting the philosophy of the natural sciences have contributed more to the perfection of our science than the labours of all who preceded him; and yet Linnaeus appears to have possessed but very little knowledge of minerals, but the complete success with which he applied the method of natural history to the vegetable kingdom rendered it easy for subsequent naturalists to apply his principles to the mineral kingdom. Linnaeus, too, has the merit of calling the attention of men to the importance of the different characters derived from the diversity of the mineral kingdom. Werner, however, remained, from the time of Linnaeus to that of Werner, almost exclusively in the hands of chemists, who appear to have regarded the science in no other light than as an appendage of chemistry, and who, while they degraded all regard to the natural properties of minerals, believed that chemical knowledge was alone capable of affording the basis of the classification, nomenclature and diagnosis of the mineral kingdom. To this class of the cultivators of mineralogy belonged Henkel, Pott, Wallerius, and Cronstedt.

In 1774, Werner published his work On the external Properties of Minerals (Von den äussern Kenntzichen de Fossilien)—a work of great merit and value at that juncture, as it served to call the attention of naturalists to the only correct method of arriving at a knowledge of this department of nature. The external characters of minerals had been almost wholly neglected; in this work they were described with uncommon minuteness, though they were employed by him in his system without a regard to their relative importance. The greatest defect, however, in the views of Werner arose from his inattention to the properties of minerals through the aid of instruments. He scarcely availed himself of any other means than such as were derived directly through the eye, the hand, and the tongue. Hence those characters, depending upon the value of angles and different degrees of hardness and specific gravity, and the nature of the components, were of the highest value in mineralogy, were turned to comparative little account. For a knowledge of Werner's system of mineralogy, we are indebted to his translation of Cronstedt's mineralogy (to which he subjoined notes), to his catalogue of the mineral collection of M. P. Obin, and to his memoirs in the Bergmmanische Journal. In addition to these sources, several expositions of his system have been made by his pupils, the best of which is that published by professor Jameson.

The fundamental principle laid down by Werner in the classification of minerals, is their natural affinity, which he allows to be founded on the chemical nature of their component parts. These he distinguishes into essential and accidental component parts, of the former of which only does he take notice in his arrangement. The essential component parts are subdivided into predominant and characteristic ones, and generally they are naming the earths predominant. His classes are four, which are founded on what he calls the fundamental constituent parts, viz., the earthy, saline, inflammable and metallic, each class being named after that fundamental constituent part which predominates in and characterizes it. Thus he divides the classes of earths, salts, inflammables, and metals. These classes are subdivided into genera, which are founded upon the variety in the component parts of the minerals comprehended in each class, there being as many genera as there are predominating, or, at least, characteristic constituent parts discovered in their mixture. But neither Werner nor his pupils have been very strict in adhering to this rule for the formation of the genera, these, as well as the species, having more frequently been established by them upon the natural instead of the chemical properties.

Werner's system was essentially deficient in respect to unity, in consequence of the regard which he allowed to the chemical relations of minerals, and, like those which preceded his time, it was rather a mixture of chemistry and mineralogy than the representation of a pure science,—an objection which applies with scarcely diminished force to the next great system, which was a geological world by Haüy at the commencement of the present century; Mineralogy, however, is under immense obligations to the abbe Haüy for his researches respecting the geometrical character of minerals. His labours, connected with crystallography, gave an entirely new aspect to the science, and communicated to its results a degree of that precision and certainty which belong to geometry. Still his want of knowledge of the principles of natural history prevented him from remedying the faults of his predecessors. His system, like that of Werner, is founded upon two sciences, and consequently wants the order, the connection and consistency of parts which belong to the idea of a science. He defines a species in mineralogy to be "an assemblage of bodies, the integrant molecules of which are similar to each other, and have the same composition." The following outline of Haüy's system is taken from his Traité de Mineralogie (Paris 1826)—

Class I. Free bodies. Class II. Metallic substances, but destitute of a metallic appearance. This class contains eight genera, viz., lime, barytes, stromites, magnesia, alumine, potash, soda, and ammonium; and to it is subjoined an appendix, consisting of one order characterized by the presence of silex in all its compounds, and which embraces a largeness of species which belong to the class to which it is appended. Class III. True
MINERALOGY.

metallic substances. This class contains eighteen genera, characterized by the different metals. Class IV.

In proceeding to notice the labours of professor Mohs, we come to an era in the history of mineralogical science. This eminent philosopher, no less distinguished as a cultivator of the mathematics than of mineralogy, published at Dresden, in 1812, his Grundriss der Mineralogie, a work in which he combined new and philosophical views of our science. His first object is to fix the exact limits of mineralogy, and to exclude from it a variety of foreign matter belonging to other sciences, which had before rendered it a heterogeneous mass of information, incapable of derivation from constant principles by any regular process of reasoning. He then proceeds to develop the science under the following heads:—1. terminology; 2. theory of the system; 3. nomenclature; 4. characteristic; 5. physiography. Under the first of these he explains those properties of minerals which manifest no change, either in the properties themselves, or in the substances which possess them during their observation or examination, and which properties alone form the object of consideration in mineralogy, viewed as a pure science. They had before been treated of under the denomination of external or physical characters, though, from the stress which had been laid upon chemical characters, the greater part of them had been but very imperfectly determined; and this part of the subject is called terminology, because, besides the general investigation of those properties, it embraces also the explanations of the expressions which, for the sake of precision, are used in a determinate and peculiar sense. Decomposed and imperfectly formed minerals, or those which are destitute of several of the properties peculiar to these bodies, are not regarded as suitable objects for the consideration of the science; in which respect they are treated like mutilated, defective, or monstrous plants or animals in botany and zoology. And in order to study the productions of the mineral kingdom in their purest state, Mohs takes notice of those properties which belong to minerals occurring in single individuals, separately from those which belong to several individuals of the same quality, formed in a common system, which he designates as the essential characters, the other,—of the former of which only does he make use in the determination of the species, while he pays no attention to the properties of minerals composed of individuals belonging to different species (mixed minerals), these last falling within the province of geology. This is a distinction of the highest importance and utility, in rendering all the departments of mineralogy mutually consistent, though one which had been almost wholly disregarded by all his predecessors. According to this system, the individual of the mineral kingdom, or the simple mineral, is the sole object of mineralogy, and the natural properties of the species are the only ones to which, in this science, we ought to direct our attention. It will be obvious, therefore, that all information thus derived must be of one kind, and consequently its aggregate conformable to the logical idea of a science. Mohs has particularly distinguished himself in treating of that part of terminology which relates to the regular form of the mineral bodies, the fundamental forms, which he derives all the occurring forms among minerals, are but four in number, viz., the scalene four-sided pyramid, the isosceles four-sided pyramid, the rhombohedron, and the hexahedron; and the geometrical constructions by which he illustrates the simple forms, and of the individuals of one and the same species, or which may produce combinations with one another, entitle him to the first rank as a crystallographer. The natural-historical properties of compound minerals are treated of in the most precise manner, the principal neglect of which had involved the science in numerous important errors. But one of the greatest improvements under this head was the establishment of an accurate scale for the degrees of hardness. This was effected by choosing a certain number of suitable minerals, of which every preceding mineral is scratched by that which follows it, while the former does not scratch the latter; and the degrees of hardness are expressed by means of numbers prefixed to the different individuals of the scale. Thus

1. expresses the hardness of tale; 2. of quartz; 3. of calcareous spar; 4. of feldspar; 5. of topaz; 6. of corundum; 7. of diamond

The second general head under which mineralogy is developed, according to Mohs, is the theory of the system, which contains the reasoning or philosophical part of the science. It determines the idea of the species; fixes the principle of classification; and, upon the idea of the species it founds, according to this principle, the idea of the general order, or family of the class; and, lastly, by applying all these ideas to nature, the outline of the system thus constructed is furnished with its contents, in conformity to our knowledge of the productions of nature, as obtained from immediate inspection. The idea of the species is here, for the first time, scientifically obtained, and is founded upon all the series of natural properties without the introduction of any considerations foreign to natural history, which had proved the source of the contamination that the science had before suffered from heterogeneous principles. The principle of classification consists in the resemblance of natural properties, since in every science the classification must rest upon such relations as are objects of the science. On the different degrees of resemblance are founded the higher ideas of the theory of the system. An assemblage of species connected by the highest degree of natural-historical resemblance is a class; of species united by that principle of order; of similar orders a class; and the collection of these ideas conformably to the degree of their generality, and applied to the productions of the mineral kingdom, constitutes the mineral system. The mineral system is therefore the systematic exhibition of the natural resemblance as observable in the mineral kingdom, or of the connection established by nature among its products by means of this resemblance. For this reason it is called the natural system, because, in fact, it expresses nature in this very remarkable relation.

The third idea of the science, as developed by Mohs, is its nomenclature, which relates to the connexion of its unities with certain words, through which the ideas and representations may be so expressed as to be conveniently applied in writing and speaking. Nothing is better calculated to furnish us with an idea of the situation in which mineralogy had before been placed, than the consideration of its former nomenclature, and of the new system employed in giving new names. Those were regarded as the best which had no signification, as is obvious from the frequency with which designations were adopted derived from colours, persons, localities, and other accidental circumstances; and, as respects those names which referred to the individuals of different minerals in regard to their resemblance, these were still more objectionable, since the connexion expressed by them
was either entirely incorrect, or without reference to
the system in which the names were applied. The
nomenclature therefore required to be wholly remo-
delled, none deserving of the name having before existed,—the reason of which appears to have been that mineralogy had not been treated as a science, but as a multiplicity of various kinds of
formation, a sort of mixture which would admit every kind of knowledge to be introduced, and in which nothing could be placed wrong, because in such a dis-
position there could be no order. The order is the
highest idea expressed in the nomenclature of Mohs,
and in the nomenclature of the mineral system, it is
invented but two which are entirely new, having em-
ployed as many designations from ancient mineralogy
as would answer the purpose. The names receive
their signification in agreement with the ideas of the
orders; thus pyrites embraces the minerals hitherto
called by that name. A mineral which may with
propriety bear the name of a metal must really be a
metal, or it must present the properties peculiar to
metals. Mica signifies a mineral which may be
cleaved with facility into thin, shining laminae; the
order mica therefore contains only such species as
present these properties, and, in a mineral which
the name of the genus is a compound name, formed by
connecting another word with the name of the order.
Thus we have lead glance, augite porphyr, iron pyrites.
The generic name also refers to the properties of the
genus, and expresses, as much as possible, some
striking feature of its resemblance with other bodies.
Such is the name garnet-blende. The genus design-
nated by this name belongs to the order blende; the
individuals which it contains very often look like
garnet. The denomination of the species is produced
by the nearer restriction of the generic name by an
adjective. The adjective with which the species is
designated within its genus is taken from its natural
properties, and in general refers to one of those pro-
erties of the species which is most useful in dis-
tinguishing it from other species of the same genus;
and hence the systems of crystallization and the relation
of the cleavage are the most frequently employed,—ex-
amples of which are hexahedral, prismatic, rhombohe-
dral, iron pyrites; rhombohedral, octahedral, dome-
cathedral, prismatic, iron ore, &c.

The great advantage of the systematic nomenclature is,
that the names produce an image of the objects to which they refer, which the trivial nomen-
cature, in which a single name is used for a whole
family of related objects, would introduce confusion.
It is impossible to bear in mind that the name perfectious titanium ore, and have only an idea
of the order ore, this at once will produce a general
image of the species, which will be still more restrict-
ed if we have some idea of the genus titanium ore;
but on the other hand, if we hear the name rutile, and
do not know the species itself to which it belongs, we
never can imagine any thing like a representation
of the object, though, for the rest, our knowledge of
mineralogy may be very extensive. The termino-
logy, the theory of the system, and the nomenclature,
form the constituents of theoretical mineralogy.
Practice, or the application of it to nature, requires
the characteristic, the object of which is, to furnish
us with the peculiar terms or marks, by which we are
able to distinguish objects from each other, so
far as they are comprehended in the ideas established
by the theory of the system. In order to find the
name of a mineral, when its properties are ascertained,
we can proceed by the following method. We take an
assemblage of general ideas, corresponding to the
system, and expressed by single distinctive marks.
With these ideas are connected the names and deno-
nimations as far as the nomenclature extends and
requires, not above the order, nor below the species;
and they are by degrees transferred to the individual,
in proportion as it enters within the compass of those
general ideas. The characteristic is only useful when
we have the mineral in our hands, and is not to be
studied to obtain a knowledge of the contents of the
mineral kingdom, since the characters of its classes,
orders, genera, and species of compounds, or the
diagram of the objects to which it refers. Physiography,
the last head of scientific mineralogy, consists of the
assemblage of the general descriptions, and is intended to produce a distinct
image of minerals. We cannot, by its assistance,
find the place of a given mineral in the system, or,
in other words, recognise it; for it is independent of
that connexion, among minerals, upon which the
system is founded. Mohs was the first writer who
drew the line between the determinative and the
descriptive parts of mineralogy—a distinction which
is of the utmost consequence to the perfection of the
science.

The foregoing heads or departments of mineralogy are all equally important and indispensable for con-
forming upon the science the character of a whole,
though, in the application of the science, the parts
are used separately, and, in many cases, the char-
acteristic of each other, according to the object in view.
Those who wish to determine an individual occurring in na-
ture, will find the characteristic the most important de-
partment, for neither of the others can be of the least
use to them; while those who intend to arrive at a
general conception of the species from knowing its
name, or one of the individuals belonging to it, will
find their views forwarded only by the physiography;
for neither the characteristic nor any other depart-
ment of mineralogy, contains any information an-
swering the purpose in view. Mineralogy, thus
developed, fulfills perfectly the demands which natural
history makes of its several departments. But it en-
ables us to answer no question which lies beyond the
limits of natural history. Nobody will ever be
able to infer from the mere natural-historical consi-
deration of a mineral, any thing with regard to its
chemical, geological, or economical properties. The
natural history system has its provinces exactly deter-
mined, within which it serves every purpose, but
admits of no application without; and these con-
comendable properties are conferred upon mineralogy,
as the natural history of the mineral kingdom, solely
by making it correspond to the philosophical idea of
a science. It consists merely in the determination of
the laws of its formation; i. e. such as proceeds from a comparison
of natural-historical properties, and all the rest is
foreign to it. The development of the whole, in its
single departments, is in itself systematical; and
what it contains of real systems, the systems of crys-

tallization, and the mineral system itself, really
deserve that name; because they are the results of
the application of one single idea to the whole
compass of a certain kind of information. The
science itself forms a whole, being intimately con-
ected in all its departments, and strictly separated
from all other sciences, which is a necessary conse-
quency of a systematic mode of treatment. The
method employed is so simple, that, on that very
account, it is immutable; nor can there be any doubt
that other methods, compounded of different princi-
plies, from the want of consistency prevailing in their
different departments, will finally also be reduced to
this method. For an account of the system of min-
elogy of Mohs, by presenting the reader with a list of the
genera, as represented in the translation of the Grund-
driss der Mineralogie, by Haidinger (Edin., 1825).

CLASS I.

ORDER I.—Gaz.

MINERALOGY—MINERVA.

MINERAL WATERS are those waters which contain a considerable proportion of foreign matter as to render them unfit for common use, and give them a sensible flavour and a specific action upon the animal economy. They are very various, both in their composition and temperature, and, of course, in their effect upon the system; they are generally, however, so far impregnated with acid or saline bodies as to derive from them their peculiarities, and are commonly divided into four classes: acidulous or carbonated, saline, chalybeate or ferruginous, and sulphureous. In regard to temperature, they are also divided into warm, or thermal, and cold. The substances which have been found in mineral waters are extremely numerous, but those which most frequently occur are oxygen, nitrogen, carbon and sulphur, in different combinations; lime, iron, magnesia, &c. Mineral waters are also divided into artificial and natural, the former being produced in the laboratories of the chemists, and sometimes merely imitations of the natural waters by a combination of the same ingredients, that is sometimes composed of different ingredients, or of the same in different proportions, in such a manner as to form compounds not known to exist in nature. The saline springs consist, in general, of salts of soda and lime, or of magnesia and lime, with carbonic acid and oxide of iron. The principal are those of Pyrmont, Sedilits, Epsom, &c. The ferruginous waters have a decided styptic taste, and are turned black by an infusion of gall-nuts. The iron is sometimes in the state of an oxide, held in solution by carbonic acid; sometimes exists as a sulphate, and sometimes both as a sulphate and carbonate; the waters of Vichy, Spa, Forges, Passy, Cheltenham, Tunbridge, Bedford, Pittsburgh, Yellow-Springs, in Ohio, Virginia, Pennsylvania, &c., are among them. The acidulous waters are characterized by an acid taste, and by the disengagement of fixed air. They contain five or six times their volume of carbonic acid gas; the salts which they contain are muriates and carbonates of lime and magnesia, carbonate and sulphate of sulphur, &c.; the waters of Buxton, Bristol, Vichy, Selts, New Lebanon, &c., are acidulous. The sulphureous waters are easily recognised by their disagreeable smell, their property of tarnishing silver and copper, &c.; the springs at Saratoga and Bullstown, Harrowgate, Moffat, Aix-la-Chapelle, Aix, and numerous others, are of this class MINERVA (called by the Greeks Μινέρβα, Minerva); one of the principal deities of the heathen Olympus, whose origin many mythologists derive from Egypt. According to the fable, Jupiter, having obtained the sovereignty of the skies by his victory over the Titans, chose Minerva, daughter of Ocean, for his wife. An oracle of Gorgon and Uranus had, however, predicted that Minerva would first bear him a daughter, and then a son, who should deprive him of the sovereignty. To avoid this, Jupiter endeavoured, by wiles and flattery, to get possession of her person, and then swallowed her with her yet unborn daugh-
ter. When the period of her delivery arrived, Jupi-
ter exposed at her birth a large stone in her head, and having caused Zevus to split open his skull, was astonished at the sight of a virgin in complete armour, who danced about with a warlike enthusiasm, brandishing her spear, and clashing her arms, as if on the point of attacking an enemy. In her character of a wise and prudent warrior, she was contrasted with the fierce, furious, and blood-thirsty Mars (Ares); and made her first appearance in the battles of the gods. In the wars of the giants, she slew Pallas and

Among the works on mineralogy, the following are worthy of notice: Traité de Mineralogie, par A. Bronquiniart (Paris, 1807); a Familiar Introduction to the Study of Crystallography, by Henry James Brooke (London, 1823); an Elementary Introduction to the Knowledge of Mineralogy, &c., by William Phillips (London, 1823); Handbuch der Mineralogie, von C. A. S. Hoffmann (Freiberg, 1811, and continued by A. Breithaupt); Mohs' System of Mineralogy, translated by William Haidinger (Edinburgh, 1825); Traité de Crystallographie, par M. l'Abbé Hardy (Paris, 1829); Traité de Mineralogie, par M. l'Abbé Hardy (Paris, 1822); Handbuch der Oryktognosie, von Karl César von Lowandt (Heidelberg, 1820); Brewster's Treatise on Mineralogy (Edinburgh, 1827); Die Mineralogie der A. Hartmann (Imlatun, 1829). The only considerable work upon the science which has as yet appeared in the United States of America, is that of professor Cleveland, and which was founded, for the most part, on the systems of Brongniart and Hailly.
Eucædus. In the wars of mortals, she aids and protects heroes. She conducted Hercules to Olympus, instructed Hellephon (see Hippopotam) how to tame Pegasus, and conquer the Chimera, accompanied him on his adventures, and conferred immortality on Tydeus, honoured Achilles, accompanied Ulysses, protected his wife, and guided his son Telemachus under the figure of Mentor. She also favoured the inventors of warlike instruments, built the Argo, and taught Epeus to construct the wooden horse, by means of which Troy was captured. She is likewise represented as the goddess of the arts of peace; and, as a virgin, is distinguished for her skill in all the employments, in which, in the heroic age, the daughters of kings occupied themselves. The loom, the spindle, the embroidering needle, are her attributes; and, as the wives of the heroes prepared the garments of their households, so she made the dresses of the goddesses; hence her epithet Ergane. Skilful artists were, therefore, under her protection, though she would not tolerate any marks of pride. (See Arachne.) All the peaceful arts which display an active and inventive spirit, form part of her attributes and the painter, as well as the philosopher, the orator and the poet, considered her their tutelary deity. As bodily health is necessary to the successful exertion of the inventive powers of the mind, she is also represented among the healing gods, and in this character is called Peonion. In all these representations she is the symbol of the thinking faculty, the goddess of wisdom, science, and art; the latter, however, only, in so far as invention and thought are comprehended. Athens, the city of the arts and sciences, was her favourite residence. She is also styled the inventress of the flute; but having seen, in a fountain, how much the players upon that instrument distorted her face, she threw it into the water, with maledictions on the person who should take it out. Marsyas suffered the effects of this malediction. Despising love, she consecrated herself to perpetual virginity; and the unhappy wretch, who directed towards her a glance of desire, suffered the severest penalties for his rashness. Tiresias, who surprised her in the bath, was struck blind.

The arts have imbibed this conception of pure reason in the images of the goddess. A manly gravity, and an air of reflection, is united with female beauty in her features. As a warrior, she is represented as wearing a chiton, a tunic, with a gold helmet, from which streams a crest of horsehair, her hand bearing her lance, and her body marked with the armour of her father. As the goddess of peaceful arts, she appears in the dress of a Grecian matron. To her attributes belong, also, the Eleusis, the Gorgon's head, the round Argive buckler, and the owl, as the symbol of vigilance (on coûs, the cock). As the preserver of health, she is also represented as feeding a dragon, and the olive-branch is a symbol of the peaceful commerce, which is rendered prosperous through her favour. An Athenian tradition relates that Neptune and Minerva (above) once contended which should have the north to their city; the gods, to decide the dispute, declared that it should be called from the one who should produce the most useful gift for the human race. Neptune, therefore, struck the ground with his trident, and the war-horse sprang forth; Minerva threw her spear, which created a sprout of olive, and the peaceful olive-tree. Her present was determined to be the most salutary, and the city received her name. All Attica, but particularly Athens, was sacred to her, and she had numerous temples there. (See Parthenon.) Her most brilliant festival at Athens was the Panathenææ. Another festival was

MINERVA—MINIATURE PAINTING. S31

the solemn washing of her statues at Athens, and more particularly at Argos, which was done yearly in running water, by the hands of virgins. The Romans worshipped her at first only as the goddess of war (Bellona), being afterwards accounted one of the guardian gods of Rome. The principal temple in the capital was dedicated to her, in common with Jupiter and Juno, and a yearly festival was observed in honour of her, which continued five days (Quinquatria).

MINGOTTI, CATHARINE, an eminent singer, born in Naples in 1757, daughter of a great Armenian. Tartar of her father, who was in the Austrian military service, Catharine entered an Ursuline convent. The music made such an impression upon her, that she implored the nuns, with tears, to allow her to receive musical instruction, that she might be able to accompany the choir; her request was granted. At the age of fourteen she returned to her mother, and some years after married Mingotti, a Venetian, who had the direction of the opera at Dresden. On her first appearance in Dresden, she attracted general admiration, and Porpora (q. v.), who was then in the King's employ, procured her an engagement at the theatre. Her reputation soon extended to all Europe, and she was engaged to sing at the grand opera in Naples, where she was received with divided applause. On her return to Dresden, in 1748, Hassa was at the head of the chapel, and endeavoured to place difficulties in her way, which she escaped with such success as to silence her enemies, and even Enaesta. In 1751, she went to Spain, under the direction of Farinelli, visited Paris and London in 1754, and afterwards the different cities of Italy, but always considered Dresden as her home during the life of Augustus. After his death, she resided at Munich. She died in 1807. Mingotti spoke German, French, and Italian, with elegance, and English with ease, and understood Latin. Her style of singing was grand and dramatic, and such as discovered her to be a perfect mistress of her art. She was a judicious actress, her intelligence extending to the poetry, decorations, and every part of the drama.

MINGRELIA; an Asiatic province of Russia, bounded north by the Caucasus, which separates it from Circassia, west by the Black sea, south by Guria, and east by Imereti. It is in general mountainous, with a fertile soil, producing excellent fruits. Wine, honey, silk, and women are the chief articles of commerce. The population is composed of about 14,000 families of Georgians, and 4,000 families of Jews. The Greek church is the predominant religion. The inhabitants are divided into three distinct castes, the Dechiani, or that of princes, the Sekour, or nobles, and the Monial, or commons; the last are the cultivators of the soil. Mingrelia is governed by a prince, called the Indien, who, in 1803, declared himself the vassal of Russia. In 1813, Persia renounced all claims of sovereignty over it, in favour of Russia.

MINHO, or, in Spanish, Mino (Minho), a river of Spain and Portugal, which rises near Mondoney, among the mountains in the north of Galicia, crosses that province north and south, and forms the frontier at the frontiers of Portugal, where it takes a western direction, and forms the boundary between the two kingdoms. It flows into the Atlantic at Guardia. It is only navigable to a small distance for boats, on account of the sand-banks. It gives its name to the northernmost province of Portugal, called Entre Deuro e Minho, remarkable for its fertility and delightful climate, of which Braga is the capital, and Oporto the principal port. See Portugal.

MINIATURE PAINTING; that branch of painting, in water colours, in which the colours are put on by the mere point of the brush. It differs from other
kinds of painting in being much finer, and therefore must be looked at near, so that it is used to represent subjects on a small scale, commonly on vellum or ivory. Hence the name miniature painting, for the smallest kind. The ground of the vellum or ivory is much tinted, and painted on both sides; the vellum is used for the heads and the ivory for the bodies. It is possible to have no white colouring matter at all, supplying its place entirely by this ground. The best colours are those which have the least body, as carmine, ultramarine, &c., which are dissolved in water, and then separated and dried. Miniature painting requires much more time on account of the painted lightness of which it consists, which must be delicately put on, so near each other that they appear as one continued colour. As early as the ninth and tenth centuries, miniature pictures are found as ornaments of manuscripts in Italy, France and Germany.—See Rive's Essai sur l'Art de vérifier l'Age des Miniatures peintes dans les Manuscrits (Paris, 1782). In general this kind of painting was an occupation of the monks; and as the art was called illuminare, so the artists received the names illuminatores, or miniatures, because they used for the ornaments of the manuscripts the red colour, minimum, more than any other; hence the name minimum painting. This branch of art flourished particularly in the fourteenth century, under Charles V. in France, and reached still greater perfection under Charles VIII. and Louis XII., but sank after the invention of printing, and of paper, and the rise of the art of engraving. In modern times, it has been employed chiefly for portrait painting. Among the distinguished miniature painters deceased are Mengs, Chodowiecki, Füger, Westermann, Nixon, and Shelly.

MINIM; a character or note, equal in duration to the sixteenth part of a large, one eighth of a long, one fourth of a breve, and one half of a semibreve.

MINIM PARS (from minimi, Latin, least), brethren of St. Francis at Paula (whence they are called also Paulini, or Pauliani), an order instituted in the middle of the fifteenth century, who have established convents in most European countries since 1493. They owe their reputation of particular sanctity to their rigorous fasting, as they are not allowed to touch anything but water in Lent; their dress is black, and, like that of the Franciscans, provided with a sc萌ue. Their life is dedicated entirely to solitary devotion. They belong to the mendicant orders, and possessed, in the eighteenth century, 460 convents in thirty provinces. In 1815, Ferdinand IV. of Naples restored to them their original convent. (See Francis of Paula.) In the Neapolitan territory, they are called Paolotti.

MINION (from the French mignon, adjective and substantive); a favourite, on whom benefits are undeservedly lavished.

In typography, minion signifies a certain kind of type. "Why," says Johnson, in his Dictionary, "is this letter was denominated minion, we have not yet been informed; probably it was held in great estimation on its first introduction, and consequently received the title minion [daring]." In size, it is between nonpareil and brevier; as, for instance, is used for the title of a foreign emperor (see Med. State, Foreign.) In Britain, the words ministry and ministers are used as collective names for the heads of departments, but the individual members are not so designated. In the United States of America, the heads of the departments are called secretaries, but are not termed ministers. In most large countries we find a minister for foreign affairs (whose duties are included in those of the secretary of state in the United States), a minister of the interior (in England, secretary of state), and a minister of foreign affairs. In the United States there is no such department, and the secretary of state has charge of the affairs which would fall to such minister. The minister of the interior has the management of all domestic affairs, roads, canals, &c., levying taxes (in many cases); in short, every thing which does not belong to the other departments; and it may easily be imagined how the importance of this department varies, as the government is more or less absolute, and disposed to exercise a more or less minute control over its subjects. In Prussia, where the government interferes in all the concerns of life, the minister of the interior is a most important person. On the continent of Europe, where the judiciary is considered a branch of the executive administration, there is always a minister of justice, whose office is incompatible with the independence of the judiciary and with the whole idea of the administration of justice entertained in Britain and America. (See Law.) In every country, the highest judge, the lord high chancellor, is a member of the ministry.) There is, further, a minister of finance (in Britain, the chancellor of the exchequer; in the United States, the secretary of the treasury). In some states there is, besides the minister of finance, a minister of the treasury. There is also a minister or secretary of war, and in maritime states, a minister or secretary of the navy, and sometimes a minister for the colonies. There is often a separate minister of commerce (in Britain, the president of the board of trade); a minister of the police (first established by the directory in France). In many countries on the continent, where the idea of a well regulated government is unhappily confounded with a concentration of all powers in a few individuals, there is, also, a minister of public worship, who has the direction of all ecclesiastical affairs. This department, though it also exists in Catholic countries, as in France, yet has received the greatest discredit from all the great and wise men of the church. Their dress is black, and, like that of the Franciscans, provided with a scumble. Their life is dedicated entirely to solitary devotion. They belong to the mendicant orders, and possessed, in the eighteenth century, 460 convents in thirty provinces. In 1815, Ferdinand IV. of Naples restored to them their original convent. (See Francis of Paula.) In the Neapolitan territory, they are called Paolotti. In the former class of governments, each minister is a sort of viceroy in his department. One of these ministers is, in many countries, prime minister, or premier, who, in constitutional monarchies, is considered as the chief person in the administration. Sometimes he has no particular department. In France, he is called minister president. In Britain, the prime-minister is the one who receives the king's order to form a ministry, and therefore to appoint men of his own sentiments. He is generally the first lord of the treasury. In some countries, there is also, a president of the minister, who, in many points, corresponds to the premier of a constitutional monarchy. The British king's cabinet
MINISTER—MINISTERS.

ministers vary somewhat: under lord Melbourne, they are the following: 1. First lord of the treasury; 2. lord high chancellor; 3. chancellor of the exchequer; 4. secretary of state for foreign affairs; 5. secretary of state for the colonial department; 6. secretary of state for the home department; 7. president of the board of control; 8. lord high admiral; 9. first lord of the admiralty; 10. president of the board of control; 11. paymaster of the forces; 12. secretary at war; 13. chancellor of the duchy of Lancaster. The French ministry consists of, 1. the minister of the interior; 2. minister of finance; 3. keeper of the seals, minister of instruction and public instruction and ecclesiastical affairs; 5. minister of commerce and public works; 6. minister of the marine and colonies; 7. minister of war; 8. minister of foreign affairs. The American cabinet consists of the secretaries of state (foreign and home affairs), of the treasury, of war, and of the navy. The attorney-general, and sometimes also the postmaster-general, are members of the cabinet. The chief-justice of the supreme court of the United States is never a member of the cabinet. He is merely a judicial officer, and not removable, except by impeachment. The lord high chancellor is the only original and principal officer of state. In France and Britain, the members are appointed solely by the king; in the United States, the concur- rence of the senate is necessary for the appointment of the secretaries, and all other officers nominated by the president. No case, however, has yet existed in which the senate has refused to concur in the ap- pointment of the secretaries, because it has been thought unfair to deny the president the choice of his own cabinet, as all the responsibility rests upon him. The modern idea of constitutional monar- chies, in which two most heterogeneous prin- ciples, the irresponsibility of the law, and that of the monarch, who thus stands above the law, were to be reconciled, produced a skilful contrivance—the responsibility of ministers—in order to leave the inviolability of the monarch uninfringed, and yet to put a check upon the arbitrary use of his power. Europe owes this development of constitutional law, as most of the improvements in her political institu- tions, to England. One or more ministers in France and Britain (and many other countries) countersign the royal orders, and by thus doing become responsible for the contents. This responsi- bility is always a delicate thing, because it is impos- sible to define exactly what constitutes monar- chieal responsibility and a violation of the public interest; and, hard as it may appear in the abstract, the ques- tion must be left to the houses of legislation to decide, in case of an impeachment of the ministers. In gen- eral, however, there is little danger of the ministers being impeached, except for very flagrant violations of law, or in times of very violent party spirit. Peculation also forms a ground of impeachment. In the United States of America, no such responsibility rests on the secretaries, nor is their countersign requisiste, for the simple reason that the president himself is answerable for every thing which he does, and may be impeached. (See Impeachment.) Though the constitutional monarch has the full right to appoint and discharge his ministers according to pleasure, he is, nevertheless, obliged to appoint such as will satisfy public opinion, or the legislature will not, in general, be willing to supply the funds necessary for the administration. This denial to grant sup- plies, which is the great support of the people against the government, was called, some time ago, in France, an outrageous interference with the king's prerogatives. In Britain, the command of a majo- rity in the houses has become indispensable for the ministers, so that the loss of a bill brought in by them is regularly followed by the resignation of the premier. This applies, however, only to what are denominated cabinet questions, in respect to which it is considered necessary that the ministry should be united. Where a difference of opinion is openly pro- pounded by the ministers themselves, the question is not a cabinet question, and the failure of a bill pro- posed by a minister respecting it is not considered fatal to the administration. Thus the Catholic ema- nicipation was for a long time not a cabinet question; and when Canning lost his bill, in 1827, he, nevertheless, did not give in his resignation. The situa- tion of the constitutional monarchs is also much more complex, and many other reasons in the organization of the governments of those countries render it neces- sary for the ministers to be present at the parlia- mentary debates, and to support their measures: in fact, one member of the cabinet, the lord high chan- cellor, is, ex officio, president of the house of lords. In Britain, those of the ministry who are peers sit in the house of lords; the others sit in the house of commons, in virtue of being elected members; but it is considered indispensable that they should be there. They could not be admitted into the house except as members. The cabinet consists of the house of lords: Pitt and Canning, who were com- moners, sat in the commons. In France, the mini- sters are also generally members of one or the other house, but they need not be members, because the constitution gives them the right of being heard in either house, by virtue of their office. The ministers have their bench in France. In the United States of America, no secretary can sit in either house, as the constitution prohibits any officer of government from being chosen a representative or senator. In Russia, the cabinet is different from the ministry. The former has the management of the emperor's private affairs and of foreign politics, and its members are called cabinet ministers; the members of the mini- stry, so called, are termed state ministers. Some governments have also conference ministers, who have no real departments. The love of titles has produced a great mixture of the designations in different countries. In France, it is formal cus- tomary to appoint an ex-minister of state, with a pension. Those who were ministers of state before the revolution of 1830, have remained so; but the ex-ministers, since 1830, have returned to their private stations. In Belgium, the privy council is to be distinguished from the ministry, which the former con- tains a very large number of members.

MINISTERS, FOREIGN. In the article Diplomacy, some account has been given of the history of embassies; it remains here to speak of the different classes of foreign ministers as they now exist. Every person sent from one sovereign government to another, and accredited to the latter, in order to transact public business, of a transient or permanent character, in the name of his government, with that to which he is sent, is a foreign minister. Sometimes such ministers are sent merely to be pre- sent at the coronation of a foreign prince; sometimes to settle disputed points; at other times to reside permanently with the foreign government. Generally, they are divided into three classes. Those of the first class, called ambassadors, are not merely the agents of their government, but represent their sovereign personally and absolutely, and enjoy privileges accordingly. The English, French, Spanish, Russian, Austrian governments send am- bassadors to each other; the Prussian government does not send ministers of this rank. The second class are those called by the joint title of envoy extraordinary and minister plenipotentiary; they
represent their government. The third class consists of the ministers resident (ministres résidens, ministres chargés d'affaires), to whom less honour is generally paid. They, however, like the former, are styled by courtesy excellency. Of still lower rank are the consuls, agents, residents; and with the regulations adopted by the congress of Vienna, the number of classes has been reduced, so that there are at present only ambassadors, envoy extraordinary, and ministers plenipotentiary, and chargés d'affaires. Persons who are sent merely to conduct the private affairs of their monarch or his subjects in a foreign place, and have consequently no special function except for their capacity as a private person, are called consuls. (q. v.) They are not considered diplomatic persons, and do not enjoy privileges accordingly. The legati a latere (q. v.) enjoy the privileges and honours of ambassadors.

Ambassadors and even ministers plenipotentiary have young gentlemen with them, called attachés, who have no particular charge, but merely this title to connect them with the legation, and to give them thus admission into the highest society. Sometimes they are sons of noble families, who are preparing themselves for diplomatic offices, but think it better to acquire dignity and appointment as secretary of legation. The suite of ambassadors always includes more individuals than the business of the embassy requires, a certain degree of pomp being considered necessary. An ambassador has generally three, always two secretaries of legation; other ministers often but one. A foreign minister receives letters of credence alone at court, which, after having delivered an attested copy of it to the secretary of state, he gives himself to the monarch, or head of the government, if he is an ambassador, in a public audience, if not, in a private audience. After the reception of the credentials, the minister is said to be acknowledged. In some countries, he puts the arms of his nation or sovereign on his mansion. After his credentials have been received, he makes formal visits to the other ambassadors, to be recognised by them as such. From the moment that a minister enters the territory of the sovereign to whom he is sent, his person is held sacred and inviolable, and a number of privileges ensue. Among these, first of all, his freedom from territorial restrictions; that is, he is not regarded as an inhabitant of the country, but his person, suite, house, equipage, &c., are considered as never having left the country to which he belongs, and as being without the jurisdiction of that in which he actually resides. From this follows the freedom of foreign ministers from the civil and criminal law; and the same applies to their suite; and all property belonging to him as minister is free from all taxes, &c. No common police-officer, tax-gatherer, or other public servant, can enter his hotel, and make inquisition, as in the house of a private citizen. But whether his hotel shall be a place of refuge for fugitives, and whether the delivery of them may be refused to the state-officers, are questions equally doubtful and important. The privilege formerly appertaining to ambassadors, by means of which, upon hanging up the arms of their sovereign, they could exempt from the law of the country whose quarter they were in, every city in which their hotel happened to stand, is abolished as an abuse. The freedom from taxes of all property belonging to the embassy has been subjected to many restrictions, in consequence of the occurrence of abuses of this privilege. Foreign ministers are not exempt from the customs and turnpike tolls, or letters-fourmis. But the chief privilege is that of worshipping according to the forms of their own religion in countries where their religion is not tolerated. In transacting business, they sometimes have immediate intercourse with the sovereign himself, and then address him in a private audience orally, or by the delivery of memorials; but more commonly their intercourse is through the minister extraordinary. This state of things continues, and exists till the termination of the embassy, which may occur in different ways, either by the expiration of the term of the credentials, by a recall, by a voluntary or compulsory departure, or by the decease of the minister. A recall occurs when the object of the embassy is obtained or defeated; sometimes it takes place in consequence of an appointment in the service, sometimes from private reasons. A minister often voluntarily leaves a court, without being recalled, when he thinks he suffers personal injuries, contrary to the laws of nations. There are cases, however, in which a minister is compelled to leave a court, when it is termed a removal. In general, an embassy is considered as ended from the moment when the minister shows his letters of recall, or receives his passports for his journey home. When these are furnished him, he must leave the country, but his person remains inviolable even in case of war, and he is allowed to retire un molested. The Ottoman Porte alone has not chosen to follow this regulation, since it imprisons in the Seven Towers the ministers of states with which any misunderstanding happens to occur. At the peace with Russia, however, in 1813, it engaged never to exercise this power for the future upon Russian ambassadors. The same inviolability of person is enjoyed in the other European states, always in time of peace, by couriers and express, as also by persons who, without any public character as envoys, are intrusted by their governments with the transaction of affairs of importance, and requiring secrecy and dispatch, but these are not allowed to assume the state of a minister, and, in their relations to other citizens, are regarded as private persons merely. All these regulations have naturally been introduced among the European powers since the establishment of the permanent residence of foreign ministers, that is, since the peace of Westphalia. Republics do not send ambassadors, in the European sense of the word. Venice, and the other Republics of Italy, the United States send only ministers plenipotentiary and chargés d'affaires, although the constitution uses the term ambassador. Prussia alone, among the principal European powers, neither sends nor receives ambassadors. A history of European diplomacy, since the peace of Westphalia, would be a very important work, in regard to politics, national law, and the progress of civilization, and is still a desideratum. Fiasson has made some excellent contributions towards it. A useful work, and one which gives instruction and examples in regard to all the relations and objects of embassies, is the Manuel diplomatique, ou Précis des Droits et des Fonctions des Ambassadeurs diplomatiques, suivis d'un Recueil d'Actes et d'Offices, pour servir de Guide aux Personnes qui se destinent à la Carrière politique, by Charles von Martens (Leipsic, 1822). The law of European embassies has been particularly treated of by F. von Moscham (Lambach, 1800).

MINCK. Mink. (Mustela). — The European mink (M. lutreola) inhabits the northern parts of Europe, and lives on the banks of streams, feeding on frogs, crabs, birds, &c. It is of a brownish-red colour. It has a strong musky smell, and its fur is very fine. The animal known in America under the name of mink is so similar to the European quadraped of the same name, that they have been generally confounded with each other. The common name of both species is derived from the Swedish munk. The American mink is
MINNESINGERS—MINOT.

835

the M. vison of naturalists, and is generally to be
found on the banks of streams, especially near farm-
houses and their gardens, and lives in cold, and can
remain under water for a considerable time. It
preys upon small fish, muscles, &c., but also commits
depredations on the poultry yard, and will devour
rats, mice, &c. The mink, when irritated, exhales
a very fetid smell, almost equal to that of the skunk. It
is usually found living attached to the mem-
ment, but, like the cat kind, is readily offended, and
will bite on a sudden provocation. The fur is of little
value.

MINNESINGERS. The ancient German word
minne was used originally to denote love and friend-
ship, even divine love. At a later period the Ger-
man poets of the middle ages expressed it
particularly a pure, faithful, and generally happy
love between the two sexes. Walther von der
Vogelweide distinguishes the high from the low
minne (a distinction similar to that of the ancients),
and defines the former to be, the happiness of two
hearts which give and receive equal bliss. Love,
the vital element of chivalry, was with the German
poets something purer, more ideal, more deep, than
with the French. The name minnesingers is given
to the lyric German poets of the middle ages in
general, on account of love being the chief subject
of their compositions. But the name is not always
accurate, because the Swabian dialect prevails in their
poems. At the beginning of the twelfth century, when
the art of poetry came from the south of France to Ger-
many, it found a welcome reception at the court of
the Hohenstaufen (q.v.), the Swabian emperors
of Germany. The minnesingers were knights, or at
least men of noble descent, who lived and sang
at the courts of princes who loved and protected
the arts, such as the emperor Frederick II., the
duke Leopold IV. of Austria, king Wenceslaus of
Bohemia, duke Henry of Breslau, and others. After
the fashion of the Provençal Troubadours, the min-
nesingers engaged in poetical contests for the grati-

cation of princes and ladies of the court. Some
among them were poor, and earned their living by
reciting their songs from court to court; but most of
them sang merely for pleasure when their swords
were unemployed. Not a few princes took part in
these games, as chivalric, and, and
breathes the romantic spirit of that extraordinary
age. Glowing devotion to the virgin Mary and the
Catholic religion; ideal love for a chosen lady; the
charms of spring, always so intimately connected
with romantic and lyric poetry—these formed the
constant subjects of the verse. Every poet sang his
compositions and accompanied himself them. The
most extensive collection of these smaller poems
which we possess, and which contains from 1400
to 1500 pieces by 140 poets, was collected by the burg-
master of Zurich, Rudiger von Manesse, in the
beginning of the fourteenth century; at the close,
therefore, of the flourishing species of
poetry. (See Manesse.) L. Tieck has published
220 poems, modernized from that great collection,
under the title of Minnelieder aus dem Schwabischen
Zeitalter (Berlin, 1800). There is a new critical
edition by Von der Hagen. The earliest of the min-
nesingers was known Henry of Veilkeck, who flour-
ished about 1180. Most of the distinguished ones lived
through the end of the twelfth and at the beginning
of the thirteenth centuries. Towards the end of
the thirteenth century, after the close of which they
gradually became silent, lived Conrad of Wurzburg and
John Haller. (For the epic poetry of Germany in
the same age, see Wikinger, Heldendichtung,
and Minnesinger Poetry.) The knights sank once more back
to almost total barbarism, and poetry fled into the cities,
where it was cultivated by mechanics in a mechan-
cal way. See Mastersingers, also Chivalry, and Min-
street.

MINNOW; the name applied to several species
of small fresh-water fish, and even to the young of
larger kinds. The minnow of England, is a small
Cyprinus. Taking these fish is one of the favourite
amusements of children. This first essay in angling
is generally performed with a bented pin, baited
with a small earth-worm. The word minnow is de-

erived from the French menu, small.

MINOR; the Latin for less, used in contradistinc-
tion to major, as Asia Minor, minor excommunication,
mor offences.

MINOR, in logic. See Syllogism.

MINORATE; the contrary of majorate, i.e. the
privilege of the youngest son to inherit the real estate
of the father, with the obligation, however, to pay
a certain sum to his brothers and sisters. This is
actually the custom in some places of Germany.

MINORCA; an island in the Mediterranean, be-
 longing to Spain, one of those anciently called Bal-
 darses (q.v.), about thirty miles in length, and about
ten in breadth; 30 E. N. E. Majorca. (q. v.)
The surface is uneven, the soil not generally fertile, the
water scarce and hard, the air moist. Some wine is
exported, but the quantity of grain is not sufficient
for the inhabitants. The hills give little importance to the
valuable port of Port Mahon. (q. v.) One of the most profitable commodities
of the country is salt. Population, 44,167; square miles,
240; lon. 4° 10' E.; lat. 39° 59' N.

MINORITES. See Franciscans.

MINORITY, in law; the age of minors. Accord-
ing to the Roman law, full age takes place, with both
sexes, at the 25th year; in Prussia, at the 24th; in
France, Saxony, England, and the United States of
America, at the 21st. Monarchs, in almost all coun-
tries, come of age much sooner than other persons,
very often in their 18th year. The golden bull de-

clarates the German electors of age at 18. See Age;
and, for minority in the English law, see Infant.

MINOS: 1. A king of the island of Crete, who lived about
1406 B. C., and is not to be confounded with his
grandson of the same name. He is celebrated as a wise
lawgiver, and for his care of the chivalry and the
beasts of the island. (Cf. The Cretan, a remarkable and powerful, by union and
military spirit, he obliged them often to eat in com-
mon, and constantly exercised them in military duties.
Tradition has adorned the history of this king with
various additions. According to it, he was a son of
Europa and Jupiter, from whom, every nine years,
he received his laws in a cavern on mount Ida. After
his death, Minos was made with Aëacus and Rhadam-
thaus, a judge in the infernal world. All three
sat at the entrance to the kingdom of shades. Min-
os, as the chief justice, delivered the sentence.

2. A grandson of the preceding, who also ruled
over Crete, and was husband of Pasiphae, whose unnatural passion gave birth to the Minotaur.

MINOT, GEORGE RICHARD, an American histo-
rian, was born at Boston, in December, 1758, and
completed his studies at Harvard college. He
embraced the profession of the law which he practi-
cised with much credit. In 1792, he was appointed
judge of probate for the county of Suffolk, Mas-
achusetts. Judge Minot cultivated, successfully,
literature and science. He was one of the founders
of the Massachusetts historical society. He pub-
ished a very interesting narrative of the inscription
in Massachusetts, in 1789, and various other orations which
he pronounced in public; but his chief production is
a valuable Continuation (in 2 vols.) of Hutchinson's

3 0 2
History of Massachusetts. He died in January, 1802. A full account of his labours and character is contained in the eighth volume of the Collections of the Massachusetts Historical Society.

MINOTAUR. Fable makes this being the son of Pasiphae and a bull, and ascribes to him the body of a man with the head of a bull. He ate human flesh, on which account Minos confined him in the labyrinth built by Daedalus, and at first exposed to him criminals, but afterwards the youths and maidens yearly sent from Athens as a tribute, until at length Theseus, who was comprehended among the youths, and was to be sacrificed to the monster, killed him, and freed the Athenians from this tribute.

MINSTER (Anglo-Saxon, Mynster, from monasterium) anciently signified the church of a monastery or convent, afterwards a cathedral. In German, the word is written Münster. Both in German and English, this title is given to several large cathedrals, as, York minster, the minster of Strasburg, &c. It is also found in the names of several places, which owe their origin or celebrity to a monastery, as, Westminister, Leominster, &c.

MINSTREL (French, mend'estril, from ministeri-alis, a minstrel) was introduced into England by the Normans, and which comprehended singers and performers of instrumental music, together with jugglers, dancers, sleight-of-hand performers, and other similar persons, whose trade it was to amuse the great. The character of the minstrels differed much at different periods; and while we find them, at one time, the friends and favourites of princes, we see them again, in the reign of queen Elizabeth, clasped with beggars and vagabonds, and forbidden to exercise their trade. The minstrels often sang the compositions of others, but they were often the authors of the poems which they recited. See Percy's and Ritson's works on minstrelsy; see, also, the articles Minnesingers, and Troubadours.

MINT (mentha); a genus of labiate plants, distinguished, however, by having the corolla divided into four nearly equal lobes. The stamens are four, two of them longer than the others. The species are herbaceous, nearly all perennial, having square stems, leaves heart-shaped and simple leaves; the flowers are small, verticillate, collected into bunches in the axils of the leaves. Sixty species are known, all growing in temperate climates, and most of them European. They abound in resinous dots, which contain an essential oil. They have an agreeable odour, and have been celebrated, from remote antiquity, both in mythology and from their useful qualities. They partake, in the highest degree, of the tonic and stimulating properties which are found in all labiate plants. To the taste they are bitter, aromatic, and pungent. The M. piperita, or pepper-mint, is the most powerful, and, on this account, it is most generally employed in medicine. The M. viridis, or spearmint, is in general milder, and very commonly employed for culinary purposes.

MINT; a place where money is coined by public authority. In Great Britain there was formerly a mint, in almost every county; but the privilege of coining is now a royal prerogative here, and the only mint now in Great Britain is at the Tower of London. Coining among the ancients, and, indeed, among the moderns till within the last 280 years, appears to have been very rudely and imperfectly performed, by placing the blank piece of money between two dies, or steel punches, containing the design of the coin, and striking upon the upper one with a hammer. This hammer-money is always imperfect, from the uncertainty of placing the two dies exactly over each other, and also from the improbability of a man being able to strike a blow with such force as to make all parts of the impression equally perfect. The coinage-press, or mill, is of French origin, and is generally said to have been first tried in the palace of Henry II. of France, in 1550 or 1553. It continued in use till 1583, when Henry III. re-established the hammer-coining, on account of its superior cheapness. The mill, or press, was introduced from France into England in 1562, in the reign of Elizabeth; but, after about ten years, it was given up for the same reason as in France. In France, it was re-established completely in 1645, by Louis XIV. In 1693, it was established anew in England, by Briot, a French artist. It was used there, alternately with the hammer, for forty years. Under Charles II., in 1662, it obtained the complete ascendency, and has remained in use ever since. For an account of the method of coining, see the article Coinage.

MINTARIES, or MINETARIES (called also, the Big-Bellies); a tribe of Indians, in the northern part of the Missouri Territory. See Indians, American.

MINUCIUS FELIX (Marcæ); a native of Africa, who, about the close of the second and the commencement of the third centuries of the Christian era, attained to a considerable degree of reputation at Rome as a rhetorician. He was a Christian, and wrote a dialogue in defence of his religion, entitled Octavius, of which Jerome and Lactantius speak highly. This work, however, was long considered to be the composition of Abarnobius, till in 1650, Baudouin restored it to its real author. Another treatise, De Fato, has also been ascribed to him; but from the difference of style which it exhibits, when compared with the other work, some doubts are entertained as to its authenticity. There are two English translations of the Octavius.

MINUET (French, menuet); a French dance, in slow time, which requires great grace and dignity of carriage. It was, therefore, considered as the touchstone of an elegant dancer, and is admirably adapted to cultivate ease and grace of motion. It was the favourite dance in the time of Louis XIV., but has since been supplanted by contre-dances, quadrilles, &c. According to Brossard, the minuet was originally derived from the Jansen, a dance usually performed in a quicker motion. According to Schulart, Lully (1603 to 1687) was the inventor of the minuet, and Louis XIV. is said to have danced the first in 1660, at Versailles. The name is derived from menu (little), on account of its short measured steps.

MINUTE; a division of time, and of angular measure. The degree is divided into sixty minutes. The divisions of degrees are fractions, whose denominators increase in a sexagesimal ratio; that is, a minute is $\frac{1}{60}$, or second $\frac{1}{3600}$, &c., of a degree. Minutes are expressed by acute accents thus; the seconds by two'; the thirds by three"'. In the computation of time, a minute is the sixtieth part of an hour.

MINY; 1. The Argonauts were so called, either because the bravest of their number were descended from Minyas, or because they were natives of the land of the Minyas, who had occupied the country from the solstices to the Orchenomus. The name was used by Homer for Argos, and was subsequently applied to the two brothers, the sons of Minyas.

2. A people of Boeotia, near Orchomenus. Their state was, at an early period, powerful, and was founded by a Pelasgic tribe. They derive their name from Minyas, one of their kings, whose father, Orchenomus, built the city of that name.—See Müller's Orchenomus und die Minyer (Gottingen, 1829).

MIQUELETS; the inhabitants of the Southern Pyrenees, in Catalonia, and in the French depart-
ments of the Upper and Eastern Pyrenees, on the heights of the chain of mountains which forms the boundary between France and Spain. They are mostly peasants, a poor, coak-burners, &c. They are warlike, and inclined to plunder. They also accompany travellers on the mountain-passes, and receive high pay for their protection. In war, they are dangerous partisans, who often descend into France in troops. In the war with Napoleon, they made themselves formidable to the French troops in Catalonia.

MIQUELON; an island in the Atlantic ocean, near the southern coast of Newfoundland, belonging to France; lat. 47° 4' N.; lon. 50° 20' W. To the south of it lies Little Miquelon (Petite Miquelon), which, since 1783, has been connected with it by a sand-bank. These islands are under the direction of the commandant of St Pierre (see Pierre, St), and are occupied only by a few families engaged in the fisheries.

MIRABEAU, HONORE GABRIEL RICQUETTI, count of, so famous for his influence in the French revolution, was born March 13, 1749, at Drancy, in Provence, and died at Paris, April 2, 1791. He sprang from a celebrated family. Nature gave him violent passions and a robust frame. Education might have made him a truly great man; but the propensities of his genius were checked, and the development of his energies perverted. When fourteen years of age, he entered a military boarding school, where he studied mathematics, made some progress in music and drawing, and became a proficient in bodily exercises. But as his moral education was entirely neglected, the most vehement passions grew with his growth. While yet a boy, he published an eulogy on the great Condé, and some pieces in verse. On leaving school, he entered the military service; and his intercourse with young and dissipated officers made him familiar with all their vices. His active mind, however, could not remain idle, and he read all the books which he could procure on the military art. He also fell in love; and his passion was marked by all the impetuosity of his character. His father, who systematically thwarted his inclinations, now procured his confinement in a fortress on the island of Ré. He was even on the point of having him sent to the Dutch colonies. But the friends of the family succeeded in obtaining his release. This display of the paternal power decided the son's hatred of despotism. After his liberation, he went, as a volunteer, to Corsica. He distinguished himself, and obtained a commission as captain of dragons; but as his father refused to purchase him a regiment, he abandoned, though unwillingly, the military profession. During the war in Corsica, he wrote a memoir respecting it, with remarks on the abuses of the Genoese aristocracy, and gave it to his father, who destroyed it. In conformity with the request of his father, he now settled in Limousin, and employed himself in cultivating the earth and in conducting lawsuits. But he soon became weary of his situation. His father's circumstances, moreover, were unhappy. In 1772, he had received, in Aix, the hand of Mademoiselle de Marginnne, an amiable young lady, with prospects of large fortune. But his extravagant propensities soon involved him in a debt of 100,000 livres. His contentious and inflexible disposition embroiled his estate, and involved him in a number of lawsuits, by means of which he was transferred to Joan, near Port- tarlier, in 1775. Here he first beheld his Sophia, the wife of the president Monnier, a man of advanced age. She was well affected towards him. His passion for her soon became extremely violent. But St Maurice, the president of the town, was disposed to put an end to the intrigue. In order to escape from the persecutions of this man and his father, he fled to Dijon, whither his mistress followed. He was seized, and his father obtained new letters of arrest. Meanwhile M. de Malesherbes, who was then minister, and felt much good will for the young man, gave him leave to leave the country. He fled to Switzerland, and Sophia rejoined him there. He then took refuge in Holland with his mistress. The offended husband entered a complaint for seduction. Mirabeau was condemned to death, and was decapitated in effigy. In Holland, he went under the name of St Matthew, and lived unnoticed with Sophia, his books, and some friends. During the years 1776 and 1777, he supported himself and his mistress altogether by his literary labours. Among other things, Mirabeau translated, in conjunction with Durival, Watson's History of Philippe H. Learning that his father accused him of the theft of 9,000 livres, he avenged himself by sending abroad libels against him. His father now effected a violation of international law, and a police officer was sent to Holland, with letters of arrest, signed by Amelot and Vergennes. Mirabeau and his mistress were arrested, in 1777, without the consent of the Dutch governor. Mirabeau was incarcerated at Vincennes; but Sophia, being far advanced in pregnancy, was resigned to the inspection of the police. After her delivery of a daughter, she was conveyed to the convent of St Clara, at Gien. During an imprisonment of three years and a half, at Vincennes, Mirabeau wrote the celebrated Lettres à Sophia, Lettres originales de Mirabeau (1792, 4 vols.). Of these, Lettres écrites du Donjon de Vincennes (1777 -1780, 3 vols.), a new edition appeared in 1820. Their accent is passionate, and the style is various, flowing, and forcible. Mirabeau's health was much affected by his confinement, and under many bodily sufferings, he wrote, with the assistance of Calmet's Dictionary of the Bible, his Eroton Bible, a very free picture of the excesses of physical love, among different nations, particularly the Jews. At the same time, he projected a grammar and a treatise on mythology, translated Johannes Secundus, and executed the last portion of Calmet's work on Lettres de Cachet. As he was denied paper, he tore out the blank leaves in the beginning and end of the books allowed him. He concealed the leaves in the lining of his clothes, and left the prison with the manuscript of his Lettres de Cachet thus sewed in. His long incarceration had wearied his persecutors. The judges also saw that the conduct of Mirabeau's father, whose own character was far from moral, could only proceed from revenge and hatred. The son was therefore released, in 1780, and seems to have become reconciled with his father, for he lived with him, and left the paternal mansion only to obtain the revocation of the sentence of death pronounced against him in Portarlier, in which he succeeded in 1782. At the same time, Sophia recovered her dowry and freedom. Mirabeau now returned to Provence, and tried to effect a reconciliation with his wife. But nothing could overcome the opposition of his wife's family. Mirabeau was obliged to resign himself to the law, and a process took place which was honourable to neither party, and which his wife gained. Mirabeau now went to London. His letters show that his opinions respecting England were not, in general, very favourable. He wrote there the Considerations justifying his return from Girondist and other, in order of which he disappeared, as the beginning of a military aristocracy in the United States of America. He
MIRABEAU—MIRACLE.

likewise wrote against the plan of Joseph II. to make the Schottenkirche, and, against Ignace’s famous work—his Doutes sur la Liberté de l’Escrave. He was also a coadjutor in the French journal, published in London, Le Courrier de l’Europe. In his subsequent writings on the Cassée d’Escompte, the Banque de St Charles, the Actions des États, he discussed the grounds of public credit, and of speculations in the public stocks, according to Adam Smith’s principles, with much eloquence. This and the satirical portraits of famous persons, brought his works into repute. He nevertheless solicited in vain, of the minister of finance, Calonne, the office of consul in Dantzig or Hamburg. He now lived some months of 1786 in Berlin, and then went to Brunswick, but returned to Berlin in the same year, probably with secret commissions from his court. In Berlin he collected information and projected the plan of the ingenious, but far from faultless work, De la Monarchie Prusienne, which was executed by his friend Mauvillon. His description of Frederick II. is especially admired. In 1787, Mirabeau returned to France, and, having convoked the notables, Mirabeau brought out his Dénonciation de l’Aigloge, au Roi et aux Notables. The king, on account of the offensive character of this pamphlet, ordered the author to be imprisoned; but he escaped, and wrote a continuation of his Dénonciation de l’Aigloge. He now wrote his Avis aux Frères des Etablissements (suggested by Dohm, avers, V. 409, without the consent of Mirabeau) the letters on the Prussian court, written in confidence to Calonne, entitled Histoire secrète de la Cour de Berlin, ou Correspond. de l’Ouvrage Francais, depuis le 5 Juillet, jusqu’à l’19 Juin. 1787 (1793, 2 volumes.) This work was an indiscreet disclosure of his political views and proceedings, written in the tone of a libel. It excited general reprehension of a man so unscrupulous as to make of the secrets of hospitality, and the confidence of his friends and the government, an offering to the public appetite for scandal. The work was condemned, by the parliament, to be burned by the common hangman. When the estates were actually convoked, he went to Provence for the purpose of being elected; but the noblesse of the province refused him a place among them, on the ground that none were entitled to it but the possessors of fiefs. He was now chosen, by acclamation, a deputy of the third estate, where he had been elected. In the month of June one was the most remarkable days of his political career. It was decisive of the fate of the monarchy. The king, after making important concessions in this memorable sitting, had ordered the assembly to separate. The assembly, however, remained together in their seats. The marquis of Breze, master of ceremonies, came to remind the assembly of the orders of the monarch. Mirabeau, in the name of his colleagues, made the celebrated answer, “The commons of France have resolved to deliberate. We have listened to the king’s exposition of the views which have been suggested to him; and you, who have no claim to be his organ in this assembly,—you, who have here no place, nor vote, nor right of speaking,—you are not the person to remind us of his discourse. Go, tell your master that we are here by the order of the people, and that nothing shall drive us hence but the bayonet.” Mirabeau had already made an unsuccessful attempt to establish an understanding with the ministers, with a view of relieving the distracted state of his pecuniary affairs. Negotiations were afterwards entered into between him and the court. He required a pension of 40,000 francs a week, and the promise of such a diplomatic or ministerial post as he should select, after the re-establishment of the royal authority. These demands were conceded, and he remained pensioned for a week. It was agreed that the dissolution of the assembly should be effected by an expression of the will of the nation, and that a new assembly should be convoked, composed of men of more moderate opinions. While the negotiations were pending, Mirabeau redoubled his activity in the assembly, and at the Jacobin club. Suspicions were already entertained of his defection from the revolutionary party, and clamours had already been raised against him, when a fever closed his stormy life, April 2, 1791. The news of his decease was received with every mark of popular mourning: his funeral was solenmized with the utmost pomp. His body was deposited in the Pantheon, from which, however, in 1795, his remains were taken and dispersed by the populace, who then stigmatized him as a royalist. Mirabeau was the creature of his passions; the early restraints, which had been imposed upon him, served only to inflame them; and, with all the resources of genius, a decision and energy of will which yielded to no opposition, and activity of mind which, though before no difficulties, he united an insatiable ambition. His orations are collected in the work entitled Mirabeau peint par lui-même (1791, 4 volumes), and in the Collection compl. des Travaux de Mirabeau à l’Assemblée nationale par Mijn (1791, etc., 5 vols.), in Esprit de Mirabeau (1804), Lettres inédites de Mirabeau, publ. by his brother (1818); these volumes of Œuvres oratoires (complete, at Paris, 1819, 2 vols.), and Œuvres choisies de Mirabeau (Paris, 1820). Concerning his connexion with the court, the Memoirs of Mad. Campan (Paris, 1853, 3 vols.), contain some remarkable disclosures. The fifth Iteration des Mémoires des Contemporains (Paris, 1854) consists of the original copies of manuscripts written in the tone of a libel. It is in this light that we must consider the elements of a miracle, viz., that it is an event produced by the interposition of an Intelligent Power for moral purposes; for, otherwise, we must consider every strange phenomenon, which our knowledge will not permit us to explain, as a miracle. The existence of Supreme Intelligence, a miracle is an impossibility, a contradiction in terms. A miraculous event cannot, indeed, prove the existence of God, for it presupposes it; but it may prove the moral government of the world by the Deity, or the divine character of a communication which claims to come from him. It is in this light that we must consider miracles as the proofs of a revelation; and, in fact, a revelation is itself a miracle. If one claims to be a teacher from God, he asserts a miraculous communication with God: this communication, however, cannot be visible, and visible miracles may therefore be necessary to give credibility to his pretensions. To those who deny the possibility of miracles, a revelation is impossible. The use, then, of a miraculous interposition in changing the usual course of nature is to prove the moral government of God, and to explain the character of it. As to the nature of miraculous events, we may distinguish those which do not appear supernatural in themselves, but rendered so by the manner in which they are produced, as cures of diseases by a touch or a word, and those which are supernatural in themselves, as in the burning bush which was not consumed, the stopping of the course of the sun, &c. In proof of miraculous occurrences, we must have recourse to the same kind of evidence.
as that by which we determine the truth of historical accounts in general; for, though miracles, in consequence of their extraordinary nature, challenge a fuller and more accurate investigation, still they do not always present the certain and unqualified samples, testimony being the only assignable medium of proof for past events of any kind. While some writers have entirely denied the possibility of miracles, others have, with the same result, denied the possibility of proving the occurrence of a miracle. Hume’s argument on this point is that it is not contrary to experience that a miracle should be true; but it is not contrary to experience that testimony should be false: it is therefore more improbable that the miracle should be true than that the testimony should be false. Without dwelling on the ambiguity of the expression “contrary to experience,” it may be replied that this improbability arising from a want of experience of such events is only equal to the probability of their repetition, this being the precise measure of the improbability of their performance. To assert that, because miracles have occurred, they ought to occur again, or frequently, is to render a miracle impossible; for no one can pretend without witness to make it be a miracle. The existence of a Supreme Intelligence being allowed, the infrequency of miracles, or their being against our experience, is no argument against their occurrence. Hume asserts that a miracle is a contest of improbabilities; and there is no need of denying this assertion, as is usually done; the improbability of a miracle is weakened by considering it an event in the moral system of the universe—not a causeless phenomenon, or a useless violation of nature; and the improbability that the testimony to it should be false is strengthened by the publicity of the event, the intelligence and honesty of the witnesses, the consideration of the results which followed it, &c. Further than this, the testimony, under these circumstances, is a fact which it is more easy to account for by allowing the event testified to have actually taken place, than to have recourse to any other hypothesis. In examining the different objections which have been urged against miracles, it will be seen that they arise, in general, from a neglect of the existence of a moral system: when it is objected that they are against the usual course of nature, that is, against all we know of the government of God, it is forgotten that they are entirely in accordance with his moral government, and that experience as full as can be desired, and contrary to the contrary, plainly teaches the character of this government, as of the physical system of the world. Most of the miracles, of which history is full, may, indeed, be put aside from want of sufficient testimony, from their being useless, unnecessary, or even unworthy of a wise and good Being, from the circumstance that the workers of them did not lay any claim to divine agency, from their having been without results, &c. We may also reject those which are referrible to false perceptions; those which are merely tentative, that is, belonging to a series of attempts of which some were unsuccessful; those which are due to the presence of credulous devotees, if they do not belong to any of those above cited, are to be looked upon with suspicion. But, when miraculous powers are claimed to be exerted by the opponents of what is established in public opinion and supported by public authority, in the face of opposition and incredulity, by men without influence or friends, and when they convince and confound their bitterest enemies, and produce a change in their lives and characters as a proof of their conversion,—when these witnesses, with no interested motives, but with the certain and unqualified prudence, come forward and testify of their belief, and when all these results are declared to have been produced to prove the divine origin of doctrines calculated to elevate humanity, and the divine mission of teachers, who spoke as no man had ever before spoken,—we are in a position to attain a certain and positive conviction, or the juggling of imposture. It is not possible, in a work of this nature, to go into a minute examination of particulars. The subject is fully and ably treated in Campbell’s Dissertation on Miracles, in Reply to Hume; in Paley’s Evidences of Christianity; in Butler’s Analogy of Natural and Revealed Religion, and numerous other works.

MIRAGE; an optical phenomenon, produced by refraction. The unusual elevation or apparent approximation of coasts, mountains, ships, and other objects, has long been known under the name of booming; and, if the same phenomenon is accompanied by an instant cease of wind, it is called a mirage.

The mirage is frequently observed on the surface of the sea by sailors, and on dry sandy plains, as in those of Egypt, where it was repeatedly seen by the French, during their campaign in that country. The appearance presented is that of a double image of the object in the air; one of the images being in the natural position, the other inverted, so as to resemble a natural object and its inverted image in the water. It may be produced whenever the rays of light meet in an oblique direction, the surface of a less refracting medium than that in which they were previously moving; they are thus turned back into the original medium in the same direction in which they would be impelled by reflection taking place at the common surface of the two mediums. The surface of the earth or sea, becoming heated, communicates a portion of its caloric to the superincumbent layer of air, which thus becomes less dense than the superior layers. The rays of light which proceed from an object in the heated layer will then be bent downward, and thus arrive at the end in such a direction as to cause the object to appear above its actual position. In the desert, where the surface is perfectly level, a plain thus assumes the appearance of a lake, reflecting the shadow of objects within sight of the traveller; the surface of the air is, in the higher heavens, often turbulent with this appearance, which recedes, as, by approaching it, he changes the angle of direction of the rays which enter his eye. The mirage is commonly vertical, that is, presenting the appearance above-described of one object over another, like a ship above its shadow in the water. Sometimes, however, the images are horizontal. On the surface of the sea, the phenomenon may also be produced by the difference of moisture in the layer of air in contact with the water and the superior layer. See Optics.

MIRANDA, DON FRANCISCO, the earliest martyr of freedom in Spanish America, was born Caracas, of an ancient Spanish family. His grandfather was governor of the province of Caracas. At the age of twenty, he travelled through a great part of America on foot, and afterwards received the commission of colonel in the Spanish service. The governor of Guatimala, inspired with his example, sent him on several missions. In 1783, he visited the United States of North America, and then travelled on foot through Britain, France, Italy, and Spain, against which he cherished the bitterest hatred. In 1789, he was at Petersburg, and Catharine endeavoured to engage him in her service, but the events in France drew him to Paris. Here he was employed on a mission to Pitt, and,
through Félibien's influence, was appointed major-general. Under Dumouriez, he was second in command in Champagne and Belgium, and his skill as an engineer and tactician, united with his uncommon talents, obtained for him the esteem of the republicans in Paris, as well as the respect of the army. When Dumouriez entered Holland, Miranda was directed to besiege Maestricht, but, being unsup- ported by general Valence, was obliged to abandon the siege. In the battle of Neerwinden, he commanded the left wing: Dumouriez imputed to him the loss of the battle; but the charge was refuted by Miranda, in an able and ingenious defence. Dumouriez and Miranda were directed against the Jacobins; but a former now became an object of suspicion to Miranda, who communicated his fears to his friend Féthon, then a member of the committee of public safety, and Miranda was ordered to arrest the commander. (See Dumouriez.) The Giron- dists, however, soon fell before the Mountain party, and Miranda was obliged to appear before the revolu- tionary tribunal. He was not convicted of the charges brought against him, and the fall of Robes- pierre delivered him from prison. Having, how- ever, become suspected by the directory, he was again thrown into prison, and, in 1797, was con- demned to transportation, but fled to England. In 1812, he came to Paris, where he lived, but was suspected for taking part in an opposition to the first consul. General Miranda now devoted himself, with all the energy of his character, to the accomplishment of his long cherished scheme of overthrowing the Spanish dominion in America. Having procured some secret assistance, he sailed from New York in 1801, assisted by numbers of volunteers, and touched at St Domingo, where he chartered two schooners. On arriving off the coast, the two latter were captured by Spanish guardacostas, and he was obliged to escape with his ship. In August, he landed in Venezuela; but his attempts to rouse the inhabitants were altogether unsuccessful, and he found himself compelled to re-embark. In 1810, he renewed his attempt with more success (see Colombia), but was finally obliged to capitulate to the Spanish general Monteverde, who, in violation of the articles of his surrender, treated him as a prisoner. Miranda was sent to Spain, and confined in the dungeon of the Inquisition, where he died, at the end of four years' imprisonment. The monks caused his body to be thrown out without burial. Miranda was a man of great energy and sagacity, full of resources, bold, active, and intelligent.

MIRANDOLA, GIOVANNI PICO DELLA, count and prince of Concordia, surnamed the Poenens, one of the brightest ornaments of literature at the time of the revival of letters, born in 1463, was the youngest son of Gianfrancesco della Mirandola and Julia, of the noble family of Boiardo. His youth was marked by an early display of talent, and, being destined for the church, he was placed at Bologna, to pursue the study of the canon law, at the age of fourteen years. Two years were spent in this course, when his grow- ing repugnance to the study, and his inclination to philo- sophical and scientific subjects, led him to visit the different parts of Italy and France for the pur- pose of observation, and to attend the most cele- brated schools and most distinguished professors. After seven years of the most assiduous application, he went to Rome, with the intention of publishing a treatise on all subjects, which he declared himself ready to defend, according to the custom of the times, in public. He challenged all the learned from all countries to dispute with him, and offered to pay the expenses of the journey to those who came from a distance. No one ventured to appear against him, and the envious endeavoured to implicate him in a charge of heresy. Mirandola repelled the charge, in his Apologia, a work full of profound erudition.

To deprive his enemies of every pretext for their accusations, he determined, although not insensible to love and its pleasures, to lead the most rigid course of life, and to devote himself entirely to let- ters. In consequence of this resolution, he entered into the fire five books of amatory poems in Italian, the loss of which is much to be regretted. None of his writings on this subject have been preserved, except a commentary on a canzone of Girolamo Beniviendi, in which he follows the notions of the New Platonists in respect to love. Having next applied himself to the study of biblical literature, he published the fruits in his Heptapla, a mystical or carablistic explanation of the history of the creation, in which he derives Plato's doctrines from Moses. Two years after, he published a treatise in ten chapters—De Este et Uno—in which he aimed to unite the opinions of Plato and Aristotle. Mirandola died at Florence, in 1494, where he had lived some time in terms of intimacy with some of the most learned and distinguished men of the age, particularly Lo- renzo de' Medici and Politian. At the time of his death, he was employed in great literary enterprises, to which his treatise against astrology must be con- sidered as preliminary. In his manner, which was peculiar to his contemporaries a miracle of learning and genius. Paolo Giovio says that the immortal gods had united in him all rare gifts of mind and body. In judging of his works, it is necessary, however, to remember the state of letters at the time when he lived. His nephew Gianfrancesco Pico was a disciple of his, but not equal to him in his reputation.

MIRE, NOEL DE; a good engraver of Rouen, among whose works are ornamental engravings accompanying the writings of Rousseau, Voltaire, Boc- caccio, and Lafontaine. His last works form part of the beautiful Galerie de Florence. He died in 1801.

MIREVELT, MICHAEL JANSON, a famous portrait painter, born at Delhi, in 1568, was the son of a goldsmith. He first intended to become an engraver under Wierinx, but, at a later period, studied the art of painting under a painter named Blocklandt. He is said to have painted 10,000 portraits, and to have received a high price for them. Mirevelt was born at Menen, and died at Rouen. He died in his native city, in 1641. His eldest son, Peter Mirevelt, is also esteemed as a painter.

MIRIAM, the sister of Moses, directed the He- brew women in their rejoicings after the passage of the Red sea. Having spoken against Moses, on account of his marriage with an Ethiopian woman, she was struck with leprosy, and shut out of the camp seven days. (Num. xii.) She died at Kadesh. (Id. xx. i.)

MIRKHOND, or MIRCHOND. See Persian Literature.

MIRROR. Mirrors are surfaces of polished metal, or glass silvered on its posterior side, capable of reflecting the rays of light from objects placed before them, and exhibiting to us their image. There are three classes of mirrors, distinguishable by the figure of their reflecting surface: they are plane, concave, and convex. The reflection of light by either of these mirrors observes the constant law, that the angle which the incident ray makes with the reflecting surface is equal to the angle made by the refracted ray with the same surface. When a person views himself in a looking- glass, if he measures the size of which he appears on the glass, the image will always be one half his real magnitude; for, as the image appears behind the glass exactly at the distance of the object before it, the mirror will be half way between the person and
his image; so that it will cut across the cone which comes from his image to his eye, half way between its base and its apex; the base of the cone is the image seen, the apex is at the pupil of the eye, where all the rays from the image are met in a point. Concave mirrors are those whose polished surfaces are spherically hollow. The properties of these mirrors may be easily understood, when we consider their surface as composed of an indefinite number of small planes, all of which make a determinate angle with the axes passing through the point where the rays are met in a point. This point is called the focus of the mirror, where an image of the object will be formed in an inverted position. The distance of this focal point from the surface of the mirror when the curvature is moderate, will be equal to half its radius. Concave mirrors are of great importance in the construction of reflecting telescopes, in which they are commonly called specula. (See Telescopes.) The employment of concave mirrors in collecting the heat of the sun's rays from the whole of its surface to a single point, thus accumulating a very great degree of heat, for the combustion and fusion of various natural substances, is a property which, if capable of being produced from ordinary fire, may be exemplified, among those of modern date, by the burning mirror of M. de Villette. The diameter of this metal speculum was three feet eleven inches, and the distance of its focus from the surface was three feet two inches. The composition of this metal was of tin and copper, which reflects the light very powerfully, and is capable of a high degree of polish. When exposed to the rays of the sun, by doctors Harris and Desaguilers, a silver sixpence was melted in seven and a half seconds when placed in its focus. A copper half-penny was melted in sixteen seconds, and liquefied in thirty-four seconds; tin was melted in three seconds, and a diamond, weighing four grains, lost seven-eighths of its weight. The intensity of heat obtained by burning mirrors or lenses, will always be as the area of the reflecting surface exposed to the sun is to the area of the small circle of light collected in its focus; thus the diameter of (the spot of light at the focus of Villette's mirror, was 0.358 of an inch, and the diameter of the mirror, forty-seven inches: hence the area of these circles was as 0.358² to 47², that is, the intensity of the sun's rays was increased 17,267 times at the focal point. The focus of a concave mirror is one fourth of its diameter through the medium of which the lens is composed, together with that lost by reflection from the surface of mirrors, must, however, be deducted from this theoretical calculation. (For further information, see Burning Mirrors.) Concave mirrors afford many curious illustrations of their peculiar properties; for example, when a person stands in front of a concave mirror, a little further from its surface than its focus (or half the radius of its concavity), he will observe his own image pendent in the air before him, and in an inverted position. This image will advance and recede with him; and, if he stretch out his hand, the image will do the like. Exhibitions have been brot light before the public, in which a singular deception was obtained by a large concave mirror. A man being placed with his head downwards, an erect image of him was exhibited in its focus, while his real person was concealed, and the place of the mirror. A crow was feeding in the directed to him. A man was told to take a plate of fruit from his hand, which, in an instant, was dexterously changed for a dagger, or some other dangerous weapon. Convex mirrors are chiefly employed as ornaments in apartments. The objects viewed in these are diminished, but seen in an erect position. The images appear to emanate from a point behind the mirror: this point, which is its focus, will be half the radius of convexity behind their surface, and is called the negative or imaginary focus, because the rays are not actually collected as by a concave mirror, whose focus is called real. In the earlier periods, with which history makes us acquainted, mirrors were made of metal: the Egyptians, Greeks, and Romans made use of metallic mirrors. Pliny, in his natural history, also mentions the use of obsidian for this purpose. Gold and silver, highly polished, were employed by the Romans for mirrors, which were richly ornamented with precious stones. The forms were various, but most commonly oval or round.

MISCHNA, or MISNA; the code or collection of the civil law of the Jews. The Jews pretend that, when the God of the Jews gave the law to Moses, he gave him also another, not written, which was preserved by tradition among the doctors of the synagogue, till Rabbi Judia, the Holy, seeing the danger they were in, through their dispersion, of departing from the tradition of their fathers, reduced it to writing. The Misna is divided into six parts: the first relates to the distinction of seeds in a field, to trees, fruits, tithes, and sukkot. The second, to the capstone of observing festivals; the third, to the contracts of women and matrimonial cases; the fourth, to losses in trade, &c.; the fifth is on oblations, sacrifices, &c.; and the sixth to the various sorts of purification. See Talmud.

MISDEMEANOUR, in law; a crime of a lower nature. Crimes and misdeemours, properly speaking, are mere synonymous terms, though, in common usage, the word crime is made to denote such offenses as are of a deeper and more atrocious dye; while smaller faults and omissions of less consequence, are comprised under the gentler name of misdeemours.

MISERE (Latin, have mercy); the name of a celebrated church song, taken from the fifty-seventh psalm, beginning, in the Vulgate, Misere mei, Domine. The misereurs forms part of certain liturgies, and many great composers have taken it as a subject. The misereur of Allegri is particularly famous; and this alone, sung by the papal choir, in the cantata Sistina, in the Passion week, would repay the trouble of a visit to the "eternal city." Miserere is also the name given to pictures representing the dying Saviour.

A terrible disease, produced by an obstruction of the bowels, is also called by this name.

MISERICORDIA (mercy; in Greek, ελπίς) was personified as a deity. She had a celebrated altar in the market-place of Athens, constituting an asylum. Misericordios Dominii is the name given to the second Sunday after Lent, because the mass for this day begins with Misericordias Dominii cantabo in aeternum.

Misericorde (French) was also the name of the dagger of the knights in the middle ages. Facchet derives its names from its putting men out of pain when irrecoverably wounded, or from the sight of it causing the vanquished to cry out for mercy.

MISNA. See Mishnah.

MISTRÁ, or MISTRA; a city of Greece, in the Morea, capital of the department of Laconia. It lies nearly a league from the ruins of Sparta, which have supplied materials for its construction. Before the Egyptian expedition of the Pharaoh, it contained 6000 inhabitants and several churches, literary institutions and manufactories; it is now a heap of ruins, inhabited by about 150 families.

* The reflecting surface of a cylinder has been occasionally used in optical instruments for giving to a manuscript (distorted or deformed pictures) regular shapes, when reflected from such surface.
MISELOE—MISSIONS.

MISLETOE (*virorum album*); a European plant, growing parasitically on various trees, and celebrated on account of the religious purposes to which it was consecrated by the Druids, who were the priests and magistrates of these people, went into the forests accompanied by the populace, and, at the foot of an old oak bearing this plant, built an altar, and performed various other religious rites and ceremonies. Some relics of this superstition still remain in France; and it is also the custom in England to hang up branches of this plant at Christmas, mixed with other evergreens. From the same cause, for a long time, it sustained a high reputation as a medicine. It is a pointed, dichotomous shrub, with sessile, oblong, entire, and opposite leaves, and small, yellowish-green flowers, the whole forming a pendent bush, from two to five feet in diameter, and, in winter, covered with small white berries. These berries are very glutinous, and contain a single heart-shaped seed. The roots of the plant consist of a woody, fibrous substance of trees, and the plant lives entirely at the expense of their sap, as the stems and leaves are incapable of absorbing moisture. All the attempts which have hitherto been made to raise this plant from the earth have failed. Though the misletoe is common enough on certain species of trees, it is very seldom found on the oak, and a specimen of this preserved in France is as a great rarity. Bird-lime is made from the berries and bark, which are boiled in water, beaten in a mortar, and washed; but this article is usually manufactured from the bark of the holly. The American misletoe grows on trees from about lat. 40° to the gulf of Mexico, and also in the West India islands. NICOTINNIEL; in law, a misnaming or misstarking of a person's name. The Christian name of a person should always be perfect; but the law is not so strict in regard to surnames, a small mistake in which will be overlooked.

MISPRISION; a neglect, oversight, or contempt (from *mespris*, French, contempt). Thus concealment of known treason or felony is misprision. In a larger sense, misprision is taken for many great offences which are neither treason, nor felony, nor capital, but very near them; and every great misdemeanor which hath no certain name appointed by law is sometimes called misprision.

MISSAL (from the Latin *missale*), in the Catholic liturgy; the book which contains the prayers and ceremonies of the mass. It was formed by collecting the separate liturgical books formerly used in the religious services, particularly the *Oratorium*, *Lec- tionarium*, *Evangelarium*, *Antiphonarium*, the *Canon*, &c., for the convenience of the priest. The greater part of these prayers and ceremonies are very ancient, and some of them have come down from the times of the popes Gelasius I. and Gregory the Great; some are even older. Considerable deviations and corruptions, which had, in the course of time, crept into the Missal, were in the council of Trent ordered to be corrected. The reason of the revision of it. Pius V., in 1570, required the Missal, which had been revised under his direction, to be adopted by the whole Catholic church, with the exception of those societies which, for more than two centuries, had followed another ritual with the consent of the pope of the papal see. This form of the Roman Missal has been retained in the present time; the changes made by pope Clement VIII. and Urban VIII. (the latter under the direction of Bellar- min) extending little beyond alterations of single expressions and the addition of a few new masses, which are by no means among the best. The earliest printed missal is the *Missale per futilis Annorum Circumum More Ambrosiano compositum* (Milan, 1475, fol.), which was followed by the *Missale secondum Constantinianum Romano Curiae* (Rome, 1478). These, and earlier missals, especially if on parchment, are objects of bibliomaniacs. (For the Bedford Missal, see Bedford.) The latest edition of the *Missale Romanum* is that of Dijon and Paris (1828, 4to).

MISSAL, in German, is also the name of the largest letters, because formerly the missal, or mass-book, which contain the songs and ceremonies of the mass, were written or printed with them. It is the same with the French canon, which probably derived its name from being early employed on some work relating to the canons of the church.

MISSALIA (Latin); the money paid to a clergyman for a mass read for the dead, at a Catholic funeral.

MISSIONS; MISSIONARIES. Even in the early ages of Christianity, it was usual for Christians, either at their own impulse, or at the desire of the community, to go into neighbouring and distant lands, to preach the gospel; and, except in a few particular cases, Christianity has been propagated, not by arms, but by persuasion. Thus Augustine, with forty associates, was sent by Gregory the Great, to preach the gospel among the wild Saxons of Britain (697). The German church was also established, in the eighth century, by similar preachers of the gospel, who were afterwards called missionaries. More has been done for the support of missions by the Catholic church than by the Protestants. Various reasons may be assigned for this: the interests of the papal hierarchy, in this case, coincided with the interests of religion; and, before Britain had acquired the superiority by sea, the Church of Europe was more closely connected with the other parts of the world than the Protestant countries were; moreover, the Catholic church had monks, whom the pope could send wherever he pleased; and, finally, it was more wealthy than the Protestant church (see Propaganda, and *Jesuits*). Not to mention that zealous Catholics, persuaded that this was the only saving method, had a much stronger incitement to undertake the difficult work of conversion than Protestants. The principal missions of the Catholic church are those to China, the East Indies, and Japan. In the last named country, though Christianity had once made considerable progress, it is now proscribed. But in China and on the Coromandel coast, the settlements established for the diffusion of Christianity still continue. The events which followed the French revolution contracted the funds of the missions, and checked their activity. According to the *Nouvelles Lettres edifiantes des Missions de la Chine et des Indes Orientales* (Paris, 1815—20, 5 vols.), there are yet three bishoprics in China, endowed by the crown of Portugal—those of Macao, Pekin, and Nankin. The bishop of Pekin, however, lives at Macao, because no missionary is permitted to reside

---

* Baron Reichlin Meldegg, doctor of theology, and professor of ecclesiastical history at the university of Freiburg, in his *Proposita for the Reformation of the German Catholic Church*, observes, "Some of the masses of the Roman Missal are borrowed out of sufficiently ancient and well-evident fables, for instance, the mass of the *Locus Christi*, of the *Incendio Cruel*, of several saints, &c. Others contain prayers grounded on absurd expressions, for instance, *Coram dominio Domini, quod nostris et temporibus, quod postea adhæret visceribus meos*, et *et in aedem custodiam sanctae Virginitatis*, quod postea adhæret tempore auctores." On the other hand, how simple, beautiful, and touching is the prayer inscribed *et in aedem sanctae Virginitatis*! See *Wieder Reisch, die Neulandgestaltung* (Leipzig, p. 7). Some maintain that the bishop, with his clergy and the consent of government, has the right to change the missal.
in Pekin, except the mathematicians, physicians, and artists in the service of the court. Besides the seven provinces to which these three bishoprics, and there are other provinces of the Chinese empire belonging to the mission's évêques vicaires apostoliques. Of the state of the Catholic mission in the East Indies, the abbé Dubois, a French missionary, in his Letters on the State of Christianity in India, etc., gives a not very encouraging account. Christianity appears to have made more progress in East Tonquin, where there are 780 churches and eighty-seven monasteries. China and Tonquin together contain 380,000 Christians. According to the missionary reports up to Sept. 24, 1824, there were in China alone 46,297 Christians, twenty-six Chinese and three European priests, and twenty-nine schools for boys, and forty-five for girls. In 1824, a seminary was also instituted, in which twelve scholars are taught Latin. The Russian ecclesiastical mission, established in China in 1727, is not intended for the conversion of the Chinese, but for the instruction of young Russian men in the Russian language. In 1822, a new Catholic mission was instituted in Thibet. A princess, whom an Italian had converted to Christianity, appointed him her first minister, and requested of the Propaganda eighty missionaries for the conversion of her subjects. Five Capuchins were consecrated, and six were promised. The Catholic worship attracted and won over the gentle and ignorant children of nature in Brazil, Mexico, the countries lying on the Andes, and Paraguay, and several missions have, therefore, been introduced there. The new republics propose to restore them to schools. The Catholic church has also shown great zeal in endeavour to win back the favour of the people, and to restore the lost influence of the church in revolutionized France and Italy. The theocratic faction, as it was called, which included state and church in its plans of reform, co-operated in these attempts. Preparatory to the jubilee year (1825), there were missions in Rome, which were devoted to religious exercises, and which proclaimed absolution. According to the Almanac du Clergé de France pour l'An 1824, a congregation of missions was established in France as early as 1810, which, unlike the old French seminary for foreign missions which belongs to the University of Louvain and Pondicherry, was destined solely to restore the Roman Catholic religion in France to its former importance. Besides this, there was a congrégation du St Esprit, destined for the service of the hospitals and missions. For this domestic mission in France, a maison princière, with a seminary for novices, was instituted, which, in some dioceses, furnished priests to the diocese parishes. To accomplish, at the same time, a political and religious restoration, a crowd of Jesuits had entered France with the Bourbons; they were called pères de la foi; they educated a vast number of pupils, not only in theology, but in other branches of knowledge, and, by their means, kindled a religious enthusiasm, which, in some instances, amounted to fanaticism. In the seminary of St Sulpice, at Issy, near Paris, such enthusiasts were educated as missionaries. They lived by the most rigid rules, and studied with great fervour. As the scholastics were acceleration in black and white, and which the bishops in general, they formed a sort of separate church, and depended upon the aumônerie, which was restored much upon the same footing on which it existed under Louis XVI. The friends of this religious connexion took advantage of that tendency to theocratic faction, in which, in general, and which was principally observed among the women—a consequence of the revolution, which shook many weak minds. The missionaries sent by the congregation were often merely fanatical preachers of repentance, and made the greatest impression on the female sex. Their religious exercises, in the churches at Paris and other places, repeatedly produced great disturbance of the public peace. In 1824, the number of missionaries in their 372 chapels amounted to 579. These péres de la foi were enemies of the charter (because it established religious toleration), of a representative government, and even of the Gallican Church. The provincial of the Jesuits, at Paris, who had a college in the village of Mont Rouge, near Paris, exercised a sort of secret spiritual government, which extended over several provinces of the Kingdom, principally the southern and western, and was connected with the Spanish apostolical junta.—Upon the state of the Catholic missions, see the Choix des Lettres édifiantes écrites des Missions étrangères (2d. ed. of the above-cited Lettres éd., etc., Paris, 1824). They consist chiefly of geographical, historical, political, and literary information, relative to the missionary countries, China, India, the Levant, and America.

Among the Protestant who have distinguished themselves in the work of missions, are the British, the Danes, and the Germans. In 1699, the Society for promoting Christian Knowledge was founded in England; and, in 1701, the Society for the Propagation of Christianity in Forcign Parts, a very richly endowed Royal Danish Missionary Society was founded by Frederic IV., which still continues its exertions at Tranquebar, on the Coromandel coast, and in whose service Knapp, Ziegenbalg, Fraske, and others, distinguished themselves. Frake, in Halle, took the first steps towards the education of missionaries; Ziegenbalg established the first society in 1707; and the first report appeared at Halle, in 1718. In 1794, the Society for the Conversion of Negro Slaves in the West Indies was established, among whose undertakings the sending of Christian preachers to Southern Africa and Australia is particularly worthy of note. The United Brethren began their missions in 1732, and soon sent missionaries into all parts of the world. Missionaries have not only been sent to the heathen, but also to ignorant and mistaken Christians; and the whole system has, undoubtedly, contributed much to the diffusion of the gospel, though it be not to be denied that, in the choice of persons and means of instruction, and in the objects proposed and the institutions founded, many mistakes have been committed, through partial views or misdirected zeal. As the British find Christianity the most effectual means of civilization, particularly in their colonies, the government has aided the missionary societies in their objects. Among the religious associations in Great Britain, which collect yearly about £400,000 by voluntary contributions, are the following: 1. The London Missionary Society, founded 1795, which has 253 branches in all parts of the world. 2. The Church Missionary Society, for Africa and Asia, which supports eighty missionaries in forty-five places. 3. The Society for the Propagation of the Gospel in Foreign Parts, which has confined itself principally to North America, and employed, in 1823, above eighteen missionaries. 4. The London Auxiliary Society, in Aid of the Protestant Missions in the Interior of India and China. The Home Missionary Society, founded in 1819, has twenty-five missionaries preaching in 206 villages; fifty Sunday schools, containing 2808 children; and labours to form village libraries. This society was very necessary, as there were found to be 314 villages with 12,000 souls, in England, destitute of religious instruction. 5. The London Association in aid of the Moravian Missions, which employs 161 missionaries. 6. The Wesleyan Methodist Mission-
ary Society, which has more than fifty regular missionaries, and above 25,100 proselytes, principally among the slaves in the colonies. Its schools contain above 8000 children. It also maintains missionaries at Paris, in the field of France. 8. The Baptist Missionary Society (1792) has more than 10,000 children, in the East Indies, under its direction. 9. The Missionary and Tract Society of the New Jerusalem Church, founded in 1821. 10. Continental Society incorporated in 1818; they have eleven missions. 11. A London Society for promoting Christianity among the Jews, which sends missionaries to Poland and Holland; and a Ladies' Missionary Society instituted for similar purposes, which has twelve missionaries, among whom are five converted Jews. The former has in its service a German, Joseph Wolf, of Halle, descended from Jewish parents, who was converted to the Catholic church, instructed in Tubingen, and at Rome, in the Seminarium Romanum, where, having expressed doubts of the infallibility of the pope, he was thrown into prison; he then left the Roman Catholic church, and, without acknowledging himself a member of any established church, entered, under the character of a Biblical student, into society with a Missions Society, which sent him to Asia: at Bassora, he had discussions with the Sabians, or Christians of St John, which are printed in the Jewish Expositor. 12. The Edinburgh Missionary Society, founded 1796, has missions in Tartary, and in the Susoo country, in the neighbourhood of Sierra Leone. From 1701 to 1817, 11 missionary societies (5 in England, 1 in Scotland; 1 in Denmark; 1 in Germany—that of the United Brethren; 3 in the United States) founded 10 missions, which, in 1819, occupied 439 missionaries, most of whom belonged to the United Brethren, and 303 of whom were supported by the British societies, 83 by the German, and 37 by the societies in the United States. They also supported a great number of physicians, farmers, labourers, and their families. More than 150 missionaries laboured in Asia, above 70 in Africa, and above 200 in America. In 1824, the whole number of missionaries exceeded 500, of whom 370 were supported by the British. In Paris, the Calvinistic and Lutheran churches united to form a missionary society. Their object, however, has been not so much the conversion of the heathen as the instruction of poor children, and they have already opened schools for several thousand children. In Germany, where they have the best frame, and are the chief of the missionary societies for their own and other missions, there are also societies for the education of missionaries in Berlin, Basle, and other places, which obtain their funds for instruction by voluntary contributions. The Berlin Missionary Union, established by the king of Prussia in November, 1823, numbered then above 300 contributors. The British societies also support an institution for the education of missionaries at Sierra Leone. Among the means by which missionary societies aim to accomplish their objects, one is the translation and distribution of the Bible. See Bible Societies.

Although the judgment of the missionaries, especially in the East Indies, has not always been equal to their zeal, yet the vital power of Christianity has displayed itself in an extraordinary manner in many countries. The inhabitants of the Society islands, particularly those of Otaheite, have embraced Christianity with apparent readiness, and the Sandwich islands by the American and British missionaries, and books have been published in their language. Similar results have attended the labours of the Wesleyan Methodists in the East Indies, as, for instance, at Trincomalee and Colombo on the island of Ceylon. A school has been established by them, for the gratuitous instruction of poor Cingalese children. Among the most active promoters of Christian civilization, in the British East Indies, by the establishment of missions and schools, was Dr Middleton, Bishop of Calcutta (1792). Different societies have supported missionaries in the same places, as, for instance, in Madras, Calcutta, and Bombay, without any interruptions from secular disputes, and have assisted one another with the utmost cordiality. For the better promotion of their common object, a Committee of Missionaries has even given up to the British Society for the Promotion of Christian Knowledge, eleven societies of native Christians about Tranquebar, in establishing which the Danish missionary Schwartz had been very active. The British Bengal Missionary Society has also been very active in the East Indies. According to its fifth report (1823), it had erected four chapels and schools. Attached to one of the schools there is a printing-office, at which 117,000 copies of the Holy Scriptures in English and the native tongues, have been printed at the expense of the society. The condition of the chief Danish missionary society, at Serampore, and the celebrated missionary, Marsham, in which he attends particularly to the instruction of heathen and Mussulman boys, is represented to be favourable. From their printing office, translations of the whole or parts of the Holy Scriptures have been issued in twenty-seven languages of Central India. Among the British missionaries at Serampore, Marsham, the celebrated author of the Clavis Sinicae, has particularly distinguished himself by his researches in Hindoo literature. The great number of languages, especially in Malabar, is a great impediment to the success of the missionaries, who, it is desirable, should be able to operate by precept as well as by example; and many local obstacles—the power of the Bramins, the division into castes, &c.—are also impediments in their way; but their schools, and the simplicity of their lives, tend to improve the character of the natives. Of South Africa, where the chief missionary station (since 1802) is Bethelstorf, and where the United Brethren now support missions at three places (see Latrobe), an agent of the British Missionary Society—Campbell—has given an account (London, 1815). Missionaries have sometimes united with their main object an attention to the ethnography and geography of the country, which deserves the highest commendation—such, for instance, as the Danish missionary Monrad, who was in Africa from 1805 to 1809, and published Materials for a Description of the Coasts of Guinea (Copenhagen, 1829). The missionaries have also rendered great service to the study of languages, as, for example, in the work of Blunhardt (inspector of the missionary school at Basle), Comparative Observations upon the Connexion between the Indian Languages, which are almost all related to the Sanscrit (Basle, 1819). In the conversion of the South sea islanders, the American and British missionaries have been very successful. The spiritual head of Christ on Australia, Marshman, is one of the most intelligent missionaries. He does not attempt to convert savages without preparation, but provides for their instruction, and endeavours to guard against the new vices which attend the beginnings of civilization. See New South Wales, and New Zealand. Among the latest missions of the United Brethren (see United Brethren, and Greenland), that established among the Calmuck tribes deserves to be mentioned. They sent two missionaries, Zwick and Schill, from Sarepta, in 1823, to the Calmucks, among whom, by the aid of the Russian Bible Society (which caused the Bible to be translated into
Calmuck), they distributed the Holy Scriptures. Their report is given in the Biblical Journal, published at Petersburg (1824). The great opposition of the Calmuck priests, however, induced the Khan to suspend the publication of the Scriptures in any form other than the vernacular, or to give them up from political views. On the other hand, the missionary Carruthers exerted himself, with great zeal, in the conversion of the Tartars in the Crimean, and a new station has been established on the Caucasus. The whole number of missions of the United Brethren, in 1822, between the Caspian and eight thousand pounds, besides the support of fifty-five retired missionaries and fifty-three children. The society receives the largest contributions from Holland, Denmark, and Sweden.

Concerning the conversion of the Jews to Christianity, in London, Berlin, Petersburg, Dresden, Breslau, Minden, Königsberg, Posen, &c., the first public report of the Berlin Society, established in 1822, appeared in 1824. It has issued a stereotype edition of the New Testament, in the Hebrew language, and sent a missionary to the Polish Jews, who have appeared in gaining attention in more than one synagogue.

There are, at present, in Germany, above thirty missionary and auxiliary missionary societies, which are connected with the missionary society of Basle. The Basle society issues a lithographed correspondence; other societies, at Hamburg, Leipzig, Berlin, &c., publish yearly reports; and others, as at Stuttgart and Königsberg in Prussia, publish missionary journals. In St Gall there is a ladies' missionary society. The great missionary school established at Basle (1818) not only educates the pupils (of whom, in 1824, there were thirty-three), in four years, in the various departments of theology; in the explanation of scriptural passages from the Hebrew and Greek; in the Latin, English, and Arabic tongues; in the comparison of the Koran with the precepts of the Bible; in geography, arithmetic, geometry, and astronomy; in rhetoric, singing, and drawing; for the British and Dutch missions, but has, also, since 1822, maintained missionaries at its own expense, at the stations on the Caspian and Black seas. One of these missionaries, Aug. Dietrich, has undertaken, with Mr Macpherson, the superintendence of the Persian translation of the New Testament, and has also agreed with the United Brethren of several biblical extracts and precepts into the Persian language, and translated the work of Grotius on the truth of the Christian religion into Arabic. The missionary school established at Berlin, under the direction of the preacher Junieck (1800), has already sent more than twenty pupils, to the East Indies, Sierra Leone, and the Cape. The Russian government has employed, in the German colonies planted about thirty years ago, from Odessa to Gandscha in Georgia, and Astracan, missionaries from Basle, as colonial preachers, who have the spiritual charge of the Germans, and endeavour likewise to operate on the adherents of the old Eastern sects, particularly the Armenians, and to gain access to the Mohammedans among the Persians. The translation of the New Testament into modern Persian, by the missionary Martin, has been distributed, and eagerly, but secretly read. To effect these objects, the Russian emperors have conferred privileges, not only on the Scottish missionary colonies at Kara, but also on the evangelical missionary colony established (1822) in the Caucasian village of Schuschi, principally inhabited by Armenians. The Moravian United Brethren have also a station in the interior of Persia, in thirty-three missions in the West Indies, North America, and South Africa. According to the seventy-second number of the Transactions of the Evangelical Missionary Societies in the East Indies, there are now upon the main land of India forty-nine missions, twelve on Ceylon, and three on other islands. In Ceylon there are seventy-five missionary schools, with more than nine hundred missionaries.

The principal missionary societies in the United States are the following: American Board of Foreign Missions, founded in 1810; income, in 1829—30, 106,928 dollars: American Baptist Board of Foreign Missions, founded in 1814; income, 1830, 12,000 dollars; Board of Missions of the General Assembly, founded 1818; income, 1830, 12,632 dollars: Methodist Missionary Society (1819), income, 1830, 13,128 dollars: American Home Missionary Society (1826), income, 1830, 33,229 dollars. The whole income of the various Missionary, Tract, Education, and Bible societies, for 1830, was about 500,000 dollars. The American Board of Foreign Missions has six stations in India, one at Canton, four in the Mediterranean, six in the Sandwich islands, and thirty-five among the Indians of the United States, employing fifty-nine missionaries, and 175 assistant missionaries. The board has printed and established numerous attempts at a Syriac alphabet, and in the Sandwich islands, from which the Bible has been issued in eleven languages. The number of scholars in their schools is 47,550. The expenditure during the twenty years from its foundation was 915,750 dollars. The annual reports of the different societies of the necessity of the means are sufficient to the means and success. Besides the works already referred to in the article, the reader may consult Lord's History of Missions, and Brown's History of the Propagation of Christianity.

MISSISSIPPI, the largest river of the United States of America, and one of the largest in the world, rises in about lat. 40° N., and long. 96° 47', and flows south-south-east till it falls into the gulf of Mexico, in lat. 29° 6', and long. 99° 30'. The length is usually given at 3000 miles; some make it less. We speak without reference to the great branch of it called Missouri. The country in which the most northern branches of the Mississippi have their rise, is an elevated table land, abounding with marshes and lakes, that are filled with wild rice. From the same plateau flow the numerous branches of Red river and other streams, which fall into lake Winnipeck, and thence flow into Hudson's bay. It is not easy to decide which of the branches of this table land should be honoured as the principal source of the Mississippi, for travellers are not agreed in determining which of the numerous streams flowing from these lakes is the main river. We follow Mr Schoolcraft's map in giving the latitude and longitude of La Bough lake to the extreme source of the Mississippi. After a winding course of nearly 700 miles, its waters are precipitated over St Anthony's falls, a cataract of sixteen or seventeen feet perpendicular. About twelve miles above these falls, it receives St Peter's river from the west, which is regarded by some as the principal river. The width of the Mississippi, for twelve miles above St Anthony's falls, is about half a mile. Below the falls, it is contracted, for some distance, to 200 yards. The large and navigable tributaries which it afterwards receives, are so numerous that we can only mention a few of the principal. About latitude 44°, the St Croix comes in from the east, said to be navigable by boats 200 miles. In 42°, the Wisconsin, also from the east, opens an easy communication with the waters which flow into lake Michigan. Near 40°, on the west side, is the Des Moines, 150 yards wide, and navigable by boats for about a mile. In 39°, the Illinois enters the Illinois from the east, 400 yards wide, navigable by boats for more than 300 miles. A little below 39°, the mighty Missouri comes in from the
west, which is both longer and broader than the Mississippi above their junction, and imparts its own character to the stream below. In 38°, the Backa-
kias enters from the east, which traverses a most de-
lightful country, and is navigable more than 100
miles. Between 37° and 36°, the magnificent Ohio also
comes in from the east. This is much the larg-
est eastern branch. On the west side, between 35°
and 34°, is the St Francis, which is 200 yards wide,
and is supposed to be navigable 300 miles. White
river enters on the same side, in about 34°, and is
supposed to be 1200 miles long. Between 34° and
33°, the Arkansas comes also from the west. It is
500 yards wide, and supposed to be 2500 miles long.
Between 33° and 32° is the Yazoo, on the eastern
side, between 200 and 200 yards wide. A little above
31°, the Red river comes in from the west. It is
nearly as long, and brings as much water as
the Arkansas. Here the Mississippi carries its
greatest volume of water. Even above the Red
river, in high floods, water escapes from the Mis-
sissippi on the west side, in many places, which
reach to the Red river; and below Red river there are
many large and outlets, but no considerable streams
flowing into it. Only four or five miles below Red
river, the Atchafalaya carries off, at some seasons, as
much water as the Red river brings in. A little
below the town of Baton Rouge, on the eastern side,
flows the Passaic; on the western, or Ohio, the river
passes through lakes Maurepas, Ponchartrain, and
Borgne, to the gulf of Mexico. Bayou Plaquemine
and bayou La Fourche flow out from the western
side before we come to New Orleans; but there is
no outlet below the city till we arrive at the divisions
which form the four mouths of the Mississippi. From
the falls of St Anthony to the mouth of Red river, and
the mouth of Des Moines, the Mississippi is about half a
mile broad. Below the rapids which occur at this place,
its average breadth before it receives the Missouri, is
a full mile; and its transparent waters, its gentle cur-
rent, the number and beauty of its islands, the variety
and magnificence of the natural scenery upon its
hores, render it admirable beyond description. Its
current here is about two miles an hour, and its aver-
age depth is about four feet. Where the Mississippi
receives the Missouri, it is a mile and a half wide.
The mouth of the Missouri is about half a mile wide.
When these are united, they constitute a stream that
is from six to nine quarters of a mile in breadth, very
deep, wide, and rapid, the rocks, stones, boat cars
rent. Its average width, during the remainder of its
course, does not exceed a mile. The influx of the
other mighty rivers only increases its depth and the
boiling and whirling motion of its waters. Its medial
current is about four miles an hour, but it is often
much greater. We know not that it has been sound-
ed in such a manner as to justify any estimate of its
average depth. At Natchez, about 400 miles from its
mouth, we have frequently heard it stated that its
depth is found to be from 100 to 150 feet. Between
New Orleans and its mouths, we have seen a large
anchor dropped three times by a vessel descending
with the current, at places far distant from each
other, and it did not reach the bottom in either case,
with less than sixty fathoms of cable. In estimating
the width of the river, we refer to the space between
the banks of its regular channel. At every flood, it
overspreads a vast country, principally on its western
side, which is from ten to fifty miles in breadth through
an extent of from 200 to 800 miles of the water
which overflows below Red river goes to the
gulf of Mexico, without returning to the river.
The country thus overflowed is generally without
any habitable spots, but is covered with cypress, cot-
tom-wood, or coarse grass; and its waters abound
with alligators. After the Mississippi receives the
Missouri, its course is so serpentine, as to present
very few "reachers", or places where it is straight.
that an extent of three or four miles can be seen at
one time. In many places, the low alluvial tract on
its borders is thirty or forty miles in breadth. The
boundaries of this river-valley are called bluff; and
these are often very steep, and sometimes 200 or
300 feet in height, or places where it is so shallow,
that a variation of a few inches in the height of the water
is generally observed during the night, and sometimes
during the day; but even at the very mouths of the
river, the water is at all times fresh, and no ebb and flood are
seen corresponding with those of the sea. The muddy
waters of the river are perceived by those who ap-
proach the Mississippi below the river.
It is seen from the description here given, that the Mississippi is not to be estimated by
its apparent magnitude, but by the prodigious num-
ber and size of the rivers whose waters it receives.
The immense valley of which it receives the waters,
extends from the Alleghany to the Rocky mountains,
and from latitude 40° to the gulf of Mexico, in 30°.
Its navigation is at all times attended with some dan-
ger, on account of the raging power of its current, and
the numerous trees which it dislodges on its banks, and
beats away in its tide. Steam-boats are admir-
ably fitted to avoid these dangers; and the naviga-
tion along the Gulf of Mexico is every year growing more
confined to them. Flat boats, besides their bring down much
produce, but no other vessels than steam-boats are often seen ascending.—For a more full description
of this mighty river, and of the Mississippi valley, see
Flint's Geography of that country. A considerable
part of this description has been selected from that
excellent work.

Mississippi: one of the United States of Amer-
ica, between 30° and 35° N. lat., and 88° and 91°
W. lon. Its average length is about 300 miles, and
its average breadth 100; square miles, 45,700. It
is bounded on the north by Tennessee, east by Ala-
Bama, south by the Gulf of Mexico and Louisiana,
and west by Louisiana and the Mississippi river.
Mississippi and Alabama constituted one state till
1817. Population of both in 1800, 6,850; in 1810,
40,352. Population of Mississippi alone in 1816,
45,929; in 1820, 75,445; white males, 23,280;
white females, 15,350; slaves, 32,814; persons
engaged in agriculture, 22,035; in manufactures, 65;
In commerce, 5,936. In 1830, there were
38,497 white males; 32,121 white females; 33,072
male slaves; 32,987 female slaves; 922 free coloured
males; 237 free coloured females; total, 136,806.
There are several distinct ranges of hills, of moderate
elevation, besides a singular succession of eminences
The Mississippi, that is anywhere, at a greater or less distance from the river, an appearance of bluffs, which, when mounted, spread out into a kind of table surface, waving agreeably; but, in many instances, the richest table lands have precipitous benches, which expose the land to erosion by deep gulches. In the northern part of the state, inhabited by the Cherokees and Choctaws, the land rises into pleasant and regular undulations. The soil is deep, black, and rich; and, in its natural state, both here and in the more southern parts of the state, much of it is covered with cane-brakes. The country inhabited by the Chickasaws, in the north-west part of the state, is charmingly variegated with swells and valleys of great fertility, and abounds with fine springs. In the lower parts of Mississippi, bordering on the river, neither rocks, stones of any size, nor even gravel, are often seen on the surface of the ground. Sometimes, indeed, the price lasts for many miles; but, in other parts, a person may perform a day's journey without finding any stones which have not been brought from distant places. In general, the surface of this state is most agreeably diversified with ridges, hills, and valleys, and the soil is remarkably fertile. The Mississippi river washes the whole western border of the state. Following its very meandering course, this distance is about 700 miles. The curves of the river often bring it back with very little progress, after a course of seven or eight leagues. The greater part of this long line of river coast consists of inundated swamp, seldom seen except by people travelling on the river. These swamps are generally covered with dense forests. The Yazoo is the largest river that has its whole course in this state. The Pearl is next in importance, and traverses the centre of the state from north to south. Some legislative efforts have been made to improve its navigation. The Pascagoula rises in Tarden, has a course of 250 miles before it enters the gulf of Mexico. It is capable of considerable navigation. At its mouth, it widens into an open bay, on which stands the town of Pascagoula, whither many people from New Orleans resort during the sickly months. A considerable part of the coast of Mississippi, and is navigable for barks fifty miles. It enters the Mississippi just above Grand Gulf. The Homochitto is also a considerable river, and flows into the Mississippi above fort Adams. The other rivers and creeks are comparatively small. The quantity of land embraced within the state is 31,074,234 acres. Of this, the Indians still claim 11,514,517 acres, and the United States claim 16,882,760 acres; leaving only 2,673,957 acres properly belonging to the citizens of the state. Mississippi has only about thirty miles of sea-coast, and has no harbour except Pascagoula. Along the coast are a few islands of little importance. Back from the coast, the country, for a considerable distance, is a sandy, level, pine forest; but this part of the state is healthy, and the timber is very valuable. The climate of this state is generally best suited to the growth of cotton. Its western border is so much exposed to the dry winds of the interior that it must be very healthy until levees are raised to keep the great river within its proper banks. In the most fertile parts of the state, the forests present an immense growth of oak, hickory, lime, sassafras, cotton-wood, magnolia, poplar, and other valuable trees; and the swamps abound with cypress. In moist land, the trees are covered with long moss, hanging often five or six feet from the branches, and giving to the forests a very singular and rather gloomy appearance. The palmetto is seen in the southern section, and the family of laurels in various parts. The laurel magnolia (magnolia grandiflora) is frequently seen in great perfection; and the Choctaw bay, which overhangs the river, is garnished with thousands of these flowers, which remind the northern traveller that he has entered upon a new climate. The sugar-cane grows only on the southern borders of the state. The orange and the live-oak are principally confined to the lower waters of the Pascagoula and Pearl rivers. In the country to the south-west of these, sweet potatoes, rice, indigo, squashes, melons, plums, and peaches will grow well; but excepting maize, peaches, melons, potatoes, and squashes, they are but little cultivated. Grapes of various kinds grow wild, and the vines are seen, in great numbers, hanging from the branches of the highest trees, like the ropes of a ship. Many of them are two or three, and some are six or eight inches in diameter. Almost every species of the grape would probably come to maturity in this state. But the principal attention of the Mississippians is directed to the growth of cotton. This is the grand staple of the state. Although cotton has been long known as a product of this state, yet it is more profitable than any other production. Most of the good planters raise Indian corn enough for their own use, and also raise hogs enough to supply them with bacon. These are the principal and most wholesome articles of food for this climate, but the wealthy planters are supplied with an abundance of the necessaries and luxuries of life. Apples and pears grow imperfectly in a few places. Probably they might flourish on some of the northern highlands. Natchez is much the largest town, and the principal seat of commercial transactions. Monticello is a pleasant, flourishing village on Pearl river, and was lately the seat of government. Jackson, near the head of Pearl river, has been selected as the permanent seat of government. It has a central, healthy, and pleasant situation, but has not yet many inhabitants. The capital, at Jackson, below the Walnut Hills, on the Mississippi, has risen up within a few years, and has already become a place of great trade. Greenville, Woodville, and Winchester are flourishing villages. Gibson Post is a village of considerable importance; it is situated on bayou Pierre, about thirty-five miles above Natchez. At the mouth of Bayou Pierre, south of the bay of St. Louis, is often resorted to by the inhabitants of New Orleans during the sickly months. Warrenton is another thriving village on the Mississippi, from which large quantities of cotton are exported. There are ample public funds for the endowment of schools, but the blessings of education are not generally diffused. The legislature has done little towards requiring the establishment and support of suitable schools. This is also true of most of the Southern and Western States; and a large part of the children are consequently but imperfectly educated. An institution, called a college, has been incorporated at Shilohborough. Jefferson college is at Washington, six miles from Natchez. Schools of good reputation have been supported at Natchez, Woodville, and Monticello. The principal religious denominations are Methodists, Baptists, Presbyterians, Catholics, and Episcopalians. The principal tribes of Indians are the Choctaws and Chickasaws; the former are estimated at 4000; the latter at more than 20,000. This state was included within the country which was discovered and possessed by the French, who formed a settlement at Natchez about the year 1716. In 1763, it was ceded to the British with the rest of the French possessions east of the river.
MISSISSIPPI VALLEY.

There were few white inhabitants before the end of the last century. In 1798, the country was erected into a territorial government, and into a state government in 1817. For the constitution, see Constitutions of the United States.

MISSISSIPPI VALLEY. This name is applied to the vast country which is watered by the Mississippi river and its numerous tributary streams, and which is included between the Alleghany and the Rocky mountains. Mr. Flint considers that it properly includes the tracts watered by the comparatively small rivers, as the Mobile, Pearl, and other rivers of west Florida, on the east side, and the Sabine, Brazas, and Colorada of Texas on the west side, which enter the gulf of Mexico without uniting with the Mississippi. Including the valleys of these separate streams, the great Valley of the Mississippi is bounded south by the gulf of Mexico, and extends on the south-east to cape Florida. Running along that cape in a northern direction, the boundary on the east passes those table elevations which separate the waters of the Mobile and Tombigbee from those of the rivers of east Florida. Thence running through the country of what are called the Indian nations, and touching the north-western extremity of Georgia, the eastern boundary becomes plainly defined by the Alleghany mountains. There are no mountains or ridges on the north, to mark a general boundary between this Valley and the basins of the lakes, or between the waters of the Mississippi and those which flow northward into lake Winnipeck, Hudson's bay, and the Arctic ocean; but the Valley is to be considered as terminating on the north, where it begins to receive its waters. The western boundary is, for the most part, distinctly marked by the Rocky mountains. One of the southern ridges of these mountains divides the waters of Arkansas and Red rivers from those of the Rio del Norte, and traverses the Mexican states of Texas and Coahuila to the low marshes and plains on the gulf of Mexico. Thus the Valley of the Mississippi extends twenty degrees in latitude, without including Cape Florida, and about thirty degrees in longitude. From Olenne point on the Alleghany, to the highest point of boat navigation on the Missouri, is 5000 miles. Between the extreme points of navigation on the Tennessee, and on the Arkansas and the Red river, the distance is at least 3000 miles. Unlike most other long and large rivers, the Mississippi rises in very cold regions, and flows towards the equator. It thus waters an immense valley, possessing almost every variety of climate, and furnishes the means of easy and most profitable intercourse between the various sections of so vast a region. If we except the Amazon, probably no other valley on the globe will compare in size with that of the Mississippi; and it probably surpasses all others in the richness and variety of its soil, and its general adaptation to the support and comfort of civilized men. In extent, it is like a continent; in beauty and fertility, it is the most perfect garden of nature. (For the leading features of the various sections of this Valley, the rivers, climates, and productions, see the separate articles. The history has been given under Louisiana territory, but some further details respecting the earlier periods may be interesting.)

Sebastian Cabot was supposed to have sailed along the coast of Florida but a few years after America was discovered by Columbus. The Spaniards contend that Florida was discovered in lat. 30°, in the year 1512, by Juan Ponce de Leon. Some say that he discovered it on Easter day, and gave it the name of Florida, from the Spanish name of that festival—pascua de flores—the festival of flowers. Others say that he named it Florida, the country of flowers, from the great profusion of flowers with which the trees, shrubs, and plants abounded. Between 1518 and 1594, Grijalva and Vasquez, both Spaniards, landed in Florida. From mismanagement with the natives, their expedition failed in its purposes. In 1528, Pampillo de Narvaez obtained a grant of Florida. He penetrated the country as far as the Indian village Appalacaha. The natives there defeated his party. He was succeeded by Ferdinand de Soto, governor of Cuba, who sailed from Havana with nine ships, about a thousand men, two or three hundred horses, and other live stock. He was attacked by the Indians immediately after he landed; but he coveted rather than feared opposition, and marched far into the interior, even to the country of the Chickasaws. He was probably the first white man who saw the Mississippi. He crossed it near the entrance of Red river; but soon after sickened and died. The number of his followers had been much reduced, and those who remained were glad to abandon the project of colonizing Florida. In 1564, the French built fort Charles, near the present site of St. Augustine, and a number of families were established there; but this was not a permanent establishment. About fifty years afterwards, in 1608, a fleet arrived in the St. Lawrence, commanded by admiral Champlain, and founded the important city of Quebec. Thus the first permanent settlement of the French in America was in the inclement climate of Canada; the Spaniards made their first colonial experiments in Florida, and on Biloxi, at places which are remarkable for their sterility: the English made their first settlements at Jamestown and Plymouth, neither of which places then offered much encouragement of fruitful ness or of peace.

END OF VOLUME FOURTH.