19.381/B

Mother

THE
 British Herbal
 AND
 Family Physician
 to which is added a
 DISPENSATORY
 FOR THE USE OF PRIVATE FAMILIES
 by
 Nich. Culpeper, Gent. Student in Physic & Astrology

Published by

Balifax

M. Gaultick.

THE
ENGLISH PHYSICIAN
ENLARGED.

AMARA DULCIS.

CONSIDERING divers shires in this nation give divers names to one and the same herb, and that the common name which it bears in one county, is not known to another; I shall take the pains to set down all the names that I know of each herb: Pardon me for setting that name first, which is most common to myself. Besides amara dulcis, some call it mortal, others bitter-sweet; some woody night-shade, and others felon-wort.

Description.] It grows up with woody stalks even to a man's height, and sometimes higher. The leaves fall off at the approach of winter, and spring out of the same stalk at springtime; The branch is compassed about with a whitish bark, and hath a pith in the middle of it: The main branch brancheth itself into many small ones with claspers, laying hold on what is next to them, as vines do: it bears many leaves, they grow in no order at all, at least in no regular order: The leaves are longish, though somewhat broad, and pointed at the ends: many of them have two little leaves growing at the end of their foot-stalk; some have but one, and some none. The leaves are of a pale green colour; the flowers are of a purple colour, or of a perfect blue like to violets, and they stand many of them together in knots; the berries are green at first, but when they are ripe they are very red; if you taste them, you shall find them just as the crabs

which we in Sussex call bitter-sweets, viz. sweet at first, and bitter afterwards.

Place.] They grow commonly almost throughout England, especially in moist and shady places.

Time.] The leaves shoot out about the latter end of March if the temperature of the air be ordinary; it flowereth in July, and the seeds are ripe soon after, usually in the next month.

Government and Virtues.] It is under the planet Mercury, and a notable herb of his also, if it be rightly gathered under his influence. It is excellent to remove witchcraft both in men and beasts, as also all sudden diseases whatsoever. Being tied round about the neck, is one of the most admirable remedies for the vertigo or dizziness in the head that is; and that is the reason (as Tragus saith) the people in Germany commonly hang it about their cattle's necks, when they fear any such evil hath betided them: Country people commonly use to take the berries of it, and having bruised them, they apply them to felons, and thereby soon rid their fingers of such troublesome guests.

We have now shewed you the external use of the herb; we shall speak a word or two of the internal, and so conclude. Take notice, it is a mercurial herb, and therefore of very subtle parts, as indeed all mercurial plants are; therefore take a pound of the wood and leaves together, bruise the wood (which you may easily do, for it is not so hard as oak) then put it into a pot, and put to it three pints of white wine, put on the pot-lid and shut it close; and let it infuse hot over a gentle fire twelve hours, then strain it out, so have you a most excellent drink to open obstructions of the liver and spleen, to help difficulty of breath, bruises and falls, and congealed blood in any part of the body, it helps the yellow jaundice, the dropsy and black jaundice, and to cleanse women newly brought to bed. You may drink a quarter of a pint of the infusion every morning. It purgeth the body very gently, and not churlishly, as some hold. And when you find good by this, remember me.

Those who think what I have said concerning the use of these

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Anemum

All Heal

medicines too brief, let them read those books of mine, of the last edition, viz. *Reverius, Veslingus, Riolanus, Johnson, Sennertus, and Physic for the Poor.*

ALL-HEAL.

IT is called all-heal, Hercules's all-heal, and Hercules's wound-wort, because it is supposed that Hercules learned the herb and its virtues from Chiron, when he learned physic of him. Some call it paney, and others opopane wort.

Descript.] Its root is long, thick, and exceeding full of juice, of a hot and biting taste, the leaves are great and large, and winged almost like ash-tree leaves, but that they are something hairy, each leaf consisting of five or six pair of such wings set one against the other upon foot-stalks, broad below, but narrow towards the end; one of the leaves is a little deeper at the bottom than the other, of a fair yellowish, fresh green colour: they are of a bitterish taste, being chewed in the mouth. From among these ariseth up a stalk, green in colour, round in form, great and strong in magnitude, five or six feet high, with many joints, and some leaves thereat; towards the top come forth umbels of small yellow flowers, after which are passed away, you may find whitish, yellow, short, flat seeds, bitter also in taste.

Place.] Having given you the description of the herb from the bottom to the top, give me leave to tell you, that there are other herbs called by this name; but because they are strangers in England, I give only the description of this, which is easily to be had in the gardens of divers places.

Time.] Although Gerrard saith, That they flower from the beginning of May to the end of December, experience teacheth them that keep it in their gardens, that it flowers not till the latter end of the summer, and sheds its seed presently after.

Government and Virtues.] It is under the dominion of Mars, hot, biting, choleric; and remedies what evils Mars afflicts the body of man with, by sympathy, as viper's flesh attracts poison, and the loadstone iron. It kills the worms, helps the gout,

cramp, and convulsions, provokes urine, and helps all joint aches. It helps all cold griefs of the head, the vertigo, falling sickness, the lethargy, the wind cholic, obstructions of the liver and spleen, and stone in the kidneys and bladder. It provokes the terms, expels the dead birth: It is excellent good for the griefs of the sinews, itch, stone, and tooth-ach, the biting of mad dogs and venomous beasts, and purgeth choler very gently.

ALKANET.

BESIDES the common name, it is called orchanet, and Spanish bugloss, and by apothecaries, enchusa.

Descript.] Of the many sorts of this herb there is but one known to grow commonly in this nation; of which one take this description; it hath a great and thick root, of a reddish colour, long, narrow, hairy leaves, green like the leaves of bugloss, which lie very thick upon the ground; the stalks rise up compassed round about, thick with leaves, which are lesser and narrower than the former; they are tender, and slender, the flowers are hollow, small, and of a reddish colour.

Place.] It grows near Rochester in Kent, and in many places in the west country, both in Devonshire and Cornwall.

Time.] They flower in July, and the beginning of August, and the seed is ripe soon after, but the root is in its prime, as carrots and parsnips are, before the herb runs up to stalk.

Government and Virtues.] It is an herb under the dominion of Venus, and indeed one of her darlings, though somewhat hard to come by. It helps old ulcers, hot inflammations, burnings by common fire, and St. Anthony's fire, by antipathy to Mars; for these uses, your best way is to make it into an ointment; also, if you make a vinegar of it, as you make vinegar of roses, it helps the morpew and leprosy; if you apply the herb to the privities, it draws forth the dead child. It helps the yellow jaundice, spleen and gravel in the kidneys. Dioscorides saith, it helps such as are bitten by a venomous beast, whether it be taken

Lyimney

Black Alder

Alders-Tongue

Periwinkle

inwardly, or applied to the wound; nay, he saith further, if any one that hath newly eaten it, doth but spit into the mouth of a serpent, the serpent instantly dies. It stays the flux of the belly, kills worms, helps the fits of the mother. Its decoction made in wine, and drank, strengthens the back, and easeth the pains thereof: It helps bruises and falls, and is as gallant a remedy to drive out the small pox and meazles as any is; an ointment made of it, is excellent for green wounds, pricks or thrusts.

ADDER'S TONGUE, OR SERPENT'S TONGUE.

Descript. **T**HIS herb hath but one leaf, which grows with the stalk a finger's length above the ground, being flat and of a fresh green colour; broad like water plantain, but less, without any rib in it; from the bottom of which leaf, on the inside, riseth up, (ordinarily) one, sometimes two or three slender stalks, the upper half whereof is somewhat bigger, and dented with small dents of a yellowish green colour, like the tongue of an adder serpent (only this is as useful as they are formidable.) The roots continue all the year.

Place.] It grows in moist meadows, and such like places.

Time.] It is to be found in May or April, for it quickly perisheth with little heat.

Government and Virtues.] It is an herb under the dominion of the Moon and Cancer, and therefore if the weakness of the retentive faculty be caused by an evil influence of Saturn in any part of the body governed by the Moon, or under the dominion of Cancer, this herb cures it by sympathy: It cures these diseases after specified, in any part of the body under the influence of Saturn, by antipathy.

It is temperate in respect of heat, but dry in the second degree. The juice of the leaves drank with the distilled water of horse-tail, is a singular remedy for all manner of wounds in the breasts, bowels, or other parts of the body, and is given with good success unto those that are troubled with casting, vomiting, or bleeding at the mouth or nose, or otherwise downwards. The

said juice given in the distilled water of oaken-buds, is very good for women who have their usual courses, or the whites flowing down too abundantly. It helps sore eyes. Of the leaves infused or boiled in oil, omphacine, or unripe olives, set in the sun for certain days, or the green leaves sufficiently boiled in the said oil, is made an excellent green balsam, not only for green and fresh wounds, but also for old and inveterate ulcers, especially if a little fine clear turpentine be dissolved therein. It also stayeth and refresheth all inflammations that arise upon pains by hurts and wounds.

What parts of the body are under each planet and sign, and also what disease may be found in my astrological judgment of diseases; and for the internal work of nature in the body of man; as vital, animal, natural and procreative spirits of man; the apprehension, judgment, memory; the external senses, *viz.* Seeing, hearing, smelling, tasting, and feeling; the virtuous attractive, retentive, digestive, expulsive, &c. under the dominion of what planets they are, may be found in my *Ephemeris* for the year 1651. In both which you shall find the chaff of authors blown away by the fame of Dr. Reason, and nothing but rational truths left for the ingenious to feed upon.

Lastly, To avoid blotting paper with one thing many times, and also to ease your purses in the price of the book, and withal to make you studious in physic; you have at the latter end of the book, the way of preserving all herbs either in juice, conserve, oil, ointment or plaister, electuary, pills or troches.

AGRIMONY.

Descript.] **T**HIS hath divers long leaves (some greater, some smaller) set upon a stalk, all of them dented about the edges, green above, and greyish underneath, and a little hairy withal. Among which ariseth up usually but one strong, round, hairy brown stalk, two or three feet high, with smaller leaves set here and there upon it. At the top hereof grow many small yellow flowers, one above another, in long spikes; after which come

round heads of seed, hanging downwards, which will cleave to and stick upon garments, or any thing that shall rub against them. The knot is black, long and somewhat woody, abiding many years, and shooting afresh every spring; which root, tho' small hath a reasonable good scent.

Place.] It groweth upon banks, near the sides of hedges.

Time.] It flowereth in July and August, the seed being ripe shortly after.

Government and Virtues.] It is an herb under Jupiter, and the sign Cancer; and strengthens those parts under the planet and sign, and removes diseases in them by sympathy, and those under Saturn, Mars and Mercury, by antipathy, if they happen in any part of the body governed by Jupiter, or under the signs Cancer, Sagitary or Pisces, and therefore must needs be good for the gout, either used outwardly in oil or ointment, or inwardly in an electuary, or syrup, or concerved juice; for which see the latter end of this book.

It is of a cleansing and cutting faculty, without any manifest heat, moderately drying and binding. It openeth and cleanseth the liver, helpeth the jaundice, and is very beneficial to the bowels, healing all inward wounds, bruises, hurts, and other distempers. The decoction of the herb made with wine, and drank, is good against the biting and stinging of serpents, and helps them that make foul, troubled or bloody water, and makes them piss very clearly speedily. It also helpeth the cholic, cleanseth the breast, and rids away the cough. A draught of the decoction taken warm before the fit, first removes, and in time rids away the tertian or quartan agues. The leaves and seeds taken in wine, stays the bloody flux; outwardly applied, being stamped with old swine's grease, it helpeth old sores, cancers, and inveterate ulcers, and draweth forth thorns and splinters of wood, nails, or any other such things gotten into the flesh. It helpeth to strengthen the members that be out of joint: and being bruised and applied, or the juice dropped in it helpeth foul and imposthumed ears.

The distilled water of the herb is good for all the said purposes, either inward or outward, but a great deal weaker.

It is a most admirable remedy for such whose liver is annoyed either by heat or cold. The liver is the former of blood, and blood the nourisher of the body, and agrimony a strengthener of the liver.

I cannot stand to give you a reason in every herb why it cureth such diseases; but if you peruse my judgment in the herb wormwood, you shall find them there, and it will be well worth your while to consider it in every herb, you shall find them true throughout the book.

WATER AGRIMONY.

IT is called in some countries, water hemp, bastard hemp, and bastard agrimony, eupatorium, and hepatorium, because it strengthens the liver.

Descript.] The root continues a long time, having many long slender strings. The stalk grows up about two feet high, sometimes higher. They are of a dark purple colour. The branches are many, growing at distances the one from the other, the one from one side of the stalk, the other from the opposite point. The leaves are winged, and much indented at the edges. The flowers grow at the top of the branches, of a brown yellow colour, spotted with black spots, having a substance within the midst of them, like that of a daisy: If you rub them between your fingers, they smell like rosin or cedar when it is burnt. The seeds are long, and easily stick to any woollen thing they touch.

Place.] They delight not in heat, and therefore they are not so frequently found in the southern parts of England as in the northern, where they grow frequently: You may look for them in cold grounds, by ponds and ditches' sides, as also by running waters; sometimes you shall find them grow in the midst of waters.

Time.] They all flower in July or August, and the seed is ripe presently after.

Government and Virtues.] It is a plant of Jupiter, as well as the other agrimony, only this belongs to the celestial sign Cancer. It healeth and drieth, cutteth and cleanseth thick and tough humours of the breast, and for this I hold it inferior to but few herbs that grow. It helps the cachexia or evil disposition of the body, the dropsy and yellow jaundice. It opens obstructions of the liver, mollifies the hardness of the spleen, being applied outwardly. It breaks imposthumes taken inwardly: It is an excellent remedy for the third day ague. It provokes urine and the terms; it kills worms, and cleanseth the body of sharp humours, which are the cause of itch and scabs; the herb being burnt, the smoke thereof drives away flies, wasps, &c. It strengthens the lungs exceedingly. Country people give it to the cattle when they are troubled with the cough, or broken winded.

ALEHOOF, OR GROUND-IVY.

SEVERAL counties give it several names, so that there is scarce an herb growing of that bigness that has got so many: It is called cats-foot, ground-ivy, gill-go-by-ground, and gill-creep-by-ground, turnhoof, hay-maids, and alehoof.

Descript.] This well known herb lieth, spreadeth, and creepeth upon the ground, shooteth forth roots, at the corners of tender jointed stalks, set with two round leaves at every joint somewhat hairy, crumpled, and unevenly dented about the edges with round dents; at the joints likewise, with the leaves towards the ends of the branches, come forth hollow, long flowers, of a blueish purple colour, with small white spots upon the lips that hang down. The root is small with strings.

Place.] It is commonly found under hedges, and on the sides of ditches, under houses, or in shadowed lanes, and other waste grounds, in almost every part of this land.

Time.] They flower somewhat early, and abide a great while; the leaves continue green until winter, and sometimes abide, except the winter be very sharp and cold.

Government and Virtues.] It is an herb of Venus, and therefore cures the diseases she causes by sympathy, and those of Mars by antipathy; you may usually find it all the year long except the year be extremely frosty; it is quick, sharp, and bitter in taste, and is therefore found to be hot and dry; a singular herb for all inward wounds, exulcerated lungs, or other parts, either by itself, or boiled with other the like herbs; and being drank, in a short time it easeth all griping pains, windy, and cholerick humours in the stomach, spleen, or belly; helps the yellow jaundice, by opening the stoppings of the gall and liver, and melancholy, by opening the stoppings of the spleen; expelleth venom or poison, and also the plague; it provokes urine and women's courses; the decoction of it in wine drank for some time together, procureth ease unto them that are troubled with the sciatica, or hip-gout: as also the gout in hands, knees, or feet; if you put to the decoction some honey and a little burnt allum, it is excellent good to gargle any sore mouth or throat, and to wash the sores and ulcers in the privy parts of man or woman; it speedily helpeth green wounds, being bruised and bound thereto. The juice of it boiled with a little honey and verdigrease, doth wonderfully cleanse fistulas, ulcers, and stayeth the spreading or eating of cancers and ulcers; it helpeth the itch, scabs, wheals, and other breakings out in any part of the body. The juice of celandine, field-daisies, and ground-ivy clarified, and a little fine sugar dissolved therein, and dropped into the eyes, is a sovereign remedy for all pains, redness, and watering of them; as also for the pin and web, skins and films growing over the sight; it helpeth beasts as well as men. The juice dropped into the ears, doth wonderfully help the noise and singing of them, and helpeth the hearing which is decayed. It is good to tun up with new drink, for it will clarify it in a night, that it will be the fitter to be drank the next morning; or if any drink be thick with removing, or any other accident, it will do the like in a few hours.

ALEXANDER.

IT is called alisander, horse-parsley, and wild-parsley, and the black pot-herb; the seed of it is that which is usually sold in apothecaries' shops for Macedonian parsley-seed.

Descript.] It is usually sown in all the gardens in Europe, and so well known, that it needs no farther description.

Time.] It flowereth in June and July; the seed is ripe in August.

Government and Virtues.] It is an herb of Jupiter, and therefore friendly to nature, for it warmeth a cold stomach, and openeth a stoppage of the liver and spleen; it is good to move women's courses, to expel the after-birth to break wind, to provoke urine and helpeth strangury; and these things the seeds will do likewise. If either of them be boiled in wine, or being bruised and taken in wine, is also effectual against the biting of serpents. And you know what alexander pottage is good for, that you may no longer eat it out of ignorance, but out of knowledge.

THE BLACK ALDER-TREE.

Descript.] **T**HIS tree seldom groweth to any great bigness, but for the most part abideth like a hedge-bush, or a tree spreading its branches, the woods of the body being white, and a dark red core, or heart; the outward bark is of a blackish colour, with many whitish spots therein; but the inner bark next the wood is yellow, which being chewed, will turn the spittle near into a saffron colour. The leaves are somewhat like those of an ordinary alder-tree, or the female cornet, or dogberry-tree, called in Sussex dog-wood, but blacker, and not so long. The flowers are white, coming forth with the leaves at the joints, which turn into small round berries, first green, afterwards red, but blackish when they are thorough ripe, divided, as it were, into two parts, wherein is contained two small round and flat seeds. The root

runneth not deep into the ground, but spreads rather under the upper crust of the earth.

Place.] This tree or shrub may be found plentifully in St. John's wood by Hornsey, and the woods upon Hamstead heath; as also a wood called the Old Park in Barcomb in Essex, near the brooks' sides.

Time.] It flowereth in May, and the berries are ripe in September.

Government and Virtues.] It is a tree of Venus, and perhaps under the celestial sign Cancer. The inner yellow bark hereof purgeth downwards both choler and phlegm, and the watery humours of such that have the dropsy, and strengthens the inward parts again by binding. If the bark hereof be boiled with agri-mony, wormwood, dodder, hops and some fennel, with smallage, endive, and succory-roots, and a reasonable draught taken every morning for some time together, it is very effectual against the jaundice, dropsy, and the evil disposition of the body, especially if some suitable purging medicines have been taken before, to avoid the grosser excrements; It purgeth and strengtheneth the liver and spleen, cleansing them from such evil humours and hardness as they are afflicted with. It is to be understood that these things are performed by the dried bark; for the fresh green bark taken inwardly provokes strong vomitings, pains in the stomach, and gripings in the belly; yet if the decoction may stand and settle two or three days, until the yellow colour be changed black, it will not work so strongly as before, but will strengthen the stomach, and procure an appetite to meat. The outward bark contrariwise doth bind the body, and is helpful for all lasks and fluxes thereof, but this also must be dried first, whereby it will work the better. The inner bark thereof boiled in vinegar is an approved remedy to kill lice, to cure the itch, and take away scabs, by drying them up in a short time. It is singularly good to wash the teeth, to take away the pains, to fasten those that are loose, to cleanse them, and keep them sound. The leaves are good fodder for kine, to make them give more milk.

If in the spring-time you use the herbs before mentioned, and will take but a handful of each of them, and to them add an handful of elder buds, and having bruised them all, boil them in a gallon of ordinary beer, when it is new; and having boiled them half an hour, add to this three gallons more, and let them work together, and drink a draught of it every morning, half a pint, or thereabouts, it is an excellent purge for the spring, to consume the phlegmatic quality the winter hath left behind it, and withal to keep your body in health, and consume those evil humours which the heat of summer will readily stir up. Esteem it as a jewel.

THE COMMON ALDER-TREE.

Descript.] **G**ROWETH to a reasonable height, and spreads much if it like the place. It is so generally well known unto country people, that I conceive it needless to tell that which is no news.

Place and Time.] It delighteth to grow in moist woods and watery places: flowering in April or May, and yielding ripe seed in September.

Government and Use.] It is a tree under the dominion of Venus and of some watery sign or other, I suppose Pisces; and therefore the decoction, or distilled water of the leaves, is excellent against burnings and inflammations, either with wounds or without, to bathe the place grieved with, and especially for that inflammation in the breast, which the vulgar call an ague.

If you cannot get the leaves (as in winter it is impossible) make use of the bark in the same manner.

The leaves and bark of the alder-tree are cooling, drying, and binding. The fresh leaves laid upon swellings dissolve them, and stay the inflammations. The leaves put under the bare feet galled with travelling, are a great refreshing to them. The said leaves gathered while the morning dew is on them, and brought into a chamber troubled with the fleas, will gather them thereun-

to, which being suddenly cast out, will rid the chamber of those troublesome bedfellows.

ANGELICA.

TO write a description of that which is so well known to be growing almost in every garden I suppose is altogether needless, yet for its virtues it is of admirable use.

In time of Heathenism, when men had found out any excellent herb, they dedicated it to their gods; as the bay-tree to Apollo, the oak to Jupiter, the vine to Bacchus, the poplar to Hercules. These the papists following as the Patriarchs they dedicate to their saints; as our lady's thistle to the Blessed Virgin, St. John's wort to St. John, and another wort to St. Peter, &c. Our physicians must imitate like apes (though they cannot come off half so cleverly) for they blasphemously call pansies or hearts-ease, *an herb of the Trinity*, because it is of three colours. And a certain ointment, *an ointment of the Apostles*, because it consists of twelve ingredients: Alas, I am sorry for their folly, and grieved at their blasphemy. God send them wisdom the rest of their age, for they have their share of ignorance already. Oh! why must ours be blasphemous, because the heathens and papists were idolatrous? Certainly they have read so much in old rusty authors, that they have lost all their divinity; for unless it were amongst the ranters, I never read or heard of such blasphemy. The heathens and papists were bad, and ours worse: the papists giving idolatrous names to herbs for their virtues' sake, not for their fair looks, and therefore some called this an herb of the *Holy Ghost*; others more moderate called it Angelica, because of its angelical virtues, and that name it retains still, and all nations follow it so near as their dialect will permit.

[*Government and Virtues.*] It is an herb of the Sun in Leo; let it be gathered when he is there, the Moon applying to his good aspect: let it be gathered either in his hour, or in the hour of Jupiter, let Sol be angular: observe the like in gathering the herbs of other planets, and you may happen to do wonders. In

all epidemical diseases caused by Saturn, that is as good a preservative as grows; It resists poison, by defending and comforting the heart, blood, and spirits; it doth the like against the plague and all epidemical diseases, if the root be taken in powder to the weight of half a dram at a time, with some good treacle in carduus water, and the party thereupon laid to sweat in his bed; if treacle be not to be had, take it alone in carduus or angelica-water. The stalks or roots candied and eaten fasting, are good preservatives in time of infection; and at other times to warm and comfort a cold stomach. The root also steeped in vinegar, and a little of that vinegar taken sometimes fasting, and the root smelled unto, is good for the same purpose. A water distilled from the root simply, as steeped in wine, and distilled in a glass, is much more effectual than the water of the leaves; and this water, drank two or three spoonfuls at a time, easeth all pains and torments coming of cold and wind, so that the body be not bound; and taken with some of the root in powder at the beginning, helpeth the pleurisy, as also all other diseases of the lungs and breasts, as coughs, phthisic, and shortness of breath; and a syrup of the stalks do the like. It helps pains of the cholic, the strangury and the stoppage of the urine; procureth women's courses, and expelleth the after birth, openeth the stoppings of the liver and spleen, and briefly easeth and discusseth all windiness and inward swellings. The decoction drunk before the fit of an ague, that they may sweat (if possible) before the fit comes, will in two or three times taking, rid it quite away; it helps digestion, and is a remedy for a surfeit. The juice, or the water being dropped into the eyes or ears, helps dimness of sight and deafness; the juice put into the hollow teeth, easeth their pains. The roots in powder, made up into a plaister with a little pitch, and laid on the biting of mad dogs, or any other venomous creature, doth wonderfully help. The juice or the water dropped, or tents wet therein, and put into filthy dead ulcers, or the powder of the root (in want of either) doth cleanse and cause them to heal quickly, by covering the naked bones

with flesh; the distilled water applied to places pained with the gout, or sciatica, doth give a great deal of ease.

The wild angelica is not so effectual as the garden; although it may be safely used to all the purposes aforesaid.

AMARANTHUS.

BESIDES its common name, by which it is best known to the florists of our days, it is called flower gentle, flower velure, floramour, and velvet flower.

Descript.] It being a garden flower, and well known to every one that keeps it, I might forbear the description; yet, notwithstanding, because some desire it, I shall give it. It runneth up with a stalk a cubit high, streaked, and somewhat reddish towards the root, but very smooth, divided towards the top with small branches, among which stand long broad leaves of a reddish green colour, slippery; the flowers are not properly flowers, but tufts, very beautiful to behold, but of no smell, of a reddish colour; if you bruise them, they yield juice of the same colour; being gathered, they keep their beauty a long time; the seed is of a shining black colour.

Time.] They continue in flower from August till the time the frost nips them.

Government and Virtues.] It is under the dominion of Saturn, and is an excellent qualifier of the unruly actions and passions of Venus, though Mars also should join with her. The flowers dried and beaten into powder stop the terms in women, and so do almost all other red things. And by the icon, or image of every herb, the ancients at first found out their virtues. Modern writers laugh at them for it; but I wonder in my heart, how the virtues of herbs came at first to be known, if not by their signatures; the moderns have them from the writings of the ancients; the ancients had not writings to have them from: But to proceed. The flowers stop all fluxes of blood; whether in man or woman, bleeding either at the nose or wound. There is also a sort of amaranthus that bears a white flower, which stops the

whites in women, and the running of the reins in men, and is a most gallant antivenereal, and a singular remedy for the French pox.

ANEHOME.

CALLED also wind flower, because they say the flowers never open but when the wind bloweth; Pliny is my author, if it be not so, blame him. The seed also (if it bears any at all) flies away with the wind.

Place and Time.] They are sown usually in the gardens of the curious, and flower in the spring-time. As for description I shall pass it, being well known to all those that sow them.

Government and Virtues.] It is under the dominion of Mars, being supposed to be a kind of crow-foot. The leaves provoke the terms mightily, being boiled, and the decoction drunk. The body being bathed with the decoction of them, cures the leprosy. The leaves being stamped and the juice snuffed up in the nose, purgeth the head mightily; so doth the root, being chewed in the mouth, for it procureth much spitting, and bringeth away many watery and phlegmatic humours, and is therefore excellent for the lethargy. And when all is done, let physicians prate what they please, all the pills in the dispensatory purge not the head like to hot things held in the mouth. Being made into an ointment, and the eye-lids anointed with it, it helps inflammations of the eyes, whereby it is palpable, that every stronger draweth its weaker like. The same ointment is excellent good to cleanse malignant and corroding ulcers.

GARDEN ARRACH.

CALLED also orach, and arage.

Descript.] It is so commonly known to every house-wife, it were labour lost to describe it.

Time.] It flowereth and seedeth from June to the end of August.

The English Physician Enlarged.

Government and Virtues.] It is under the government of the Moon; in quality cold and moist like unto her. It softeneth and looseneth the body of man being eaten, and fortifieth the expulsive faculty in him. The herb, whether it be bruised and applied to the throat, or boiled, and in like manner applied, it matters not much, it is excellent good for swellings in the throat; the best way I suppose, is to boil it, and having drunk the decoction inwardly, apply the herb outwardly: The decoction of it besides, is an excellent remedy for the yellow jaundice.

ARRACH, WILD AND STINKING.

CALLED also vulvaria, from that part of the body, upon which the operation is most; also dog's arrach, goat's arrach, and stinking motherwort.

Descript.] This hath small and almost round leaves, yet a little pointed and without dent or cut, of a dusky mealy colour, growing on the slender stalks and branches that spread on the ground, with small flowers in clusters set with the leaves, and small seed succeeding like the rest perishing yearly, and rising again with its own sowing. It smells like rotten fish, or something worse.

Place.] It grows usually upon dunghills.

Time.] They flower in June and July, and their seed is ripe quickly after.

Government and Virtues.] Stinking arrach is used as a remedy to help women pained, and almost strangled with the mother by smelling to it; but inwardly taken there is no better remedy under the moon for that disease. I would be large in commendation of this herb; were I but eloquent. It is an herb under the dominion of Venus, and under the sign Scorpio; it is common almost upon every dunghill. The works of God are given freely to man, his medicines are common and cheap, and easy to be found. ('Tis the medicines of the College of Physicians that are so dear and scarce to find.) I commend it for an universal medicine for the womb, and such a medicine as will easily,

safely, and speedily cure any disease thereof, as the fits of the mother, dislocation, or falling out thereof; it cools the womb, being overheated. And let me tell you this, and I will tell you the truth, heat of the womb is one of the greatest causes of hard labour in child-birth. It makes barren women fruitful. It cleanseth the womb if it be foul, and strengthens it exceedingly; it provokes the terms if they be stopped, and stops them if they flow immoderately; you can desire no good to your womb, but this herb will effect it; therefore if you love children, if you love health, if you love ease, keep a syrup always by you, made of the juice of this herb, and sugar, (or honey if it be to cleanse the womb) and let such as be rich keep it for their poor neighbours; and bestow it as freely as I bestow my studies upon them, or else let them look to answer it another day, when the Lord shall come to make inquisition of blood.

ARCHANGEL.

TO put a gloss upon their practice, the physicians call an herb (which country people vulgarly know by the name of dead nettle) archangel; whether they savour more of superstition or folly, I leave to the judicious reader. There is more curiosity than courtesy to my countrymen used by others in the explanation as well of the names, as description of this so well known herb, which that I may not also be guilty of, take this short description first of the red archangel.

Descript.] This has divers square stalks somewhat hairy, at the joints whereof grow two sad green leaves dented about the edges, opposite to one another to the lowermost upon long foot stalks, but without any toward the tops, which are somewhat round, yet pointed, and a little crumpled and hairy; round about the upper joints, where the leaves grow thick, are sundry gaping flowers of a pale reddish colour; after which come the seeds three or four in a husk. The root is small and thready, perishing every year: the whole plant hath a strong scent, but not stinking.

White archangel hath divers square stalks, none standing straight upward, but bending downward, whereon stand two leaves at a joint, larger and more pointed than the other, dented about the edges, and greener also, more like unto nettle leaves, but not stinking, yet hairy. At the joints with the leaves stand larger and more open gaping white flowers, husks round about the stalks, but not with such a bush of leaves and flowers set in the top, as is on the other, wherein stand small roundish black seeds: the root is white, with many strings at it, not growing downward, but lying under the upper crust of the earth, and abideth many years increasing; this hath not so strong a scent as the former.

Yellow archangel is like the white in the stalks and leaves; but that the stalks are more straight and upright, and the joints with the leaves are farther asunder, having longer leaves than the former, and the flowers a little larger and more gaping, of a fair yellowish colour in most, in some paler. The roots are like the white, only they creep not so much under the ground.

Place.] They grow almost every where (except it be in the middle of the street) the yellow most usually in the wet grounds of woods, and sometimes in the dryer, in divers counties of this nation.

Time.] They flower from the beginning of the spring all the summer long.

Virtues and Use.] The archangels are somewhat hot and drier than the stinging nettles, and used with better success for the stopping and hardness of the spleen than they, by using the decoction of the herb in wine, and afterwards applying the herb hot into the region of the spleen as a plaister, or the decoction with sponges. Flowers of the white archangel are preserved or conserved to be used to stay the whites, and the flowers of the red to stay the reds in women. It makes the heart merry, drives away melancholy, quickens the spirits, is good against quartan agues, stauncheth bleeding at mouth and nose, if it be stamped and applied to the nape of the neck; the herb also bruised, and

with some salt and vinegar and hog-grease, laid, upon an hard tumour or swelling, or that vulgarly called the king's evil, doth help to dissolve or discuss them; and being in like manner applied, doth much allay the pains, and give ease to the gout, sciatica, and other pains of the joints and sinews. It is also very effectual to heal green wounds, and old ulcers; also to stay their fretting, gnawing and spreading. It draweth forth splinters, and such like things gotten into the flesh, and is very good against bruises and burnings. But the yellow archangel is most commended for old, filthy, corrupt sores and ulcers, yea, although they grow to be hollow, and to dissolve tumours. The chief use of them is for women, it being an herb of Venus, and may be found in my *Guide for women*.

ARSSMART.

THE hot arssmart is called also water-pepper, or culrage. The mild arssmart is called dead arssmart, percicaria, or peach-wort, because the leaves are so like the leaves of a peach-tree; it is also called plumbago.

Description of the Mild.] This hath broad leaves set at the great red joint of the stalks; with semi-circular blackish marks on them, usually either blueish or whitish, with such like seed following. The root is long, with many strings thereat, perishing yearly; this hath no sharp taste (as another sort hath, which is quick and biting) but rather sour like sorrel, or else a little drying, or without taste.

Place.] It groweth in watery places, ditches and the like, which for the most part are dry in summer.

Time.] It flowereth in June, and the seed is ripe in August.

Government and Virtues.] As the virtue of both these is various, so is also their government; for that which is hot and biting, is under the dominion of Mars, but Saturn challengeth the other, as appears by that leaden coloured spot he hath placed upon the leaf.

It is of a cooling and drying quality, and very effectual for

putrified ulcers in man or beast, to kill worms and cleanse the putrified places. The juice thereof dropped in, or otherwise applied, consumeth all cold swellings, and dissolveth the congealed blood of bruises by strokes, falls, &c. A piece of the root, or some of the seeds bruised, and held to an aching tooth; taketh away the pain. The leaves bruised and laid to the joint that hath a felon thereon taketh it away. The juice destroyeth worms in the ears, being dropped into them; if the hot arssmart be strewed in a chamber, it will soon kill all the fleas; and the herb or juice of the cold arssmart, put to a horse or other cattle's sores, will drive away the fly in the hottest time of summer; a good handful of the hot biting arssmart put under a horse's saddle, will make him travel the better, although he were half tired before. The mild arssmart is good against all imposthumes and inflammations at the beginning and to heal green wounds.

All authors chop the virtues of both sorts of arssmart together, as men chop herbs to the pot, when both of them are of clean contrary qualities. The hot arssmart groweth not so high or tall as the mild doth, but hath many leaves of the colour of peach leaves, very seldom or never spotted: in other particulars it is like the former, but may easily be known from it, if you will but be pleased to break a leaf of it cross your tongue, for the hot will make your tongue, to smart, so will not the cold. If you see them both together, you may easily distinguish them, because the mild hath far broader leaves; and our College of Physicians, out of the learned care of the public good, *Anglice*, their own gain, mistake the one for the other in their *New Master-piece*, whereby they discover, 1. Their ignorance, 2. Their carelessness; and he that hath but half an eye, may see their pride, without a pair of spectacles. I have done what I could to distinguish them in the virtues, and when you find not the contrary named, use the cold. The truth is, I have not yet spoken with Dr. Reason, nor his brother Dr. Experience, concerning either of them.

ASARABACCA.

Descript.] **A**SARABACCA hath many heads rising from the roots, from whence come many smooth leaves, every one upon his own foot-stalk, which are rounder and bigger than violet leaves, thicker also, and of a dark green shining colour on the upper side, and of a pale yellow green underneath, little or nothing dented about the edges, from among which rise small, round, hollow, brown green husks, upon short stalks, about an inch long, divided at the brims into five divisions, very like the cups or heads of the henbane seed, but that they are smaller; and these be all the flowers it carrieth, which are somewhat sweet, being smelled unto, and wherein, when they are ripe, is contained small cornered rough seeds, very like the kernels or stones of grapes or raisins. The roots are small and whitish, spreading divers ways in the ground, increasing into divers heads; but not running or creeping under the ground, as some other creeping herbs do. They are somewhat sweet in smell, resembling nardus, but more when they are dry than green; and of a sharp but not unpleasant taste.

Place.] It groweth frequently in gardens.

Time.] They keep their leaves green all winter; but shoot forth new in the spring, and with them come forth those heads or flowers which give ripe seed about midsummer, or somewhat after.

Government and Virtues.] 'Tis a plant under the dominion of Mars, and therefore inimical to nature. This herb being drank, not only provoketh vomiting but purgeth downward, and by urine also, purgeth both choler and phlegm: if you add to it some spikenard, with the whey of goat's milk, or honeyed water, it is made more strong, but it purgeth phlegm more manifestly than choler, and therefore doth much help pains in the hips, and other parts; being boiled in whey, they wonderfully help the obstructions of the liver and spleen, and are therefore profitable for the dropsy and jaundice; being steeped in wine and drank,

it helps those continual agues that come by the plenty of stubborn humours; an oil made thereof by setting in the sun, with some laudanum added to it, provoketh sweating, (the ridge of the back being anointed therewith) and thereby driveth away the shaking fits of the ague. It will not abide any long boiling, for it loseth its chief strength thereby; nor much beating, for the finer powder doth provoke vomits and urine, and the coarser purgeth downwards.

The common use hereof is, to take the juice of five or seven leaves in a little drink to cause vomiting; the roots have also the same virtue, though they do not operate so forcibly; they are very effectual against the biting of serpents, and therefore are put as an ingredient both into mithridate and Venice treacle. The leaves and roots being boiled in lee, and the head often washed therewith while it is warm, comforteth the head and brain that is ill affected by taking cold, and helpeth the memory.

I shall desire ignorant people to forbear the use of the leaves; the roots purge more gently, and may prove beneficial in such as have cancers, or old putrified ulcers, or fistulas upon their bodies, to take a dram of them in powder in a quarter of a pint of white wine in the morning. The truth is, I fancy purging and vomiting medicines as little as any man breathing doth, for they weaken nature, nor shall ever advise them to be used, unless upon urgent necessity. If a physician be nature's servant, it is his duty to strengthen his mistress as much as he can, and weaken her as little as may be.

ASPARAGUS, SPARAGUS, OR SPERAGE.

Descript.] **I**T riseth up at first with divers white and green scaly heads, very brittle and easy to break while they are young, which afterward rise up in very long and slender green stalks, of the bigness of an ordinary riding wand, at the bottom of most, or bigger or lesser, as the roots are of growth: on which are set divers branches of green leaves shorter and smaller than fennel

to the top ; at the joints whereof come forth small yellowish flowers, which turn into round berries, green at first, and of an excellent red colour when they are ripe, shewing like bead or coral, wherein are contained exceeding hard black seeds, the roots are dispersed from a spongy head into many long, thick, and round strings, wherein is sucked much nourishment out of the ground, and increaseth plentifully thereby.

PRICKLY ASPARAGUS, OR SPERAGE.

Descript.] IT groweth usually in gardens, and some of it grows wild in Appleton meadows in Gloucestershire, where the poor people do gather the buds of young shoots, and sell them cheaper than our garden asparagus is sold at London.

Time. They do for the most part flower, and bear their berries late in the year, or not at all, although they are housed in winter.

Government and Virtues.] They are both under the dominion of Jupiter. The young buds or branches boiled in ordinary broth, make the belly soluble and open, and boiled in white wine, provoke urine, being stopped, and is good against the strangury or difficulty of making water, it expelleth the gravel and stone out of the kidneys, and helpeth pains in the reins. And boiled in white wine or vinegar, it is prevalent for them that have their arteries loosened, or are troubled with the hip-gout or sciatica. The decoction of the roots boiled in wine and taken is good to clear the sight, and being held in the mouth easeth the tooth-ach ; and being taken fasting several mornings together, stirreth up bodily lust in man or woman (whatever some have written to the contrary.) The garden asparagus nourisheth more than the wild, yet hath it the same effects in all the afore mentioned diseases : The decoction of the roots in white wine, and the back and belly bathed therewith, or kneeling or lying down in the same, or sitting therein as a bath hath been found effectual against pains of the reins and bladder, pains of the mother and cholic, and generally against all pains that hap-

pen to the lower parts of the body, and no less effectual against stiff and benumbed sinews, or those that are shrunk by cramps and convulsions, and helpeth the sciatica.

ASH TREE.

THIS is so well known, that time will be mispent in writing a description of it; and therefore I shall only insist upon the virtues of it.

Government and Virtues.] It is governed by the Sun; and the young tender tops, with the leaves taken inwardly, and some of them outwardly applied, are singularly good against the biting of viper, adder, or any other venomous beast; and the water distilled therefrom being taken a small quantity every morning fasting, is a singular medicine for those that are subject to dropsy, or to abate the greatness of those that are too gross or fat. The decoction of the leaves in white wine helpeth to break the stone, and expel it, and cureth the jaundice. The ashes of the bark of the ash made into a lee, and those heads bathed therewith, which are leprous, scabby, or scald, they are thereby cured. The kernels within the husks, commonly called ashen keys, prevail against stitches and pains in the sides, proceeding of wind, and voideth away the stone by provoking urine.

I can justly except against all of this, save only the first, *viz.* That ash-tree tops and leaves are good against the bitings of serpents and vipers. I suppose this had its rise from Gerard or Pliny, both which hold, That there is such an antipathy between an adder and an ash-tree, that if an adder be encompassed round with ash-tree leaves, she will sooner run through the fire than through the leaves: The contrary to which is the truth, as both my eyes are witness. The rest are virtues something likely, only if it be in winter when you cannot get the leaves, you may safely use the bark instead of them. The keys you may easily keep all the year, gathering them when they are ripe.

AVENS, CALLED ALSO COLEWORT, AND HERB BONET.

Descript.] **T**HE ordinary avens hath many long, rough, dark, green winged leaves, rising from the root, every one made of many leaves set on each side of the middle rib, the largest three thereof grow at the end, and are snipped, or dented round about the edges; the other being small pieces, sometimes two and sometimes four, standing on each side of the middle rib underneath them. Among which do rise up divers rough or hairy stalks about two feet high, branching forth with leaves at every joint not so long as those below, but almost as much cut in on the edges, some into three parts, some into more. On the tops of the branches stand small, pale, yellow flowers, consisting of five leaves, like the flowers of cinquefoil, but larger, in the middle whereof standeth a small green herb, which when the flower is fallen groweth to be round, being made of many long greenish purple seeds (like grains) which will stick upon your clothes. The root consists of many brownish strings or fibres, smelling somewhat like unto cloves, especially those which grow in the higher, hotter, and drier grounds, and in free and clear air.

Place.] They grow wild in many places under hedges' sides, and by the path ways in fields; yet they rather delight to grow in shadowy than sunny places.

Time.] They flower in May and June for the most part, and their seed is ripe in July at the farthest.

Government and Virtues.] It is governed by Jupiter, and that gives hopes of a wholesome healthful herb. It is good for the diseases of the chest or breast, for pains, and stitches in the side, and to expel crude and raw humours from the belly and stomach, by its sweet savour and warming quality. It dissolves the inward congealed blood happening by falls or bruises, and the spitting of blood, if the roots, either green or dry, be boiled in wine and drank; as also all manner of inward wounds or outward, if washed or bathed therewith. The decoction also being drank, comforts the heart, and strengtheneth the stomach and a

cold brain, and therefore is good in the spring-time to open obstructions of the liver, and helpeth the wind cholick; it also helps those that have fluxes, or are bursten, or have a rupture; it taketh away spots or marks in the face, being washed therewith. The juice of the fresh root, or powder of the dried root, hath the same effect with the decoction. The root in the spring-time steeped in wine, doth give it a delicate savour and taste, and being drank fasting every morning, comforteth the heart, and is a good preservative against the plague, or any other poison. It helpeth digestion, and warmeth a cold stomach, and openeth obstructions of the liver and spleen.

It is very safe; you need have no dose prescribed; and is very fit to be kept in every body's house.

BALM.

THIS herb is so well known to be an inhabitant almost in every garden, that I shall not need to write any description thereof, although the virtues thereof, which are many, may not be omitted.

Government and Virtues.] It is an herb of Jupiter, and under Cancer, and strengthens nature much in all its actions. Let a syrup made with the juice of it and sugar (as you shall be taught at the latter end of this book) be kept in every gentlewoman's house to relieve the weak stomachs and sick bodies of their poor sickly neighbours; as also the herb kept dry in the house, that so with other convenient simples, you may make it into an electuary with honey, according as the disease is, as you shall be taught at the latter end of my book. The Arabian physicians have extolled the virtues thereof to the skies; although the Greeks thought it not worth mentioning. Seraphio saith, It causeth the mind and heart to become merry, and reviveth the heart, faintings and swoonings, especially of such who are overtaken in sleep, and driveth away all troublesome cares and thoughts out of the mind, arising from melancholy or black choler; which Avicen also confirmeth. It is very good to help

digestion, and open obstructions of the brain, and hath so much purging quality in it (saith Avicen) as to expel those melancholy vapours from the spirits and blood which are in the heart and arteries, although it cannot do so in other parts of the body. Dioscorides saith, That the leaves steeped in wine, and the wine drank, and the leaves externally applied, is a remedy against the stings of a scorpion, and the bitings of mad dogs; and commendeth the decoction thereof for women to bathe or sit in to procure their courses; it is good to wash aching teeth therewith, and profitable for those that have the bloody-flux. The leaves also, with a little nitre taken in drink, are good against the surfeit of mushrooms, helps the griping pains of the belly; and being made into an electuary, it is good for them that cannot fetch their breath: Used with salt, it takes away wens, kernels, or hard swellings in the flesh or throat; it cleanseth foul sores, and easeth pains of the gout. It is good for the liver and spleen. A tansy, or caudle made with eggs, and juice thereof while it is young, putting to it some sugar and rosewater, is good for a woman in child-bed, when the after-birth is not thoroughly voided, and for their faintings upon or in their sore travail. The herb bruised and boiled in a little wine and oil, and laid on a boil, will ripen it, and break it.

BARBERRY.

THIS shrub is so well known by every boy and girl that hath but attained to the age of seven years, that it needs no description.

Government and Virtues.] Mars owns the shrub, and presents it to the use of my countrymen to purge their bodies of choler. The inner rind of the barberry-tree boiled in white wine, and a quarter of a pint drank each morning, is an excellent remedy to cleanse the body of choleric humours, and free it from such diseases as choler causeth, such as scabs, itch, tetters, ring-worms, yellow jaundice, boils, &c. It is excellent for hot agues, burnings, scaldings, heat of the blood, heat of the liver, bloody-

flux : for the berries are as good as the bark, and more pleasing ; they get a man a good stomach to his victuals, by strengthening the attractive faculty which is under Mars, as you may see more at large at the latter end of my *Ephemeris* for the year 1651 : The hair washed with the lee made of ashes of the tree and water, will make it turn yellow, viz. of Mars' own colour. The fruit and rind of the shrub, the flowers of broom and of heath, or furze, cleanse the body of choler by sympathy, as the flowers, leaves, and bark of the peach-tree do by antipathy ; because these are under Mars, that under Venus.

BARLEY.

THE continual usefulness hereof hath made all in general so acquainted herewith, that it is altogether needless to describe it, several kinds hereof plentifully growing, being yearly sown in this land. The virtues thereof take as followeth.

Government and Virtues.] It is a notable plant of Saturn : if you view diligently its effects by sympathy and antipathy, you may easily perceive a reason of them ; as also why barley bread is so unwholesome for melancholy people. Barley in all the parts and compositions thereof (except malt) is more cooling than wheat. and a little cleansing : And all the preparations thereof, as barley-water and other things made thereof do give great nourishment to persons troubled with fevers, agues, and heats in the stomach. A poultice made of barley meal or flour boiled in vinegar and honey, and a few dry figs put into them, dissolveth all hard imposthumes, and assuageth inflammations, being thereto applied. And being boiled with melilot and camomile flowers, and some linsseed, fenugreek, and rue in powder, and applied warm, it easeth pains in side and stomach, and windiness of the spleen. The meal of barley and fleawort boiled in water, and made a poultice with honey and oil of lilies applied warm, cureth swellings under the ears, throat, neck, and such like ; and a plaister made thereof with tar, wax, and oil helpeth the king's evil in the throat ; boiled with sharp vinegar

into a poultice, and laid on hot, helpeth the leprosy ; being boiled in red wine with pomegranate rinds, and myrtles, stayeth the lask or other flux of the belly ; boiled with vinegar and quince, it easeth the pains, of the gout ; barley, flour, white salt, honey, and vinegar mingled together, taketh away the itch speedily and certainly. The water distilled from the green barley in the end of May, is very good for those that have defluations of humours fallen into their eyes, and easeth the pain being dropped into them ; or white bread steeped therein, and bound on the eyes, doth the same.

GARDEN BAZIL, OR SWEET BAZIL.

Descript.] **T**HE greater or ordinary basil riseth up usually with one upright stalk diversely branching forth on all sides, with two leaves at every joint, which are somewhat broad and round, yet pointed, of a pale green colour, but fresh ; a little snipped about the edges, and of a strong healthy scent. The flowers are small and white, and standing at the tops of the branches, with two small leaves at the joints, in some places green, in others brown, after which come black seed. The root perisheth at the approach of winter, and therefore must be new sown every year.

Place.] It groweth in gardens.

Time.] It must be sowed late, and flowers in the heart of Summer, being a very tender plant.

Government and Virtues.] This is the herb which all authors are together by the ears about, and rail at one another (like lawyers.) Galen and Dioscorides hold it not fitting to be taken inwardly ; and Chrysippus rails at it with downright Billingsgate rhetoric ; Pliny, and the Arabian physicians, defend it.

For my own part, I presently found that speech true ;

Non nostrum inter nos tantas componere lites.

And away to Dr. Reason went I, who told me it was an herb of Mars, and under the scorpion, and perhaps therefore called basilicon, and it is no marvel if it carry a kind of virulent

quality with it. Being applied to the place bitten by venomous beasts, or stung by a wasp or hornet, it speedily draws the poison to it. *Every like draws his like.* Mizeldus affirms, that being laid to rot in horse-dung, it will breed venomous beasts. Hilorius, a French physician, affirms upon his own knowledge, that an acquaintance of his, by common smelling to it, had a scorpion bred in his brain. Something is the matter, this herb and rue will not grow together, no, nor near one another, and we know rue is as great an enemy to poison as any that grows.

To conclude. It expelleth both birth and after-birth; and as it helps the deficiency of Venus in one kind, so it spoils all her actions in another. I dare write no more of it.

THE BAY TREE.

THIS is so well known that it needs no description; I shall therefore only write the virtues thereof, which are many.

Government and virtues.] I shall but only add a word or two to what my friend hath written, viz. That it is a tree of the Sun, and under the celestial sign Leo, and resisteth witchcraft very potently, as also all the evils old Saturn can do the body of man, and they are not a few; for it is the speech of one, and I am mistaken if it were not Mizeldus, that neither witch nor devil, thunder or lightning, will hurt a man in the place where a bay-tree is. Galen said, That the leaves or bark do dry and heal very much, and the berries more than the leaves; the bark of the root is less sharp and hot, but more bitter, and hath some astringent withal, whereby it is effectual to break the stone, and good to open obstructions of the liver, spleen and other inward parts, which bring the jaundice, dropsy, &c. The berries are very effectual against all poison of venomous creatures, and the sting of wasps and bees; as also against the pestilence, or other infectious diseases and therefore put into sundry treacles for that purpose; they likewise procure women's courses; and seven of them given to a woman in sore travail of child-birth, doth cause a speedy delivery, and expel the after-birth, and

therefore not to be taken by such as have not gone out their time, lest they procure abortion, or cause labour too soon. They wonderfully help all cold and rheumatic distillations from the brain, to the eyes, lungs or other parts; and being made into an electuary with honey, do help the consumption, old coughs, shortness of breath, and thin rheums; as also the meagrim. They mightily expel the wind, and provoke urine; help the mother, and kill the worms. The leaves also work the like effects. A bath of the decoction of the leaves and berries, is singularly good for women to sit in, that are troubled with the mother, or the diseases thereof, or the stoppings of their courses, or for the diseases of the bladder, pains in the bowels by wind and stopping of urine. A decoction likewise of equal parts of bay-berries, cummin seed, hyssop, origanum, and euphorbium, with some honey, and the head bathed therewith, doth wonderfully help distillations and rheums, and setteth the palate of the mouth into its place. The oil made of the berries is very comfortable in all cold griefs of the joints, nerves, arteries, stomach, belly, or womb, and helpeth palsies, convulsions, cramp, aches, tremblings, and numbness in any part, weariness also, and pains that come by sore travelling. All griefs and pains proceeding from wind, either in the head, stomach, back, belly, or womb, by anointing the parts affected therewith: And pains in the ears are also cured by dropping in some of the oil, or by receiving into the ears the fume of the decoction of the berries through a funnel. The oil takes away the marks of the skin and flesh by bruises, falls, &c. and dissolveth the congealed blood in them. It helpeth also the itch, scabs, and wheals in the skin.

BEANS.

BOTH the garden and field beans are so well known, that it saveth me the labour of writing any description of them. Their virtues follow.

Government and Virtues.] They are plants of Venus, and the distilled water of the flower of garden beans is good to clean the

face and skin from spots and wrinkles, and the meal or flour of them, or the small beans doth the same. The water distilled from the green husks, is held to be very effectual against the stone, and to provoke urine. Bean flour is used in poultices to assuage inflammations arising from wounds, and the swelling of women's breasts caused by the curdling of their milk, and represseth their milk; flour of beans and fenugreek mixed with honey, and applied to felons, boils, bruises, or blue marks by blows, or the imposthumes in the kernels of the ears, helpeth them all, and with rose leaves, frankincense and the white of an egg, being applied to the eyes, helpeth them that are swollen or do water, or have received any blow upon them, if used with wine. If a bean be parted into two, the skin being taken away and laid on the place where the leech hath been set that bleedeth too much, stayeth the bleeding. Bean flour boiled to a poultice with wine and vinegar, and some oil put thereto, easeth both pains and swelling of the cods. The husks boiled in water to the consumption of a third part thereof, stayeth a lask; and the ashes of the husks, made up with old hog's grease, helpeth the old pains, contusions, and wounds of the sinews, the sciatica and gout. The field beans have all the aforementioned virtues as the garden beans.

Beans eaten are extreme windy meat; but if after the Dutch fashion, when they are half boiled you husk them and then stew them, (I cannot tell you how, for I never was cook in all my life) they are wholesome food.

FRENCH BEANS.

Descript. **T**HIS French or kidney bean ariseth at first but with one stalk, which afterwards divides itself into many arms or branches, but all so weak that if they be not sustained with sticks or poles, they will be fruitless on the ground. At several places of these branches grow footstalks, each with three broad round and pointed green leaves at the end of them; towards the top come forth divers flowers made like unto pease blossoms, of

the same colour for the most part that the fruit will be of; that is to say, white, yellow, red, blackish, or of a deeper purple, but white is the most usual; after which come long and slender flat cods, some crooked, some straight, with a string running down the back thereof, wherein is flattish round fruit made like a kidney; the root is long, spreadeth with many strings annexed to it, and perisheth every year.

There is another sort of French beans commonly growing with us in this land, which is called the scarlet flower bean. This ariseth with sundry branches as the other, but runs higher to the length of hop-poles, about which they grow twining, but turning contrary to the sun, having footstalks with three leaves on each, as on the other; the flowers also are like the other, and of a most orient scarlet colour. The beans are larger than the ordinary kind, of a dead purple colour, turning black when ripe and dry; the root perisheth in winter.

Government and Virtues.] These also belong to dame Venus, and being dried and beat to powder, are as great strengtheners of the kidneys as any are; neither is there a better remedy than it; a dram at a time taken in white wine to prevent the stone, or to cleanse the kidneys of gravel or stoppage. The ordinary French beans are of an easy digestion; they move the belly, provoke urine, enlarge the breast that is straitened with shortness of breath, engender sperm, and incite to venery. And the scarlet-coloured beans, in regard to the glorious beauty of their colour, being set near a quickset hedge, will bravely adorn the same, by climbing up thereon, so that they may be discerned a great way, not without admiration of the beholders at a distance. But they will go near to kill the quicksets by cloathing them in scarlet.

LADIES BED STRAW.

BESIDES the common name above written, it is called cheese-rennet, because it performs the same office, as also gal-

lion, pettimugget, and maid-hair; and by some wild rosemary.

Descript.] This riseth up with diverse small, brown and square upright stalks a yard high or more; sometimes branches forth into diverse parts, full of joints, and with divers very fine small leaves at every one of them, little or nothing rough at all; at the tops of the branches grow many long tufts or branches of yellow flowers very thick set together, from the several joints which consist of four leaves a-piece, which smell somewhat strong, but not unpleasant. The seed is small and black like poppy seed, two for the most part joined together. The root is reddish, with many small threads fastened unto it, which take strong hold of the ground, and creepeth a little; and the branches leaning a little down to the ground, take root at the joints thereof, whereby it is easily increased.

There is another sort of Ladies bed-straw, growing frequently in England which beareth white flowers as the other doth yellow; but the branches of this are so weak, that unless it be sustained by the hedges, or other things near which it groweth, it will lie down to the ground; the leaves a little bigger than the former, and the flowers not so plentiful as these; and the root hereof is also thready and abiding.

Place.] They grow in meadows and pastures, both wet and dry, and by the hedges.

Time.] They flower in May for the most part, and the seed is ripe in July and August.

Government and Virtues.] They are both herbs of Venus, and therefore strengthening the parts both internal and external, which she rules. The decoction of the former of those being drank, is good to fret and break the stone, provoke urine, stayeth inward bleeding, and healeth inward wounds. The herb or flower bruised and put up into the nostrils, stayeth their bleeding likewise: The flowers and herbs being made into an oil, by being set into the sun, and changed after it hath stood ten or twelve days; or into an ointment being boiled in *Axunga*, or sallad oil, with some wax melted therein, after it is strained; either the oil made thereof, or the ointment, do help burnings with fire, or

scaldings with water. The same also, or the decoction of the herb and flower, is good to bathe the feet of travellers and lacquies whose long running causeth weariness and stiffness in their sinews and joints. If the decoction be used warm, and the joints afterwards anointed with ointment, it helpeth the dry scab, and the itch in children; and the herb with the white flower is also very good for the sinews, arteries, and joints, to comfort and strengthen them after travel, cold, and pains.

BEETS.

OF beets there are two sorts, which are best known generally, and whereof I shall principally treat at this time, *viz.* the white and red beets, and their virtues.

Descript.] The common white beet hath many great leaves next the ground, somewhat large and of a whitish green colour. The stalk is great, strong, and ribbed, bearing great store of leaves upon it, almost to the very top of it; The flowers grow in very long tufts, small at the end, and turning down their heads, which are small, pale greenish, yellow buds, giving cornered prickly seed. The root is great, long, and hard, and when it hath given seed is of no use at all.

The common red beet differeth not from the white, but only it is less, and the leaves and the roots are somewhat red; the leaves are differently red, some only with red stalks or veins; some of a fresh red, and others of a dark red. The root thereof is red, spungy, and not used to be eaten.

Government and Virtues.] The government of these two sorts of beets are far different; the red beet being under Saturn, and the white under Jupiter; therefore take the virtues of them apart, each by itself; the white beet doth much loosen the belly, and is of a cleansing digesting quality, and provoketh urine. The juice of it openeth obstructions both of the liver and spleen, and is good for the head-ach and swimings therein, and turnings of the brain; and is effectual also against all venomous creatures; and applied unto the temples, stayeth inflammations in the eyes;

it helpeth burnings, being used without oil, and with a little alum put to it, is good for St. Anthony's fire. It is good for all wheals, pushes, blisters, and blains, in the skin: the herb boiled, and laid upon chilblains or kibes helpeth them. The decoction thereof in water and some vinegar, healeth the itch, if bathed therewith, and cleanseth the head of dandruff, scurf, and dry scabs, and doth much good for fretting and running sores, ulcers, and cankers in the head, legs or other parts, and is much commended against baldness and shedding the hair.

The red beet is good to stay the bloody flux, women's courses and the whites, and to help the yellow jaundice; the juice of the root put into the nostrils, purgeth the head, helpeth the noise in the ears, and the tooth-ach; the juice snuffed up the nose, helps a stinking breath, if the cause lies in the nose, as many times it doth, if any bruise hath been there; as also want of smell coming that way.

WATER BETONY.

CALLED also brown-wort, and in Yorkshire, bishop's leaves.

Descript.] First, of the water betony, which riseth up, with square, hard, greenish stalks, sometimes brown, set with broad dark green leaves, dented about the edges with notches somewhat resembling the leaves of the wood betony, but much larger too, for the most part set at a joint. The flowers are many, set at the tops of the stalks and branches, being round bellied and open at the brims, and divided into two parts, the uppermost being like a hood, and the lowermost like a hip hanging down, of a dark red colour, which passing, there come in their places small round heads with small points at the ends, wherein lie small and brownish seeds; the root is a thick bush of strings and shreds growing from the head.

Place.] It groweth by the ditch side, brooks, and other water-courses, generally through this land, and is seldom found far from the water-side.

White Behen

Bistort

Betony

Time.] It flowereth about July, and the seed is ripe in August.

Government and Virtues.] Water betony is an herb of Jupiter in Cancer, and is appropriated more to wounds and hurts in the breast than wood-betony, which follows: it is an excellent remedy for sick hogs. It is of a cleansing quality; the leaves bruised and applied are effectual for all old and filthy ulcers: and especially if the juice of the leaves be boiled with a little honey, and dipped therein, and the sores dressed therewith; as also for bruises or hurts, whether, inward or outward; the distilled water of the leaves is used for the same purpose; as also to bathe the face and hands spotted or blemished, or discoloured by sun-burning.

I confess I do not much fancy distilled waters, I mean such waters as are distilled cold; some virtues of the herb they may haply have (it were a strange thing else;) but this I am confident of, that being distilled in a pewter still, as the vulgar and apish fashion is, both chemical oil and salt is left behind, unless you burn them, and then all is spoiled, water and all, which was good for as little as can be by such a distillation in my translation of the London Dispensatory.

WOOD BETONY.

Descript.] COMMON or wood betony hath many leaves rising from the root, which are somewhat broad and round at the end, roundly dented about the edges, standing upon a long foot-stalk, from among which arise up small, square, slender, but upright hairy stalks with some leaves thereon to a piece at the joints, smaller than the lower, whereon are set several spiked heads of flowers like lavender, but thicker and shorter, for the most part, and of a reddish or purple colour, spotted with white spots both in the upper and lower part. The seeds being contained within the husks that hold the flowers, are blackish, somewhat long and uneven. The roots are many white thready strings: the stalk perisheth, but the roots with some leaves thereon, abide all the winter. The whole plant is something small.

Place.] It groweth frequently in woods, and delighteth in shady places.

Time.] And it flowereth in July; after which the seed is quickly ripe, yet in its prime in May.

Government and Virtues.] The herb is appropriated to the planet Jupiter, and the sign Aries. Antonius Musa, physician to the emperor Augustus Cæsar, wrote a peculiar book of the virtues of this herb; and among other virtues saith of it, that it preserveth the liver and bodies of men from the danger of epidemical diseases, and from witchcrafts also; it helpeth those that loath and cannot digest their meat, those that have weak stomachs and sour belchings, or continual rising in their stomach, using it familiarly either green or dry; either the herb, or root, or the flowers, in broth, drink, or meat, or made into conserve, syrup, water, electuary, or powder, as every one may best frame themselves unto, or as the time and season requireth; taken any of the aforesaid ways, it helpeth the jaundice, falling sickness, the palsy, convulsions, or shrinking of the sinews, the gout and those that are inclined to dropsy, those that have continual pains in their heads, although it turn to phrensy. The powder mixed with pure honey, is no less available for all sorts of coughs or colds, wheesing, or shortness of breath, distillation of thin rheum upon the lungs, which causeth consumptions. The decoction made with mead, and a little penny-royal, is good for those that are troubled with putrid agues, whether quotidian tertian, or quartan, and to draw down and evacuate the blood, and humours, that by falling into the eyes, do hinder the sight; the decoction thereof made in wine and taken, killeth the worms in the belly, openeth obstructions both of the spleen and liver; cureth stitches, and pains in the back and sides, the torments and griping pains in the bowels, and the wind colic; and mixed with honey, purgeth the belly, helpeth to bring down women's courses, and is of special use for those that are troubled with the falling down of the mother, and pains thereof, and causeth an easy and speedy delivery of women in child-birth. It helpeth also to break and expel the stone, either in the bladder or kidneys. The

decoction with wine gargled in the mouth easeth the tooth-ach. It is commended against the stinging or biting of venomous serpents, or mad dogs, being used inwardly and applied outwardly to the place. A dram of the powder of betony taken with a little honey in some vinegar, doth wonderfully refresh those that are overwearyed by travel. It stayeth the bleeding at the mouth or nose, and helpeth those that piss or spit blood, and those that are bursten or have a rupture, and is good for such as are bruised by any fall or otherwise. The green herb bruised, or the juice applied to any inward hurt, or outward green wound in the head or body, will quickly heal and close it up: as also any veins or sinews that are cut, and will draw forth any broken bone or splinter, thorn or other things got into the flesh. It is no less profitable for old sores or filthy ulcers, yea, though they be fistulous and hollow. But some do advise to put a little salt to this purpose; being applied with a little hog's lard, it helpeth a plague or sore, and other boils and pushes. The fumes of the decoction, while it is warm, received by a funnel into the ears, easeth the pain of them, destroyeth the worms and cureth the running sore in them. The juice dropped into them doth the same. The root of betony is displeasing both to the taste and stomach, whereas the leaves and flowers, by their sweet and spicy taste, are comfortable both to meat and medicine.

These are some of the many virtues Anthony Muse, an expert physician, (for it was not the practice of Octavius Cæsar to keep fools about him) appropriates to betony; it is a very precious herb, that is certain, and most fitting to be kept in a man's house, both in syrup, conserve, oil, ointment, and plaister; The flowers are usually conserved.

THE BEECH TREE.

IN treating of this tree, you must understand, that I mean the green mast beech, which is by way of distinction from that other small rough sort, called in Sussex the smaller beech, but in Essex, horn-bean.

I suppose it needless to describe it, being already too well known to my countrymen.

Place.] It groweth in woods amongst oaks and other trees, and in parks, forests, and chases, to feed deer; and in other places to fatten swine.

Time.] It bloometh in the end of April, or beginning of May, for the most part, and the fruit is ripe in September.

Government and Virtues.] It is a plant of Saturn, and therefore performs his qualities and proportion in these operations. The leaves of the beech-tree are cooling and binding, and therefore good to be applied to hot swellings to discuss them; the nuts do much nourish such beasts as feed thereon. The water that is found in the hollow places of decaying beeches will cure both man and beast of any scurf, scab, or running tetters, if they be washed therewith; you may boil the leaves into a poultice, or make an ointment of them when time of year serves.

BILBERRIES, CALLED BY SOME WHORTS, AND WHORTLE BERRIES.

Descript.] **O**F these I shall only speak of two sorts which are common in England, viz. The black and red berries. And first of the black.

The small bush creepeth along upon the ground, scarce rising half a yard high, with divers small dark green leaves set in the green branches, not always one against the other, and a little dented about the edges; At the foot of the leaves come forth small, hollow, pale, blueish coloured flowers, the brims ending in five points, with a reddish thread in the middle, which pass into small round berries of the bigness and colour of juniper berries, but of a purple, sweetish sharp taste; the juice of them giveth a purplish colour to the hands and lips that eat and handle them, especially if they break them. The root groweth aslope under ground, shooting forth in sundry places as it creepeth. This loseth its leaves in winter.

The red bilberry, or whortle-bush, riseth up like the former,

having sundry hard leaves, like the box-tree leaves, green and round pointed, standing on the several branches, at the top whereof only, and not from the sides, as in the former, come forth divers round, reddish, sappy berries, when they are ripe, of a sharp taste. The root runneth in the ground, as in the former, but the leaves of this abide all the winter.

Place.] The first groweth in forests, on the heaths, and such like barren places: the red grows in the north parts of this land, as Lancashire, Yorkshire, &c.

Time.] They flower in March and April, and the fruit of the black is ripe in July and August.

Government and Virtues.] They are under the dominion of Jupiter. It is a pity they are used no more in physic than they are. The black bilberries are good in hot agues and to cool the heat of the liver and stomach; they do somewhat bind the belly, and stay vomitings and loathings; the juice of the berries made in a syrup, or the pulp made into a conserve with sugar, is good for the purposes aforesaid, as also for an old cough, or an ulcer in the lungs, or other diseases therein. The red worts are more binding, and stop women's courses, spitting of blood, or any other flux of blood or humours, being used as well outwardly as inwardly.

BIFOIL, OR TWABLADE.

Descript.] **T**HIS small herb, from a root somewhat sweet shooting downward many long strings, riseth up a round green stalk, bare or naked, next the ground for an inch, two or three to the middle thereof as it is in age or growth; as also from the middle upward to the flowers, having only two broad plantain-like leaves (but whiter) set at the middle of the stalk one against another, compasseth it round at the bottom of them.

Place.] It is an usual inhabitant in woods, copses, and in many other places in this land.

There is another sort groweth in wet grounds and marshes, which is somewhat different from the former. It is a smaller

plant, and greener, having sometimes three leaves: the spike of the flowers is less than the former, and the roots of this do run or creep in the ground.

They are much and often used by many to good purpose for wounds, both green and old, to consolidate or knit ruptures; and well it may, being a plant of Saturn.

THE BIRCH TREE.

Descript.] **T**HIS groweth a goodly tall straight tree, fraught with many boughs, and slender branches bending downward: the old being coloured with discoloured chapped bark, and the younger being browner by much. The leaves at the first breaking out are crumpled, and afterwards like the beech leaves, but smaller and greener, and dented about the edges. It beareth small short cat-skins, somewhat like those of the hazel-nut-tree, which abide on the branches a long time, until growing ripe, they fall on the ground, and their seed with them.

Place.] It usually groweth in woods.

Government and Virtues.] It is a tree of Venus, the juice of the leaves, while they are young, or the distilled water of them, or the water that comes from the tree being bored with an auger, and distilled afterwards; any of these being drank for some days together, is available to break the stone in the kidneys and bladder, and is good also to wash sore mouths.

BIRD'S FOOT.

THIS small herb groweth not above a span high, with many branches spread upon the ground, set with many wings of small leaves. The flowers grow upon the branches, many small ones of a pale yellow colour being set a-head together, which afterwards turneth into small jointed cods, well resembling the claws of small birds, whence it took its name.

There is another sort of bird's foot in all things like the former, but a larger; the flower of a pale whitish red colour, and

the cods distinct by joints like the other, but a little more crooked; and the roots do carry many small white knots or kernels amongst the strings.

Place.] These grow on heaths, and many open untilled places of this land.

Time.] They flower and seed in the end of summer.

Government and Virtues.] They belong to Saturn, and are of a drying, binding quality, and therefore very good to be used in wound drinks; as also to apply outwardly for the same purpose. But the latter bird's-foot is found by experience to break the stone in the back or kidneys, and drives them forth, if the decoction thereof be taken; and it wonderfully helpeth the rupture, being taken inwardly, and outwardly applied to the place.

All salts have best operations upon the stone, as ointments and plaisters have upon wounds: and therefore you may make a salt of this for the stone; the way how to do so may be found in my translation of the London Dispensatory; and it may be I may give you it again in plainer terms at the latter end of this book.

BISHOP'S-WEED.

BESIDES the common name bishops-weed, it is usually known by the Greek name *Ammi* and *Ammois*; some call it Æthiopian cummin-seed, and others cummin-royal, as also herb-william, and bull-wort.

Descript.] Common bishops-weed riseth up with a round straight stalk, sometimes as high as a man, but usually three or four feet high, beset with divers small, long and somewhat broad leaves, cut in some places, and dented about the edges, growing one against another, of a dark green colour, having sundry branches on them, and at the top small umbels of white flowers, which turn into small round seeds, little bigger than parsley seeds, of a quick hot scent and taste; the root is white

and stringy; perishing yearly, and usually riseth again on its own sowing.

Place.] It groweth wild in many places of England and Wales, as between Greenhithe and Gravesend.

Government and Virtues.] It is hot and dry in the third degree, of a bitter taste, and somewhat sharp withal; it provokes lust to purpose; I suppose Venus owns it. It digesteth humours, provoketh urine and women's courses, dissolveth wind, and being taken in wine it easeth pain and griping in the bowels, and is good against the biting of serpents; it is used to good effect in those medicines which are given to hinder the poisonous operation of cantharides upon the passage of the urine: being mixed with honey and applied to black and blue marks, coming of blows or bruises, it takes them away; and being drank or outwardly applied, it abateth an high colour, and makes it pale; and the fumes thereof taken with rosin or raisins, cleanseth the mother.

BISTORT, OR SNAKEWEED.

IT is called snakeweed, English serpentary, dragon-wort, oste-rick, and passion.

Descript.] This hath a thick short knobbed root, blackish without, and somewhat reddish within, a little crooked or turned together, of a hard astringent taste, with divers black threads hanging there, from whence spring up every year divers leaves, standing upon long footstalks, being somewhat broad and long like a dock leaf, and a little pointed at the ends, but that it is of a blueish green colour on the upper side, and of an ash-colour grey, and a little purplish underneath, with divers veins therein; from among which rise up divers small and slender stalks, two feet high, and almost naked and without leaves, or with a very few, and narrow, bearing a spikey bush of pale coloured flowers, which being past, there abideth small seed, like unto sorrel seed, but greater.

There are other sorts of bistort growing in this land, but smaller, both in height, root, and stalks, and especially in the

leaves. The root blackish without, and somewhat whitish within; of an austere binding taste, as the former.

Place.] They grow in shadowy moist woods, and at the foot of hills, but are chiefly nourished up in gardens. The narrow-leaved bistort groweth in the north, in Lancashire, Yorkshire, and Cumberland.

Time.] They flower about the end of May, and the seed is ripe about the beginning of July.

Government and Virtues.] It belongs to Saturn, and is in operation cold and dry; both the leaves and roots have a powerful faculty to resist all poison. The root in powder taken in drink expelleth the venom of the plague, the small pox, measles, purples, or any other infectious disease, driving it out by sweating. The root in powder, the decoction thereof in wine being drank stayeth all manner of inward bleeding, or spitting of blood, and any fluxes in the body of either man or woman, or vomiting. It is also very availing against ruptures, or burstings, or all bruises of falls, dissolving the congealed blood, and easing the pains that happen thereupon; it also helpeth the jaundice.

The water distilled from both leaves and roots, is a singular remedy to wash any place bitten or stung by any venomous creature; as also for any of the purposes before spoken of, and is very good to wash any running sores or ulcer. The decoction of the root in wine being drank, hindereth abortion or miscarriage in child-bearing. The leaves also kill the worms in children, and is a great help to them that cannot keep their water; if the juice of plantain be added thereto, and outwardly applied much helpeth the gonorrhœa, or running of the reins. A dram of the powder of the root taken in water thereof, wherein some red hot iron or steel hath been quenched, is also an admirable help thereto, so as the body be first prepared and purged from the offensive humours. The leaves, seed, or roots are all very good in decoctions, drinks, or lotions, for inward or outward wounds, or other sores. And the powders strewed upon any cut or wound in a vein, stayeth the immoderate bleeding thereof. The decoction of the root in water, whereunto some pomegran-

ate peels and flowers are added, injected into the matrix, stayeth the immoderate flux of the courses. The root thereof with pelitory of Spain, and burnt allum, of each a little quantity, beaten small and made into paste, with some honey, and a little piece thereof put into a hollow tooth, or held between the teeth, if there be no hollowness in them, stayeth the defluction of rheum upon them which causeth pains, and helps to cleanse the head, and void much offensive water. The distilled water is very effectual to wash sores or cankers in the nose, or any other parts: if the powder of the root be applied thereunto afterwards. It is good also to fasten the gums and to take away the heat and inflammations that happen in the jaws, almonds or the throat, or mouth, if the decoction of the leaves, roots, or seeds bruised, or the juice of them be applied; but the roots are most effectual to the purposes aforesaid.

ONE BLADE.

Descript.] **T**HIS small plant never beareth any more than one leaf, but only when it riseth up with its stalk, which thereon beareth another, and seldom more, which are of a blueish green colour, broad at the bottom, and pointed with many ribs or veins like plantain; at the top of the stalk grow many small flowers star-fashion, smelling somewhat sweet; after which cometh small reddish berries when they are ripe; the root small, of the bigness of a rush, lying and creeping under the upper crust of the earth, shooting forth in divers places.

Place.] It grows in moist, shadowy, grassy places of woods, in many places of this realm.

Time.] It flowereth about May, and the berries be ripe in June, and then quickly perisheth, until the next year it springeth from the same again.

Government and Virtues.] It is an herb of the Sun, and therefore cordial: half a dram or a dram at most, of the roots hereof in powder, taken in wine and vinegar, of each a like quanti-

ty, and the party presently laid to sweat, is held to be a sovereign remedy for those that are infected with the plague, and have a sore upon them, by expelling the poison, and defending the heart and spirits from danger. It is also accounted a singular good wound herb, and therefore used with other herbs in making such balms as are necessary for curing of wounds, either green or old, and especially if the nerves be hurt.

THE BRAMBLE, OR BLACKBERRY BUSH.

IT is so well known that it needeth no description. The virtues thereof are as followeth :

Government and Virtues.] It is a plant of Venus in Aries. You shall have some directions at the latter end of the book for the gathering of all herbs and plants, &c. If any ask the reason why Venus is so prickly? Tell them it is because she is in the house of Mars. The buds, leaves, and branches, while they are green, are of a good use in the ulcers and putrid sores of the mouth and throat, and of the quincy, and likewise to heal other fresh wounds and sores; but the flowers and fruits unripe are very binding, and so profitable for the bloody flux, lasks, and a fit remedy for spitting of blood. Either the decoction of the powder or of the root taken, is good to break or drive forth gravel and the stone in the reins and kidneys. The leaves and brambles, as well green as dry, are excellent good lotions for sores in the mouth or secret parts. The decoction of them, and of the dried branches, do much bind the belly, and are good for too much flowing of women's courses; the berries of the flowers are a powerful remedy against the poison of the most venomous serpents; as well drank as outwardly applied, helpeth the sores of the fundament and the piles; the juice of the berries mixed with the juice of mulberries, do bind more effectually, and help all fretting and eating sores and ulcers whatsoever. The distilled water of the branches, leaves, and flowers, or of the fruit is very pleasant in taste, and very effectual in fevers and hot distempers of the body, head, eyes, and other parts,

and for the purposes aforesaid. The leaves boiled in lee, and the head washed therewith, healeth the itch and the running sores thereof, and maketh the hair black. The powder of the leaves strewed on cankers and running ulcers, wonderfully help, to heal them. Some use to condensate the juice of the leaves and some the juice of the berries, to keep for their use all the year, for the purposes aforesaid.

BLITES.

Discript.] **O**F these there are two sorts commonly known, viz. white and red. The white hath leaves somewhat like unto beets, but smaller, rounder, and of a whitish green colour, every one standing upon a small long footstalk; the stalk riseth up two or three feet high, with such like leaves thereon; the flowers grow at the top in long round tufts or clusters, wherein are contained small and round seed; the root is very full of threads or strings.

The red blite is in all things like the white, but that its leaves and tufted heads are exceeding red at first, and after turn more purplish.

There are other kinds of blites which grow different from the two former sorts but little, but only the wild are smaller in every part.

Place.] They grow in gardens, and wild in many places in this land.

Time.] They seed in August and September.

Government and Virtues.] They are all of them cooling, drying and binding, serving to restrain the fluxes of blood in either man or woman, especially the red; which also stayeth the overflowing of woman's reds, as the white blites stayeth the whites in woman; it is an excellent secret; you cannot well fail in the use; they are all under the dominion of Venus.

There is another sort of wild blites like the other wild kinds, but have long and spikey heads of greenish seeds seeming by the thick setting together to be all seed.

This sort fishes are delighted with, and it is a good and usual bait ; for fishes will bite fast enough at them, if you have wit enough to catch them when they bite.

BORAGE AND BUGLOSS.

THESE are so well known to the inhabitants of every garden, that I hold it needless to describe them.

To these I may add a third sort, which is not so common, nor yet so well known, and therefore I shall give you its name and description.

It is called *langue de beuf*; but why then should they call one herb by the name of bugloss, and another by the name *langue de beuf*? It is some question to me, seeing one signifies ox-tongue in Greek, and the other signifies the same in French.

Descript.] The leaves thereof are smaller than those of Bugloss, but much rougher ; the stalks arising up about a foot and a half high, and is most commonly of a red colour ; the flowers stand in scaly rough heads, being composed of many small yellow flowers, not much unlike to those of dandelions, and the seed flieth away in down as that doth ; you may easily know the flowers by their taste, for they are very bitter.

Place.] It groweth wild in many places of this land, and may be plentifully found near London as between Rotherhithe and Deptford, by the ditch side. Its virtues are held to be the same with borage and bugloss, only this is somewhat hotter.

Time.] They flower in June and July, and the seed is ripe shortly after.

Government and Virtues.] They are all three herbs of Jupiter, and under Leo, all great cordials, and great strengtheners of nature. The leaves and roots are to very good purpose used in putrid and pestilential fevers, to defend the heart, and help to resist and expel the poison or the venom of other creatures ; the seed is of the like effects ; and the seed and leaves are good to encrease milk in womens breasts ; the leaves, flowers, and seed, all or any of them, are good to expell pensiveness and melancholy ; it

helpeth to clarify the blood, and mitigate heat in fevers. The juice made into a syrup prevaileth much to all the purposes aforesaid, and is put with other cooling, opening and cleansing herbs to open obstructions and help the yellow jaundice, and mixed with fumitory, to cool, cleanse, and temper the blood thereby; it helpeth the itch, ring-worms and tetters, or other spreading scabs or sores. The flowers candied or made into a conserve, are helpful in the former cases, but are chiefly used as a cordial, and are good for those that are weak in long sickness, and to comfort the heart and spirits of those that are in a consumption or troubled with often swoonings, or passions of the heart. The distilled water is no less effectual to all the purposes aforesaid, and helpeth the redness and inflammations of the eyes being washed therewith; the herb dried is never used, but the green; yet the ashes thereof boiled in mead, or honeyed water, is available against the inflammations and ulcers in the mouth or throat to gargle it therewith; the roots of bugloss are effectual, being made into a licking electuary for the cough, and to condensate thick phlem, and the rheumatic distillations upon the lungs.

BLUE-BOTTLE.

IT is called Cyanus, I suppose from the colour of it: Hurt-sickle, because it turns the edge of the sickles that reap the corn; Blue-blow, corn-flower, and blue-bottle.

Descript.] I shall only describe that which is commonest and in my opinion most useful; its leaves spread upon the ground, being of a whitish green colour, somewhat on the edges like those of corn scabious, amongst which ariseth up a stalk divided into divers branches, beset with long leaves of a greenish colour, either but very little indented, or not at all; the flowers are of a blue colour, whence it took its name, consisting of an innumerable company of small flowers set in a scaly head not much unlike those of knap-weed; the seed is smooth, is bright, and shining, wrapped up in a wooly mantle; the root perisheth every year.

Place.] They grow in corn fields, amongst all sorts of corn (pease, beans, and tares excepted.) If you please to take them up from thence and transplant them in your garden, especially towards the full of the moon, they will grow more double than they are, and many times change colour.

Time.] They flower from the beginning of May to the end of harvest.

Government and Virtues.] As they are naturally cold, dry, and binding, so they are under the dominion of Saturn. The powder or dried leaves of the blue-bottle, or corn-flower, is given with good success to those that are bruised by a fall, or have broken a vein inwardly, and void much blood at the mouth; being taken in the water of plantain, horse tail, or the greater comfrey, it is a remedy against the poison of the scorpion, and resisteth all venoms and poison. The seed or leaves taken in wine, is very good against the plague, and all infectious diseases, and is very good in pestilential fevers. The juice put into fresh or green wounds, doth quickly solder up the lips of them together, and is very effectual to heal all ulcers and sores in the mouth. The juice dropped into the eyes takes away the heat and inflammation of them. The distilled water of this herb, hath the same properties, and may be used for the effects aforesaid.

BRANK URSINE.

BESIDE the common name brank-ursine, it is also called bears-breech, and acanthus, though I think our English names to be more proper; For the Greek word *acanthus*, signifies any thistle whatsoever.

Descript.] This thistle shooteth forth very many large, thick, and green smooth leaves upon the ground, with a very thick and juicy middle rib; the leaves are parted with sundry deep gashes on the edges; the leaves remain a long time before any stalk appears, afterwards a reasonable big stalk, three or four feet high, and bravely decked with flowers from the middle of the

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stalk upwards; for on the lower part of the stalk, there is neither branches nor leaf. The flowers are hooded and gaping, being white in colour, and standing in brownish husks, with a long small undivided leaf under each leaf; they seldom seed in our country. Its roots are many, great and thick, blackish without and whitish within, full of a clammy sap; a piece of them if you see it in the garden, and defend it from the first winter cold, will grow and flourish.

Place.] They are only nursed up in the gardens in England, where they will grow very well.

Time.] It flowereth in June and July.

Government and Virtues.] It is an excellent plant under the dominion of the Moon: I could wish such as are studious would labour to keep it in their gardens. The leaves being boiled and used in glisters, is excellent good to mollify the belly, and make the passage slippery. The decoction drank inwardly, is excellent and good for the bloody flux. The leaves being bruised, or rather boiled, and applied like a poultice, are excellent good to unite broken bones and strengthen joints that have been put out. The decoction of either leaves or roots being drank and the decoction of leaves applied to the place, is excellent good for the king's evil that is broken and runneth; for by the influence of the Moon, it reviveth the ends of the veins which are relaxed; there is scarce a better remedy to be applied to such places as are burnt with fire than this is, for it fetches out the fire and heals it without a scar. This is an excellent remedy for such as are busrten, being either taken inwardly, or applied to the place. In like manner used, it helps the cramp and the gout. It is excellent good in hectic fevers, and restores radical moisture to such as are in consumptions.

BRIONY, OR WILD VINE.

IT is called wild, and wood vine, tamus, or ladies' seal. The white is called white vine by some; and the black, black vine.

Descript.] The common white briony groweth ramping upon

Butter Sweet

Brooklime

the hedges, sending forth many long, rough, very tender branches at the beginning, with many very rough, and broad leaves thereon, cut (for the most part) into five partitions, in form like a vine leaf, but smaller, rough, and of a whitish hoary green colour, spreading very far and twining with his small clasps (that come forth at the joints with the leaves) very far on whatsoever standeth next to it. At the several joints also (especially towards the top of the branches) cometh forth a long stalk bearing many whitish flowers together on a long tuft, consisting of five small leaves a-piece, laid open like a star, after which come the berries separated one from another, more than a cluster of grapes, green at the first, and very red when they are thorough ripe of no good scent, but of a most loathsome taste, provoking vomit. The root groweth to be exceeding great, with many long twines or branches going from it, of a pale whitish colour on the outside, and more white within, and of a sharp bitter, loathsome taste.

Place.] It groweth on banks, or under edges through this land; the roots lie very deep.

Time.] It flowereth in July and August, some earlier and some later than the other.

Government and Virtues.] They are furious Martial plants. The root of briony purges the belly with great violence, troubling the stomach and burning the liver, and therefore not rashly to be taken; but being corrected, is very profitable for the diseases of the head, as falling sickness, giddiness and swimings, by drawing away much phlegm and rheumatic humours that oppress the head, as also the joints and sinews, and is therefore good for palsies, convulsions, cramps, and stiches in the sides, and the dropsy, and in provoking urine; it cleanseth the reins and kidneys from gravel and stone by opening the obstructions of the spleen, and consumeth the hardness and swelling thereof. The decoction of the root in wine, drank once a week at going to bed, cleanseth the mother, and helpeth the rising thereof, expelleth the dead child, a dram of the root in powder taken in white wine, bringeth down the courses. An electuary made of

the roots and honey, doth mightily cleanse the chest and rotten phlegm, and wonderfully helpeth any old strong cough, to those that are troubled with shortness of breath, and is very good for them that are bruised inwardly, to help to expel the clotted or congealed blood. The leaves, fruit and root to cleanse old and filthy sores, are good against all fretting and running cankers, gangrenes, and tetters, and therefore the berries are by some country people called tetter-berries. The root cleanseth the skin wonderfully from all black and blue spots, freckles, morpew, leprosy, foul scars, or other deformity whatsoever; also all running scabs and manginess are healed by the powder of the dried root, or the juice thereof, but especially by the fine white hardened juice. The distilled water of the root worketh the same effects, but more weakly; the root bruised and applied of itself to any place where the bones are broken, helpeth to draw them forth, as also splinters and thorns in the flesh; and being applied with a little wine mixed therewith, it breaketh boils and helpeth whitlows on the joints. For all these latter, beginning at sores, cankers, &c, apply it outwardly, and take my advice in my translation of the London Dispensatory, among the preparations at the latter end, where you have a medicine called *Fæcula Brionia*, which take and use, mixing it with a little hog's grease, or other convenient ointment.

As for the former diseases where it must be taken inwardly, it purgeth very violently, and needs an abler hand to correct it than most country people have; thereof it is a better way for them in my opinion to let the simple alone, and take the compound water of it mentioned in my Dispensatory, and that is far more safe, being wisely corrected.

BROOK LIME, OR WATER-PIMPERNAL.

Descript.] **T**HIS sendeth forth from a creeping root that shooteth forth strings at every joint, as it runneth, divers and sundry green stalks, round and sappy, with some branches on

Buckbean

Butcher's Broom

Bugle

them somewhat broad, round, deep green, and thick leaves set by couples thereon; from the bottom whereof shoot forth long foot-stalks, with sundry small blue flowers on them, that consist of five small round pointed leaves a-piece.

There is another sort nothing differing from the former, but that it is greater, and the flowers of a paler green colour.

Place.] They grow in small standing waters, and usually near water cresses.

Time.] And flowereth in June and July, giving seed the next month after.

Government and Virtues.] It is a hot and biting Martial plant. Brook-lime and water-cresses are generally used together in diet-drink, with other things serving to purge the blood and body from all ill humours that would destroy health, and are helpful to the scurvey. they do all provoke urine, and help to break the stone, and pass it away; they procure women's courses, and expel the dead child. Being fried with butter and vinegar, and applied warm, it helpeth all manners of tumours, swellings, and inflammations.

Such drinks ought to be made of sundry herbs, according to the malady. I shall give a plain and easy rule at the latter end of this book.

BUTCHERS' BROOM.

IT is called ruscus, and bruscus, kneeholm, kneeholy, kneehulver, and pettigree.

Descript.] The first shoots that sprout from the root of butchers' broom, are thick, whitish and short, somewhat like those of asparagus, but greater, they rising up to be a foot and a half high, are spread into divers branches, green, and somewhat cressed with the roundness, tough and flexible, whereon are set somewhat broad and almost round hard leaves, and prickly, pointed at the end, of a dark green colour, two for the most part set at a place, very close and near together; about the middle of the leaf, on the back and lower side from the middle rib, breaketh

forth a small whitish green flower, consisting of four small round pointed, leaves, standing upon little or no foot-stalk, and in the place whereof cometh a small berry, green at first, and red when it is ripe, wherein are two or three white, hard, round seeds contained. The root is thick, white, and great at the head, and from thence sendeth forth divers thick, white, long tough strings.

Place.] It groweth in copses, and upon heaths and waste grounds, and oftentimes under or near the holly bushes.

Time.] It shooteth forth its young buds in the spring, and the berries are ripe about september, the branches of leaves abiding green all the winter.

Government and Virtues.] It is a plant of Mars, being of a gallant cleansing and opening quality. The decoction of the root made with wine openeth obstructions, provoketh urine, helps to expel gravel and the stone, the strangury and women's courses, also the yellow jaundice and the head-ach: And with some honey or sugar put thereunto, cleanseth the breast of phelgm, and the chest of clammy humours gathered therein. The decoction of the root drank, and a poultice made of the berries and leaves being applied, are effectual in knitting and consolidating broken bones or parts out of joint. The common way of using it, is to boil the root of it, and parsley and fennel and smallage in white wine, and drink the decoction, adding the like quantity of grass-root to them: The more of the root you boil the stronger will the decoction be; it works no ill effects, yet I hope you have wit enough to give the strongest decoction to the strongest bodies.

BROOM, AND BROOM-RAPE.

TO spend time in writing a description hereof is altogether needless, it being so generally used by all the good house-wives almost through this land to sweep their houses with, and therefore very well known to all sorts of people.

The broom-rape springeth up on many places from the roots

of the broom (but more often in fields, as by hedge-sides and on heaths.) The stalk whereof is of the bigness of a finger or thumb, above two feet high, having a shew of leaves on them, and many flowers at the top, of a reddish yellow colour, as also the stalks and leaves are.

Place.] They grow in many places of this land commonly, and as commonly spoil all the land they grow in.

Time.] And flower in the summer months, and give their seed before winter.

Government and Virtues.] The juice or decoction of the young branches or seed, or the powder of the seed taken in drink, purgeth downwards, and draweth phlegmatic and watery humours from the joints, whereby it helpeth the dropsy, gout, sciatica, and pains of the hips and joints; it also provoketh strong vomits, and helpeth the pains of the sides, and swelling of the spleen, cleanseth also the reins or kidneys and bladder of the stone, provoketh urine abundantly, and hindereth the growing again of the stone in the body. The continual use of the powder of the leaves and seed doth cure the black jaundice. The distilled water of the flowers is profitable for all the same purposes: it also helpeth surfeits, and altereth the fits of agues, if three or four ounces thereof, with as much of the water of the lesser centaury, and a little sugar put therein, be taken a little before the fit cometh, and the party be laid down to sweat in his bed. The oil or water that is drawn from the end of the green sticks heated in the fire, helpeth the tooth-ach. The juice of young branches made into an ointment of old hog's grease, and anointed, or the young branches bruised and heated in oil or hog's grease, and laid to the sides pained by wind, as in stitches, or the spleen, easeth them in once or twice using it. The same boiled in oil is the safest and surest medicine to kill lice in the head or body of any; and is an especial remedy for joint aches, and swollen knees, that come by the falling down of humours.

Th BROOM RAPE *also is not without its Virtues.*

The decoction thereof in wine, is thought to be as effectual to void the stone in the kidneys and bladder, and to provoke urine, as the broom itself. The juice thereof is a singular good help to cure as well green wounds, as old and filthy sores and malignant ulcers. The insolate oil, wherein there hath been three or four repetitions of infusion of the top stalks, with flowers strained and declared, cleanseth the skin from all manner of spots, marks, freckles that rise either by the heat of the sun, or the malignity of humours. As for the broom and broom-rape, Mars owns them, and is exceedingly prejudicial to the liver; I suppose by reason of antipathy between Jupiter and Mars, therefore if the liver be disaffected, minister none of it.

BUCK'S-HORN PLANTAIN.

Descript.] **T**HIS being sown of seed, riseth up at first with small, long, narrow, hairy dark green leaves like grass, without any division or gash in them, but those that follow are gashed in on both sides the leaves into three or four gashes, and pointed at the ends, resembling the knags of a buck's horn, (whereof it took its name) and being well ground round about the root upon the ground, in order one by another, thereby resembling the form of a star, from among which rise up divers hairy stalks about a hand's breadth high, bearing every one a long small, spikey head, like to those of the common plantain, having such like bloomings and seed after them. The root is single, long, and small, with divers strings at it.

Place.] They grow in sandy grounds, as in Tothillfields by Westminster, and divers other places of this land.

Time.] They flower and seed in May, June, and July, and their green leaves do in a manner abide fresh all the winter.

Government and Virtues.] It is under the dominion of Saturn, and is of a gallant drying and binding quality. This boiled in

wine and drank, and some of the leaves put to the hurt place, is an excellent remedy for the biting of the viper or adder, which I take to be one and the same: The same being also drank, helpeth those that are troubled with the stone in the reins or kidneys, by cooling the heat of the parts afflicted, and strengthening them; also weak stomachs that cannot retain, but cast up their meat. It stayeth all bleeding both at mouth and nose; bloody urine, or the bloody flux, and stoppeth the lask of the belly and bowels. The leaves hereof bruised and laid to their sides that have an ague, suddenly easeth the fit: and the leaves and roots being beaten with some bay-salt and applied to the wrists, worketh the same effects. The herb boiled in ale or wine, and given for some mornings and evenings together, stayeth the distillation of hot and sharp rheums falling into the eyes from the head, and helpeth all sorts of sore eyes.

BUCK'S HORN.

IT is called hart's-horn, herba-stella, and herba-stellaria, sanguinaria, herb-eve, herb-ivy, wort-cresses, and swine-cresses.

Descript.] They have many small and weak straggling branches trailing here and there upon the ground; the leaves are many, small and jagged, not much unlike to those of buck's horn plantain, but much smaller, and not so hairy. The flowers grow among the leaves in small, rough, whitish clusters: The seeds are smaller and brownish, of a bitter taste.

Place.] They grow in dry, barren, sandy grounds.

Time.] They flower and seed when the rest of the plantains do.

Government and Virtues.] This is also under the dominion of Saturn; the virtues are held to be the same as buck's horn plantain, and therefore by all authors it is joined with it: The leaves bruised and applied to the place, stop bleeding: the herbs bruised and applied to warts, will make them consume and waste away in a short time.

BUGLE.

BESIDES the name bugle, it is called middle confound and middle comfrey, brown bugle, and by some sicklewort, and herb-carpenter; though in Essex we call another herb by that name.

Descript.] This hath larger leaves than those of the self heal, but else of the same fashion, or rather longer, in some green on the upper side, and in others more brownish, dented about the edges, somewhat hairy, as the square stalk is also which riseth up to be half a yard high sometimes, with the leaves set by couples, from the middle almost whereof upwards stand the flowers, together with many smaller and browner leaves than the rest, on the stalk below, set at a distance, and the stalk bare between them: among which flowers are also small ones of a blueish and sometimes of an ash-colour, fashioned like the flowers of ground-ivy, after which come small, round, blackish seeds. The root is composed of many strings, and spreadeth upon the ground.

The white flowered bugle differeth not in form or greatness from the former, saving that the leaves and stalks are always green, and never brown, like the other, and the flowers thereof are white.

Place.] They grow in woods, copses, and fields, generally throughout England, but the white flowered bugle is not so plentiful as the former.

Time.] They flower from May until July, and in the mean time perfect their seed. The roots and leaves next thereunto upon the ground abiding all the winter.

Government and Virtues.] This herb belongeth to dame Venus: If the virtues of it make you fall in love with it (as they will if you be wise) keep a syrup of it to take inwardly, and an ointment and plaister of it to use outwardly, always by you.

The decoction of the leaves and flowers made in wine, and taken, dissolves the congealed blood in those that are bruised inwardly by a fall, or otherwise is very effectual for any inward wounds, thrusts or stabs in the body or bowels; and is an espe-

cial help in all wound drinks, and for those that are livergrown (as they call it.) It is wonderful in curing all manner of ulcers and sores, whether new and fresh, or old and inveterate; yea gangrenes and fistulas also, if the leaves bruised and applied, or their juice be used to wash and bathe the place, and the same made into a lotion, and some honey and allum, cureth all sores in the mouth and gums, be they never so foul, or of long continuance; and worketh no less powerfully and effectually for such ulcers and sores as happen in the secret parts of men and women. Being also taken inwardly, or outwardly applied, it helpeth those that have broken any bone, or have any member out of joint. An ointment made with the leaves of bugle, scabious and sanicle bruised and boiled in hog's grease, until the herbs be dry, and then strained forth into a pot for such occasions as shall require; it is so singularly good for all sorts of hurts in the body, that none that know its usefulness will be without it.

The truth is, I have known this herb cure some diseases of Saturn, of which I thought good to quote one. Many times such as give themselves much to drinking, are troubled with strange fancies, strange sights in the night time, and some with voices, as also with the disease ephialtes, or the mare. I take the reason of this to be (according to Fernelius) a melancholy vapour made thin by excessive drinking strong liquor, and so flies up and disturbs the fancy, and breeds imaginations like itself, viz. fearful and troublesome. These I have known cured by taking only two spoonsful of the syrup of this herb, after supper two hours, when you go to bed. But whether this does it by sympathy or antipathy, is some doubt in astrology. I know there is a great antipathy between Saturn and Venus in matter of procreation: yea, such a one, that the barrenness of Saturn can be removed by none but Venus; nor the lust of Venus be repelled by none but Saturn; but I am not of opinion this is done this way, and my reason is, because these vapours, though in quality melancholy, yet by their flying upward, seem to be something aerial; therefore I rather think it is done by sympathy; Saturn being exalted in Libra, in the house of Venus.

BURNET.

IT is called sanguisorbia, pimpinella, bipulo, solbegrella, &c. The common garden burnet is so well known that it needeth no description.—There is another sort which is wild, the description whereof take as followeth.

Descript.] The great wild burnet hath winged leaves rising from the roots like the garden burnet, but not so many; yet each of these leaves are at the least twice as large as the other, and nicked in the same manner about the edges, of a greyish colour on the under side; the stalks are greater, and rise higher, with many such like leaves set thereon, and greater heads at the top, of a brownish colour, and out of them come small dark purple flowers, like the former, but greater. The root is black and long like the other, but great also; it hath almost neither scent nor taste therein, like the garden kind.

Place.] The first grows frequently in gardens. The wild kind groweth in divers counties of this island, especially in Huntingdon, in Northamptonshire, in the meadows there: as also near London, by Pancras church, and by a causeway-side in the middle of a field by Paddington.

Time.] They flower about the end of June, and beginning of July, and their seed is ripe in August.

Government and Virtues.] This is an herb the sun challengeth dominion over, and is a most precious herb, little inferior to betony; the continual use of it preserves the body in health, and the spirit in vigour; for if the sun be the preserver of life under God, his herbs are the best in the world to do it by. They are accounted to be both of one property, but the lesser is more effectual because quicker and more aromatical: It is a friend to the heart, liver, and other principal parts of a man's body. Two or three of the stalks, with leaves put into a cup of wine, especially claret, are known to quicken the spirits, refresh and clear the heart, and drive away melancholy: It is a special help to defend the heart from noisome vapours, and from infection of

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Burnet Sage

Butter Bean

the pestilence, the juice thereof being taken in some drink, and the party laid to sweat thereupon. They have also a drying and an astringent quality whereby they are available in all manner of fluxes of blood or humours, to staunch bleedings inward or outward, lasks, scourings, the bloody-flux, women's too abundant flux or courses, the whites, and the choleric belchings and castings of the stomach, and is a singular wound herb for all sorts of wounds, both of the head and body, either inward or outward, for all old ulcers, running cankers, and most sores, to be used either by the juice or decoction of the herb, or by the powder of the herb or root, or the water of the distilled herb or ointment by itself, or with other things to be kept. The seed is also no less effectual both to stop fluxes, and dry up moist sores, being taken in powder inwardly, in wine, or steeled water, that is, wherein hot gads of steel have been quenched; or the powder, or the seed mixed with the ointment.

THE BUTTER BUR, OR PETASITIS

Descript.] **T**HIS riseth up in February, with a thick stalk about a foot high, whereon are set a few small leaves, or rather pieces, and at the tops a long spiked head; flowers of a blush or deep red colour, according to the soil where it groweth, and before the stalk with the flowers have abiden a month above ground, it will be withered and gone, and blown away with the wind, and the leaves will begin to spring, which being full grown, are very large and broad, being somewhat thin and almost round, whose thick red foot-stalks above a foot long, stand towards the middle of the leaves. The lower part being divided into two round parts, close almost one to another, and are of a pale green colour, and hairy underneath. The root is long, and spreadeth under ground, being in some places no bigger than one's finger, in others much bigger, blackish on the outside, and whitish within, of a bitter and unpleasant taste.

Place and Time.] They grow in low and wet grounds by

rivers and water sides. Their flowers (as is said) rising and decaying in February and March, before their leaves, which appear in April.

Government and Virtues.] It is under the dominion of the Sun, and therefore is a great strengthener of the heart, and cheerer of the vital spirits. The roots thereof are by long experience found to be very available against the plague and pestilential fevers by provoking sweat; if the powder thereof be taken in wine, it also resisteth the force of any other poison. The root hereof taken with zodory and angelica, or without them, helps the rising of the mother. The decoction of the root in wine, is singularly good for those that wheeze much, or are short winded. It provoketh urine also, and women's courses, and killeth the flat and broad worms in the belly. The powder of the root doth wonderfully help to dry up the moisture of the sores that are hard to be cured, and taketh away all spots and blemishes of the skin. It were well if gentlewomen would keep this root preserved, to help their poor neighbours. *It is fit the rich should help the poor, for the poor cannot help themselves.*

THE BURDOCK.

THEY are also called personata, and loppymajor, great burdock and clod-bur; it is so well known, even by the little boys, who pull off the burs to throw and stick upon one another, that I shall spare to write any description of it.

Place.] They grow plentifully by ditches and water-sides, and by the highways almost every where through this land.

Government and Virtues.] Venus challengeth this herb for her own, and by its leaf or seed you may draw the womb which way you please, either upwards by applying it to the crown of the head, in case it falls out; or downwards in fits of the mother, by applying it to the soles of the feet; or if you would stay it in its place, apply it to the navel, and that is one good way to stay the child in it. See more of it in my *Guide for Women*. The

burdock leaves are cooling, moderately drying, and discussing withal, whereby it is good for old ulcers and sores. A dram of the roots taken with pine kernels, helpeth them that spit foul, mattery, and bloody phlegm. The leaves applied to the places troubled with the shrinking of the sinews or arteries, give much ease. The juice of the leaves, or rather the roots themselves, given to drink with old wine, doth wonderfully help the biting of any serpents: and the root beaten with a little salt, and laid on the place, suddenly easeth the pain thereof, and helpeth those that are bit by a mad dog. The juice of the leaves being drank with honey, provoketh urine, and remedieth the pain of the bladder. The seed being drank in wine forty days together, doth wonderfully help the sciatica. The leaves bruised with the white of an egg, and applied to any place burnt with fire, taketh out the fire, gives sudden ease, and heals it up afterwards. The decoction of them fomented on any fretting sore or cankers stayeth the corroding quality, which must be afterwards anointed with an ointment made of the same liquor, hog's-grease, nitre and vinegar boiled together. The roots may be preserved with sugar, and taken fasting, or at other times, for the same purposes, and for consumptions, the stone and the lask. The seed is much commended to break the stone, and cause it to be expelled by urine, and is often used with other seeds and things to that purpose.

CABBAGES AND COLEWORTS.

I SHALL spare labour in writing a description of these, since almost every one that can but write at all, may describe them from his own knowledge, they being generally so well known, that descriptions are altogether needless.

Place.] They are generally planted in gardens.

Time.] Their flower time is towards the middle or end of July, and the seed is ripe in August.

Government and Virtues.] The cabbages or coleworts boiled gently in broth, and eaten, do open the body, but the second decoction doth bind the body. The juice thereof drank in wine,

helpeth those that are bitten by an adder, and the decoction of the flowers bringeth down women's courses : Being taken, with honey, it recovereth hoarseness or loss of the voice. The often eating of them well boiled, helpeth those that are entering into a consumption. The pulp or the middle ribs of coleworts boiled in almond milk, and made up into an electuary with honey, being taken often, is very profitable for those that are puffy and short-winded. Being boiled twice, and an old cock boiled in the broth and drauk, it helpeth the pains, and the obstructions of the liver and spleen, and the stone in the kidneys. The juice boiled with honey, and dropped into the corner of the eyes, cleareth the sight, by consuming any film or cloud beginning to dim it; it also consumeth the canker growing therein. They are much commended, being eaten before meat to keep one from surfeiting, as also from being drunk with too much wine, or quickly make a man sober again that is drunk before. For (as they say) there is such an antipathy or enmity between the vine and the coleworts, that the one will die where the other groweth. The decoction of coleworts taketh away the pain and ache, and allayeth the swellings of sores and gouty legs and knees, wherein many gross and watery humours are fallen, the place being bathed therewith warm. It helpeth also old and filthy sores, being bathed therewith, and healeth all small scabs, pushes, and wheals, that break out in the skin. The ashes of colewort stalks mixed with old hogs grease, are very effectual to anoint the sides of those that have had long pains therein, or any other place pained with melancholy and windy humours. This was surely Chrysippus's God, and therefore he wrote a volume of them and their virtues, and that none of the least neither, for he would be no small fool : He appropriates them to every part of the body, and to every disease in every part; and honest old Cato (they say) used no other physic. I know not what metal their bodies were made of; this I am sure, cabbages are extremely windy, whether you take them as meat or as medicine : yea, as windy meat as can be eaten, unless you eat bag pipes or bellows, and they are but seldom eaten in our days; and colewort flowers are something

more tolerable, and the wholesomer food of the two. The Moon challengeth the dominion of the herb.

THE SEA COLEWORTS.

Descript. **T**HIS hath divers somewhat long and broad large and thick wrinkled leaves, somewhat crumpled about the edges, and growing each upon a thick footstalk, very brittle, of a greyish green colour, from among which riseth up a strong thick stalk, two feet high and better, with some leaves thereon to the top, where it brancheth forth much; and on every branch standeth a large bush of pale whitish flowers, consisting of four leaves a-piece: The root is somewhat great, shooteth forth many branches under ground, keeping the leaves green all the winter.

Place.] They grow in many places upon the sea-coasts as well on the Kentish as Essex shores; as at Lid in Kent, Colchester in Essex, and divers other places, and in other counties of this land.

Time.] They flower and seed about the time that other kinds do.

Government and Virtues.] The Moon claims the dominion of these also. The broth, or first decoction of the sea-colewort, doth by the sharp, nitrous, and bitter qualities therein, open the belly, and purge the body; it cleanseth and digests more powerfully than the other kind: The seed hereof bruised and drank killeth the worms. The leaves or the juice of them applied to sores or ulcers, cleanseth and healeth them, and dissolveth swellings, and taketh away inflammations.

CALAMINT, OR MOUNTAIN-MINT.

Descript. **T**HIS is a small herb, seldom rising above a foot high, with square hairy, and woody stalks, and two small hoary leaves set at a joint, about the bigness of marjorani, or not much bigger, a little dented about the edges, and of a very fierce or

quick scent, as the whole herb is. The flowers stand at several spaces of the stalks, from the middle almost upwards, which are small and gaping, like to those of mints, and of a pale blueish colour: After which follow small, round blackish seeds. The root is small and woody, with divers small strings spreading within the ground, and dieth not, but abideth many years.

Place.] It groweth on heaths, and uplands, and dry grounds in many places of this land.

Time.] They flower in July, and their seed is ripe quickly after.

Government and Virtues.] It is an herb of Mercury, and a strong one too, therefore excellent good in all afflictions of the brain; the decoction of the herb being drank, bringeth down women's courses, and provoketh urine. It is profitable for those that are bursten, or troubled with convulsions or cramps, with shortness of breath, or choleric torments and pains in their bellies or stomach; it also helpeth the yellow jaundice, and stayeth vomiting, being taken in wine. Taken with salt and honey, it killeth all manner of worms in the body. It helpeth such as have the leprosy, either taken inwardly, drinking whey after it, or the green herb outwardly applied. It hindereth conception in women, but either burned or strewed in the chamber, it driveth away venomous serpents. It takes away black and blue marks in the face, and maketh black scars become well coloured, if the green herb (not the dry) be boiled in wine, and laid to the place, or the place washed therewith. Being applied to the buckle-bone, by continuance of time, it spends the humours, which cause the pain of the sciatica. The juice being dropped into the ears, killeth the worms in them. The leaves boiled in wine, and drank, provoke sweat, and open obstructions of the liver and spleen. It helpeth them that have a tertian ague (the body being first purged) by taking away the cold fits. The decoction hereof, with some sugar put thereto afterwards, is very profitable for those that are troubled with the overflowing of the gall, and that have an old cough, and that are scarce able to breathe by shortness of their

wind; that have any cold distemper in their bowels, and are troubled with the hardness of the spleen, for all which purposes, both the powder, called diacaluminthes, and the compound syrup of calamint (which are to be had at the apothecaries) are the most effectual. Let not women be too busy with it, for it works very violent upon the feminine part.

CAMOMILE.

IT is so well known every where, that it is but lost time and labour to describe it. The virtues thereof are as followeth:

A decoction made of Camomile, and drank, taketh away all pains and stitches in the side. The flowers of Camomile beaten, and made up into balls with oil, drive away all sorts of agues, if the part grieved be anointed with that oil, taken from the flowers, from the crown of the head to the sole of the foot, and afterwards laid to sweat in his bed, and that he sweats well. This is Necessor, an Egyptian's medicine. It is profitable for all sorts of agues that come either from phlegm, or melancholy, or from an inflammation of the bowels, being applied when the humours causing them shall be concocted; and there is nothing more profitable to the sides and region of the liver and spleen than it. The bathing with a decoction of camomile taketh away weariness, easeth pains, to what part of the body soever they be applied. It comforteth the sinews that are over-strained, molifieth all swellings: It moderately comforteth all parts that have need of warmth, digesteth and dissolveth whatsoever hath need thereof, by a wonderful speedy property. It easeth all the pains of the cholic and stone, and all pains and torments of the belly, and gently provoketh urine. The flowers boiled in posset-drink provoke sweat, and help to expel all colds, aches and pains whatsoever, and is an excellent help to bring down women's courses. Syrup made of the juice of camomile, with the flowers in white wine, is a remedy against the jaundice and dropsy. The flowers boiled in lee, are good to wash the head, and comfort both it

and the brain. The oil made of the flowers of camomile, is much used against all hard swellings, pains or aches, shrinking of the sinews, or cramps, or pains in the joints, or any other part of the body. Being used in glysters, it helps to dissolve the wind and pains in the belly ; anointed also, it helpeth stitches and pains in the sides.

Nechessor said, the Egyptians dedicated it to the Sun, because it cured agues, and they were like enough to do it, for they were the arrantest apes in their religion I ever read of. Bachinus, Bena, and Lobel, commend the syrup made of the juice of it and sugar, taken inwardly, to be excellent for the spleen. Also this is certain, that it most wonderfully breaks the stone ; Some take it in syrup or decoction, others inject the juice of it into the bladder with a syringe. My opinion is, that the salt of it taken half a dram in the morning in a little white or rhenish wine, is better than either ; that it is excellent for the stone, appears in this which I have seen tried, viz. that a stone that hath been taken out of the body of a man being wrapped in camomile, will in time dissolve, and in a little time too.

WATER CALTROPS.

THEY are called also *tribulus aquaticus*, *tribulus lacusoris*, *tribulus marinus*, caltrop, *saligos*, water nuts, and water chesnuts.

Descript.] As for the greater sort of water caltrop it is not found here, or very rarely. Two other sorts there are which I shall here describe. The first hath a long creeping and jointed root, sending forth tufts at each joint, from which joints rise long, flat, slender knotted stalks, even to the top of the water, divided towards the top into many branches, each carrying two leaves on both sides, being about two inches long, and half an inch broad, thin, and almost transparent, they look as though they were torn : the flowers are long, thick and whitish, set together almost like a bunch of grapes, which being gone, there succeeds for the most part sharp-pointed grains altogether, containing a small white kernel in them.

The second differs not much from this; save that it delights in more clear water; its stalks are not flat, but round: its leaves are not so long, but more pointed; as for the place, we need not determine, for their name sheweth they grow in the water.

Government and Virtues.] They are under the dominion of the Moon, and being made into a poultice, are excellent good for hot inflammations, swellings, cankers, sore mouths and throats, being washed with the decoction; it cleanseth and strengtheneth the neck, and throat, and helps those swellings, which, when people have, they say the almonds of their ears are fallen down; it is excellent good for the rankness of the gums, a safe and present remedy for the king's evil; they are excellent good for the stone and gravel, especially the nuts being dried; they also resist poison, and bitings of venomous beasts.

CAMPION WILD.

Descript.] **T**HE wild white campion hath many long and somewhat broad dark green leaves, lying upon the ground, and divers ribs therein, somewhat like plantain, but somewhat hairy, broader, but not so long: The hairy stalks rise up in the middle of them three or four feet high, and sometimes more, with divers great white joints at several places thereon, and two such like leaves thereat up to the top, sending forth branches at several joints also: All which bear on several footstalks, white flowers at the tops of them, consisting of five broad pointed leaves, every one cut in on the end unto the middle, making them seem to be two a-piece, smelling somewhat sweet, and each of them standing in a large green striped hairy husk, large and round below next to the stalk. The seed is small and greyish in the hard heads that come up afterwards. The root is white and long, spreading divers fangs in the ground.

The red wild campion groweth in the same manner as the white, but the leaves are not so plainly ribbed, somewhat shorter, rounder, and more woolly in handling. The flowers are of the

same form and bigness; but in some of a pale, in others of a bright red colour, cut in at the ends more finely, which makes the leaves look more in number than the other. The seeds and the roots are alike, the roots of both sorts abiding many years.

There are forty-five kinds of campion more, those of them which are of a physical use, having the like virtues with those above described, which I take to be the chiefest kinds.

Place.] They grow commonly through this land by fields and hedge-sides and ditches.

Time.] They flower in summer, some earlier than others, and some abiding longer than others.

Government and Virtues.] They belong unto Saturn, and it is found by experience, that the decoction of the herb, either in white or red wine, being drank, doth stay inward bleedings, and applied outwardly, it doth the like; and being drank, helpeth to expel urine, being stopped, and gravel or stone in the reins or kidneys. Two drams of the seed drank in wine, purgeth the body of cholerick humours, and helpeth those that are stung by scorpions, or other venomous beasts, and may be as effectual for the plague. It is of very good use in old sores, ulcers, cankers, fistulas, and the like, to cleanse and heal them, by consuming the moist humours falling into them, and correcting the putrifaction of humours offending them.

CARDUUS BENEDICTUS.

IT is called carduus benedictus, or blessed thistle, or holy thistle; I suppose the name was put upon it by some that had little holiness in themselves.

I shall spare labour in writing a description of this, as almost every one that can write at all, may describe them from his own knowledge.

Time.] They flower in August, and seed not long after.

Government and Virtues.] It is an herb of Mars, and under the sign of Aries. Now, in handling this herb, I shall give you a rational pattern of all the rest; and if you please to view them

Wild Carrots

Great Celandine

Cat Mint

throughout the book, you shall, to your content, find it true. It helps swimming and giddiness of the head, or the disease called vertigo, because Aries is in the house of Mars. It is an excellent remedy against the yellow jaundice and other infirmities of the gall, because Mars governs choler. It strengthens the attractive faculty in man, and clarifies the blood, because the one is ruled by Mars. The continually drinking the decoction of it, helps red faces, tetters, and ringworms, because Mars causeth them. It helps the plague, sores, boils, and itch, the bitings of mad-dogs and venomous beasts, all which infirmities are under Mars; thus you see what it doth by sympathy.

By antipathy to other planets it cures the French-pox. By antipathy to Venus, who governs it, it strengthens the memory, and cures deafness by antipathy to Saturn, who hath his fall in Aries, which rules the head. It cures quartan agues, and other diseases of melancholy, and adjusts choler, by sympathy to Saturn, Mars being exalted in Capricorn. Also it provokes urine, the stopping of which is usually caused by Mars or the Moon.

CARROTS.

GARDEN carrots are so well known, that they need no description; but because they are of less physical use than the wild kind (as indeed almost in all herbs the wild are most effectual in physic, as being more powerful in operation than the garden kinds,) I shall therefore briefly describe the wild carrot.

Descript.] It groweth in a manner altogether like the tame, but that the leaves and stalks are somewhat whiter and rougher. The stalks bear large tufts of white flowers, with a deep purple spot in the middle, which are contracted together when the seed begins to ripen, that the middle part being hollow and low, and the outward stalk rising high, maketh the whole umbel to shew like a bird's nest. The root small, long and hard, and unfit for meat, being somewhat sharp and strong.

Place.] The wild kind groweth in divers parts of this land, plentifully by the field sides and untilled places.

Time.] They flower and seed in the end of summer.

Government and Virtues.] Wild carrots belong to Mercury, and therefore break wind, and remove stitches in the sides, provoke urine and women's courses, and helpeth to break and expel the stone; the seed also of the same worketh the like effect, and is good for the dropsy, and those whose bellies are swoln with wind; helpeth the cholic, the stone in the kidneys, and rising of the mother; being taken in wine, or boiled in wine, and taken, it helpeth conception. The leaves being applied with honey to running sores or ulcers, do cleanse them.

I suppose the seeds of them perform this better than the roots; and though Galen commended garden carrots highly to break wind, yet experience teacheth they breed it first, and we may thank nature for expelling it, not they: the seeds of them expel wind indeed, and so mend what the root marreth.

CARRAWAY.

Descript.] **I**T beareth divers stalks of fine cut leaves, lying upon the ground, somewhat like to the flowers of carrots, but not bushing so thick, of a little quick taste in them, from among which riseth up a square stalk, not so high as the carrot, at whose joints are set the like leaves, but smaller and fitter, and at the top small open tufts, or umbels of white flowers, which turn into small blackish seed, smaller than the anniseed, and of a quicker and better taste. The root is whitish, small and long, somewhat like unto a parsnip, but with more wrinkled bark, and much less, of a little hot and quick taste, and stronger than the parsnip, and abideth after seed time.

Place.] It is usually sown with us in gardens.

Time.] They flower in June and July, and seed quickly after.

Government and Virtues.] This is also a Mercurial plant. Carraway seed hath a moderate sharp quality, whereby it breaketh wind, and provoketh urine, which also the herb doth. The root is better food than the parsnips; it is pleasant and comfortable

to the stomach and helpeth digestion. The seed is conducing to all cold griefs of the head and stomach, bowels, or mother, as also the wind in them, and helpeth to sharpen the eyesight. The powder of the seed put into a poultice, taketh away black and blue spots of blows and bruises. The herb itself, or with some of the seed bruised and fried, laid hot in a bag or double cloth, to the lower parts of the belly, easeth the pains of the wind cholic.

The roots of carraway eaten as men eat parsnips, strengthen the stomach of ancient people exceedingly, and they need not to make a whole meal of them neither, and are fit to be planted in every garden.

Carraway confects, once only dipped in sugar, and a spoonful of them eaten in the morning fasting, and as many after each meal, is a most admirable remedy for those that are troubled with wind.

CELANDINE.

Descript.] **T**HIS hath divers tender, round, whitish green stalks, with greater joints than ordinary in other herbs, as it were knees, very brittle and easy to break, from whence grow branches with large tender broad leaves, divided into many parts, each of them cut in on the edges, set at the joint on both sides of the branches, of a dark blueish green colour, on the upper side like columbines, and of a more pale blueish green underneath, full of yellow sap when any part is broken, is of a bitter taste, and strong scent. The root is somewhat great at the head, shooting forth divers long roots and small strings, reddish on the outside, and yellow within, full of yellow sap therein.

Place.] They grow in many places by old walls, hedges, and way-sides, in untilled places; and being once planted in a garden, especially some shady place, it will remain there.

Time.] They flower all the summer long, and the seed ripeneth in the mean time.

Government and Virtues.] This is an herb of the Sun, and under the celestial Lion, and is one of the best cures for the eyes; for all that know any thing in astrology, know that the eyes are subject to the luminaries: let it then be gathered when the Sun is in Leo, and the Moon in Aries, applying to this time; let Leo arise, then may you make it into an oil or ointment, which you please, to anoint your sore eyes with: I can prove it doth both by my own experience, and the experience of those to whom I have taught it, that most desperate sore ones have been cured by this only medicine; and then I pray, is not this far better than endangering the eyes by the art of the needle? For if this doth not absolutely take away the film, it will so facilitate the work, that it might be done without danger. The herb or root boiled in white wine and drank, a few anniseeds being boiled therewith, openeth obstructions of the liver and gall, helpeth the yellow jaundice; and often using it, helps the dropsy and the itch, and those that have old sores in their legs, or other parts of the body. The juice thereof taken fasting, is held to be of singularly good use against the pestilence. The distilled water, with a little sugar, and a little good treacle mixed therewith (the party upon the taking being laid down to sweat a little) hath the same effect. The juice dropped in the eyes, cleanseth them from films and cloudiness which darken the sight, but it is best to allay the sharpness of the juice with a little breast milk. It is good in all old filthy, corroding, creeping ulcers wheresoever, to stay their malignity of fretting and running, and to cause them to heal more speedily. The juice often applied to tetters, ring-worms, or other such like spreading cankers, will quickly heal them, and rubbed often upon warts, will take them away. The herb with the roots bruised and bathed with oil of camomile, and applied to the navel, taketh away, the griping pains in the belly and bowels, and all the pains of the mother; and applied to women's breasts, stayeth the overmuch flowing of the courses. The juice or decoction of the herb gargled between the teeth that ache, easeth the pain, and the powder of the dried root laid upon any

aching, hollow or loose tooth, will cause it to fall out. The juice mixed with some powder of brimstone is not only good against the itch, but taketh away all discolourings of the skin whatsoever; and if it chance that in a tender body it causeth any itchings or inflammations, by bathing the place with a little vinegar it is helped.

Another ill favoured trick have physicians got to use to the eye, and that is worse than the needle; which is, to take away films by corroding or guawing medicines. This I absolutely protest against;

1. Because the tunicles of the eyes are very thin, and therefore soon eaten asunder.

2. The calus or film that they would eat away, is seldom of an equal thickness in every place, and then the tunicle may be eaten asunder in one place, before the film be consumed in another, and so be a readier way to extinguish the sight than to restore it.

It is called chelidonium, from the Greek word *chelison*, which signifies a swallow, because they say, that if you put out the eyes of young swallows when they are in the nest, the old ones will recover their eyes again with this herb. This I am confident, for I have tried it, that if we mar the very apple of their eyes with the needle, she will recover them again; but whether with this herb or not, I know not.

Also I have read (and it seems to be somewhat probable) that the herb being gathered as I shewed before, and the elements drawn apart from it by art of the alchymist, and after they are drawn apart rectified, the earthy quality, still in rectifying them, added to the *terra demnata* (as alchymists call it) or *terra sacratissima* (as some philosophers call it) the elements so rectified are sufficient for the cure of all diseases, the humours offending being known, and the contrary elements given: It is an experiment worth the trying, and can do no harm.

THE LESSER CELANDINE,
usually known by the names of Pilewort, and Fogwort.

I WONDER what ailed the ancients to give this the name of celandine, which resembles it neither in nature nor form; it acquired the name of pilewort from its virtues, and it being no great matter where I set it down, so I set it down at all, I humoured Dr. Tradition so much, as to set him down here.

Descript.] This celandine or pilewort (which you please) doth spread many round pale green leaves, set on weak and trailing branches, which lie upon the ground, and are flat, smooth, and somewhat shining, and in some places (though seldom) marked with black spots, each standing on a long foot-stalk, among which rise small yellow flowers, consisting of nine or ten small narrow leaves, upon slender foot-stalks, very like unto crowsfoot, whereunto the seed also is not unlike, being many small kernels like a grain of corn, sometimes twice as long as others, of a whitish colour, with some fibres at the end of them.

Place.] It groweth for the most part in moist corners of fields and places that are near water sides, yet will abide in drier ground if they be but a little shady.

Time.] It flowereth betimes about March or April, is quite gone by May; so it cannot be found till it spring again.

Government and Virtues.] It is under the dominion of Mars, and behold here another verification of the learning of the ancients, viz. that the virtue of an herb may be known by its signature, as plainly appears in this; for if you dig up the root of it, you shall perceive the perfect image of the disease which they commonly call the piles. It is certain by good experience, that the decoction of the leaves and roots doth wonderfully help piles and hæmorrhoides, also kernels by the ears and throat, called the king's evil, or any other hard wens or tumours.

Here is another secret for my countrymen and women, a couple of them together; pilewort made into an oil, ointment, or plaister, readily cures both the piles, or hæmorrhoides, and the

Little Celandine

Centaury

Earth Nut

evil: The very herb borne about one's body next the skin, helps in such diseases, though it never touch the place grieved; let poor people make much of it for those uses; with this I cured my own daughter of the king's evil, broke the sore, drew out a quarter of a pint of corruption, cured without any scar at all in one week's time.

THE ORDINARY SMALL CENTAURY.

Descript.] **T**HIS groweth up most usually but with one round and somewhat crusted stalk, about a foot high or better, branching forth at the top into many sprigs, and some also from the joints of the stalks below; the flowers thus stand at the tops as it were in one umbel or tuft, are of a pale red, tending to carnation colour, consisting of five, sometimes six small leaves, very like those of St. John's wort, opening themselves in the day time and closing at night, after which come seeds in little short husks, in form like unto wheat corn. The leaves are small and somewhat round; the root small and hard, perishing every year. The whole plant is of an exceeding bitter taste.

There is another sort in all things like the former, save only it beareth white flowers.

Place.] They grow ordinarily in fields, pastures and woods, but that with the white flowers not so frequently as the other.

Time.] They flower in July or thereabouts, and seed within a month after.

Government and Virtues.] They are under the dominion of the Sun, as appears in that their flowers open and shut as the sun either sheweth or hideth its face. This herb, boiled and drank, purgeth cholerick and gross humours, and helpeth the sciatica: it openeth obstructions of the liver, gall, and spleen, helpeth the jaundice, and easeth the pains in the sides and hardness of the spleen, used outwardly, and is given with very good effect in agues. It helpeth those that have the dropsy, or the green sickness, being much used by the Italians in powder for that purpose.

It killeth the worms in the belly, as is found by experience. The decoction thereof, viz. the tops of the stalks, with the leaves and flowers, is good against the cholic, and to bring down women's courses, helpeth to avoid the dead birth, and easeth pains of the mother, and is very effectual in all old pains of the joints, as the gout, cramps, or convulsions. A dram of the powder thereof taken in wine, is a wonderful good help against the biting and poison of an adder. The juice of the herb, with a little honey put to it, is good to clear the eyes from dimness, mists and clouds that offend or hinder sight. It is singularly good both for green and fresh wounds, as also for old ulcers and sores, to close up the one, and cleanse the other, and perfectly to cure them both, although they are hollow or fistulous; the green herb especially being bruised and laid thereto. The decoction thereof dropped into the ears, cleanseth them from worms, cleanseth the foul ulcers and spreading scabs of the head, and taketh away all freckles, spots, and marks in the skin, being washed with it; the herb is so safe you cannot fail in the using of it, only giving it inwardly for inward diseases. 'Tis very wholesome, but not very toothsome.

There is, besides these, another small centaury, which beareth a yellow flower; in all other respects it is like the former, save that the leaves are bigger, and of a darker green, and the stalk passeth through the midst of them, as it doth the herb thorowan. They are all of them, as I told you, under the government of the Sun; yet this, if you observe it, you shall find as excellent truth; in diseases of the blood, use the red centaury; if of choler, use the yellow; but if phlegm or water, you will find the white best.

THE CHERRY-TREE.

I SUPPOSE there are few but know this tree, for its' fruit's sake; and therefore I shall spare writing a description thereof.

Place.] For the place of its growth, it is afforded room in every orchard.

Government and Virtues.] It is a tree of Venus. Cherries as they are of different tastes, so they are of different qualities. The sweet pass through the stomach and the belly more speedily, but are of little nourishment; the tart or sour are more pleasing to an hot stomach, procure appetite to meat, and help to cut tough phlegm, and gross humours; but when these are dried, they are more binding to the belly than when they are fresh being cooling in hot diseases, and welcome to the stomach, and provoke urine. The gum of the cherry-tree, dissolved in wine, is good for a cold, cough, and hoarseness of the throat; mendeth the colour in the face, sharpeneth the eye-sight, provoketh appetite, and helpeth to break and expel the stone; the black cherries bruised with the stones, and dissolved, the water thereof is much used to break the stone, and to expel gravel and wind.

WINTER CHERRIES.

Descript.] **T**HE winter cherry hath a running or creeping root in the ground, of the bigness many times of one's little finger, shooting forth at several joints in several places, whereby it quickly spreads over a great compass of ground. The stalk riseth not above a yard high, whereon are set many broad and long green leaves, somewhat like nightshade, but larger: at the joints whereof come forth whitish flowers made of five leaves a-piece, which afterwards turn into green berries inclosed with thin skins, which change to be reddish when they grow ripe, the berry likewise being reddish, and as large as a cherry; wherein are contained many flat and yellowish seeds lying within the pulp, which being gathered and strung up, are kept all the year to be used upon occasion.

Place.] They grow not naturally in this land, but are cherished in gardens for their virtues.

Time.] They flower not until the middle or latter end of July; and the fruit is ripe about August, or the beginning of September.

Government and Virtues.] This also is a plant of Venus. They are of great use in physic: The leaves being cooling, may be used in inflammations, but not opening as the berries and fruit are: which by drawing down the urine, provoke it to be voided plentifully when it is stopped or grown hot, sharp, and painful in the passage; it is good also to expel stone and gravel out of the reins, kidneys and bladder; helping to dissolve the stone, and voiding it by grit or gravel sent forth in the urine; it also helpeth much to cleanse inward imposthumes or ulcers in the reins or bladder, or in those that void a bloody or foul urine. The distilled water of the fruit, or the leaves together with them, or the berries, green or dry, distilled with a little milk and drank morning and evening with a little sugar, is effectual to all the purposes before specified, and especially against the heat and sharpness of the urine. I shall only mention one way, amongst many others, which might be used for ordering the berries, to be helpful for the urine and the stone; which is this: Take three or four good handfuls of the berries, either green or fresh, or dried, and having bruised them, put them into so many gallons of beer or ale when it is new tunned up: This drink, taken daily, hath been found to do much good to many, both to ease the pains, and expel urine and the stone, and to cause the stone not to engender. The decoction of the berries in wine and water is the most usual way: but the powder of them taken in drink is more effectual.

CHERVIL.

IT is called *cerefolium*, *mirrhis*, and *mirrha*, *chervel*, sweet *chervil*, and sweet *cicely*.

Descript.] The garden chervil doth at first somewhat resemble parsley, but after it is better grown, the leaves are much cut in and jagged, resembling hemlock, being a little hairy and of a whitish green colour, sometimes turning reddish in the summer, with the stalks also: it riseth a little above half a foot high, bearing white flowers in spiked tufts, which turn into long and

round seeds pointed at the ends and blackish when they are ripe : of a sweet taste, but no smell, though the herb itself smelleth reasonably well. The root is small and long, and perisheth every year, and must be sown a-new in spring, for seed after July or autumn fails.

The wild chervil groweth two or three feet high, with yellow stalks and joints, set with broader and more hairy leaves, divided into sundry parts, nicked about the edges, and of a dark green colour, which likewise grow reddish with the stalks; at the tops whereof stand small white tufts of flowers, afterwards smaller and longer seed. The root is white, hard, and enduring long. This hath little or no scent.

Place.] The first is sown in gardens for a sallad herb; the second groweth wild in many of the meadows of this land, and by the hedge sides, and on heaths.

Time.] They flower and seed early, and thereupon are sown again in the end of summer.

Government and Virtues.] The garden chervil being eaten, doth moderately warm the stomach, and is a certain remedy (saith Tragus) to dissolve congealed or clotted blood in the body, or that which is clotted by bruises, falls, &c. The juice or distilled water thereof being drank, and the bruised leaves laid to the place, being taken either in meat or drink, it is a good help to provoke urine, or expel the stone in the kidneys, to send down women's courses, and to help the pleurisy and pricking of the sides.

The wild chervil bruised and applied, dissolveth swellings in any part, or the marks of congealed blood by bruises or blows in a little space.

SWEET CHERVIL, OR SWEET CICELY.

Descript.] **T**HIS groweth very like the great hemlock, having large spread leaves cut into divers parts, but of a fresher green colour than the hemlock, tasting as sweet as the anniseed. The stalks rise up a yard high, or better, being cressed or hol-

low, having leaves at the joints, but lesser; and at the tops of the branched stalks, umbels or tufts of white flowers; after which come large and long crested black shining seed, pointed at both ends, tasting quick, yet sweet and pleasant. The root is great and white, growing deep in the ground, and spreading sundry long branches therein, in taste and smell stronger than the leaves or seeds, and continuing many years.

Place.] This groweth in gardens.

Government and Virtues.] These are all three of them of the nature of Jupiter, and under his dominion. This whole plant, besides its pleasantness in sallads, hath its physical virtue. The roots boiled and eaten with oil and vinegar, (or without oil) do much please and warm old and cold stomachs oppressed with wind or phlegm, or those that have the phthisic or consumption of the lungs. The same drank with wine is a preservation from the plague. It provoketh women's courses, and expelleth the afterbirth, procureth an appetite to meat, and expelleth wind. The juice is good to heal the ulcers of the head and face; the candied roots hereof are held as effectual as angelica, to preserve from infection in the time of a plague, and to warm and comfort a cold weak stomach. It is so harmless, you cannot use it amiss.

CHESNUT TREE.

IT were as needless to describe a tree so commonly known as to tell a man he hath gotten a mouth: therefore take the government and virtues of them thus:

The tree is abundantly under the dominion of Jupiter, and therefore the fruit must needs breed good blood, and yield commendable nourishment to the body; yet, if eaten overmuch, they make the blood thick, procure head-ach, and bind the body; the inner skin, that covereth the nut, is of so binding a quality, that a scruple of it being taken by a man, or ten grains by a child, soon stops any flux whatsoever: The whole nut being

dried and beaten into powder, and a dram taken at a time, is a good remedy to stop the terms in women. If you dry chesnuts, (only the kernels I mean) both the barks being taken away, beat them into powder, and make the powder into an electuary with honey, so have you an admirable remedy for the cough and spitting of blood.

EARTH CHESNUTS.

THEY are called earth-nuts, earth chesnuts, ground nuts, ciper-nuts, and in Sussex pig-nuts. A description of them were needless, for every child knows them.

Government and Virtues.] They are something hot and dry in quality, under the dominion of Venus, they provoke lust exceedingly, and stir up to those sports she is mistress of; the seed is excellent good to provoke urine; and so also is the root, but it doth not perform it so forcibly as the seed doth. The root being dried and beaten into powder, and the powder being made into an electuary is a singular remedy for spitting and pissing of blood, as the former chesnut was for coughs.

CHICKWEED.

IT is so generally known to most people, that I shall not trouble you with the description thereof, nor myself with setting forth the several kinds, since but only two or three are considerable for their usefulness.

Place.] They are usually found in moist and watery places, by wood sides, and elsewhere.

Time.] They flower about June, and their seed is ripe in July.

Government and Virtues.] It is a fine soft pleasing herb, under the dominion of the Moon. It is found to be effectual as purslain to all the purposes whereunto it serveth, except for meat only. The herb bruised, or the juice applied (with cloths or

sponges dipped therein) to the region of the liver, and as they dry, to have it fresh applied, doth wonderfully temperate the heat of the liver, and is effectual for all imposthumes and swellings whatsoever, for all redness in the face, wheals, pushes, itch, scabs; the juice either simply used or boiled with hog's grease and applied, helpeth cramps, convulsions, and palsy. The juice, or distilled water, is of much good use for all heats and redness in the eyes, to drop some thereof into them; as also into the ears, to ease pains in them; and is of good effect to ease pains from the heat and sharpness of the blood in the piles, and generally all pains in the body, that arise from heat. It is used also in hot and virulent ulcers and sores in the privy parts of men or women, or on the legs, or elsewhere. The leaves boiled with marsh-mallows, and made into a poultice with fenugreek and linseed, applied to swellings or imposthumes, ripen and break them, or assuage the swellings and ease the pains. It helpeth the sinews when they are shrunk by cramps, or otherwise, and to extend and make them pliable again by this medicine. Boil a handful of chickweed, and a handful of red rose leaves dried, in a quart of muscadine, until a fourth part be consumed: then put to them a pint of oil of trotters or sheep's feet, let them boil a good while, still stirring them well; which being strained, anoint the grieved place therewith, warm against the fire, rubbing it well with one hand: and bind also some of the herb (if you will) to the place, and with God's blessing, it will help it in three times dressing.

CHICK-PEASE, OR CICERS.

Descript. **T**HE garden sorts, whether red, black, or white, bring forth stalks a yard long, whereon do grow many small and almost round leaves, dented about the edges, set on both sides of a middle rib: At the joints come forth one or two flowers, upon sharp foot-stalks, pease-fashion, either white or whitish, or purplish red, lighter or deeper, according as the pease that follow will be, that are contained in small, thick, and short pods,

wherein lie one or two pease, more usually pointed at the lower end, and almost round at the head, yet a little cornered or sharp; the root is small, and perisheth yearly.

Place and Time.] They are sown in gardens or fields, as pease, being sown later than pease, and gathered at the same time with them, or presently after.

Government and Virtues.] They are both under the dominion of Venus. They are less windy than beans, but nourish more; they provoke urine, and are thought to increase sperm; they have a cleansing faculty, whereby they break the stone in the kidneys. To drink the cream of them, being boiled in water, is the best way. It moves the belly downwards, provokes women's courses and urine, increases both milk and seed. One ounce of cicers, two ounces of French barley, and a small handful of marsh-mallow roots, clean washed and cut, being boiled in the broth of a chicken, and four ounces taken in the morning, and fasting two hours after, is a good medicine for pain in the sides. The white cicers are used more for meat than medicine, yet have the same effect, and are thought more powerful to increase milk and seed. The wild cicers are so much more powerful than the garden kinds, by how much they exceed them in heat and dryness; whereby they do more open obstructions, break the stone, and have all the properties of cutting, opening, digesting, and dissolving; and this more speedily and certainly than the former.

CINQUEFOIL, OR FIVE-LEAVED GRASS,

called in some Counties, Five-fingered Grass.

Descript. **I**T spreads and creeps far upon the ground, with long slender strings like strawberries, which take root again, and shoot forth many leaves, made of five parts, and sometimes of seven, dented about the edges, and somewhat hard. The stalks are slender, leaning downwards, and bear many small yellow flowers thereon, with some yellow threads in the middle, standing

about a smooth green head, which, when it is ripe, is a little rough, and containeth small brownish seed. The root is of a blackish brown colour, as big as one's little finger, but growing long, with some threads thereat; and by the small strings it quickly spreadeth over the ground.

Place.] It groweth by wood sides, hedge-sides, the pathway in fields, and in the borders and corners of them almost through all this land.

Time.] It flowereth in summer, some sooner, some later.

Government and Virtues.] This is an herb of Jupiter, and therefore strengthens the part of the body it rules; let Jupiter be angular and strong when it is gathered; and if you give but a scruple (which is but twenty grains) of it at a time, either in white wine, or in white wine vinegar, you shall very seldom miss the cure of an ague, be it what ague soever, in three fits, as I have often proved to the admiration both of myself and others; let no man despise it because it is plain and easy, the ways of God are all such. It is an especial herb used in all inflammations and fevers, whether infectious or pestilential; or among other herbs to cool and temper the blood and humours in the body. As also for all lotions, gargles, infections, and the like, for sore mouths, ulcers, cancers, fistulas, and other corrupt, foul, and running sores. The juice hereof drank, about four ounces at a time, for certain days together, cureth the quinsy, and yellow jaundice; and taken for thirty days together, cureth the falling sickness. The roots boiled in milk, and drank, is a most effectual remedy for all fluxes in a man or a woman, whether the white or red, as also the bloody flux. The roots boiled in vinegar, and the decoction thereof held in the mouth, easeth the pains of the tooth-ach. The juice or decoction taken with a little honey, helpeth the hoarseness of the throat, and is very good for the cough of the lungs. The distilled water of both roots and leaves is also effectual to all the purposes aforesaid: and if the hands be often washed therein, and suffered at every time to dry in of itself without wiping, it will in a short time

help the palsy, or shaking in them. The root boiled in vinegar, helpeth all knots, kernels, hard swellings, and lumps growing in any part of the flesh, being thereto applied; as also inflammations, and St. Anthony's fire, all imposthumes, and painful sores with heat and putrefaction, the shingles also, and all other sorts of running and foul scabs, sores, and itch. The same also boiled in wine, and applied to any joint full of pain, ache, or the gout in the hands or feet, or the hip gout, called the sciatica, and the decoction thereof drank the while doth cure them, and easeth much pain in the bowels. The roots are likewise effectual to help ruptures or bursting, being used with other things available to that purpose, taken either inwardly, or outwardly, or both; as also bruises or hurts by blows, falls, or the like, and to stay the bleeding of wounds in any parts inward or outward.

Some hold that one leaf cures a quotidian, three a tertian, and four a quartan ague, and a hundred to one if it be not Dioscorides: for he is full of whimsies. The truth is, I never stood so much upon the number of the leaves, nor whether I give it in powder or decoction: If Jupiter were strong, and the Moon applying to him, or his good aspect at the gathering, I never knew it miss the desired effects.

CIVES.

CALLED also rush leeks, chives, civet, and sweth.

Temperature and Virtues.] I confess I had not added these, had it not been for a country gentleman, who by a letter, certified me, that amongst other herbs, I had left these out; they are indeed a kind of leeks, hot and dry in the fourth degree as they are, and so under the dominion of Mars: if they be eaten raw, (I do not mean raw opposite to roasted or boiled, but raw, opposite to chemical preparation) they send up very hurtful vapours to the brain, causing troublesome sleep, and spoiling the eye-sight, yet of them, prepared by the art of the alchymist, may be made an excellent remedy for the stoppage of urine.

CLARY, or more properly, CLEAR-EYE.

Descript.] OUR ordinary garden clary hath four square stalks, with broad, rough, wrinkled, whitish, or hoary green leaves, somewhat evenly cut in on the edges, and of a strong sweet scent, growing some near the ground, and some by couples upon stalks. The flowers grow at certain distances, with two small leaves at the joints under them, somewhat like the flowers of sage, but smaller, and of a whitish blue colour. The seed is brownish, and somewhat flat, or not so round as the wild. The roots are blackish, and spread not far, and perish after the seed time. It is usually sown, for it seldom rises of its own sowing.

Place.] This groweth in gardens.

Time.] It flowereth in June and July, some a little later than others, and their seed is ripe in August, or thereabouts.

Government and Virtues.] It is under the dominion of the Moon. The seed put into the eyes clears them from moles, and such like things gotten within the lids to offend them, as also clears them from white and red spots on them. The mucilage of the seed made with water, and applied to tumours or swellings, disperseth and taketh them away; as also draweth forth splinters, thorns, and other things gotten into the flesh. The leaves used with vinegar, either by itself, or with a little honey, doth help boils, felons, and the hot inflammations that are gathered by their pains, if applied before it be grown too great. The powder of the dried root put into the nose, provoketh sneezing, and thereby purgeth the head and brain of much rheum and corruption. The seed or leaves taken in wine, provoketh to venery. It is of much use both for men and women that have weak backs, and helpeth to strengthen the reins; used either by itself, or with other herbs conducing to the same effect, and in tansies often. The fresh leaves dipped in a batter of flour, eggs, and a little milk, and fried in butter, and served to the table,

is not unpleasant to any, but exceeding profitable for those that are troubled with weak backs, and the effects thereof. The juice of the herb put into ale or beer, and drank, bringeth down women's courses, and expelleth the after-birth.

It is an usual course with many men, when they have gotten the running of the reins, or women the whites, they run to the bush of Clary; maid, bring hither the frying-pan, fetch me some butter quickly, then for eating fried clary, just as hogs eat acorns; and this they think will cure their disease (forsooth) whereas when they have devoured as much clary as will grow upon an acre of ground, their backs are as much the better as though they had pissed in their shoes; nay, perhaps much worse.

We will grant that clary strengthens the back; but this we deny, that the cause of the running of the reins in men, or the whites in women, lies in the back, (though the back may sometimes be weakened by them) and therefore the medicine is as proper, as for me when my toe is sore to lay a plaister on my nose.

WILD CLARY.

WILD clary is most blasphemously called Christ's eye, because it cures diseases of the eyes. I could wish from my soul, blasphemy, ignorance, and tyranny, were ceased among physicians, that they may be happy and I joyful.

Descript.] It is like the other clary, but lesser, with many stalks about a foot and a half high. The stalks are square, and somewhat hairy; the flowers of a blush colour: He that knows the common clary cannot be ignorant of this.

Place.] It grows commonly in this nation, in barren places; you may find it plentifully, if you look in the fields near Grey's Inn, and the fields near Chelsea.

Time.] They flower from the beginning of June, till the latter end of August.

Government and Virtues.] It is something hotter and drier

than the garden clary is, yet nevertheless under the dominion of the Moon, as well as that; the seeds of it being beaten to powder, and drank with wine, is an admirable help to provoke lust. A decoction of the leaves being drank, warms the stomach, and it is a wonder if it should not, the stomach being under Cancer, the house of the Moon. Also it helps digestion, and scatters congealed blood in any part of the body. The distilled water hereof cleanseth the eyes of redness, waterishness, and heat: It is a gallant remedy for dimness of sight, to take one of the seeds of it, and put it into the eyes, and there let it remain till it drops out of itself, (the pain will be nothing to speak on), it will cleanse the eyes of all filthy and putrified matter; and in often repeating it, will take off a film which covereth the sight; a handsomer, safer, and easier remedy by a great deal, than to tear it off with a needle.

CLEAVERS

IT is also called aperine, goose-share, goose-grass, and cleavers.

Descript.] The common cleavers have divers very rough, square stalks, not so big as the top of a pint, but rising up to be two or three yards high sometimes, if it meet with any tall bushes or trees whereon it may climb, yet without any claspers, or else much lower, and lying on the ground full of joints, and at every one of them shooteth forth a branch, besides the leaves thereat, which are usually six, set in a round compass like a star, or a rowel of a spur: From between the leaves or the joints towards the tops of the branches, come forth very small white flowers, at every end, upon small thready foot-stalks, which after they have fallen, there do shew two small round and rough seeds joined together like two testicles, which, when they are ripe, grow hard and whitish, having a little hole on the side, something like unto a navel. Both stalks, leaves, and seeds, are so rough, that they will cleave to any thing that will touch them. The root is small and thready, spreading much to the ground,

Place.] It groweth by the hedge and ditch side in many places of this land, and is so troublesome an inhabitant in gardens, that it rampeth upon, and is ready to choak whatever grows near it.

Time.] It flowereth in June or July, and the seed is ripe and falleth again in the end of July or August, from whence it springeth up again, and not from the old roots.

Government and Virtues.] It is under the dominion of the Moon. The juice of the herb and the seed together taken in wine helpeth those bitten with an adder, by preserving the heart from the venom. It is familiarly taken in broth, to keep them lean and lank that are apt to grow fat. The distilled water drank twice a-day, helpeth the yellow jaundice, and the decoction of the herb, in experience, is found to do the same, and stayeth lasks and bloody fluxes. The juice of the leaves, or they a little bruised, and applied to any bleeding wounds, stayeth the bleeding. The juice also is very good to close up the lips of green wounds, and the powder of the dried herb strewed thereupon doth the same, and likewise helpeth old ulcers. Being boiled in hog's grease, it helpeth all sorts of hard swellings or kernels in the throat, being anointed therewith. The juice dropped into the ears, taketh away the pain of them.

It is a good remedy in the spring, eaten (being first chopped small, and boiled well) in water-gruel, to cleanse the blood, and strengthen the liver, thereby to keep the body in health, and fitting it for that change of season that is coming.

CLOWN'S WOUNDWORT.

Descript.] **I**T groweth up sometimes to two or three feet high, but usually about two feet, with square, green rough stalks, but slender, joined somewhat far asunder, and two very long, somewhat narrow, dark green leaves, bluntly dented about the edges thereof, ending in a long point. The flowers stand towards the tops, compassing the stalks at the joints with the leaves, and end

likewise in a spiked top, having long and much gaping hoods of a purplish red colour, with whitish spots in them, standing in somewhat round husks, wherein afterwards stand blackish round seeds. The root is composed of many long strings, with some tuberous long knobs growing among them, of a pale yellowish or whitish colour, yet some times of the year these knobby roots in many places are not seen in this plant: the plant smelleth somewhat strong.

Place.] It groweth in sundry counties of this land, both north and west, and frequently by path-sides in the fields near about London, and within three or four miles distant about it, yet it usually grows in or near ditches.

Time.] It flowereth in June or July, and the seed is ripe soon after.

Government and Virtues.] It is under the dominion of the planet Saturn. It is singularly effectual in all fresh and green wounds, and therefore beareth not this name for nought. And it is very available in staunching the blood, and to dry up the fluxes of humours in old fretting ulcers, cankers, &c. that hinder the healing of them.

A syrup made of the juice of it is inferior to none for inward wounds, ruptures of veins, bloody flux, vessels broken, spitting, pissing, or vomiting blood: Ruptures are excellently and speedily, even to admiration, cured by taking now and then a little of the syrup, and applying an ointment or plaister of this herb to the place. Also, if any vein or muscle be swelled, apply a plaister of this herb to it, and if you add a little comfrey to it, it will not do amiss. I assure thee the herb deserves commendations, though it has gotten such a clownish name; and whosoever reads this, (if he try it as I have done) will commend it; only take notice that it is of a dry earthy quality.

COCK'S HEAD, RED FITCHING, OR MEDICK FETCH.

Descript.] **T**HIS hath divers weak but rough stalks, half a yard long, leaning downwards, but set with winged leaves, long-

er, and more pointed than those of lintels, and whitish underneath; from the tops of these stalks arise up other slender stalks, naked without leaves unto the tops, where there grow many small flowers in manner of a spike, of a pale reddish colour, with some blueness among them; after which rise up in their places, round, rough, and somewhat flat heads. The root is tough, and somewhat woody, yet liveth and shooteth a-new every year.

Place.] It groweth under hedges, and sometimes in the open fields, in divers places of this land.

Time.] They flower all the months of July and August, and the seed ripeneth in the mean while.

Government and Virtues.] It is under the dominion of Venus. It hath power to rarefy and digest; and therefore the green leaves bruised and laid as a plaister, disperse knots, nodes, or kernels in the flesh; and if when dry it be taken in wine, it helpeth the strangury: and being anointed with oil, it provoketh sweat. It is a singular food for cattle, to cause them to give store of milk: and why then may it not do the like, being boiled in ordinary drink, for nurses?

COLUMBINES.

THESE are so well known, growing almost in every garden, that I think I may save the expence of time in writing a description of them.

Time.] They flower in May, and abide not for the most part when June is past, perfecting their seed in the mean time.

Government and Virtues.] It is also an herb of Venus. The leaves of columbines are commonly used in lotions with good success for sore mouths and throats. Tragus saith, that a dram of the seed taken in wine, with a little saffron, openeth obstructions of the liver, and is good for the yellow jaundice, if the party after the taking thereof be laid to sweat well in bed. The seed also taken in wine, causeth a speedy delivery of women in childbirth; if one draught suffice not, let her drink the second, and it is effectual: The Spaniards used to eat a piece of the root

thereof in a morning fasting, many days together, to help them when troubled with the stone in the reins or kidneys.

COLTSFOOT.

CALLED also coughwort, foal's-foot, horse-hoof, and bull's-foot.

Descript.] This shooteth up a tender stalk, with small yellowish flowers somewhat earlier, which fall away quickly, and after they are past, come up somewhat round leaves, sometimes dented about the edges, much lesser, thicker, and greener than those of butter-bur, with a little down or frize over the green leaf on the upper side, which may be rubbed away, and whitish or mealy underneath. The root is small and white, spreading much under ground, so that where it taketh it will hardly be driven away again, if any little piece be abiding therein; and from thence spring fresh leaves.

Place.] It groweth as well in wet grounds as in drier places.

Time.] It flowereth in the end of February, the leaves begin to appear in March.

Government and Virtues.] The plant is under Venus, the fresh leaves or juice, or a syrup thereof is good for a hot, dry cough, or wheezing, and shortness of breath. The dry leaves are best for those that have thin rheums and distillations upon their lungs, causing a cough, for which also the dried leaves taken as tobacco, or the root is very good. The distilled water hereof simply, or with elder flowers and night-shade, is a singularly good remedy against all hot agues to drink two ounces at a time, and apply cloths wet therein to the head and stomach, which also does much good, being applied to any hot swellings and inflammations: It helpeth St. Anthony's fire, and burnings, and is singularly good to take away wheals and small pushes that arise through heat; as also the burning heat of the piles, or privy parts, cloths wet therein being thereunto applied.

COMFREY.

Descript.] **T**HE common great comfrey hath divers very large hairy green leaves lying on the ground, so hairy or prickly, that if they touch any tender parts of the hands, face, or body, it will cause it to itch; the stalk that riseth from among them, being two or three feet high, hollowed and cornered, is very hairy also, having many such like leaves as grow below, but lesser and lesser up to the top: At the joints of the stalks it is divided into many branches, with some leaves thereon, and at the end stand many flowers in order one above another, which are somewhat long and hollow like the finger of a glove, of a pale whitish colour, after which come small black seeds. The roots are great and long, spreading great thick branches under ground, black on the outside, and whitish within, short and easy to break, and full of glutinous or clammy juice, of little or no taste at all.

There is another sort in all things like this, only somewhat less, and beareth flowers of a pale purple colour.

Place.] They grow by ditches and water-sides, and in divers fields that are moist, for therein they chiefly delight to grow. The first generally through all the land, and the other but in some places. By the leave of my authors, I know the first grows in dry places.

Time.] They flower in June or July, and give their seed in August.

Government and Virtues.] This is an herb of Saturn, and I suppose under the sign Capricorn, cold, dry, and earthy in quality. What was spoken of clown's woundwort may be said of this. The great comfrey helpeth those that spit blood, or make a bloody urine. The root boiled in water or wine and the decoction drank, helps all inward hurts, bruises, wounds, and ulcers of the lungs, and causeth the phlegm that oppreseth them to be easily spit forth: It helpeth the defluction of rheum from the head upon the lungs, the fluxes of blood or humours by the

belly, women's immoderate courses, as well the reds as the whites, and the running of the reins, happening by what cause soever. A syrup made thereof is very effectual for all those inward griefs and hurts, and the distilled water for the same purposes also, and for outward wounds and sores in the fleshy or sinewy part of the body whatsoever, as also to take away the fits of agues, and to allay the sharpness of humours. A decoction of the leaves hereof is available to all the purposes, though not so effectual as the roots. The roots being outwardly applied, help fresh wounds or cuts immediately, being bruised and laid thereto: and is special good for ruptures and broken bones; yea, it is said to be so powerful to consolidate and knit together, that if they be boiled with dissevered pieces of flesh in a pot, it will join them together again. It is good to be applied to women's breasts that grow sore by the abundance of milk coming into them; also, to repress the overmuch bleeding of the hæmorrhoids, to cool the inflammation of the parts thereabouts, and to give ease of pains. The roots of comfrey taken fresh, beaten small, and spread upon leather, and laid upon any place troubled with the gout, doth presently give ease of the pains; and applied in the same manner, giveth ease to pained joints, and profiteth very much for running and moist ulcers, gangrenes, mortifications, and the like, for which it hath by often experience been found helpful.

CORALWORT.

IT is also called by some, toothwort, tooth violet, dog-teeth violet, and dentaria.

Descript.] Of the many sorts of this herb two of them may be found growing in this nation; the first of which shooteth forth one or two winged leaves, upon long brownish foot-stalks, which are doubled down at their first coming out of the ground; when they are fully opened they consist of seven leaves, most commonly of a sad green colour, dented about the edges, set on

both sides the middle rib one against another, as the leaves of the ash-tree; the stalk beareth no leaves on the lower half of it; the upper half beareth sometimes three or four, each consisting of five leaves, sometimes of three; on the top stand four or five flowers upon short footstalks, with long husks; the flowers are very like the flowers of stockgilliflowers, of a pale purplish colour, consisting of four leaves a piece, after which come small pods, which contain the seed; the root is very smooth, white and shining; it doth not grow downwards, but creeping along under the upper crust of the ground, and consisteth of divers small round knobs set together; towards the top of the stalks there grow some single leaves, by each of which cometh a small cloven bulb, which when it is ripe, if it be set in the ground it will grow to be a root.

As for the other coralwort, which groweth in this nation, it is more scarce than this, being a very small plant, much like crow-foot, therefore some think it to be one of the sorts of crowfoot; I know not where to direct you to it, therefore I shall forbear the description.

Place.] The first groweth in Mayfield in Sussex, in a wood called Highread, and in another wood there also, called Fox-holes.

Time.] They flower from the latter end of April to the middle of May, and before the middle of July they are gone, and not to be found.

Government and Virtues.] It is under the dominion of the Moon. It cleanseth the bladder, and provoketh urine, expels gravel, and the stone; it easeth pains in the sides and bowels, is excellent good for inward wounds, especially such as are made in the breast or lungs, by taking a dram of the powder of the root every morning in wine; the same is excellent good for ruptures, as also to stop fluxes; an ointment made of it is excellent good for wounds and ulcers, for it soon dries up the watery humours which hinder the cure.

COSTMARY, or ALCOST, or BALSAM HERB.

THIS is so frequently known to be an inhabitant in almost every garden, that I suppose it needless to write a description thereof.

Time.] It flowereth in June and July.

Government and Virtues.] It is under the dominion of Jupiter. The ordinary costmary, as well as maudlin, provoketh urine abundantly, and moisteneth the hardness of the mother; it gently purgeth choler and phlegm, extenuating that which is gross, and cutting that which is tough and glutinous, cleanseth that which is foul, and hindereth putrefaction and corruption; it dissolveth without attraction, openeth obstructions, and helpeth their evil effects, and it is a wonderful help to all sorts of dry agues. It is astringent to the stomach, and strengtheneth the liver, and all the other inward parts; and taken in whey worketh more effectually. Taken fasting in the morning, it is very profitable for pains in the head that are continual, and to stay, dry up, and consume all thin rheums or distillations from the head into the stomach, and helpeth much to digest raw humours that are gathered therein. It is very profitable for those that are fallen into a continual evil disposition of the whole body, called cachexia, but especially in the beginning of the disease. It is an especial friend and help to evil, weak and cold livers. The seed is familiarly given to children for the worms, and so is the infusion of the flowers in white wine given them to the quantity of two ounces at a time; it maketh an excellent salve to cleanse and heal old ulcers, being boiled with oil of olive, and adder's tongue with it, and after it is strained, put a little wax, rosin, and turpentine, to bring it to a convenient body.

CUDWEED, or COTTONWEED.

BESIDES cudweed and cotton-weed, it is also called chaff-weed, dwarf cotton, and petty cotton.

Descript.] The common cudweed riseth up with one stalk sometimes, and sometimes with two or three, thick set on all sides with small, long and narrow whitish or woody leaves, from the middle of the stalk almost up to the top; with every leaf standeth a small flower of a dun or brownish yellow colour, or not so yellow as others; in which herbs, after the flowers are fallen, come small seed wrapped up, with the down therein, and is carried away with the wind; the root is small and thready.

There are other sorts hereof, which are somewhat lesser than the former, not much different, save only that the stalks and leaves are shorter, so the flowers are paler and more open.

Place.] They grow in dry, barren, sandy and gravelly grounds, in most places of this land.

Time.] They flower about July, some earlier, some later, and their seed is ripe in August.

Government and Virtues.] Venus is lady of it. The plants are all astringent, binding, or drying, and therefore profitable for defluations of rheum from the head, and to stay fluxes of blood wheresoever, the decoction being made into red wine and drank, or the powder taken therein. It also helpeth the bloody-flux, and easeth the torments that come thereby, stayeth the immoderate courses of women, and is also good for inward or outward wounds, hurts, and bruises, and helpeth children both of burstings and the worms, and being either drank or injected, for the disease called tenesmus, which is an often provokation to stool without doing any thing. The green leaves bruised, and laid to any green wound, stayeth the bleeding and healeth it up quickly. The juice of the herb taken in wine and milk, is, as Pliny saith, a sovereign remedy against the mumps and quinsy; and further saith, That whosoever shall so take it, shall never be troubled with that disease again.

COWSLIPS, or PEAGLES.

BOTH the wild and garden cowslips are so well known, that

I will neither trouble myself nor the reader with a description of them.

Time.] They flower in April and May.

Government and Virtues.] Venus lays claim to this herb as her own, and it is under the sign Aries, and our city dames know well enough the ointment or distilled water of it adds beauty, or at least restores it when it is lost. The flowers are held to be more effectual than the leaves, and the roots of little use. An ointment being made with them, taketh away spots and wrinkles of the skin, sun-burning, and freckles, and adds beauty exceedingly; they remedy all infirmities of the head coming of heat and wind, as vertigo, ephialties, false apparitions, phrensies, falling-sickness, palsies, convulsions, cramps, pains in the nerves, the roots ease pains in the back and bladder, and open the passages of urine. The leaves are good in wounds, and the flowers take away trembling. If the flowers be not well dried, and kept in a warm place, they will soon putrefy and look green: Have a special eye over them. If you let them see the sun once a month, it will do neither the sun nor them harm.

Because they strengthen the brain and nerves, and remedy palsies, the Greeks gave them the name paralysis: The flowers preserved or conserved, and the quantity of a nutmeg eaten every morning, is a sufficient dose for inward diseases; but for wounds spots, wrinkles, and sun-burnings, an ointment is made of the leaves and hog's grease.

CRABS CLAWS.

CALLED also water seagreen, knight's pond water, water house-leek, pond weed, and fresh-water soldier.

Descript.] It hath sundry long narrow leaves, with sharp prickles on the edges of them, also very sharp pointed; the stalks which bear flowers, seldom grow so high as the leaves,

bearing a forked head, like a crab's claw, out of which comes a white flower, consisting of three leaves, with divers yellowish hairy threads in the middle; it taketh root in the mud in the bottom of the water.

Place.] It groweth plentifully in the fens in Lincolnshire.

Time.] It flowereth in June, and usually from thence till August.

Government and Virtues.] 'Tis a plant under the dominion of Venus, and therefore a great strengthener of the reins: it is excellent good in that inflammation which is commonly called St. Anthony's fire; it assuageth all inflammations, and swellings in wounds; and an ointment made of it, is excellent good to heal them; there is scarce a better remedy growing than this is, for such as have bruised their kidneys, and upon that account pissing blood; a dram of the powder of the herb taken every morning, is a very good remedy to stop the terms.

BLACK CRESSES.

Descript.] **I**T hath long leaves, deeply cut and jagged on both sides, not much unlike wild mustard; the stalk small, very limber, though very tough; you may twist them round as you may a willow before they break. The stones are very small and yellow, after which come small pods, which contain the seed.

Place.] It is a common herb, grows usually by the wayside, and sometimes upon mud walls about London, but it delights to grow most among stones and rubbish.

Time.] It flowers in June and July, and the seed is ripe in August and September.

Government and Virtues.] It is a plant of a hot and biting nature, under the dominion of Mars. The seed of black cresses strengthens the brain exceedingly, being, in performing that office, little inferior to mustard-seed, if at all; they are excellent good to stop those rheums which may fall down from the head upon the lungs; you may beat the seed into powder, if you

please, and make it up into an electuary with honey; so you have an excellent remedy by you, not only for the premises, but also for the cough, yellow jaundice, and the sciatica. The herb boiled into a poultice, is an excellent remedy for inflammations, both in women's breasts, and men's testicles.

SCIATICA CRESSES.

Descript.] THESE are of two kinds: The first riseth up with a round stalk about two feet high, spread into divers branches, whose lower leaves are somewhat larger than the upper, yet all of them cut or torn on the edges, somewhat like garden cresses, but smaller, the flowers are small and white, growing at the tops of branches, where afterwards grow husks with small brownish seeds therein, very strong and sharp in taste, more than the cresses of the garden; the root is long, white, and woody.

The other hath the lower leaves whole, somewhat long and broad, not torn at all, but only somewhat deeply dented about the edges towards the ends; but those that grow up higher are lesser. The flowers and seeds are like the former, and so is the root likewise, and both root and seeds as sharp as it.

Place.] They grow in the way-sides in untilled places, and by the sides of old walls.

Time.] They flower in the end of June, and their seed is ripe in July.

Government and Virtues.] It is a Saturnine plant. The leaves, but especially the root, taken fresh in summer time, beaten or made into a poultice or salve with old hog's grease, and applied to the places pained with the sciatica, to continue thereon four hours if it be on a man, and two hours on a woman; the place afterwards bathed with wine and oil mixed together, and then wrapped with wool or skins, after they have sweat a little, will assuredly cure not only the same disease in hips, huckle-bone, or other of the joints, as gout in the hands or feet, but all other old

Wart Cress

Sciatica Cress

Cress Wort

griefs of the head, (as inveterate rheums) and other parts of the body that are hard to be cured. And if of the former griefs any parts remain, the same medicine after twenty days, is to be applied again. The same is also effectual in the diseases of the spleen: and applied to the skin, taketh away the blemishes thereof, whether they be scars, leprosy, scabs, or scurf, which although it ulcerate the part, yet that is to be helped afterwards with a salve made of oil and wax. Esteem this as another secret.

WATER CRESSES.

Descript.] OUR ordinary water cresses spread forth with many weak, hollow, sappy stalks, shooting out fibres at the joints, and upwards long winged leaves made of sundry broad sappy almost round leaves, of a brownish colour. The flowers are many and white, standing on long foot-stalks, after which come small yellow seeds, contained in small long pods like horns. The whole plant abideth green in the winter, and tasteth somewhat hot and sharp.

Place.] They grow for the most part, in small standing waters, yet sometimes in small rivulets of running water.

Time.] They flower and seed in the beginning of summer.

Government and Virtues.] It is an herb under the dominion of the Moon. They are more powerful against the scurvy, and to cleanse the blood and humours, than brooklime is, and serve in all the other uses in which brooklime is available, as to break the stone, and provoke urine and women's courses. The decoction thereof cleanseth ulcers, by washing them therewith. The leaves bruised, or the juice, is good to be applied to the face or other parts troubled with freckles, pimples, spots, or the like, at night, and washed away in the morning. The juice mixed with vinegar, and the fore part of the head bathed therewith, is very good for those that are dull and drowsy, or have the lethargy.

Water-cress pottage is a good remedy to cleanse the blood in the spring, and help head-achs, and consume the gross humours

winter hath left behind; those that would live in health, may use it if they please; if they will not, I cannot help it. If any fancy not pottage, they may eat the herb as a salad.

CROSSWORT.

Descript.] **C**OMMON crosswort groweth up with square hairy brown stalks a little above a foot high, having four small broad, and pointed, hairy, yet smooth thin leaves, growing at every joint, each against other one way, which has caused the name. Towards the tops of the stalks at the joints, with the leaves in three or four rows downwards; stand small, pale yellow flowers, after which come small blackish round seeds, four for the most part, set in every husk. The root is very small, and full of fibres, or threads, taking good hold of the ground, and spreading with the branches a great deal of ground, which perish not in winter, although the leaves die every year, and spring again anew.

Place.] It groweth in many moist grounds, as well in meadows as untilled places, about London, in Hampstead churchyard, at Wye in Kent, and sundry other places.

Time.] It flowers from May all the summer long, in one place or other, as they are more open to the sun: the seed ripeneth soon after.

Government and Virtues.] It is under the dominion of Saturn. This is a singular good wound herb, and is used inwardly, not only to stay bleeding of wounds, but to consolidate them, as it doth outwardly any green wound, which it quickly soldereth up, and healeth. The decoction of the herb in wine, helpeth to expectorate the phlegm out of the chest, and is good for obstructions in the breast, stomach or bowels, and helpeth a decayed appetite. It is also good to wash any wounds or sore with, to cleanse and heal it. The herb bruised, and then boiled, applied outwardly, for certain days together, renewing it often; and in the mean time the decoction of the herb in wine, taken in-

Crowfoot.

Cuckow Flower

Cudweed

wardly every day, doth certainly cure the rupture in any, so as it be not too inveterate; but very speedily, if it be fresh and lately taken.

CROWFOOT.

MANY are the names this furious biting herb hath obtained, almost enough to make up a Welchman's pedigree, if he fetch no farther than John of Gaunt, or William the Conqueror; for it is called frog's-foot, from the Greek name Barrakion: crow-foot, gold knobs, gold cups, king's knob, baffiners, troilflowers, polts, locket goulions, and butterflowers.

So abundant are the sorts of this herb, that to describe them all, would tire the patience of Socrates himself, but because I have not yet attained to the spirits of Socrates, I shall but describe the most usual.

Descript.] The most common crowfoot hath many thin green leaves, cut into divers parts, in taste biting and sharp, biting and blistering the tongue; it bears many flowers, and those of a bright, resplendent, yellow colour. I do not remember, that I ever saw any thing yellower. Virgins, in ancient time, used to make powder of them to furrow bride beds; after which flowers come small heads, some spiked and rugged like a pineapple.

Place.] They grow very common every where; unless you turn your head into an hedge, you cannot but see them as you walk.

Time.] They flower in May and June, even till September.

Government and Virtues.] This fiery and hot-spirited herb of Mars is no ways fit to be given inwardly, but an ointment of the leaves or flowers will draw a blister, and may be so fitly applied to the nape of the neck to draw back rheum from the eyes. The herb being bruised and mixed with a little mustard, draws a blister as well, and as perfectly as cantharides, and with far less danger to the vessels of urine, which cantharides naturally delight to wrong; I knew the herb once applied to a pestilential

rising that was fallen down, and it saved life even beyond hope; it were good to keep an ointment and plaister of it, if it were but for that.

CUCKOW-PINT OR ARUM.

IT is called alron, janus, barba-arum, calf's-foot, ramp, starch-wort, cuckow-pintle, priest's-pintle, and wake-robin.

Descript.] This shooteth forth three, four, or five leaves at the most, from one root, every one whereof is somewhat large and long, broad at the bottom next the stalk, and forked, but ending in a point, without a cut on the edge, of a full green colour, each standing upon a thick round stalk, of a hand-breadth long, or more, among which, after two or three months that they begin to wither, riseth up a bare, round, whitish green stalk, spotted and streaked with purple, somewhat higher than the leaves: At the top whereof standeth a long hollow husk, close at the bottom, but open from the middle upwards, ending in a point; in the middle whereof stand the small long pestle or clapper, smaller at the bottom than at the top, of a dark purple colour, as the husk is on the inside, though green without; which, after it hath so abided for some time, the husk with the clapper decayeth, and the foot or bottom thereof groweth to be a small long bunch of berries, green at the first and of a yellowish red colour when they are ripe, of the bigness of a hazel nut kernel, which abideth thereon almost until winter; the root is round, and somewhat long, for the most part lying along, the leaves shooting forth at the largest end, which, when it beareth its berries, are somewhat wrinkled and loose, another growing under it, which is solid and firm, with many small threads hanging thereat. The whole plant is of a very sharp bitter taste, pricking the tongue as nettles do the hands, and so abideth for a great while without alteration. The root thereof was anciently used instead of starch to starch linen with.

There is another sort of cuckow-pint, with lesser leaves than the former, and sometimes harder, having blackish spots upon

them, which for the most part abide longer green in summer than the former, and both leaves and roots are more sharp and fierce than it: In all things else it is like the former.

Place.] These two sorts grow frequently almost under every hedge-side in many places of this land.

Time.] They shoot forth leaves in the spring, and continue but until the middle of summer, or somewhat later; their husks appearing before they fall away, and their fruit shewing in April.

Government and Virtues.] It is under the dominion of Mars. Tragus reporteth, that a dram weight, or more, if need be, of the spotted wake robin, either fresh and green, or dried, being eaten or taken, is a present and sure remedy for poison, and the plague. The juice of the herb taken to the quantity of a spoonful hath the same effect. But if there be a little vinegar added thereto, as well as to the root aforesaid, it somewhat allayeth the sharp biting taste thereof upon the tongue. The green leaves bruised, and laid upon any boil, plague, or sore, doth wonderfully help to draw forth the poison: A dram of the powder of the dried root, taken with twice so much sugar, in the form of a licking electuary, or the green root, doth wonderfully help those that are purfy and shortwinded, as also those that have a cough; it breaketh, digesteth, and riddeth away phlegm from the stomach, chest, and lungs. The milk wherein the root hath been boiled is effectual also for the same purpose. The said powder taken in wine or other drink, or the juice of the berries, or the powder of them, or the wine wherein they have been boiled, provoketh urine, and bringeth down women's courses, and purgeth them effectually after child-bearing, to bring away the afterbirth. Taken with sheep's milk, it healeth the inward ulcers of the bowels. The distilled water thereof is effectual to all the purposes aforesaid. A spoonful taken at a time healeth the itch; and an ounce or more taken at a time for some days together doth help the rupture: The leaves, either green or dry, or the juice of them, doth cleanse all manner of rotten and filthy ulcers, in what part of the body soever; and healeth the stinking sores in the

nose, called polypus. The water wherein the root hath been boiled, dropped into the eyes, cleanseth them from any film or skin, cloud or mists, which begin to hinder the sight, and helpeth the watering and redness of them, or when, by some chance, they become black and blue. The root mixed with bean flour, and applied to the throat or jaws that are inflamed, helpeth them. The juice of the berries boiled in oil of roses, or beaten into powder mixed with the oil, and dropped into the ears, easeth pains in them. The berries, or the roots beaten with hot ox-dung, and applied, easeth the pains of the gout. The leaves and roots boiled in wine with a little oil, and applied to the piles, or the falling down of the fundament, easeth them, and so doth sitting over the hot fumes thereof. The fresh roots bruised and distilled with a little milk, yieldeth a most sovereign water to cleanse the skin from scurf, freckles, spots, or blemishes what soever therein.

Authors have left large commendations of this herb you see, but for my part, I have neither spoken with Dr. Reason nor Dr. Experience about it.

CUCUMBERS.

Government and Virtues.] **T**HERE is no dispute to be made, but that they are under the dominion of the Moon, though they are so much cried out against for their coldness, and if they were but one degree colder they would be poison. The best of Galenists hold them to be cold and moist in the second degree, and then not so hot as either lettuces or purslain: They are excellent good for a hot stomach, and hot liver; the unmeasurable use of them fills the body full of raw humours, and so indeed the unmeasurable use of any thing else doth harm. The face being washed with their juice, cleanseth the skin, and is excellent good for hot rheums in the eyes; the seed is excellent good to provoke urine and cleanseth the passages thereof when they are stopped; there is not a better remedy for ulcers in the

bladder growing, than cucumbers are. The usual course is, to use the seeds in emulsions, as they make almond milk; but a far better way (in my opinion) is this; When the season of the year is, take the cucumbers and bruise them well, and distil the water from them, and let such as are troubled with ulcers in the bladder drink no other drink. The face being washed with the same water, cureth the reddest face that is; it is also excellent good for sun-burning, freckles, and morphew.

DAISIES.

THESE are so well known almost to every child, that I suppose it needless to write any description of them. Take therefore the virtues of them as followeth.

Government and Virtues.] The herb is under the sign Cancer, and under the dominion of Venus, and therefore excellent good for wounds in the breast, and very fitting to be kept both in oils, ointments, and plaisters, as also in syrup. The greater wild daisy is a wound herb of good respect, often used in those drinks or salves that are for wounds, either inward or outward. The juice or distilled water of these, or the small daisy, doth much temper the heat of choler, and refresh the liver, and other inward parts. A decoction made of them, and drank, helpeth to cure the wounds made in the hollowness of the breast. The same also cureth all ulcers and pustules in the mouth or tongue, or in the secret parts. The leaves bruised and applied to the cods, or to any other parts that are swoln and hot, doth dissolve it, and temper the heat. A decoction made thereof, of wallwort and agrimony, and the places fomented or bathed therewith warm, giveth great ease to them that are troubled with the palsy, sciatica, or the gout. The same also disperseth and dissolveth the knots or kernels that grow in the flesh of any part of the body, and bruises and hurts that come of falls and blows; they are also used for ruptures, and other inward burnings, with very good success. An ointment made thereof doth wonderfully help all wounds that have inflammations about them, or by reason of

moist humours having access unto them, are kept long from healing, and such are those, for the most part, that happen to joints of the arms or legs. The juice of them dropped into the running eyes of any, doth much help them.

DANDELION, vulgarly called PISS-A-BEDS.

Descript.] **I**T is well known to have many long and deep gashed leaves, lying on the ground round about the head of the roots: the ends of each gash or jag, on both sides looking downwards towards the roots; the middle rib being white, which being broken yieldeth abundance of bitter milk, but the root much more; from among the leaves, which always abide green, arise many slender, weak, naked foot-stalks, every one of them bearing at the top one large yellow flower, consisting of many rows of yellow leaves, broad at the points, and nicked in with deep spots of yellow in the middle; which growing ripe, the green husk wherein the flowers stood turns itself down to the stalk, and the head of down becomes as round as a ball; with long reddish seed underneath, bearing a part of the down on the head of every one, which together is blown away with the wind, or may be at once blown away with one's mouth. The root growing downwards exceeding deep, which being broken off within the ground, will yet shoot forth again, and will hardly be destroyed where it hath once taken deep root in the ground.

Place.] It groweth frequently in all meadows and pasture-grounds.

Time.] It flowereth in one place or other almost all the year long.

Government and Virtues.] It is under the dominion of Jupiter. It is of an opening and cleansing quality, and therefore very effectual for the obstructions of the liver, gall, and spleen, and the diseases that arise from them, as the jaundice, and hypochondriac; it openeth the passages of the urine both in young and old: powerfully cleanseth imposthumes and inward ulcers in the uri-

nary passages, and by its drying and temperate quality doth afterwards heal them; for which purpose the decoction of the roots or leaves in white wine, or the leaves chopped as pot herbs, with a few alisanders, and boiled in their broth, are very effectual. And whoever is drawing towards a consumption, or an evil disposition of the whole body, called cachexia, by the use hereof for some time together, shall find a wonderful help. It helpeth also to procure rest and sleep to bodies distempered by the heat of ague fits, or otherwise: The distilled water is effectual to drink in pestilential fevers, and to wash the sores.

You see here what virtues this common herb hath, and that is the reason the French and Dutch so often eat them in the spring: and now, if you look a little farther, you may see plainly, without a pair of spectacles, that foreign physicians are not so selfish as ours are, but more communicative of the virtues of plants to people.

DARNEL.

IT is called jum and wray; in Sussex they call it cropit, being a pestilent enemy among corn.

Descript.] This hath, all the winter long, sundry long, flat, and rough leaves, which, when the stalk riseth, which is slender and jointed, are narrower, but rough still; on the top groweth a long spike, composed of many heads set one above another, containing two or three husks, with sharp but short beards or awns at the end; the seed is easily shaken out of the ear, the husk itself being somewhat rough.

Place.] The country husbandmen do know this too well to grow among their corn, or in the borders and pathways of the other fields that are fallow.

Government and Virtues.] It is a malicious part of sullen Saturn. As it is not without some vices, so hath it also many virtues. The meal of darnel is very good to stay gangrenes, and other such like fretting and eating cankers, and putrid sores: It also cleanseth the skin of all leprosies, morphews, ringworms,

and the like, if it be used with salt and reddish roots. And being used with quick brimstone and vinegar, it dissolveth knots and kernels, and breaketh those that are hard to be dissolved, being boiled in wine with pigeon's dung and linseed: A decoction thereof made with water and honey, and the places bathed therewith, is profitable for the sciatica. Darnel meal applied in a poultice draweth forth splinters and broken bones in the flesh: The red darnel, boiled in red wine and taken, stayeth the lask and all other fluxes, and women's bloody issues; and restraineth urine that passeth away too suddenly.

DILL.

Descript.] **T**HE common dill groweth up with seldom more than one stalk, neither so high, nor so great usually as fennel, being round and fewer joints thereon, whose leaves are sadder, and somewhat long, and so like fennel that it deceiveth many, but harder in handling, and somewhat thicker, and of a stronger unpleasant scent: The tops of the stalks have four branches and smaller umbels of yellow flowers, which turn into small seed, somewhat flatter and thinner than fennel seed. The root is somewhat small and woody, perishing every year after it hath borne seed; and is also unprofitable, being never put to any use.

Place.] It is most usually sown in gardens and grounds for the purpose, and is also found wild in many places.

Government and Virtues.] Mercury hath the dominion of this plant, and therefore to be sure it strengthens the brain. The dill being boiled and drank, is good to ease swellings and pains; it also stayeth the belly and stomach from casting. The decoction thereof helpeth women that are troubled with the pains and windiness of the mother, if they sit therein. It stayeth the hiccough, being boiled in wine, and but smelled unto, being tied in a cloth. The seed is of more use than the leaves, and more effectual to digest raw and viscous humours, and is used in medicines that serve to expel the pains and wind, proceeding therefrom. The

seed being roasted or fried, and used in oils or plaisters, dissolves the imposthumes in the fundament; and drieth up all moist ulcers, especially in the fundament; an oil made of dill is effectual to warm or dissolve humours and imposthumes, to ease pains, and to procure rest. The decoction of dill, be it herb or seed (only if you boil the seed you must bruise it) in white wine, being drank, it is a gallant expeller of wind, and provoker of the terms.

DEVIL'S BIT.

Descript.] **T**HIS riseth up with a round, green, smooth stalk, about two feet high, set with divers long and somewhat narrow, smooth, dark green leaves, somewhat nipped about the edges, for the most part, being else all whole, and not divided at all, or but very seldom, even to the tops of the branches, which yet are smaller than those below, with one rib only in the middle. At the end of each branch standeth a round head of many flowers set together in the same manner, or more neatly than scabious, and of a more blueish purple colour, which being past there followeth seed that falleth away. The root is somewhat thick, but short and blackish, with many strings, abiding after seed time many years. This root was longer, until the devil (as the friars say) bit away the rest of it for spite, envying its usefulness to mankind; for sure he was not troubled with any disease for which it is proper.

There are two other sorts hereof, in nothing unlike the former, save that the one beareth white, and the other blush-coloured flowers.

Place.] The first groweth as well in dry meadows and fields as moist, in many places of this land: But the other two are more rare, and hard to be met with, yet they are both found growing wild about Appledore, near Rye in Kent.

Time.] They flower not usually until August.

Government and Virtues.] The plant is venereal, pleasing, and

harmless. The herb or the root (all that the devil hath left of it) being boiled in wine, and drank, is very powerful against the plague, and all pestilential diseases or fevers, poisons also, and the bitings of venomous beasts: It helpeth also those that are inwardly bruised by any casualty, or outwardly by falls or blows, dissolving the clotted blood; and the herb or root beaten and outwardly applied, taketh away the black and blue marks that remain in the skin. The decoction of the herb, with honey of roses put therein, is very effectual to help the inveterate tumours and swellings of the almonds and throat, by often gargling the mouth therewith. It helpeth also to procure women's courses, and easeth all pains of the mother, and to break and discuss wind therein, and in the bowels. The powder of the root taken in drink, driveth forth the worms in the body. The juice, or distilled water of the herb, is effectual for green wounds or old sores, and cleanseth the body inwardly, and the seed outwardly, from sores, scurf, itch, pimples, freckles, morpew, or other deformities thereof, especially if a little vitriol be dissolved therein.

DOCK.

MANY kinds of these are so well known, that I shall not trouble you with a description of them: My book grows big too fast.

Government and Virtues.] All docks are under Jupiter, of which the red dock, which is commonly called blood-wort, cleanseth the blood, and strengthens the liver; but the yellow dock-root is best to be taken when either the blood or liver is affected by choler. All of them have a kind of cooling (but not all alike) drying quality, the sorrel being most cold, and the bloodworts most drying. Of the burdock, I have spoken already by itself. The seed of most of the other kinds whether the gardens or fields, do stay lasks and fluxes of all sorts, the loathing of the stomach through choler, and is helpful for those that spit blood. The roots boiled in vinegar helpeth the itch, scabs, and breaking out of the skin, if it be bathed therewith. The distilled water of

Rue

Pimpernel

Dodder

the herb and roots have the same virtue, and cleanseth the skin from freckles, morpew, and all other spots and discolouring therein.

All docks being boiled with meat, make it boil the sooner; besides, blood-wort is exceedingly strengthening to the liver, and procures good blood, being as wholesome a pot-herb as any growing in a garden; yet such is the nicety of our times, forsooth, that women will not put it into a pot because it makes the pottage black; pride and ignorance (a couple of monsters in the creation) preferring nicety before health.

DODDER OF THYME, EPITHYUM, AND OTHER DODDERS.

Descript.] **T**HIS first from seed giveth roots in the ground, which shooteth forth threads or strings, grosser or finer, as the property of the plant wherein it groweth, and the climate doth suffer, creeping and spreading on that plant whereon it fasteneth, be it high or low. The strings have no leaves at all upon them, but wind and interlace themselves, so thick upon a small plant, that it taketh away all comfort of the sun from it; and is ready to choak or strangle it. After these strings are risen up to that height, that they may draw nourishment from that plant, they seem to be broken off from the ground either by the strength of their rising, or withered by the heat of the sun. Upon these strings are found clusters of small heads or husks, out of which shoot forth whitish flowers, which afterwards give small pale white coloured seed, somewhat flat, and twice as big as poppy-seed. It generally participates of the nature of the plant which it climbeth upon; but the dodder of thyme is accounted the best, and is the only true epithymum.

Government and Virtues.] All dodders are under Saturn. Tell not me of physicians crying epithymum, or that dodder which grows upon thyme, (most of which comes from Hemetius in Greece, or Hybla in Sicily, because those mountains abound

with thyme) he is a physician indeed, that hath wit enough to choose his dodder according to the nature of the disease and humour peccant. We confess, thyme is the hottest herb it usually grows upon; and therefore that which grows upon thyme is hotter than that which grows upon colder herbs; for it draws nourishment from what it grows upon, as well as from the earth where its root is, and thus you see old Saturn is wise enough to have two strings to his bow. This is accounted the most effectual for melancholy diseases, and to purge black or burnt choler, which is the cause of many diseases of the head and brain, as also for the trembling of the heart, faintings and swoonings. It is helpful in all diseases and griefs of the spleen, and melancholy that arise from the windiness of the hypochondria. It purgeth also the reins or kidneys by urine; it openeth obstructions of the gall, whereby it profiteth them that have the jaundice: as also the leaves the spleen: purging the veins of the cholerick and phlegmatic humours, and helpeth children, in agues, a little worm seed being put thereto.

The other dodders do, as I said before, participate of the nature of those plants whereon they grow; as that which hath been found growing on nettles in the west country, hath by experience been found very effectual to procure plenty of urine where it hath been stopped or hindered. And so of the rest.

Sympathy and antipathy are two hinges upon which the whole model of physic turns: and that physician which minds them not, is like a door off from the hooks, more like to do a man mischief, than to secure him. Then all the diseases Saturn causeth, this helps by sympathy, and strengthens all the parts of the body he rules: such as be caused by Sol, it helps by antipathy. What these diseases are, see my judgment of diseases by astrology: and if you be pleased to look for the herb wormwood, you shall find a rational way for it.

DOG'S GRASS, OR COUCH GRASS.

Descript] **I**T is well known that this grass creepeth far about

under ground, with long white jointed roots, and small fibres almost at every joint, very sweet in taste, as the rest of the herb is, and interlacing one another, from whence shoot forth many fair grassy leaves, small at the ends, and cutting or sharp on the edges. The stalks are jointed like corn, with the like leaves on them, and a large spiked head, with a long husk in them, and hard rough seed in them. If you know it not by this description, watch the dogs when they are sick, and they will quickly lead you to it.

Place.] It groweth commonly through this land in divers ploughed grounds, to the no small trouble of the husbandmen, as also of the gardener, in gardens, to weed it out, if they can; for it is a constant customer to the place it gets footing in.

Government and Virtues.] 'Tis under the dominion of Jupiter, and is the most medicinal of all the quick grasses. Being boiled and drank, it openeth obstructions of the liver and gall, and the stopping of urine, and easeth the griping pains of the belly and inflammations; wasteth the matter of the stone, in the bladder, and the ulcers thereof also. The roots bruised and applied, do consolidate wounds. The seed doth more powerfully expel urine, and stayeth the lask and vomiting. The distilled water alone, or with a little worm-seed, killeth the worms in children.

The way of use is to bruise the roots, and having well boiled them in white wine, drink the decoction: 'Tis opening but not purging, very safe: 'Tis a remedy against all diseases coming of stopping, and such are half those that are incident to the body of man; and although a gardener be of another opinion, yet a physician holds half an acre of them to be worth five acres of carrots twice told over.

DOVE'S FOOT, or CRANE'S-BILL.

Descript.] **T**HIS hath divers small, round pale-green leaves, cut in about the edges, much like mallows, standing upou long,

reddish hairy stalks, lying in a round compass upon the ground; among which rise up two or three, or more, reddish jointed, slender, weak, hairy stalks, with such like leaves thereon, but smaller, and more cut in up to the tops, where grow many very small bright red flowers of five leaves a-piece; after which follow small heads, with small short beaks pointed forth, as all other sorts of those herbs do.

Place.] It groweth in pasture grounds, and by the path-sides in many places, and will also be in gardens.

Time.] It flowereth in June, July, and August, some earlier and some later; and the seed is ripe quickly after.

Government and Virtues.] It is a very gentle, though Martial plant. It is found by experience to be singular good for wind cholic, as also to expel the stone and gravel in the kidneys. The decoction thereof in wine, is an excellent good cure for those that have inward wounds, hurts, or bruises, both to stay the bleeding, to dissolve and expel the congealed blood, and to heal the parts, as also to cleanse and heal outward sores, ulcers, and fistulas; and for green wounds, many do only bruise the herb, and apply it to the place, and it healeth them quickly. The same decoction in wine fomented to any place pained with the gout, or to joint-achs, or pains of the sinews, giveth much ease. The powder or decoction of the herb taken for some time together, is found by experience to be singular good for ruptures and burstings in people, either young or old.

DUCK'S MEAT.

THIS is so well known to swim on the tops of standing waters, as ponds, pools, and ditches, that it is needless further to describe it.

Government and Virtues.] Cancer claims the herb, and the Moon will be lady of it; a word is enough to a wise man. It is effectual to help inflammations, and St. Anthony's fire, as also the gout, either applied by itself, or in a poultice with barley meal. The distilled water is highly esteemed by some, against all inward inflammations and pestilent fevers: as also to help the

redness of the eyes, and swelling of the cuds, and of the breasts before they be grown too much. The fresh herb applied to the forehead, easeth the pains of the head-ach coming of heat.

DOWN, or COTTON-THISTLE.

Descript.] **T**HIS hath large leaves lying on the ground, somewhat cut in, and as it were crumbled on the edges, of a green colour on the upper side, but covered with long hairy wool, or cotton down, set with most sharp and cruel pricks, from the middle of whose heads of flowers, thrust forth many purplish crimson threads, and sometimes (although very seldom) white ones. The seed that followeth in the heads, lying in a great deal of white down, is somewhat large, long, and round, like the seed of lady's thistle, but somewhat paler. The root is great and thick, spreading much, yet it usually dieth after seed time.

Place.] It groweth in divers ditches, banks, and in corn-fields and high ways, generally every way throughout the land.

Time.] It flowereth and beareth seed about the end of summer, when other thistles do flower and seed.

Government and Virtues.] Mars owns the plant, and manifests to the world, that though it may hurt your finger, it will help your body; for I fancy it much for the ensuing virtues. Pliny and Dioscorides write, That the leaves and roots thereof taken in drink, help those that have a crick in their neck; whereby they cannot turn their neck but their whole body must turn also (sure they do not mean those that have got a crick in their neck by being under the hangman's hand.) Galen saith, that the root and leaves hereof are of a healing quality, and good for such persons as have their bodies drawn together by some spasm or convulsions, as it is with children that have the rickets, or rather, as the college of physicians will have it, the rachites, for which name of the disease, they have (in a particular treatise lately set forth by them) learnedly disputed and brought forth to public view, that the world may see that they have taken much pains to little purpose.

DRAGONS.

THEY are so well known to all those who plant them in their gardens, they need no description; if not, let them look down to the lower end of the stalks, and see how like a snake they look.

Government and Virtues.] The plant is under the dominion of Mars, and therefore it would be a wonder if it should want some obnoxious quality or other; In all herbs of that quality, the safest way is either to distil the herb in an alembick, in what vehicle you please, or else to press out the juice and distil that in a glass still in sand. It scoureth and cleanseth the internal parts of the body mightily, and it cleareth the external parts also, being externally applied, from freckles, morpew and sun-burning; Your best way to use it externally, is to mix it with vinegar; an ointment of it is held to be good in wounds and ulcers: it consumes cankers, and that flesh growing in the nostrils, which they call polypus: Also the distilled water being dropped into the eyes, taketh away spots there, or the pin and web, and mends the dimness of sight; it is excellent good against pestilence and poison. Pliny and Dioscorides affirm, that no serpent will meddle with him that carries this herb about him.

THE ELDER TREE.

IHOLD it needless to write any description of this, since every boy that plays with a pop-gun will not mistake another tree instead of elder: I shall therefore in this place only, describe the dwarf elder, called also dead-wort and wall-wort.

THE DWARF ELDER.

Descript.] **T**HIS is but an herb, every year dying with his stalks to the ground, and rising fresh every spring, and is like unto the elder both in form and quality, rising up with a square rough hairy stalk, four feet high, or more sometimes. The wing-

ed leaves are somewhat narrower than the elder, but else like them. The flowers are white with a dash of purple, standing in umbels, very like the elder also, but more sweet in scent; after which come small blackish berries, full of juice while they are fresh, wherein is small hard kernels, or seed, the root doth creep under the upper crust of the ground, springing in divers places, being of the bigness of one's finger or thumb sometimes.

Place.] The elder tree groweth in hedges, being planted there to strengthen the fences and partitions of ground, and to hold the banks by ditches and water courses.

The dwarf-elder groweth wild in many places of England, where being once gotten into a ground, it is not easily gotten forth again.

Time.] Most of the elder trees flower in June, and their fruit is ripe for the most part in August. But the dwarf-elder, or wall-wort, flowereth somewhat later, and his fruit is not ripe until September.

Government and Virtues.] Both the elder and dwarf tree are under the dominion of Venus. The first shoots of the common elder boiled like asparagus, and the young leaves and stalks boiled in fat broth, doth mightily carry forth phlegm and choler. The middle or inward bark boiled in water, and given in drink, worketh much more violently; and the berries, either green or dry, expel the same humour, and are often given with good success to help the dropsy; the bark of the root boiled in wine, or the juice thereof drank, worketh the same effects, but more powerfully than either the leaves or fruit. The juice of the root taken, doth mightily procure vomitings, and purgeth the watery humours of the dropsy. The decoction of the root taken, cureth the biting of an adder, and biting of mad dogs. It mollifieth the hardness of the mother, if women sit thereon, and openeth their veins, and bringeth down their courses: The berries boiled in wine performeth the same effect; and the hair of the head washed therewith is made black. The juice of the green leaves applied to the hot inflammations of the eyes, assuageth them; the juice of the leaves snuffed up into the nostrils, purgeth the tu-

nicles of the brain; the juice of the berries boiled with honey, and dropped into the ears, helpeth the pains of them; the decoction of the berries in wine being drank provoketh urine; the distilled water, of the flowers is of much use to clean the skin from sun-burning, freckles, morpew, or the like; and taketh away the head-ach, coming of a cold cause, the head being bathed therewith. The leaves or flowers distilled in the month of May, and the legs often washed with the said distilled water, it taketh away the ulcers and sores of them. The eyes washed therewith, it taketh away the redness and bloodshot; and the hands washed morning and evening therewith, helpeth the palsy, and shaking of them.

The dwarf elder is more powerful than the common elder in opening and purging choler, phlegm, and water; in helping the gout, piles, and women's diseases, coloureth the hair black, helpeth the inflammations of the eyes, and pains in the ears, the biting of serpents, or mad dogs, burnings and scaldings, the wind cholic, cholic and stone, the difficulty of urine, the cure of old sores and fistulous ulcers. Either leaves or bark of elder, stripped upwards as you gather it causeth vomiting. Also Dr. Butler, in a manuscript of his, commends dwarf elder to the sky for dropsies, viz. to drink it, being boiled in white wine: to drink the decoction I mean, not the elder.

THE ELM TREE.

THIS tree is so well known, growing generally in all counties of this land, that it is needless to describe it.

Government and Virtues.] It is a cold and Saturnine plant. The leaves thereof bruised and applied heal green wounds, being bound thereon with its own bark. The leaves of the bark used with vinegar cureth scurf and leprosy very effectually: The decoction of the leaves, bark, or root, being bathed, heals broken bones. The water that is found in the bladders on the leaves, while it is fresh, is very effectual to cleanse the skin, and make it fair: and if cloths be often wet therein, and applied to the ruptures of children, it healeth them, if they be well bound up

with a truss. The said water put into a glass, and set into the ground or else in dung for twenty-five days, the mouth thereof being close stopped, and the bottom set upon a lay of ordinary salt, that the fœces may settle and water become clear, is a singular and sovereign balm for green wounds, being used with soft tents: The decoction of the bark of the root fomented, mollifieth hard tumours, and the shrinking of the sinews. The roots of the elm, boiled for a long time in water, and the fat arising on the top thereof, being clean scummed off, and the place anointed therewith that is grown bald, and the hair fallen away, will quickly restore them again. The said bark ground with brine and pickle, until it come to the form of a poultice, and laid on the place pained with the gout, giveth great ease. The decoction of the bark in water, is excellent to bathe such places as have been burnt with fire.

ENDIVE.

Descript.] COMMON garden endive beareth a longer and larger leaf than succory, and abideth but one year, quickly running up to a stalk and seed, and then perisheth; it hath blue flowers, and the seed of the ordinary endive is so like succory seed, that it is hard to distinguish them.

Government and Virtues.] It is a fine cooling, cleansing, Jovial plant. The decoction of the leaves, or the juice, or the distilled water of endive, serveth well to cool the excessive heat of the liver and stomach, and in the hot fits of agues, and all other inflammations in any part of the body; it cooleth the heat and sharpness of the urine, and excoriations in the urinary parts. The seeds are of the same property, or rather more powerful, and besides are available for fainting, swoonings, and passions of the heart. Outwardly applied, they serve to temper the sharp humours of fretting ulcers, hot tumours, swellings, and pestilential sores; and wonderfully help not only the redness and inflammations of the eyes, but the dimness of the sight also; they are also used to allay the pains of the gout. You cannot use it amiss: a syrup of

it is a fine cooling medicine for fevers. See the end of this book, and the English Dispensatory.

ELECAMPANE.

Descript.] IT shooteth forth many large leaves, long and broad, lying near the ground, small at both ends, somewhat soft in handling, of a whitish-green on the upper side, and grey underneath, each set upon a short foot-stalk, from among which rise up divers great and strong hairy stalks, three or four feet high, with some leaves thereupon, compassing them about at the lower end, and are branched towards the tops, bearing divers great and large flowers, like those of the corn marigold, both the border of the leaves, and the middle thrum being yellow, which turn into down, with long, small, brownish seeds among it, and is carried away with the wind. The root is great and thick, branching forth divers ways, blackish on the outside, and whitish within, of a very bitter taste, and strong but good scent, especially when they are dried, no part else of the plant having any smell.

Place.] It groweth in moist grounds and shadowy places oftener than in the dry and open borders of fields and lanes, and in other waste places, almost in every county of this land.

Time.] It flowereth in the end of June and July, and the seed is ripe in August. The roots are gathered for use, as well in the spring before the leaves come forth, as in autumn or winter.

Government and Virtues.] It is a plant under the dominion of Mercury. The fresh roots of elecampane preserved with sugar, or made into a syrup or conserve, are very effectual to warm a cold windy stomach, or the prickling therein, and stitches in the sides caused by the spleen; and to help the cough, shortness of breath, and wheezing in the lungs. The dried root made into powder, and mixed with sugar, and taken, serveth to

Dyer's Weed

Eryngo

Eye - Bright

the same purpose, and is also profitable for those who have their urine stopped; or the stopping of women's courses, the pains of the mother, and of the stone in the reins, kidneys or bladder; it resisteth poison, and stayeth the spreading of the venom of serpents, as also putrid and pestilential fevers, and the plague itself. The roots and herbs beaten and put into new ale or beer, and daily drank, cleareth, strengtheneth, and quickeneth the sight of the eyes wonderfully. The decoction of the roots in wine, or the juice taken therein, killeth and driveth forth all manner of worms in the belly, stomach and maw; and gargled in the mouth, or the root chewed, fasteneth loose teeth, and helps to keep them from putrefaction; and being drank is good for those that spit blood, helpeth to remove cramps or convulsions, gout, sciatica, pains to the joints, applied outwardly or inwardly, and is also good for those that are bursten, or have any inward bruise. The root boiled well in vinegar, beaten afterwards, and made into an ointment with hog's suet, or oil of trotters, is an excellent remedy for scabs or itch in young or old; the places also bathed or washed with the decoction doth the same; it also helpeth all sorts of filthy old putrid sores or cankers whatsoever. In the roots of this herb lieth the chief effect for the remedies aforesaid. The distilled water of the leaves and roots together, is very profitable to cleanse the skin of the face, or other parts, from any morpiew, spots, or blemishes therein, and make it clear.

ERINGO, OR SEA-HOLLY.

Descript.] **T**HE first leaves of our ordinary sea-holly, are nothing so hard and prickly as when they grow old, being almost round, and deeply dented about the edges, hard and sharp pointed, and a little crumpled, of a bluish green colour, every one upon a long footstalk; but those that grow up higher with the stalk, do as it were compass it about. The stalk itself is round and strong, yet somewhat crested, with joints and leaves

set thereat, but more divided, sharp and prickly; and branches rising from thence, which have likewise other small branches, each of them having several blueish, round prickly heads, with many small jagged prickly leaves under them, standing like a star, and sometimes found greenish or whitish: The root groweth wonderfully long even to eight or ten feet in length, set with rings and circles toward the upper-part, cut smooth and without joints down lower, brownish on the outside, and very white within, with a pith in the middle; of a pleasant taste, but much more being artificially preserved, and candied with sugar.

Place.] It is found about the sea coast in almost every country of this land which bordereth upon the sea.

Time.] It flowereth in the end of summer, and giveth ripe seed within a month after.

Government and Virtues.] The plant is venereal, and breedeth seed exceedingly, and strengthens the spirits procreative; it is hot and moist, and under the celestial Balance. The decoction of the root hereof in wine, is very effectual to open obstructions of the spleen and liver, and helpeth yellow jaundice, dropsy, pains of the loins, and wind cholic, provoketh urine, and expelleth the stone, procureth women's courses. The continued use of the decoction for fifteen days, taken fasting, and next to bedward, doth help the strangury, the pissing by drops, the stopping of urine, and stone, and all defects of the reins and kidneys; and if the said drink be continued longer, it is said that it cureth the stone; it is found good against the French pox. The roots bruised and applied outwardly, helpeth the kernels of the throat, commonly called the king's evil; or taken inwardly, and applied to the place stung or bitten by any serpent, healeth it speedily. If the roots be bruised, and boiled in old hog's grease, or salted lard, and applied to broken bones, thorns, &c, remaining in the flesh, they do not only draw them forth, but heal up the place again, gathering new flesh where it was consumed. The juice of the leaves dropped into the ear, helpeth imposthumes therein. The distilled water of the whole herb,

when the leaves and stalks are young, is profitably drank for all the purposes aforesaid; and helpeth the melancholy of the heart, and is available in quartan and quotidian agues; as also for them that have their necks drawn a-wry, and cannot turn them without turning their whole body.

EYEBRIGHT.

Descript.] COMMON eyebright is a small low herb, rising up usually but with one blackish green stalk a span high, or not much more, spread from the bottom into sundry branches, whereon are small and almost round, yet pointed, dark green leaves, finely snipped about the edges, two always set together, and very thick. At the joints with the leaves, from the middle upward, come forth small white flowers, steeped with purple and yellow spots, or stripes; after which follow small round heads, with very small seed therein. The root is long, small and thready at the end.

Place.] It groweth in meadows and grassy places in this land.

Government and Virtues.] It is under the sign of the Lion, and Sol claims dominion over it. If the herb was but as much used as it is neglected, it would half spoil the spectacle maker's trade; and a man would think, that reason should teach people to prefer the preservation of their natural before artificial spectacles; which that they may be instructed how to do, take the virtues of eyebright as followeth.

The juice, or distilled water of eyebright, taken inwardly in white wine or broth, or dropped into the eyes for divers days together, helpeth all infirmities of the eyes, that cause dimness of sight. Some make conserve of the flowers to the same effect. Being used any of the ways, it also helpeth a weak brain or memory. This tunned up with strong beer that it may work together, and drank, or the powder of the dried herb mixed with sugar, a little mace, and fennel seed, and drank, or eaten in

broth; or the said powder made into an electuary with sugar, and taken, hath the same powerful effect to help and restore the sight decayed through age; and Arnoldus de Villa Nova saith, it hath restored to sight them that have been blind a long time before.

FERN.

Descript.] **O**F this there are two kinds principally to be treated of, viz. the male and female. The female groweth higher than the male, but the leaves thereof are lesser and more divided and dented, and of as strong a smell as the male; the virtue of them are both alike, and therefore I shall not trouble you with any description or distinction of them.

Place.] They grow both in heaths, and in shady places, near the hedge-sides in all counties of this land.

Time.] They flower and give their seed at midsummer.

The female fern is that plant which is in Sussex called brakes the seed of which some authors hold to be so rare. Such a thing there is I know, and may be easily had upon midsummer eve, and for ought I know, two or three days after it, if not more.

Government and Virtues.] It is under the dominion of Mercury, both male and female. The roots of both these sorts of fern being bruised and boiled in mead, or honeyed water, and drank, killeth both the broad and long worms in the body, and abateth the swelling and hardness of the spleen. The green leaves eaten, purge the belly of cholerick and waterish humours that trouble the stomach. They are dangerous for women with child to meddle with, by reason they cause abortions. The roots bruised and boiled in oil, or hog's grease, make a very profitable ointment to heal wounds or pricks gotten in the flesh. The powder of them used in foul ulcers, drieth up their malignant moisture, and causeth their speedier healing. Fern being burned the smoke thereof driveth away serpents, gnats, and other noi-

some creatures, which in fenny countries do, in the night time, trouble and molest people lying in their beds with their faces uncovered; it causeth barrenness.

OSMOND ROYAL, OR WATER FERN.

Descript.] **T**HIS shooteth forth in spring time (for in the winter the leaves perish) divers rough, hard stalks, half round and yellowish, or flat on the other side, two feet high having divers branches of winged yellowish green leaves on all sides, set one against another, longer, narrower, and not nicked on the edges as the former. From the top of some of these stalks grow forth a long bush of small, and more yellow, green, scaly aglets, set in the same manner on the stalks as the leaves are, which are accounted the flowers and seeds. The root is rough thick and scabby, with a white pith in the middle, which is called the heart thereof.

Place.] It groweth on moors, and bogs, and watery places in many parts of this land.

Time.] It is green all the summer, and the root only abideth in winter.

Government and Virtues.] Saturn owns the plant. This hath all the virtues mentioned in the former ferns, and is much more effectual than they, both for inward and outward griefs, and is accounted singular good in wounds, bruises, or the like. The decoction to be drank, or boiled into an ointment of oil, as a balsam or balm, and so it is singular good against bruises, and bones broken, or out of joint, and giveth much ease to the cholic and splenetic diseases; as also for ruptures or burstings. The decoction of the root in white wine, provokes urine exceedingly, and cleanseth the bladder and passages of urine.

FEVERFEW, OR FEATHERFEW.

Descript.] **C**OMMON featherfew hath large, fresh, green

leaves, much torn or cut on the edges. The stalks are hard and round, set with many such like leaves, but smaller, and at the tops stand many single flowers, upou small footstalks, consisting of many small white leaves standing round about a yellow thrum in the middle. The root is somewhat hard and short, with many strong fibres about it. The scent of the whole plant is very strong and stifling, and the taste is very bitter.

Place.] This grows wild in many places of the land, but is for the most part nourished in gardens.

Time.] It flowereth in the months of June and July.

Government and Virtues.] Venus commands this herb, and hath commended it to succour her sisters (women) and to be a general strengthener of their wombs, and remedy such infirmities as a careless midwife hath there caused; if they will but be pleased to make use of her herb boiled in white wine, and drink the decoction; it cleanseth the womb, expels the after birth, and doth a woman all the good she can desire of an herb. And if any grumble because they cannot get the herb in winter, tell them, if they please, they may make a syrup of it in summer; it is chiefly used for the diseases of the mother, whether it be the strangling or rising of the mother, or hardness, or inflammations of the same, applied outwardly thereunto. Or a decoction of the flowers in wine, with a little nutmeg or mace put therein, and drank often in a day, is an approved remedy to bring down women's courses speepily, and helpeth to expel the dead birth and after birth. For a woman to sit over the hot fumes of the decoction of the herb, made in water or wine, is effectual for the same; aud in some cases, to apply the boiled herb warm to the privy parts. The decoction thereof made, with some sugar or honey put thereto, is used by many with good success to help the cough and stuffing of the chest, by colds, as also to cleanse the reins and bladder, and helps to expel the stone in them. The powder of the herb taken in wine, with some oxymel, purgeth both choler and phlegm, and is available for those that are short-winded, and are troubled with melancholy and heaviness, or sadness of spirits. It is very effectual for all pains in the head com-

ing of a cold cause, the herb being bruised and applied to the crown of the head; as also for the vertigo, that is, a running or swimming of the head. The decoction thereof drank warm, and the herb bruised with a few corns of bay-salt, and applied to the wrists before the coming of the ague fits, doth take them away. The distilled water taketh away freckles, and other spots and deformities in the face. The herb bruised and heated on a tile, with some wine to moisten it, or fried with a little wine and oil in a frying-pan, and applied warm outwardly to the places, helpeth the wind and cholic in the lower part of the belly. It is an especial remedy against opium taken too liberally.

FENNEL.

EVERY garden affordeth this so plentifully, that it needs no description.

Government and Virtues.] One good old fashion is not yet left off, viz, to boil fennel with fish, for it consumes that phlegmatic humour, which fish most plentifully afford and annoy the body with, though few that use it know wherefore they do it: I suppose the reason of its benefit this way is because it is an herb of Mercury, and under Virgo, and therefore bears antipathy to Pisces. Fennel is good to break wind, to provoke urine, and ease the pains of the stone, and helps to break it. The leaves or seed, boiled in barley water and drank are good for nurses, to increase their milk, and make it more wholesome for the child. The leaves, or rather the seeds, boiled in water, stayeth the hiccough, and taketh away the loathings which oftentimes happen to the stomachs of sick and feverish persons, and allayeth the heat thereof. The seed boiled in wine and drank, is good for those that are bitten with serpents, or have eaten poisonous herbs, or mushrooms. The seed and the roots much more help to open obstructions of the liver, spleen, and gall, and thereby help the painful and windy swellings of the spleen, and the yellow jaundice; and also the gout and cramps. The seed is of good use in medicines to help shortness of breath and

wheezing by stopping of the lungs. It helpeth also to bring down the courses, and to cleanse the parts after delivery. The roots are of most use in physic, drinks and broths, that are taken to cleanse the blood, to open obstructions of the liver, to provoke urine, and amend the ill colour of the face after sickness, and to cause a good habit through the body. Both leaves, seeds, and roots thereof are much used in drink or broth, to make people more lean that are too fat. The distilled water of the whole herb, or the condensate juice dissolved, but especially the natural juice, that in some counties issueth out hereof of its own accord, dropped into the eyes, cleanseth them from mists and films that hinder the sight. The sweet fennel is much weaker in physical uses than the common fennel. The wild fennel is stronger and hotter than the tame, and therefore most powerful against the stone, but not so effectual to increase milk, because of its dryness.

SOW-FENNEL, OR HOG'S FENNEL.

BESIDES the common name in English, hog's fennel, and the Latin name *peucedanum*, it is called hoar-strange, and hoar-strong, sulphur-wort, and brimstone wort.

Descript.] The common sow fennel hath divers branched stalks, of thick and somewhat long leaves, three for the most part joined together at a place, among which ariseth a crested straight stalk, less than fennel, with some joints thereon, and leaves growing thereat, and towards the tops some branches issuing from thence; likewise on the tops of the stalks and branches stand divers tufts of yellow flowers, whereafter grows somewhat flat, thin, and yellowish seed, bigger than fennel seed. The roots grow great and deep, with many other parts and fibres about them of a strong scent like hot brimstone, and yield forth a yellowish milk, or clammy juice, almost like a gum.

Place.] It groweth plentifully in the salt low marshes near Feversham in Kent.

Time.] It flowereth plentifully in July and August.

Hog's Funnel

Male Fern

Female Fern

Fig. Herb.

Sweet Flag

Sweet Fern

Government and Virtues.] This is also an herb of Mercury, The juice of sow fennel (saith Dioscorides and Galen,) used with vinegar and rose water, or the juice with a little euphorbium put to the nose, helpeth those that are troubled with the lethargy, frenzy, giddiness of the head, the falling sickness, long and inveterate head-ach, the palsy, sciatica, and the cramp; and generally all the diseases of the sinews, used with oil and vinegar. The juice dissolved in wine, or put into an egg, is good for a cough, or shortness of breath, and for those that are troubled with wind in the body. It purgeth the belly gently expelleth the hardness of the spleen, giveth ease to women that have sore travail in child-birth, and easeth the pains of the reins and bladder, and also the womb. A little of the juice dissolved in wine, and dropped into the ears, easeth much of the pains in them, and put into a hollow tooth, easeth the pains thereof. The root is less effectual to all the aforesaid disorders; yet the powder of the root cleanseth foul ulcers, being put into them, and taketh out splinters of broken bones, or other things in the flesh, and healeth them up perfectly; as also drieth up old and inveterate running sores, and is of admirable virtue in all green wounds.

FIG-WORT, OR THROAT-WORT.

Descript.] COMMON great fig-wort sendeth divers great strong, hard, square brown stalks, three or four feet high, whereon grow large, hard, and dark green leaves, two at a joint, harder and larger than nettle leaves, but not stinking; at the tops of the stalks stand many purple flowers set in husks, which are sometimes gaping and open, somewhat like those of water betony; after which come hard round heads, with a small point in the middle, wherein lie small brownish seed. The root is great, white, and thick, with many branches at it, growing aslope under the upper crust of the ground, which abideth many years, but keepeth not its green leaves in winter.

Place.] It groweth frequently in moist and shadowy woods, and in the lower parts of fields and meadows.

Time.] It flowereth about July, and the seed will be ripe about a month after the flowers are fallen.

Government and Virtues.] Some Latin authors call it cervicaria, because it is appropriated to the neck; and we throat-wort, because it is appropriated to the throat. Venus owns the herb, and the Celestial Bull will not deny it; therefore a better remedy cannot be for the king's evil, because the moon that rules the disease, is exalted there. The decoction of the herb taken inwardly, and the bruised herb applied outwardly, dissolves clotted and congealed blood within the body, coming by any wounds, bruise, or fall; and is no less effectual for the king's evil, or any other knobs, kernels, bunches, or wens growing in the flesh wheresoever; and for the hæmorrhoids, or piles. An ointment made hereof may be used at all times when the fresh herb is not to be had. The distilled water of the whole plant, roots and all, is used for the same purposes, and drieth up the superfluous, virulent moisture of hollow and corroding ulcers; it taketh away all redness, spots, and freckles in the face, as also the scurf, and any foul deformity therein, and the leprosy likewise.

FILIPENDULA, OR DROP-WORT.

Descript.] **T**HIS sendeth forth many leaves, some bigger some lesser, set on each side of a middle rib, and each of them dented about the edges, somewhat resembling wild tansy, or rather agrimony, but harder in handling; among which rise up one or more stalks, two or three feet high, with the leaves growing thereon, and sometimes also divided into other branches spreading at the top into many white, sweet smelling flowers, consisting of five leaves a-piece, with some threads in the middle of them standing together in a pith or umbel, each upon a small foot-stalk, which, after they have been blown upon a good while, do

fall away, and in their places appear small, round, chaffy heads like buttons, wherein are the chaffy seeds set and placed. The root consists of many small, black, tuberous pieces fastened together by many small, long, blackish strings, which run from one to another.

Place.] It groweth in many places of this land, in the corners of dry fields, and meadows, and the hedge sides.

Time.] They flower in June and July, and their seed is ripe in August.

Government and Virtues.] It is under the dominion of Venus. It effectually opens the passages of the urine, helpeth the strangury; the stone in the kidneys or bladder, the gravel, and all other pains of the bladder and reins, by taking the roots in powder, or the decoction of them in white wine, with a little honey. The roots made into powder, and mixed with honey in the form of an electuary doth much help them whose stomachs are swollen dissolving and breaking the wind which was the cause thereof; and is also very effectual for all the diseases of the lungs, as shortness of breath, wheezing, hoarseness of the throat, the cough, and to expectorate tough phlegm, or any other parts thereabout. It is called drop-wort, because it helps such as piss by drops.

THE FIG-TREE.

FOR to give a description of a tree so well known to every body that keeps it in his garden, were needless. They prosper very well in our English gardens, yet are fitter for medicine than for any other profit which is gotten by the fruit of them.

Government and Virtues.] The tree is under the dominion of Jupiter. The milk that issueth out from the leaves or branches where they are broken off, being dropped upon warts, taketh them away. The decoction of the leaves is excellent good to wash sore heads with; and there is scarcely a better remedy for the leprosy than it is. It clears the face also of morpew, and the body of white scurf, scabs, and running sores. If it be dropped into old fretting ulcers, it cleanseth out the moisture, and bringeth up the flesh; because you cannot have the leaves green all

the year, you may make an ointment of them whilst you may. A decoction of the leaevs being drank inwardly, or rather a syrup made of them, dissolves congealed blood caused by bruises or falls, and helps the bloody flux. The ashes of the wood made into an ointment with hog's grease, helps kibes and chilblains. The juice being put into an hollow tooth, easeth pain; as also pain and noise in the ears, being dropped into them; and deafness. An ointment made of the juice and hog's grease, is as excellent a remedy for the biting of mad dogs, or other venomous beasts as most are. A syrup made of the leaves, or green fruit, is excellent good for coughs, hoarseness, or shortness of breath, and all diseases of the breast and lungs; it is also excellent good for the dropsy and falling sickness. They say that the figtree, as well as the bay-tree is never hurt by lightning: as also if you tie a bull, be he ever so mad, to a fig-tree he will quickly become tame and gentle. As for such figs as come from beyond the sea, I have little to say, because I write not of exotics; yet some authors say, the eating of them makes people lousy.

THE YELLOW WATER FLAG, OR FLOWER-DE-LUCE.

Descript.] **T**HIS groweth like the flower-de-luce, but it hath much longer and narrower sad green leaves jointed together in that fashion; the stalk also growing oftentimes as high, bearing small yellow flowers shaped like the flower-de-luce, with three falling leaves, and other three arched that cover their bottoms; but instead of the three upright leaves, as the flower-de-luce hath, this hath only three short pieces standing in their places, after which succeed thick and long three square heads, containing in each part somewhat big and flat seed, like those of the flower-de-luce. The root is long and slender, of a pale brownish colour on the outside, and of a horseflesh colour on the inside, with many hard fibres thereat, and very harsh in taste.

Place.] It usually grows in watery ditches, ponds, lakes, and moor sides, which are always overflowed with water.

Time.] It flowereth in July, and the seed is ripe in August.

Government and Virtues.] It is under the dominion of the Moon. The root of this water-flag is very astringent, cooling and drying; and thereby helps all lasks and fluxes, whether of blood or humours, as bleeding at the mouth, nose, or other parts, bloody flux, and the immoderate flux of women's courses. The distilled water of the whole herb, flowers and roots, is a sovereign good remedy for watering eyes, both to be dropped into them, and to have cloths or sponges wetted therein, and applied to the forehead: it also helpeth the spots and blemishes that happen in and about the eyes, or in any other parts: The said water fomented on swellings and hot inflammations of women's breasts, upon cankers also, and those spreading ulcers called *Noli me tangere*, will do much good: It helpeth also foul ulcers in the privities of men or women; but an ointment made of the flowers is better for those external applications.

FLAX-WEED, or TOAD-FLAX.

Descript.] **O**UR common flax-weed hath divers stalks full fraught with long and narrow ash-coloured leaves, and from the middle of them almost upward, stored with a number of pale yellow flowers, of a strong unpleasant scent, with deeper yellow mouths, and blackish flat seed in round heads. The root is somewhat woody and white, especially the main downright one, with many fibres, abiding many years, shooting forth roots every way round about, and new branches every year.

Place.] This groweth throughout this land, both by the way sides, and in meadows, also by hedge-sides, and upon the sides of banks, and borders of fields.

Time.] It flowereth in Summer, and the seed is ripe usually before the end of August.

Government and Virtues.] Mars owns the herb: In Sussex we call it gall-wort, and lay it in our chickens' water to cure them of the gall; it relieves them when they are drooping. This is frequently used to spend the abundance of those watery humours by urine, which cause the dropsy. The decoction of the herb, both leaves and flowers, in wine taken and drank, doth somewhat move the belly downwards, openeth obstructions of the liver, and helpeth the yellow jaundice; expelleth poison, provoketh women's courses, driveth forth the dead child, and after.birth. The distilled water of the herb and flowers is effectual for all the same purposes; being drank with a dram of the powder of the seeds of bark or the roots of wall-wort, and a little cinnamon, for certain days together, it is held a singular remedy for the dropsy. The juice of the herb, or the distilled water, dropped into the eyes, is a certain remedy for all heat, inflammations, and redness in them. The juice or water put into foul ulcers, whether they be cancerous or fistulous, with tents rolled therein, or parts washed and injected therewith, cleanseth them thoroughly from the bottom, and healeth them up safely. The same juice or water also cleanseth the skin wonderfully of all sorts of deformity, as leprosy, morpew, scurf, wheals, pimples, or spots, applied of itself, or used with some powder of lupines.

FLEA-WORT.

Descript.] ORDINARY flea-wort risrth up with a stalk two feet high or more, full of joints and branches on every side up to the top, and at every joint two small, long, and narrow whitish green leaves somewhat hairy; at the top of every branch stand divers small, short scaly, or chaffy heads, out of which come forth small whitish yellow threads, like to those of the plantain herbs, which are the blooming of flowers. The seed enclosed in these heads is small and shining while it is fresh, very like unto fleas both for colour and bigness, but turning black when it groweth old. The root is not long, but white, hard and

woody, perishing every year, and rising again of its own seed for divers years, if it be suffered to shed: The whole plant is somewhat whitish and hairy, smelling somewhat like rosin.

There is another sort hereof, differing not from the former in the manner of growing, but only that this stalk and branches being somewhat greater, do a little more bow down to the ground: The leaves are somewhat greater, the heads somewhat lesser, the seed alike; and the root and leaves abide all winter, and perish not as the former.

Place.] The first groweth only in gardens, the second plentifully in fields that are near the sea.

Time.] They flower in July, or thereabouts.

Government and Virtues.] The herb is cold, dry, and Saturnine. I suppose it obtained the name of flea-wort, because the seeds are so like fleas. The seed fried, and taken, stayeth the flux or lask of the belly, and the corrosions that come by reason of hot cholerick, or sharp and malignant humours, or by too much purging of any violent medicine, as scammony, or the like. The mucilage of the seed made with rose-water, and a little sugarcandy put thereto, is very good in all hot agues and burning fevers, and other inflammations, to cool the thirst, and lenify the dryness and roughness of the tongue and throat. It helpeth also hoarseness of the voice, and diseases of the breast and lungs, caused by heat, or sharp salt humours, and the pleurisy also. The mucilage of the seed made with plantain water, whereunto the yolk of an egg or two, and a little populeon are put, is a most safe and sure remedy to ease the sharpness, pricking, and pains of the hæmorrhoids or piles, if it be laid on a cloth, and bound thereto. It helpeth all inflammations in any part of the body, and the pains that come thereby, as the head-ach and megrims, and all hot imposthumes, swellings, or breaking out of the skin, as blains, wheals, pushes, purples, and the like; as also the joints of those that are out of joint, the pains of the gout and sciatica, the burstings of young children, and the swellings of the navel, applied with oil of roses and vinegar. It is also good to heal the nipples and sore breasts of women, being often applied thereun-

to. The juice of the herb with a little honey put into the ears helpeth the running of them, and the worms breeding in them: The same also mixed with hog's grease, and applied to corrupt and filthy ulcers, cleanseth them and healeth them.

FLUXWEED.

Descript.] It riseth up with a round upright hard stalk, four or five feet high, spreading into sundry branches, whereon grow many greyish green leaves, very finely cut and severed into a number of short and almost round parts. The flowers are very small and yellow, growing spike fashion, after which come small long pods, with small yellowish seed in them. The root is long and woody, perishing every year.

There is another sort, differing in nothing, save only it hath somewhat broader leaves; they have a strong evil savour, being smelled unto, and are of a drying taste.

Place.] They grow wild in the fields by hedge sides, and highways, and among rubbish and other places.

Time.] They flower and seed quickly after, namely in June and July.

Government and Virtues.] This herb is Saturnine also. Both the herb and seed of fluxweed is of excellent use to stay the flux or lask of the belly, being drank in water wherein gads of steel heated have been often quenched; and is no less effectual for the same purpose than plantain or comfrey, and to restrain any other flux of blood in man or woman, as also to consolidate bones broken or out of joint. The juice thereof drank in wine, or the decoction of the herb drank, doth kill the worms in the stomach or belly, or the worms that grow in putrid and filthy ulcers: and made into a salve doth quickly heal all old sores how foul or malignant soever they be. The distilled water of the herb worketh the same effects, although somewhat weaker, yet it is a fair medicine, and more acceptable to be taken. It is called flinxweed because it cures the flux, and for its uniting broken bones, &c. Paracelsus extols it to the skies. It is fitting that syrup, ointment and plaisters of it were kept in your houses.

Yellow Flag

Ragwort

Sea Bane

FLOWER-DE-LUCE.

IT is so well known, being nourished up in most gardens, that I shall not need to spend time in writing a description thereof.

Time.] The flaggy kinds thereof have the most physical uses; the dwarf kinds thereof flower in April, the greater sorts in May.

Government and Virtues.] The herb is Lunar. The juice or decoction of the green root or flaggy kind of flower-de-luce, with a little honey drank, doth purge and cleanse the stomach of gross and tough phlegm, and choler therein; it helpeth the jaundice and the dropsy, evacuating those humours both upwards and downwards; and because it somewhat hurts the stomach, is not to be taken without honey and spikenard. The same being drank doth ease the pains and torments of the belly and sides, the shaking of agues, the diseases of the liver and spleen, the worms of the belly; the stone in the reins, convulsions and cramps that come of old humours; it also helps those whose seed passeth from them unawares; It is a remedy against the bitings and stings of venomous creatures, being boiled in water and vinegar and drank: boiled in water and drank, it provoketh urine, helpeth the cholic, bringeth down women's courses; and made up into a pessary with honey, and put up into the body, draweth forth the dead child. It is much commended against the cough, to expectorate tough phlegm; It much easeth pains in the head, and procureth sleep; being put into the nostrils it procureth sneezing, and thereby purgeth the head of phlegm; the juice of the root applied to the piles or hemorrhoids, giveth much ease. The decoction of the roots gargled in the mouth, easeth the tooth-ach, and helpeth the stinking breath. Oil called oleum irinum, if it be rightly made of the great broad flag flower-de-luce, (and not of the great bulbous blue flower-de-luce, as is used by some apothecaries) and the roots of the same of the flaggy kinds, is very effectual to warm

and comfort all cold joints and sinews, as also the gout and sciatica, and mollifieth dissolveth and consumeth tumours and swellings in any part of the body, as also of the matrix; it helpeth the cramp, or convulsions of the sinews; the head and temples anointed therewith, helpeth the catarrh or thin rheum distilled from thence; and used upon the breast or stomach, helpeth to extenuate the cold tough phlegm; it helpeth also the pains and noise in the ears, and the stench of the nostrils. The root itself, either green or in powder, helpeth to cleanse, heal, and incarnate wounds, and to cover the naked bones with flesh again, that ulcers have made bare; and is also very good to cleanse and heal up fistulas and cankers that are hard to be cured.

FLUELLIN, OR LLUELLIN.

Descript.] **I**T shooteth forth many long branches, partly lying upon the ground, and partly standing upright, set with almost red leaves, yet a little pointed, and sometimes more long than round, without order thereon, somewhat hairy, and of an evil greenish white colour; at the joints all along the stalks, and with the leaves come forth small flowers, one at a place, upon a very small short footstalk, gaping somewhat like snap-dragons, or rather like toad-flax, with the upper jaw of a yellow colour, and the lower of a purplish, with a small heel or spur behind; after which come forth small round heads, containing small black seed. The root is small and thready, dying every year, and raiseth itself again of its own sowing.

There is another sort of lluellin which hath longer branches wholly trailing upon the ground, two or three feet long, and somewhat more thin, set with leaves thereon, upon small footstalks. The leaves are a little larger, and somewhat round, and cornered sometimes in some places on the edges; but the lower part of them being the broadest, hath on each side a small point, making it seem as if they were ears, sometimes hairy, but not hoary, and of a better green colour than the former. The flowers come forth like the former, but the colours therein are more

white than yellow, and the purple not so fair: The flower is large, and so are the seed and seed-vessels. The root is like the other, and perisheth every year.

Place.] They grow abundantly in divers corn-fields, and in borders about them, and in other fertile grounds about Southfleet in Kent; at Buchrite, Hamerton, and Richmanworth in Huntingdonshire, and in divers other places.

Time.] They are in flower about June and July, and the whole plant is dry and withered before August be over.

Government and Virtues.] It is a Lunar herb. The leaves bruised and applied with barley meal to watering eyes that are hot and inflamed by defluxions from the head, do very much help them, as also the fluxes of blood or humours, as the lask, bloody flux, women's courses, and stayeth all manner of bleeding at the nose, mouth, or any other place, or that cometh by any bruise or hurt, or bursting a vein; it wonderfully helpeth all those inward parts that need consolidating or strengthening, and is no less effectual both to heal and close green wounds, and to cleanse and heal all foul or old ulcers, fretting or spreading cankers, or the like. Bees are industrious, and go abroad to gather honey from each plant or flower, but drones lie at home, and eat up what the bees have taken pains for: Just so do the college of physicians lie at home and domineer, and suck out the sweetness of other men's labours and studies, themselves being as ignorant in the knowledge of herbs as a child of four years old, as I can make appear to any rational man by their last dispensatory. Now then to hide their ignorance, there is no readier way in the world than to hide knowledge from their countrymen, that so no body might be able so much as to smell out their ignorance. When simples were in use, men's bodies were better in health by far than now they are, or shall be, if the college can help it. The truth is, this herb is of a fine cooling, drying quality, and an ointment or plaister of it might do a man a courtesy that hath any hot virulent sores; It is admirable for the ulcers of the French pox; if taken inwardly, may cure the disease. It was first called female speedwell, but a shentleman

of Wales, whose nose was almost eaten off with the pox, and so near the matter, that the doctors commanded it to be cut off, being cured only by the use of this herb; and to honour the herb, for saving hur nose whole, gave it one of hur country names, Fluellin.

FOX-GLOVES.

Descript.] **I**T hath many long and broad leaves lying upon the ground dented upon the edges, a little soft or woolly and of a hoary green colour, among which riseth up sometimes sundry stalks, but one very often, bearing such leaves thereon from the bottom to the middle, from whence to the top it is stored with large and long hollow reddish purple flowers, a little more long and eminent at the lower edge, with some white spots within them, one above another, with small green leaves at every one, but all of them turning their heads one way, and hanging downwards, having some threads also in the middle, from whence rise round heads, pointed sharp at the ends, wherein small brown seed lieth. The roots are so many small fibres, and some greater strings among them; the flowers have no scent, but the leaves have a bitter hot taste.

Place.] It groweth on dry sandy ground for the most part, and as well on the higher as the lower places under hedge-sides in almost every county of this land.

Time.] It seldom flowereth before July, and the seed is ripe in August.

Government and Virtues.] The plant is under the dominion of Venus, being of a gentle cleansing nature, and withal very friendly to nature. The herb is familiarly and frequently used by the Italians to heal any fresh or green wound, the leaves being but bruised and bound thereon; and the juice thereof is also used in old sores, to cleanse, dry, and heal them. The decoction hereof made up with some sugar or honey, is available to cleanse and purge the body both upwards and downwards, sometimes of tough phlegm and clammy humours, and to open obstructions

of the liver and spleen. It hath been found by experience to be available for the king's evil, the herb bruised and applied, or an ointment made with the juice thereof, and so used; and a decoction of two handfuls thereof, with four ounces of polipody in ale, hath been found by late experience to cure divers of the falling sickness, that have been troubled with it above twenty years. I am confident that an ointment of it is one of the best remedies for a scabby head that is.

FUMITORY.

Descript.] OUR common fumitory is a tender sappy herb, sending from one square, a slender weak stalk, and leaning downwards on all sides, many branches two or three feet long, with finely cut and jagged leaves of whitish, or rather blueish sea green colour; At the tops of the branches stand many small flowers, as it were in a long spike one above another, made like little birds, of a reddish purple colour, with whitish bellies, after which come small round husks, containing small black seeds. The root is yellow, small, and not very long, full of juice while it is green, but quickly perishes with the ripe seed. In the corn-fields in Cornwall, it beareth white flowers.

Place.] It groweth in corn-fields almost every where, as well as in gardens.

Time.] It flowereth in May, for the most part, and the seed ripeneth shortly after.

Government and Virtues.] Saturn owns the herb, and presents it to the world as a cure for his own disease, and strengthener of the parts of the body he rules. If by my astrological judgment of diseases, from the decumbiture, you find Saturn author of the disease, or if by direction from a nativity you fear a Saturnine disease approaching, you may by this herb prevent it in the one, and cure it in the other, and therefore it is fit you keep a syrup of it always by you. The juice or syrup made thereof, or the decoction made in whey by itself, with some

other purging or opening herbs and roots to cause it to work the better (itself being but weak) is very effectual for the liver and spleen, opening the obstructions thereof, and clarifying the blood from saltish, choleric, and adust humours, which cause leprosy scabs, tetters, and itches, and such like breakings-out of the skin, and after the purgings doth strengthen all the inward parts. It is also good against the yellow jaundice, and spendeth it by urine, which it procureth in abundance. The powder of the dried herb given for some time together, cureth melancholy, but the seed is strongest in operation for all the former diseases. The distilled water of the herb is also of good effect in the former diseases, and conduceth much against the plague and pestilence, being taken with good treacle. The distilled water also, with a little water and honey of roses, helpeth all the sores of the mouth or throat, being gargled often therewith. The juice dropped into the eyes, cleareth the sight, and taketh away redness and other defects in them, although it procureth some pain for the present, and cause tears. Dioscorides saith it hindereth any fresh springing of hairs on the eye-lids (after they are pulled away) if the eye-lids be anointed with the juice hereof, with gum arabic dissolved therein. The juice of the fumitory and docks mingled with vinegar, and the places gently washed or wet therewith, cureth all sorts of scabs, pimples, blotches, wheals, and pushes which arise on the face or hands, or any other parts of the body.

THE FURZE BUSH.

IT is so well known by this name, as it is in some counties by the name of gorz or whins, that I shall not need to write any description thereof, my intent being to teach my countrymen what they know not, rather than tell them again of that which is generally known before.

Place.] They are known to grow on dry barren heaths, and other waste, gravelly or sandy grounds, in all counties of this land.

Time.] They also flower in the summer months.

Government and Virtues.] Mars owns the herb. They are hot and dry, and open obstructions of the liver and spleen. A decoction made with the flowers thereof hath been found effectual against the jaundice, as also to provoke urine, and cleanse the kidneys from gravel or stone engendered in them. Mars doth also this by sympathy.

GARLICK.

THE offensiveness of the breath of him that hath eaten garlick, will lead you by the nose to the knowledge thereof, and (instead of a description) direct you to the place where it groweth in gardens, which kinds are the best, and most physical.

Government and Virtues.] Mars owns this herb. This was anciently accounted the poor man's treacle, it being a remedy for all diseases and hurts (except those which itself breed.) It provoketh urine and women's courses, helpeth the biting of mad dogs and other venomous creatures; killeth worms in children, cutteth and voideth tough phlegm, purgeth the head, helpeth the lethargy, is a good preservative against, and a remedy for any plague, sore, or foul ulcer; taketh away spots and blemishes in the skin, easeth pains in the ears, ripeneth and breaketh imposthumes, or other swellings. And for all those diseases the onions are as effectual. But the garlic hath some more peculiar virtues besides the former, viz. it hath especial quality to discuss inconveniences coming by corrupt agues or mineral vapours, or by drinking corrupt and stinking waters; as also by taking wolfbane, hen-bane, hemlock, or other poisonous and dangerous herbs. It is also held good in hydropic diseases, the jaundice, falling sickness, cramps, convulsions, the piles or hæmorrhoids, or other cold diseases. Many authors quote many diseases this is good for; but conceal its vices. Its heat is very vehement, and all vehement hot things send up but ill favoured vapours to the brain. In choleric men it will add fuel to the fire; in men oppressed by melancholy, it will attenuate the humour, and send

up strong fancies, and as many strange visions to the head; therefore let it be taken inwardly with great moderation; outwardly you may make more bold with it.

GENTAIN, FELWORT, OR BALDMONY.

IT is confessed that gentain, which is most used among us, is brought over beyond sea, yet we have two sorts of it growing frequently in our nation, which, besides the reasons so frequently alledged why English herbs should be fittest for English bodies, hath been proved by the experience of divers physicians, to be not a whit inferior in virtue to that which cometh from beyond sea, therefore be pleased to take the description of them as followeth:

Descript.] The greater of the two hath many small, long roots, thrust down deep into the ground, and abiding all the winter. The stalks are sometimes more, sometimes fewer, of a brownish green colour, which is sometimes two feet high, if the ground be fruitful, having many long, narrow, dark green leaves, set by couples up to the top; the flowers are long and hollow, of a purple colour, ending in fine corners. The smaller sort, which is to be found in our land, groweth up with sundry stalks, not a foot high, parted into several small branches, whereon grow divers small leaves together, very like those of the lesser centaury, of a whitish green colour; on the tops of these stalks grow divers perfect blue flowers, standing in long husks, but not so big as the other; the root is very small, and full of threads.

Place.] The first groweth in divers places of both the east and west countries, and as well in wet as in dry grounds; as near Longfield by Gravesend; near Cobham in Kent; near Lillinstone in Kent; also in a chalk pit hard by a paper-mill, not far from Dartford in Kent. The second groweth also in divers places in Kent, as about Southfleet and Longfield; upon Barton's hills in Bedfordshire; also not far from St. Alban's; up-

on a piece of waste chalky ground, as you go out of Dunstable way towards Gorhambury.

Time.] They flower in August.

Government and Virtues.] They are under the dominion of Mars, and one of the most principal herbs he is ruler of. They resist putrefactions, poison, and a more sure remedy cannot be found to prevent the pestilence than it is; it strengthens the stomach exceedingly, helps digestion, comforts the heart, and preserves it against faintings and swoonings: The powder of the dry roots helps the biting of mad dogs and venomous beasts, opens obstructions of the liver, and restoreth an appetite of their meat to such as have lost it. The herb steeped in wine, and the wine drank, refresheth such as be over-weary with travel, and grow lame in their joints, either by cold or evil lodgings; it helps stitches, and griping pains in the sides; is an excellent remedy for such as are bruised by falls; it provokes urine and the terms exceedingly, therefore let it not be given to women with child: The same is very profitable for such as are troubled with cramps and convulsions, to drink the decoction: Also they say it breaks the stone, and helps ruptures most certainly; it is excellent in all cold diseases, and such as are troubled with tough phlegm, scabs, itch, or any fretting sores and ulcers; it is an admirable remedy to kill the worms, by taking half a dram of the powder in a morning in any convenient liquor; the same is excellent good to be taken inwardly for the king's evil. It helps agues of all sorts, and the yellow jaundice, as also the bots in cattle; when kine are bitten on the udder by any venomous beast; do but stroke the place with the decoction of any of these, and it will instantly heal them.

CLOVE GILLIFLOWERS.

IT is in vain to describe an herb so well known.

Government and Virtues.] They are gallant, fine temperate flowers, of the nature and under the dominion of Jupiter; yea,

so temperate, that no excess, either in heat, cold, dryness, nor moisture, can be perceived in them; they are great strengtheners both of the brain and heart, and will therefore serve either for cordials or cephalics as your occasion will serve. There is both a syrup and a conserve made of them alone, commonly to be had at every apothecary's. To take now and then a little of either, strengthens nature much, in such as are in consumptions. They are also excellent good in hot pestilent fevers, and expel poison.

GERMANDER.

Descript.] COMMON germander shooteth forth sundry stalks, with small and somewhat round leaves, dented about the edges. The flowers stand at the tops, of a deep purple colour. The root is composed of divers sprigs, which shoot forth a great way round about, quickly overspreading a garden.

Place.] It groweth usually with us in gardens.

Time.] And flowereth in June and July.

Government and Virtues.] It is a most prevalent herb of Mercury, and strengthens the brain and apprehension exceedingly; (you may see what human virtues are under Mercury, in the latter end of my Ephemeris for 1652,) strengthens them when weak, and relieves them when drooping. This taken with honey (saith Dioscorides,) is a remedy for coughs, hardness of the spleen, and difficulty of urine, and helpeth those that are fallen into a dropsy, especially at the beginning of the disease, a decoction being made thereof when it is green, and drank. It also bringeth down women's courses, and expelleth the dead child. It is most effectual against the poison of all serpents, being drank in wine, and the bruised herb outwardly applied; used with honey, it cleanseth old and foul ulcers; and made into an oil, and the eyes anointed therewith, taketh away the dimness and moistness. It is likewise good for the pains in the sides and

cramps. The decoction thereof taken for four days together, driveth away and cureth both tertian and quartan agues. It is also good against all diseases of the brain, as continual head ach, falling sickness, melancholy, drowsiness and dulness of the spirits, convulsions and palsies. A dram of the seed taken in powder purgeth by urine, and is good against the yellow jaundice. The juice of the leaves dropped into the ears killeth the worms in them. The tops thereof, when they are in flower, steeped twenty-four hours in a draught of white wine, and drank, killeth the worms in the belly.

STINKING GLADWIN.

Descript.] **T**HIS is one of the kinds of flower-de-luce, having divers leaves arising from the roots, very like a flower-de-luce, but that they are sharp-edged on both sides, and thicker in the middle, of a deeper green colour, narrower and sharper pointed, and a strong ill scent, if they be bruised between the fingers. In the middle riseth up a reasonable strong stalk, a yard high at the least, bearing three or four flowers at the top, made somewhat like the flowers of the flower-de-luce, with three upright leaves, of a dead purplish ash-colour, with some veins discoloured in them: the other three do not fall down, nor are the three other small ones so arched, nor cover the lower leaves as the flower-de-luce doth, but stand loose or asunder from them. After they are past, there come up three square hard husks, opening wide into three parts when they are ripe, wherein lie reddish seed, turning black when it hath abiden long. The root is like that of the flower-de-luce, but reddish on the outside, and whitish within, very sharp and hot in the taste, of as evil scent as the leaves.

Place.] This groweth as well in upland grounds, as in moist places, woods, and shadowy places by the sea side in many places of this land, and is usually nursed up in gardens.

Time.] It flowereth not until July, and the seed is ripe in

August or September, yet the husks after they are ripe, opening themselves, will hold their seed with them for two or three months, and not shed them.

Government and Virtues.] It is supposed to be under the dominion of Saturn. It is used by many country people to purge corrupt phlegm and choler, which they do by drinking the decoction of the roots; and some to make it more gentle, do but infuse the sliced roots in ale; and some take the leaves which serve well for the weaker stomachs; The juice hereof put up, or stuffed up the nose, causeth sneezing, and draweth from the head much corruption; and the powder thereof doth the same. The powder thereof drank in wine, helpeth those that are troubled with cramps and convulsions, or with the gout and sciatica, and giveth ease to those that have griping pains in their body and belly, and helpeth those that have the strangury. It is given with much profit to those that have had long fluxes by the sharp and evil quality of humours, which it stayeth, having first cleansed and purged them by the drying and binding property therein. The root boiled in wine and drank, doth effectually procure women's courses, and used as a pessary, worketh the same effect, but causeth abortion in women with child. Half a dram of the seed beaten to powder, and taken in wine, doth speedily cause one to piss, which otherwise cannot. The same taken with vinegar, dissolveth the hardness and swellings of the spleen. The root is very effectual in all wounds, especially of the head; as also to draw forth any splinters, thorns, or broken bones, or any other thing sticking in the flesh, without causing pains, being used with a little verdigrease and honey, and the great centaury root. The same boiled in vinegar, and laid upon any tumour or swelling, doth very effectually dissolve and consume them; yea even the swellings of the throat called the king's evil; the juice of the leaves or roots healeth the itch, and all running or spreading scabs, sores, blemishes, or scars in the skin, wheresoever they be.

Sonchus

Silene

Silene

GOLDEN ROD.

Descript.] **T**HIS ariseth up with brownish small round stalks, two feet high, and sometimes more, having thereon many narrow and long dark green leaves, very seldom with any dents about the edges, or any stalks of white spots therein, yet they are sometimes so found divided at the tops into many small branches, with divers small yellow flowers on every one of them, all which are turned one way, and being ripe, do turn into down, and are carried away by the wind. The root consists of many small fibres, which grow not deep in the ground, but abideth all the winter therein, shooting forth new branches every year, the old ones lying down to the ground.

Place.] It groweth in the open places of woods and copses, both moist and dry grounds, in many places of this land.

Time.] It flowereth about the month of July.

Government and Virtues.] Venus claims the herb, and therefore to be sure it respects beauty lost. Arnoldus de Villa Nova commends it much against the stone in the reins and kidneys, and to provoke urine in abundance, whereby also the gravel and stone may be voided. The decoction of the herb, green or dry, or the distilled water thereof, is very effectual for inward bruises, as also to be outwardly applied, it stayeth bleeding in any part of the body, and of wounds; also the fluxes of humours, the bloody flux, and women's courses; and is no less prevalent in all ruptures or burstings, being drank inwardly, and outwardly applied. It is a sovereign wound herb, inferior to none, both for inward and outward hurts; green wounds, old sores and ulcers, are quickly cured therewith. It is also of especial use in all lotions for sores or ulcers in the mouth, throat, or privy parts of man or woman. The decoction also helpeth to fasten the teeth that are loose in the gums.

GOUT-WORT, OR HERB GERRARD.

Descript.] **I**T is a low herb, seldom rising half a yard high, having sundry leaves standing on brownish green stalks by threes, snipped about, and of a strong unpleasant savour: The umbels of the flowers are white, and the seed blackish, the root runneth in the ground, quickly taking a great deal of room.

Place.] It groweth by hedge and wall-sides, and often in the borders and corners of fields, and in gardens also.

Time.] It flowereth and seedeth about the end of July.

Government and Virtues.] Saturn rules it. Neither is it to be supposed gout-wort hath its name for nothing but upon experiment to heal the gout and sciatica; as also joint-achs, and other cold griefs. The very bearing of it about one easeth the pains of the gout, and defends him that bears it from the disease.

GROMEL.

OF this I shall briefly describe the kinds, which are principally used in physic, the virtues whereof are alike, though somewhat different in their manner and form of growing.

Descript.] The greater gromel groweth up with slender hard and hairy stalks, trailing and taking root in the ground, as it lieth thereon, and parted into many other small branches with hairy dark green leaves thereon. At the joints with the leaves come forth very small blue flowers, and after them hard stony roundish seed. The root is long and woody, abiding the winter, and shooteth forth fresh stalks in the spring.

The smaller wild gromel sendeth forth divers upright hard branched stalks, two or three feet high, full of joints, at every one of which groweth small, long, hard, and rough leaves like the former, but lesser; among which leaves come forth

Groundpine

Harefoot

Groundwell

small white flowers, and after them greyish round seed like the former; the root is not very big, but with many strings thereat.

The garden gromel hath divers upright, slender, woody, hairy stalks, blown and cressed, very little branched, with leaves like the former, and white flowers; after which in rough brown husks, is contained a white, hard, round seed, shining like pearls, and greater than either of the former; the root is like the first described, with divers branches and sprigs thereat, which continueth (as the first doth) all the winter.

Place.] The two first grow wild in barren or untilled places, and by the way sides in many places of this land. The last is a nursling in the gardens of the curious.

Time.] They all flower from Midsummer until September, sometimes, and in the mean time the seed ripeneth.

Government and Virtues.] The herb belongs to Dame Venus; and therefore if Mars cause the cholic or stone, as usually he doth if in Virgo, this is your cure. These are accounted to be of as singular force as any herb or seed whatsoever, to break the stone and to void it, and the gravel either in the reins or bladder, as also to provoke urine, being stopped, and to help the strangury. The seed is of greater use, being bruised and boiled in white wine or in broth, or the like, or the powder of the seed taken therein. Two drams of the seed in powder taken with women's breast milk, is very effectual to procure a very speedy delivery to such women as have sore pains in their travail, and cannot be delivered: The herb itself, (when the seed is to be had) either boiled, or the juice thereof drank, is effectual to all the purposes aforesaid, but not so powerful or speedy in operation.

GOOSEBERRY BUSH.

CALLED also feadberry, and in Sussex dewberry-bush, and in some counties wineberry.

Government and Virtues.] They are under the dominion of

Venus. The berries, while they are unripe, being scalded, or baked, are good to stir up a fainting or decaying appetite, especially such whose stomachs are afflicted by choleric humours: They are excellent good to stay longings of women with child. You may keep them preserved with sugar all the year long. The decoction of the leaves of the tree cools hot swellings and inflammations; as also St. Anthony's fire. The ripe gooseberries being eaten, are an excellent remedy to allay the violent heat both of the stomach and liver. The young and tender leaves break the stone, and expel gravel both from the kidneys and bladder. All the evils they do to the body of man is, they are supposed to breed crudities, and by crudities, worms.

WINTER-GREEN.

Descript.] **T**HIS sends forth seven, eight, or nine leaves from a small brown creeping root, every one standing upon a long foot-stalk, which are almost as broad as long, round pointed, of a sad green colour, and hard in handling, and like the leaf of a pear-tree; from whence ariseth a slender weak stalk, yet standing upright, bearing at the top many small white sweet-smelling flowers, laid open like a star, consisting of five round pointed leaves, with many yellowish threads standing in the middle about a green head, and a long stalk with them, which in time groweth to be the seed-vessel, which being ripe is found five square, with a small point at it, wherein is contained seed as small as dust.

Place.] It groweth seldom in fields, but frequently in the woods northwards, viz. in Yorkshire, Lancashire, and Scotland.

Time.] It flowereth about June and July.

Government and Virtues.] Winter green is under the dominion of Saturn, and is a singular good wound herb, and an especial remedy for to heal green wounds speedily, the green

leaves being bruised and applied, or the juice of them. A salve made of the green herb stamped, or the juice boiled with hog's lard, or with salad oil and wax, and some turpentine added unto it, is a sovereign salve, and highly extolled by the Germans, who use it to heal all manner of wounds and sores. The herb boiled in wine and water, and given to drink to them that have any inward ulcers in their kidneys, or neck of the bladder, doth wonderfully help them. It stayeth all fluxes, as the lask, bloody fluxes, women's courses, and bleeding of wounds, and taketh away any inflammations rising upon pains of the heart; it is no less helpful for foul ulcers, hard to be cured; as also for cankers or fistulas. The distilled water of the herb doth effectually perform the same things.

GROUNDSEL.

Descript.] **O**UR common groundsel hath a round green and somewhat brownish stalk, spreading toward the top into branches, set with long and somewhat narrow green leaves, cut in on the edges, somewhat like the oak leaves, but lesser and round at the end. At the tops of the branches stand many small green heads, out of which grow many small, yellow threads or thumbs, which are the flowers, and continue many days blown in that manner, before it pass away into down, and, with the seed, is carried away in the wind. The root is small and thready, and soon perisheth, and as soon riseth again of its own sowing, so that it may be seen many months in the year, both green and in flower, and seed; for it will spring and seed twice in a year at least, if it be suffered in a garden.

Place.] This groweth almost every where, as well on tops of walls, as at the foot, amongst rubbish and untilled grounds, but especially in gardens.

Time.] It flowereth, as is said before, almost in every month throughout the year.

Government and Virtues.] This herb is Venus's mistress-

piece, and is as gallant and universal a medicine for all diseases coming of heat, in what part of the body soever they be, as the sun shines upon; it is very safe and friendly to the body of man; yet causeth vomiting if the stomach be afflicted; if not, purging; and it doth it with more gentleness than can be expected; it is moist, and something cold withal, thereby causing expulsion, and repressing the heat caused by the motion of the internal parts in purges and vomits. Lay by our learned receipts, "take so much sena, so much scammony, so much colocynthis, so much infusion of crocus metallorum," &c.; this herb alone served in a syrup, in a distilled water or in an ointment, shall do the deed for you in all hot diseases, and, shall do it, 1. Safely, 2. Speedily.

The decoction of the herb (saith Dioscorides) made with wine, and drank, helpeth the pains of the stomach, proceeding of choler, (which it may well do by a vomit) as daily experience sheweth. The juice thereof taken in drink, or the decoction of it in ale, gently performeth the same. It is good against the jaundice and falling sickness, being taken in wine; as also against difficulty of making water. It provokes urine, expelleth gravel in the reins or kidneys, a dram thereof given in oxymel, after some walking or stirring of the body. It helpeth also the sciatica, griping of the belly, the cholic, defects of the liver, and provoketh women's courses. The fresh herb boiled, and made into a poultice, applied to the breasts of women that are swollen with pain and heat, as also the privy parts of man or woman, the seat or fundament, or the arteries, joints and sinews, when they are inflamed and swollen, doth much ease them; and used with some salt, helpeth to dissolve knots or kernels in any part of the body. The juice of the herb, or (as Dioscorides saith) the leaves and flowers, with some fine frankincence in powder, used in wounds of the body, nerves or sinews, doth singularly help to heal them. The distilled water of the herb performeth well all the aforesaid cures, but especially for inflammations or watering of the eyes, by reason of the defluction of rheum unto them.

HEART'S-EASE.

THIS is that herb, which such physicians as are licensed to plaspheme by authority, without danger of having their tongues burned through with an hot iron, call an herb of the Trinity. It is also called by those that are more moderate, three faces in a hood, live in idleness, cull me to you; and in Sussex we call them pancies.

Place.] Besides those which are brought up in gardens, they grow commonly wild in the fields, especially in such as are very barren: sometimes you may find it on the tops of the high hills.

Time.] They flower all the spring and summer long.

Government and Virtues.] The herb is really Saturnine, something cold, viscous, and slimy. A strong decoction of the herbs and flowers (if you will, you may make it into syrup) is an excellent cure for the French-pox, the herb being a gallant antivenerean: and that antivenereans are the best cure for that disease, far better and safer than to torment them with the flux, divers foreing physicians have confessed. The spirit of it is excellent good for the convulsions in children, as also for the falling sickness, and a gallant remedy for the inflammation of the lungs and breasts, pleurisy, scabs, itch, &c. It is under the celestial sign cancer.

ARTICHOKES.

THE Latins call them cinera, only our college calls them antichocus.

Government and Virtues.] They are under the dominion of Venus, and therefore it is no marvel if they provoke lust, as indeed they do, being something windy meat; and yet they stay the involuntary course of natural seed in man, which is commonly called nocturnal pollutions. And here I care not greatly if I quote a little of Galen's nonsense in his treatise of the facul-

ties of nourishment. He saith, they contain plenty of choleric juice (which notwithstanding I can scarcely believe) of which he saith is engendered melancholy juice, and of that melancholy juice thin choleric blood. But to proceed; this is certain that the decoction of the root boiled in wine, or the root bruised and distilled in wine in an alembic, and being drank, purgeth by urine exceedingly.

HART'S TONGUE.

THIS hath divers leaves arising from the root every one severally, which fold themselves to their first springing and spreading: when they are full grown, are about a foot long, smooth and green above, but hard and with little sap in them, and streaked on the back, thwart on both sides of the middle rib, with small and somewhat long and brownish marks; the bottoms of the leaves are a little bowed on each side of the middle rib, somewhat narrow with the length, and somewhat small at the end. The root is of many black threads, folded or interlaced together.

Time.] It is green all the winter; but new leaves spring every year.

Government and Virtues.] Jupiter claims dominion over this herb, therefore it is a singular remedy for the liver, both to strengthen it when weak, and to ease it when afflicted, you shall do well to keep it in a syrup all the year: for though authors say it is green all the year, I scarce believe it. Hart's tongue is much commended against the hardness and stoppings of the spleen and liver, and against the heat of the liver and stomach, and against lasks, and the bloody flux. The distilled water thereof is also very good against the passions of the heart, and to stay hiccough, to help the falling of the palate, and to stay the bleeding of the gums, being gargled in the mouth. Dioscorides saith, it is good against the stinging or biting of serpents. As for the use of it, my direction at the latter end will

Hemlock

Marsh Marigold

be sufficient, and enough for those that are studious in physic, to whet their brains upon for one year or two.

HAZEL-NUT.

HAZEL nuts are so well known to every body, that they need no description.

Government and Virtues.] They are under the dominion of Mercury. The parted kernels made into an electuary, or the milk drawn from the kernels with mead or honeyed water, is very good to help an old cough; and being parched, and a little pepper put to them and drank, divesteth the distillations of rheum from the head. The dried husks and shells, to the weight of two drams, taken in red wine, stayeth lasks and women's courses, and so doth the red skin that covers the kernels, which is more effectual to stay women's courses.

And if this be true, as it is, then why should the vulgar so familiarly affirm, that eating nuts causeth shortness of breath, than which nothing is falser? For, how can that which strengthens the lungs, cause shortness of breath? I confess, the opinion is far older than I am; I knew tradition was a friend to error before, but never that he was the father of slander: Or are men's tongues so given to slandering one another, that they must slander nuts too, to keep their tongues in use? If any thing of the hazel nut be stopping, it is the husks and shells, and nobody is so mad to eat them, unless physically; and the red skin which covers the kernel, you may easily pull off. And so thus have I made an apology for nuts, which cannot speak for themselves.

HAWK-WEED.

Descript.] **I**T hath many large leaves lying upon the ground, much rent or torn on the sides into gashes like dandelion, but with greater parts, more like the smooth sow thistle, from

among which riseth a hollow, rough stalk, two or three feet high, branched from the middle upward, whereon are set at every joint longer leaves, little or nothing rent or cut, bearing on their top sundry pale, yellow flowers, consisting of many small, narrow leaves, broad pointed, and nicked in at the ends, set in a double row or more, the outermost being larger than the inner, which form most of the hawk-weeds (for there are many kinds of them) which turn into down, and, with the small brownish seed, is blown away with the wind. The root is long, and somewhat greater, with many small fibres thereat. The whole plant is full of bitter milk.

Place.] It groweth in divers places about the field sides, and the path-ways in dry grounds.

Time.] It flowereth and flieth away in the summer months.

Government and Virtues.] Saturn owns it. Hawk-weed (saith Dioscorides) is cooling, somewhat drying and binding, and therefore good for the heat of the stomach, and gnawings therein; for inflammations, and the hot fits of agues. The juice thereof in wine, helpeth digestion, discusseth wind, hindereth crudities abiding in the stomach, and helpeth the difficulty of making water, and biting of venomous serpents, and stinging of the scorpion, if the herb be also outwardly applied to the place, and is very good against all other poisons. A scruple of the dried root given in wine and vinegar, is profitable for those that have the dropsy. The decoction of the herb taken with honey, digesteth the phlegm in the chest or lungs, and with hyssop helpeth the cough. The decoction thereof, and of wild succory, made with wine, and taken, helpeth the wind cholic and hardness of the spleen; it procureth rest and sleep, hindereth venery and venerous dreams, cooling heats, purgeth the stomach, increaseth blood, and helpeth the diseases of the reins and bladder. Outwardly applied, it is singularly good for all the defects and diseases of the eyes, used with some women's milk; and is used with good success in fretting or creeping ulcers, especially in the beginning. The green leaves bruised, and with

a little salt applied to any place burnt with fire, before blisters do arise, helpeth them; as also inflammations, St. Anthony's fire, and all pushes and eruptions, hot and salt phlegm. The same applied with meal and fair water in manner of a poultice, to any place, affected with convulsions and the cramp, such as are out of joint, doth give help and ease. The distilled water cleanseth the skin, and taketh away freckles, spots, morpew, or wrinkles in the face.

HAWTHORN.

IT is not my intent to trouble you with a description of this tree, which is so well known that it needeth none. It is ordinarily but a hedge bush, although being pruned and dressed, it groweth to a tree of a reasonable height.

As for the hawthorn tree at Glastenbury, which is said to flower yearly on Christmas-day, it rather shews the superstition of those that observe it for the time of its flowering, than any great wonder, since the like may be found in divers other places of this land; as in Whey-street in Romney Marsh, and near unto Nantwich in Cheshire, by a place called White Green, where it flowereth about Christmas and May. If the weather be frosty, it flowereth not until January, or until the hard weather be over.

Government and Virtues.] It is a tree of Mars. The seeds in the berries beaten to powder being drank in wine, are held singular good against the stone, and are good for the dropsy. The distilled water of the flowers stayeth the lask. The seed cleared from the down, bruised and boiled in wine, and drank, is good for inward tormenting pains. If clothes and sponges be wet in the distilled water, and applied to any place wherein thorns and splinters or the like, do abide in the flesh, it will notably draw them forth.

And thus you see the thorn gives a medicine for his own pricking, and so doth almost every thing else.

HEMLOCK.

Descript.] **T**HE common great hemlock groweth up with a green stalk, four or five feet high, or more, full of red spots sometimes, and at the joints very large winged leaves set at them, which are divided into many other winged leaves one set against the other, dented about the edges, of a sad green colour, branched towards the top, where it is full of umbels of white flowers, and afterwards with whitish flat seed: The root is long, white, and sometimes crooked, and hollow within. The whole plant, and every part hath a strong, heady, and ill-savoured scent, much offending the senses.

Place.] It groweth in all countries of this land, by walls and hedge-sides, in waste grounds and untilled places.

Time.] It flowereth and seedeth in July, or thereabouts.

Government and Virtues.] Saturn claims dominion over this herb, yet I wonder why it may not be applied to the privities in a priapism, or continual standing of the yard, it being very beneficial to that disease; I suppose, my author's judgment was first upon the opposite disposition of Saturn to Venus in those faculties, and therefore he forbade the applying of it to those parts, that it might not cause barrenness, or spoil the spirit procreative; which if it do, yet applied to the privities, it stops its lustful thoughts. Hemlock is exceedingly cold, and very dangerous, especially to be taken inwardly. It may safely be applied to inflammations, tumours, and swellings in any part of the body, (save the privy parts) as also to St. Anthony's fire, wheals, pushes, and creeping ulcers that arise of hot sharp humours, by cooling and repelling the heat; the leaves bruised and laid to the brow or forehead are good for their eyes that are red and swollen; as also to take away a pin and web growing in the eye; this is a tried medicine; Take a small handful of this herb, and half as much bay salt, beaten together, and applied to the contrary wrist of the hand for 24 hours, doth

remove it in thrice dressing. If the root thereof be roasted under the embers, wrapped in double wet paper, until it be soft and tender, and then applied to the gout in the hands or fingers, it will quickly help this evil. If any through mistake eat the herb hemlock instead of parsley, or the roots instead of parsnip (both of which it is very like) whereby happeneth a kind of frenzy, or perturbation of the senses, as if they were stupid and drunk, the remedy is (as Pliny saith) to drink of the best and strongest pure wine, before it strikes to the heart, or gentain put in wine, or a draught of vinegar, wherewith Tragus doth affirm, that he cured a woman that had eaten the root.

HEMP.

THIS is so well known to every good house-wife in the country, that I shall not need to write any description of it.

Time.] It is sown in the end of March or beginning of April, and is ripe in August or September.

Government and Virtues.] It is a plant of Saturn, and good for something else, you see, than to make halters only. The seed of hemp consumeth wind, and by too much use thereof disperseth it so much, that it drieth up the natural seed for procreation; yet, being boiled in milk, and taken, helpeth such as have a hot dry cough. The Dutch make an emulsion out of the seed, and give it with good success to those that have the jaundice, especially in the beginning of the disease, if there be no ague accompanying it, for it openeth obstructions of the gall, and causeth digestion of choler. The emulsion or decoction of the seed stayeth lasks and continual fluxes, easeth the cholic, and allayeth the troublesome humours in the bowels, and stayeth bleeding at the mouth, nose, or other places, some of the leaves being fried with the blood of them that bleed, and so given them to eat. It is held very good to kill the worms in men or beasts; and the juice dropped into the ears killeth worms in them, and draweth forth earwigs, or other living creatures

gotten into them. The decoction of the root allayeth inflammations of the head, or any other parts: the herb itself, or the distilled water thereof, doth the like. The decoction of the roots easeth the pains of the gout, the hard humours or knots in the joints, the pains and shrinkings of the sinews, and the pains of the hips. The fresh juice mixed with a little oil and butter, is good for any place that hath been burnt with fire, being thereto applied.

HENBANE.

Descript.] OUR common henbane hath very large, thick, soft woolly leaves, lying on the ground, much cut in, or torn on the edges, of a dark, ill greyish green colour; among which arise up divers thick and short stalks, two or three feet high, spread into divers small branches, with lesser leaves on them, and many hollow flowers, scarcely appearing above the husks, and usually torn on one side, ending in five round points, growing one above another, of a deadish yellow colour, somewhat paler towards the edges, with many purplish veins therein, and of a dark, yellowish purple in the bottom of the flower, with a small point of the same colour in the middle, each of them standing in a hard close husk, which after the flowers are past, groweth very like the husk of asarabacca, and somewhat sharp at the top points, wherein is contained much small seed, very like poppy seed, but of a dusky, greyish colour. The root is great, white, and thick, branching forth divers ways under ground, so like a parsnip root, (but that it is not so white) that it hath deceived others. The whole plant more than the root, hath a very heavy, ill, soporiferous smell, somewhat offensive.

Place.] It commonly groweth by the way-sides, and under hedge-sides and walls.

Time.] It flowereth in July, and springeth again yearly of its own seed. I doubt my authors mistook July for June, if not for May.

Kubane

Menon

Good King Henry

Government and Virtues.] I wonder how astrologers could take on them to make this an herb of Jupiter; and yet Mezal-dus, a man of penetrating brain, was of that opinion as well as the rest; the herb is indeed under the dominion of Saturn, and I prove it by this argument: All the herbs which delight most to grow in Saturnine places, are Saturnine herbs. But henbane delights most to grow in Saturnine places, and whole cart loads of it may be found near the places where they empty the common jacques, and scarce a ditch to be found without it growing by it: Ergo, it is an herb of Saturn. The leaves of henbane do cool all hot inflammations in the eyes, or any other part of the body; and are good to assuage all manner of swellings of the cods, or women's breasts or elsewhere, if they be boiled in wine, and either applied themselves, or the fomentation warm; it also assuageth the pain of the gout, the sciatica, and other pains in the joints, which arise from a hot cause. And applied with vinegar to the forehead and temples, helpeth the head ache and want of sleep in hot fevers. The juice of the herb or seed, or the oil drawn from the seed, does the like. The oil of the seed is helpful for deafness, noise, and worms in the ears, being dropped therein; the juice of the herb or root doth the same. The decoction of the herb or seed, or both, killeth lice in man or beast. The fume of the dried herb, stalks and seed, burned, quickly healeth swellings, chilblains or kibes in the hands or feet, by holding them in the fume thereof. The remedy to help those that have taken henbane is to drink goat's milk, honeyed water, or pine kernels, with sweet wine; or, in the absence of these, fennel seed, the seed of cresses, mustard, or raddish; as also onions or garlic taken in wine, do all help to free them from danger, and restore them to their due temper again.

Take notice, that this herb must never be taken inwardly; outwardly, an oil, ointment, or plaister of it, is most admirable for the gout, to cool the venereal heat of the reins in the French pox; to stop the tooth ache, being applied to the aching

side; to allay all inflammations, and to help the diseases before promised.

HEDGE HYSSOP.

Descript.] **D**IVERS sorts there are of this plant; the first of which is an Italian by birth, and only nursed up here in the gardens of the curious. Two or three sorts are found commonly growing wild here, the description of two of which I shall give you. The first is a smooth, low plant, not a foot high, very bitter in taste, with many square stalks, diversely branched from the bottom to the top, with divers joints, and two small leaves at each joint, broader at the bottom than they are at the end, a little dented about the edges, of a sad green colour, and full of veins. The flowers stand at the joints, being of a fair purple colour, with some white spots in them, in fashion like those of dead nettles. The seed is small and yellow, and the roots spread much under ground.

The second seldom groweth half a foot high, sending up many small branches, whereon grow many small leaves, set one against the other, somewhat broad, but very short. The flowers are like the flowers of the other fashion, but of a pale reddish colour. The seeds are small and yellowish. The root spreadeth like the other, neither will it yield to its fellow one ace of bitterness.

Place.] They grow in wet low grounds, and by the watersides; the last may be found among the bogs on Hamstead heath.

Time.] They flower in June and July, and the seed is ripe presently after.

Government and Virtues.] They are herbs of Mars, and as cholerick and churlish as he is, being most violent purges, especially of choler and phlegm. It is not safe taking them inwardly, unless they be well rectified by the art of the alchymist, and only the purity of them given; so used they may be very helpful both for the dropsy, gout, and sciatica; outwardly used

in ointment they kill worms, the belly anointed with it, and are excellent good to cleanse old and filthy ulcers.

BLACK HELLEBORE.

IT is called setter-wort, setter-grass, bear's-foot, christmas-herb, and christmas-flower.

Descript.] It hath sundry, fair, green leaves rising from the root, each of them standing about an handful high from the earth; each leaf is divided into seven, eight, or nine parts, dented from the middle of the leaf to the point on both sides, abiding green all the winter, about christmas time, if the weather be any thing temperate, the flowers appear upon foot-stalks, also consisting of five large, round, white leaves a-piece, which sometimes are purple towards the edges, with many pale yellow thumbs in the middle; the seeds are divided into several cells, like those of columbines, save only that they are greater; the seeds are in colour black, and in form long and round. The root consisteth of numberless blackish strings all united into one head. There is another black hellebore, which grows up and down in the woods very like this, but only that the leaves are smaller and narrower, and perish in the winter, which this doth not.

Place.] The first is maintained in gardens. The second is commonly found in the woods in Northamptonshire.

Time.] The first flowereth in December or January: the second in February or March.

Government and Virtues.] It is an herb of Saturn, and therefore no marvel if it hath some sullen condition with it, and would be far safer being purified by the art of the alchymist than given raw. If any have taken any harm by taking it, the common cure is to take goat's milk: if you cannot get goat's milk, you must make shift with such as you can get. The roots are very effectual against all melancholy diseases, especially, such as are of long standing, as quartan agues and madness; it helps

the falling sickness, the leprosy, both the yellow and black jaundice, the gout, sciatica, and convulsions; and this was found out by experience, that the root of that which groweth wild in our country, works not so churlishly as those do which are brought from beyond sea, as being maintained by a more temperate air. The root used as a pessary, provokes the terms exceedingly; also being beaten into powder, and strewed upon foul ulcers, it consumes the dead flesh, and instantly heals them; nay, it will help gangrenes in the beginning. Twenty grains taken inwardly is a sufficient dose for one time, and let that be corrected with half so much cinnamon; country people used to rowel their cattle with it. If a beast be troubled with a cough, or have taken any poison, they bore a hole through his ear, and put a piece of the root in it, this will help him in 24 hours. Many other uses farriers put it to which I shall forbear.

HERB ROBERT.

Descript.] **I**T riseth up with a reddish stalk, two feet high, having divers leaves thereon upon very long and reddish footstalks, divided at the ends into three or five divisions, each of them cut in on the edges, some deeper than others, and all dented likewise about the edges, which sometimes turn reddish. At the tops of the stalks come forth divers flowers made of five leaves, much larger than the dove's foot, and of a more reddish colour; after which come black heads, as in others. The root is small and thready, and smelleth as the whole plant, very strong, almost stinking.

Place.] This groweth frequently every where by the waysides, upon ditch banks and waste grounds wheresoever one goeth.

Time.] It flowereth in June or July chiefly, and the seed is ripe shortly after.

Government and Virtues.] It is under the dominion of Venus. Herb robert is commended not only against the stone, but to stay

blood, where or howsoever flowing; it speedily healeth all green wounds, and is effectual in old ulcers in the privy parts, or elsewhere. You may persuade yourself this is true, and also conceive a good reason for it, if you do but consider it is an herb of Venus, for all it hath a man's name.

HERB TRUE-LOVE, OR ONE-BERRY.

Descript.] ORDINARY herb true-love, hath a small creeping root running under the uppermost crust of the ground, somewhat like couch grass root, but not so white, shooting forth stalks with leaves, some whereof carry no berries, the others do; every stalk smooth without joints, and blackish green, rising about half a foot high, if it bear berries, otherwise seldom so high, bearing at the top four leaves set directly one against another, in manner of a cross or ribband tied (as it is called) in a true-love's knot, which are each of them apart somewhat like unto a nightshade leaf, but somewhat broader, having sometimes three leaves, sometimes five, sometimes six, and those sometimes greater than in others; in the middle of the four leaves riseth up one small slender stalk, about an inch high, bearing at the tops thereof one flower spread open like a star, consisting of four small and long narrow pointed leaves of a yellowish green colour, and four others lying between them lesser than they; in the middle whereof stands a round dark purplish button or head, compassed about with eight small yellow mealy threads with three colours, making it the more conspicuous, and lovely to behold. This button or head in the middle, when the other leaves are withered, becometh a blackish purple berry, full of juice, of the bigness of a reasonable grape, having within it many white seeds. The whole plant is without any manifest taste.

Place.] It groweth in woods and copses, and sometimes in the corners or borders of fields, and waste grounds in very many places of this land, and abundantly in the woods, copses, and other places about Chislehurst and Maidstone in Kent.

Time.] They spring up in the middle of April or May, and are in flower soon after. The berries are ripe in the end of May, and in some places in June.

Government and Virtues.] Venus owns it; the leaves or berries hereof are effectual to expel poison of all sorts, especially that of the aconites; as also the plague, and other pestilential disorders: Matthiolus saith, that some that have lain long in lingering sickness, and others that by witchcraft (as it was thought) were become half foolish, by taking a dram of the seeds or berries hereof in powder every day for 20 days together, were restored to their former health. The roots in powder taken in wine, easeth the pains of the cholic speedily. The leaves are very effectual, as well for green wounds, as to cleanse and heal up filthy old sores and ulcers; and are very powerful to discuss all tumours and swellings in the cods, privy parts, the groin, or in any part of the body, and speedily to allay all inflammations. The juice of the leaves applied to felons, or those nails of the hands or toes that have imposthumes or sores gathered together at the roots of them, healeth them in a short space. This herb is not to be described for the premises, but is fit to be nourished in every good woman's garden.

HYSSOP.

HYSSOP is so well known to be an inhabitant in every garden, that it will save me labour in writing a description thereof. The virtues are as follow:

Temperature and Virtues.] The herb is Jupiter's, and the sign Cancer. It strengthens all the parts of the body under Cancer and Jupiter; which what they may be, is found amply discussed in my astrological judgment of diseases. Dioscorides saith that hyssop boiled with rue and honey, and drank, helpeth those that are troubled with coughs, shortness of breath, wheezing and rheumatic distillations upon the lungs; taken also with oxymel, it purgeth gross humours by stool; and with honey killeth worms in the belly; and with fresh and new figs bruised,

helpeth to loosen the belly, and more forcibly if the root of flower-de-luce, and cresses be added thereto. It amendeth and cherisheth the native colour of the body, spoiled by the yellow jaundice; and being taken with figs and nitre, helpeth the dropsy and spleen; being boiled with wine, it is good to wash inflammations, and taketh away the black and blue spots, and marks that come by strokes, bruises, or falls, being applied with warm water. It is an excellent medicine for the quinsy, or swelling in the throat, to wash and gargle it, being boiled in figs; it helpeth the tooth-ache, being boiled in vinegar and gargled therewith. The hot vapours of the decoction taken by a funnel in at the ears, easeth the inflammations and singing noise of them. Being bruised, and salt, honey, and cummin-seed put to it, helpeth those that are stung by serpents. The oil thereof (the head being anointed) killeth lice, and taketh away itching of the head. It helpeth those that have the falling sickness, which way soever it be applied. It helpeth to expectorate tough phlegm, and is effectual in all cold griefs or diseases of the chest or lungs, being taken either in syrup or licking medicine. The green herb bruised and a little sugar put thereto doth quickly heal any cut or green wound, being thereunto applied.

HOPS.

THESE are so well known that they need no description; I mean the manured kind, which every good husband or housewife is acquainted with.

Descript.] The wild hop groweth up as the other doth, ramming upon trees or hedges, that stand next to them, with rough branches and leaves like the former but it giveth smaller heads, and in far less plenty than it, so that there is scarce a head or two seen in a year on divers of this wild kind, wherein consisteth the chief difference.

Place.] They delight to grow in low moist grounds, and are found in all parts of this land.

Time.] They spring not up until April, and flower not until

the latter end of June; the heads are not gathered until the middle or latter end of September.

Government and Virtues.] It is under the dominion of Mars. This, in physical operations, is to open obstructions of the liver and spleen, to cleanse the blood, to loosen the belly, to cleanse the reins from gravel, and provoke urine. The decoction of the tops of hops, as well of the tame as the wild; worketh the same effects. In cleansing the blood they help to cure the French disease, and all manner of scabs, itch, and over breakings-out of the body; as also all tetters, ringworms, and spreading sores, the morpew, and all discolouring of the skin. The decoction of the flowers and tops do help to expel poison that any one hath drank. Half a dram of the seed in powder taken in drink, killeth worms in the body, bringeth down women's courses, and expelleth urine. A syrup made of the juice and sugar, cureth the yellow jaundice, easeth the head-ache that comes of heat, and tempereth the heat of the liver and stomach, and is profitably given in long and hot agues that rise in choler and blood. Both the wild and the manured are of one property, and alike effectual in all the aforesaid diseases. By all these testimonies beer appears to be better than ale.

Mars owns the plant, and then Dr. Reason will tell you how it performs these actions.

HOREHOUND.

Descript.] COMMON horehound groweth up with square hairy stalks, half a yard or two feet high, set at the joints with two round crumpled rough leaves of a sullen hoary green colour, of a reasonable good scent, but a very bitter taste. The flowers are small, white, and gaping, set in a rough, hard prickly husk round about the joints, with the leaves from the middle of the stalk upward, wherein afterward is found small round blackish seed. The root is blackish, hard and woody, with many strings, and abideth many years.

White Horehound

Black Horehound

Heart-leaved

Place.] It is found in many parts of this land, in dry grounds, and waste green places.

Time.] It flowereth in July, and the seed is ripe in August.

Government and Virtues.] It is an herb of Mercury. A decoction of the dried herb, with the seed, or the juice of the green herb taken with honey, is a remedy for those that are short-winded, have a cough, or are fallen in a consumption, either through long sickness, or thin distillations or rheum upon the lungs. It helpeth to expectorate tough phlegm from the chest, being taken from the roots of Iris or Orris. It is given to women to bring down their courses, to expel their after-birth, and to them that have sore and long travails; as also to those that have taken poison, or are stung or bitten by venomous serpents. The leaves used with honey, purge foul ulcers, stay running or creeping sores, and the growing of the flesh over the nails. It also helpeth pains of the sides. The juice thereof with wine and honey, helpeth to clear the eye-sight, and snuffed up into the nostrils, purgeth away the yellow jaundice, and with a little oil of roses dropped into the ears, easeth the pains of them. Galen saith, it openeth obstructions both of the liver and spleen, and purgeth the breast and lungs of phlegm; and used outwardly it both cleanseth and digesteth. A decoction of horehound (saith Matthiolus) is available for those that have hard livers, and for such as have itches and running tetters. The powder hereof taken, or the decoction, killeth worms. The green leaves bruised, and boiled in old hog's grease into an ointment, healeth the biting of the dogs, abateth the swellings and pains that come by any pricking of thorns, or such like mean; and used with vinegar cleanseth and healeth tetters. There is a syrup made of horehound to be had at the apothecaries, very good for old coughs, to rid the tough phlegm; as also to void cold rheums from the lungs of old folks, and for those that are asthmatic or short-winded.

HORSETAIL.

OF that there are many kinds, but I shall not trouble you

nor myself with any large description of them, which to do, were but, as the proverb is, To find a knot in a rush, all the kinds thereof being nothing else but knotted rushes, some with leaves and some without. Take the description of the most eminent sort as followeth :

Descript.] The great horsetail, at the first springing, hath heads somewhat like those of asparagus, and after grow to be hard, rough, hollow stalks jointed at sundry places up to the top, a foot high, so made as if the lower parts were put into the upper, where grow on each side a bush of small long rush-like hard leaves, each part resembling a horsetail, from whence it is called so. At the tops of the stalks come forth small catkins, like those of trees. The root creepeth under ground having joints at sundry places.

Place.] This (as most of the other sorts hereof) groweth in wet grounds.

Time.] They spring up in April, and their blooming catkins in July, seeding for the most part in August, and then perish down to the ground, rising afresh in the spring.

Government and Virtues.] The herb belongs to Saturn, yet is very harmless, and excellent good for the things following: Horsetail, the smoother rather than the rough and the leaved rather than the bare, is most physical. It is very powerful to staunch bleeding either inward or outward, the juice of the decoction thereof being drank, or the juice, decoction, or distilled water applied outwardly. It also stayeth all sorts of lasks and fluxes in man or woman, and the pissing of blood; and healeth also not only the inward ulcers, and the excoriation of the entrails, bladder, &c. but all other sorts of foul, moist, and running ulcers, and soon soldereth together the tops of green wounds. It cureth all ruptures in children. The decoction thereof in wine being drank, provoketh urine, and helpeth the stone and strangury; and the distilled water thereof drank two or three times in a day, and a small quantity at a time, also easeth the entrails or guts, and is effectual against a cough that comes by distillation from the head. The juice or

distilled water being warmed, and hot inflammations, pustules or red wheals and other breakings out in the skin, being bathed therewith, doth help them, and doth no less ease the swelling heat and inflammation of the fundament, or privy parts in men and women.

HOUSELEEK, OR SENGREEN.

BOTH these are so well known to my countrymen that I shall not need to write any description of them.

Place.] It groweth commonly upon walls and house-sides, and flowereth in July.

Government and Virtues.] It is an herb of Jupiter, and it is reported by Mezaldus, to preserve what it grows upon from fire and lightning. Our ordinary houseleek is good for all inward heats as well as outward, and in the eyes or other parts of the body; a posset made with the juice of houseleek, is singular good in all hot agues, for it cooleth and tempereth the blood and spirits, and quencheth the thirst; and is also good to stay all hot defluxions or sharp and salt rheums in the eyes, the juice being dropped into them, or into the ears, helpeth them. It helpeth also other fluxes of humours in the bowels, and the immoderate courses in women. It cooleth and restraineth all other hot inflammations, St. Anthony's fire, scaldings and burnings, the shingles, fretting ulcers, cankers, tetters, ringworms, and the like; and much easeth the pains of the gout proceeding from a hot cause. The juice also taketh away warts and corns in the hands or feet, being often bathed therewith, and the skin and leaves being laid on them afterwards. It easeth also the headache, and distempered heat of the brain in phrenzies, or through want of sleep, being applied to the temples and forehead. The leaves bruised and lain upon the crown or seam of the head, stayeth bleeding at the nose very quickly. The distilled water of the herb is profitable for all the purposes aforesaid. The leaves being gently rubbed on any place stung with nettles or bees, doth quickly take away the pain.

HOUND'S TONGUE.

Descript.] **T**HE great ordinary hound's tongue hath many long and somewhat narrow, soft, hairy, darkish green leaves, lying on the ground, somewhat like unto buglos leaves, from amongst which riseth up a rough hairy stalk about two feet high, with some smaller leaves thereon, and branched at the tops into divers parts, with a small leaf at the foot of every branch, which is somewhat long, with many flowers set along the same, which branch is crooked or turned inwards before it flowereth, and openeth by degrees as the flower doth blow, which consists of small purplish red leaves of a dead colour rising out of the husks wherein they stand with some threads in the middle. It hath sometimes a white flower. After the flowers are past, there cometh rough flat seed, with a small pointal in the middle, easily cleaving to any garment that it toucheth, and not so easily pulled off again. The root is black, thick, and long, hard to break, and full of clammy juice, smelling somewhat strong, of an evil scent, as the leaves also do.

Place.] It groweth in most places of this land, in waste grounds, and untilled places, by highway-sides, lanes, and hedge-sides.

Time.] It flowereth about May or June, and the seed is ripe shortly after.

Government and Virtues.] It is a plant under the dominion of Mercury. The root is very effectually used in pills, as well as the decoction, or otherwise, to stay all sharp and thin defluctions of rheum from the head into the eyes, or nose, or upon the stomach or lungs, as also for coughs and shortness of breath. The leaves boiled in wine (saith Dioscorides, but others do rather appoint it to be made with water, and to add thereto oil and salt) mollifieth or openeth the belly downwards. It also helpeth to cure the biting of a mad dog, some of the leaves being also applied to the wound: The leaves bruised, or the juice of them boiled in hog's lard, and applied, helpeth the falling away of the

St. John's Wort

Kidney Wort

Juniper Shrub

hair, which cometh of hot and sharp humours; as also for any place that is scalded or burnt; the leaves bruised and laid to any green wound doth heal it up quickly; the root baked under the embers, wrapped in paste or wet paper, or in wet double cloth, and thereof a suppository made, and put up into or applied to the fundament, doth very effectually help the painful piles or hæmorrhoids. The distilled water of the herbs and roots is very good to all the purposes aforesaid, to be used as well inwardly to drink, as outwardly to wash any sore place, for it healeth all manner of wounds and punctures, and those foul ulcers that arise by the French pox. Mizaldus adds that the leaves laid under the feet, will keep the dogs from barking at you. It is called hound's tongue, because it ties the tongues of hounds; whether true or not, I never tried, yet I cured the biting of a mad dog with this only medicine.

HOLLY, HOLM, OR HULVER BUSH.

FOR to describe a tree so well known is needless.

Government and Virtues.] The tree is Saturnine. The berries expel wind, and therefore are held to be profitable in the cholic. The berries have a strong faculty with them; for if you eat a dozen of them in the morning fasting when they are ripe and not dried, they purge the body of gross and clammy phlegm; but if you dry the berries, and, beat them into powder, they bind the body, and stop fluxes, bloody-fluxes, and the terms in women. The bark of the tree, and also the leaves, are excellent good, being used in fomentations for broken bones, and such members as are out of joint. Pliny saith the branches of the tree defend houses from lightning, and men from witchcraft.

ST. JOHN'S WORT.

Descript.] **C**OMMON St. John's wort shooteth forth brownish, upright, hard, round stalks, two feet high, spreading many branches from the sides up to the tops of them, with two small leaves set one against another at every place, which are of a deep

green colour, somewhat like the leaves of the lesser centaury, but narrow, and full of small holes in every leaf, which cannot be so well perceived, as when they are held up to the light; at the tops of the stalks and branches stand yellow flowers of five leaves a-piece, with many yellow threads in the middle, which being bruised, do yield a reddish juice like blood: after which come small round heads, wherein is contained small blackish seed, smelling like rosin. The root is hard and woody, with divers strings and fibres at it, of a brownish colour, which abideth in the ground many years, shooting anew every spring.

Place.] This groweth in woods and copses, as well those that are shady, as open to the sun.

Time.] They flower about midsummer and July, and their seed is ripe in the latter end of July or August.

Government and Virtues.] It is under the celestial sign Leo, and the dominion of the Sun. It may be, if you meet a Papist, he will tell you, especially if he be a lawyer, that St. John made it over to him by a letter of attorney. It is a singular wound herb; boiled in wine and drank, it healeth inward hurts or bruises; made into an ointment, it opens obstructions, dissolves swellings, and closes up the lips of wounds. The decoction of the herb and flowers, especially of the seed, being drank in wine, with the juice of knot-grass, helpeth all manner of vomiting and spitting of blood, is good for those that are bitten or stung by any venomous creature, and for those that cannot make water. Two drams of the seed of St. John's wort made into powder, and drank in a little broth, doth gently expel choler or congealed blood in the stomach. The decoction of the leaves and seeds drank somewhat warm before the fits of agues, whether they be tertians or quartans, alters the fits, and, by often using, doth take them quite away. The seed is much commended, being drank for forty days together, to help the sciatica, the falling-sickness, and the palsy.

IVY.

IT is so well known, to every child almost, to grow in woods upon the trees, and upon the stone walls of churches, houses, &c. and sometimes to grow alone of itself, though but seldom.

Time.] It flowereth not until July, and the berries are not ripe till Christmas, when they have felt winter frosts.

Government and Virtues.] It is under the dominion of Saturn. A pugil of the flowers, which may be about a dram, (saith Dioscorides) drank twice a day in red wine, helpeth the lask, and bloody-flux. It is an enemy to the nerves and sinews, being much taken inwardly, but very helpful unto them, being outwardly applied. Pliny saith, the yellow berries are good against the jaundice; and taken before one be set to drink hard, preserveth from drunkenness, and helpeth those that spit blood; and that the white berries being taken inwardly, or applied outwardly, killeth worms in the belly. The berries are a singular remedy to prevent the plague, as also to free them from it that have got it, by drinking the berries thereof made into a powder, for two or three days together. They being taken in wine, do certainly help to break the stone, provoke urine, and women's courses. The fresh leaves of ivy, boiled in vinegar, and applied warm to the sides of those that are troubled with the spleen, ach, or stitch in the sides, do give much ease: The same applied with some rose-water, and oil of roses, to the temples and forehead, easeth the head-ach, though it be of long continuance. The fresh leaves boiled in wine, and old filthy ulcers hard to be cured washed therewith, do wonderfully help to cleanse them. It also quickly healeth green wounds, and is effectual to heal all burnings and scaldings, and all kinds of exulcerations coming thereby, or by salt pblegm or humours in other parts of the body. The juice of the berries or leaves snuffed up into the nose, purgeth the head and brain of thin rheum that maketh defluctions into the eyes and nose, and cureth

the ulcers and stench therein; the same dropped into the ears, helpeth the old and running sores of them; those that are troubled with the spleen, shall find much ease by continual drinking out of a cup made of ivy, so as the drink may stand some small time therein before it be drank. Cato saith, that wine put into such a cup, will soak through it, by reason of the antipathy that is between them.

There seems to be a very great antipathy between wine and ivy; for if one hath got a surfeit by drinking of wine, his speediest cure is to drink a draught of the same wine wherein a handful of ivy leaves, being first bruised, have been boiled.

JUNIPER BUSH.

FOR to give a description of a bush so commonly known is needless.

Place.] They grow plentifully in divers woods in Kent, Warney Common near Brentwood in Essex, upon Finchley Common without Highgate; hard by the New-found Wells near Dulwich, upon a Common between Mitcham and Croydon, in the Highgate, near Amersham in Buckinghamshire, and many other places.

Time.] The berries are not ripe the first year, but continue green two summers and one winter before they are ripe; at which time they are all of a black colour, and therefore you shall always find upon the bush green berries; the berries are ripe about the fall of the leaf.

Government and Virtues.] This admirable Solar shrub is scarce to be paralleled for its virtues. The berries are hot in the third degree, and dry but in the first, being a most admirable counter poison, and as great resister, of the pestilence, as any that grows; they are excellent good against the bitings of venomous beasts; they provoke urine exceedingly, and therefore are very available to dysuries and stranguries. It is so powerful a remedy against the dropsy, that the very lee made of the ashes of the

herb being drank, cures the disease. It provokes the terms, helps the fits of the mother, strengthens the stomach exceedingly, and expels the wind. Indeed there is scarce a better remedy for wind in any part of the body, or the cholic, than the chymical oil drawn from the berries; such country people as know not how to draw the chymical oil, may content themselves by eating ten or a dozen of the ripe berries every morning fasting. They are admirable good for a cough, shortness of breath, and consumption, pains in the belly, ruptures, cramps, and convulsions. They give safe and speedy delivery to women with child, they strengthen the brain exceedingly, help the memory, and fortify the sight by strengthening the optic nerves; are excellent good in all sorts of agues; help the gout and sciatica, and strengthen all the limbs of the body. The ashes of the wood is a speedy remedy to such as have the scurvy, to rub their gums with. The berries stay all fluxes, help the hæmorrhoids or piles, and kill worms in children. A lee made of the ashes of the wood, and the body bathed with it, cures the itch, scabs and leprosy. The berries break the stone, procure appetite when it is lost, and are excellent good for all palsies, and falling-sickness.

KIDNEYWORT, OR WALL PENNYROYAL, OR
WALL PENNYWORT.

Descript.] **I**T hath many thick, flat, and round leaves growing from the root, every one having a long foot-stalk fastened underneath, about the middle of it, and a little unevenly weaved sometimes about the edges, of a pale green colour, and somewhat yellow on the upper side like a saucer: from among which rise one or more tender, smooth, hollow stalks half a foot high, with two or three small leaves thereon, usually not round as those below, but somewhat long, and divided at the edges; the tops are somewhat divided into long branches, bearing a number of flowers, set round about a long spike one above another, which are hollow and like a little bell of a whitish green colour, after which come small heads, containing very small brownish

seed, which falling on the ground, will plentifully spring up before winter, if it have moisture. The root is round and most usually smooth, greyish without, and white within, having small fibres at the head of the root, and bottom of the stalk.

Place.] It groweth very plentifully in many places of this land, but especially in all the west parts thereof, upon stone and mud walls, upon rocks also, and in stony places, upon the ground, at the bottom of old trees, and sometimes on the bodies of them that are decayed and rotten.

Time.] It usually flowereth in the beginning of May, and the seed ripeneth quickly after, shedding itself; so that about the end of May, usually the leaves and stalks are withered, dry, and gone until September, that the leaves spring up again, and so abide all winter.

Government and Virtues.] Venus challengeth the herb under Libra. The juice or the distilled water being drank, is very effectual for all inflammations, and unnatural heats, to cool a fainting hot stomach, a hot liver, or the bowels; the herb, juice, or distilled water whereof, outwardly applied, healeth pimples, St. Anthony's fire, and other outward heats. The said juice or water helpeth to heal sore kidneys, torn or fretted by the stone, or exulcerated within; it also provoketh urine, is available for the dropsy, and helpeth to break the stone. Being used as a bath, or made into an ointment, it cooleth the painful piles or hæmorrhoidal veins. It is no less effectual to give ease in pains of the hot gout, the sciatica and the inflammations and swellings in the cods; it helpeth the kernels or knots in the neck or throat, called the king's evil; healeth kibes and chilblains if they be bathed with the juice, or anointed with ointment made thereof, and some of the skin of the leaf upon them; it is also used in green wounds to stay the blood, and to heal them quickly.

KNAPWEED.

Descript.] **T**HE common sort hereof hath many long and

somewhat broad dark green leaves, rising from the root, dented about the edges, and sometimes a little rent or torn on both sides in two or three places, and somewhat hairy withal; amongst which ariseth a long round stalk four-or five feet high, divided into many branches, at the tops whereof stand great scaly green heads, and from the middle of them thrust forth a number of dark purplish red thrums or threads, which after they are withered and past, there are found divers black seeds, lying in a great deal of down, somewhat like unto thistle seed, but smaller; the root is white, hard and woody, and divers fibres annexed thereunto, which perisheth not, but abideth with leaves thereon all the winter, shooting out fresh every spring.

Place.] It groweth in most fields and meadows, and about their borders and hedges, and in many waste grounds also every where.

Time.] It usually flowereth in June and July, and the seed is ripe shortly after.

Government and Virtues.] Saturn challengeth the herb for his own. The knapweed helpeth to stay fluxes, both of blood at the mouth or nose, or other outward parts, and those veins that are inwardly broken, or inward wounds, as also the fluxes of the belly; it stayeth distillations of thin and sharp humours from the head upon the stomach and lungs; it is good for those that are bruised by any falls, blows, or otherwise, and is profitable for those that are bursten, and have ruptures, by drinking the decoction of the herb and roots in wine, and applying the same outwardly to the place. It is singularly good for all running sores, cancerous or fistulous, drying up the moisture and healing them up gently, without sharpness; it doth the like to running sores or scabs of the head or other parts. It is of special use for the soreness of the throat, swelling of the uvula and jaws, and excellent good to stay bleeding, and heal up all green wounds.

KNOTGRASS.

IT is generally known so well that it needeth no description.

Place.] It groweth in every county of this land, by the highway sides, and by foot-paths in fields; as also by the sides of old walls.

Time.] It springeth up late in the spring, and abideth until the winter, when all the branches perish.

Government and Virtues.] Saturn seems to me to own the herb, and yet some hold the Sun; out of doubt 'tis Saturn. The juice of the common kind of knotgrass is most effectual to stay bleeding of the mouth, being drank in steeled or red wine; and the bleeding at the nose, to be applied to the forehead or temples, or to be squirted up into the nostrils. It is no less effectual to cool and temper the heat of the blood and stomach, and to stay any flux of the blood and humours, as lask, bloody-flux, women's courses and running of the reins. It is singular good to provoke urine, help the strangury, and allay the heat that cometh thereby; and is powerful by urine to expel the gravel or stone in the kidneys and bladder, a dram of the powder of the herb being taken in wine for many days together; Being boiled in wine and drank, it is profitable to those that are stung or bitten by venomous creatures and very effectual to stay all defluations of rheumatic humours upon the stomach, and killeth worms in the belly or stomach, quieteth inward pains that arise from the heat, sharpness and corruption of blood and choler. The distilled water hereof taken by itself or with the powder of the herb or seed, is very effectual to all the purposes aforesaid, and is accounted one of the most sovereign remedies to cool all manner of inflammation, breaking out through heat, hot swellings and imposthumes, gangrene and fistulous cankers, or foul filthy ulcers, being applied or put into them; but especially for all sorts of ulcers and sores happening in the privy parts of men or women. It helpeth all fresh and green wounds, and speedily healeth them. The juice dropped in the ears, cleanseth them being foul, and having running matter in them.

It is very prevalent for the premises; as also for broken joints and ruptures.

LADY'S MANTLE.

Descript.] **I**Thath many leaves rising from the root standing upon long hairy foot-stalks, being almost round, and a little cut on the edges, into eight or ten parts, making it seem like a star, with so many corners or points, and dented round about, of a light green colour, somewhat hard in handling, and as it were folded or plaited at first, and then crumpled in divers places, and a little hairy, as the stalk is also, which riseth up among them to the height of two or three feet; and being weak, is not able to stand upright, but bendeth to the ground, divided at the top into two or three small branches, with small yellowish green heads, and flowers of a whitish colour breaking out of them; which being past, there cometh a small yellowish seed like a poppy seed: The root is somewhat long and black, with many strings and fibres thereat.

Place.] It groweth naturally in many pastures and wood sides in Hertfordshire, Wiltshire, and Kent, and other places of this land.

Time.] It flowereth in May and June, and abideth after seed-time green all the winter.

Government and Virtues.] Venus claims the herb as her own. Lady's mantle is very proper for those wounds that have inflammations, and is very effectual to stay bleeding, vomitings, fluxes of all sorts, bruises by falls or otherwise, and helpeth ruptures; and such women or maids as have over great flagging breasts, causing them to grow less and hard, being both drank and outwardly applied; the distilled water drank for 20 days together helpeth conception, and to retain the birth: if the woman do sometimes also sit in a bath made of the decoction of the herb. It is one of the most singular wound herbs, and therefore highly prized and praised by the Germans, who use it in all wounds inward and outward, to drink a decoction thereof, and wash the wounds therewith, or dip tents therein, and put them into the wounds, which wonderfully drieth up all

humidity of the sores, and abateth inflammations therein. It quickly healeth all green wounds, not suffering any corruption to remain behind, and cureth all old sores, though fistulous and hollow.

LAVENDER.

BEING an inhabitant almost in every garden, it is so well known, that it needeth no description.

Time.] It flowereth about the end of June, and beginning of July.

Government and Virtues.] Mercury owns the herb, and it carries his effects very potently. Lavender is of a special good use for all the griefs and pains of the head and brain that proceed of a cold cause, as the apoplexy, falling sickness, the dropsy, or sluggish malady, cramps, convulsions, palsies, and often faintings. It strengthens the stomach, and freeth the liver and spleen from obstructions, provoketh women's courses, and expelleth the dead child and after-birth. The flowers of lavender steeped in wine, helpeth them to make water that are stopped, or are troubled with the wind or cholic, if the place be bathed therewith. A decoction made with the flowers of lavender, horehound, fennel, asparagus root, and a little cinnamon, is very profitably used to help the falling sickness, and the giddiness or turning of the brain; to gargle the mouth with the decoction thereof, is good against the tooth-ach. Two spoonfuls of the distilled water of the flowers taken, helpeth them that have lost their voice, as also the tremblings and passions of the heart, and faintings and swooning, not only being drank, but applied to the temples, or nostrils to be smelt unto; but it is not safe to use it where the body is replete with blood and humours, because of the hot and subtile spirits wherewith it is possessed. The chymical oil drawn from lavender, usually called oil of spike, is of so fierce and piercing a quality, that it is cautiously to be used, some few drops being sufficient, to be given with other things, either for inward or outward griefs.

LAVENDER COTTON.

IT being a common garden herb, I shall forbear the description, only take notice, that it flowereth in June and July.

Government and Virtues.] It is under the dominion of Mercury. It resisteth poison, putrefaction, and heals the bitings of venomous beasts: A dram of the powder of the dried leaves taken every morning fasting, stops the running of the reins in men, and whites in women. The seed beaten into powder, and taken as worm-seed, kills the worms, not only in children, but also in people of riper years; the like doth the herb itself, being steeped in milk, and the milk drank; the body bathed with the decoction of it, helps scabs and itch.

LADY'S-SMOCK, OR CUCKOW-FLOWERS.

Descript.] **T**HE root is composed of many small white threads; from whence spring up divers long stalks of winged leaves, consisting of round, tender, dark green leaves, set one against another upon a middle rib, the greatest being at the end, amongst which arise up divers tender, weak, round, green stalks, somewhat streaked, with longer and smaller leaves upon them, on the tops of which stand flowers, almost like the stock gilliflowers, but rounder, and not so long, of a blushing, white colour; the seed is reddish; and groweth to small bunches, being of a sharp biting taste, and so hath the herb.

Place.] They grow in moist places, and near to brook-sides.

Time.] They flower in April and May, and the lower leaves continue green all the winter.

Government and Virtues.] They are under the dominion of the Moon, and very little inferior to water cresses in all their operations; they are excellent good for the scurvy; they provoke urine, and break the stone, and excellently warm a cold and weak stomach, restoring lost appetite, and help digestion.

LETTUCE.

IT is so well-known, being generally used as a salad-herb, that it is altogether needless to write any description thereof.

Government and Virtues.] The Moon owns them, and that is the reason they cool and moisten what heat and dryness Mars causeth, because Mars hath his fall in Cancer; and they cool the heat because the Sun rules it, between whom and the Moon is a reception in the generation of men, as you may see in my guide for women. The juice of lettuce mixed or boiled with oil of roses, applied to the forehead and temples procureth sleep, and easeth the head-ach proceeding of an hot cause: Being eaten boiled, it helpeth to loosen the belly. It helpeth digestion, quencheth thirst, increaseth milk in nurses, easeth griping pains in the stomach or bowels, that come of choler. It abateth bodily lust, represseth venereous dreams, being outwardly applied to the cods with a little camphire. Applied in the same manner to the region of the heart, liver or reins, or by bathing the said place with the juice of distilled water, wherein some white sanders, or red roses are put; also it not only represseth the heat and inflammations therein, but comforts and strengthens those parts, and also tempereth the heat of urine. Galen adviseth old men to use it with spice; and where spices are wanting, to add mints, rochet, and such like hot herbs, or else citron, lemon, or orange seeds, to abate the cold of one and heat of the other. The seed and distilled water of the lettuce work the same effects in all things; but the use of lettuce is chiefly forbidden to those that are shortwinded, or have any imperfection in the lungs, or spit blood.

WATER LILY.

OF these there are two principally noted kinds, viz. the white and the yellow.

Descript.] The white lily hath very large and thick, dark

Water Lily

Liverwort

Thymus

green leaves lying on the water, sustained by long and thick foot-stalks, that arise from a great, thick, round, and long tuberous black root, spongy or loose, with many knobs thereon, like eyes, and whitish within; from amidst which rise other the like thick, green stalks, sustaining one large great flower thereon, green on the outside, but as white as snow within, consisting of divers rows of long and somewhat thick and narrow leaves, smaller and thinner the more inward they be, encompassing a head with many yellow threads or thrums in the middle; where, after they are past, stand round poppy-like heads, full of broad, oily and bitter seed.

The yellow kind is little different from the former, save only that it hath fewer leaves on the flowers, greater and more shining seed, and a whitish root, both within and without. The root of both is somewhat sweet in taste.

Place.] They are found growing in great pools, and standing waters, and sometimes in slow running rivers, and lesser ditches of water, in sundry places of this land.

Time.] They flower more commonly about the end of May, and their seed is ripe in August.

Government and Virtues.] The herb is under the dominion of the moon, and therefore cools and moistens like the former. The leaves and flowers of the water lily are cold and moist, but the roots and seeds are cold and dry; the leaves do cool all inflammations; both outward and inward heat of agues; and so doth the flowers also, either by the syrup or conserve; the syrup helpeth much to procure rest, and to settle the brain of frantic persons, by cooling the hot distemperature of the head. The seed as well as the root is effectual to stay fluxes of blood or humours, either of wounds or of the belly: but the roots are most used, and more effectual to cool, bind, and restrain all fluxes in man or woman; also running of the reins, and passing away of the seed when one is asleep; but the frequent use hereof extinguisheth venereous actions. The root is likewise very good for those whose urine is hot and sharp, to be boiled in wine and water, and the decoction drank. The distilled water of the

flowers is very effectual for all the diseases aforesaid, both inwardly taken, and outwardly applied, and is much commended to take away freckles, spots, sunburn, and morpew from the face, or other parts of the body. The oil made of the flowers, as oil of roses is made, is profitably used to cool hot tumours, and to ease the pains, and help the sores.

LILY OF THE VALLEY,

CALLED also conval lily, male lily, and lily constancy.

Descript.] The root is small, and creepeth far in the ground, as grass roots do. The leaves are many, against which riseth up a stalk half a foot high, with many white flowers, like little bells with turned edges, of a strong, though pleasing smell; the berries are red, not much unlike those of asparagus.

Place.] They grow plentifully upon Hamstead-heath, and many other places of this nation.

Time.] They flower in May, and the seed is ripe in September.

Temperature and Virtues. It is under the dominion of Mercury, and therefore strengthens the brain, recruits a weak memory, and makes it strong again: The distilled water dropped into the eyes, helps inflammations there; as also that infirmity which they call a pin and web. The spirit of the flowers distilled in wine, restoreth lost speech, helps the palsy, is exceedingly good in the apoplexy, and comforteth the heart and vital spirits. Gerrard saith, that the flowers being close stopped up in a glass, put into an ant-hill, and taken away again a month after, ye shall find a liquor in the glass, which, being outwardly applied, helps the gout.

WHITE LILIES.

IT were in vain to describe a plant so commonly known in every one's garden; therefore I shall not tell you what they are, but what they are good for.

Government and Virtues.] They are under the dominion of

the Moon, and by antipathy to Mars expel poison; they are excellently good in pestilential fevers, the roots being bruised and boiled in wine, and the decoction drank; for it expels the venom to the exterior parts of the body: The juice of it being tempered with barley meal, baked, and so eaten for ordinary bread, is an excellent cure for the dropsy. An ointment made of the root and hog's grease, is excellent good for scald heads, unites the sinews when they are cut, and eleanses ulcers. The root boiled in any convenient decoction, gives speedy delivery to women in travail, and expels the after-birth. The root roasted, and mixed with a little hog's grease, makes a gallant poultice to ripen and break plague-sores. The ointment is excellent good for swellings in the privities, and will cure burnings and scaldings without a scar, and trimly deck a blank place with hair.

LIQUORICE.

Descript.] OUR English liquorice riseth up with divers woody stalks, whereon are set at several distances many narrow, long, green leaves, set together on both sides of the stalk, and an odd one at the end, very well resembling a young ash tree sprung up from the seed. This by many years continuance in a place without removing, and not else, will bring forth flowers, many standing together spike fashion, one above another upon the stalk, of the form of pease blossoms, but of a very pale blue colour, which turn into long, somewhat flat and smooth cods, wherein is contained a small, round hard seed: The roots run down exceedingly deep into the ground, with divers other small roots and fibres growing with them, and shoot out suckers from the main roots all about, whereby it is much increased, of a brownish colour on the outside, and yellow within.

Place.] It is planted in fields and gardens, in divers places of this land, and thereof good profit is made.

Government and Virtues.] It is under the dominion of Mercury. Liquorice boiled in fair water, with some maiden

hair and figs, maketh a good drink for those that have a dry cough or hoarseness, wheezing or shortness of breath, and for all the griefs of the breasts and lungs, phthisic or consumptions caused by the distillation of salt humours on them. It is also good in all pains of the reins, the strangury, and heat of urine: The fine powder of liquorice blown through a quill into the eyes that have a pin and web (as they call it) or rheumatic distillations in them, doth cleanse and help them: The juice of liquorice is as effectual in all the diseases of the breast and lungs, the reins and the bladder, as the decoction. The juice distilled in rose-water, with some gum tragacanth, is a fine licking medicine for hoarseness, wheezing, &c.

LIVERWORT.

Descript.] COMMON liverwort groweth close, and spreadeth much upon the moist and sandy places with many small green leaves, or rather (as it were) sticking flat to one another, very unevenly cut in on the edges, and crumpled; from among which arise small slender stalks an inch or two high at most, bearing small star-like flowers at the top; the roots are very fine and small.

Government and Virtues.] It is under the dominion of Jupiter, and under the sign Cancer. It is a singularly good herb for all the diseases of the liver, both to cool and cleanse it, and helpeth the inflammations in any part, and the yellow jaundice likewise: Being bruised and boiled in small beer, and drank, it cooleth the heat of the liver and kidneys, and helpeth the running of the reins in men, and the whites in women; it is a singular remedy to stay the spreading of tetters, ringworms, and other fretting and running sores and scabs, and is an excellent remedy for such whose livers are corrupted by surfeits, which cause their bodies to break out, for it fortifieth the liver exceedingly, and makes it impregnable.

LOOSESTRIFE, OR WILLOWHERB.

Descript.] COMMON yellow loosestrife groweth to be four

or five feet high, or more, with great round stalks a little crested; diversely branched from the middle of them to the tops into great and long branches, on all which at the joints there grow long and narrow leaves, but broader below, and usually two at a joint, yet sometimes three or four, somewhat like willow leaves, smooth on the edges, and of a fair green colour from the upper joints of the branches, and at the tops of them also stand many yellow flowers of five leaves a-piece, with divers yellow threads in the middle, which turn into small round heads, containing small cornered seeds; the root creepeth under ground, almost like couchgrass, but greater, and shooteth up every spring brownish heads, which afterwards grow up into stalks. It hath no scent or taste, but only astringent.

Place.] It groweth in many places of this land in moist meadows, and by water sides.

Time.] It flowereth from June to August.

Government and Virtues.] This herb is good for all manner of bleeding at the mouth, nose, or wounds, and all fluxes of the belly, and the bloody-flux, given either to drink or taken by clyster; it stayeth also the abundance of women's courses; it is a singularly good wound herb for green wounds, to stay the bleeding, and quickly close together the lips of the wound if the herb be bruised, and the juice only applied. It is often used in gargles for sore mouths, as also for the secret parts. The smoke hereof being burned, driveth away flies and gnats, which in the night time molest people inhabiting near marshes, and in the fenny countries.

LOOSESTRIFE, with spiked Heads of Flowers.

Descript.] **T**HIS groweth with many woody square stalks, full of joints, about three feet high at least; at every one whereof stand two long leaves, shorter, narrower, and a larger green colour than the former, and some brownish. The stalks are branched into many long stems of spiked flowers half a foot long, growing in bundles one above another, out of small husks, very

like the spiked heads of lavender, each of which flowers have five round pointed leaves of a purple violet colour, or somewhat inclining to redness; in white husks stand small round heads after the flowers are fallen, wherein is contained small seed. The root creepeth under ground like unto the yellow, but is gréater than it, and so are the heads of the leaves when they first appear out of the ground, and more brown than the other.

Place.] It groweth usually by rivers, and ditch-sides in wet ground, as about the ditches at and near Lambeth, and in many other places of this land.

Time.] It flowereth in the months of June and July.

Government and Virtues.] It is an herb of the Moon, and under the sign Cancer; neither do I know a better preserver of the sight when it is well, nor a better cure for sore eyes than eyebright, taken inwardly, and this used outwardly; it is cold in quality. This herb is not a whit inferior to the former, it having not only all the virtues which the former hath, but some peculiar virtues of its own, found out by experience; as namely, the distilled water is a present remedy for hurts and blows on the eyes, and for blindness, so as the christaline humour be not perished or hurt; and this hath been sufficiently proved true by the experience of a man of judgment, who kept it long to himself as a great secret. It cleareth the eyes of dust, or any thing gotten into them, and preserveth the sight. It is also very available against wounds and thrusts, being made into an ointment in this manner: To every ounce of the water, add two drams of May butter without salt, and of sugar and wax, of each as much also; let them boil gently together. Let tents dipped into the liquor that remaineth after it is cold, be put into the wounds, and the place covered with a linen cloth doubled and anointed with the ointment; and this is also an approved medicine. It likewise cleanseth and healeth all foul ulcers, and sores whatsoever, and stayeth their inflammations by washing them with the water, and laying on them a green leaf or two in the summer, or dry leaves in the winter. This water gargled warm in the mouth, and sometimes drank also, doth

cure the quinsy, or king's evil, in the throat. The said water applied warm, taketh away all spots, marks, and scabs in the skin; and a little of it drank, quencheth thirst when it is extraordinary.

LOVAGE.

Descript.] **I**T hath many long and green stalks of large winged leaves, divided into many parts, like smallage, but much larger and greater, every leaf being cut about the edges, broadest forward, and smallest at the stalk, of a sad green colour, smooth and shining; from among which rise up sundry strong, hollow green stalks, five or six, some-times seven or eight feet high, full of joints, but lesser leaves set on them than grow below; and with them towards the tops come forth large branches, bearing at their tops large umbels of yellow flowers, and after them flat brownish seed. The root groweth thick, great and deep, spreading much, and enduring long, of a brownish colour on the outside, and whitish within. The whole plant and every part of it smelling strong and aromatically, and is of a hot, sharp, biting taste.

Place.] It is usually planted in gardens, where, if it be suffered, it groweth huge and great.

Time.] It flowereth in the end of July, and seedeth in August.

Government and Virtues.] It is an herb of the Sun, under the sign Taurus. If Saturn offend the throat (as he always doth if he be the occasion of the malady, and in Taurus is the Genesis) this is your cure. It openeth, cureth, and digesteth humours, and mightily provoketh women's courses and urine. Half a dram at a time of the dried root in powder, taken in wine, doth wonderfully warm a cold stomach, helpeth digestion, and consumeth all raw and superfluous moisture therein; easeth all inward gripings and pains, dissolveth wind and resisteth poison and infection. It is a known and much praised remedy to drink the decoction of the herb for any sort of ague,

and to help the pains and torments of the body and bowels coming of cold. The seed is effectual to all the purposes aforesaid (except the last) and worketh more powerfully. The distilled water of the herb helpeth the quinsy in the throat, if the mouth and throat be gargled and washed therewith, and helpeth the pleurisy, being drank three or four times. Being dropped into the eyes, it taketh away the redness or dimness of them; it likewise taketh away spots or freckles in the face. The leaves bruised, and fried with a little hog's lard, and laid hot to any blotch or boil, will quickly break it.

LUNGWORT.

Descript.] **T**HIS is a kind of moss that groweth on sundry sorts of trees, especially oaks and beeches, with broad, greyish, tough leaves diversely folded, crumpled, and gashed in on the edges, and some spotted also with many small spots on the upper side. It was never seen to bear any stalk or flower at any time.

Government and Virtues.] Jupiter seems to own this herb. It is of great use to physicians to help the diseases of the lungs, and for coughs, wheezings, and shortness of breath, which it cureth both in man and beast. It is very profitable to put into lotions that are taken to stay the moist humours that flow to ulcers, and hinder their healing, as also to wash all other ulcers in the privy parts of a man or women. It is an excellent remedy boiled in beer for broken-winded horses.

MADDER.

Descript.] **G**ARDEN madder shooteth forth many very long, weak, four-square, reddish stalks, trailing on the ground a great way, very rough or hairy, and full of joints: At every one of these joints come forth divers long and narrow leaves, standing like a star about the stalks, rough also and hairy, towards the tops whereof come forth many small pale yellow flowers, after which come small round heads, green at first and reddish,

afterwards, but black when they are ripe, wherein is contained the seed. The root is not very great, but exceeding long, running down half a man's length into the ground, red and very clear, while it is fresh, spreading divers ways.

Place.] It is only manured in gardens, or large fields, for the profit that is made thereof.

Time.] It flowereth towards the end of summer, and the seed is ripe quickly after.

Government and Virtues.] It is an herb of Mars. It hath an opening quality, and afterwards to bind and strengthen. It is a sure remedy for the yellow jaundice, by opening the obstructions of the liver and gall, and cleansing those parts: it openeth also the obstructions of the spleen, and diminisheth the melancholy humour: It is available for the palsy and sciatica, and effectual for bruises inward and outward, and is therefore much used in vulnerary drinks. The root for all those aforesaid purposes, is to be boiled in wine or water, as the cause requireth, and some honey and sugar put thereunto afterwards. The seed hereof taken in vinegar and honey, helpeth the swelling and hardness of the spleen. The decoction of the leaves and branches is a good fomentation for women to sit over that have not their courses. The leaves and roots beaten and applied to any part that is discoloured with freckles, morpew, the white scurf, or any such deformity of the skin, cleanseth thoroughly, and taketh them away.

MAIDEN-HAIR.

Descript.] **O**UR common maiden-hair doth, from a number of hard black fibres, send forth a great many blackish shining brittle stalks, hardly a span long, in many not half so long, on each side set very thick with small, round, dark green leaves, and spitted on the back of them like a fern.

Place.] It groweth upon old stone walls in the west parts in Kent, and divers other places of this land; it delighteth likewise to grow by springs, wells, and rocky moist and shady places, and is always green

WALL RUE, OR WHITE MAIDEN-HAIR.

Descript.] **T**HIS hath very fine pale green stalks, almost as fine as hairs, set confusedly with divers pale green leaves on every short footstalk, somewhat near unto the colour of garden rue, and not much differing in form, but more diversely cut in on the edges, and thicker, smooth on the upper part, and spotted finely underneath.

Place.] It groweth in many places of this land, at Dartford, and the bridge at Ashford in Kent; at Beaconsfield in Buckinghamshire; at Wholly in Huntingdonshire, on Framingham castle in Suffolk; on the church walls at Mayfield in Sussex; in Somersetshire; and divers other places of this land; and is green in winter as well as summer.

Government and Virtues.] Both this and the former are under the dominion of Mercury, and so is that also which followeth after, and the virtues of both these are so near alike, that though I have described them and their places of growing severally, yet I shall, in writing the virtues of them, join them both together as followeth:

The decoction of the herb maiden-hair being drank, helpeth those that are troubled with the cough, shortness of breath, the yellow jaundice, diseases of the spleen, stopping of urine, and helpeth exceedingly to break the stone in the kidneys (in all which diseases the wall rue is also very effectual): It provoketh women's courses, and stays both bleedings and fluxes of the stomach and belly, especially when the herb is dry; for being green, it looseneth the belly, and voideth choler and phlegm from the stomach and liver; it cleanseth the lungs, and by rectifying the blood, causeth a good colour to the whole body. The herb boiled in oil of camomile, dissolveth knots, allayeth swellings, and drieth up moist ulcers. The lee made thereof is singularly good to cleanse the head from scurf, and from dry and running sores, stayeth the falling or shedding of the hair, and causeth it to grow thick, fair, and well-coloured; for which

Meadow Sweet

Scabious

Heliotropium

Marsh Mallow

Yellow Lo

Purple Loosetrife

purpose some boil it in wine, putting some smallage seed thereto, and afterwards some oil. The wall rue is as effectual as maiden-hair, in all diseases of the head, or falling and recovering of the hair again, and generally for all the aforementioned diseases: And besides, the powder of it taken in drink for forty days together, helpeth the burstings in children.

GOLDEN MAIDEN-HAIR.

TO the former give me leave to add this, and I shall no more but only describe it unto you, and for the virtues refer you to the former, since whatsoever is said of them, may be also said of this.

Descript.] It hath many small, brownish, red hairs to make up the form of leaves growing about the ground from the root; and in the middle of them, in summer, rise small stalks of the same colour, set with very fine yellowish green hairs on them, and bearing a small gold, yellow head, lesser than the wheat corn, standing in a great husk. The root is very small and thready.

Time.] It groweth in bogs and moorish places, and also on dry shady places, as Hampstead heath, and elsewhere.

MALLOWS AND MARSHMALLOWS.

COMMON mallows are generally so well known that they need no description.

Our common marshmallows have divers soft hairy white stalks, rising to be three or four feet high, spreading forth many branches, the leaves whereof are soft and hairy, somewhat lesser than the other mallow leaves, but longer pointed, cut (for the most part) into some few divisions, but deep. The flowers are many, but smaller also than the other mallows, and white, or tending to a blueish colour. After which come such long, round cases and seeds, as in the other mallows. The roots are many and long, shooting from one head, of the bigness of a thumb or finger, very pliant, tough, and being like

liquorice, of a whitish yellow colour on the outside, and more white within, full of a slimy juice, which being laid in water, will thicken, as if it were a jelly.

Place.] The common mallows grow in every county of this land. The common marshmallows in most of the salt marshes, from Woolwich down to the sea, both on the Kentish and Essex shores, and in divers other places of this land.

Time.] They flower all the summer months, even until the winter do pull them down.

Government and Virtues.] Venus owns them both. The leaves of either of the sorts before specified, and the roots also boiled in wine or water, or in broth with parsley or fennel roots, do help to open the body, and are very convenient in hot agues, or other distempers of the body, to apply the leaves so boiled warm to the belly. It not only voideth hot, choleric, and other offensive humours, but easeth the pains and torments of the belly coming thereby: and are therefore used in all clysters conducing to those purposes. The same used by nurses procureth them store of milk. The decoction of the seed of any of the common mallows made in milk or wine, doth marvellously help excoriations, the phthisic, pleurisy, and other diseases of the chest and lungs, that proceed of hot causes, if it be continued taking for some time together. The leaves and roots work with the same effects. They help much also in the excoriations of the guts and bowels; and hardness of the mother, and in all hot and sharp diseases thereof. The juice drank in wine, or the decoction of them therein, do help women to a speedy and easy delivery. Pliny saith, that whosoever shall take a spoonful of any of the mallows, shall that day be free from all diseases that may come unto him; and that it is special good for the falling sickness. The syrup also and conserve made of the flowers, are very effectual for the same diseases, and to open the body, being costive. The leaves bruised, and laid to the eyes with a little honey, taketh away the imposthumations of them. The leaves bruised or rubbed upon any place stung with

bees, wasps, or the like, presently take away the pains, redness, and swelling that rise thereupon. And Dioscorides saith, the decoction of the roots and leaves helpeth all sorts of poison, so as the poison may be presently voided by vomit. A poultice made of the leaves boiled and bruised, with some bean or barley flour, and oil of roses added, is an especial remedy against all hard tumours and inflammations, or imposthumes, or swellings of the cods, and other parts, and easeth the pains of them; as also against the hardness of the liver or spleen, being applied to the places. The juice of mallows boiled in old oil and applied, taketh away all roughness of the skin, as also the scurf, dandriff, or dry scabs in the head, or other parts, if they be anointed therewith, or washed with the decoction, and preserveth the hair from falling off. It is also effectual against scaldings and burnings, St. Anthony's fire, and all other hot, red and painful swellings in any part of the body. The flowers boiled in oil or water (as every one is disposed) whereunto a little honey and allum is put, is an excellent gargle to wash, cleanse or heal any sore mouth or throat in a short time. If the feet be bathed or washed with the decoction of the leaves, roots and flowers, it helpeth much the defluction of rheum from the head; if the head be washed therewith it stayeth the falling and shedding of the hair. The green leaves (saith Pliny) beaten with nitre, and applied, draw out thorns or prickles in the flesh.

The marshmallows are more effectual in all the diseases before mentioned: The leaves are likewise used to loosen the belly gently, and in decoctions for clysters to ease all pains of the body, opening the strait passages, and making them slippery, whereby the stone may descend the more easily, and without pain, out of the reins, kidneys, and bladder, and to ease the torturing pains thereof. But the roots are of more special use for those purposes, as well for coughs, hoarseness, shortness of breath, and wheezings, being boiled in wine, or honeyed water, and drank. The roots and seeds hereof boiled in wine or water, are with good success used by them that have excoriations in the guts, or

the bloody flux, by qualifying the violence of sharp, fretting humours, easing the pains, and healing the soreness. It is profitably taken by them that are troubled with ruptures, cramps, or convulsions of the sinews; and boiled in white wine, for the imposthumes of the throat, commonly called the king's evil, and of those kernels that rise behind the ears, and inflammations or swellings in women's breasts. The dried roots boiled in milk and drank, is special good for the chin-cough. Hippocrates used to give the decoction of the roots, or the juice thereof, to drink, to those that are wounded, and ready to faint through loss of blood, and applied the same mixed with honey and rosin to the wounds. As also, the roots boiled in wine to those that have received any hurt by bruises, falls, or blows, or had any bone or member out of joint, or any swelling pain, or ache in the muscles, sinews, or arteries. The mucilage of the roots, and of linseed and fenugreek put together, is much used in poultices, ointments, and plaisters, to mollify and digest all hard swellings, and the inflammation of them, and to ease pains in any part of the body. The seed, either green or dry, mixed with vinegar, cleanseth the skin of morpew, and all other discolourings, being boiled therewith in the sun.

You may remember, that not long since, there was a raging disease called the bloody-flux; the college of physicians not knowing what to make of it, called it the plague of the guts, for their wits were at *Ne plus ultra* about it: My son was taken with the same disease, and the excoriation of his bowels was exceeding great; myself being in the country, was sent for up: the only thing I gave him, was mallows bruised and boiled both in milk and drink; in two days (the blessing of God being upon it) cured him. And I here, to show my thankfulness to God, in communicating it to his creatures, leave it to posterity.

MAPLE TREE.

Government and Virtues.] **I**T is under the dominion of Jupiter. The decoction either of the leaves or bark, must needs

strengthen the liver much, and so you shall find it to do, if you use it. It is excellent good to open obstructions both of the liver and spleen, and easeth pains of the sides thence proceeding.

WIND MARJORAM.

CALLED also origane, origanum, eastward marjoram, wild marjoram, and grove marjoram.

Descript.] Wild or field marjoram hath a root which creepeth much under ground, which continueth a long time, sending up sundry brownish, hard, square stalks, with small dark green leaves, very like those of sweet marjoram, but harder, and somewhat broader; at the top of the stalks stand tufts of flowers, of a deep purplish red colour. The seed is small and something blacker than that of sweet marjoram.

Place.] It groweth plentifully in the borders of corn-fields, and in some copses.

Time.] It flowereth towards the latter end of summer.

Government and Virtues.] This is also under the dominion of Mercury. It strengthens the stomach and head much, there being scarce a better remedy growing for such as are troubled with a sour humour in the stomach; it restores the appetite, being lost; helps the cough, and consumption of the lungs; it cleanseth the body of choler, expelleth poison, and remedieth the infirmities of the spleen; helps the bitings of venomous beasts, and helps such as have poisoned themselves by eating hemlock, henbane, or opium. It provoketh urine and the terms in women, helps the dropsy, and the scurvy, scabs, itch, and yellow jaundice. The juice being dropped into the ears, helps deafnesa, pain and noise in the ears. And thus much for this herb, between which and adders, there is a deadly antipathy.

SWEET MARJORAM.

SWEET marjoram is so well known, being an inhabitant

in every garden, that it is needless to write any description thereof, neither of the winter sweet marjoram, or pot marjoram.

Place.] They grow commonly in gardens; some sorts there are that grow wild in the borders of the corn fields and pastures, in sundry places of this land; but it is not my purpose to insist upon them, the garden kinds being most used and useful.

Time.] They flower in the end of summer.

Government and Virtues.] It is an herb of Mercury, and under Aries, and therefore is an excellent remedy for the brain and other parts of the body and mind, under the dominion of the same planet. Our common sweet marjoram is warming and comfortable in cold diseases of the head, stomach, sinews, and other parts, taken inwardly or outwardly applied. The decoction thereof being drank, helpeth all diseases of the chest, which hinder the freeness of breathing, and is also profitable for the obstructions of the liver and spleen. It helpeth the cold griefs of the womb, and the windiness thereof, and the loss of speech, by resolution of the tongue. The decoction thereof made with some pelitory of Spain, and long pepper, or with a little acorns or origanum, being drank, is good for those that are beginning to fall into a dropsy; for those that cannot make water; and against pains and torments in the belly; it provoketh women's courses, if it be put up as a pessary. Being made into a powder, and mixed with honey, it taketh away the black marks of blows and bruises, being thereunto applied; it is good for the inflammations and watering of the eyes, being mixed with fine flour, and laid unto them. The juice dropped into the ears, easeth the pains and singing noise in them. It is profitably put into those ointments and salves that are warm, and comfort the outward parts, as the joints and sinews; for swellings also, and places out of joint. The powder thereof snuffed up into the nose provoketh sneezing, and thereby purgeth the brain; and chewed in the mouth, draweth forth

much phlegm. The oil made thereof, is very warm and comfortable to the joints that are stiff, and the sinews that are hard, to molify and supple them. Marjoram is much used in all odoriferous waters, powders, &c. that are for ornament or delight.

MARIGOLDS.

THESE being so plentiful in every garden, are so well known, that they need no description.

Time.] They flower all the summer long, and sometimes in winter, if it be mild.

Government and Virtues.] It is an herb of the Sun, and under Leo. They strengthen the heart exceedingly, and are very expulsive, and little less effectual in the small-pox and measles than saffron. The juice of marigold leaves mixed with vinegar, and any hot swellings bathed with it, instantly giveth ease and aswageth it. The flowers, either green or dried, are much used in possets, broths, and drink, as a comforter of the heart and spirits; and to expel any malignant or pestilential quality which might annoy them. A plaister made with the dry flowers in powder, hog's grease, turpentine, and rosin, applied to the breast, strengthens and succours the heart infinitely in fevers, whether pestilential or not pestilential.

MASTERWORT.

Descript.] **C**OMMON masterwort hath divers stalks of winged leaves, divided into sundry parts, three for the most part standing together with small footstalks on both sides of the greater, and three likewise at the end of the stalk, somewhat broad, and cut in on the edges into three or more divisions, all of them dented about the brims, of a dark green colour, somewhat resembling the leaves of angelica, but that these grow lower to the ground, and on lesser stalks; among which rise up two or three short stalks about two feet high, and slender, with such like leaves at the joints which grow below, but with lesser and fewer divisions, bearing umbels of white flowers, and after them,

thin, flat blackish seeds, bigger than dill seeds. The root is somewhat greater and growing rather sideways than down deep in the ground, shooting forth sundry heads, which taste sharp, biting on the tongue, and is the hottest and sharpest part of the plant, and the seed next unto it being somewhat blackish on the outside, and smelling well.

Place.] It is usually kept in gardens with us in England.

Time.] It flowereth and seedeth about the end of August.

Government and Virtues.] It is an herb of Mars. The root of masterwort is hotter than pepper, and very available in cold griefs and diseases both of the stomach and body, dissolving very powerfully upwards and downwards. It is also used in a decoction with wine against all cold rheums, distillation upon the lungs, or shortness of breath, to be taken morning and evening. It also provoketh urine, and helpeth to break the stone, and expel the gravel from the kidneys; provoketh women's courses, and expelleth the dead birth. It is singularly good for strangling of the mother, and other such like feminine diseases. It is effectual also against the dropsy, cramps, and falling sickness; for the decoction in wine being gargled in the mouth, draweth down much water and phlegm from the brain, purging and easing it of what oppresseth it. It is of a rare quality against all sorts of cold poison, to be taken as there is cause; it provoketh sweat. But lest the taste hereof, or of the seed (which worketh to the like effect, though not so powerfully) should be too offensive, the best way is to take the water distilled both from the herb and root. The juice hereof dropped, or tents dipped therein, and applied either to green wounds or filthy rotten ulcers, and those that come by envenomed weapons, doth soon cleanse and heal them. The same is also very good to help the gout coming of a cold cause.

SWEET MAUDLIN.

Descript.] COMMON maudlin hath somewhat long and narrow leaves, snipped about the edges. The stalks are two

feet high, bearing at the tops many yellow flowers set round together, and all of an equal height, in umbels or tufts like unto tansy; after which followeth small whitish seed, almost as big as wormseed.

Place and Time.] It groweth in gardens, and flowereth in June and July.

Government and Virtues.] The virtues hereof being the same with costmary or alecost, I shall not make any repetition thereof, lest my book grow too big, but rather refer you unto costmary for satisfaction.

THE MEDLAR.

Descript.] **T**HE tree groweth near the bigness of the quince tree, spreading branches reasonably large, with longer and narrower leaves than either the apple or quince, and not dented about the edges. At the end of the sprigs stand the flowers, made of five white, great, broad pointed leaves, nicked in the middle, with some white threads also; after which cometh the fruit, of a brownish green colour, being ripe, bearing a crown as it were on the top, which were the five green leaves; and being rubbed off, or fallen away, the head of the fruit is seen to be somewhat hollow. The fruit is very harsh before it is mellowed, and hath usually five hard kernels within it— There is another kind hereof nothing differing from the former, but that it hath some thorns on it in several places, which the other hath not; and usually the fruit is small and not so pleasant.

Time and Place.] They grow in this land, and flower in May for the most part, and bear fruit in September and October.

Government and Virtues.] The fruit is old Saturn's, and sure a better medicine he hardly hath to strenghten the retentive faculty; therefore it stays women's longings: The good old man cannot endure women's minds should run a gadding. Also a plaister made of the fruit dried before they are rotten, and other convenient things, and applied to the reins of the back,

stops miscarriage in women with child. They are very powerful to stay any fluxes of blood, or humours in men or women; the leaves also have this quality. The fruit eaten by women with child, stayeth their longing after unusual meats, and is very effectual for them that are apt to miscarry, and be delivered before their time, to help that malady, and make them joyful mothers. The decoction of them is good to gargle and wash the mouth, throat and teeth, when there is any defluations of blood to stay it, or of humours, which causeth the pains and swellings. It is a good bath for women to sit over, that have their courses flowing too abundant; or for the piles when they bleed too much. If a poultice or plaister be made with dried medlars, beaten and mixed with the juice of red roses, whereunto a few cloves and nutmegs may be added, and a little red coral also, and applied to the stomach that is given to casting or loathing of meat, it effectually helpeth. The dried leaves in powder, strewed on fresh bleeding wounds, restraineth the blood, and healeth up the wound quickly. The medlar-stones made into powder, and drank in wine, wherein some parsley-roots have lain infused all night, or a little boiled, do break the stone in the kidneys, helping to expel it.

MELLILOT, OR KING'S CLAVER.

Descript.] **T**HIS hath many green stalks, two or three feet high, rising from a tough, long, white root, which dieth not every year, set round about at the joints with small and somewhat long, well smelling leaves, set three together unevenly dented about the edge. The flowers are yellow, and well smelling also, made like other trefoil, but small, standing in long spikes one above another, of an hand breadth long or better, which afterwards turn into long crooked cods, wherein is contained flat seed, somewhat brown.

Place.] It groweth plentifully in many places of this land, as in the edge of Suffolk, and in Essex, as also in Huntingdonshire, and in other places, but most usually in corn-fields, and in corners of meadows.

Time.] It flowereth in June and July, and is ripe quickly after.

Government and Virtues.] Mellilot, boiled in wine, and applied, mollifieth all hard tumours and inflammations that happen in the eyes, or other parts of the body, as the fundament, or privy parts of men and women; and sometimes the yolk of a roasted egg, or fine flour, or poppy seed, or endive, is added unto it. It helpeth the spreading ulcers in the head, it being washed with a lee made thereof. It helpeth the pains of the stomach, being applied fresh; or boiled with any of the aforenamed things; also, the pains of the ears, being dropped into them; and steeped in vinegar, or rosewater, it mitigateth the head-ache. The flowers of mellilot and camomile are much used to be put together in clysters to expel wind, and ease pains; and also in poultices for the same purposes, and to assuage swelling tumours in the spleen or other parts, and helpeth inflammations in any part of the body. The juice dropped into the eyes, is a singular good medicine to take away the film or skin that cloudeth or dimmeth the eye-sight. The head often washed with the distilled water of the herb and flower, or a lee made therewith, is effectual for those that suddenly lose their senses: as also to strengthen the memory, to comfort the head and brain, and to preserve them from pain, and the apoplexy.

FRENCH AND DOG MERCURY.

Descript.] **T**HIS riseth up with a square great stalk full of joints, two feet high, or thereabouts, with two leaves at every joint, and the branches likewise from both sides of the stalk, set with fresh green leaves, somewhat broad and long, about the bigness of the leaves of basil, finely dented about the edges; towards the tops of the stalks and branches, come forth at every joint in the male mercury two small, round geern heads, standing together upon a short footstalk, which growing ripe, are seeds, not having flowers. The female stalk is longer spike-

fashion, set round about with small green husks, which are the flowers, made like small bunches of grapes, which give no seed, but abide long upon the stalks without shedding. The root is composed of many small fibres, which perisheth every year at the first approach of winter, and riseth again of its own sowing; and if once it is suffered to sow itself, the ground will never want afterwards, even both sorts of it.

DOG MERCURY.

HAVING described unto you that which is called French mercury, I come now to shew you a description of this kind also.

Descript.] This is likewise of two kinds, male and female, having many stalks slender and lower than mercury, without any branches at all upon them; the root is set with two leaves at every joint, somewhat greater than the female, but more pointed and full of veins, and somewhat harder in handling; of a dark green colour, and less dented or snipped about the edges. At the joints with the leaves come forth longer stalks than the former, with two hairy round seeds upon them, twice as big as those of the former mercury. The taste hereof is herby, and the smell somewhat strong, and virulent. The female has much harder leaves standing upon longer footstalks, and the stalks are also longer: from the joints come forth spikes of flowers like the French female mercury. The roots of them both are many, and full of small fibres which run under ground, and mat themselves very much, not perishing as the former mercuries do, but abiding the winter, and shoot forth new branches every year, for the old lie down to the ground.

Place.] The male and female French mercury are found wild in divers places of this land, as by a village called Brookland, in Romney Marsh in Kent.

The dog mercury in sundry places of Kent also, and elsewhere; but the female more seldom than the male.

Time.] They flower in the summer months, and therein give their seed.

Government and Virtues.] Mercury, they say, owns the herb, but I rather think it is Venus's, and I am partly confident of it too, for I never heard that Mercury ever minded women's business so much: I believe he minds his study more. The decoction of the leaves of mercury, or the juice thereof in broth, or drank with a little sugar put to it, purgeth cholerick and waterish humours. Hippocrates commended it wonderfully for women's diseases, and applied to the secret parts, to ease the pains of the mother; and used the decoction of it, both to procure women's courses, and to expel the after-birth; and gave the decoction thereof with myrrh or pepper, or used to apply the leaves outwardly against the strangury, and diseases of the reins and bladder. He used it also for sore and watering eyes, and for deafness and pains in the ears, by dropping the juice thereof into them, and bathing them afterwards in white wine. The decoction thereof made with water and a cock chicken, is a most safe medicine against the hot fits of agues. It also cleanseth the breast and lungs of phlegm, but a little offendeth the stomach. The juice or distilled water snuffed up into the nostrils, purgeth the head and eyes of catarrhs and rheums. Some use to drink two or three ounces of the distilled water, with a little sugar put to it, in the morning, fasting, to open and purge the body of gross, viscous, and melancholy humours. It is wonderful, (if it be not fabulous) what Dioscorides and Theophrastus do relate of it, viz. That if women use these herbs either inwardly or outwardly, for three days together after conception, and their courses be past, they shall bring forth male or female children, according to that kind of herb they use. Matthiolus saith, that both the seed of the male and female mercury boiled with wormwood and drank, cureth the yellow jaundice in a speedy manner. The leaves or the juice rubbed upon warts, taketh them away. The juice mingled with some vinegar, helpeth all running scabs, tetters, ringworms, and the itch. Galen saith, that being applied in manner of a poultice to any swelling or inflammation, it digesteth the swellings, and allayeth the inflammation, and is therefore given in clysters to evacuate from the belly offensive

No. 10.

humours. The dog mercury, although it be less used, yet may serve in the same manner, to the same purpose, to purge waterish and melancholy humours.

MINT.

OF all the kinds of mint, the spear mint, or heart mint, being most usual, I shall only describe as follows :

Descript.] Spear mint hath divers round stalks, and long but narrowish leaves set thereon, of a dark green colour. The flowers stand in spiked heads at the tops of the branches, being of a pale blue colour. The smell or scent thereof is somewhat near unto basil; it increaseth by the root under ground as all the others do.

Place.] It is an usual inhabitant in gardens; and because it seldom giveth any good seed, the defect is recompensed by the plentiful increase of the root, which being once planted in a garden, will hardly be rid out again.

Time.] It flowereth not until the beginning of August, for the most part.

Government and Virtues.] It is an herb of Venus. Dioscorides saith it hath a heating, binding and drying quality, and therefore the juice taken in vinegar, stayeth bleeding: It stirreth up venery, or bodily lust; two or three branches thereof taken in the juice of four pomegranates, stayeth the hiccough, vomiting, and allayeth the choler. It dissolveth imposthumes, being laid to with barley-meal. It is good to repress the milk in women's breasts, and for such as have swollen, flagging, or great breasts. Applied with salt, it helpeth the biting of a mad dog; with mead and honeyed water, it easeth the pains of the ears, and taketh away the roughness of the tongue, being rubbed thereupon. It suffereth not milk to curdle in the stomach, if the leaves thereof be steeped or boiled in it before you drink it: Briefly, it is very profitable to the stomach. The often use hereof is a very powerful medicine to stay women's courses and the whites. Applied to the forehead and temples, it easeth the

pains in the head, and is good to wash the heads of young children therewith, against all manner of breakings-out, sores or scabs therein, and healeth the chops of the fundament. It is also profitable against the poison of venomous creatures. The distilled water from mint is available to all the purposes aforesaid, yet more weakly. But if a spirit thereof be rightly and chemically drawn, it is much more powerful than the herb itself. Simeon Sethi saith, it helpeth a cold liver, strengtheneth the belly, causeth digestion, stayeth vomits and the hiccough; it is good against the gnawing of the heart, provoketh appetite, taketh away obstructions of the liver, and stirreth up bodily lust; but therefore too much must not be taken, because it maketh the blood thin and wheyish, and turneth it into choler, and therefore choleric persons must abstain from it. It is a safe medicine for the biting of a mad dog, being bruised with salt and laid thereon. The powder of it being dried and taken after meat, helpeth digestion, and those that are splenetic. Taken with wine, it helpeth women in their sore travail in child-bearing. It is good against the gravel and stone in the kidneys, and the strangury. Being smelled unto, it is comfortable for the head and memory. The decoction hereof gargled in the mouth, cureth the gums and mouth that is sore, and mendeth an ill-savoured breath; as also the rue and coriander, canseth the palate of the mouth to turn to its place, the decoction being gargled and held in the mouth.

The virtues of the wind or horse mint, such as grow in ditches (whose description I purposely omitted, in regard they are well enough known) are especial to dissolve wind in the stomach, to help the cholic, and those that are short winded, and are an especial remedy for those that have venereal dreams and pollutions in the night, being outwardly applied to the testicles or cods. The juice dropped into the ears easeth the pains of them, and destroyeth the worms that breed therein. They are good against the venomous biting of serpents. The juice laid on warm, helpeth the king's evil, or kernels in the throat. The decoction or distilled water helpeth a stinking breath, pro-

ceeding from corruption of the teeth, and snuffed up the nose purgeth the head. Pliny saith, the eating of the leaves hath been found by experience to cure the leprosy, applying some of them to the face, and to help the scurf or dandriff of the head used with vinegar. They are extremely bad for wounded people; and they say a wounded man that eats mint, his wound will never be cured, and that is a long day.

MISSELTO.

Descript.] **T**HIS riseth up from the branch or arm of the tree whereon it groweth, with a woody stem, putting itself into sundry branches, and they again divided into many other smaller twigs, interlacing themselves one within another, very much covered with a greyish green bark, having two leaves set at every joint, and at the end likewise, which are somewhat long and narrow, small at the bottom, but broader towards the end. At the knots or joints of the boughs and branches grow small yellow flowers, which run into small, round, white transparent berries, three or four together, full of a glutinous moisture, with a blackish seed in each of them, which was never yet known to spring, being put into the ground, or any where else to grow.

Place.] It groweth very rarely on oaks with us; but upon sundry other, as well timber as fruit-trees plentifully in woody groves, and the like, through all this land.

Time.] It flowereth in the spring-time, but the berries are not ripe until October, and abideth on the branches all the winter, unless the blackbirds, and other birds, do devour them.

Government and Virtues.] This is under the dominion of the Sun, I do not question; and can also take for granted, that that which grows upon oaks, participates something of the nature of Jupiter, because an oak is one of his trees; as also that which grows upon pear trees and apple trees, participates something of his nature, because he rules the tree it grows upon, having no root of its own. But why that should have most

Mystecia

Milkwort

Valerian

virtues that grows upon oaks I know not, unless because it is rarest and hardest to come by; and our college's opinion is in this contrary to scripture, which saith, *God's tender mercies are over all his works*: and so it is, let the college of physicians walk as contrary to him as they please, and that is as contrary as the east to the west. Clusius affirms that which grows upon pear trees to be as prevalent, and gives order, that it should not touch the ground after it is gathered; and also saith, that, being hung about the neck, it remedies witchcraft. Both the leaves and berries of misselto do heat and dry, and are of subtile parts; the birdlime doth mollify hard knots, tumours, and imposthumes: ripeneth and discusseth them, and draweth forth thick as well as thin humours from the remote parts of the body, digesting and separating them. And being mixed with equal parts of rosin and wax, doth mollify the hardness of the spleen, and helpeth old ulcers and sores. Being mixed with sandaric and orpiment, it helpeth to draw off foul nails; and if quick-lime and wine lees be added thereto, it worketh the stronger. The misselto itself of the oak (as the best) made into powder, and given in drink to those that have the falling sickness, doth assuredly heal them, as Matthiolus saith; but it is fit to use it for forty days together. Some have so highly esteemed it for the virtues thereof, that they have called it *Lignum Sanctæ Crucis*, wood of the holy cross, believing it helps the falling sickness, apoplexy and palsy very speedily, not only to be inwardly taken, but to be hung at their neck. Tragus saith, that the fresh wood of any misselto bruised, and the juice drawn forth and dropped in the ears that have imposthumes in them, doth help and ease them within a few days

MONEYWORT, OR HERB TWOPENCE.

Descript.] **T**HE common moneywort sendeth forth from a small thready root divers long, weak, and slender branches, lying and running upon the ground two or three feet long or more, set with leaves two at a joint, one against another at

equal distances, which are almost round, but pointed at the ends, smooth, and of a good green colour. At the joints with the leaves, from the middle forward, come forth at every point sometimes one yellow flower, and sometimes two, standing each on a small footstalk, and made of five leaves, narrow pointed at the end, with some yellow threads in the middle, which being past, there stand in their places small round heads of seed.

Place.] It groweth plentifully in almost all places of this land, commonly in moist grounds by hedge-sides, and in the middle of grassy fields.

Time.] They flower in June and July, and their seed is ripe quickly after.

Government and Virtues.] Venus owns it. Moneywort is singularly good to stay all fluxes in man or woman, whether they be lasks, bloody fluxes, the flowing of women's courses, bleeding inwardly or outwardly, and the weakness of the stomach that is given to casting. It is very good also for the ulcers or excoriations of the lungs, or other inward parts. It is exceeding good for all wounds, either fresh or green, to heal them speedily, and for all old ulcers that are of spreading natures. For all which purposes the juice of the herb, or the powder drank in water wherein hot steel hath been often quenched; or the decoction of the green herb in wine or water drank, or used to the outward place, to wash or bathe them, or to have tents dipped therein and put into them, are effectual.

MOONWORT.

Descript.] **I**T riseth up usually but with one dark, green, thick and flat leaf, standing upon a short footstalk not above two fingers breadth; but when it flowers it may be said to bear a small slender stalk about four or five inches high, having but one leaf in the middle thereof, which is much divided on both sides into sometimes five or seven parts on a side, sometimes more; each of which parts is small like the middle rib, but broad forwards, pointed and round, resembling therein a half-

Heu Heu

Thyme

Cup. Moss

moon, from whence it took the name; the uppermost parts or divisions being bigger than the lowest. The stalks rise above this leaf two or three inches, bearing many branches of small long tongues, every one like the spikey head of the adder's tongue, of a brownish colour, (which whether I shall call them flowers, or the seed, I well know not) which after they have continued a while, resolve into a mealy dust. The root is small and fibrous. This hath sometimes divers such like leaves as are before described, with so many branches or tops rising from one stalk, each divided from the other.

Place.] It groweth on hills and heaths, yet where there is much grass, for therein it delighteth to grow.

Time.] It is to be found only in April and May; for in June when any hot weather cometh, for the most part it is withered and gone.

Government and Virtues.] The Moon owns the herb, Moonwort is cold and drying more than adder's tongue, and is therefore held to be more available for all wounds, both inward and outward. The leaves boiled in white wine, and drank, stay the immoderate flux of women's courses and the whites. It also stayeth bleeding, vomiting and other fluxes. It helpeth all blows and bruises, and to consolidate all fractures and dislocations. It is good for ruptures, but is chiefly used by most with other herbs to make oils or balsams to heal fresh or green wounds (as I said before) either inward or outward, for which it is excellent good.

Moonwort is an herb which (they say) will open locks, and unshoe such horses as tread upon it; This some laugh to scorn, and those no small fools neither; but country people that I know, call it unshoe the horse. Besides, I have heard commanders say, that on White Down in Devonshire, near Tiverton, there were found thirty horse shoes, pulled off from the feet of the earl of Essex's horses, being there drawn up in a body, many of them being but newly shod, and no reason known, which caused much admiration, and the herb described usually grows upon heaths.

MOSSES.

I SHALL not trouble the reader with a description of these, since my intent is to speak only of two kinds, as the most principal, viz. ground moss and tree moss, both of which are very well known.

Place.] The ground moss groweth in our moist woods, and in the bottom of hills, in boggy grounds and in shadowy ditches, and many other such like places. The tree moss groweth only on trees.

Government and Virtues.] All sorts of mosses are under the dominion of Saturn. The ground moss is held to be singularly good to break the stone, and to expel and drive it forth by urine, being boiled in wine and drank. The herb, being bruised and boiled in water, and applied, easeth all inflammations and pains coming from an hot cause; and is therefore used to ease the pains of the gout.

The tree mosses are cooling and binding, and partake of a digesting and mollifying quality withal, as Galen saith. But each moss doth partake of the nature of the tree from whence it is taken; therefore that of the oak is more binding, and is of good effect to stay fluxes in man or woman; as also vomiting or bleeding, the powder thereof being taken in wine. The decoction thereof in wine is very good for women to be bathed, or to sit in, that are troubled with the overflowing of their courses. The same being drank, stayeth the stomach that is troubled with casting, or the hiccough; and, as Avicena saith, it comforteth the heart. The powder therefore taken in drink for some time together, is thought available for the dropsy. The oil that has had fresh moss steeped therein for a time, and afterwards boiled and applied to the temples and forehead, doth marvellously ease the headache coming of a hot cause; as also the distillations of hot rheums or humours in the eyes, or other parts. The ancients much used it in their ointments and other medicines, against the lassitude, and to strengthen and comfort the sinews;

For which, if it was good then, I know no reason but it may be found so still.

MOTHERWORT.

Descript.] **T**HIS hath a hard, square, brownish, rough, strong stalk, rising three or four feet high at least, spreading into many branches, whereon grow leaves on each side, with long foot-stalks, two at every joint, which are somewhat broad and long, as if it were rough or crumpled, with many green veins therein of a sad green colour, and deeply dented about the edges, and almost divided. From the middle of the branches up to the tops of them (which are long and small) grow the flowers round them at distances, in sharp-pointed, rough, hard husks, of a more red or purple colour than balm or horehound, but in the same manner or form as the horehound, after which come small, round, blackish seeds in great plenty. The root sendeth forth a number of long strings and small fibres, taking strong hold in the ground, of a dark yellowish or brownish colour, and abideth as the horehound doth; the smell of this not much differeth from that.

Place.] It groweth only in gardens with us in England.

Government and Virtues.] Venus owns the herb, and it is under Leo. There is no better herb to take melancholy vapours from the heart, to strengthen it, and make a merry, chearful, blithe soul than this herb. It may be kept in a syrup or conserve; therefore the Latins called it *cardiaca*. Besides, it makes women joyful mothers of children, and settles their wombs as they should be, therefore we call it motherwort. It is held to be of much use for the trembling of the heart, and faintings and swoonings; from whence it took the name *cardiaca*. The powder thereof, to the quantity of a spoonful, drank in wine, is a wonderful help to women in their sore travail, as also for the suffocating or risings of the mother, and for these effects, it is likely it took the name of motherwort with us. It also provoketh urine and women's courses, cleanseth the chest of cold phlegm oppressing it, and

killeth worms in the belly. It is of good use to warm and dry up the cold humours, to digest and disperse them that are settled in the veins, joints, and sinews of the body, and to help cramps and convulsions.

MOUSE-EAR.

Descript.] **M**OUSE-EAR is a low herb, creeping upon the ground by small strings, like the strawberry plant, whereby it shooteth forth small roots, whereat grow upon the ground many small and somewhat short leaves, set in a round form together, and very hairy, which being broken do give a whitish milk: From among these leaves spring up two or three small hoary stalks about a span high, with a few smaller leaves thereon: at the tops whereof standeth usually but one flower, consisting of many pale yellow leaves, broad at the point, and a little dented in, set in three or four rows (the greater uppermost) very like a dandelion flower, and a little reddish underneath about the edges, especially if it grow in a dry ground; which, after they have stood long in flower, do turn into down, which, with the seed, is carried away with the wind.

Place.] It groweth on ditch banks, and sometimes in ditches, if they be dry, and in sandy grounds.

Time.] It flowereth about June or July, and abideth green all the winter.

Government and Virtues.] The Moon owns this herb also; and though authors cry out upon alchymists, for attempting to fix quicksilver by this herb and moonwort, a Roman would not have judged a thing by the success; if it be to be fixed at all, it is by Lunar influence. The juice thereof taken in wine, or the decoction thereof drank, doth help the jaundice, although of long continuance, to drink thereof morning and evening, and abstain from other drink two or three hours after. It is a special remedy against the stone, and the tormenting pains thereof; as also other tortures and griping pains of the bowels. The decoction thereof with succory and centaury is held very effectual

House Ear

House Ear

Wolfe's Wort

to help the dropsy, and them that are inclining thereunto, and the diseases of the spleen. It stayeth the fluxes of blood, either at the mouth or nose, and inward bleeding also, for it is a singular wound herb for wounds both inward and outward: It helpeth the bloody flux, and helpeth the abundance of women's courses. There is a syrup made of the juice hereof, and sugar, by the apothecaries of Italy, and other places, which is of much account with them, to be given to those that are troubled with the cough or phthisic. The same also is singularly good for ruptures or burstings. The green herb bruised and presently bound to any cut or wound, doth quickly solder the lips thereof. And the juice, decoction, or powder of the dried herb is most singular to stay the malignity of spreading and fretting cankers and ulcers whatsoever, yea in the mouth and secret parts. The distilled water of the plant is available in all the diseases afore-said, and to wash outward wounds and sores, and apply tents of cloths wet therein.

MUGWORT.

Descript.] COMMON mugwort hath divers leaves lying upon the ground, very much divided, or cut deeply in about the brims, somewhat like wormwood, but much larger, of a dark green colour on the upper side, and very hoary white underneath. The stalks rise to be four or five feet high, having on it such like leaves as those below, but somewhat smaller, branching forth very much towards the top, whereon are set very small, pale, yellowish flowers like buttons, which fall away, and after them come small seeds inclosed in round heads. The root is long and hard, with many small fibres growing from it, whereby it taketh strong hold on the ground; but both stalks and leaves do lie down every year, and the root shooteth anew in the spring. The whole plant is of a reasonable scent, and is more easily propagated by the slips than the seed.

Place.] It groweth plentifully in many places of this land, by the water-sides; as also by small water courses, and in divers other places.

Time.] It flowereth and seedeth in the end of summer.

Government and Virtues.] This is an herb of Venus, therefore maintaineth the parts of the body she rules, remedies the diseases of the parts that are under her signs Taurus and Libra. Mugwort is with good success put among other herbs that are boiled for women to sit over the hot decoction to draw down their courses, to help the delivery of their birth, and expel the after-birth. As also for the obstructions and inflammations of the mother. It breaketh the stone, and causeth one to make water where it is stopped. The juice thereof made up with myrrh, and put under as a pessary, worketh the same effects, and so doth the root also. Being made up with hog's grease into an ointment, it taketh away wens and hard knots and kernels that grow about the neck and throat, and easeth the pains about the neck more effectually, if some field daisies be put with it. The herb itself being fresh, or the juice thereof taken, is a special remedy upon the over much taking of opium. Three drams of the powder of the dried leaves taken in wine, is a speedy and the best certain help for the sciatica. A decoction thereof made with camomile and agrimony, and the place bathed therewith while it is warm, taketh away the pains of the sinews and the cramp.

THE MULBERRY-TREE.

THIS is so well known where it groweth, that it needeth no description.

Time.] It beareth fruit in the months of July and August.

Government and Virtues.] Mercury rules the tree, therefore are its effects variable as his are. The mulberry is of different parts; the ripe berries, by reason of their sweetness and slippery moisture, opening the body, and the unripe binding it, especially when they are dried, and then they are good to stay fluxes, lasks, and the abundance of women's courses. The bark of the root killeth the broad worms in the body. The juice or the syrup made of the juice of the berries, helpeth all inflam-

mations or sores in the mouth or throat, and palate of the mouth when it is fallen down. The juice of the leaves is a remedy against the biting of serpents, and for those that have taken aconite. The leaves beaten with vinegar, are good to lay on any place that is burnt with fire. A decoction made of the bark and leaves is good to wash the mouth and teeth when they ache. If the root be a little slit or cut, and a small hole made in the ground next there unto, in the harvest time, it will give out a certain juice, which being hardened the next day, is of good use to help the tooth-ach, to dissolve knots, and purge the belly. The leaves of mulberries are said to stay bleeding at the mouth or nose, or the bleeding of the piles, or of a wound, being bound unto the places. A branch of the tree taken when the moon is at the full, and bound to the wrists of a woman's arm, whose courses come down too much, doth stay them in a short space.

MULLEIN.

Descript.] COMMON white mullein hath many fair, large, woolly white leaves, lying next the ground, somewhat larger than broad, pointed at the end, and as it were dented about the edges. The stalk riseth up to be four or five feet high, covered over with such like leaves, but lesser, so that no stalk can be seen for the multitude of leaves thereon up to the flowers, which come forth on all sides of the stalk, without any branches for the most part, and are many set together in a long spike, in some of a yellow colour, in others more pale, consisting of five round pointed leaves, which afterwards have small round heads, wherein is small brownish seed contained. The root is long, white, and woody, perishing after it hath borne seed.

Place.] It groweth by way-sides and lanes, in many places of this land.

Time.] It flowereth in July, or thereabouts.

Government and Virtues.] It is under the dominion of Saturn. A small quantity of the root given in wine, is com-

mended by Dioscorides, against lasks and fluxes of the belly. The decoction hereof drank, is profitable for those that are bursten, and for cramps and convulsions, and for those that are troubled with an old cough. The decoction thereof gargled, easeth the pains of the tooth-ache. And the oil made by the often infusion of the flowers is of very good effect for the piles. The decoction of the root in red wine or in water, (if there be an ague) wherein red hot steel hath been often quenched, doth stay the bloody flux. The same also openeth obstructions of the bladder and veins when one cannot make water. A decoction of the leaves hereof, and of sage, marjoram, and camomile flowers, and the places bathed therewith, that have sinews stiff with cold or cramps, doth bring them much ease and comfort. Three ounces of the distilled water of the flowers, drank morning and evening for some days together, is said to be a most excellent remedy for the gout. The juice of the leaves and flowers being laid upon rough warts, as also the powder of the dried roots rubbed on, doth easily take them away, but doth no good to smooth warts. The powder of the dried flowers is an especial remedy for those that are troubled with the belly-ach, or the pains of the cholic. The decoction of the root, and so likewise of the leaves, is of great effect to dissolve the tumours, swellings, or inflammations of the throat. The seeds and leaves boiled in wine, and applied, draw forth speedily thorns or splinters gotten into the flesh, ease the pains, and heal them also. The leaves bruised and wrapped in double papers, and covered with hot ashes and embers to bake a while, and then taken forth and laid warm on any blotch or boil happening in the groin or share, doth dissolve and heal them. The seed bruised and boiled in wine, and laid on any member that hath been out of joint, and newly set again, taketh away all swelling and pain thereof.

MUSTARD.

Descript.] **O**UR common mustard hath large and broad rough leaves, very much jagged with uneven and unorderedly

gashes, somewhat like turnip leaves, but lesser and rougher. The stalk riseth to be more than a foot high, and sometimes two feet high, being round, rough, and branched at the top, bearing such like leaves thereon as grow below, but lesser, and less divided, and divers yellow flowers one above another at the tops, after which come small rough pods, with small, lank, flat ends, wherein is contained round yellowish seed, sharp, hot and biting upon the tongue. The root is small, long and woody when it beareth stalks, and perisheth every year.

Place.] This groweth with us in gardens only, and other manured places.

Time.] It is an annual plant, flowering in July, and the seed is ripe in August.

Government and Virtues.] It is an excellent sauce for such whose blood wants clarifying, and for weak stomachs, being an herb of Mars, but naught for choleric people, though as good for such as are aged, or troubled with cold diseases. Aries claims something to do with it, therefore it strengthens the heart, and resisteth poison. Let such whose stomachs are so weak they cannot digest their meat, or appetite it, take of mustard-seed a dram, cinnamon as much, and having beaten them to powder, and half as much mastic in powder, and with gum arabic dissolved in rose water, make it up into trotches, of which they may take one of about half a dram weight an hour or two before meals; let old men and women make much of this medicine, and they will either give me thanks, or shew manifest ingratitude. Mustard seed hath the virtue of heat, discussing, ratifying, and drawing out splinters of bones, and other things of the flesh. It is of good effect to bring down women's courses, for the falling sickness or lethargy, drowsy forgetful evil, to use it both inwardly and outwardly, to rub the nostrils, forehead and temples, to warm and quicken the spirits; for by the fierce sharpness, it purgeth the brain by sneezing, and drawing down rheum and other viscous humours, which by their distillations upon the lungs and chest, procure coughing, and therefore, with some honey added thereto, doth much good therein. The

decoction of the seed made in wine, and drank, provoketh urine, resisteth the force of poison, the malignity of mushrooms, and venom of scorpions, or other venomous creatures, if it be taken in time; and taken before the cold fits of agues, altereth, lesseneth, and cureth them. The seed taken either by itself, or with other things, either in an electuary or drink, doth mightily stir up bodily lust, and helpeth the spleen and pains in the sides, and gnawings in the bowels; and used as a gargle, draweth up the palate of the mouth, being fallen down; and also it dissolveth the swellings about the throat, if it be outwardly applied. Being chewed in the mouth, it oftentimes helpeth the tooth-ach. The outward application hereof upon the pained place of the sciatica, discusseth the humours, and easeth the pains, as also the gout, and other joint-achs; and is much and often used to ease pains in the sides or loins, the shoulders, or other parts of the body, upon the plying thereof to raise blisters, and cureth the disease by drawing it to the outward parts of the body. It is also used to help the falling off of the hair. The seed bruised, mixed with honey, and applied, or made up with wax, taketh away the marks and black and blue spots of bruises, or the like, the roughness or scabbiness of the skin, as also the leprosy, and lousy evil. It helpeth also the crick in the neck. The distilled water of the herb, when it is in flower, is much used to drink inwardly to help in any of the diseases aforesaid, or to wash the mouth when the palate is down, and for the diseases of the throat to gargle, but outwardly also for scabs, itch, or other the like infirmities, and cleanseth the face from morpew, spots, freckles, and other deformities.

THE HEDGE-MUSTARD.

Descript.] **T**his groweth up usually but with one blackish green stalk, tough, easy to bend, but not to break, branched into divers parts, and sometimes with divers stalks, set full of branches, whereon grow long, rough, or hard, rugged leaves,

very much tore or cut on the edges in many parts, some bigger, and some lesser, and of a dirty green colour. The flowers are small and yellow, that grow on the tops of the branches in long spikes, flowering by degrees: so that continuing long in flower, the stalk will have small round cods at the bottom growing upright and close to the stalk, while the top flowers yet shew themselves, in which are contained small yellow seed, sharp and strong, as the herb is also. The root groweth down slender and woody, yet abiding and springing again every year.

Place.] This groweth frequently in this land, by the ways and hedge-sides, and sometimes in the open fields.

Time.] It flowereth most usually about July.

Government and Virtues.] Mars owns this herb also. It is singularly good in all the diseases of the chest and lungs, hoarseness of voice; and by the use of the decoction thereof for a little space, those have been recovered who had utterly lost their voice, and almost their spirits also. The juice thereof made into a syrup, or licking medicine, with honey or sugar, is no less effectual for the same purpose, and for all other coughs, wheezing, and shortness of breath. The same is also profitable for those that have the jaundice, pleurisy, pains in the back and loins, and for torments in the belly, or cholic, being also used in clysters. The seed is held to be a special remedy against poison and venom. It is singularly good for the sciatica, and in joint-achs, ulcers, and cankers in the mouth, throat, or behind the ears, and no less for the hardness and swelling of the testicles, or of women's breasts.

NAILWORT, OR WITLOWGRASS.

Descript.] **T**HIS very small and common herb hath no root, save only a few strings; neither doth it ever grow to be above a hand's breadth high, the leaves are very small, and something long, not much unlike those of chickweed, among which rise up divers slender stalks, bearing many white flowers one above another, which are exceeding small; after which come

small flat pouches containing the seed, which is very small, but of a sharp taste.

Place.] It grows commonly upon old stone and brick walls, and sometimes in dry gravelly grounds, especially if there be grass or moss near to shadow it.

Time.] They flower very early in the year, sometimes in January, and in February; for before the end of April they are not to be found.

Government and Virtues.] It is held to be exceeding good for those imposthumes in the joints, and under the nails, which they call whitlows, felons, and icons and nailwheals. Such as would be knowing physicians, let them read those books of mine of the last edition, viz. Reverius, Riolanus, Johnson, Vestingus, Sennertus.

NEP, OR CATMINT.

Descript.] COMMON garden nep shooteth forth hard four-square stalks, with a hoariness on them, a yard high or more, full of branches, bearing at every joint two broad leaves like balm, but longer pointed, softer white and more hoary nicked about the edges, and of a strong sweet scent. The flowers grow in large tufts at the tops of the branches, and underneath them, likewise on the stalks many together, of a whitish purple colour. The roots are composed of many long strings or fibres, fastening themselves stronger in the ground, and abide with green leaves thereon all the winter.

Place.] It is only nursed up in our gardens.

Time.] And it flowereth in July, or thereabouts.

Government and Virtues.] It is an herb of Venus. Nep is generally used for women to procure their courses, being taken inwardly or outwardly, either alone, or with other convenient herbs in a decoction to bathe them, or sit over the hot fumes thereof; and by the frequent use thereof, it taketh away barrenness, and the wind, and pains of the mother. It is also used in pains of the head coming of any cold cause, catarrhs

rheums, and for swimming and giddiness thereof, and is of special use for the windiness of the stomach and belly. It is effectual for any cramp, or cold aches, to dissolve cold and wind that afflicteth the place, and is used for colds, coughs, and shortness of breath. The juice thereof drank in wine, is profitable for those that are bruised by an accident. The green herb bruised and applied to the fundament, and lying there two or three hours, easeth the pains of the piles; the juice also being made up into an ointment, is effectual for the same purpose. The head washed with a decoction thereof, it taketh away scabs, and may be effectual for other parts of the body also.

NETTLES.

NETTLES are so well known, that they need no description; they may be found by feeling, in the darkest night.

Government and Virtues.] This is also an herb Mars claims dominion over. You know Mars is hot and dry, and you know as well that winter is cold and moist; then you may know as well the reason why nettle tops eaten in the spring consumeth the phlegmatic superfluities in the body of man, that the coldness and moistness of winter hath left behind. The roots or leaves boiled, or the juice of either of them, or both, made into an electuary with honey and sugar, is a safe and sure medicine to open the pipes and passages of the lungs, which is the cause of wheezing and shortness of breath, and helpeth to expectorate tough phlegm, as also to raise the imposthured pleurisy; and spend it by spitting; the same helpeth the swelling of the almonds of the throat, the mouth and throat being gargled therewith. The juice is also effectual to settle the palate of the mouth in its place, and to heal and temper the inflammations and soreness of the mouth and throat. The decoction of the leaves in wine, being drank, is singularly good to provoke women's courses, to settle the suffocation, strangling of the mother, and all other diseases thereof; as also applied outwardly with a little myrrh. The same also, or the seed, provoketh

urine, and expelleth the gravel and stone in the reins or bladder, often proved to be effectual in many that have taken it. The same killeth the worms in children, easeth pains in the sides, and dissolveth the windiness in the spleen, as also in the body, although others think it only powerful to provoke venery. The juice of the leaves taken two or three days together, stayeth bleeding at the mouth. The seed being drank, is a remedy against the stinging of venomous creatures, the biting of mad dogs, the poisonful qualities of hemlock, henbane, nightshade, mandrake, or other such like herbs that stupify or dull the senses; as also the lethargy, especially to use it outwardly, to rub the forehead or temples in the lethargy, and the places stung or bitten with beasts, with a little salt. The distilled water of the herb is also effectual (though not so powerful) for the diseases aforesaid; as for outward wounds and sores to wash them, and to cleanse the skin from morphew, leprosy, and other discolourings thereof. The seed or leaves bruised, and put into the nostrils, stayeth the bleeding of them, and taketh away the flesh growing in them called polypus. The juice of the leaves, or the decoction of them, or of the root is singularly good to wash either old, rotten, or stinking sores or fistulas, and gangrenes, and such as fretting, eating, or corroding scabs, maligness and itch, in any part of the body, as also green wounds, by washing them therewith, or applying the green herb bruised thereunto, yea, although the flesh were separated from the bones, the same applied to our wearied members, refresh them, or replace those that have been out of joint, being first set up again, strengthen, drieth, and comforteth them, as also those places troubled with aches and gouts, and the defluction of humours upon the joints or sinews; it easeth the pains, and drieth or dissolveth the defluctions. An ointment made of the juice, oil, and a little wax, is singularly good to rub cold and benumbed members. An handful of the leaves of green nettles, and another of wallwort, or deanwort bruised and applied simply themselves to the gout, sciatica, or joint aches in any part, hath been found to be an admirable helo thereunto.

NIGHTSHADE.

Descript.] COMMON nightshade hath an upright, round, green, hollow stalk, about a foot or half a yard high, bushing forth in many branches whereon grow many green leaves, somewhat broad, and pointed at the ends, soft and full of juice, somewhat like unto basil, but longer and a little unevenly dented about the edges: At the tops of the stalks and branches come forth three or four more white flowers made of five small pointed leaves a-piece, standing on a stalk together, one above another, with yellowish pointels in the middle, composed of four or five yellow threads set together, which afterwards run into so many pendulous green berries, of the bigness of small pease, full of green juice, and small whitish round flat seed lying within it. The root is white, and a little woody when it hath given flower fruit, with many small fibres at it: The whole plant is of a waterish insipid taste, but the juice within the berries is somewhat viscous, and of a cooling and binding quality.

Place.] It groweth wild with us under our walls, and in rubbish, the common paths, and sides of hedges and fields, as also in our gardens here in England, without any planting.

Time.] It lieth down every year and riseth again of its own sowing, but springeth not until the latter end of April at the soonest.

Government and Virtues.] It is a cold Saturnine plant. The common nightshade is wholly used to cool hot inflammations either inwardly or outwardly, being no ways dangerous to any that use it, as most of the rest of the nightshades are; yet it must be used moderately. The distilled water only of the whole herb is fittest and safest to be taken inwardly. The juice also clarified and taken, being mingled with a little vinegar, is good to wash the mouth and throat that is inflamed; but outwardly the juice of the herbs or berries, with oil of roses and a little vinegar and ceruse laboured together in a leaden mortar, is very good to anoint all hot inflammations in the eyes. It also doth

much good for the shingles, ringworms, and in all running, fretting, and corroding ulcers applied thereunto. A pessary dipped in the juice, and dropped into the matrix, stayeth the immoderate flux of women's courses; a cloth wet therein, and applied to the testicles or cods, upon any swelling therein, giveth much ease, also to the gout that cometh of hot and sharp humours. The juice dropped into the ears, easeth pains thereof that arise of heat or inflammations. And Pliny saith, it is good for hot swellings under the throat. Have a care you mistake not the deadly nightshade for this; if you know it not, you may let them both alone, and take no harm, having other medicines sufficient in the book.

THE OAK.

IT is so well known (the timber thereof being the glory and safety of this nation by sea) that it needeth no description.

Government and Virtues.] Jupiter owns the tree. The leaves and bark of the oak, and the acorn cups, do bind and dry very much. The inner bark of the tree, and the thin skin that covereth the acorn, are most used to stay the spitting of blood, and the bloody flux. The decoction of that bark, and the powder of the cups, do stay vomitings, spitting of blood, bleeding at the mouth, or other fluxes of blood in men or women; lasks also, and the involuntary flux of natural seed. The acorn in powder, taken in wine, provoketh urine, and resisteth the poison of venomous creatures. The decoction of acorns and the bark made in milk and taken, resisteth the force of poisonous herbs and medicines, as also the virulency of cantharides, when one by eating them hath his bladder exulcerated, and pisseth blood. Hippocrates saith, he used the fumes of oak leaves to women that were troubled with the strangling of the mother; and Galen applied them being bruised to cure green wounds. The distilled water of the oaken bud, before they break out into leaves, is good to be used either inwardly or outwardly, to assuage inflammations, and to stop all manner of fluxes in ma.

or woman. The same is singularly good in pestilential and hot burning fevers: for it resisteth the force of the infection, and allayeth the heat. It cooleth the heat of the liver, breaketh the stone in the kidneys, and stayeth women's courses. The decoction of the leaves worketh the same effects. The water that is found in the hollow places of old oaks, is very effectual against any foul or spreading scabs. The distilled water (or decoction, which is better) of the leaves, is one of the best remedies that I know of for the whites in women.

OATS.

ARE so well known that they need no description.

Government and Virtues.] Oats fried with bay salt, and applied to the sides, take away the pains of stitches and wind in the sides of the belly. A poultice made of meal of oats, and some oil of bays put thereunto, helpeth the itch and the leprosy, as also the fistulas of the fundament, and dissolveth hard imposthumes. The meal of oats boiled with vinegar, and applied, taketh away freckles and spots in the face, and other parts of the body.

ONE-BLADE.

Descript.] **T**HIS small plant never beareth more than one leaf, but only when it riseth up with his stalk, which thereon beareth another, and seldom more, which are of a blueish green colour, pointed, with many ribs or veins therein, like plantain. At the top of the stalk grow many small white flowers, star fashion, smelling somewhat sweet; after which come small red berries, when they are ripe. The root is small, of the bigness of a rush, lying and creeping under the upper crust of the earth, shooting forth in divers places.

Place.] It groweth in moist, shadowy, and grassy places of woods, in many places of this land.

Time.] It flowereth about May, and the berries are ripe in June, and then quickly perisheth, until the next year it springeth from the same root again.

Government and Virtues.] It is a precious herb of the Sun. Half a dram, or a dram at most, in powder of the roots hereof taken in wine and vinegar, of each equal parts, and the party laid presently to sweat thereupon, is said to be a sovereign remedy for those that are infected with the plague, and have a sore upon them, by expelling the poison and infection, and defending the heart and spirits from danger. It is a singularly good wound herb, and is thereupon used with other the like effects in many compound balsams for curing of wounds, be they fresh and green, or old and malignant, and especially if the sinews be burnt.

ORCHIS.

IT hath gotten almost as many several names attributed to the several sorts of it, as would almost fill a sheet of paper; as dogstones, goat-stones, fool-stones, fox-stones, satirion, culians, together with many others too tedious to rehearse.

Descript.] To describe all the several sorts of it were an endless piece of work; therefore I shall only describe the roots, because they are to be used with some discretion. They have each of them a double root within, some of them are round, in others like a hand; these roots alter every year by course, when the one riseth and waxeth full, the other waxeth lank, and perisheth: Now, it is that which is full which is to be used in medicines, the other being either of no use at all, or else, according to the humour of some, it destroys and disannuls the virtues of the other, quite undoing what that doth.

Time.] One or other of them may be found in flower from the beginning of April to the latter end of August.

Temperature and Virtues.] They are hot and moist in operation, under the dominion of dame Venus, and provoke lust exceedingly, which they say, the dried and withered roots do restrain. They are held to kill worms in children; as also, being bruised and applied to the place, to heal the king's evil.

ONIONS.

THEY are so well known, that I need not spend time about writing a description of them.

Government and Virtues.] Mars owns them, and they have gotten this quality, to draw any corruption to them, for if you peel one, and lay it upon the dunghill, you shall find it rotten in half a day, by drawing putrefaction to it; then being bruised and applied to a plague sore, it is very probable it will do the like. Onions are flatulent, or windy; yet they do somewhat provoke appetite, increase thirst, ease the belly and bowels, provoke women's courses, help the biting of a mad dog, and of other venomous creatures, to be used with honey and rue, increase sperm, especially the seed of them. They also kill worms in children, if they drink the water fasting wherein they have been steeped all night. Being roasted under the embers, and eaten with honey or sugar and oil, they much conduce to help an inveterate cough, and expectorate the tough phlegm. The juice being snuffed up in the nostrils, purgeth the head, and helpeth the lethargy, (yet the often eating them, is said to procure pains in the head.) It hath been held by divers country people a great preservative against infection, to eat onions fasting with bread and salt: As also to make a great onion hollow, filling the place with good treacle, and after to roast it well under the embers, which, after taking away the outermost skin thereof, being beaten together, is a sovereign salve for either plague or sores, or any other putrefied ulcer. The juice of onions is good for either scalding or burning by fire, water, or gunpowder, and used with vinegar, taketh away all blemishes, spots, and marks in the skin: and dropped into the ears, easeth the pains and noise of them. Applied also with figs beaten together, helpeth to ripen and break imposthumes, and other sores.

Leeks are as like them in quality, as the pome-water is like an apple: They are a remedy against a surfeit of mushrooms, being

baked under the embers and taken; and being boiled and applied very warm, help the piles. In other things they have the same property as the onions, although not so effectual.

ORPINE.

Descript.] COMMON orpine riseth up with divers round brittle stalks, thick set with fat and fleshy leaves, without any order, and little or nothing dented about the edges, of a green colour: The flowers are white, or whitish, growing in tufts, after which come small chaffy husks, with seeds like dust in them. The roots are divers thick, round, white tuberous clogs; and the plant groweth not so big in some places as in others where it is found.

Place.] It is frequent in almost every county of this land, and is cherished in gardens with us, where it groweth greater than that which is wild, and groweth in shadowy sides of fields and woods.

Time.] It flowereth about July, and the seed is ripe in August.

Government and Virtues.] The Moon owns the herb, and he that knows but her exaltation, knows what I say is true. Orpine is seldom used in inward medicines with us, although Tragus saith from experience in Germany, that the distilled water thereof is profitable for gnawings or excoriations in the stomach or bowels, or for ulcers in the lungs, liver, or other inward parts, as also in the matrix, and helpeth all those diseases, being drank for certain days together. It stayeth the sharpness of humours in the bloody-flux, and other fluxes in the body or in wounds. The root thereof also performeth the like effect. It is used outwardly to cool any heat or inflammation upon any hurt or wound, and easeth the pains of them; as also to heal scaldings or burnings, the juice thereof being beaten with some green salad oil, and anointed. The leaf bruised, and laid to any green wound in the hands or legs, doth heal them quickly; and being bound to the throat, much helpeth the quinsy; it

Cyprip

W. Mullien

T. Mustard

helpeth also ruptures and burstenness. If you please to make the juice thereof into a syrup with honey or sugar, you may safely take a spoonful or two at a time, (let my author say what he will) for a quinsy, and you shall find the medicine more pleasant, and the cure more speedy, than if you had taken a dog's turd, which is the vulgar cure.

PARSLEY.

THIS is so well known, that it needs no description.

Government and Virtues.] It is under the dominion of Mercury; is very comfortable to the stomach, helpeth to provoke urine and women's courses; to break wind both in the stomach and bowels; and doth a little open the body, but the root much more. It openeth obstructions both of liver and spleen, and is therefore accounted one of the five opening roots. Galen commended it against the falling sickness, and to provoke urine mightily, especially if the roots be boiled, and eaten like parsnips. The seed is effectual to provoke urine and women's courses, to expel wind, to break the stone, and easeth the pains and torments thereof; it is also effectual against the venom of any poisonous creature, and the danger that cometh to them that have the lethargy; and is as good against the cough. The distilled water of parsley is a familiar medicine with nurses to give their children, when they are troubled with wind in the stomach or belly, which they call the frets; and is also much available to them that are of great years. The leaves of parsley laid to the eyes that are inflamed with heat, or swollen, doth much help them, if it be used with bread or meal; and being fried with butter, and applied to women's breasts that are hard through the curdling of their milk, it abateth the hardness quickly, and also it taketh away black and blue marks coming of bruises or falls. The juice thereof dropped into the ears, with a little wine, easeth the pains. Tragus setteth down an excellent medicine to help the jaundice and falling sickness, the dropsy, and stone in the kidneys, in this manner: Take of the seed of parsley, fennel,

anise and carraways, of each an ounce; of the roots of parsley, burnet, saxifrage, and carraways, of each an ounce and a half; let the seeds be bruised, and the roots washed and cut small; let them lie all night in steep in a bottle of white wine, and in the morning be boiled in a close earthen vessel until a third part or more be wasted; which being strained and cleared, take four ounces thereof morning and evening first and last, abstaining from drink after it for three hours. This openeth obstructions of the liver and spleen, and expelleth the dropsy and jaundice by urine.

PARSLEY PIERT, OR PARSLEY BREAKSTONE.

Descript.] **T**HE root, although it be very small and thready, yet it continues many years, from whence arise many leaves lying along on the ground, each standing upon a long small foot-stalk, the leaves as broad as a man's nail, very deeply dented on the edges, somewhat like a parsley-leaf, but of a very dusky green colour, the stalks are very weak and slender, about three or four fingers in length, set so full of leaves that they can hardly be seen, either having no foot-stalk at all, or but very short; the flowers are so small they can hardly be seen, and the seed as small as may be.

Place.] It is a common herb throughout the nation, and rejoiceth in barren, sandy, moist places. It may be found plentifully about Hamstead Heath, Hyde Park, and in Tothill-fields.

Time.] It may be found all the summer-time, even from the beginning of April to the end of October.

Government and Virtues.] Its operation is very prevalent to provoke urine, and to break the stone. It is a very good salad herb. It were good the gentry would pickle it up as they pickle up samphire for their use all the winter. I cannot teach them how to do it; yet this I can tell them, it is a very wholesome herb. They may also keep the herb dry, or in a syrup, if they please. You may take a dram of the powder of it in white

wine; it would bring away gravel from the kidneys insensibly, and without pain. It also helps the strangury.

PARSNIP.

THE garden kind thereof is so well known (the root being commonly eaten) that I shall not trouble you with any description of it. But the wild kind being of more physical use, I shall in this place describe it unto you.

Descript.] The wild parsnip differeth little from the garden, but groweth not so fair and large, nor hath so many leaves, and the root is shorter, more woody, and not so fit to be eaten, and therefore more medicinal.

Place.] The name of the first sheweth the place of its growth. The other groweth wild in divers places, as in the marshes by Rochester, and elsewhere, and flowereth in July; the seed being ripe about the beginning of August, the second year after sowing; for if they do flower the first year, the country people call them madneps.

Government and Virtues.] The garden parsnips are under Venus. The garden parsnip nourisheth much, and is good and wholesome nourishment, but a little windy, whereby it is thought to procure bodily lust; but it fatteneth the body much, if much used. It is conducible to the stomach and reins, and provoketh urine. But the wild parsnip hath a cutting, attenuating, cleansing, and opening quality therein. It resisteth and helpeth the bitings of serpents, easeth the pains and stitches in the sides, and dissolveth wind both in the stomach and bowels, which is the cholic, and provoketh urine. The root is often used, but the seed much more; the wild being better than the tame, shews dame Nature to be the best physician.

COW PARSNIP.

Descript.] **T**HIS groweth with three or four large, spread, winged, rough leaves, lying often on the ground, or else raised a little from it, with long, round, hairy footstalks under them,

parted usually into five divisions, the two couples standing each against the other; and one at the end, and each leaf being almost round, yet somewhat deeply cut in on the edges in some leaves, and not so deep in others, of a whitish green colour, smelling somewhat strongly; among which riseth up a round crusted, hairy stalk, two or three feet high, with a few joints and leaves thereon, and branched at the top, where stand large umbels of white, and sometimes reddish flowers, and after them flat, whitish, thin, winged seed, two always joined together. The root is long and white, with two or three long strings growing down into the ground, smelling likewise strongly and unpleasant.

Place.] It groweth in moist meadows, and the borders and corners of fields, and near ditches, through this land.

Time.] It flowereth in July, and seedeth in August.

Government and Virtues.] Mercury hath the dominion over them. The seed thereof, as Galen saith, is of a sharp and cutting quality, and therefore is a fit medicine for a cough and shortness of breath, the falling sickness and jaundice. The root is available to all the purposes aforesaid, and is also of great use to take away the hard skin that groweth on a fistula, if it be but scraped upon it. The seed hereof being drank, cleanseth the belly from tough phlegmatic matter therein, easeth them that are liver-grown, women's passions of the mother, as well being drank as the smoke thereof received underneath, and likewise raiseth such as are fallen into a deep sleep, or have the lethargy, by burning it under their nose. The seed and root boiled in oil, and the head rubbed therewith, helpeth not only those that are fallen into a frenzy, but also the lethargy or drowsy evil, and those that have been long troubled with the head-ache, if it be likewise used with rue. It helpeth also the running scab and the shingles. The juice of the flowers dropped into the ears that run and are full of matter, cleanseth and healeth them.

THE PEACH TREE.

Descript.] A PEACH tree groweth not so great as the

apricot tree, yet spreadeth branches reasonable well, from whence spring smaller reddish twigs, whereon are set long and narrow green leaves dented about the edges. The blossoms are greater than the plumb, and of a light purple colour; the fruit round, and sometimes as big as a reasonable pippin, others smaller, as also differing in colour and taste, as russet, red, or yellow, waterish or firm, with a frize or cotton all over, with a cleft therein like an apricot, and a rugged, furrowed, great stone within it, and a bitter kernel within the stone. It sooner waxeth old, and decayeth than the apricot, by much.

Place.] They are nursed in gardens and orchards through this land.

Time.] They flower in the spring, and fructify in autumn.

Government and Virtues. Lady Venus owns the tree, and by it opposeth the ill effects of Mars, and indeed for children and young people, nothing is better to purge choler and the jaundice, than the leaves and flowers of this tree being made into a syrup or conserve; let such as delight to please their lust regard the fruit; but such as have lost their health, and their children's, let them regard what I say, they may safely give two spoonfuls of the syrup at a time: it is as gentle as Venus herself. The leaves of peaches bruised and laid on the belly, kill worms; and so they do also being boiled in ale and drank, and open the belly likewise; and being dried is a safer medicine to discuss humours. The powder of them strewed upon fresh bleeding wounds stayeth their bleeding, and closeth them up. The flowers steeped all night in a little wine standing warm, strained forth in the morning, and drank fasting, doth gently open the belly, and move it downward. A syrup made of them, as the syrup of roses is made, worketh more forcibly than that of roses, for it provoketh vomiting, and spendeth waterish and hydropic humours by the continuance thereof. The flowers made into a conserve, worketh the same effect. The liquor that droppeth from the tree, being wounded, is given with the decoction of coltsfoot, to those that are troubled with the cough or shortness

of breath, by adding thereunto some sweet wine, and putting some saffron also therein. It is good for those that are hoarse, or have lost their voice; helpeth all defects of the lungs, and those that vomit and spit blood. Two drams hereof given in the juice of lemons, or of raddish, is good for them that are troubled with the stone. The kernels of the stones do wonderfully ease the pains and wringings of the belly, through wind or sharp humours, and help to make an excellent medicine for the stone upon all occasions, in this manner: *I take fifty kernels of peach-stones, and one hundred of the kernels of cherry-stones, a handful of elder flowers fresh or dried, and three pints of muscadel, set them in a close pot into a bed of horse dung for ten days, after which distil in a glass with a gentle fire, and keep it for your use: You may drink upon occasion three or four ounces at a time. The milk or cream of these kernels being drawn forth with some vervain water, and applied to the forehead and temples doth much help to procure rest and sleep to sick persons wanting it. The oil drawn from the kernels, the temples being therewith anointed, doth the like. The said oil put into clysters, easeth the pains of the wind cholic: and anointed on the lower part of the body, doth the like, and dropped into the ears, easeth pains in them; the juice of the leaves doth the like. Being also anointed on the forehead and temples, it helpeth the megrim, and all other pains in the head. If the kernels be bruised and boiled in vinegar, until they become thick, and applied to the head, it marvellously procures the hair to grow again upon bald places or where it is too thin.*

THE PEAR TREE.

PEAR trees are so well known, that they need no description.

Government and Virtues.] The tree belongs to Venus, and so doth the apple tree. For their physical use they are best discerned by their taste. All the sweet and luscious sorts, whether manured or wild, do help to move the belly downwards

more or less. Those that are hard and sour, do, on the contrary, bind the belly as much, and the leaves do so also: Those that are moist do in some sort cool, but harsh or wild sorts much more, and are very good in repelling medicines; and if the wild sort be boiled with mushrooms, it makes them less dangerous. The said pears boiled with a little honey, help much the oppressed stomach, as all sorts of them do, some more, some less: but the harsher sorts do more cool and bind, serving well to be bound to green wounds, to cool and stay the blood, and to heal up the wound without farther trouble, or inflammation, as Galen saith he hath found by experience. The wild pears do sooner close up the lips of green wounds than others.

Schola and Salerni advise to drink much wine after pears, or else (say they) they are as bad as poison; nay, and they curse the tree for it too; but if a poor man find his stomach oppressed by eating pears, it is but working hard, and it will do as well as drinking wine.

PELLITORY OF SPAIN.

COMMON pellitory of Spain, if it be planted in our gardens, it will prosper very well; yet there is one sort growing ordinarily here wild, which I esteem to be little inferior to the other, if at all. I shall not deny you the description of them both.

Descript.] Common pellitory is a very common plant, and will not be kept in our gardens without diligent looking to. The root goes downright into the ground bearing leaves, being long and finely cut upon the stalk, lying on the ground, much larger than the leaves of the camomile are. At the top it bears one single large flower at a place, having a border of many leaves white on the upper side, and reddish underneath, with a yellow thrum in the middle, not standing so close as that of camomile doth.

The other common pellitory which groweth here, hath a root of a sharp biting taste, scarce discernible by the taste from that

before described; from whence arise divers brittle stalks, a yard high and more, with narrow long leaves finely dented about the edges, standing one above another up to the tops. The flowers are many and white, standing in tufts like those of yarrow, with a small yellowish thrum in the middle. The seed is very small.

Place.] The last groweth in fields by the hedge sides and paths, almost every where.

Time.] It flowereth at the latter end of June and in July.

Government and Virtues.] It is under the government of Mercury, and I am persuaded it is one of the best purgers of the brain that grows. An ounce of the juice taken in a draught of muscadell, an hour before the fit of the ague comes, will assuredly drive away the ague at the second or third time taking at the farthest. Either the herb or root dried and chewed in the mouth, purgeth the brain of phlegmatic humours; thereby not only easing pains in the head and teeth, but also hindereth the distilling of the brain upon the lungs and eyes, thereby preventing coughs, phthisics and consumption, the apoplexy and falling sickness. It is an excellent approved remedy in the lethargy. The powder of the herb or root being snuffed up the nostrils, procureth sneezing, and easeth the head-ach; being made into an ointment with hog's grease, it takes away black and blue spots occasioned by blows or falls, and helps both the gout and sciatica.

PELLITORY OF THE WALL.

Descript.] **I**T riseth with brownish, red, tender, weak, clear, and almost transparent stalks, about two feet high, upon which grow at the joints two leaves somewhat broad and long, of a dark green colour, which afterwards turn brownish, smooth on the edges, but rough and hairy, as the stalks are also. At the joints with the leaves from the middle of the stalk upwards, where it spreadeth in branches, stand many small, pale, purplish flowers in hairy rough heads, or husks, after which come small,

black rough seed, which will stick to any cloth or garment that shall touch it. The root is somewhat long, with small fibres thereat, of a dark reddish colour, which abideth the winter, although the stalks and leaves perish and spring every year.

Place.] It groweth wild generally through the land, about the borders of fields, and by the sides of walls, and among rubbish. It will endure well being brought up in gardens, and planted on the shady side, where it will spring of its own sowing.

Time.] It flowereth in June and July, and the seed is ripe soon after.

Government and Virtues.] It is under the dominion of Mercury. The dried herb pellitory made up into an electuary with honey, or the juice of the herb, or the decoction thereof made up with sugar or honey, is a singular remedy for an old or dry cough, the shortness of breath, and wheezing in the throat. Three ounces of the juice thereof taken at a time, doth wonderfully help stopping of the urine, and to expel the stone or gravel in the kidneys or bladder, and is therefore usually put among other herbs used in clysters to mitigate pains in the back, sides, or bowels, proceeding of wind, stopping of urine, the gravel or stone as aforesaid. If the bruised herb, sprinkled with muscadell, be warmed upon a tile, or in a dish upon a few quick coals in a chafing-dish, and applied to the belly, it worketh the same effect. The decoction of the herb being drank, easeth pains of the mother, and bringeth down women's courses; It also easeth those griefs that arise from obstructions of the liver, spleen, and reins. The same decoction, with a little honey added thereto, is good to gargle a sore throat. The juice held a while in the mouth, easeth pains in the teeth. The distilled water of the herb, drank with some sugar, worketh the same effects, and cleanseth the skin from spots, freckles, purples, wheals, sun-burn, morphew, &c. The juice dropped into the ears, easeth the noise in them, and taketh away pricking and shooting pains therein: The same, or the distilled water, assuag-

eth hot and swelling imposthumes, burnings and scaldings by fire or water; as also all other hot tumours and inflammations, or breakings-out of heat, being bathed often with wet cloths dipped therein: The said juice made into a liniment with ceruse, and oil of roses, and anointed therewith, cleanseth foul rotten ulcers, and stayeth spreading or creeping ulcers, and running scabs or sores in children's heads; and helpeth to stay the hair from falling off the head. The said ointment, or the herb applied to the fundament, openeth the piles, and easeth their pains; and being mixed with goat's tallow, helpeth the gout: The juice is very effectual to cleanse fistulas, and to heal them up safely; or the herb itself bruised and applied, with a little salt. It is likewise also effectual to heal any green wound; if it be bruised and bound thereto for three days, you shall need no other medicine to heal it further. A poultice made hereof with mallows and boiled in wine and wheat bran and bean flower, and some oil put thereto, and applied warm to any bruised sinews, tendon, or muscle, doth, in a very short time, restore them to their strength, taking away the pains of the bruises, and dissolveth the congealed blood coming of blows, or falls from high places.

The juice of pellitory of the wall clarified and boiled in a syrup with honey, and a spoonful of it drank every morning by such as are subject to the dropsy; if continuing that course, though but once a week, if ever they have the dropsy, let them come but to me, and I will cure them *gratis*.

PENNYROYAL.

PENNYROYAL is so well known unto all, I mean the common kind, that it needeth no description.

There is a greater kind than the ordinary sort found wild with us, which so abideth being brought into gardens, and differeth not from it, but only in the largeness of the leaves and stalks, in rising higher, and not creeping up in the ground so much. The flowers whereof are purple, growing in rundles about the stalks like the other.

Siphocampyl

Pungipyl

Pungipyl

Place.] The first, which is common in gardens, groweth also in many moist and watery places of this land.

The second is found wild in divers places by the highways from London to Colchester, and thereabouts, more abundantly than in any other counties, and is also planted in their gardens in Essex.

Time.] They flower in the latter end of summer, about August.

Government and Virtues.] The herb is under Venus. Dioscorides saith, that pennyroyal maketh him tough phlegm, warmeth the coldness of any part whereto it is applied, and digesteth raw or corrupt matter: Being boiled and drank, it provoketh women's courses, and expelleth the dead child and after-birth, and stayeth the disposition to vomit, being taken in water and vinegar mingled together. And being mingled with honey and salt, it voideth phlegm out of the lungs, and purgeth melancholy by stool. Drank with wine, it helpeth such as are bitten and stung with venomous beasts, and applied to the nostrils with vinegar, reviveth those that are fainting and swooning. Being dried and burnt, it strengtheneth the gums. It is helpful to those that are troubled with the gout, being applied of itself to the place until it was red, and applied in a plaister, it takes away spots or marks in the face, applied with salt, it profiteth those that are splenetic, or liver-grown. The decoction doth help the itch, if washed therewith; being put into baths for women to sit therein, it helpeth the swellings and hardness of the mother. The green herb bruised and put into vinegar, cleanseth foul ulcers, and taketh away the marks of bruises and blows about the eyes, and all discolourings of the face by fire, yea, and the leprosy, being drank and outwardly applied: Boiled in wine with honey and salt, it helpeth the tooth ache. It helpeth the cold griefs of the joints, taking away the pains, and warmeth the cold part, being fast bound to the place, after a bathing or sweating in a hot house. Pliny addeth, that pennyroyal and mints together help faintings, being put into vine-

gar, and smelled unto, or put into the nostrils or mouth. It easeth head-aches, pains of the breast and belly, and gnawing of the stomach; applied with honey, salt, and vinegar, it helpeth cramps or convulsions of the sinews: Boiled in milk, and drank, it is effectual for the cough, and for ulcers and sores in the mouth; drank in wine it provoketh women's courses, and expelleth the dead child, and after-birth. Matthiolus saith, The decoction thereof being drank, helpeth the jaundice and dropsy, all pains of the head and sinews that come of a cold cause, and cleareth the eye-sight. It helpeth the lethargy, and applied with barley-meal, helpeth burnings; and put into the ears easeth the pains of them.

MALE AND FEMALE PEONY.

Descript.] **M**ALE peony riseth up with brownish stalks, whereon grow green and reddish leaves, upon a stalk without any particular division in the leaf at all. The flowers stand at the top of the stalks, consisting of five or six broad leaves, of a fair purplish red colour, with many yellow threads in the middle, standing about the head, which after riseth up to be the seed vessels, divideth into two, three, or four crooked pods like horns, which being full ripe, open and turn themselves down backward, shewing within them divers round, black, shining seeds, having also many crimson grains, intermixed with black, whereby it maketh a very pretty show. The roots are great, thick, and long, spreading and running down deep in the ground.

The ordinary female peony hath as many stalks, and more leaves on them than the male; the leaves not so large, but nicked on the edges, some with great and deep, others with smaller cuts and divisions, of a dead green colour. The flowers are of a strong heady scent, usually smaller, and of a more purple colour than the male, with yellow thrums about the head as the male hath. The seed vessels are like horns, as in the male, but smaller; the seed is black, but less shining. The

roots consist of many short tuberous clogs, fastened at the end of long strings, and all from the heads of the roots, which is thick and short, and of the like scent with the male.

Place and Time.] They grow in gardens, and flower usually about May.

Government and Virtues.] It is an herb of the Sun, and under the Lion. Physicians say, male peony roots are best; but Dr. Reason told me male peony was best for men, and female peony for women, and he desires to be judged by his brother Dr. Experience. The roots are held to be of more virtue than the seeds; next the flowers, and last of all, the leaves. The root of the male peony fresh gathered, having been found by experience to cure the falling sickness; but the surest way is, besides hanging it about the neck, by which children have been cured, to take the root of the male peony washed clean, and stamped somewhat small, and laid to infuse in sack for 24 hours at the least, afterwards strain it, and take it first and last morning and evening, a good draught for sundry days together, before and after full moon, and this will also cure older persons; if the disease be not grown too old, and past cure, especially if there be a due and orderly preparation of the body with posset-drink made of betony, &c. The root is also effectual for women that are not sufficiently cleansed after child-birth, and such as are troubled with the mother; for which likewise the black seed beaten to powder, and given in wine, is also available. The black seed also taken before bed time, and in the morning, is very effectual for such as in their sleep are troubled with the disease called ephialtes, or incubus, but we do commonly call it the night-mare; a disease which melancholy persons are subject unto: It is also good against melancholy dreams. The distilled water, or syrup made of the flowers, worketh the same effects that the root and seed do, although more weakly. The female is often used for the purposes aforesaid, by reason the male is so scarce a plant, that it is possessed by few, and those great lovers of rarities of this kind.

PEPPERWORT, OR DITTANDER.

Descript.] OUR common pepperwort sendeth forth somewhat long and broad leaves, of a light blueish greenish colour, finely dented about the edges and pointed at the ends, standing upon round hard stalks, three or four feet high, spreading many branches on all sides, and having many small white flowers at the tops of them, after which follow small seeds in small heads. The root is slender, running much under ground, and shooting up again in many places, and both leaves and roots are very hot and sharp of taste, like pepper, for which cause it took the name.

Place.] It groweth naturally in many places of this land, as at Clare in Essex; also near unto Exeter in Devonshire; upon Rochester Common in Kent; in Lancashire, and divers other places; but usually kept in gardens.

Time.] It flowereth in the end of June, and in July.

Government and Virtues.] Here is another Martial herb for you, make much of it. Pliny and Paulus Ægineta say, that pepperwort is very successful for the sciatica, or any other gout or pain in the joints, or any other inveterate grief: The leaves hereof to be bruised, and mixed with old hog's grease, and applied to the place, and to continue thereon four hours in men, and two hours in women, the place being afterwards bathed with wine and oil, mixed together, and then wrapt up with wool or skins, after they have sweat a little. It also amendeth the deformities or discolourings of the skin, and helpeth to take away marks, scars, and scabs, or the foul marks of burning with fire or iron. The juice hereof is by some used to be given in ale to drink, to women with child, to procure them a speedy delivery in travail.

PERIWINKLE.

Descript.] THE common sort hereof hath many branches

running upon the ground, shooting out small fibres at the joints as it runneth, taking thereby hold in the ground, and rooteth in divers places; at the joints of these branches stand two small dark-green shining leaves, somewhat like bay-leaves, but smaller, and with them come forth also flowers, one at a joint standing upon a tender footstalk, being somewhat long and hollow, parted at the brims sometimes into four, sometimes into five, leaves; the most ordinary sort are of a pale blue colour, some are pure white, and some of a dark reddish purple colour. The root is little bigger than a rush, bushing in the ground, and creeping with its branches far about, whereby it quickly possesseth a great compass, and is therefore most usually planted under hedges where it may have room to grow.

Place.] Those with the pale blue and those with the white flowers grow in woods and orchards by the hedge sides in divers places of this land, but those with the purple flowers in gardens only.

Time.] They flower in March and April.

Government and Virtues.] Venus owns this herb, and saith that the leaves, eaten by man and wife together, cause love between them. The periwinkle is a great binder, staying bleeding both at mouth and nose, if some of the leaves be chewed; the French use it to stay women's courses. Dioscorides, Galen, and Ægineta, commend it against the lask, and fluxes of the belly, to be drunk in wine.

ST. PETER'S WORT.

IF superstition had not been the father of tradition, as well as ignorance the mother of devotion, this herb, (as well as St. John's Wort) had found some other name to be known by; but we may say of our forefathers, as St. Paul of the Athenians, *I perceive in many things you are too superstitious*. Yet seeing it is come to pass, That custom having got in possession, pleads prescription for the name, I shall let it pass and come to the description of the herb, which take as followeth.

Descript.] It riseth up with square upright stalks for the most part, somewhat greater and higher than St. John's Wort, (and good reason too, St. Peter being the greater apostle, (ask the pope else;) for though God would have the saints equal, the pope is of another opinion) but brown in the same manner, having two leaves at every joint, somewhat like, but larger than St. John's Wort; and a little rounder pointed, with few or no holes to be seen therein, and having sometimes some smaller leaves rising from the bosom of the greater, and sometimes a little hairy also. At the tops of the stalks stand many star-like flowers, with yellow threads in the middle, very like those of St. John's Wort, insomuch that this is hardly to be discerned from it, but only by the largeness and height, the seed being alike in both. The root abideth long, sending forth new shoots every year.

Place.] It groweth in many groves and small low woods, in divers places of this land, as in Kent, Huntingdonshire, Cambridgeshire, and Northamptonshire: as also near water-courses in other places.

Time.] It flowereth in June and July, and the seed is ripe in August.

Government and Virtues.] There is not a straw to choose between this and St. John's wort, only St. Peter must have it, lest he should want pot herbs: It is of the same property with St. John's wort, but somewhat weak, and therefore more seldom used. Two drachms of the seed taken at a time, in honeyed water, purge cholerick humours, as saith Dioscorides, Pliny, and Galen, and thereby help those that are troubled with sciatica. The leaves are used, as St. John's wort, to heal those places of the body that have been burnt with fire.

PIMPERNEL.

Descript.] **C**OMMON pimpernel hath many weak square stalks lying on the ground, beset all along with two small and

almost round leaves at every joint one against another, very like chickweed; but hath no footstalks, for the leaves as it were compass the stalk: the flowers stand singly, consisting of five round small pointed leaves of a fine pale red colour, with so many threads in the middle, in whose place succeed smooth round heads, wherein is contained small seed. The root is small and fibrous, perishing every year.

Place.] It groweth every where almost, as well in the meadows and corn-fields as by the way-sides, and in gardens, arising of itself.

Time.] It flowereth from May to August, and the seed ripeneth in the mean time and falleth.

Government and Virtues.] It is a solar herb. This is of a cleansing and attractive quality, whereby it draweth forth thorns or splinters, or other such like things gotten into the flesh; and put into the nostrils, purgeth the head; and Galen saith also, they have a drying faculty, whereby they are good to solder the lips of wounds, and to cleanse foul ulcers. The distilled water or juice is much esteemed by French dames to cleanse the skin from any roughness, deformity, or discolouring thereof; being boiled in wine and given to drink, it is a good remedy against the plague, and other pestilential fevers, if the party after taking it be warm in his bed, and sweat for two hours after, and use the same for twice at least. It helpeth also all stingings and bitings of venomous beasts, or mad dogs, being used inwardly, and applied outwardly. The same also openeth obstructions of the liver, and is very available against the infirmities of the reins: It provoketh urine, and helpeth to expel the stone and gravel out of the kidneys and bladder, and helpeth much in all inward pains and ulcers. The decoction, or distilled water, is no less effectual to be applied to all wounds that are fresh and green, or old, filthy, fretting, and running ulcers, which it effectually cureth in a short space. A little honey mixed with the juice, and dropped into the eyes, cleanseth them from cloudy mists, or thick films which grow over them, and hinder the sight. It helpeth the tooth-ach, being dropped into the ear on the contrary side

of the pain. It is also effectual to ease the pains of the hæmorrhoids or piles.

GROUND PINE, OR CHAMEPITYS.

Descript:.] OUR common ground pine groweth low, seldom rising above an hand's breadth high, shooting forth divers small branches, set with slender, small, long, narrow, greyish, or whitish leaves, somewhat hairy, and divided into three parts, many bushing together at a joint, some growing scatteringly upon the stalks, smelling somewhat strong, like unto rosin: The flowers are small, and of a pale yellow colour, growing from the joint of the stalk all along among the leaves; after which come small and round husks. The root is small and woody, perishing every year.

Place.] It groweth more plentifully in Kent than any other county of this land; as, namely, in many places on this side Dartford, along to Southfleet, Chatham, and Rochester, and upon Chatham Down, hard by the Beacon, and half a mile from Rochester, in a field nigh a house called Selesys.

Time.] It flowereth and giveth seed in the summer months.

Government and Virtues.] Mars owns the herb. The decoction of ground pine drank, doth wonderfully prevail against the strangury, or any inward pains arising from the diseases of the reins and urine, and is special good for all obstructions of the liver and spleen, and gently openeth the body; for which purpose they were wont in former times to make pills with the powder thereof, and the pulp of figs. It marvellously helpeth all the diseases of the mother, inwardly or outwardly applied, procuring women's courses, and expelling the dead child and after-birth; yea, it is so powerful upon those feminine parts, that it is utterly forbidden for women with child, for it will cause abortion or delivery before the time. The decoction of the herb in wine taken inwardly, or applied outwardly, or both, for some

time together, is also effectual in all pains and diseases of the joints, as gouts, cramps, palsies, sciatica, and aches; for which purpose the pills made with powder of ground pine, and of hermodactyls with Venice turpentine, are very effectual. The pills also, continued for some time, are special good for those that have the dropsy, jaundice, and for griping pains of the joints, belly, or inward parts. It helpeth also all diseases of the brain, proceeding of cold and phlegmatic humours and distillations, as also for the falling sickness. It is a special remedy for the poison of the aconites, and other poisonful herbs, as also against the stinging of any venomous creature. It is a good remedy for a cold cough, especially in the beginning. For all the purposes aforesaid, the herb being tunned up in new drink and drank, is almost as effectual, but far more acceptable to weak and dainty stomachs. The distilled water of the herb hath the same effects, but more weakly. The conserve of the flowers doth the like, which Matthiolus much commendeth against the palsy. The green herb, or the decoction thereof, being applied, dissolveth the hardness of women's breasts, and all other hard swellings in any other part of the body. The green herb also applied, or the juice thereof with some honey, not only cleanseth putrid, stinking, foul, and malignant ulcers and sores of all sorts, but healeth and soldereth up the lips of green wounds in any part also. Let women forbear, if they be with child, for it works violently upon the feminine part.

PLANTAIN.

THIS groweth usually in meadows and fields, and by path sides, and is so well known, that it needeth no description.

Time.] It is in its beauty about June, and the seed ripeneth shortly after.

Government and Virtues.] It is true, Mizaldus and others, yea, almost all astrology-physicians hold this to be an herb of Mars, because it cures the disease of the head and privities,

which are under the houses of Mars, Aries, and Scorpio: The truth is, it is under the command of Venus, and cures the head by antipathy to Mars, and the privities by sympathy to Venus; neither is there hardly a Martial disease but it cures.

The juice of plantain clarified and drank for divers days together, either of itself or in other drink, prevaieth wonderfully against all torments or excoriations in the guts or bowels, helpeth the distillations of rheum from the head, and stayeth all manner of fluxes, even women's courses, when they flow too abundantly. It is good to stay spitting of blood and other bleedings at the mouth, or the making of foul and bloody water, by reason of any ulcer in the reins or bladder, and also stayeth the too free bleeding of wounds. It is held an especial remedy for those that are troubled with the phthisic, or consumption of the lungs, or ulcers of the lungs, or coughs that come of heat. The decoction or powder of the roots or seeds, is much more binding for all the purposes aforesaid than the leaves. Dioscorides saith, that three roots boiled in wine and taken, helpeth the tertian ague, and for the quartan ague, (but letting the number pass as fabulous) I conceive the decoction of divers roots may be effectual. The herb (but especially the seed) is held to be profitable against the dropsy, the falling-sickness, the yellow jaundice, and stoppings of the liver and reins. The roots of plantain, and pellitory of Spain, beaten into powder, and put into the hollow teeth, taketh away the pains of them. The clarified juice, or distilled water, dropped into the eyes, cooleth the inflammations in them, and taketh away the pin and web; and dropped into the ears, easeth the pains in them, and helpeth and removeth the heat. The same also, with the juice of house-leek, is profitable against all inflammations and breakings-out of the skin, and against burnings and scaldings by fire and water. The juice or decoction made either of itself, or other things of the like nature, is of much use and good effect for old and hollow ulcers that are hard to be cured, and for cankers and sores in the mouth, or privy parts of man or woman; and helpeth also the pains of the piles

in the fundament. The juice mixed with oil of roses, and the temples and forehead anointed therewith, easeth the pains of the head proceeding from heat, and helpeth lunatic and frantic persons very much: as also the biting of serpents, or a mad dog. The same also is profitably applied to all hot gouts in the feet or hands, especially in the beginning. It is also good to be applied where any bone is out of joint, to hinder inflammations, swellings, and pains that presently rise thereupon. The powder of the dried leaves taken in drink, killeth worms in the belly; and boiled in wine, killeth worms that breed in old and foul ulcers. One part of plantain water, and two parts of the brine of powdered beef, boiled together and clarified, is a most sure remedy to heal all spreading scabs or itch in the head and body, all manner of tetters, ringworms, the shingles, and all other running and fretting sores. Briefly, the plantains are singularly good wound herbs to heal fresh or old wounds or sores, either inward or outward.

PLUMBS

ARE so well known, that they need no description.

Government and Virtues.] All plumbs are under Venus, and are like women, some better, some worse. As there is great diversity of kinds, so there is in the operation of plumbs, for some that are sweet moisten the stomach, and make the belly soluble; those that are sour quench thirst more, and bind the belly; the moist and waterish do sooner corrupt in the stomach, but the firm do nourish more, and offend less. The dried fruit sold by the grocers under the name of damask prunes, do somewhat loosen the belly, and being stewed, are often used, both in health and sickness, to relish the mouth and stomach, to procure appetite, and a little to open the body, allay choler, and cool the stomach. Plumb-tree leaves boiled in wine, are good to wash and gargle the mouth and throat to dry the flux of rheum coming to the palate, gums, or almonds of the ears. The gum of the tree is good to break the stone. The gum or leaves boiled in vinegar, and applied, kills

tetters and ringworms. Matthiolus saith, the oil pressed out of the kernels of the stones, as oil of almonds is made, is good against the inflamed piles, the tumours or swellings of ulcers, hoarseness of the voice, roughness of the tongue and throat, and likewise the pains in the ears; and that five ounces of the said oil, taken with one ounce of muskadel, driveth forth the stone, and helpeth the cholic.

POLYPODY OF THE OAK.

Descript.] **T**HIS is a small herb, consisting of nothing but roots and leaves, bearing neither stalk, flower, nor seed, as it is thought. It hath three or four leaves rising from the root, every one single by itself, of about a hand length, are winged, consisting of many small narrow leaves, cut into the middle rib, standing on each side of the stalk, large below, and smaller up to the top, not dented nor notched at the edges at all, as the male fern hath, of a sad green colour, and smooth on the upper side, but on the other side somewhat rough by reason of some yellowish spots set thereon. The root is smaller than one's little finger, lying aslope, or creeping along under the upper crust of the earth, brownish on the outside, and greenish within, of a sweetish harshness in taste, set with certain rough-knags on each side thereof, having also much mossiness or yellow hairiness upon it, and some fibres underneath it, whereby it is nourished.

Place.] It groweth as well upon old rotten stumps, or trunks of trees, as oak, beech, hazel, willow, or any other, as in the woods under them, and upon old mud walls, as also in mossy, stony, and gravelly places near unto wood. That which groweth upon oak is accounted the best; but the quantity whereof is scarce sufficient for the common use.

Time.] It being always green, may be gathered for use at any time.

Government and Virtues.] And why, I pray, must polypodium of the oak only be used, gentle college of physicians? Can you give me but a glimpse of reason for it? It is only because it is dearest. Will you never leave off your covetousness till your lives leave you? The truth is, that which grows upon the earth is best (it is an herb of Saturn, and he seldom climbs trees) to purge melancholy: if the humour be otherwise, choose you polypodium accordingly. Meuse (who is called the physician's Evangelist for the certainty of his medicines, and the truth of his opinion) saith, that it drieth up thin humours, digesteth thick and tough, and purgeth burnt choler, and especially tough and thick phlegm, and thin phlegm also, even from the joints, and therefore good for those that are troubled with melancholy, or quartan agues, especially if it be taken in whey or honeyed water, or in barley-water, or the broth of a chicken with epithymum, or with beets and mallows. It is good for the hardness of the spleen, and for pricking or stitches in the sides, as also for the colic: Some use to put to it some fennel seeds, or anise seeds or ginger, to correct that loathing it bringeth to the stomach which is more than needeth, it being a safe and gentle medicine fit for all persons, which daily experience confirmeth; and an ounce of it may be given at a time in a decoction, if there be not senna or some other strong purger put with it. A dram or two of the powder of the dried roots taken fasting in a cup of honeyed water, worketh gently, and for the purposes aforesaid. The distilled water, both of roots and leaves, is much commended for the quartan ague, to be taken for many days together, as also against melancholy, or fearful and troublesome sleeps or dreams; and with some sugar-candy dissolved therein is good against the cough, shortness of breath, and wheezings, and those distillations of thin rheum upon the lungs, which cause phthisics, and oftentimes consumptions. The fresh roots beaten small, or the powder of the dried roots mixed with honey, and applied to the member that is out of joint, doth much help it; and applied also to the nose, cureth the dis-

ease called polypus, which is a piece of flesh growing therein, which in time stoppeth the passage of breath through that nostril; and it helpeth those clefts or chops that come between the fingers or toes.

THE POPLAR TREE.

THERE are two sorts of poplars, which are most familiar with us, viz. the black and white, both which I shall here describe unto you.

Descript.] The white poplar groweth great, and reasonably high, covered with thick, smooth, white bark, especially the branches, having long leaves cut into several divisions almost like a vine leaf, but not of so deep a green on the upper side, and hoary white underneath, of a reasonable good scent, the whole form representing the form of coltsfoot. The catkins which it bringeth forth before the leaves, are long, and of a faint reddish colour, which fall away, bearing seldom good seed with them. The wood hereof is smooth, soft, and white, very finely waved, whereby it is much esteemed.

The black poplar groweth higher and straighter than the white, with a greyish bark, bearing broad green leaves, somewhat like ivy leaves, not cut in on the edges like the white, but whole and dented, ending in a point, and not white underneath, hanging by slender long footstalks, which, with the air, are continually shaken like as the aspen leaves are. The catkins hereof are greater than those of the white, composed of many round green berries, as if they were set together in a long cluster, containing much downy matter, which being ripe, is blown away with the wind. The clammy buds hereof, before they spread into leaves, are gathered to make unguentum populneum, and are of a yellowish green colour, and somewhat small, sweet, but strong. The wood is smooth, tough, and white, and easy to be cloven: On both these trees groweth a sweet kind of musk, which in former times was used to put into sweet ointments.

Place.] They grow in moist woods, and by water-sides in sundry places of this land; yet the white is not so frequent as the other.

Time.] Their time is likewise expressed before: The catkins coming forth before the leaves in the end of summer.

Government and Virtues.] Saturn hath dominion over both. White poplar, saith Galen, is of a cleansing property: The weight of one ounce in powder of the bark thereof being drank, saith Dioscorides, is a remedy for those that are troubled with the sciatica, or the strangury. The juice of the leaves dropped warm into the ears, easeth the pains in them. The young clammy buds or eyes, before they break out into leaves, bruised, and a little honey put to them, is a good medicine for a dull sight. The black poplar is held to be more cooling than the white, and therefore the leaves bruised with vinegar and applied, help the gout. The seed drank in vinegar, is held good against the falling-sickness. The water that droppeth from the hollow places of this tree, taketh away warts, pushes, wheals, and other the like breakings-out of the body. The young black poplar buds, saith Matthiolus, are much used by women to beautify their hair, bruising them with fresh butter, straining them after they have been kept for some time in the sun. The ointment called populneum, which is made of this poplar, is singularly good for all heat and inflammations in any part of the body, and tempereth the heat of wounds. It is much used to dry up the milk of women's breasts, when they have weaned their children.

POPPY.

OF this I shall describe three kinds, viz. the white and black of the garden, and the erratic wild poppy, or corn rose.

Descript.] The white poppy hath at first four or five whitish green leaves lying upon the ground, which rise with the stalk, compassing it at the bottom of them, and are very large, much cut or torn on the edges, and dented also besides: The stalk, which is usually four or five feet high, hath sometimes no

branches at the top, and usually but two or three at most, bearing every one but one head wrapped up in a thin skin, which boweth down before it is ready to blow, and then rising, and being broken, the flower within it spreading itself open, and consisting of four very large, white round leaves, with many whitish round threads in the middle, set about a small, round, green head, having a crown, or star like cover at the head thereof, which growing ripe, becomes as large as a great apple, wherein are contained a great number of small round seeds in several partitions or divisions next unto the shell, the middle thereof remaining hollow, and empty. The whole plant, both leaves, stalks and heads, while they are fresh, young, and green, yield a milk when they are broken, of an unpleasant bitter taste, almost ready to provoke casting, and of a strong heady smell, which being condensate, is called opium. The root is white and woody, perishing as soon as it hath given ripe seed.

The black poppy little differeth from the former, until it beareth its flower, which is somewhat less, and of a black purplish colour, but without any purple spots in the bottom of the leaf. The head of the seed is much less than the former, and openeth itself a little round about to the top, under the crown, so that the seed, which is very black, will fall out, if one turn the head thereof downward.

The wild poppy, or corn rose, hath long and narrow leaves, very much cut in on the edges into many divisions, of a light green colour, sometimes hairy withal. The stalk is blackish and hairy also, but not so tall as the garden-kind, having some such like leaves thereon as grow below, parted into three or four branches sometimes, whereon grow small hairy heads bowing down before the skin break, wherein the flower is inclosed, which when it is full blown open, is of a fair yellowish red or crimson colour, and in some much paler, without any spot in the bottom of the leaves, having many black soft threads in the middle, compassing a small green head, which when it is ripe,

is not bigger than one's little finger's end, wherein is contained much black seed, smaller by half than that of the garden. The root perisheth every year, and springeth again of its own sowing. Of this kind there is one lesser in all the parts thereof, and differeth in nothing else.

Place.] The garden kinds do not naturally grow wild in any place, but are all sown in gardens where they grow.

The wild poppy or corn rose, is plentiful enough, and many times too much in the corn-fields of all counties through this land, and also upon ditch banks, and by hedge-sides. The smaller wild kind is also found in corn-fields, and also in some other places, but not so plentifully as the former.

Time.] The garden kinds are usually sown in the spring, which then flower about the end of May, and somewhat earlier, if they spring of their own sowing.

The wild kind flower usually from May until July, and the seed of them is ripe soon after the flowering.

Government and Virtues.] The herb is Lunar, and of the juice of it is made opium; only for lucre of money they cheat you, and tell you it is a kind of tear, or some such like thing, that drops from poppies when they weep, and that is somewhere beyond the seas, I know not where beyond the Moon. The garden poppy heads, with seeds, made into a syrup, is frequently, and to good effect, used to procure rest, and sleep, in the sick and weak, and to stay catarrhs and defluations of thin rheums from the head into the stomach and lungs, causing a continual cough, the fore runner of a consumption; it helpeth also hoarseness of the throat, and when one hath lost his voice, which the oil of the seed doth likewise. The black seed boiled in wine, and drank is said also to stay the flux of the belly, and women's courses. The empty shells, or poppy heads, are usually boiled in water, and given to procure rest and sleep. So doth the leaves in the same manner; as also if the head and temples be bathed with the decoction warm, or with the oil of poppies, the green leaves or heads bruised, and applied with a

little vinegar, or made into a poultice with barley meal, or hog's grease; cooleth and tempereth all inflammations, as also the disease called St. Anthony's fire. It is generally used in treacle and mithridate, and in all other medicines that are made to procure rest and sleep, and to ease pains in the head as well as in other parts. It is also used to cool inflammations, agues, or frenzies, or to stay defluations which cause a cough, or consumption, and also other fluxes of the belly, or women's courses; it is also put into hollow teeth, to ease the pain, and hath been found, by experience, to ease the pains of the gout.

The wild poppy, or corn rose (as Matthiolus saith) is good to prevent the falling-sickness. The syrup made with the flower, is with good effect given to those that have the pleurisy; and the dried flowers also, either boiled in water, or made into powder and drank, either in the distilled water of them, or some other drink, worketh the like effect. The distilled water of the flowers is held to be of much use against surfeits, being drank evening and morning: It is also more cooling than any of the other poppies, and therefore cannot but be as effectual in hot agues, frenzies, and other inflammations either inward or outward. Galen saith, the seed is dangerous to be used inwardly.

PURSLANE.

GARDEN purslane (being used as a salad herb) is so well known that it needeth no description; I shall therefore only speak of its virtues as followeth.

Government and Virtues.] 'Tis an herb of the Moon. It is good to cool any heat in the liver, blood, reins, and stomach, and in hot agues nothing better: It stayeth hot and cholerick fluxes of the belly, women's courses, the whites, and gonorrhæa, or running of the reins, the distillation from the head, and pains therein proceeding from heat, want of sleep, or the frenzy. The seed is more effectual than the herb, and is of singular good use to cool the heat and sharpness of urine, and the outrageous

lust of the body, venerous dreams, and the like: Insomuch that the over frequent use hereof extinguisheth the heat and-virtue of natural procreation. The seed bruised and boiled in wine, and given to children, expelleth the worms. The juice of the herb is held as effectual to all the purposes aforesaid; as also to stay vomitings, and taken with some sugar or honey, helpeth an old and dry cough, shortness of breath, and the phthisic, and stayeth immoderate thirst. The distilled water of the herb is used by many (as the more pleasing) with a little sugar to work the same effects. The juice also is singular good in the inflammations and ulcers in the secret parts of man or woman, as also the bowels and hæmorrhoids, when they are ulcerous, or excoriations in them: The herb bruised and applied to the forehead and temples, allays exeessive heat therein, that hinders rest and sleep: and applied to the eyes, taketh away the redness and inflammation in them, and those other parts where pushes, wheals, pimples, St. Anthony's fire and the like, break forth; if a little vinegar be put to it, and laid to the neck, with as much of galls and linseed together, it taketh away the pains therein, and the crick in the neck. The juice is used with oil of roses for the same causes, or for blasting by lightning, and burnings by gunpowder, or for women's sore breasts, and to allay the heat in all other sores or hurts; applied also to the navels of children that stick forth, it helpeth them; it is also good for sore mouths and gums that are swollen, and to fasten loose teeth. Camararius saith, that the distilled water used by some, took away the pain of their teeth, when all other remedies failed, and the thickened juice made into pills with the powder of gum tragacanth and arabic, being taken, prevaieth much to help those that make bloody water. Applied to the gout it easeth pains thereof, and helpeth the hardness of the sinews, if it come not of the cramp or a cold cause.

PRIMROSES.

THEY are so well known, that they need no description.

Of the leaves of primroses is made as fine a salve to heal wounds as any that I know; you shall be taught to make salves of any herb at the latter end of the book: make this as you are taught there, and do not (you that have any ingenuity in you) see your poor neighbours go with wounded limbs when an halfpenny cost will heal them.

PRIVET.

Descript.] OUR common privet is carried up with many slender branches to a reasonable height and breadth, to cover arbours, bowers and banqueting houses, and brought, wrought, and cut into so many forms, of men, horses, birds, &c. which though at first supported, groweth afterwards strong of itself. It beareth long and narrow green leaves by the couples and sweet smelling white flowers in tufts at the end of the branches, which turn into small black berries that have a purplish juice with them, and some seeds that are flat on the one side with a hole or dent therein.

Place.] It groweth in this land, in divers woods.

Time.] Our privet flowereth in June and July, the berries are ripe in August and September.

Government and Virtues.] The Moon is lady of this. It is little used in physic with us in these times, more than in lotions, to wash sores and sore mouths, and to cool up inflammations, and dry up fluxes. Yet Matthiolus saith, it serveth to all the uses for the which cypress, or the east privet, is appointed by Dioscorides and Galen. He further saith, that the oil that is made of the flowers of privet infused therein, and set in the sun, is singular good for the inflammations of wounds and for the head-ach, coming of an hot cause. There is a sweet water also distilled from the flowers, that is good for all those diseases that need cooling and drying, and therefore helpeth all fluxes of the belly or stomach, bloody-fluxes, and women's courses, being either drank or applied; as all those that void blood at the mouth, or any other place, and for distillations of rheum in the eyes, especially if it be used with tutia.

QUEEN OF THE MEADOWS, MEADOW SWEET,
OR MEAD SWEET.

Descript.] **T**HE stalks of this are reddish, rising to be three feet high, sometimes four or five feet, having at the joints thereof large winged leaves, standing one above another at distances, consisting of many and somewhat broad leaves, set on each side of a middle rib, being hard, rough, or rugged, crumpled much like unto elm leaves, having also some smaller leaves with them (as agrimony hath) somewhat deeply dented about the edges, of a sad green colour on the upper side, and greyish underneath, of a pretty sharp scent and taste, somewhat like unto the burnet, and a leaf hereof put into a cup of claret wine, giveth also a fine relish to it. At the tops of the stalks and branches stand many tufts of small white flowers thrust thick together, which smell much sweeter than the leaves; and in their places, being fallen, some crooked and cornered seed. The root is somewhat woody, and blackish on the outside, and brownish within, with divers great strings, and lesser fibres set thereat, of a strong scent, but nothing so pleasant as the flowers and leaves, and perisheth not, but abideth many years, shooting forth anew every spring.

Place.] It groweth in moist meadows that lie much wet, or near the courses of water.

Time.] It flowereth in some places or other all the three summer months, that is, June, July, and August, and the seed is ripe soon after.

Government and Virtues.] Venus claims dominion over the herb. It is used to stay all manner of bleedings, fluxes, vomitings, and women's courses, as also their whites; It is said to alter and take away the fits of the quartan agues, and to make a merry heart, for which purpose some use the flowers, and some the leaves. It helpeth speedily those that are troubled with the cholic; being boiled in wine, and with a little honey taken warm, it openeth the belly, but boiled in red wine, and drank,
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it stayeth the flux of the belly. Outwardly applied, it helpeth old ulcers that are cancerous, or hollow and fistulous, for which it is by many much commended, as also for the sores in the mouth or secret parts. The leaves, when they are full grown, being laid on the skin, will in a short time, raise blisters thereon, as Tragus saith. The water thereof helpeth the heat and inflammation in the eyes.

THE QUINCE TREE.

Descript.] **T**HE ordinary quince tree groweth often to the height and bigness of a reasonable apple tree, but more usually lower and crooked, with a rough bark, spreading arms and branches far abroad. The leaves are somewhat like those of the apple tree, but thicker, broader, and full of veins, and whiter on the under side, not dented at all about the edges. The flowers are large and white, sometimes dashed over with a blush. The fruit that followeth is yellow, being near ripe, and covered with a white freeze, or cotton, thick set on the younger, and growing less as they grow to be thorough ripe, bunched out oftentimes in some places, some being like an apple, and some a pear, of a strong heady scent, and not durable to keep, and is sour, harsh, and of an unpleasant taste to eat fresh; but being scalded, roasted, baked, or preserved, becometh more pleasant.

Place and Time.] It best likes to grow near ponds and water sides, and is frequent through this land; and flowereth not until the leaves be come forth. The fruit is ripe in September or October.

Government and Virtues.] Old Saturn owns the tree. Quinces when they are green, help all sorts of fluxes in men or women, and choleric lasks, casting, and whatever needeth astringion, more than any way prepared by fire; yet the syrup of the juice, or the conserve, are much conducive, much of the binding quality being consumed by the fire; if a little vinegar be added, it stirreth up the languishing appetite, and the stomach given to

casting; some spices being added, comforteth and strengtheneth the decaying and fainting spirits, and helpeth the liver oppressed, that it cannot perfect the digestion, or correcteth choler and phlegm. If you would have them purging, put honey to them instead of sugar; and if more laxative, for choler, rhubarb; for phlegm, turbith, for watery humours, scammony; but if more forcibly to bind, use the unripe quinces, with roses and acacia hypocistis, and some torrifed rhubarb. To take the crude juice of quinces, is held a preservative against the force of deadly poison; for it hath been found most certainly true, that the very smell of a quince hath taken away all the strength of the poison of white hellebore. If there be need of any outwardly binding and cooling of hot fluxes, the oil of quinces, or other medicines that may be made thereof, are very available to anoint the belly or other parts therewith; it likewise strengtheneth the stomach and belly, and the sinews that are loosened by sharp humours falling on them, and restraineth immoderate sweatings. The mucilage taken from the seeds of quinces, and boiled in a little water, is very good to cool the heat and heal the sore breasts of women. The same with a little sugar, is good to lenify the harshness and hoarseness of the throat, and roughness of the tongue. The cotton or down of quinces boiled and applied to plague sores, healeth them up: and laid as a plaister made up with wax, it bringeth hair to them that are bald, and keepeth it from falling, if it be ready to shed.

RADISH, OR HORSE-RADISH.

THE garden-radish is so well known, that it needeth no description.

Descript.] The horse-radish hath its first leaves that rise before winter about a foot and a half long, very much cut in or torn on the edges into many parts, of a dark green colour, with a great rib in the middle; after these have been up a while, others follow, which are greater, rougher, broader and longer, whole and not divided at first, but only somewhat rougher dent-

ed about the edges; the stalk when it beareth flowers (which is seldom) is great, rising up with some few lesser leaves thereon, to three or four feet high, spreading at the top many small branches of whitish flowers, made of four leaves a-piece; after which come small pods, like those of shepherd's purse, but seldom with any seed in them. The root is great, long, white and rugged, shooting up divers heads of leaves, which may be parted for increase, but it doth not creep in the ground, nor run above ground, and is of a strong, sharp and bitter taste, almost like mustard.

Place.] It is found wild in some places, but is chiefly planted in gardens, and joyeth in moist and shadowy places.

Time.] It seldom flowereth, but when it doth, it is in July.

Government and Virtues.] They are both under Mars. The juice of horse-radish given to drink, is held to be very effectual for the scurvy. It killeth the worms in children, being drank, and also laid upon the belly. The root bruised and laid to the place grieved with the sciatica, joint-ach, or the hard swellings of the liver and spleen, doth wonderfully help them all. The distilled water of the herb and root is more familiar to be taken with a little sugar for all the purposes aforesaid.

Garden radishes are in wantonness by the gentry eaten as a salad, but they breed but scurvy humours in the stomach, and corrupt the blood, and then send for a physician as fast as you can; that is one cause which makes the owners of such nice palates so unhealthful; yet for such as are troubled with the gravel, stone, or stoppage of urine, they are good physic, if the body be strong that takes them; you may make the juice of the roots into a syrup if you please, for that use: They purge by urine exceedingly.

RAGWORT.

IT is also called St. James'-wort, and stagger-wort, and stammer-wort and segrum.

Descript.] The greater common ragwort hath many large

and long, dark green leaves, lying on the ground, very much rent and torn on the sides in many places; from among which rise up sometimes but one, and sometimes two or three square or crested blackish or brownish stalks, three or four feet high, sometimes branched, bearing divers such like leaves upon them, at several distances unto the top, where it branches forth into many stalks bearing yellow flowers, consisting of divers leaves, set as a pale or border, with a dark yellow thrum in the middle, which do abide a great while, but at last are turned into down, and with the small blackish grey seed, are carried away with the wind. The root is made of many fibres, whereby it is firmly fastened into the ground, and abideth many years.

There is another sort thereof different from the former only in this, that it riseth not so high: the leaves are not so finely jagged, nor of so dark a green colour, but rather somewhat whitish, soft and woolly, and the flowers usually paler.

Place.] They grow both of them wild in pastures, and untilled grounds in many places, and sometimes both in one field.

Time.] They flower in June and July, and the seed is ripe in August.

Government and Virtues.] Ragwort is under the command of dame Venus, and cleanseth, digesteth, and discusseth. The decoction of the herb is good to wash the mouth or throat that hath ulcers or sores therein; and for swellings, hardness, or imposthumations, for it thoroughly cleanseth and healeth them; as also the quinsy, and the king's evil. It helpeth to stay catarrhs, thin rheums, and defluctions from the head into the eyes, nose, or lungs. The juice is found, by experience, to be singularly good to heal green wounds, and to cleanse and heal all old and filthy ulcers in the privities, and in other parts of the body, as also inward wounds and ulcers; stayeth the malignity of fretting and running cankers, and hollow fistulas, not suffering them to spread farther. It is also much commended to help aches and pains either in the fleshy part, or in the nerves and sinews, as also the sciatica, or pain of the hips or huckle-bone,

to bathe the places with the decoction of the herb, or to anoint them with an ointment made of the herb, bruised and boiled in old hog's suet, with some mastic and olibanum in powder added unto it after it is strained forth. In Sussex we call it ragweed.

RATTLE GRASS.

OF this there are two kinds, which I shall speak of, viz. the red and yellow.

Descript.] The common red rattle hath sundry reddish, hollow stalks, and sometimes green, rising from the root, lying for the most part on the ground, some growing more upright, with many small reddish or green leaves set on both sides of a middle rib, finely dented about the edges: The flowers stand at the tops of the stalks and branches, of a fine purplish red colour, like small gaping hooks; after which come blackish seed in small husks, which lying loose therein, will rattle with shaking. The roots consist of two or three small whitish strings, with some fibres thereat.

The common yellow rattle hath seldom above one round great stalk, rising from the foot, about half a yard, or two feet high, and but few branches thereon, having two long and somewhat broad leaves set at a joint, deeply cut in on the edges, resembling the comb of a cock, broadest next to the stalk, and smaller to the end. The flowers grow at the tops of the stalks, with some shorter leaves with them, hooded after the same manner that the others are, but of a fair yellow colour, or in some paler, and in some more white. The seed is contained in large husks, and being ripe will rattle or make a noise with lying loose in them. The root is small and slender, perishing every year.

Place.] They grow in meadows and woods generally through this land.

Time.] They are in flower from Midsummer until August be past, sometimes.

Government and Virtues.] They are both of them under the dominion of the Moon. The red rattle is accounted profitable to heal up fistulas and hollow ulcers, and to stay the flux of humours in them, as also the abundance of women's courses, or any other flux of blood, being boiled in red wine, and drank.

The yellow rattle, or cock's comb, is held to be good for those that are troubled with a cough, or dimness of sight, if the herb, being boiled with beans, and some honey put thereto, be drank or dropped into the eyes. The whole seed being put into the eyes, draweth forth any skin, dimness or film, from the sight, without trouble or pain.

REST HARROW, OR CAMMOCK.

Descript.] COMMON rest harrow riseth up with divers rough woody twigs, half a yard or a yard high, set at the joints without order, with little roundish leaves, sometimes more than two or three at a place, of a dark green colour, without thorns while they are young; but afterwards armed in sundry places, with short and sharp thorns. The flowers come forth at the tops of the twigs and branches, whereof it is full, fashioned like pease or broom blossoms, but lesser, flatter, and somewhat closer, of a faint purplish colour; after which come small pods containing small, flat, round seed: The root is blackish on the outside, and whitish within, very rough, and hard to break when it is fresh and green, and as hard as an horn when it is dried, thrusting down deep into the ground, and spreading likewise, every piece being apt to grow again if it be left in the ground.

Place.] It groweth in many places of this land, as well in arable as waste ground.

Time.] It flowereth about the beginning or middle of July, and the seed is ripe in August.

Government and Virtues.] It is under the dominion of Mars. It is singularly good to provoke urine when it is stopped,

and to break and drive forth the stone, which the powder of the bark of the root taken in wine performeth effectually. Matthi-olus saith, the same helpeth the disease called *hernia carnosæ*, the fleshy rupture, by taking the said powder for some months together constantly, and that it hath cured some, which seemed incurable by any other means than by cutting or burning. The decoction thereof made with some vinegar, gargled in the mouth, easeth the tooth-ach, especially when it comes of rheum; and the said decoction is very powerful to open obstructions of the liver and spleen, and other parts. A distilled water in *Balneo Mariæ*, with four pounds of the root hereof first sliced small, and afterwards steeped in a gallon of Canary wine, is singularly good for all the purposes aforesaid, and to cleanse the passages of the urine. The powder of the said root made into an electuary, or lozenges, with sugar, as also the bark of the fresh roots boiled tender, and afterwards beaten to a conserve with sugar, worketh the like effect. The powder of the roots strewed upon the brims of ulcers, or mixed with any other convenient thing, and applied, consumeth the hardness, and causeth them to heal the better.

ROCKET.

IN regard the garden rocket is rather used as a salad herb than for any physical purposes, I shall omit it, and only speak of the common wild rocket. The description whereof take as followeth:

Descript.] The common wild rocket hath longer and narrower leaves, much more divided into slender cuts, and jags on both sides the middle rib than the garden kinds have; of a sad green colour, from among which rise up divers stalks two or three feet high, sometimes set with the like leaves, but smaller and smaller upwards, branched from the middle into divers stiff stalks, bearing sundry yellow flowers on them, made of four leaves a piece, as the others are, which afterwards yield them small reddish seed, in small long pods, of a more bitter and hot biting taste than the garden kinds, as the leaves are also.

Place.] It is found wild in divers places of this land.

Time.] It flowers about June or July, and the seed is ripe in August.

Government and Virtues.] The wild rockets are forbidden to be used alone, in regard their sharpness fumeth into the head, causing aches and pains therein, and are less hurtful to hot and choleric persons, for fear of inflaming their blood, and therefore for such we may say a little doth but a little harm, for angry Mars rules them, and he sometimes will be rusty when he meets with fools. The wild rocket is more strong and effectual to increase sperm and venomous qualities, whereunto all the seed is more effectual than the garden kind. It serveth also to help digestion, and provoketh urine exceedingly. The seed is used to cure the biting of serpents, the scorpion, and the shrew mouse, and other poisons, and expelleth worms, and other noisome creatures that breed in the belly. The herb boiled or stewed, and some sugar put thereto, helpeth the cough in children, being taken often. The seed also taken in drink, taketh away the ill scent of the arm-pits, increaseth milk in nurses, and wasteth the spleen. The seed mixed with honey, and used on the face, cleanseth the skin from morpew, and used with vinegar, taketh away freckles and redness in the face, or other parts; and with the gall of an ox, it mendeth foul scars, black and blue spots, and the marks of the small-pox.

WINTER-ROCKET, OR CRESSES.

Descript.] **W**INTER-rocket, or winter-cresses, hath divers somewhat large sad green leaves lying upon the ground, torn or cut in divers parts, somewhat like unto rocket, or turnip-leaves, with smaller pieces next the bottom, and broad at the ends, which so abide all the winter (if it spring up in autumn, when it is used to be eaten) from among which rise up divers small round stalks, full of branches, bearing many small yellow flowers of four leaves a-piece, after which come small pods, with reddish seed in them. The root is stringy, and perisheth every year after the seed is ripe.

Place.] It groweth of its own accord in gardens and fields, by the way-sides, in divers places, and particularly in the next pasture to the conduit-head behind Gray's Inn, that brings water to Mr. Lamb's conduit in Holborn.

Time.] It flowereth in May, seedeth in June, and then perisheth.

Government and Virtues.] This is profitable to provoke urine, to help strangury, and expel gravel and the stone. It is good for the scurvy, and found, by experience, to be a singularly good wound herb to cleanse inward wounds; the juice or decoction being drank, or outwardly applied to wash foul ulcers and sores, cleansing them by sharpness, and hindering or abating the dead flesh from growing therein, and healing them by the drying quality.

ROSES.

I HOLD it altogether needless to trouble the reader with a description of any of these, since both the garden roses, and the roses of the briars are well enough known: take therefore the virtue of them as followeth: and first I shall begin with the garden kinds.

Government and Virtues.] What a pother have authors made with roses! What a racket have they kept! I shall add, red roses are under Jupiter, damask under Venus, white under the Moon, and Provence under the king of France. The white and red roses are cooling and drying, and yet the white is taken to exceed the red in both the properties, but is seldom used inwardly in any medicine: The bitterness in the roses when they are fresh, especially the juice, purgeth choler, and watery humours; but being dried, and that heat which caused the bitterness being consumed, they have then a binding and astringent quality: Those also that are not full blown, do both cool and bind more than those that are full blown, and the white rose more than the red. The decoction of red roses made with wine and used, is very good for the head-ache, and pains in the eyes,

ears, throat and gums; as also for the fundament, the lower parts of the belly and the matrix, being bathed and put into them. The same decoction with the roses remaining in it, is profitably applied to the region of the heart to ease the inflammation therein; as also St. Anthony's fire, and other diseases of the stomach. Being dried and beaten to powder, and taken in steeled wine or water, it helpeth to stay women's courses. The yellow threads in the middle of the roses (which are erroneously called the rose seed) being powdered and drank in the distilled water of quinces, stayeth the overflowing of women's courses, and doth wonderfully stay the defluctions of rheum upon the gums and teeth, preserving them from corruption, and fastening them if they be loose, being washed and gargled therewith, and some vinegar of squills added thereto. The heads with the seeds being used in powder, or in a decoction, stayeth the lask and spitting of blood. Red roses do strengthen the heart, the stomach and the liver, and the retentive faculty: They mitigate the pains that arise from heat, assuage inflammations, procure rest and sleep, stay both whites and reds in women; the gonorrhea, or running of the reins, and fluxes of the belly; the juice of them doth purge and cleanse the body from choler and phlegm. The husks of the roses, with the beards and nails of the roses, are binding and cooling, and the distilled water of either of them is good for the heat and redness in the eyes, and to stay and dry up the rheums and watering of them. Of the red roses are usually made many compositions, all serving to sundry good uses, viz. Electuary of roses, conserve, both moist and dry, which is more usually called sugar of roses, syrup of dry roses, and honey of roses; the cordial powder called *diarrhoden abbatis* and *aromatica rosarum*. The distilled water of roses, vinegar of roses, ointment, and oil of roses, and the rose leaves dried, are of very great use and effect. To write at large of every one of these would make my book swell too big, it being sufficient for a volume of itself, to speak fully of them. But briefly, the electuary is purging, whereof two or three drams taken by itself in some convenient liquor, is a purge sufficient for a weak con-

stitution, but may be increased to six drams, according to the strength of the patient. It purgeth choler without trouble, and it is good in hot fevers, and pains of the head arising from hot choleric humours, and heat in the eyes, the jaundice also, and joint-aches proceeding of hot humours. The moist conserve is of much use, both binding and cordial; for until it be about two years old, it is more binding than cordial, and after that, more cordial than binding. Some of the younger conserve taken with mithridate mixed together, is good for those that are troubled with distillations of rheum from the brain to the nose, and defluations of rheum into the eyes; as also for fluxes and lasks of the belly; and being mixed with the powder of mastic, is very good for the running of the reins, and for the looseness of humours in the belly. The old conserve mixed with aromaticum rosarum, is a very good cordial against faintings, swoonings, weakness and tremblings of the heart, strengthens both it and a weak stomach, helpeth digestion, stayeth casting, and is a very good preservative in the time of infection. The dry conserve, which is called the sugar of roses, is a very good cordial to strengthen the heart and spirits; as also to stay defluations. The syrup of dried red roses strengthens a stomach given to casting, cooleth an over-heated liver, and the blood in agues, comforteth the heart, and resisteth putrefaction and infection, and helpeth to stay lasks and fluxes. Honey of roses is much used in gargles and lotions to wash sores, either in the mouth, throat, or other parts, both to cleanse and heal them, and to stay the fluxes of humours falling upon them. It is also used in clysters both to cool and cleanse. The cordial powders, called diarrhoden abbatis and aromatic rosarum, do comfort and strengthen the heart and stomach, procure an appetite, help digestion, stay vomiting, and are very good for those that have slippery bowels, to strengthen them, and to dry up their moistures; red rose water is very well known, and of a familiar use on all occasions, and better than damask rose-water, being cooling and cordial, refreshing, quickening the weak and faint spirits, used either in meats or broths, to wash the temples, to

smell at the nose, or to smell the sweet vapours thereof out of a perfuming pot, or cast into a hot fire shovel. It is also of much good use against the redness and inflammations of the eyes to bathe them therewith, and the temples of the head; as also against pain and ache, for which purpose also vinegar of roses is of much good use, and to procure rest and sleep, if some thereof, and rose water together, be used to smell unto, or the nose and temples moistened therewith, but more usually to moisten a piece of a red rose-cake, cut for the purpose, and heated between a double folded cloth, with a little beaten nutmeg, and poppy-seed strewed on the side that must lie next to the forehead and temples, and bound thereto all night. The ointment of roses is much used against heat and inflammations in the head, to anoint the forehead and temples, and being mixt with *unguentum populneum*, to procure rest; it is also used for the heat of the liver, the back and reins, and to cool the heat of pushes, wheals, and other red pimples rising in the face or other parts. Oil of roses is not only used by itself to cool any hot swellings or inflammations, and to bind and stay fluxes of humours unto sores, but is also put into ointments and plaisters that are cooling and binding, and restraining the flux of humours. The dried leaves of the red roses are used both inwardly and outwardly, both cooling, binding, and cordial, for with them are made both *aromaticum rosarum*, *diarrhoden abbatis*, and *saccharum rosarum*, each of whose properties are before declared. Rose leaves and mint, heated and applied outwardly to the stomach, stay castings, and very much strengthen a weak stomach; and applied as a fomentation to the region of the liver and heart, do much cool and temper them, and also serve instead of a rose cake (as is said before) to quiet the over-hot spirits, and cause rest and sleep. The syrup of damask roses is both simple and compound, and made with agaric. The simple solutive syrup is a familiar, safe, gentle and easy medicine, purging choler, taken from one ounce to three or four, yet this is remarkable herein that the distilled water of this syrup should notably bind

the belly. The syrup with agaric, is more strong and effectual, for one ounce thereof by itself will open the body more than the other, and worketh as much on phlegm as choler. The compound syrup is more forcible in working on melancholic humours; and available against the leprosy, itch, tetters, &c. and the French disease: Also honey of roses solutive is made of the same infusions that the syrup is made of, and therefore worketh the same effect, both opening and purging, but is oftener given to phlegmatic than choleric persons, and is more used in clysters than in potions, as the syrup made with sugar is. The conserve and preserved leaves of those roses are also operative in gently opening the belly.

The simple water of the damask roses is chiefly used for fumes to sweeten things, as the dried leaves thereof to make sweet powders, and fill sweet bags; and little use they are put to in physic, although they have some purging quality: the wild roses also are few or none of them used in physic, but are generally held to come near the nature of manured roses. The fruit of the wild briar, which are called heps, being thoroughly ripe, and made into a conserve with sugar, besides the pleasantness of the taste, doth gently bind the belly, and stay defluxions from the head upon the stomach, drying up the moisture thereof and helping digestion. The pulp of the heps dried into a hard consistence, like to the juice of liquorice, or so dried that it may be made into a powder and taken in drink, stayeth speedily the whites in women. The briar ball is often used, being made into powder and drank, to break the stone, to provoke urine when it is stopped, and to ease and help the cholic; some appoint it to be burnt, and then taken for the same purpose. In the middle of the balls are often found certain white worms, which being dried and made into powder, and some of it drank, is found by experience of many to kill and drive forth the worms of the belly.

ROSA SOLIS, OR SUN DEW.

Descript.] **I**T hath divers small, round, hollow leaves some-

what greenish, but full of certain red hairs, which make them seem red, every one standing upon his own footstalk, reddish, hairy likewise. The leaves are continually moist in the hottest day, yea, the hotter the sun shines on them, the moister they are, with a sliminess that will rope (as we say) the small hairs always holding this moisture. Among these leaves rise up slender stalks, reddish also, three or four fingers high, bearing divers small white knobs one above another, which are flowers; after which in the heads are contained small seeds. The root is a few small hairs.

Place.] It groweth usually in bogs and wet places, and sometimes in moist woods.

Time.] It flowereth in June, and then the leaves are fittest to be gathered.

Government and Virtues.] The Sun rules it, and it is under the sign Cancer. Rosa Solis is accounted good to help those that have a salt rheum distilling on the lungs, which breedeth a consumption, and therefore the distilled water thereof in wine is held fit and profitable for such to drink, which water will be of a good yellow colour. The same water is held to be good for all other diseases of the lungs, as phthisics, wheezings, shortness of breath, or the cough; as also to heal the ulcers that happen in the lungs; and it comforteth the heart and fainting spirits. The leaves outwardly applied to the skin, will raise blisters, which has caused some to think it dangerous to be taken inwardly; but there are other things which will also draw blisters, yet nothing dangerous to be taken inwardly. There is an usual drink made thereof with aqua vitæ and spices frequently, and without any offence or danger, but to good purpose used in qualms and passions of the heart.

ROSEMARY.

OUR garden rosemary is so well known, that I need not describe it.

Time.] It flowereth in April and May with us, sometimes again in August.

Government and Virtues.] The Sun claims privilege in it, and it is under the celestial Ram. It is an herb of as great use with us in these days as any whatsoever, not only for physical but civil purposes. The physical use of it (being my present task) is very much both for inward and outward diseases, for by the warming and comforting heat thereof it helpeth all cold diseases, both of the head, stomach, liver, and belly. The decoction thereof in wine, helpeth the cold distillations of rheums into the eyes, and all other cold diseases of the head and brain, as the giddiness or swimings therein, drowsiness or dulness of the mind and senses like a stupidity, the dumb palsy, or loss of speech, the lethargy, and falling-sickness, to be both drank, and the temples bathed therewith. It helpeth the pains in the gums and teeth, by rheum falling into them, not by putrefaction, causing an evil smell from them, or a stinking breath. It helpeth a weak memory, and quickeneth the senses. It is very comfortable to the stomach in all the cold griefs thereof, helpeth both retention of meat, and digestion, the decoction or powder being taken in wine. It is a remedy for the windiness in the stomach, bowels, and spleen, and expels it powerfully. It helpeth those that are liver-grown, by opening the obstructions thereof. It helpeth dim eyes, and procureth a clear sight, the flowers thereof being taken all the while it is flowering, every morning fasting, with bread and salt. Both Dioscorides and Galen say, That if a decoction be made thereof with water, and they that have the yellow jaundice exercise their bodies presently after the taking thereof, it will certainly cure them. The flowers, and conserve made of them, are singularly good to comfort the heart, and to expel the contagion of the pestilence; to burn the herb in houses and chambers, correcteth the air in them. Both the flower and leaves are very profitable for women that are troubled with the whites, if they be daily taken. The dried leaves shred small, and taken in a pipe, as tobacco is taken, helpeth those that have any cough, phthisic, or consumption, by warming and drying the thin distillations which cause

those diseases. The leaves are very much used in bathings; and made into ointments or oil, are singularly good to help cold benumbed joints, sinews, or members. The chymical oil drawn from the leaves and flowers, is a sovereign help for all the diseases aforesaid, to touch the temples and nostrils with two or three drops for all the diseases of the head and brain spoken of before: as also to take one drop, two, or three, as the case requireth, for the inward griefs: Yet must it be done with discretion, for it is very quick and piercing, and therefore but a very little must be taken at a time. There is also another oil made by insolation in this manner: Take what quantity you will of the flowers, and put them into a strong glass close stopped. tie a fine linen cloth over the mouth, and turn the mouth down into another strong glass, which being set in the sun, an oil will distil down into the lower glass, to be preserved as precious for divers uses, both inward and outward, as a sovereign balm to heal the diseased before-mentioned, to clear dim sights, and take away spots, marks, and scars in the skin.

RHUBARB, OR RAPHONTIC.

DO not start and say, this grows you know not how far off; and then ask me, how it comes to pass that I bring it among our English simples? For though the name may speak it foreign, yet it grows with us in England, and that frequent enough in our gardens; and when you have thoroughly pursued its virtues, you will conclude it nothing inferior to that which is brought out of China, and by that time this hath been as much used as that hath been, the name which the other hath gotten will be eclipsed by the fame of this; take therefore a description at large of it as followeth:

Descript.] At the first appearing out of the ground, when the winter is past, it hath a great round brownish head, rising from the middle or sides of the root, which openeth itself into sundry leaves one after another, very much crumpled or folded together at the first, and brownish; but afterwards it spreadeth

itself, and becometh smooth, very large and almost round, every one standing on a brownish stalk of the thickness of a man's thumb, when they are grown to their fulness, and most of them two feet and more in length, especially when they grow in any moist or good ground; and the stalk of the leaf, from the bottom thereof to the leaf itself, being also two feet, the breadth thereof from edge to edge, in the broadest place, being also two feet, of a sad or dark green colour, of a fine tart or sourish taste, much more pleasant than the garden or wood sorrel. From among these riseth up some, but not every year, strong thick stalks, not growing so high as the patience, or garden dock, with such round leaves as grow below, but smaller at every joint up to the top, and among the flowers, which are white, spreading forth into many branches, consisting of five or six small leaves a-piece, hardly to be discerned from the white threads in the middle, and seeming to be all threads, after which come brownish three square seeds, like unto other docks, but larger, whereby it may be plainly known to be a dock. The root grows in time to be very great, with divers and sundry great spreading branches from it, of a dark brownish or reddish colour on the outside, with a pale yellow skin under it, which covereth the inner substance or root, which rind and skin being pared away, the root appears of so fresh and lively a colour, with fresh coloured veins running through it, that the choicest of that rhubarb that is brought us from beyond the seas cannot excel it, which root, if it be dried carefully, and as it ought (which must be in our country by the gentle heat of a fire, in regard the sun is not hot enough here to do it, and every piece kept from touching one another) will hold its colour almost as well as when it is fresh, and hath been approved of, and commended by those who have oftentimes used them.

Place.] It groweth in gardens, and flowereth about the beginning or middle of June, and the seed is ripe in July.

Time.] The roots that are to be dried and kept all the year following, are not to be taken up before the stalk and leaves be quite withered and gone, and that is not until the middle or end

of October, and if they be taken a little before the leaves do spring or when they are sprung up, the roots will not have half so good a colour in them.

I have given the precedence unto this, because in virtues also it hath the pre-eminence. I come now to describe unto you that which is called patience, or monk's rhubarb; and next unto that, the great round leaved dock, or bastard rhubarb, for the one of these may haply supply in the absence of the other, being not much unlike in their virtues, only one more powerful and efficacious than the other. And lastly, shall shew you the virtues of all the three sorts.

GARDEN PATIENCE, OR MONK'S RHUBARB.

Descript.] **T**HIS is a dock, bearing the name of rhubarb for some purging quality therein, and groweth up with large tall stalks, set with somewhat broad and long fair green leaves, not dented at all. The tops of the stalks being divided into many small branches, bearing reddish or purplish flowers, and three square seed, like unto other docks. The root is long, great and yellow, like unto the wild docks, but a little redder: and if it be a little dried, sheweth less store of discoloured veins than the next doth when it is dry.

GREAT ROUND-LEAVED DOCK, OR BASTARD RHUBARB.

Descript.] **T**HIS hath divers large, round, thin, yellowish green leaves rising from the root, a little waved about the edges, every one standing upon a reasonable thick and long brownish foot-stalk, from among which riseth up a pretty big stalk, about two feet high, with some such like leaves growing thereon, but smaller; at the top whereof stand in a long spike many small brownish flowers, which turn into a hard three square shining brown seed, like the garden patience before described. The root groweth greater than that, with many branches of great fibres thereat, yellow on the outside, and somewhat pale;

yellow within, with some discoloured veins like to the rhubarb which is first described, but much less than it, especially when it is dry.

Place and Time.] These also grow in gardens, and flower and seed at or near the same time that our true rhubarb doth, viz. they flower in June, and the seed is ripe in July.

Temperature and Virtues.] Mars claims predominancy over all these wholesome herbs: You cry out upon him for an unfortunate, when God created him for your good (only he is angry with fools.) What dishonour is this, not to Mars, but to God himself? A dram of the dried root of monk's rhubarb, with a scruple of ginger made into powder, and taken fasting in a draught or mess of warm broth, purgeth choler and phlegm downwards very gently and safely, without danger. The seed on the contrary doth bind the belly, and helpeth to stay any sort of lasks or bloody-flux. The distilled water thereof is very profitably used to heal scabs; also foul ulcerous sores, and to lay the inflammation of them; the juice of the leaves or roots or the decoction of them in vinegar, is used as a most effectual remedy to heal scabs and running sores.

The bastard rhubarb hath all the properties of the monk's rhubarb, but more effectual for both inward and outward diseases. The decoction thereof without vinegar dropped into the ears, taketh away the pains; gargled in the mouth, taketh away the tooth-ach; and being drank, healeth the jaundice. The seed thereof taken, easeth the gnawing and griping pains of the stomach, and taketh away the loathing thereof unto meat. The root thereof helpeth the ruggedness of the nails, and being boiled in wine helpeth the swelling of the throat, commonly called the king's evil, as also the swellings of the kernels of the ears. It helpeth them that are troubled with the stone, provoketh urine, and helpeth the dimness of the sight. The roots of this bastard rhubarb are used in opening and purging diet-drinks, with other things, to open the liver, and to cleanse and cool the blood.

The properties of that which is called the English rhubarb, are the same with the former, (but much more effectual, and hath all the properties of the true Italian rhubarbs except the force in purging, wherein it is but of half the strength thereof, and therefore a double quantity must be used; it likewise hath not that bitterness and astringency; in other things it worketh almost in an equal quantity) which are these: It purgeth the body of choler and phlegm, being either taken of itself, made into powder, and drank in a draught of white wine, or steeped therein all the night, and taken fasting, or put among other purges, as shall be thought convenient, cleansing the stomach, liver, and blood, opening obstructions, and helping those griefs that come thereof, as the jaundice, dropsy, swelling of the spleen, tertian and daily agues, and pricking pains of the sides; and also it stayeth spitting of blood. The powder taken with cassia dissolved, and washed Venice turpentine, cleanseth the reins, and strengthens them afterwards, and is very effectual to stay the running of the reins, or gonorrhea. It is also given for the pains and swellings in the head, for those that are troubled with melancholy, and helpeth the sciatica, gout, and the cramp. The powder of the rhubarb taken with a little mummia and madder roots in some red wine, dissolveth clotted blood in the body, happening by any fall or bruise, and helpeth burstings and broken parts, as well inward as outward. The oil likewise wherein it hath been boiled, worketh the like effects, being anointed. It is used to heal those ulcers that happen in the eyes or eyelids, being steeped and strained; as also to assuage the swellings and inflammations; and applied with honey, boiled in wine, it taketh away all blue spots or marks that happen therein. Whey or white wine are the best liquors to steep it in, and thereby it worketh more effectually in opening obstructions, and purging the stomach and liver. Many do use a little Indian spikenard as the best corrector thereof.

MEADOW-RUE.

Descript.] MEADOW-RUE riseth up with a yellow

stringy root, much spreading in the ground, shooting forth new sprouts round about, with many herby green stalks, two feet high, crested all the length of them, set with joints here and there, and many large leaves on them, above as well as below, being divided into smaller leaves, nicked or dented in the forepart of them, of a red green colour on the upper side, and pale green underneath: Toward the top of the stalk there shooteth forth divers short branches, on every one whereof stand two, three or four small heads, or buttons, which breaking the skin that encloseth them, shoot forth a tuft of pale greenish yellow threads, which falling away, there come in their places small three cornered cods, wherein is contained small, long and round seed. The whole plant hath a strong unpleasant scent.

Place.] It groweth in many places of this land, in the borders of moist meadows, and ditch-sides.

Time.] It flowereth about July, or the beginning of August.

Government and Virtues.] Dioscorides saith, that this herb bruised and applied, perfectly healeth old sores, and the distilled water of the herb and flowers doth the like. It is used by some among other pot-herbs to open the body, and make it soluble; but the roots washed clean, and boiled in ale and drank, provoke to stool more than the leaves, but yet very gently. The root boiled in water, and the places of the body most troubled with vermin and lice washed therewith while it is warm, destroyeth them utterly. In Italy it is used against the plague, and in Saxony against the jaundice, as Camerarius saith.

GARDEN-RUE

GARDEN Rue is so well known by this name, and the name herb of grace, that I shall not need to write any further description of it, but shall only shew you the virtue of it, as followeth.

Government and Virtues.] It is an herb of the Sun, and under Leo. It provoketh urine and women's courses, being taken

either in meat or drink. The seed thereof taken in wine, is an antidote against all dangerous medicines or deadly poisons. The leaves taken either by themselves, or with figs or walnuts, is called Mithridates' counter-poison against the plague, and causeth all venomous things to become harmless; being often taken in meat and drink, it abateth venery, and destroyeth the ability to get children. A decoction made thereof with some dried dill leaves and flowers, easeth all pains and torments, inwardly to be drank and outwardly to be applied warm to the place grieved. The same being drank, helpeth the pains both of the chest and sides, as also coughs and hardness of breathing, the inflammations of the lungs, and the tormenting pains of the sciatica and the joints, being anointed, or laid to the places; as also the shaking fits of agues, to take a draught before the fit comes; being boiled or infused in oil, it is good to help the wind cholic, the hardness and windiness of the mother, and freeth women from the strangling or suffocation thereof, if the share and the parts thereabouts be anointed therewith: It killeth and driveth forth the worms in the belly, if it be drank after it is boiled in wine to the half, with a little honey; it helpeth the gout or pains in the joints, hands, feet or knees, applied thereunto; and with figs it helpeth the dropsy, being bathed therewith; Being bruised and put into the nostrils, it stayeth the bleeding thereof; it helpeth the swelling of the cods, if they be bathed with a decoction of rue and bay leaves. It taketh away wheals and pimples, if, being bruised with a few myrtle leaves, it be made up with wax and applied. It cureth the morpew, and taketh away all sorts of warts, if boiled in wine with some pepper and nitre, and the place rubbed therewith, and with almond and honey, helpeth the dry scabs, or any tetter or ring-worm. The juice thereof warmed in a pomegranate shell or rind, and dropped into the ears, helpeth the pains of them. The juice of it and fennel, with a little honey, and the gall of a cock put thereunto, helpeth the dimness of the eye sight. An ointment made of the juice thereof with oil of roses, ceruse, and a little vinegar, and anointed, cureth St. Anthony's fire, and all run-

ning sores in the head; and the stinking ulcers of the nose, or other parts. The antidote used by Mithridates, every morning fasting, to secure himself from any poison or infection, was this: Take twenty leaves of rue, a little salt, a couple of walnuts, and a couple of figs beaten together into a mass with twenty juniper berries, which is the quantity appointed for every day. Another electuary is made thus: Take of nitre, pepper, and cummin seed, of each equal parts; of the leaves of rue clean picked, as much in weight as all the other three weighed; beat them well together, and put as much honey as will make it up into an electuary (but you must first steep your cummin seed in vinegar twenty-four hours, and then dry it, or rather roast it in a hot fire-shovel, or in an oven) and is a remedy for the pains or griefs in the chest or stomach, of the spleen, belly, or sides, by wind or stitches; of the liver by obstructions; of the reins and bladder by the stopping of urine; and helpeth also to extenuate fat corpulent bodies.

What an infamy is cast upon the ashes of Mithridates, or Mithridates (as the Augustines read his name) by unworthy people. They that deserve no good report themselves, love to give none to others, viz. That renowned king of Pontius fortified his body by poison against poison. *He cast out devils by Beelzebub, prince of the devils.* What a sot is he that knows not if he had accustomed his body to cold poisons, hot poisons would have dispatched him? on the contrary, if not, corrosions would have done it. The whole world is, at this present time, beholden to him for his studies in physic, and he that useth the quantity but of an hazel-nut of that receipt every morning, to which his name is adjoined, shall, to admiration, preserve his body in health, if he do but consider that rue is an herb of the Sun, and under Leo, and gather it and the rest accordingly.

RUPTURE-WORT.

Descript.] **T**HIS spreadeth many thready branches round

about upon the ground, about a span long, divided into many other smaller parts full of small joints set very thick together, whereat come forth two very small leaves of a French yellow, green coloured branches and all, where groweth forth also a number of exceeding small yellowish flowers scarce to be discerned from the stalks and leaves, which turn into seeds as small as the very dust. The root is very long and small, thrusting down deep into the ground. This hath neither smell nor taste at first, but afterwards hath a little astringent taste, without any manifest heat; yet a little bitter and sharp withal.

Place.] It groweth in dry, sandy, and rocky places.

Time.] It is fresh and green all the summer.

Government and Virtues.] They say Saturn causeth ruptures; if he do, he doth no more than he can cure; if you want wit, he will teach you, though to your cost. This herb is Saturn's own, and is a noble antivenerean. Rupture-wort hath not its name in vain; for it is found by experience, to cure the rupture, not only in children, but also in elder persons, if the disease be not too inveterate, by taking a dram of the powder of the dried herb every day in wine, or a decoction made and drank for certain days together. The juice or distilled water of the green herb, taken in the same manner, helpeth all other fluxes either of man or woman; vomitings also, and the gonorrhea, or running of the reins, being taken any of the ways aforesaid. It doth also most assuredly help those that have the strangury, or are troubled with the stone or gravel in the reins or bladder. The same also helpeth stitches in the sides, griping pains of the stomach or belly, the obstructions of the liver, and cureth the yellow jaundice; likewise it kills also the worms in children. Being outwardly applied, it conglutinateth wounds notably, and helpeth much to stay defluxions of rheum from the head to the eyes, nose and teeth, being bruised green, and bound thereto; or the forehead, temples, or the nape of the neck behind, bathed with the decoction of the dried herb. It also drieth up the moisture of fistulous ulcers, or any other that are foul and spreading.

RUSHES.

ALTHOUGH there are many kinds of rushes, yet I shall only here insist upon those which are best known, and most medicinal; as the bulrushes, and other of the soft and smooth kinds, which grow so commonly in almost every part of this land, and are so generally noted, that I suppose it needless to trouble you with any description of them: Briefly then take the virtues of them as followeth:

Government and Virtues.] The seed of the soft rushes, (saith Dioscorides and Galen, toasted, saith Pliny) being drank in wine and water, stayeth the lask and women's courses, when they come down too abundantly; but it causeth head-ach: It provoketh sleep likewise, but must be given with caution. The root boiled in water, to the consumption of one third, helpeth the cough.

Thus you see that conveniences have their inconveniences, and virtue is seldom unaccompanied with some vices. What I have written concerning rushes, is to satisfy my countrymen's question: *Are our rushes good for nothing?* Yes, and as good let them alone as taken, there are remedies enough without them for any disease; and therefore as the proverb is, I care not a rush for them; or rather they will do you as much good as if one had given you a rush.

RYE.

THIS is so well known in all the counties of this land, and especially to the country people, who feed much thereon, that if I did describe it, they would presently say, I might as well have spared my labour. Its virtues follow:

Government and Virtues.] Rye is more digesting than wheat; the bread and the leaven thereof ripeneth and breaketh imposthumes, boils, and other swellings: the meal of rye put between a double cloth, and moistened with a little vinegar, and heated in a pewter dish, set over a chafing-dish of coals, and

Wood Sage

Scrophularia

Wood Sanicle

bound fast to the head while it is hot, doth much ease the continual pains of the head. Matthiolus saith, that the ashes of rye straw put into water, and steeped therein a day and a night, and the chops of the hands or feet washed therewith, doth heal them.

SAFFRON.

THE herb needs no description, it being known generally where it grows.

Place.] It grows frequently at Walden in Essex, and in Cambridgeshire.

Government and Virtues.] It is an herb of the Sun, and under the Lion, and therefore you need not demand a reason why it strengthens the heart so exceedingly. Let not above ten grains be given at one time, for the Sun, which is the fountain of light, may dazzle the eyes, and make them blind; a cordial being taken in an immoderate quantity, hurts the heart instead of helping it. It quickeneth the brain, for the Sun is exalted in Aries, as he hath his house in Leo: It helps consumptions of the lungs, and difficulty of breathing: It is excellent in epidemical diseases, as pestilence, small-pox, and measles. It is a notable expulsive medicine, and a notable remedy for the yellow jaundice. My opinion is (but I have no author for it) that hermodactyls are nothing else but the roots of saffron dried; and my reason is, that the roots of all crocus, both white and yellow, purge phlegm as hermodactyls do; and if you please to dry the roots of any crocus, neither your eyes nor your taste shall distinguish them from hermodactyls.

SAGE.

OUR ordinary garden sage needs no description.

Time.] It flowereth in or about July.

Government and Virtues.] Jupiter claims this, and bids me tell you, it is good for the liver, and to breed blood. A decoction of the leaves and branches of sage made and drank, saith

Dioscorides, provoketh urine, bringeth down women's courses, helps to expel the dead child, and causeth the hair to become black. It stayeth the bleeding of wounds, and cleanseth foul ulcers or sores. The said decoction made in wine, taketh away the itching of the cods, if they be bathed therewith. Agrippa saith, that if women that cannot conceive by reason of the moist slipperiness of their wombs, shall take a quantity of the juice of sage, with a little salt, for four days before they company with their husbands, it will help them not only to conceive, but also to retain the birth without miscarrying. Orpheus saith, three spoonfuls of the juice of sage taken fasting, with a little honey, doth presently stay the spitting or casting of blood of them that are in a consumption. These pills are much commended: Take of spikenard, ginger, of each two drams; of the seed of sage toasted at the fire, eight drams; of long pepper 12 drams; all these being brought into powder, put thereto so much juice of sage as may make them into a mass of pills, taking a dram of them every morning, fasting, and so likewise at night, drinking a little pure water after them. Matthiolus saith, it is very profitable for all manner of pains in the head, coming of cold and rheumatic humours: as also for all pains of the joints, whether inwardly or outwardly, and therefore helpeth the falling sickness, the lethargy, such as are dull and heavy of spirit, the palsy; and is of much use in all defluxions of rheum from the head, and for the diseases of the chest or breast. The leaves of sage and nettles bruised together, and laid upon the imposthume that riseth behind the ears, doth assuage it much. The juice of sage taken in warm water, helpeth a hoarseness and a cough. The leaves soddened in wine, and laid upon the place affected with the palsy, helpeth much, if the decoction be drank: Also, sage taken with wormwood is good for the bloody flux. Pliny saith, it procures women's courses, and stayeth them coming down too fast; helpeth the stinging and biting of serpents, and killeth the worms that breed in the ear, and in sores. Sage is of an excellent use to help the memory, warming and quickening the senses; and the conserve made of the flowers is used to the same pur-

pose, and also for all the former recited diseases. The juice of sage drank, with vinegar, hath been of good use in time of the plague at all times. Gargles likewise are made of sage, rosemary, honey-suckles, and plantain, boiled in wine or water, with some honey or allum put thereto, to wash sore mouths and throats, cankers, or the secret parts of man or woman, as need requireth. And with other hot and comfortable herbs, sage is boiled to bathe the body and the legs in the summer time, especially to warm cold joints, or sinews, troubled with the palsy and cramp, and to comfort and strengthen the parts. It is much commended against the stitch, or pains in the side coming of wind, if the place be fomented warm with the decoction thereof in wine, and the herb also after boiling be laid warm thereunto.

WOOD-SAGE.

Descript.] WOOD-SAGE riseth up with square hoary stalks, two feet high at the least, with two leaves set at every joint, somewhat like other sage leaves, but smaller, softer, whiter, and rounder, and a little dented about the edges, and smelling somewhat stronger. At the tops of the stalks and branches stand the flowers, on slender-like spikes, turning themselves all one way when they blow, and are of a pale and whitish colour, smaller than sage, but hooded and gaping like unto them. The seed is blackish and round; four usually seem in a husk together: the root is long and stringy, with divers fibres thereat, and abideth many years.

Place.] It groweth in woods, and by wood-sides; as also in divers fields and bye-lanes in the land.

Time.] It flowereth in June, July and August.

Government and Virtues.] The herb is under Venus. The decoction of the wood-sage provoketh urine and women's courses: It also provoketh sweat, digesteth humours, and discusseth swellings and nodes in the flesh, and is therefore thought to be good against the French pox. The decoction of the green

herb, made with wine, is a safe and sure remedy for those who by falls, bruises, or blows, suspect some vein to be inwardly broken, to disperse and void the congealed blood, and to consolidate the veins. The drink used inwardly, and the herb used outwardly, is good for such as are inwardly or outwardly bursten, and is found to be a sure remedy for the palsy. The juice of the herb, or the powder thereof dried, is good for moist ulcers and sores in the legs, and other parts, to dry them, and cause them to heal more speedily. It is no less effectual also in green wounds, to be used upon any occasion.

SOLOMON'S SEAL.

Descript.] **T**HE common Solomon's seal riseth up with a round stalk, half a yard high, bowing or bending down to the ground, set with single leaves one above another, somewhat large, and like the leaves of the lily convally, or May-lily, with an eye of blueish upon the green, with some ribs therein, and more yellowish underneath. At the foot of every leaf, almost from the bottom up to the top of the stalks, come forth small, long, white and hollow pendulous flowers somewhat like the flowers of May-lily, but ending in five long points, for the most part two together, at the end of a long footstalk, and sometimes but one, and sometimes also two stalks, with flowers at the foot of a leaf, which are without any scent at all, and stand on one side of the stalk. After they are past, come in their places small round berries, great at the first, and blackish green, tending to blueness when they are ripe, wherein lie small, white, hard, and stony seeds. The root is of the thickness of one's finger or thumb, white and knotted in some places, a flat round circle representing a seal, whereof it took the name, lying along under the upper crust of the earth, and not growing downward, but with many fibres underneath.

Place.] It is frequent in divers places of this land; as, namely, in a wood two miles from Canterbury, by Fish-pool Hill, as also in Bushy Close belonging to the parsonage of Al-

derbury, near Clarendon, two miles from Salisbury; in Cheffon wood, on Chesson Hill, between Newington and Sittingbourn in Kent, and divers other places in Essex, and other counties.

Time.] It flowereth about May: the root abideth and shooteth anew every year.

Government and Virtues.] Saturn owns the plant, for he loves his bones well. The root of solomon's seal is found, by experience, to be available in wounds, hurts, and outward sores, to heal and close up the lips of those that are green, and to dry up and restrain the flux of humours to those that are old. It is singularly good to stay vomiting and bleeding wheresoever, as also all fluxes in man or woman, whether whites or reds in women, or the running of the reins in men; also, to knit any joint, which, by weakness, useth to be often out of place, or will not stay in long when it is set; also to knit and join broken bones in any part of the body, the roots being bruised and applied to the places; yea, it hath been found, by late experience, that the decoction of the root in wine, or the bruised root put into wine or other drink, and after a night's infusion, strained forth hard and drank, hath helped both man and beast, whose bones have been broken by any occasion; which is the most assured refuge of help to people of divers counties of the land that they can have: It is no less effectual to help ruptures and burstings, the decoction in wine, or the powder in broth or drink, being inwardly taken, and outwardly applied to the place. The same is also available for inward or outward bruises, falls or blows, both to dispel the congealed blood, and to take away both the pains, and the black and blue marks that abide after the hurt. The same also, or the distilled water of the whole plant, used to the face, or other parts of the skin, cleanseth it from morpew, freckles, spots, or marks whatsoever, leaving the place fresh, fair, and lovely; for which purpose it is much used by the Italian dames.

SAMPHIRE.

Descript.] **R**OCK samphire groweth up with a tender green

stalk, about half a yard, or two feet high at the most, branching forth almost from the very bottom, and stored with sundry thick, and almost round (somewhat long) leaves of a deep green colour, sometimes two together, and sometimes more on a stalk, and sappy, and of a pleasant, hot, and spicy taste. At the top of the stalks and branches stand umbels of white flowers, and after them come large seed bigger than fennel seed, yet somewhat like it. The root is great, white, and long, continuing many years, and is of an hot and spicy taste likewise.

Place.] It groweth on the rocks that are often moistened at the least, if not overflowed with the sea water.

Time.] And it flowereth and seedeth in the end of July and August.

Government and Virtues.] It is an herb of Jupiter, and was in former times wont to be used more than now it is; the more is the pity. It is well known almost to every body, that ill digestions and obstructions are the cause of most of the diseases which the frail nature of man is subject to; both which might be remedied by a more frequent use of this herb. If people would have sauce to their meat, they may take some for profit as well as for pleasure. It is a safe herb, very pleasant both to taste and stomach, helpeth digestion, and in some sort opening obstructions of the liver and spleen; provoketh urine, and helpeth thereby to wash away the gravel and stone engendered in the kidneys or bladder.

SANICLE.

Descript.] **O**RDINARY sanicle sendeth forth many great round leaves, standing upon long brownish stalks, every one somewhat deeply cut or divided into five or six parts, and some of these also cut in somewhat like the leaf of crow's-foot or dove's foot, and finely dented about the edges, smooth, and of a dark shining colour, and sometimes reddish about the brims; from among which arise up small, round green stalks, without any joint or leaf thereon, saving at the top, where it branches

forth into flowers, having a leaf divided into three or four parts at that joint with the flowers, which are small and white, starting out of small round greenish yellow heads, many standing together in a tuft, in which afterwards are the seeds contained, which are small round burs, somewhat like the leaves of cleavers, and stick in the same manner upon any thing that they touch. The root is composed of many blackish strings or fibres, set together at a little long head, which abideth with green leaves all the winter, and perisheth not.

Place.] It is found in many shadowy woods, and other places of this land.

Time.] It flowereth in June, and the seed is ripe shortly after.

Government and Virtues.] This is one of Venus' herbs, to cure the wounds or mischiefs Mars inflicteth upon the body of man. It heals green wounds speedily, or any ulcers, imposthumes, or bleedings, inward, also tumours in any part of the body; for the decoction or powder in drink taken, and the juice used outwardly, dissipateth the humour; and there is not found any herb that can give such present help either to man or beast, when the disease falleth upon the lungs or throat, and to heal up putrid malignant ulcers in the mouth, throat and privities, by gargling or washing with the decoction of the leaves and roots made in water, and a little honey put thereto. It helpeth to stay women's courses, and all other fluxes of blood, either by the mouth, urine or stool, and lasks of the belly; the ulcerations of the kidneys also, and the pains in the bowels, and gonorrhea, or running of the reins, being boiled in wine or water, and drank. The same also is no less powerful to help any ruptures or burstings, used both inwardly and outwardly: And briefly, it is as effectual in binding, restraining, consolidating, heating, drying and healing, as comfrey, bugle, self-heal, or any other of the vulnerary herbs whatsoever.

SARACENS CONFOUND, OR SARACENS
WOUNDWORT.

Descript.] **T**HIS groweth high sometimes, with brownish stalks, and other whiles with green, to a man's height, having narrow green leaves snipped about the edges, somewhat like those of the peach-tree, or willow leaves, but not of such a white green colour. The tops of the stalks are furnished with many yellow star-like flowers, standing in green heads, which, when they are fallen, and the seed ripe, which is somewhat long, small, and of a brown colour, wrapped in down, is therewith carried away with the wind. The root is composed of fibres set together at a head, which perish not in winter, although the stalks dry away, and no leaf appeareth in the winter. The taste hereof is strong and unpleasant; and so is the smell also.

Place.] It groweth in moist and wet grounds, by wood-sides, and sometimes in the moist places of shady groves, as also by the water-side.

Time.] It flowereth in July, and the seed is soon ripe, and carried away with the wind.

Government and Virtues.] Saturn owns the herb, and it is of a sober condition, like him. Among the Germans, this wound herb is preferred before all others of the same quality. Being boiled in wine, and drank, it helpeth the indisposition of the liver, and freeth the gall from obstructions; whereby it is good for the yellow jaundice, and for the dropsy in the beginning of it; for all inward ulcers, for the reins, mouth or throat, and inward wounds and bruises, likewise for such sores as happen in the privy parts of men or women; being steeped in wine, and then distilled, the water thereof drank, is singularly good to ease all gnawings in the stomach, or other pains of the body, as also the pains of the mother; and being boiled in water, it helpeth continual agues; and the said water, or the simple water of the herb distilled, or the juice or decoction, are

very effectual to heal any green wound, or old sore or ulcer whatever, cleansing them from corruption, and quickly healing them up: Briefly, whatsoever hath been said of bugle or sanicle, may be found herein.

SAUCE-ALONE, OR JACK BY THE HEDGE-SIDE.

Descript.] **T**HE lower leaves of this are rounder than those that grow towards the top of the stalks, and are set singly on a joint, being somewhat long and broad, pointed at the ends, dented also about the edges, somewhat resembling nettle leaves for the form, but of a fresher green colour, not rough or pricking: The flowers are white growing at the top of the stalks one above another, which being past, follow small round pods, wherein are contained round seed somewhat blackish. The root stringy and thready, perisheth every year after it hath given seed, and raiseth itself again of its own sowing. The plant or any part thereof, being bruised, smelleth of garlic, but more pleasantly, and tasteth somewhat hot and sharp, almost like unto rocket.

Place.] It groweth under walls, and by hedge-sides, and path-ways in fields in many places.

Time.] It flowereth in June, July, and August.

Government and Virtues.] It is an herb of Mercury. This is eaten by many country people as sauce to their salt fish, and helpeth well to digest the crudities, and other corrupt humours engendered thereby: It warmeth also the stomach, and causeth digestion: The juice thereof boiled with honey is accounted to be as good as hedge mustard for the cough, to cut and expectorate the tough phlegm. The seed bruised and boiled in wine, is a singularly good remedy for the wind colic, or the stone, being drank warm: it is also given to women troubled with the mother, both to drink, and the seed put into a cloth, and applied while it is warm, is of singularly good use. The leaves also, or the seed boiled, is good to be used in clysters to ease the pains of the stone. The green leaves are held to be good to heal the ulcers in the legs.

WINTER AND SUMMER SAVORY.

BOTH these are so well known (being entertained as constant inhabitants in our gardens) that they need no description.

Government and Virtues.] Mercury claims the dominion over this herb, neither is there a better remedy against the colic and iliac passion, than this herb; keep it dry by you all the year, if you love yourself and your ease, and it is a hundred pounds to a penny if you do not; keep it dry, make conserves and syrups of it for your use, and withal, take notice that the summer kind is the best. They are both of them hot and dry, especially the summer kind, which is both sharp and quick in taste, expelling wind in the stomach and bowels, and is a present help for the rising of the mother procured by wind; provoketh urine and women's courses, and is much commended for women with child to take inwardly, and to smell often unto. It cureth tough phlegm in the chest and lungs, and helpeth to expectorate it the more easily; quickens the dull spirits in the lethargy, the juice thereof being snuffed up into the nostrils. The juice dropped into the eyes, cleareth a dull sight, if it proceed of thin cold humours distilled from the brain. The juice heated with oil of roses, and dropped into the ears, easeth them of the noise and singing in them, and of deafness also: Outwardly applied with wheat flour, in manner of a poultice, it giveth ease to the sciatica and palsied members, heating and warming them, and taketh away their pains. It also taketh away the pain that comes by stinging of bees, wasps, &c.

SAVINE.

TO describe a plant so well known is needless, it being nursed up almost in every garden, and abiding green all the winter.

Government and Virtues.] It is under the dominion of Mars, being hot and dry in the third degree, and being of exceeding

clean parts, is of a very digesting quality. If you dry the herb into powder, and mix it with honey, it is an excellent remedy to cleanse old filthy ulcers and fistulas, but it hinders them from healing. The same is excellent good to break carbuncles and plague-sores; also helpeth the king's evil, being applied to the place. Being spread over a piece of leather, and applied to the navel, kills the worms in the belly, helps scabs and itch, running sores, cankers, tetters, and ringworms; and being applied to the place, may haply cure venereal sores. This I thought good to speak of, as it may be safely used outwardly, for inwardly it cannot be taken without manifest danger.

THE COMMON WHITE SAXIFRAGE.

Descript.] **T**HIS hath a few small reddish kernels of roots covered with some skins, lying among divers small blackish fibres, which send forth divers round, faint or yellow green leaves, and greyish underneath, lying above the ground, unevenly dented about the edges, and somewhat hairy, every one upon a little footstalk, from whence riseth up round, brownish, hairy, green stalks, two or three feet high, with a few such like round leaves as grow below, but smaller, and somewhat branched at the top, whereon stand pretty large white flowers of five leaves a-piece, with some yellow threads in the middle, standing in a long, crested, brownish, green bush. After the flowers are past, there ariseth sometimes a round hard head, forked at the top, wherein is contained small black seed, but usually they fall away without any seed, and it is the kernels or grains of the root which are usually called the white saxifrage-seed, and so used.

Place.] It groweth in many places of our land, as well in the lowermost, as in the upper dry corners of meadows, and grassy sandy places. It used to grow near Lamb's conduit, on the backside of Gray's Inn.

Time.] It flowereth in May, and then gathered, as well for that which is called the seed, as to distil, for it quickly perisheth down to the ground when any hot weather comes.

Government and Virtues.] It is very effectual to cleanse the reins and bladder, and to dissolve the stone engendered in them, and to expel it and the gravel by urine; to help the strangury; for which purpose the decoction of the herb or roots in white wine, is most usual, or the powder of the small kernelly root, which is called the seed, taken in white wine, or in the same decoction made with white wine, is most usual. The distilled water of the whole herb, root and flowers, is most familiar to be taken. It provoketh also women's courses, and freeth and cleanseth the stomach and lungs from thick and tough phlegm that troubleth them. There are not many better medicines to break the stone than this.

BURNET SAXIFRAGE.

Descript.] **T**HE greater sort of our English Burnet saxifrage groweth up with divers long stalks of winged leaves set directly opposite one to another on both sides, each being somewhat broad, and a little pointed and dented about the edges, of a sad green colour. At the top of the stalks stand umbels of white flowers, after which come small and blackish seed. The root is long and whitish, abiding long. Our lesser burnet saxifrage hath much finer leaves than the former, and very small, and set one against another, deeply jagged about the edges, and of the same colour as the former. The umbels of the flowers are white, and the seed very small, and so is the root, being also somewhat hot and quick in taste.

Place.] These grow in moist meadows of this land, and are easy to be found being well sought for among the grass, wherein many times they lay hid scarcely to be discerned.

Time.] They flower about July, and their seed is ripe in August.

Government and Virtues.] They are both of them herbs of the Moon. The saxifrages are hot as pepper; and Tragus saith, by his experience, that they are wholesome. They have the same properties the parsleys have, but in provoking urine,

Smallage

Sage Wort

and easing the pains thereof, and of the wind and cholic, are much more effectual, the roots or seed being used either in powder, or in decoctions, or any other way; and likewise helpeth the windy pains of the mother, and to procure their courses, and to break and void the stone in the kidneys, to digest cold, viscous, and tough phlegm in the stomach, and is an especial remedy against all kind of venom. Castoreum being boiled in the distilled water thereof, is singular good to be given to those that are troubled with cramps and convulsions. Some do use to make the seeds into comfits (as they do carraway seeds) which is effectual to all the purposes aforesaid. The juice of the herb dropped into the most grievous wounds of the head drieth up their moisture, and healeth them quickly. Some women use the distilled water to take away freckles or spots in the skin or face; and to drink the same sweetened with sugar for all the purposes aforesaid.

SCABIOUS, THREE SORTS.

Descript.] COMMON field scabious groweth up with many hairy, soft, whitish green leaves, some whereof are very little, if at all jagged on the edges, others very much rent and torn on the sides, and have threads in them, which upon breaking may be plainly seen; from among which rise up divers hairy green stalks, three or four feet high, with such like hairy green leaves on them, but more deeply and finely divided, branched forth a little: At the tops thereof, which are naked and bare of leaves for a good space, stand round heads of flowers of a pale blueish colour, set together in a head, the outermost whereof are larger than the inward, with many threads also in the middle, somewhat flat at the top, as the head with the seed is likewise; the root is great, white and thick, growing down deep into the ground, and abideth many years.

There is another sort of field scabious different in nothing from the former, but only it is smaller in all respects.

The corn scabious differeth little from the first, but that it

is greater in all respects, and the flowers more inclining to purple, and the root creepeth under the upper crust of the earth, and runneth not deep into the ground as the first doth.

Place.] The first groweth more usually in meadows, especially about London every where.

The second in some of the dry fields about this city, but not so plentifully as the former.

The third in standing corn, or fallow fields, and the borders of such like fields.

Time.] They flower in June and July, and some abide flowering until it be late in August, and the seed is ripe in the mean time.

There are many other sorts of scabious, but I take those which I have here described to be most familiar with us; the virtues of both these and the rest, being much alike, take them as followeth.

Government and Virtues.] Mercury owns the plant. Scabious is very effectual for all sorts of coughs, shortness of breath, and all other diseases of the breast and lungs, ripening and digesting cold phlegm, and other tough humours, voideth them forth by coughing and spitting; It ripeneth also all sorts of inward ulcers and imposthumes; pleurisy also, if the decoction of the herb dry or green to be made in wine, and drank for some time together. Four ounces of the clarified juice of scabious taken in the morning fasting, with a dram of mithridate, or Venice treacle, freeth the heart from any infection or pestilence, if after the taking of it the party sweat two hours in bed, and this medicine be again and again repeated, if need require. The green herb bruised and applied to any carbuncle or plague sore, is found by certain experience to dissolve and break it in three hours space. The same decoction also drank, helpeth the pains and stitches in the side. The decoction of the roots taken for forty days together, or a dram of the powder of them taken at a time in whey doth, (as Matthiolus saith) wonderfully help those that are troubled with running or spreading scabs, tetter, ring-worms, yea, although they proceed from the French pox, which, he saith,

he hath tried by experience. The juice or decoction drank, helpeth also scabs and breakings-out of the itch, and the like. The juice also made up into an ointment and used, is effectual for the same purpose. The same also healeth all inward wounds by the drying, cleansing, and healing quality therein; And a syrup made of the juice and sugar, is very effectual to all the purposes aforesaid, and so is the distilled water of the herb and flowers made in due season, especially to be used when the green herb is not in force to be taken. The decoction of the herb and roots outwardly applied, doth wonderfully help all sorts of hard or cold swellings in any part of the body, is effectual for shrunk sinews or veins, and healeth green wounds, old sores and ulcers. The juice of scabious, made up with the powder of borax and samphire, cleanseth the skin of the face, or other parts of the body, not only from freckles and pimples, but also from morpew and leprosy; the head washed with the decoction, cleanseth it from dandriff, scurf, sores, itch, and the like, used warm. The herb bruised and applied, doth in a short time loosen, and draw forth any splinter, broken bone, arrow head, or other such like thing lying in the flesh.

SCURVY-GRASS.

Descript.] **O**UR ordinary English scurvy-grass hath many thick flat leaves more long than broad, and sometimes longer and narrower; sometimes also smooth on the edges, and sometimes a little waved; sometimes plain, smooth and pointed, of a sad green, and sometimes a blueish colour, every one standing by itself upon a long foot-stalk, which is brownish or greenish also, from among which arise many slender stalks, bearing few leaves thereon like the other, but longer and lesser for the most part: At the tops whereof grow many whitish flowers, with yellow threads in the middle, standing about a green head, which becometh the seed vessel, which will be somewhat flat when it is ripe, wherein is contained reddish seed, tasting somewhat hot. The root is made of many white strings, which stick

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deeply into the mud, wherein it chiefly delights, yet it will well abide in the more upland and drier ground, and tasteth a little brackish and salt even there, but not so much as where it hath the salt water to feed upon.

Place.] It groweth all along the Thames sides, both on the Essex and Kentish shores, from Woolwich round about the sea-coasts to Dover, Portsmouth, and even to Bristol, where it is had in plenty; the other with round leaves groweth in the marshes in Holland, in Lincolnshire, and other places of Lincolnshire by the sea side.

Descript.] There is also another sort called Dutch scurvy-grass, which is most known, and frequent in gardens, which hath fresh green, and almost round leaves rising from the root, not so thick as the former, yet in some rich ground, very large, even twice as big as in others, not dented about the edges, or hollow in the middle, standing on a long foot-stalk; from among these rise long, slender stalks, higher than the former, with more white flowers at the tops of them, which turn into small pods, and smaller brownish seed than the former. The root is white, small and thready. The taste is nothing salt at all; it hath a hot, aromatical, spicy taste.

Time.] It flowereth in April and May, and giveth ripe seed quickly after.

Government and Virtues.] It is an herb of Jupiter. The English scurvy-grass is more used for the salt taste it beareth, which doth somewhat open and cleanse; but the Dutch scurvy-grass is of better effect, and chiefly used (if it may be had) by those that have the scurvy, and is of singularly good effect to cleanse the blood, liver, and spleen, taking the juice in the spring every morning fasting in a cup of drink. The decoction is good for the same purpose, and openeth obstructions, evacuating cold, clammy, and phlegmatic humours both from the liver and the spleen, and bringing the body to a more lively colour. The juice also helpeth all foul ulcers and sores in the mouth, gargled therewith; and used outwardly, cleanseth the skin from spots, marks, or scars that happen therein.

Shepherd's Purse

Self Heal

Surry Grass

SELF-HEAL.

Called also Prunel, Carpenter's Herb, Hook-heal, and Sickle-wort.

Descript.] **T**HE common self-heal is a small, low, creeping herb, having many small, roundish pointed leaves, like leaves of wild mints, of a dark green colour, without dents on the edges; from among which rise square hairy stalks, scarce a foot high, which spread sometimes into branches with small leaves set thereon, up to the tops, where stand brown spike heads of small brownish leaves like scales and flowers set together, almost like the head of cassidony, which flowers are gaping, and of a blueish purple, or more pale blue, in some places sweet, but not so in others. The root consists of many fibres downward, and spreadeth strings also whereby it increaseth. The small stalks, with the leaves creeping on the ground, shoot forth fibres taking hold on the ground, whereby it is made a great tuft in a short time.

Place.] It is found in woods and fields every where.

Time.] It flowereth in May, and sometimes in April.

Government and Virtues.] Here is another herb of Venus, self-heal, whereby when you are hurt you may heal yourself: It is a special herb for inward and outward wounds. Take it inwardly in syrups for inward wounds: outwardly in unguents and plaisters for outward. As self-heal is like bugle in form, so also in the qualities and virtues, serving for all the purposes whereto bugle is applied with good success, either inwardly or outwardly, for inward wounds or ulcers whatsoever within the body, for bruises or falls, and such like hurts. If to be accompanied with bugle, sanicle, and other the like wound herbs, it will be more effectual to wash or inject into ulcers in the parts outwardly. Where there is cause to repress the heat and sharpness of humours flowing to any sore, ulcers, inflammations, swellings, or the like, or to stay the fluxes of blood in any wound or part, this is used with some good success;

also to cleanse the foulness of sores; and cause them more speedily to be healed. It is an especial remedy for all green wounds, to solder the lips of them, and to keep the place from any further inconveniences. The juice hereof used with oil of roses to anoint the temples and forehead, is very effectual to remove the head-ach, and the same mixed with honey of roses, cleanseth and healeth all ulcers in the mouth, and throat, and those also in the secret parts. And the proverb of the Germans, French and others, is verified in this, *That he needeth neither physician nor surgeon that hath self-heal and sanicle to help himself.*

THE SERVICE-TREE.

IT is so well known in the place where it grows, that it needeth no description.

Time.] It flowereth before the end of May, and the fruit is ripe in October.

Government and Virtues.] Services when they are mellow, are fit to be taken to stay fluxes, scouring, and casting, yet less than medlars. If they be dried before they be mellow, and kept all the year, they may be used in decoctions for the same purpose, either to drink, or to bathe the parts requiring it; and are profitably used in that manner to stay the bleeding of wounds, and of the mouth or nose, to be applied to the forehead and nape of the neck; and are under the dominion of Saturn.

SHEPHERD'S PURSE.

IT is called whoreman's permacety, shepherd's scrip, shepherd's pounce, toywort, pickpurse, and casewort.

Descript.] The root is small, white, and perisheth every year. The leaves are small and long, of a pale green colour, and deeply cut in on both sides, among which spring up a stalk which is small and round, containing small leaves upon it even to the top. The flowers are white and very small; after which come the little cases which hold the seed, which are flat, almost in the form of a heart.

Place.] They are frequent in this nation, almost by every path-side.

Time.] They flower all the summer long: nay some of them are so fruitful, that they flower twice a-year.

Government and Virtues.] It is under the dominion of Saturn, and of a cold, dry, and binding nature, like to him. It helps all fluxes of blood, either caused by inward or outward wounds; as also flux of the belly and bloody flux, spitting and pissing of blood, stops the terms in women; being bound to the wrists of the hands, and the soles of the feet, it helps the yellow jaundice. The herb being made into a poultice, helps inflammations and St. Anthony's fire. The juice being dropped into the ears, heals the pains, noise, and matterings thereof. A good ointment may be made of it for all wounds, especially wounds in the head.

SMALLAGE.

THIS is also very well known, and therefore I shall not trouble the reader with any description thereof.

Place.] It groweth naturally in dry and marshy ground; but if it be sown in gardens, it there prospereth very well.

Time.] It abideth green all the winter, and seedeth in August.

Government and Virtues.] It is an herb of Mercury. Smallage is hotter, drier, and much more medicinal than parsley, for it much more openeth obstructions of the liver and spleen, rarefieth thick phlegm, and cleanseth it and the blood withal. It provoketh urine and women's courses, and is singular good against the yellow jaundice, tertian and quartan agues, if the juice thereof be taken, but especially made into a syrup. The juice also put to honey of roses, and barley-water, is very good to gargle the mouth and throat of those that have sores and ulcers in them, and will quickly heal them. The same lotion also cleanseth and healeth all other foul ulcers and cankers elsewhere, if they be washed therewith. The seed is especially

used to break and expel wind, to kill worms and help a stinking breath. The root is effectual to all the purposes aforesaid, and is held to be stronger in operation than the herb, but especially to open obstructions, and to rid away any ague, if the juice thereof be taken in wine, or the decoction thereof in wine be used.

SOPEWORT, OR BRUISEWORT.

Descript.] **T**HE root creepeth under ground far and near, with many joints therein, of a brown colour on the outside and yellowish within, shooting forth in divers places weak round stalks, full of joints, set with two leaves a-piece at every one of them on the contrary side, which are ribbed somewhat like unto plantain, and fashioned like the common field white campion leaves, seldom having any branches from the sides of the stalks, but set with flowers at the top, standing in long husks like the wild campions, made of five leaves a-piece, round at the ends, and dented in the middle, of a rose colour, almost white, sometimes deeper, sometimes paler; of a reasonable scent.

Place.] It groweth wild in many low and wet grounds of this land, by brooks and the sides of running waters.

Time.] It flowereth usually in July, and so continueth all August, and part of September, before they be quite spent.

Temperature and Virtues.] Venus owns it. The country people in divers places do use to bruise the leaves of sopewort, and lay it to their fingers, hands or legs, when they are cut, to heal them up again. Some make great boast thereof, that it is diuretical to provoke urine, and thereby to expel gravel and the stone in the reins or kidneys, and do also account it singular good to void hydropical waters; and they no less extol it to perform an absolute cure in the French pox, more than either sarsaparilla, guiacum, or china can do; which, how true it is, I leave others to judge.

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Soap Wort

Wood Sorrel

SORREL.

OUR ordinary sorrel, which grows in gardens, and also wild in the fields, is so well known, that it needeth no description.

Government and Virtues.] It is under the dominion of Venus. Sorrel is prevalent in all hot diseases, to cool any inflammation and heat of blood in agues, pestilential or choleric, or sickness and fainting, arising from heat, and to refresh the over-spent spirits with the violence of furious or fiery fits of agues; to quench thirst, and procure an appetite in fainting or decaying stomachs: For it resisteth the putrefaction of the blood, killeth worms, and is a cordial to the heart, which the seed doth more effectually, being more drying and binding, and thereby stayeth the hot fluxes of women's courses, or of humours in the bloody flux, or flux of the stomach. The root also in a decoction, or in powder, is effectual for all the said purposes. Both roots and seeds, as well as the herb, are held powerful to resist the poison of the scorpion. The decoction of the roots is taken to help the jaundice, and to expel the gravel and the stone in the reins or kidneys. The decoction of the flowers made with wine and drank, helpeth the black jaundice, as also the inward ulcers of the body and bowels. A syrup made with the juice of sorrel and fumitory, is a sovereign help to kill those sharp humours that cause the itch. The juice thereof, with a little vinegar, serveth well to be used outwardly for the same cause, and is also profitable for tetters, ring-worms, &c. It helpeth also to discuss the kernels in the throat; and the juice gargled in the mouth, helpeth the sores therein. The leaves wrapt in a colewort leaf and roasted in the embers, and applied to a hard imposthume, botch, boil, or plague sore, doth both ripen and break it. The distilled water of the herb is of much good use for all the purposes aforesaid.

WOOD SORREL.

Descript.] **T**HIS groweth upon the ground, having a number of leaves coming from the root made of three leaves, like a trefoil, but broad at the ends, and cut in the middle, of a yellowish green colour, every one standing on a long foot-stalk, which at their first coming up are close folded together to the stalk, but opening themselves afterwards, and are of a fine sour relish, and yielding a juice which will turn red when it is clarified, and maketh a most dainty clear syrup. Among these leaves rise up divers slender, weak foot-stalks, with every one of them a flower at the top, consisting of five small pointed leaves, star-fashion, of a whitish colour, in most places, and in some dashed over with a small show of blueish, on the backside only. After the flowers are past, follow small round heads, with small yellowish seed in them. The roots are nothing but small strings fastened to the end of a small long piece; all of them being of a yellowish colour.

Place.] It groweth in many places of our land, in woods and wood-sides, where they be moist and shadowed, and in other places not too much open to the sun.

Time.] It flowereth in April and May.

Government and Virtues.] Venus owns it. Wood-sorrel serveth to all the purposes that the other sorrels do, and is more effectual in hindering putrefaction of blood, and ulcers in the mouth and body, and to quench thirst, to strengthen a weak stomach, to procure an appetite, to stay vomiting, and very excellent in any contagious sickness or pestilential fevers. The syrup made of the juice, is effectual in all the cases aforesaid, and so is the distilled water of the herb. Spunges or linen cloths wet in the juice, and applied outwardly to any hot swellings or inflammations, doth much cool and help them. The same juice taken and gargled in the mouth, and after it is spit forth, taken afresh, doth wonderfully help a foul stinking canker or ulcers therein. It is singularly good to heal wounds, or to stay the bleeding of thrusts or stabs in the body.

SOW THISTLE.

SOW thistles are generally so well known, that they need no description.

Place.] They grow in gardens and manured grounds, sometimes by old walls, path-sides of fields and high-ways.

Government and Virtues.] This and the former are under the influence of Venus. Sow thistles are cooling, and somewhat binding, and are very fit to cool a hot stomach, and ease the pains thereof. The herb boiled in wine, is very helpful to stay the dissolution of the stomach, and the milk that is taken from the stalks when they are broken, given in drink, is beneficial to those that are short-winded, and have a wheezing. Pliny saith, That it hath caused the gravel and stone to be voided by urine, and the eating thereof helpeth a stinking breath. The decoction of the leaves and stalks causeth abundance of milk in nurses, and their children to be well-coloured. The juice or distilled water is good for all hot inflammations, wheals, eruptions or heat in the skin, and itching of the hæmorrhoids. The juice boiled or thoroughly heated in a little oil of bitter almonds in the peel of a pomegranate, and dropped into the ears, is a sure remedy for deafness, singings, &c. Three spoonfuls of the juice taken warmed in white wine, and some wine put thereto, causeth women in travail to have so easy and speedy delivery, that they may be able to walk presently after. It is wonderfully good for women to wash their faces with, to clear the skin, and give it a lustre.

SOUTHERN-WOOD.

SOUTHERN-wood is so well known to be an ordinary inhabitant in our gardens, that I shall not need to trouble you with any description thereof.

Time.] It flowereth for the most part in July and August.

Government and Virtues.] It is a gallant Mercurial plant, worthy of more esteem than it hath. Dioscorides saith, that
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the seed bruised, heated in warm water and drank, helpeth those that are bursten, or troubled with cramps or convulsions of the sinews, the sciatica, or difficulty of making water, and bringing down women's courses. The same taken in wine is an antidote, or counter poison against all deadly poison, and driveth away serpents and other venomous creatures; as also the smell of the herb, being burnt, doth the same. The oil thereof anointed on the back bone before the fits of agues come, taketh them away. It taketh away inflammations in the eyes, if it be put with some part of a roasted quince, and boiled with a few crumbs of bread and applied. Boiled with barley-meal, it taketh away pimples, pushes or wheals that arise in the face, or other parts of the body. The seed as well as the dried herb, is often given to kill the worms in children: The herb bruised and laid to, helpeth to draw forth splinters and thorns out of the flesh. The ashes thereof drieth up and healeth old ulcers, that are without inflammation, although by the sharpness thereof it biteth sore, and putteth them to sore pains; as also the sores in the privy parts of man or woman. The ashes mingled with old salad oil, helpeth those whose hair is fallen, and are bald, causing the hair to grow again either on the head or beard. Darentes saith, that the oil made of southern-wood, and put among the ointments that are used against the French disease, is very effectual, and likewise killeth lice in the head. The distilled water of the herb is said to help them much that are troubled with the stone, as also for the diseases of the spleen and mother. The Germans commend it for a singular wound herb, and therefore, call it stabwort. It is held by all writers, ancient and modern, to be more offensive to the stomach than wormwood.

SPIGNELE.

Descript.] **T**HE roots of common spignel do spread much and deep in the ground, many strings or branches growing from one head, which is hairy at the top, of a blackish brown colour

on the outside, and white within, smelling well, and of an aromatical taste, from whence rise sundry long stalks of most fine cut leaves like hair, smaller than dill, set thick on both sides of the stalks, and of a good scent. Among these leaves rise up round stiff stalks, with a few joints and leaves on them, and at the tops an umbel of fine pure white flowers; and at the edges whereof sometimes will be seen a shew of the reddish blueish colour, especially before they be full blown, and are succeeded by small, somewhat round seeds, bigger than the ordinary fennel, and of a brown colour, divided into two parts, and crusted on the back, as most of the umbelliferous seeds are.

Place.] It groweth wild in Lancashire, Yorkshire, and other northern counties, and is also planted in gardens.

Government and Virtues.] It is an herb of Venus. Galen saith, The roots of spignel are available to provoke urine, and women's courses; but if too much thereof be taken, it causeth head-ach. The roots boiled in wine or water, and drank, helpeth the strangury and stoppings of the urine, the wind, swellings and pains in the stomach, pains of the mother, and all joint-achs. If the powder of the root be mixed with honey, and the same taken as a licking medicine, it breaketh tough phlegm, and drieth up the rheum that falleth on the lungs. The roots are accounted very effectual against the stinging or biting of any venomous creature, and is one of the ingredients in Mithridate and other antidotes of the same.

SPLEENWORT, OR CETERACH.

Descript.] **T**HE smooth spleenwort, from a black, thready and bushy root, sendeth forth many long single leaves, cut in on both sides into round dents almost to the middle, which is not so hard as that of polypody, each division being not always set opposite unto the other, but between each smooth, and of a light green on the upper side, and a dark yellowish roughness on the back, folding or rolling itself inward at the first springing up.

Place.] It groweth as well upon stone walls, as moist and shadowy places, about Bristol, and other the west parts plentifully; as also on Framlingham Castle, on Beaconsfield church in Berkshire, at Stroude in Kent, and elsewhere, and abideth green all the winter.

Government and Virtues.] Saturn owns it. It is generally used against infirmities of the spleen; it helpeth the strangury, and wasteth the stone in the bladder, and is good against the yellow jaundice, and the hiccough; but the juice of it in women hindereth conception. Matthiolus saith, that if a dram of the dust that is on the backside of the leaves be mixed with half a dram of amber in powder, and taken with the juice of purslain or plantain, it helps the running of the reins speedily, and that the herb and root being boiled and taken, helpeth all melancholy diseases, and those especially that arise from the French disease. Camerarius saith, That the distilled water thereof being drank, is very effectual against the stone in the reins and bladder; and that the lee that is made of the ashes thereof being drank for some time together, helpeth splenetic persons. It is used in outward remedies for the same purpose.

STAR THISTLE.

Descript.] **A** common star thistle hath divers narrow leaves lying next the ground, cut on the edges somewhat deeply into many parts, soft or a little woolly, all over green, among which rise up divers weak stalks parted into many branches, all lying down to the ground, that it seemeth a pretty bush, set with divers the like divided leaves up to the tops, where severally do stand small whitish green heads, set with sharp white pricks (no part of the plant else being prickly) which are somewhat yellowish; out of the middle whereof riseth the flowers, composed of many small reddish purple threads; and in the heads, after the flowers are past, come small whitish round seed, lying down as others do. The root is small, long and woody, perishing every year, and rising again of their own sowing.

Star Thistle

Tansy

Place.] It groweth wild in the fields about London in many places, as at Mile-End green, in Finsbury fields, beyond the windmills, and many other places.

Time.] It flowereth early, and seedeth in July, and sometimes in August.

Government and Virtues.] This, as almost all thistles are, is under Mars. The seed of this star thistle made into powder, and drank in wine, provoketh urine, and helpeth to break the stone, and driveth it forth. The root in powder, and given in wine and drank, is good against the plague and pestilence; and drank in the morning fasting for some time together, it is very profitable for a fistula, in any part of the body. Babtista Sardas doth much commend the distilled water hereof, being drank, to help the French disease, to open the obstructions of the liver, and cleanse the blood from corrupted humours, and is profitable against the quotidian or tertian ague.

STRAWBERRIES.

THESE are so well known through this land, that they need no description.

Time.] They flower in May ordinarily, and the fruit is ripe shortly after.

Government and Virtues.] Venus owns the herb. Strawberries, when they are green, are cool and dry; but when they are ripe they are cool and moist: the berries are excellent good to cool the liver, the blood, and the spleen, or an hot choleric stomach; to refresh and comfort the fainting spirits, and quench thirst: They are good also for other inflammations; yet it is not amiss to refrain from them in a fever, lest by their putrifying in the stomach they increase the fits. The leaves and roots boiled in wine and water, and drank, do likewise cool the liver and blood, and assuage all inflammations in the reins and bladder, provoke urine, and allay the heat and sharpness thereof. The same also being drank stayeth the bloody flux and women's courses, and help the swellings of the spleen. The water of the berries carefully distilled, is a sovereign remedy and cordial

in the panting and beating of the heart, and is good for the yellow jaundice. The juice dropped into foul ulcers, or they washed therewith, or the decoction of the herb and root, doth wonderfully cleanse and help to cure them. Lotions and gargles for sore mouths, or ulcers therein, or in the privy parts or elsewhere, are made with the leaves and roots thereof; which is also good to fasten loose teeth, and to heal spongy foul gums. It helpeth also to stay catarrhs, or defluxions of rheum in the mouth, throat, teeth, or eyes. The juice or water is singular good for hot and red inflamed eyes, if dropped into them, or they bathed therewith. It is also of excellent property for all pushes, wheals, and other breakings forth of hot and sharp humours in the face and hands, and other parts of the body, to bathe them therewith, and to take away any redness in the face, or spots, or other deformities in the skin, and to make it clear and smooth. Some use this medicine: Take so many strawberries as you shall think fitting, and put them into a distillatory, or body of glass fit for them, which being well closed, set it in a bed of horse dung for your use. It is an excellent water for hot inflamed eyes, and to take away a film or skin that beginneth to grow over them, and for such other defects in them as may be helped by any outward medicine.

SUCCORY.

Descript.] **T**HE garden succory hath longer and narrower leaves than the endive, and more cut in or torn on the edges, and the root abideth many years. It beareth also blue flowers like endive, and the seed is hardly distinguished from the seed of the smooth or ordinary endive.

The wild succory hath divers long leaves lying on the ground, very much cut in or torn on the edges, on both sides, even to the middle rib, ending in a point: sometimes it hath a rib down to the middle of the leaves, from among which riseth up a hard round, woody stalk, spreading into many branches, set with smaller and lesser divided leaves on them up to the tops, where stand the flowers, which are like the garden kind, and the seed

is also (only take notice that the flowers of the garden kind are gone in on a sunny day, they being so cold, that they are not able to endure the beams of the sun, and therefore more delight in the shade) the root is white, but more hard and woody than the garden kind. The whole plant is exceeding bitter.

Place.] This groweth in many places of our land in waste untilled and barren fields. The other only in gardens.

Government and Virtues.] It is an herb of Jupiter. Garden succory, as it is more dry and less cold than endive, so it openeth more. An handful of the leaves, or roots boiled in wine or water, and a draught thereof drank fasting, driveth forth cholerick and phlegmatic humours, openeth obstructions of the liver, gall, and spleen; helpeth the yellow jaundice, the heat of the reins, and of the urine; the dropsy also; and those that have an evil disposition in their bodies, by reason of long sickness, evil diet, &c. which the Greeks call cachexia. A decoction thereof made with wine, and drank, is very effectual against long lingering agues; and a dram of the seed in powder, drank in wine, before the fit of the ague, helpeth to drive it away. The distilled water of the herb and flowers (if you can take them in time) hath the like properties, and is especial good for hot stomachs, and in agues, either pestilential or of long continuance; for swooning and passions of the heart, for the heat and head-ach in children, and for the blood and liver. The said water, or the juice, or the bruised leaves applied outwardly, allay swellings, inflammations, St. Anthony's fire, pushes, wheals and pimples, especially used with a little vinegar; as also to wash pestiferous sores. The said water is very effectual for sore eyes that are inflamed with redness, and for nurses' breasts that are pained by the abundance of milk.

The wild succory, as it is more bitter, so it is more strengthening to the stomach and liver.

STONE-CROP, PRICK-MADAM, OR SMALL HOUSE-LEEK.

Descript.] **I**T groweth with divers trailing branches upon

the ground, set with many thick, flat, roundish, whitish green leaves, pointed at the ends. The flowers stand many of them together, somewhat loosely. The roots are small, and run creeping under ground.

Place.] It groweth upon the stone walls and mud walls, upon the tiles of houses, and pent-houses, and amongst rubbish, and in other gravelly places.

Time.] It flowereth in June and July, and the leaves are green all the winter.

Government and Virtues.] It is under the dominion of the Moon, cold in quality, and something binding, and therefore very good to stay defluxions, especially such as fall upon the eyes. It stops bleeding, both inward and outward, helps cankers, and all fretting sores and ulcers; It abates the heat of choler, thereby preventing diseases arising from choleric humours. It expels poison much, resisteth pestilential fevers, being exceeding good also for tertian agues: You may drink the decoction of it, if you please, for all the foregoing infirmities. It is so harmless an herb, you can scarce use it amiss: Being bruised and applied to the place, it helps the king's evil, and any other knots or kernels in the flesh; as also the piles.

ENGLISH TOBACCO.

Descript.] **T**HIS riseth up with a round thick stalk, about two feet high, whereon do grow thick, flat green leaves, nothing so large as the other Indian kind, somewhat round pointed also, and nothing dented about the edges. The stalk branches forth, and beareth at the tops divers flowers set on great husks like the other, but nothing so large; scarce standing above the brims of the husks, round pointed also, and of a greenish yellow colour. The seed that followeth is not so bright, but larger, contained in the like great heads. The roots are neither so great nor woody; it perisheth every year with the hard frosts in winter, but riseth generally of its own sowing.

Place.] This came from some part of Brazil, as it is thought, and is more familiar in our country than any of the

other sorts; early giving ripe seed, which the others seldom do.

Time.] It flowereth from June, sometimes to the end of August, or later, and the seed ripeneth in the mean time.

Government and Virtues.] It is a Martial plant. It is found by good experience to be available to expectorate tough phlegm from the stomach, chest and lungs. The juice thereof made into a syrup, or the distilled water of the herb drank with some sugar, or without, if you will, or the smoke taken by a pipe, as is usual, but fasting, helpeth to expel worms in the stomach, and belly, and to ease the pains in the head, or megrim, and the griping pains in the bowels. It is profitable for those that are troubled with the stone in the kidneys, both to ease the pains by provoking urine, and also to expel gravel and the stone engendered therein, and hath been found very effectual to expel windiness, and other humours, which cause the strangling of the mother. The seed hereof is very effectual to expel the tooth ach, and the ashes of the burnt herb to cleanse the gums, and make the teeth white. The herb bruised and applied to the place grieved with the king's evil, helpeth it in nine or ten days effectually. Monardus saith, it is a counter poison against the biting of any venomous creature, the herb also being outwardly applied to the hurt place. The distilled water is often given with some sugar before the fit of an ague, to lessen it, and take it away in three or four times using. If the distilled fæces of the herb, having been bruised before the distillation, and not distilled dry, be set in warm dung for fourteen days, and afterwards be hung up in a bag in a wine cellar, the liquor that distilleth therefrom is singularly good to use for cramps, achs, the gout and sciatica, and to heal itches, scabs, and running ulcers, cankers, and all foul sores whatsoever. The juice is also good for all the said griefs, and likewise to kill lice in children's heads. The green herb bruised and applied to any green wounds, cureth any fresh wound or cut whatsoever; and the juice put into old sores, both cleanseth and healeth them. There is also made hereof a singular good salve to help imposthumes, hard tumours, and other swellings by blows and falls.

THE TAMARISK TREE.

IT is so well known in the places where it grows, that it needeth no description.

Time.] It flowereth about the end of May, or in June, and the seed is ripe and blown away in the beginning of September.

Government and Virtues.] A gallant Saturnine herb it is. The root, leaves, young branches, or bark boiled in wine, and drank, stays the bleeding of the hæmorrhoidal veins, the spitting of blood, the too abounding of women's courses, the jaundice, the cholic, and the biting of all venomous serpents, except the asp: and outwardly applied, is very powerful against the hardness of the spleen, and the tooth-ach, pains in the ears, and red and watering eyes. The decoction, with some honey put thereto is good to stay gangrenes and fretting ulcers, and to wash those that are subject to nits and lice. Alpinus and Veslingus affirm, that the Egyptians do with good success use the wood of it to cure the French disease, as others do with *lignum vitæ* or *guaiacum*; and give it also to those who have the leprosy, scabs, ulcers, or the like. Its ashes doth quickly heal blisters raised by burnings or scaldings. It helps the leprosy, arising from the hardness of the spleen, and therefore to drink out of cups made of the wood is good for splenetic persons. It is also helpful for melancholy, and the black jaundice that ariseth thereof.

GARDEN TANSY.

GARDEN tansy is so well known that it needeth no description.

Time.] It flowereth in June and July.

Government and Virtues.] Dame Venus was minded to pleasure women with child by this herb, for there grows not an herb fitter for their use than this is; it is just as tho' it were cut out for the purpose. This herb bruised and applied to the navel,

stays miscarriages; I know no herb like it for that use: Boiled in ordinary beer, and the decoction drank, doth the like; and if her womb be not as she would have it, this decoction will make it so. Let those women that desire children love this herb, it is their best companion, their husbands excepted. Also it consumes the phlegmatic humours, the cold and moist constitution of winter most usually affects the body of man with, and that was the first reason of eating tansies in the spring. At last the world being over-run with popery, a monster called Superstition perks up his head, and, as a judgment of God, obscures the bright beams of knowledge by his dismal looks; (physicians seeing the pope and his imps selfish, they began to do so too) and now forsooth tansies must be eaten only on Palm and Easter Sundays, and their neighbour days: At last superstition being too hot to hold, and the selfishness of physicians walking in the clouds; after the friars and monks had made the people ignorant, the superstition of the time was found out, by the virtue of the herb hidden, and now it is almost, if not altogether, left off. Surely our physicians are beholden to none so much as they are to monks and friars: for want of eating this herb in spring, maketh people sickly in summer; and that makes work for the physician. If it be against any man or woman's conscience to eat tansy in the spring, I am as unwilling to burthen their conscience, as I am that they should burthen mine; they may boil it in wine and drink the decoction, it will work the same effect. The decoction of the common tansy, or the juice drank in wine, is a singular remedy for all the griefs that come by stopping of the urine, and helpeth the strangury and those that have weak reins and kidneys. It is also very profitable to dissolve and expel wind in the stomach, belly, or bowels, to procure women's courses, and expel windiness in the matrix, if it be bruised and often smelled unto, as also applied to the lower parts of the belly. It is also very profitable for such women as are given to miscarry in child bearing, to cause them to go out their full time; it is used also against the stone in the reins, especially in men. The herb fried with eggs (as it is the custom in the spring-time)

which is called a tansy, helpeth to digest and carry downward those bad humours that trouble the stomach. The seed is very profitably given to children for the worms, and the juice in drink is as effectual. Being boiled in oil, it is good for the sinews shrunk by cramps, or pained with colds, if thereto applied.

WILD TANSY, OR SILVER WEED.

THIS is also so well known, that it needeth no description.

Place.] It groweth in every place.

Time.] It flowereth in June and July.

Government and Virtues.] Now Dame Venus hath fitted women with two herbs of one name, the one to help conception, and the other to maintain beauty, and what more can be expected of her? What now remains for you, but to love your husbands, and not to be wanting to your poor neighbours? Wild tansy stayeth the lask, and all the fluxes of blood in men and women, which some say it will do, if the green herb be worn in the shoes, so it be next the skin; and it is true enough, that it will stop the terms, if worn so, and the whites too, for aught I know. It stayeth also spitting or vomiting of blood. The powder of the herb taken in some of the undistilled water, helpeth the whites in women, but more especially if a little coral and ivory in powder be put to it. It is also recommended to help children that are bursten, and have a rupture, being boiled in water and salt. Being boiled in water and drank, it easeth the griping pains of the bowels, and is good for the sciatica and joint-achs. The same boiled in vinegar, with honey and alum, and gargled in the mouth, easeth the pains of the tooth-ach, fasteneth loose teeth, helpeth the gums that are sore, and setteth the palate of the mouth in its place, when it is fallen down. It cleanseth and healeth ulcers in the mouth, or secret parts, and is very good for inward wounds, and to close the lips of green wounds, and to heal old, moist, and corrupt running sores in the legs or elsewhere. Being bruised and applied

to the soles of the feet and hand wrists, it wonderfully cooleth the hot fits of agues, be they never so violent. The distilled water cleanseth the skin of all discolourings therein, as morpew, sun-burnings, &c. as also pimples, freckles, and the like; and dropped into the eyes, or cloths wet therein and applied, taketh away the heat and inflammations in them.

THISTLES.

OF these are many kinds growing here in England, which are so well known, that they need no description: Their difference is easily known by the places where they grow, viz.

Place.] Some grow in fields, some in meadows, and some among the corn; others on heaths, greens, and waste grounds in many places.

Time.] They flower in July and August, and their seed is ripe quickly after.

Government and Virtues.] Surely Mars rules it, it is such a prickly business. All these thistles are good to provoke urine, and to mend the stinking smell thereof; as also the rank smell of the arm-pits, or the whole body, being boiled in wine and drank; and are said also to help a stinking breath, and to strengthen the stomach. Pliny saith, that the juice bathed on the place that wanteth hair, it being fallen off, will cause it to grow again speedily.

THE MELANCHOLY THISTLE.

Descript.] **I**T riseth up with tender single hoary green stalks, bearing thereon four or five green leaves, dented about the edges; the points thereof are little or nothing prickly, and at the top usually but one head, yet sometimes from the bosom of the uppermost leaves there shooteth forth another small head, scaly and prickly, with many reddish thrums or threads in the middle, which being gathered fresh, will keep the colour a long time, and fadeth not from the stalk a long time, while it per-

fects the seed, which is of a mean bigness, lying in the down. The root hath many strings fastened to the head, or upper part, which is blackish, and perisheth not.

There is another sort little differing from the former, but that the leaves are more green above, and more hoary underneath, and the stalk being about two feet high beareth but one scaly head, with threads and seeds as the former.

Place.] They grow in many moist meadows of this land, as well in the southern, as in the northern parts.

Time.] They flower about July or August, and their seed ripeneth quickly after.

Government and Virtues.] It is under Capricorn, and therefore under both Saturn and Mars, one rids melancholy by sympathy, the other by antipathy. Their virtues are but few, but those not to be despised; for the decoction of the thistle in wine being drank, expels superfluous melancholy out of the body, and makes a man as merry as a cricket; superfluous melancholy causeth care, fear, sadness, despair, envy, and many evils more besides; but religion teaches to wait upon God's providence, and cast our care upon him who careth for us. What a fine thing were it if men and women could live so! And yet seven years care and fear makes a man never the wiser, nor a farthing richer. Dioscorides saith, the root borne about one doth the like, and removes all diseases of melancholy. Modern writers laugh at him; *Let them laugh that win*, my opinion is, that it is the best remedy against all melancholy diseases that grows; they that please may use it.

OUR LADY'S THISTLE.

Descript.] **O**UR lady's thistle hath divers very large and broad leaves lying on the ground cut in, and as it were crumpled, but somewhat hairy on the edges, of a white green shining colour, wherein are many lines and streaks of a milk white colour, running all over, and set with many sharp and stiff prickles all about, among which riseth up one or more strong, round

and prickly stalks, set full of the leaves up to the top, where at the end of every branch, comes forth a great prickly thistle like a head, strongly armed with prickles, and with bright purple thrums rising out of the middle; after they are past the seed groweth in the said heads, lying in soft white down, which is somewhat flattish in the ground, and many strings and fibres fastened thereunto. All the whole plant is bitter in taste.

Place.] It is frequent on the banks of almost every ditch.

Time.] It flowereth and seedeth in June, July, and August.

Government and Virtues.] Our lady's thistle is under Jupiter, and thought to be as effectual as cardous benidictus for agues, and to prevent and cure the infection of the plague: as also to open the obstructions of the liver and spleen, and thereby is good against the jaundice. It provoketh urine, breaketh and expelleth the stone, and is good for the dropsy. It is effectual also for the pains in the sides, and many other inward pains and gripings. The seed and distilled water are held powerful to all the purposes aforesaid, and besides, it is often applied outwardly with cloths or sponges to the region of the heart, against swoonings and the passions of it. It cleanseth the blood exceedingly: and in spring, if you please to boil the tender plant (but cut off the prickles, unless you have a mind to choak yourself) it will change your blood as the season changeth, and that is the way to be safe.

THE WOOLLEN, OR COTTON THISTLE.

Descript.] **T**HIS hath many large leaves lying upon the ground, somewhat cut in and as it were crumpled on the edges, of a green colour on the upper side, but covered over with a long hairy wool or cotton down, set with most sharp and cruel pricks; from the middle of whose heads of flowers come forth many purplish crimson threads, and sometimes white, although but seldom. The seed that follows in those white downy heads, is somewhat large and round, resembling the seed of lady's this-

tle, but paler; the root is great and thick, spreading much, yet usually dieth after seed time.

Place.] It groweth on divers ditch-banks, and in the corn-fields, and high-ways, generally throughout the land, and is often growing in gardens.

Government and Virtues.] It is a plant of Mars. Dioscorides and Pliny write, That the leaves and roots hereof taken in drink, help those that have a crick in their neck, that they cannot turn it, unless they turn their whole body. Galen saith, that the roots and leaves hereof are good for such persons as have their bodies drawn together by some spasm or convulsion, or other infirmities; as the rickets (or as the college of physicians would have it, rachites, about which name they have quarrelled sufficiently) in children, being a disease that hindereth their growth, by binding their nerves, ligaments, and whole structure of their body.

THE FULLER'S THISTLE, OR TEASLE.

IT is so well known, that it needs no description, being used with the cloth workers.

The wild teasle is in all things like the former, but that the prickles are small, soft, and upright, not hooked or stiff, and the flowers of this are of a fine blueish, or pale carnation colour, but that of the manured kind, whitish.

Place.] The first groweth, being sown in gardens or fields for the use of clothworkers; The other near ditches and rills of water in many places of this land.

Time.] They flower in July, and are ripe in the end of August.

Government and Virtues.] It is an herb of Venus. Dioscorides saith, that the root bruised and boiled in wine, till it be thick, and kept in a brazen vessel, and after spread as a salve, and applied to the fundament, doth heal the cleft thereof, cankers and fistulas therein, also taketh away warts and wens. The juice of the leaves dropped into the ears, killeth worms in them

Tea-rose

Milk Thistle

The English Physician Enlarged.

The distilled water of the leaves dropped into the eyes, taketh away redness and mists in them that hinder the sight; and is often used by women to preserve their beauty, and to take away redness and inflammations, and all other heats or discolourings.

TREACLE MUSTARD.

Descript.] **I**T riseth with a hard round stalk, about a foot high, parted into some branches, having divers soft green leaves long and narrow, set thereon, waved, but not cut into the edges, broadest towards the ends, somewhat round pointed; the flowers are white that grow at the tops of the branches, spike fashion, one above another; after which come round pouches, parted in the middle with a furrow, having one blackish brown seed on either side, somewhat sharp in taste, and smelling of garlic, especially in the fields where it is natural, but not so much in gardens; The roots are small and thready, perishing every year.

Give me leave here to add mithridate mustard, altho' it may seem more properly by the name to belong to M, in the alphabet.

MITHRIDATE MUSTARD.

Descript.] **T**HIS groweth higher than the former, spreading more and higher branches, whose leaves are smaller and narrower, sometimes unevenly dented about the edges. The flowers are small and white, growing on long branches, with much smaller and rounder vessels after them, and parted in the same manner, having smaller brown seeds than the former, and much sharper in taste. The root perisheth after seed time, but abideth the first winter after springing.

Place.] They grow in sundry places in this land, as half a mile from Hatfield, by the river side, under a hedge as you go to Hatfield, and in the street of Peckham on Surry side.

Time.] They flower and seed from May to August.

Government and Virtues.] Both of them are herbs of Mars. The mustards are said to purge the body both upwards and

downwards, and procureth women's courses so abundantly, that it suffocateth the birth. It breaketh inward imposthumes, being taken inwardly; and used in clysters, helpeth the sciatica. The seed applied, doth the same. It is an especial ingredient unto mithridate and treacle, being of itself an antidote resisting poison, venom, and putrefaction. It is also available in many cases for which the common mustard is used, but somewhat weaker.

THE BLACK THORN, OR SLOE-BUSH.

IT is so well known, that it needeth no description.

Place.] It groweth in every county, in the hedges and borders of fields.

Time.] It flowereth in April, and sometimes in March, but the fruit ripeneth after all other plums whatsoever, and is not fit to be eaten until the autumn frosts mellow them.

Government and Virtues.] All the parts of the sloe-bush are binding, cooling, and dry, and all effectual to stay bleeding at the nose and mouth, or any other place; the lask of the belly or stomach, or the bloody flux, the too much abounding of women's courses, and helpeth to ease the pains of the sides, bowels, and guts, that come by over-much scouring, to drink the decoction of the bark of the roots, or more usually the decoction of the berries, either fresh or dried. The conserve also is of very much use, and more familiarly taken for the purpose aforesaid. But the distilled water of the flowers first steeped in sack for a night, and drawn therefrom by the heat of balneuin anglico, a bath, is a most certain remedy, tried and approved, to ease all manner of gnawings in the stomach, the sides and bowels, or any griping pains in any of them, to drink a small quantity when the extremity of pain is upon them. The leaves also are good to make lotions to gargle and wash the mouth and throat, wherein are swellings, sores, or kernels; and to stay the defluations of rheum to the eyes, or other parts: as also to cool the heat and inflammations of them, and ease hot pains of the head, to bathe the forehead and temples therewith. The

simple distilled water of the flowers is very effectual for the said purposes, and the condensate juice of the sloes. The distilled water of the green berries is used also for the said effects.

THOROUGH WAX, OR THOROUGH LEAF.

Descript.] **C**OMMON thorough-wax sendeth forth a straight round stalk, two feet high, or better, whose lower leaves being of a blueish colour, are smaller and narrower than those up higher, and stand close thereto, not compassing it; but that as they grow higher, they do more encompass the stalks, until it wholly pass through them, branching toward the top into many parts, where the leaves grow smaller again, every one standing singly, and never two at a joint. The flowers are small and yellow, standing in tufts at the heads of the branches, where afterwards grow the seed, being blackish, many, thick thrust together. The root is small, long and woody, perishing every year, after seed-time, and rising again plentifully of its own sowing.

Place.] It is found growing in many corn-fields and pasture-grounds in this land.

Time.] It flowereth in July, and the seed is ripe in August.

Temperature and Virtues.] Both this and the former are under the influence of Saturn. Thorough-wax is of singular good use for all sorts of bruises and wounds either inward or outward; and old ulcers and sores likewise, if the decoction of the herb with water and wine be drank, and the place washed therewith, or the juice of the green herb bruised, or boiled, either by itself, or with other herbs, in oil or hog's grease, to be made into an ointment to serve all the year. The decoction of the herb, or powder of the dried herb, taken inwardly, and the same, or the leaves bruised and applied outwardly, is singular good for all ruptures and burstings, especially in children before they be too old. Being applied with a little flour and wax to children's navels that stick forth, it helpeth them.

THYME.

IT is in vain to describe an herb so commonly known.

Government and Virtues.] It is a noble strengthener of the lungs, as notable a one as grows; neither is there scarce a better remedy growing for that disease in children which they commonly call the Chin-cough, than it is. It purgeth the body of phlegm, and is an excellent remedy for shortness of breath. It kills worms in the belly, and being a notable herb of Venus, provokes the terms, gives safe and speedy delivery to women in travail, and brings away the after-birth. It is so harmless you need not fear the use of it. An ointment made of it takes away hot swellings and warts, helps the sciatica and dulness of sight, and takes away pains and hardness of the spleen; 'Tis excellent for those that are troubled with the gout; as also to anoint the cods that are swelled. It easeth pains in the loins and hips. The herb taken any way inwardly, comforts the stomach much, and expels wind.

WILD THYME, OR MOTHER OF THYME.

WILD thyme also is so well known, that it needeth no description.

Place.] It may be found commonly on commons, and other barren places throughout the nation.

Government and Virtues.] It is under the dominion of Venus, and under the sign Aries, and therefore chiefly appropriated to the head. It provoketh urine and the terms, and easeth the griping pain of the belly, cramps, ruptures, and inflammation of the liver. If you make a vinegar of the herb, as vinegar of roses is made (you may find out the way in my translation of the London Dispensatory) and anoint the head with it, it presently stops the pains thereof. It is excellent good to be given either in phrenzy or lethargy, although they are two contrary diseases: It helps spitting and pissing of blood, coughing,

and vomiting; it comforts and strengthens the head, stomach, reins, and womb, expels wind, and breaks the stone.

TORMENTIL OR SEPTFOIL.

Descript.] **T**HIS hath reddish, slender, weak branches rising from the root, lying on the ground, rather leaning than standing upright, with many short leaves that stand closer to the stalks than cinquefoil (to which this is very like) with the foot-stalk compassing the branches in several places; but those that grow to the ground are set upon long foot-stalks, each whereof are like the leaves of cinquefoil, but somewhat longer and less dented about the edges, many of them divided but into five leaves, but most of them into seven, whence it is also called septfoil: yet some may have six, and some eight, according to the fertility of the soil. At the tops of the branches stand divers small yellow flowers, consisting of five leaves, like those of cinquefoil, but smaller. The root is smaller than bistort, somewhat thick, but blacker without, and not so red within, yet sometimes a little crooked, having blackish fibres thereat.

Place.] It groweth as well in woods and shadowy places, as in the open champain country, about the borders of fields in many places of this land, and almost in every broom field in Essex.

Time.] It flowereth all the summer long.

Government and Virtues.] This is a gallant herb of the Sun. Tormentil is most excellent to stay all kinds of fluxes of blood or humours in man or woman, whether at nose, mouth, or belly. The juice of the herb and root, or the decoction thereof, taken with some Venice treacle, and the person laid to sweat, expels any venom or poison, or the plague, fever, or other contagious diseases, as pox, measles, &c. for it is an ingredient in all antidotes or counter poisons. Andreas Valesius is of opinion, that the decoction of this root is no less effectual to cure the French pox than guaiacum of China; and it is not unlikely, be-

cause it so mightily resisteth putrefaction. The root taken inwardly is most effectual to help any flux of the belly, stomach, spleen, or blood; and the juice wonderfully opens obstructions of the liver and lungs, and thereby helpeth the yellow jaundice. The powder or decoction drank, or to sit thereon as a bath, is an assured remedy against abortion in women, if it proceed from the over flexibility or weakness of the inward retentive faculty; as also a plaister made therewith, and vinegar applied to the reins of the back, doth much help not only this, but also those that cannot hold their water, the powder being taken in the juice of plantain, and is also commended against the worms in children. It is very powerful in ruptures and burstings, as also for bruises or falls, to be used as well outwardly as inwardly. The root hereof made up with pellitory of Spain and alum, and put into a hollow tooth, not only assuageth the pain, but stayeth the flux of humours which causeth it. Tormentil is no less effectual and powerful a remedy against outward wounds, sores and hurts, than for inward, and is therefore a special ingredient to be used in wound drinks, lotions and injections, for foul corrupt rotten sores and ulcers of the mouth, secrets, or other parts of the body. The juice or powder of the root put in ointments, plaisters, and such things that are to be applied to wounds or sores, is very effectual, as the juice of the leaves and the root bruised and applied to the throat or jaws, healeth the king's evil, and easeth the pains of the sciatica; the same used with a little vinegar, is a special remedy against the running sores of the head or other parts; scabs also, and the itch or any such eruptions in the skin, proceeding of salt and sharp humours. The same is also effectual for the piles or hæmorrhoids, if they be washed or bathed therewith, or with the distilled water of the herb and roots. It is found also helpful to dry up any sharp rheum that distilleth from the head into the eyes, causing redness, pain, waterings, itching, or the like, if a little prepared tutia, or white amber, be used with the distilled water thereof. Many women use this water as a secret, to help themselves and others, when they are troubled with too

much flowing of the whites or reds, both to drink it, or inject it with a syringe. And here is enough, only remember the Sun challengeth this herb.

TURNSOLE, OR HELIOTROPIUM.

Descript.] **T**HE greater turnsole riseth with one upright stalk, about a foot high, or more, dividing itself almost from the bottom, into divers small branches, of a hoary colour; at each joint of the stalk and branches grow small broad leaves, somewhat white and hoary. At the tops of the stalks and branches stand small white flowers, consisting of four, and sometimes five small leaves, set in order one above another, upon a small crooked spike, which turneth inwards like a bowed finger, opening by degrees as the flowers blow open; after which in their place come forth cornered seed, four for the most part standing together; the root is small and thready, perishing every year, and the seed shedding every year, riseth it again the next spring.

Place.] It groweth in gardens, and flowereth and seedeth with us, notwithstanding it is not natural to this land, but to Italy, Spain, and France, where it grows plentifully.

Government and Virtues.] It is an herb of the Sun, and a good one too. Dioscorides saith, that a good handful of this, which is called the great turnsole, boiled in water, and drank, purgeth both choler and phlegm; and boiled with cummin, helpeth the stone in the reins, kidneys, or bladder, provoketh urine and women's courses, and causeth an easy and speedy delivery in child-birth. The leaves bruised and applied to places pained with the gout, or that have been out of joint, and newly set, and full of pain, do give much ease: the seed and juice of the leaves also being rubbed with a little salt upon warts or wens, and other kernels in the face, eye-lids, or any other part of the body, will, by often using, take them away.

MEADOW TREFOIL, OR HONEYSUCKLES.

IT is so well known, especially by the name of Honeysuckles, white and red, that I need not describe them.

Place.] They grow almost every where in this land.

Government and Virtues.] Mercury hath dominion over the common sorts. Dodoneds saith, the leaves and flowers are good to ease the griping pains of the gout, the herb being boiled and used in a clyster. If the herb be made into a poultice, and applied to inflammations, it will ease them. The juice dropped in the eyes, is a familiar medicine, with many country people, to take away the pin and web (as they call it) in the eyes; it also allayeth the heat and blood-shooting of them. Country people do also in many places drink the juice thereof against the biting of an adder; and having boiled the herb in water, they first wash the place with the decoction, and then lay some of the herb also to the hurt place. The herb also boiled in swine's grease, and so made into an ointment, is good to apply to the biting of any venomous creatures. The herb also bruised and heated between tiles, and applied hot to the share, causeth them to make water who had it stopt before. It is held likewise to be good for wounds, and to take away seed. The decoction of the herb and flowers, with the seed and root, taken for some time, helpeth women that are troubled with the whites. The seed and flowers boiled in water, and after made into a poultice with some oil, and applied, helpeth hard swellings and imposthumes.

HEART TREFOIL.

BESIDES the ordinary sort of trefoil, here are two more remarkable, and one of which may be probably called heart trefoil, not only because the leaf is triangular, like the heart of a man, but also because each leaf contains the perfect icon of a heart, and that in its proper colour; viz. a flesh colour.

Place.] It groweth between Longford and Bow, and beyond Southwark, by the highway and parts adjacent.

Government and Virtues.] It is under the dominion of the Sun, and if it were used, it would be found as great a strengthener of the heart, and cherisher of the vital spirits as grows, relieving the body against fainting and swoonings, fortifying it against poison and pestilence, and defending the heart against the noisome vapours of the spleen.

PEARL TREFOIL.

IT differs not from the common sort, save only in this one particular, it hath a white spot in the leaf like a pearl. It is particularly under the dominion of the Moon, and its icon sheweth that it is of a singular virtue against the pearl, or pin and web in the eyes.

TUTSAN, OR PARK LEAVES.

Descript.] **I**T hath brownish shining round stalks, crested the length thereof, rising two by two, and sometimes three feet high, branching forth even from the bottom, having divers joints, and at each of them two fair large leaves standing, of a dark blueish green colour on the upper side, and of a yellowish green underneath, turning reddish toward autumn. At the top of the stalks stand large yellow flowers, and heads with seed, which being greenish at the first, and afterwards reddish, turn to be of a blackish purple colour when they are ripe, with small brownish seed within them, and they yield a reddish juice or liquor, somewhat resinous, and of a harsh and styptic taste, as the leaves also and the flowers be, although much less, but do not yield such a clear claret wine colour, as some say it doth, the root is brownish, somewhat great, hard, and woody, spreading well in the ground.

Place.] It groweth in many woods, groves, and woody grounds, as parks and forests, and by hedge-sides in many places of this land, as in Hampstead wood, by Ratly in Essex, in the wilds of Kent, and in many other places needless to recite.

Time.] It flowereth later than St. John's or St. Peter's wort.

Government and Virtues.] It is an herb of Saturn, and a most noble antivenerean. Tutsan purgeth cholerick humours, as St. Peter's wort is said to do, for therein it worketh the same effects, both to help the sciatica and gout, and to heal burning by fire; it stayeth all the bleedings of wounds, if either the green herb be bruised, or the powder of the dry be applied thereto. It hath been accounted, and certainly it is, a sovereign herb to heal either wound or sore, either outwardly or inwardly, and therefore always used in drinks, lotions, balms, oils, ointments, or any other sorts of green wounds, old ulcers, or sores; in all which the continued experience of former ages hath confirmed the use thereof to be admirable good, though it be not so much in use now, as when physicians and surgeons were so wise as to use herbs more than now they do.

GARDEN VALERIAN.

Descript.] **T**HIS hath a thick short greyish root, lying for the most part above ground, shooting forth on all other sides such like small pieces of roots, which have all of them many long green strings and fibres under them in the ground, whereby it draweth nourishment. From the head of these roots spring up many green leaves, which at first are somewhat broad and long, without any divisions at all in them, or denting on the edges; but those that rise up after are more and more divided on each side, some to the middle rib, being winged, as made of many leaves together on a stalk, and those upon a stalk, in like manner more divided, but smaller towards the top than below; the stalk riseth to be a yard high or more, sometimes branched at the top, with many small whitish flowers, sometimes dashed over at the edges with a pale purplish colour, of a little scent, which passing away, there followeth small brownish white seed, that is easily carried away with the wind. The root smelleth more strong than either leaf or flower, and is of more use in medicines.

Place.] It is generally kept with us in gardens.

Time.] It flowereth in June and July, and continueth flowering until the frost pull it down.

Government and Virtues.] This is under the influence of Mercury. Dioscorides saith, that the garden valerian hath a warming faculty, and that being dried and given to drink it provoketh urine, and helpeth the strangury. The decoction thereof taken, doth the like also, and taketh away pains of the sides, provoketh women's courses, and is used in antidotes. Pliny saith, that the powder of the root given in drink, or the decoction thereof taken, helpeth all stoppings and stranglings in any part of the body, whether they proceed of pains in the chest or sides, and taketh them away. The root of valerian boiled with liquorice, raisins, and aniseed, is singular good for those that are short-winded, and for those that are troubled with a cough, and helpeth to open the passages, and to expectorate phlegm easily. It is given to those that are bitten or stung by any venomous creature, being boiled in wine. It is of a special virtue against the plague, the decoction thereof being drank, and the root being used to smell to. It helpeth to expel the wind in the belly. The green herb with the root taken fresh, being bruised and applied to the head, taketh away the pains and prickings there, stayeth rheum and thin distillation, and being boiled in white wine, and a drop thereof put into the eyes, taketh away the dimness of the sight, or any pin or web therein; it is of excellent property to heal any inward sores or wounds, as also for outward hurts or wounds, and drawing away splinters or thorns out of the flesh.

VERVAIN.

Descript.] **T**HE common vervain hath somewhat long broad leaves next the ground, deeply gashed about the edges, and some only deeply dented, or cut all alike, of a blackish green colour on the upper side, somewhat grey underneath. The stalk is square, branched into several parts, rising about two feet high, especially if you reckon the long spike of flowers at the tops of

them, which are set on all sides one above another, and sometimes two or three together, being small and gaping, of a blue colour and white intermixed, after which come small round seed, in small and somewhat long heads; the root is small and long, but of no use.

Place.] It groweth generally throughout this land in divers places of the hedges and way-sides, and other waste grounds.

Time.] It flowereth in July, and the seed is ripe soon after.

Government and Virtues.] This is an herb of Venus, and excellent for the womb to strengthen and remedy all the cold griefs of it, as plantain doth the hot. Vervain is hot and dry, opening obstructions, cleansing and healing; it helpeth the yellow jaundice, the dropsy and the gout; it killeth and expelleth worms in the belly, and causeth a good colour in the face and body, strengtheneth as well as correcteth the diseases of the stomach, liver, and spleen; helps the cough, wheezings, and shortness of breath, and all the defects of the reins and bladder, expelling the gravel and stone. It is held to be good against the biting of serpents, and other venomous beasts, against the plague, and both tertian and quartan agues. It consolidateth and healeth also all wounds, both inward and outward, stayeth bleedings, and used with some honey, healeth all old ulcers and fistulas in the legs or other parts of the body; as also those ulcers that happen in the mouth; or used with hog's grease, it helpeth the swellings and pains of the secret parts in man or woman, also for the piles or hæmorrhoids; applied with some oil of roses and vinegar unto the forehead and temples, it easeth the inveterate pains and ach of the head, and is good for those that are frantic. The leaves bruised, or the juice of them mixed with some vinegar, doth wonderfully cleanse the skin, and taketh away morpew, freckles, fistulas, and other such like inflammation and deformities of the skin in any part of the body. The distilled water of the herb when it is in full strength, dropped into the eyes, cleanseth them from films, clouds, or mists, that darken the sight, and wonderfully strengthens the optic nerves;

the said water is very powerful in all the diseases aforesaid, either inward or outward, whether they be old corroding sores, or green wounds.

THE VINE.

THE leaves of the English vine (I do not mean to send you to the Canaries for a medicine) being boiled, make a good lotion for sore mouths; being boiled with barley meal in to a poultice, it cools inflammations of wounds; the dropping of the vine, when it is cut in the spring, which country people call tears, being boiled in a syrup, with sugar, and taken inwardly, is excellent to stay women's longings, after every thing they see, which is a disease many women with child are subject to. The decoction of vine leaves in white wine doth the like; also the tears of the vine, drank two or three spoonfuls at a time, breaks the stone in the bladder. This is a very good remedy, and it is discreetly done, to kill a vine to cure a man, but the salt of the leaves are held to be better. The ashes of the burnt branches will make teeth that are as black as a coal, to be as white as snow, if you but every morning rub them with it. It is a most gallant tree of the Sun, very sympathetical with the body of man, and that is the reason spirit of wine is the greatest cordial among all vegetables.

VIOLETS.

BOTH the tame and the wild are so well known, that they need no description.

Time.] They flower until the end of July, but are best in March, and the beginning of April.

Government and Virtues.] They are a fine, pleasing plant of Venus, of a mild nature, no way harmful. All the violets are cold and moist, while they are fresh and green, and are used to cool any heat, or distemperature of the body, either inwardly or outwardly, as inflammations of the eyes, in the matrix or fundament, in imposthumes also, and hot swelling, to drink the

decoction of the leaves and flowers made with water and wine, or to apply them poultice-wise to the grieved places: It likewise easeth pains in the head, caused through want of sleep; or any other pains arising of heat, being applied in the same manner, or with oil of roses. A dram weight of the dried leaves or flowers of violets, but the leaves more strongly, doth purge the body of choleric humours, and assuageth the heat, being taken in a draught of wine, or any other drink; the powder of the purple leaves of the flowers only picked and dried and drank in water, is said to help the quinsy, and the falling-sickness in children, especially in the beginning of the disease. The flowers of the white violets ripen and dissolve swellings. The herb or flowers, while they are fresh, or the flowers when they are dry, are effectual in the pleurisy, and all diseases of the lungs, to lenify the sharpness of hot rheums, and the hoarseness of the throat, the heat also and sharpness of urine, and all pains of the back or reins, and bladder. It is good also for the liver and the jaundice, and all hot agues, to cool the heat, and quench the thirst; but the syrup of violets is of most use, and of better effect, being taken in some convenient liquor; and if a little of the jnice or syrup of lemons be put to it, or a few drops of the oil of vitriol, it is made thereby the more powerful to cool the heat, and quench the thirst, and giveth to the drink a claret wine colour, and a fine tart relish, pleasing the taste. Violets taken, or made up with honey, do more cleanse and cool, and with sugar contrary-wise. The dried flowers of violets are accounted amongst the cordial drinks, powders, and other medicines especially where cooling cordials are necessary. The green leaves are used with other herbs to make plaisters and poultices for inflammations and swellings, and to ease all pains whatsoever, arising of heat, and for the piles also, being fried with yolks of eggs, and applied thereto.

VIPER's BUGLOSS.

Descript.] **T**HIS hath many long rough leaves lying on the

Page

(Violet)

Vipers. Bugles

ground, from among which arise up divers hard round stalks, very rough, as if they were thick set with prickles or hairs, whereon are set such like rough, hairy, or prickly sad green leaves somewhat narrow; the middle rib for the most part being white. The flowers stand at the top of the stalk, branched forth into many long spiked leaves of flowers, bowing or turning like the turnsole, all opening for the most part on the one side, which are long and hollow, turning up the brims a little, of a purplish violet colour in them that are fully blown, but more reddish while they are in the bud, as also upon their decay and withering: but in some places of a paler purple colour, with a long pointel in the middle, feathered or parted at the top. After the flowers are fallen, the seeds growing to be ripe, are blackish, cornered and pointed somewhat like the head of a viper. The root is somewhat great and blackish, and woolly, when it groweth toward seed-time, and perisheth in the winter.

There is another sort, little differing from the former only in this, that it beareth white flowers.

Place.] The first groweth wild almost every where. That with white flowers about the castle-walls at Lewis in Sussex.

Time.] They flower in summer, and their seed is ripe quickly after.

Government and Virtues.] It is a most gallant herb of the Sun; it is a pity it is no more in use than it is. It is an especial remedy against the biting of the viper, and all other venomous beasts or serpents; as also against poison, or poisonful herbs. Dioscorides and others say, that whosoever shall take of the herb or root before they be bitten, shall not be hurt by the poison of any serpent. The root or seed is thought to be most effectual to comfort the heart, and expel sadness, or causeless melancholy; it tempers the blood, and allayeth hot fits of agues. The seed drank in wine, procureth abundance of milk in women's breasts. The same also being taken, easeth pain in the loins, back, and kidneys. The distilled water of the herb when it is in flower, or its chief strength, is excellent to be ap-

plied either inwardly or outwardly, for all the griefs aforesaid. There is a syrup made hereof very effectual for the comforting the heart, and expelling sadness and melancholy.

WALL FLOWERS, OR WINTER GILLIFLOWERS.

THE garden kind are so well known that they need no description.

Descript.] The common single wall flowers which grow wild abroad, have sundry small, long, narrow, dark green leaves, set without order upon small round, whitish woody stalks, which bear at the tops divers single yellow flowers one above another, every one bearing four leaves a-piece, and of a very sweet scent: after which come long pods, containing a reddish seed. The roots are white, hard and thready.

Place.] It groweth upon church walls, and old walls of many houses, and other stone walls in divers places; the other sort in gardens only.

Time.] All the single kinds do flower many times in the end of autumn; and if the winter be mild, all the winter long, but especially in the months of February, March, and April, and until the heat of the spring do spend them. But the double kinds continue not flowering in that manner all the year long, although they flower very early sometimes, and in some places very late.

Government and Virtues.] The Moon rules them. Galen, in his seventh book of simple medicines, saith, that the yellow wall-flowers work more powerfully than any of the other kinds, and are therefore of more use in physic. It cleanseth the blood, and freeth the liver and reins from obstructions, provoketh women's courses, expelleth the fecundine, and the dead child; helpeth the hardness and pains of the mother, and of the spleen also: stayeth inflammations and swellings, comforteth and strengtheneth any weak part, or out of joint; helpeth to cleanse the eyes from mistiness or films upon them, and to cleanse the filthy ulcers in the mouth, or any other part, and is

a singular remedy for the gout, and all aches and pains in the joints and sinews, a conserve made of the flowers, is used for a remedy both for the apoplexy and palsy.

THE WALNUT TREE.

IT is so well known, that it needeth no description.

Time.] It blossometh early before the leaves come forth, and the fruit is ripe in September.

Government and Virtues.] This is also a plant of the Sun. Let the fruit of it be gathered accordingly, which you shall find to be of most virtues whilst they are green, before they have shells. The bark of the tree doth bind and dry very much, and the leaves are much of the same temperature: but the leaves when they are older, are heating and drying in the second degree, and harder of digestion than when they are fresh, which, by reason of their sweetness, are more pleasing, and better digested in the stomach; and taken with sweet wine, they move the belly downwards, but being old, they grieve the stomach; and in hot bodies cause the choler to abound, and the head-ach, and are an enemy to those that have the cough; but are less hurtful to those that have a colder stomach, and are said to kill the broad worms in the belly or stomach. If they be taken with onions, salt, and honey, they help the biting of a mad dog, or the venom or infectious poison of any beast, &c. Caias Pompeius found in the treasury of Mithridates, king of Pontus, when he was overthrown, a scroll of his own hand writing, containing a medicine against any poison or infection; which is this: take two dry walnuts, and as many good figs, and twenty leaves of rue, bruised and beaten together with two or three corns of salt and twenty juniper berries, which taken every morning fasting, preserveth from danger of poison and infection that day it is taken. The juice of the other green husks boiled with honey is an excellent gargle for sore mouths, or the heat and inflammations in the throat and stomach. The kernels, when they grow old, are more oily, and therefore not fit to be eaten,

but are then used to heal the wounds of the sinews, gangrenes and carbuncles. The side kernels being burned, are then very astringent and will stay lasks and women's courses, being taken in red wine; and stay the falling of the hair, and make it fair, being anointed with oil and wine. The green husks will do the like, being used in the same manner. The kernels beaten with rue and wine, being applied, helpeth the quinsy; and bruised with some honey, and applied to the ears, easeth the pains and inflammations of them. A piece of the green husks put into a hollow tooth, easeth the pain. The catkins hereof, taken before they fall off, dried and given a dram thereof in powder with white wine, wonderfully helpeth those that are troubled with the rising of the mother. The oil that is pressed out of the kernels, is very profitable taken inwardly like oil of almonds, to help the cholic, and to expel wind very effectually; an ounce or two thereof may be taken at any time. The young green nuts taken before they be half ripe, and preserved with sugar, are of good use for those that have weak stomacis, or defluxions thereon. The distilled water of the green husks, before they be half ripe, is of excellent use to cool the heat of agues, being drank an ounce or two at a time; as also to resist the infection of the plague, if some of the same be also applied to the sores thereof. The same also cooleth the heat of green wounds and old ulcers, and healeth them, being bathed therewith. The distilled water of the green husks being ripe, when they are shelled from the nuts, and drank with a little vinegar, is good for the plague, so as before the taking thereof a vein be opened. The said water is very good against the quinsy, being gargled and bathed therewith, and wonderfully helpeth deafness, the noise, and other pains in the ears. The distilled water of the young green leaves in the end of May, performeth a singular cure on foul running ulcers and sores, to be bathed with wet cloths or sponges applied to them every morning.

WOLD, WELD, OR DYER'S WEED.

THE common kind groweth bushing with many leaves, long narrow and flat upon the ground; of a dark blueish green colour, somewhat like unto woad, but nothing so large, a little crumpled, and as it were round-pointed, which do so abide the first year; and the next spring, from among them rise up divers round stalks, two or three feet high, beset with many such like leaves thereon, but smaller, and shooting forth small branches, which with the stalks carry many small yellow flowers, in a long spiked head at the top of them, where afterwards come the seed, which is small and black, inclosed in heads that are divided at the tops into four parts. The root is long, white and thick, abiding the winter. The whole herb changeth to be yellow after it hath been in flower a while.

Place.] It groweth every where by the way sides, in moist grounds, as well as dry, in corners of fields and bye-lanes, and sometimes all over the field. In Sussex and Kent they call it green weed.

Time.] It flowereth about June.

Government and Virtues.] Matthioli saith, that the root hereof cureth tough phlegm, digesteth raw phlegm, thinneth gross humours, dissolveth hard tumours, and openeth obstructions. Some do highly commend it against the bitings of venomous creatures, to be taken inwardly and applied outwardly to the hurt place; as also for the plague or pestilence. The people in some counties of this land, do use to bruise the herb, and lay it to cuts or wounds in the hands or legs, to heal them.

WHEAT.

ALL the several kinds thereof are so well known unto almost all people, that it is altogether needless to write a description thereof.

Government and Virtues.] It is under Venus. Dioscorides saith, that to eat the corn of green wheat is hurtful to the sto-

mach, and breedeth worms. Pliny saith, that the corns of wheat, roasted upon an iron pan, and eaten, are a present remedy for those that are chilled with cold. The oil pressed from wheat, between two thick plates of iron, or copper heated, healeth all tetters and ringworms, being used warm; and hereby Galen saith, he hath known many to be cured. Matthiolus commendeth the same to be put into hollow ulcers to heal them up, and it is good for chaps in the hands and feet, and to make rugged skin smooth. The green corns of wheat being chewed, and applied to the place bitten by a mad dog, heal it; slices of wheat bread soaked in red rose water, and applied to the eyes that are hot, red and inflamed, or blood-shotten, helpeth them. Hot bread applied for an hour at times, for three days together, perfectly healeth the kernels in the throat, commonly called the king's evil. The flour of wheat mixed with the juice of henbane, stayeth the flux of humours in the joints, being laid thereon. The said meal being boiled in vinegar, helpeth the shrinking of the sinews, saith Pliny; and mixed with vinegar, and boiled together, healeth all freckles, spots or pimples on the face. Wheat flour, mixed with the yolk of an egg, honey, and turpentine, doth draw, cleanse and heal any boil, plague, sore, or foul ulcer. The bran of wheat meal steeped in sharp vinegar, and then bound in a linen cloth, and rubbed on those places that have the scurf, morpew, scabs or leprosy, will take them away, the body being first well purged and prepared. The decoction of the bran of wheat or barley, is of good use to bathe those places that are bursten by a rupture; and the said bran boiled in good vinegar, and applied to swollen breasts, helpeth them, and stayeth all inflammations. It helpeth also the biting of vipers (which I take to be no other than our English adder) and all other venomous creatures. The leaves of wheat meal, applied with some salt, take away hardness of the skin, warts, and hard knots in the flesh. Starch moistened with rose-water, and laid to the cods, taketh away their itching. Wafers put in water, and drank, stayeth the lasks and bloody flux, and are profitably used both inwardly and outwardly for the ruptures in

children. Boiled in water unto a thick jelly, and taken, it stayeth spitting of blood; and boiled with mint and butter, it helpeth the hoarseness of the throat.

THE WILLOW TREE.

THESE are so well known, that they need no description; I shall therefore only shew you the virtues thereof.

Government and Virtues.] The Moon owns it. Both the leaves, bark, and the seed, are used to stanch bleeding of wounds at the mouth and nose, spitting of blood, and other fluxes of blood in man or woman, and to stay vomiting, and provocation thereunto, if the decoction of them in wine be drank. It helpeth also to stay thin, hot, sharp, salt distillations from the head upon the lungs, causing a consumption. The leaves bruised with some pepper, and drank in wine, helps much the wind cholic. The leaves bruised and boiled in wine, and drank, stayeth the heat of lust in man or woman, and quite extinguisheth it, if it be long used: the seed is also of the same effect. Water that is gathered from the willow, when it flowereth, the bark being slit, and a vessel fitting to receive it, is very good for redness and dimness of sight, or films that grow over the eyes, and stay the rheums that fall into them; to provoke urine, being stopped, if it be drank; to clear the face and skin from spots and discolourings. Galen saith, the flowers have an admirable faculty in drying up humours, being a medicine without any sharpness or corrosion: you may boil them in white wine, and drink as much as you will, so you drink not yourself drunk. The bark works the same effect, if used in the same manner, and the tree hath always a bark upon it, though not always flowers; the burnt ashes of the bark being mixed with vinegar, taketh away warts, corns, and superfluous flesh, being applied to the place. The decoction of the leaves or bark in wine, takes away scurf and dandrif by washing the place with it. It is a fine cool tree, the boughs of which are very convenient to be placed in the chamber of one sick of a fever.

WOAD.

Descript.] **I**T hath divers large leaves, long, and somewhat broad withal, like those of the greater plantain, but larger, thicker, of a greenish colour, somewhat blue withal. From among which leaves riseth up a lusty stalk, three or four feet high, with divers leaves set thereon; the higher the stalk riseth, the smaller are the leaves; at the top it spreadeth divers branches, at the end of which appear very pretty little yellow flowers, and after they pass away like other flowers of the field, come husks, long and somewhat flat withal; in form they resemble a tongue, in colour they are black, and they hang bobbing downwards. The seed contained within these husks (if it be a little chewed) gives an azure colour. The root is white and long.

Place.] It is sowed in fields for the benefit of it, where those that sow it, cut it three times a year.

Time.] It flowers in June, but it is long after before the seed is ripe.

Government and Virtues.] It is a cold and dry plant of Saturn. Some people affirm the plant to be destructive to bees, and fluxes them, which, if it be, I cannot help it. I should rather think, unless bees be contrary to other creatures, it possesseth them with the contrary disease, the herb being exceeding dry and binding. However, if any bees be diseased thereby, the cure is, to set urine by them, but set it in a vessel that they cannot drown themselves, which may be remedied, if you put pieces of cork in it. The herb is so drying and binding, that it is not fit to be given inwardly. An ointment made thereof stancheth bleeding. A plaster made thereof, and applied to the region of the spleen which lies on the left side, takes away the hardness and pains thereof. The ointment is excellent good in such ulcers as abound with moisture, and takes away the corroding and fretting humours: It cools inflammations, quenches St. Anthony's fire, and stayeth defluxion of the blood to any part of the body

WOODBINE, OR HONEY-SUCKLES.

IT is a plant so common, that every one that hath eyes knows it, and he that hath none, cannot read a description if I should write it.

Time.] They flower in June; and the fruit is ripe in August.

Government and Virtues.] Doctor Tradition, that grand introducer of errors, that hater of truth, lover of folly, and that mortal foe to Dr. Reason, hath taught the common people to use the leaves or flowers of this plant in mouth-water, and by long continuance of time, hath so grounded it in the brains of the vulgar, that you cannot beat it out with a beetle; All mouth-waters ought to be cooling and drying, but honey-suckles are cleansing, consuming and digesting, and therefore no way fit for inflammations; thus Dr. Reason. Again if you please, we will leave Dr. Reason a while, and come to Dr. Experience, a learned gentleman, and his brother; take a leaf and chew it in your mouth, and you will quickly find it likelier to cause a sore mouth and throat than cure it. Well then, if it be not good for this, what is it good for? It is good for something, for God and nature made nothing in vain. It is an herb of Mercury, and appropriated to the lungs: the Celestial Crab claims dominion over it, neither is it a foe to the Lion; if the lungs be afflicted by Jupiter, this is your cure: It is fitting a conserve made of the flowers of it were kept in every gentlewoman's house; I know no better cure for an asthma than this; besides, it takes away the evil of the spleen, provokes urine, procures speedy delivery of women in travail, helps cramps, convulsions, and palsies, and whatsoever griefs come of cold or stopping; if you please to make use of it as an ointment, it will clear your skin of morpew, freckles, and sun-burnings, or whatever else discolours it, and then the maids will love it. Authors say, the flowers are of more effect than the leaves and that is true; but they say the seeds are least effectual of all. But Dr. Reason told me,

that there was a vital spirit in every seed to beget its like; and Dr. Experience told me, that there was a greater heat in the seed than there was in any other part of the plant; and withal, that heat was the mother of action, and then judge if old Dr. Tradition (who may well be honoured for his age, but not for his goodness) hath not so poisoned the world with errors before I was born, that it was never well in its wits since, and there is great fear it will die mad.

WORMWOOD.

THREE wormwoods are familiar with us; one I shall not describe, another I shall describe, and the third be critical at; and I care not greatly if I begin with the last first.

Sea Wormwood hath gotten as many names as virtues, (and perhaps one more) seriphian, santonicon, belchion, narbinense, hantonicon, misneule, and a matter of twenty more which I shall not blot paper withal. A papist got the toy by the end, and he called it holy wormwood; and in truth, I am of opinion, their giving so much holiness to herbs, is the reason there remains so little in themselves. The seed of this wormwood is that which usually women give their children for the worms. Of all wormwoods that grow here, this is the weakest, but doctors commend it, and apothecaries sell it: the one must keep his credit; and the other get money, and that is the key of the work. The herb is good for something, because God made nothing in vain: Will you give me leave to weigh things in the balance of Reason? then thus; the seeds of the common wormwood are far more prevalent than the seed of this, to expel worms in children, or people of ripe age; of both, some are weak, some are strong. The seriphian wormwood is the weakest, and haply may prove to be fittest for the weak bodies, (for it is weak enough of all conscience.) Let such as are strong take the common wormwood, for the others will do but little good. Again near the sea many people live, and seriphian grows near them, and therefore is more fitting for their bodies, because

Water Plantain

Wormwood

Woodroose

nourished by the same air; and this I had from Dr. Reason. In whose body Dr. Reason dwells not, dwells Dr. Madness, and he brings in his brethren, Dr. Ignorance, Dr. Folly, and Dr. Sickness, and these together make way for death, and the latter end of that man is worse than the beginning. Pride was the cause of Adam's fall; Pride begat a daughter, I do not know the father of it, unless the devil, but she christened it, and called it Appetite, and sent her daughter to taste these wormwoods, who finding this the least bitter, made the squeamish wench extol it to the skies, though the virtues of it never reached to the middle region of the air. Its due praise is this; it is weakest, therefore fittest for weak bodies, and fitter for those bodies that dwell near it, than those that dwell far from it; my reason is, the sea (those that live far from it, know when they come near it) casteth not such a smell as the land doth. The tender mercies of God being over all his works, hath by his eternal providence, planted seriphian by the sea side, as a fit medicine for the bodies of those that live near it. Lastly, it is known to all that know any thing in the course of nature, that the liver delights in sweet things; if so, it abhors bitter; then if your liver be weak, it is none of the wisest courses to plague it with an enemy. If the liver be weak, a consumption follows; would you know the reason? It is this, a man's flesh is repaired by blood, by a third concoction, which transmutes the blood into flesh, it is well I said (concoction) say I, if I had said (boiling) every cook would have understood me. The liver makes blood, and if it be weakened that it makes not enough, the flesh wasteth: and why must flesh always be renewed? Because the eternal God, when he made the creation, made one part of it in continual dependency upon another; and why did he so? Because himself only is permanent; to teach us, that we should not fix our affections upon what is transitory, but what endures for ever. The result of this is, if the liver be weak, and cannot make blood enough, I would have said, sanguify, if I had written only to scholars, the seriphian, which is the weakest of wormwoods, is better than the best.

I have been critical enough, if not too much.

Place.] It grows familiarly in England, by the sea-side.

Descript.] It starts up out of the earth, with many round, woody, hairy stalks from one root. Its height is four feet, or three at least. The leaves in longitude are long, in latitude narrow, in colour white, in form hoary, in similitude like southern-wood, only broader and longer; in taste rather salt than bitter, because it grows so near the salt-water; at the joints, with the leaves toward the tops it bears little yellow flowers; the root lies deep, and is woody.

Common Wormwood I shall not describe, for every boy that can eat an egg knows it.

Roman Wormwood: and why Roman, seeing it grows familiarly in England? It may be so called, because it is so good for a stinking breath which the Romans cannot be very free from, maintaining so many bawdy-houses by authority of his Holiness.

Descript.] The stalks are slender, and shorter than the common wormwood by one foot at least; the leaves are more finely cut and divided than they are, but something smaller; both leaves and stalks are hoary, the flowers of a pale yellow colour; it is altogether like the common wormwood, save only in bigness, for it is smaller; in taste, for it is not so bitter; in smell, for it is spicy.

Place.] It groweth upon the tops of the mountains (it seems 'tis aspiring) there 'tis natural, but usually nursed up in gardens for the use of the apothecaries in London.

Time.] All wormwoods usually flower in August, a little sooner or later.

Government and Virtues.] Will you give me leave to be critical a little? I must take leave; wormwood is an herb of Mars, and if Pontanus say otherwise, he is beside the bridge; I prove it thus: What delights in martial places, is a martial herb; but wormwood delights in martial places, (for about forges and iron works you may gather a cart-load of it) *ergo*, it is a martial herb. It is hot and dry in the first degree, viz. just as hot as your blood, and no hotter. It remedies the evils choler

can inflict on the body of man by sympathy. It helps the evils Venus and the wanton Boy produce, by antipathy; and it doth something else besides. It cleanseth the body of choler (who dares say Mars doth no good?) It provokes urine, helps surfeits, or swellings in the belly; it causeth appetite to meat, because Mars rules the attractive faculty in man: The sun never shone upon a better herb for the yellow jaundice than this; why should men cry out so much upon Mars for an unfortunate, (or Saturn either?) did God make creatures to do the creation a mischief? This herb testifies, that Mars is willing to cure all diseases he causes; the truth is, Mars loves no cowards, nor Saturn fools, nor I neither. Take of the flowers of wormwood, rosemary, and black thorn, of each a like quantity, half that quantity of saffron; boil this in Rhenish wine, but put it not in saffron till it is almost boiled; this is the way to keep a man's body in health, appointed by Camerarius, in his book intituled, *Hortus Medicus*, and it is a good one too. Besides all this, wormwood provokes the terms. I would willingly teach astrologers, and make them physicians (if I knew how) for they are most fitting for the calling; if you will not believe me, ask Dr. Hippocrates, and Dr. Galen, a couple of gentlemen that our college of physicians keep to vapour with, not to follow. In this our herb, I shall give the pattern of a ruler, the sons of art rough cast, yet as near the truth as the men of Benjamin could throw a stone: Whereby, my brethren the astrologers may know by a penny how a shilling is coined: As for the college of physicians, they are too stately to learn, and too proud to continue. They say a mouse is under the dominion of the Moon, and that is the reason they feed in the night; the house of the Moon is Cancer: rats are of the same nature with mice, but they are a little bigger; Mars receives his fall in Cancer, *ergo*, wormwood being an herb of Mars, is a present remedy for the biting of rats and mice. Mushrooms (I cannot give them the title of Herba, Frutex or Arbor) are under the dominion of Saturn, (and take one time with another,) they do as much harm as good; if any have poisoned himself by eating

them, wormwood, an herb of Mars, cures him, because Mars is exalted in Capricorn, the house of Saturn, and this it doth by sympathy, as it did the other by antipathy. Wheals, pushes, black and blue spots, coming either by bruises or beatings, wormwood, an herb of Mars, helps, because Mars (as bad as you love him, and as you hate him) will not break your head, but he will give you a plaister. If he do but teach you to know yourselves, his courtesy is greater than his discourtesy. The greatest antipathy between the planets, is between Mars and Venus; one is hot, the other cold; one diurnal, the other nocturnal; one dry, the other moist; their houses are opposite, one masculine, the other feminine; one public, the other private; one is valiant, the other effeminate; one loves the light, the other hates it; one loves the fields, the other sheets; then the throat is under Venus, the quinsy lies in the throat, and is an inflammation there; Venus rules the throat, it being under Taurus her sign. Mars eradicates all diseases in the throat by his herbs (of which wormwood is one; and sends them to Egypt on an errand never to return more; this is done by antipathy. The eyes are under the Luminaries; the right eye of a man, and the left eye of a woman, the Sun claims dominion over; the left eye of a man, and the right eye of a woman are privileges of the Moon; wormwood, an herb of Mars, cures both; what belongs to the Sun by sympathy, because he is exalted in his house; but what belongs to the Moon by antipathy, because he hath his fall in her's. Suppose a man be bitten or stung by a Martial creature, imagine a wasp, a hornet, a scorpion, wormwood, an herb of Mars, giveth you a present cure: then Mars, cholerie as he is, hath learned that patience, to pass by your evil speeches of him, and tells you by my pen, that he gives you no affliction, but he gives you a cure; you need not run to Apollo, nor Æsculapius; and if he was so cholerie as you make him to be, he would have drawn his sword for anger, to see the ill conditions of those people that can spy his vices, and not his virtues. The eternal God, when he made Mars, made him for public good, and

the sons of men shall know it in the latter end of the World. *Et cælum Mars solus habet.* You say Mars is a destroyer; mix a little wormwood, an herb of Mars, with your ink, neither rats nor mice touch the paper written with it, and then Mars is a preserver. Astrologers think Mars causeth scabs and itch, and the virgins are angry with him, because wanton Venus told them he deforms their skins; but, quoth Mars, my only desire is, they should know themselves; my herb wormwood will restore them to the beauty they formerly had, and in that I will not come an inch behind my opposite, Venus; for which doth the greatest evil, he that takes away an innate beauty, and when he has done, knows how to restore it again: or she that teaches a company of wanton lasses to paint their faces? If Mars be in a Virgin, in the nativity, they say he causeth the cholic (it is well God hath set somebody to pull down the pride of man.) He in the Virgin troubles none with the cholic, but them that know not themselves (for who knows himself may easily know all the world.) Wormwood, an herb of Mars, is a present cure for it: and whether it be most like a Christian to love him for his good, or hate him for his evil, judge ye; I had almost forgotten, that charity thinks no evil. I was once in the tower and viewed the wardrobe, and there was a great many fine clothes: (I can give them no other title, for I was never either linen or woollen draper) yet as brave as they looked, my opinion was, that the moths might consume them; moths are under the dominion of Mars; this herb wormwood being laid among clothes, will make a moth scorn to meddle with the clothes, as much as a lion scorns to meddle with a mouse, or an eagle with a fly. You say Mars is angry and it is true enough he is angry with many countrymen, for being such fools to be led by the noses by the college of physicians, as they lead bears to Paris garden. Melancholy men cannot endure to be wronged in point of good fame, and that doth solely trouble old Saturn, because they call him the greatest infortunate; in the body of man he rules the spleen, (and that makes covetous men so splenetic) the poor old man lies crying out of his left side. Father Saturn is angry, Mars

comes to him; Come, brother, I confess thou art evil spoken of, and so am I; thou knowest I have my exaltation in thy house, I give him an herb of mine, wormwood, to cure the poor man: Saturn consented, but spoke little, and so Mars cured him by sympathy. When Mars was free from war, (for he loves to be fighting, and is the best friend a soldier hath) I say, when Mars was free from war, he called a council of war in his own brain, to know how he should do poor sinful man good, desiring to forget his abuses in being called an infortunate. He musters up his own forces, and places them in battalia. Oh! quoth he, why do I hurt a poor silly man or woman? His angel answers him, it is because they have offended their God, (look back to Adam :) Well, says Mars, though they speak evil of me, I will do good to them; death's cold, my herb shall heat them; they are full of ill humours (else they would never have spoken ill of me :) my herb shall cleanse them, and dry them; they are poor weak creatures, my herb shall strengthen them; they are dull witted, my herb shall fortify their apprehensions; and yet among astrologers all this does not deserve a good word: Oh the patience of Mars!

Felix qui potuit rerum cognoscere causas,

Inque domus superum scandere cura facit.

Oh happy he that can the knowledge gain,

To know th' eternal God made nought in vain.

To this I add,

I know the reason causeth such a dearth

Of knowledge; 'tis because men love the earth.

The other day Mars told me he met with Venus, and he asked her, what was the reason that she accused him for abusing women? He never gave them the pox. In the dispute they fell out, and in anger parted, and Mars told me that his brother Saturn told him, that an antivenerean medicine was the best against the pox. Once a month he meets with the Moon. Mars is quick enough of speech, and the Moon not much behindhand, (neither are most

women.) The Moon looks much after children, and children are much troubled with the worms; she desired a medicine of him, he bid her take his own herb, wormwood. He had no sooner parted with the Moon, but he met with Venus, and she was as drunk as a bitch; Alas! poor Venus, quoth he; What! thou a fortune, and be drunk? I'll give thee an antipathetical cure! take my herb wormwood, and thou shalt never get a surfeit by drinking. A poor silly countryman hath got an ague, and cannot go about his business: he wishes he had it not, and so do I; but I will tell him a remedy, whereby he shall prevent it: Take the herb of Mars, wormwood, and if infortunes will do good, what will fortunes do? Some think the lungs are under Jupiter; and if the lungs, then the breath; and though sometimes a man gets a stinking breath, and yet Jupiter is a fortune, forsooth; up comes Mars to him; Come, brother Jupiter, thou knowest I sent thee a couple of trines to thy house last night, the one from Aries, and the other from Scorpio; give me thy leave by sympathy to cure this poor man with drinking a draught of wormwood beer every morning. The Moon was weak the other day, and she gave a man two terrible mischiefs, a dull brain and a weak sight; Mars laid by his sword, and comes to her; Sister Moon, said he, this man hath angered thee, but I beseech thee take notice he is but a fool; prithee be patient, I will with my herb wormwood cure him of both infirmities by antipathy, for thou knowest thou and I cannot agree; with that the Moon began to quarrel; Mars (not delighting much in women's tongues) went away, and did it whether she would or no.

He that reads this, and understands what he reads, hath a jewel of more worth than a diamond; he that understands it not, is as little fit to give physic. There lies a key in these words which will unlock, (if it be turned by a wise hand) the cabinet of physic: I have delivered it as plain as I durst: it is not only upon wormwood as I wrote, but upon all plants, trees, and herbs; he that understands it not, is unfit (in my opinion) to give

physic. This shall live when I am dead. And thus I leave it to the world, not caring a farthing whether they like or dislike it. The grave equals all men, and therefore shall equal me with all princes; until which time the eternal Providence is over me: Then the ill tongue of a prating fellow, or one that hath more tongue than wit, or more pride than honesty, shall never trouble me. *Wisdom is justified by her children.* And so much for wormwood.

YARROW, CALLED NOSE-BLEED, MILFOIL, AND
THOUSAND-LEAF.

Descript.] **I**T hath many long leaves spread upon the ground, finely cut, and divided into many small parts: Its flowers are white, but not all of a whiteness, and stayed in knots, upon divers green stalks which rise from among the leaves.

Place.] It is frequent in all pastures.

Time.] It flowereth late, even in the latter end of August.

Government and Virtues.] It is under the influence of Venus, an ointment of them cures wounds, and is most fit for such as have inflammations, it being an herb of Dame Venus; it stops the terms in women, being boiled in white wine, and the decoction drank; as also the bloody flux; the ointment of it is not only good for green wounds, but also for ulcers and fistulas, especially such as abound with moisture. It stays the shedding of hair, the head being bathed with the decoction of it; inwardly taken it helps the retentive faculty of the stomach; it helps the running of the reins in men, and the whites in women, and helps such as cannot hold their water; and the leaves chewed in the mouth easeth the tooth-ach; and these virtues being put together, shew the herb to be drying and binding. Achilles is supposed to be the first that left the virtues of this herb to posterity, having learned them of his master Chiron, the Centaur; and certainly a very profitable herb it is in cramps, and therefore called *Militaris*.

Yarrow

Water Crow-Head

Sea Wormwood

APPENDIX.

COMMON AMMOMUM.

Descript.] **T**HE lower leaves of this Ammomum, are long, and pinnated, or having small holes growing opposite to one another, on a common foot-stalk, being about an inch long, and not above half the breadth, broader at the base, and ending sharper pointed, cut in on the edges, having a single leaf at the end of the foot-stalk. They are of a bright green colour. The stalk arises to the height of two or three feet, finely channeled and divided into several branches, on which grow the like leaves, but much less and finer; on the tops grow small umbels of white fine-leav'd flowers, producing little striated seed, about the bigness of parsley seed, of a pleasant, hot, spicy smell and taste, something like a nutmeg.

Place.] It grows in ditches, banks, and moist places, flowering in summer, its seed, which is the only part used, being ripe in August.

Virtues.] The seed is hot and dry, attenuating and good to open obstructions, to cleanse the reins of gravel, and sometimes given as carminatives and diuretics, like the other warm seeds, and usually substituted in the shops for those of the following.

THE TRUE AMMOMUM,

HAS been formerly sold by the druggists under the name of Cardamomum majus, or the greater Cardamoms.

Descript.] It grows in bunches of roundish, triangular capsulæ, containing several black corner'd rough seed, like the lesser Cardamoms, of a hot aromatic taste. It can hardly be gathered, what the true ammomum of the ancients was, their descriptions thereof being so short and confused; but it is the opinion of the most learned and discerning authors, that the above-mentioned fruit answers best to the description of the ancients, and comes nearest to its virtues.

Virtues.] It is warming and comforting, strengthens the stomach, helps digestion; expels wind, and is good against the cholic and cold disorders of the stomach and bowels, as also against the biting of venomous creatures.

EPIMEDIUM; OR, BARRENWORT,

IS a shrub-like plant, shooting forth sundry, hard, round stalks, half a yard or two feet high, each stalk divided for the most part into three branches, and each of them bearing three leaves a-piece, which are severally, somewhat broad and round, yet pointed at the ends, hard or dry in feeling, and a little sharply dented about the edges, of a light green colour on the upper side, and whiter underneath: from the middle of some of the stalks or leaves, shooteth forth with them from the first rising up of them, a small long footstalk of flowers, not much higher than the stalks of leaves, divided into branches, containing on each of them three flowers, separated into four parts, as if the flower consisted of but four leaves, whereas each part hath but two leaves, one lying close upon another, the inner being yellow and smaller than the lower, which are red, so that the red edge appeareth round about the yellow, making it seem a yellow flower of four leaves, with red edges; it hath also a few yellow threads in the middle, set with green, the under side of the flowers, being of a yellowish red colour, striped with white lines, which being past, small long pods appear, with flattish red seed in them, the roots are small and fibrous, hard and reddish, spreading much under ground, and delighteth best in shadowy, rather than sunny places; the scent of the plant is rather strong than pleasant.

Virtues.] We have not any late experience hereof to shew, but as Dioscorides, Pliny, and Galen, have set down of it, that it is moderately cold and moist, without any special property more, than to keep women's breasts from growing too great, being made into a cataplasm, with oil, and applied; and that the report went, that the root would make women barren that took it inwardly, as also the leaves made in powder, and taken in wine for some time.

Baren Wort

Bedstraw

Avens

WHITE BEHEN.

THIS herb has a long, thick, whitish, woody root, not much branched; from which spring several smooth weak stalks, about two feet high, with pretty large joints; at each of which grow two leaves opposite to one another without foot-stalks, two or three feet long, and about an inch broad, sharp-pointed at the end, of a glaucous or blueish green colour, smooth and without any indentures about the edges. The flowers grow on the tops of long foot-stalks, several together, of five small white leaves a-piece, standing in a loose swelled round husk or bladder, of a greenish white colour, with several fine darker veins; this encloses the roundish calyx, in which are contained small brown seed.

Place.] It is frequently to be met with in meadows and corn-fields, and flowers in July and August.

Virtues.] The roots are only used; and as to their qualities, they are accounted cordial, cephalic, alexipharmic, and a provocative to venery. It is but seldom used.

BUCK-BEAN, OR MARSH TREFOIL.

MARSH Trefoil has smooth round stalks three or four inches long, on which grow three longish round leaves, somewhat resembling the leaves of beans; among these arise stalks about two feet high, bare of leaves, and bearing on the top a spike of whitish purple flowers, of one leaf divided into five segments, whose inside is covered with a curled downiness, having five whitish chives in the middle, all set in five cornered calyces. The seed is small and brown, growing in roundish seed-vessels; the root is long and jointed, with many whitish fibres at each joint.

Place.] It grows in marshy, boggy grounds, and flowers in May and June. The leaves are used.

Virtues.] This is reckoned a great antiscorbutic, and very serviceable for the gout, rheumatism, and dropsy, and is much

used in diet-drinks for those distempers. It is likewise a good stomachic, made use of against intermitting fevers. It is likewise extolled against the scurvy. It is good in scorbutic consumption, in the itch, and other cutaneous diseases. It is good in gargles for the rottenness of the gums, and to fasten the teeth. It is given in powder, from a scruple to a dram and upwards. In broth, water, or whey, a handful or two when decocted.

BUR REED.

Descript.] A COMMON water plant, with leaves like flags and rough heads of seeds: it is two or three feet high. The stalks are round, green, thick, and upright. The leaves are very long and narrow, sharp at the edges with a sharp ridge on the back along the middle; they are of a pale green, and look fresh and beautiful. The flowers are inconsiderable and yellowish: they stand in a kind of circular tufts about the upper parts of the stalk: lower down stand the rough fruits called burs, from whence the plant obtained its name: they are of the bigness of a large nutmeg, green and rough. The root is composed of a quantity of white fibres.

Virtues.] The unripe fruit is used. They are astringent, and good against fluxes of the belly, and bleedings of all kinds; the best way of giving them is infused in a rough red wine, with a little cinnamon. They use them in some parts of England externally for wounds. A strong decoction of them is made to wash old ulcers, and the juice is applied to fresh hurts, and they say with great success.

CORN MARIGOLD.

Descript.] A VERY beautiful wild plant growing in corn-fields, with large bluish leaves, and full of flowers like marigolds. It is two feet high; the stalks are numerous, round, stiff, tolerably upright, and branched; the leaves stand irregularly, and are long, very broad, and of a bluish green; they are small-

Cranasilla

Corn. Marygold

Corn Wheat-

est towards the base, and larger at the end, and they are deeply cut in at the sides. The flowers are as broad as half a crown, and of a very beautiful yellow; they have a cluster of threads in the middle. The root is fibrous.

The flowers, fresh gathered and just opened, contain the greatest virtue. They are good against all obstructions, and work by urine. An infusion of them, given in the quantity of half a pint warm, three times a day, has been known to cure a jaundice, without any other medicine; the dried herb has the same virtue, but in a less degree.

COW-WHEAT.

Descript.] **A** COMMON wild plant in our woods and thickets, with narrow leaves, and bright yellow flowers. It is eight or ten inches high. The stalks are square and slender; very brittle, weak, and seldom quite upright. The leaves are oblong and narrow; sometimes of a dusky green colour, but oftener purplish or blackish; they are broadest at the base, and small all the way to the point; and they are commonly, but not always indented a little about the edges. The flowers stand, or rather hang, all on one side of the stalk, in a kind of loose spike; they are small and yellow, and grow two together. The seeds which follow these are large, and have something of the aspect of wheat, from whence the plant has its odd name.

Virtues.] These seeds are the part used; they are to be dried and given in powder, but in small doses. They have virtues, which few seem to imagine; they are a high cordial and provocative to venery; but if given in too large a dose, they occasion the head-ach and a strange giddiness. I knew an instance of a woman who had boiled the fresh tops of the plant in a large quantity in water, as a remedy for the jaundice, (I know not by what information,) and having drank this in large draughts was as a person drunk and out of her senses; she complained of numbness in her limbs, and seemed in danger of her life, but nature recovered her after a few hours without other assistance.

LONG CYPERUS.

Descript.] **A** WILD plant in our marshes, fens, and other damp places. It is a foot and a half high. The leaves are, a foot long or more, narrow, grassy, and of a bright green colour, flat, and sharp at the ends. The stalk is triangular and green; there are no leaves on it, except two or three small ones at the top, from which there rises a number of small tufts or spikes of flowers. These are brown, light, chaffy, and in all respects like those of the other water grasses.

Virtues.] The root is used. It is long and brown, and when dried, is of a pleasant smell, and aromatic warm taste. It should be taken up in spring. It is good against pains in the head, and it promotes urine.

SWEET FLAG.

Descript.] **A** COMMON wild plant that grows undistinguished among the flags and rushes, by our ditch sides. The old physicians meant another thing by *calamus aromaticus*: they gave this name to the dried stalks of a plant, but at present it is used as the name of the root of this. The sweet flag grows three feet high, but consists only of leaves without a stalk. They are long, narrow, and of a pale green colour. Among these there are commonly three or four in all respects like the rest, but that they have a cluster of flowers breaking out at one side, within five or six inches of the top. This is long, brown, and thick, and resembles a catkin of a filbert tree, only it is longer and thicker. The root is long, flattish, and creeping: it is of a strong and rather unpleasant smell when fresh, but it becomes very fragrant, and aromatic in drying. Our own has its value, because we can have it fresh, but the dried root is better had of the druggists; they have it from warmer countries, where it is more fragrant.

Virtues.] The juice of the fresh root of *acorus* is excellent to promote the menses, it works by urine moderately, and gives

Fockston

Flux Weed

Fluellin

no offence to the stomach. The dried root is cordial and sudorific, it warms the stomach, and is good against indigestions and fevers.

FOOL'S STONES.

Descript.] **A** BEAUTIFUL wild plant in our meadows and pastures in June. The leaves are long and spotted, and the flowers are purple. It grows ten inches high. The leaves are six inches long, and three quarters of an inch broad, of a very deep green, with large and irregular blotches of black in different parts. The stalk is round, thick, upright, single, and fleshy; it has two or three smaller leaves of the same figure, and at the top stand the flowers, in a spike of an inch and a half long; they are not very large, and of a shape different from the generality of flowers; their colour is a deep and glossy purple; but sometimes they are white. The whole plant is juicy. The root consists of two round bulbs or two round lumps, like a pair of testicles, and is white and full of a slimy juice.

Virtues.] The root is the only part used. It is supposed to be a strengthener of the parts of generation, and a promoter of venereal desires; but with what truth one cannot say. Externally applied in cataplasms, it is excellent in hard swellings. There are a great many other kinds of orchis in our meadows, but only this is used. The root, called salep by our druggists, is brought from Turkey, and is the root of a plant of this kind. It is strengthening and restorative, good in consumptions and all decays

FROG BIT.

Descript.] **A** LITTLE plant, not uncommon on waters, with round leaves and small white flowers. It has been by the common writers called a kind of water lily, because its leaves are round, and it floats upon the water, but it is as distinct as any thing can be, when we regard the flower. Duck-weed has round leaves, and floats upon the water, and it might be called

water lily for that reason, if that were sufficient. The leaves are of a roundish figure, and a dusky dark green colour; they are of the breadth of a crown piece, and they rise many together in tufts, from the same part of the stalk. This stalk runs along at a little distance under the surface of the water, and from it descend the roots, but they do not reach down into the mud, but play loose like the fibres of duckweed in the water. The flowers stand singly upon slender foot-stalks; they are white, and composed of three leaves a-piece, which give them a singular appearance.

Virtues.] The fresh leaves are used in outward applications, and are very cooling.

GOLD OF PLEASURE.

Descript.] **A** VERY pretty plant common in many parts of England, and known at sight by the vast quantity of seed vessels. It is two feet high: the stalk is round, thick, firm, upright, and toward the top has a great many branches, all standing upright. The leaves stand irregularly, and are not numerous, they are long, not very broad, and of a pale green; they are indented about the edges, and surround the stalk at the base; the flowers are little and white; the seed vessels are short and roundish, and they stand in vast quantities, forming a kind of spikes all the way up the tops of the branches, with few flowers at the summit.

Virtues.] The fresh tops of the plant are to be used before it is run to seed. An infusion of them sweetened with honey, is excellent for sore throats, and ulcerations of the mouth. The seeds yield a great quantity of oil on pressing, and they are so plentiful, that it might seem worth while to cultivate the plant for them; the oil is pleasant and well tasted.

GLASSWORT.

Descript.] **A** COMMON wild plant, on the sea coasts of many parts of Europe, but not a native of our country. It is

Footboard

Glasswort

Platycodon

called cochleated kali, from the form of its seed-vessels, which are twisted in the manner of a snail's shell. It grows to a foot and a half in height. The stalk is round, thick, fleshy, and brittle. The leaves are few, and they stand irregularly; they are oblong, and blunted at the ends, and of a bluish green colour. The flowers are small, inconsiderable, and yellow.

Virtues.] The juice of the fresh plant is said to be an excellent diuretic; but we have no opportunities of knowing its virtues here. Some say the seed vessels have the same virtue, and give them in infusion, but we have better remedies of the same kind, of our own growth. The whole plant is burnt for its fixed salt, which is used in making glass.

GOAT'S BEARD.

Descript.] A COMMON wild plant, distinguished in our meadows by its narrow and green leaves, and the long leaves of the cup, about its yellow flowers. It grows to a foot and a half in height. The leaves are very narrow; they are broadest at the base, and smaller all the way to the point. The stalk is round, thick, firm, very upright, and towards the top divided into two or three branches. The flowers stand at the extremities of the stalks; they are of a beautiful pale yellow, very large and surrounded by a cup, composed of long and narrow green leaves, which, for the greatest part of the day, are closed over it, so that it seems only in bud. The seeds are winged with a fine white down, in the manner of those of dandelion, and when ripe, they stand upon the tops of the branches, in a round head, in the same manner. The root is long, and white; and the whole plant is full of a milky juice, which, after it has been a little time exposed to the air, becomes yellow, and thick like cream.

Virtues.] The root is used. It is so pleasant in taste, that it may be eaten in the manner of carrots, and other roots at table, but it exceeds them all in its qualities. It is an excellent restorative, and will do great service to people after long illnesses: the best way of giving it for this purpose, is to boil it first in water, and then cutting it to pieces, boil it again in milk, which

is to be rendered palatable in the usual way; it becomes thus a most excellent medicine, in the form of food.

GROUND-PINE.

Descript.] **A** VERY singular little wild plant, of a mossy appearance, and resinous smell: it grows four inches high; the stalks are hairy, and seldom stand upright; the leaves are very close set, and the young shoots which grow from their bosoms perfectly obscure the stalk; it seems a thick round tuft. These leaves are short, narrow, and divided into three parts at their ends, and they stand two at every joint of the stalk: they are rough and hairy like the stalk. The flowers are little and yellow, and they stand at the joints.

Virtues.] The whole plant is used, and it has great virtue; it is to be used dry in powder or infusion. It works strongly by urine, and promotes the menses. It opens also all obstructions of the liver and spleen, and is good in jaundice, the rheumatism, and most of the chronic disorders.

HARE'S FOOT.

Descript.] **T**HIS plant seldom rises very high, but spreads out into many slender branches, having small narrow hairy trefoil leaves set at every joint; on the tops of the branches grow short round heads composed of small papilionaceous pale purple flowers, each set in a soft woody calyx, making the heads appear soft and downy. The seed is small, lying at the bottom of the calyx; the root is little, and perishes yearly. It is found frequently among corn, and in fallow fields; and flowers in June and July. The whole plant is used, though not very often.

Virtues.] Hare's-foot is drying and binding; accounted good for a diarrhea and dysentery, and to stop the too great flux of the catamenia and the fluor albus. It helps the ulceration of the bladder, and heat and pain in making water.

GOOD HENRY, OR ENGLISH MERCURY.

Descript.] **T**HIS Mercury has a thick, yellowish, percular root, with several fibres; the leaves grow upon long foot-stalks of a triangular shape, like spinnage, of a yellow green colour, feeling greasy or unctuous in handling. The stalks grow to be about a foot high, with several of the like leaves growing on them; and on their tops spikes of small herbaceous flowers, inclosing little round black shining seed. It grows in waste places, among rubbish; and flowers sometime in the spring.

Virtues.] This herb is of a detersive cleansing quality. The young shoots, before they come to seed, boiled as spinnage or asparagus, are pleasant to the palate, cooling, soluble, and good for the scurvy, and provoke urine; outwardly it is much used in clysters, and a cataplasm of the leaves helps pains of the gout.

HONEYWORT.

Descript.] **A** JUICY plant frequently wild in many parts of Europe, but with us kept in gardens. It has its name from the sweet taste of the flowers. Almost all flowers have a drop of honey juice in their bottom: this is indeed the real substance of honey, for the bees only pick it out and get it together: the hollow flowers in general have more of it, or it is better preserved in them than others, but scarce any in so great a degree as this plant named from it. It is two feet high, when kept erect, but if left to itself, is very apt to lean upon the ground. The stalk is round, thick, juicy, and tender; the leaves are large, oblong, broad, they surround and inclose the stalk at their base; they are of a bluish green colour, spotted or clouded irregularly with white, and they are full of a sort of prickles. The flowers grow at the top of the stalks, several together, among the clusters of leaves; they are hollow, oblong, and very wide open at the mouth; their colour is yellow, variegated with purple in the middle, and they have a very pretty appearance.

Virtues.] The fresh gathered tops of the plant are to be used; an infusion of them is cooling, and works by urine. It is good against scorbutic complaints, and in the jaundice.

THE JACINTH, OR HYACINTH.

Descript.] **T**HE common spring plant our children gather with their cowslips and May flowers, and call blue bells. The root is white and roundish; the leaves are narrow and long, like grass, but of a deep green colour, and smooth surface: the stalks are round, upright, and smooth; they have no leaves on them. The flowers are large, and of a beautiful blue; they are hollow, oblong, and turn up at the rim. The root is the part used.

Virtues.] It abounds in a slimy juice, but it is to be dried, and this must be done carefully; the decoction of it operates well by urine; and the powder is balsamic, and somewhat styp-tic. It is not enough known. There is hardly a more powerful remedy for the whites.

FLEABANE.

Descript.] **A** PRETTY wild plant, frequent about damp places, with whitish leaves and large yellow flowers in autumn. It is two feet high. The stalk is round and erect, very firm and strong, and is often of a reddish colour. The leaves are numerous, and stand irregularly; they are above an inch long, moderately broad, of a rough surface, and whitish green. The flowers stand at the top of the branches; they are broader than a shilling, yellow, and composed of many narrow petals. The whole plant has a disagreeable smell.

Virtues.] It is disputed whether this kind of fleabane, or another which is smaller, and has globous flowers, have the greater virtue; but most give it for this. The juice of the whole plant cures the itch, applied externally; and the very smell of the herb is said to destroy fleas.

Jacynth

Jack by the Hedge

Pearl Muscleeck

BLACK HOREHOUND.

Descript.] **A** COMMON wild plant of a disagreeable smell, thence also called by some stinking horehound. The stalks are square, the leaves grow two at every joint, and are broad, short, and of a blackish green colour, but in shape not unlike those of the white kind. The flowers stand in clusters round the stalk at the joints, as in the other, but they are red. The whole plant has a dismal aspect. The root is fibrous.

Virtues.] The plant is to be used fresh and dried, and it has more virtue than most imagine. It is to be given in the form of tea: it promotes the menses, and is superior to most things as a remedy in hysteric cases, faintings, convulsions, and low-spiritedness, and all the train of those disorders.

MILKWORT.

Descript.] **A** COMMON little plant upon our heaths, and in dry pastures, with numerous leaves and blue or white flowers, (for this is a variety and caused by accident) disposed in loose spikes. The root is long, and divided into several parts, the stalks are very numerous, and very much branched, they are slender and weak, and they spread themselves upon the ground, forming a little green tuft. There is great variety in the appearance of the plant, beside what has been already named in the colour of the flower; nor is that indeed the only variation there: so that it has been divided into two or three kinds by some writers, but as all these will rise from the same seed, and only are owing to the soil and exposure, the plant is without doubt the same in every appearance, and its virtues are the same in which ever state it is taken. When it grows in barren places, the stalks are not more than three or four inches in length, and the leaves are very numerous, short, and of an oval figure. The flowers are in this case small and blue, sometimes whitish, striated with blue, and sometimes

intirely white. When the plant grows in a somewhat more favourable soil, the leaves are oblong and narrow, pointed at the ends, and of a beautiful green, the stalks are five or six inches long, and the flowers in this case are commonly blue, and this is the most ordinary state of the plant. When it grows in very favourable places, as upon the damp side of a hill, where there are springs, and among the tall grass, then its leaves are longer, its stalks more robust and more upright, and its flowers are red. These are the several appearances of this little plant, and it is all one in which of them it is taken. The root is often of a considerable thickness, and single, but it is more usually divided and smaller; it is whitish, and of a disagreeable acrid taste.

Virtues.] This plant had passed unregarded as to any medicinal use, till Dr. Tennent brought into England the senekka root, famous in America against the effects of the bite of the rattle-snake, and found here to be of service in pleurisies: but when it was found, that this was the root of a kind of milkwort, not very different from our own, we tried the roots of our own kind, and found them effectual in the same cases: as to the poisonous bites of a serpent, they are so uncommon here, that we need not regard that part of the qualities, but we find it good in the other disorder, and in all diseases in which the blood is thick and sily. The fresh root is best, but it has not its full virtue except in spring, when the stalks are just shooting out of the ground, for this reason it is most proper to take it up at that time, and dry it for the service of the year. When fresh, it is best given in infusion: but when dried, it is kept in powder.

WATER MINT.

Descript.] **A** COMMON wild plant of the mint kind, not so much regarded as it deserves. It is frequent by ditch sides. It is a foot and half high. The stalks are square, upright, firm, and strong, and generally of a brown colour; the leaves are broad and short; they stand two at a joint, and are of a brownish or

deep green colour, somewhat hairy, and serrated about the edges. The flowers are larger than those of common mint, and are of a pale red colour; they stand in round thick clusters at the tops of the stalks, and round the upper joints. The whole plant has a strong smell, not disagreeable, but of a mixed kind between that of mint, and penny royal: and the taste is strong and acrid, but it is not to be called disagreeable.

Virtues.] A distilled water of this plant is excellent against colics, pains in the stomach and bowels, and it will bring down the menses. A single dose of it often cures the colic. The use of peppermint has excluded this kind from the present practice, but all three ought to be used. Where a simple weakness of the stomach is the complaint, the common mint should be used; when colicky pains alone, the peppermint; and where suppressions of the menses are in the case, this wild water mint: they may all be given in the way of tea, but a simple water distilled from them, and made sufficiently strong, is by much the most efficacious.

MILK THISTLE.

Descript.] **A** VERY beautiful plant, common by road-sides, but wanting only to have been a native of Greece, or the Indies, to be esteemed one of the most elegant vegetables in the world. The leaves rising from the root are two feet long, and more than a foot broad, of a beautiful deep green, variegated all over with irregular lines of a milk white, dentated deeply at the edges, and prickly. They spread themselves into a round of more than a yard diameter, and when they grow out of the way of dust, make a most charming appearance. A single stalk rises in the midst of these. It is five feet high, round, thick, very firm, upright, and divided at the top into a few branches. The leaves on it are like those from the root, and variegated with white in the same manner. At the tops stand the flowers, which are of the nature of those of other thistles, but twice as big, and vastly more beautiful. The flowery part

is of a deep and fine purple; the head itself is composed of beautiful scales arranged with great regularity, and each terminating in a single and very strong prickle; the root is long and thick; the seeds are winged with down.

Virtues.] The root and seeds are used. An infusion of the fresh root removes obstructions, and works by urine: it is good against the jaundice. The seeds beaten up into an emulsion with barley-water are good in pleurisies. The young leaves with the prickles cut off, are excellent boiled in the way of cabbage; they are very wholesome, and exceed all other greens in taste.

OXEYE.

Descript.] **A** VERY beautiful wild plant, common in the North of England, but not in other parts of the kingdom. It grows a foot and a half high. The stalk is round, firm, and branched; the leaves are numerous; they are divided each into a multitude of fine segments, so that at a distance they somewhat resemble the leaves of yarrow, but they are whitish. The flowers are large and yellow; they somewhat resemble a marigold in form, and they stand at the tops of the branches.

Virtues.] The fresh herb is used; they boil it in ale, and give it as a remedy for the jaundice: it works by urine.

INDIAN SPIKENARD.

Descript.] **A**N East Indian plant, of the grass kind, with triangular stalks, and yellowish flowers. It resembles not a little that common yellow tufted grass, which is frequent in our meadows in spring. It is six or eight inches high. The leaves are long, narrow, and of a pale green; they are very numerous, and stand in a thick tuft almost growing together at the bases. The stalks rise among these; they are naked, triangular, and of a pale, green colour; the flowers stand in tufts, of the bigness of an horsebean, on the tops of the stalks; they are black-

Col. Eng.

Wild Parsnip

Plitory of the Hall

Speedwell

Spleen Wort

ish, but ornamented with yellow threads, which give the whole a yellowish appearance. This is the plant, some samples of which have been of late brought over as the Indian spikenard, and there is reason and authority for supposing they are so. The tops of the roots have that sort of tuft of hairy matter, which we call Indian spikenard, growing to them; and it is of the nature of the hairy top of the spignel root, owing to the fibres of decayed leaves. Breynius also calls the plant which affords the Indian spikenard, a kind of cyperus grass.

Virtues.] The tuft of fibres at the tops of the root of this plant, is what we call Indian spikenard; they are brown, flat-tish, matted together, and of a pleasant smell: they are good in disorders of the nerves, and hysteric cases; but so many better medicines are at hand, that it is rarely used.

SNEEZEWORT, WITH SERRATED LEAVES.

Descript.] FROM a woody, creeping fibrous root, of a hot biting taste, this plant sends out upright stalks, a foot or more high, stiff, and not much branched, having long narrow leaves, finely serrated about the edges, growing on them without any order; the flowers grow umbel-fashion on the tops of the stalks, consisting of a border of white petala, set about a fistular thrum; they are larger than the flowers of the yarrow.

Place.] It grows in moist meadows, and watery places, and flowers in July.

Virtues.] It is of a hot biting taste; and therefore it is sometimes put into sallads to correct the coldness of other herbs. The roots held in the mouth helps the tooth ach, by evacuating the rheum, like pellitory of Spain; the powder of the herb snuffed up the nose causes sneezing, and cleanses the head of tough slimy humours.

SPEEDWELL.

Descript.] A COMMON little plant in our dry pastures, and on heaths. The stalks are six or eight inches long; the leaves are short, and of an oval figure. The stalks are not upright: they

trail along the ground, only rising at their upper parts. The leaves are of a pale green colour; a little hairy and dentated at the edges: the flowers are small and blue; they grow in slender spikes, arising from the bosoms of the leaves; the root is small and fibrous.

Virtues.] The whole herb is used, and it is best fresh. An infusion of it drank in quantities, works by urine, and opens all obstructions: it promotes the menses. There was an opinion lately that this plant would cure the gout. The dried leaves picked from the stalks, were sold in our markets, and people made a tea of them. The opinion was so prevalent, that the plant was in a manner destroyed for many miles about London; but like all other things, that want truth for their foundation, it came to nothing.

WHITLOW-GRASS.

Descript.] **A** COMMON little plant, early in spring, on our walls and houses, and of a very singular aspect; it is red, and has pretty white flowers. It is not more than four inches high; the stalks are round, upright, and a little hairy; and they are covered with an unctuous clamminess, which makes them stick to the fingers in handling. The leaves are little, and also red; they are each divided into three parts at the extremity, in the way of fingers: they stand irregularly on the stalks, and they are thick, fleshy, and clammy in handling. The flowers stand at the tops of the branches; they are little, but of a very bright white, and look very conspicuous. The whole plant dies away as soon as it has ripened the seed, and is not to be seen again till the next spring.

Virtues.] The fresh gathered plant is to be used entire: a strong infusion of it is a very great sweetener of the blood. It is excellent against the scurvy in whatever form; and there are accounts of its curing the king's evil, that seem very well attested. A syrup may be made of its juice, or of a very strong infusion of it; or a conserve of the leaves: for the dried plant has very little virtue, and it is to be had fresh only a very small part of the year.

(Sweet Flag)

Vervain

WATER ARROW HEAD.

Descript.] A VERY pretty plant, common in our ditches, with leaves like the bearded heads of arrows, and with pretty white flowers. It is two feet and a half high, but generally the greatest part of the stalk is buried in water, very little appearing above, except the spike of flowers. The leaves stand each upon a pedicle, which is round, thick, and very long; they are of a beautiful green, and are broad, and bearded at the base, and sharp at the point; the flowers are white, tolerably large, and very bright; and the stalk, on which they are supported, is also round and thick.

Virtues.] The common people in many places have a custom of applying these leaves bruised to inflammations; they cool and give ease, but it is not always right.

WATER PLANTAIN.

Descript.] A VERY common tall plant in ditches, and having not the least resemblance of any kind of plantain, except in the leaves; from which, however, it has received its name. The root is composed of a great quantity of fibres. From this, there rise in spring a number of leaves, oblong, broad, smooth, and of a beautiful green colour, and having in shape, though not at all in colour or consistence, some slight resemblance of plantain: they are perfectly smooth, of a glossy surface, and brittle. These stand for many months without the stalk; and doubtless in this state it got the name. The stalk is two feet or more in height; round, firm, and upright; and at the top it sends out a vast number of branches, which send out others smaller; and even these last are again divided. On the tops of the last divisions stand the flowers with their buds, and the seed-vessels; so that the whole has the appearance of a cone. The flowers are little and white, and consist of three leaves each: they stand but a little time, and only a few are seen together.

Virtues.] The seed is the part used: the plant is to be suffered to stand, till this is thoroughly ripe, and then cut up gently,

and laid to dry two or three days upon a table: a smart stroke or two, will dislodge a great quantity of the seeds; they are very good against the overflowing of the menses, and all other bleedings; and are given in powder, in electuaries, small doses being to be taken at a time, and often repeated.

WOODRUFFE.

Descript.] **A** COMMON little wild plant, in our woods and thickets: it is ten inches high. The stalk is square, slender, weak, and not able to support itself perfectly upright. The leaves stand several at each joint, encompassing the stalk in the manner of a star; they are oblong, broad, and of a deep green. In their form and manner of growth they much resemble those of common cleavers, but they are larger, though the plant is so much less, and they are not rough as in that plant, but nearly smooth. The flowers stand at the tops of the stalks in little clusters; they are small and white; the seeds stand two together in a globular form. The roots are little and fibrous.

Virtues.] The fresh herb is used, and is best given in a strong decoction; it opens obstructions of the liver and spleen, and is a cordial, and stomachic. It is good in the jaundice.

SEA WORMWOOD.

Descript.] **A** PLANT common in our salt-marshes, and about ditches, where salt water comes. It has somewhat the aspect of wormwood, but the leaves are much narrower in the divisions, and the whole plant is smaller. The stalks are woody, firm, upright, very much branched, and a foot and a half high. The leaves are whitish and small. The flowers stand in loose spikes at the tops of the stalks; they are little and brown; and they very much resemble those of the common wormwood, except for the size. The whole plant has a bitter taste but not disagreeable, and it has a pleasant aromatic smell.

Virtues.] The tops fresh gathered, and the whole plant dry, are used. They call it Roman wormwood at the markets and in the

shops; and it is used for the other; it has the same general virtues. All the three kinds indeed possess them in common; but the common wormwood is the most disagreeable to the taste, and sits worst upon the stomach: this is better than that, but it is much more disagreeable than the true Roman wormwood. It is very strengthening to the stomach; it assists digestion, and prevents wind. It is commonly an ingredient in the bitter infusions, and tinctures of the shops, but it does very well alone; boiling water poured upon it, and suffered to stand till it is cold, then strained off, is an excellent medicine to cause an appetite. Put into white wine, it also gives a pleasant bitter flavour, with the same virtues.

DIRECTIONS.

HAVING in divers places of this treatise promised you the way of making syrups, conserves, oils, ointments, &c. of herbs, roots, flowers, &c. whereby you may have them ready for your use at such times when they cannot be had otherwise; I come now to perform what I promised, and you shall find me rather better than worse than my word.

That this may be done methodically, I shall divide my directions into two grand sections, and each section into several chapters, and then you shall see it look with such a countenance as this is.

SECT. I.

Of gathering, drying, and keeping Simples, and their Juices.

CHAP. 1. <i>Of leaves of Herbs, &c.</i>	Chap. 3. <i>Of Seeds.</i>
	Chap. 4. <i>Of Roots.</i>
Chap. 2. <i>Of Flowers.</i>	Chap. 5. <i>Of Barks.</i>
	Chap. 6. <i>Of Juices.</i>

SECT. II.

Of making and keeping Compounds.

C HAP. 1. <i>Of distilled Waters.</i>	Chap. 9. <i>Of Lohochs.</i>
Chap. 2. <i>Of Syrups.</i>	Chap. 10. <i>Of Ointments.</i>
Chap. 3. <i>Of Juleps.</i>	Chap. 11. <i>Of Plaisters.</i>
Chap. 4. <i>Of Decoctions.</i>	Chap. 12. <i>Of Poultices.</i>
Chap. 5. <i>Of Oils.</i>	Chap. 13. <i>Of Troches.</i>
Chap. 6. <i>Of Electuaries.</i>	Chap. 14. <i>Of Pills.</i>
Chap. 7. <i>Of Conserves.</i>	Chap. 15. <i>The way of fitting Medicines to Compound Diseases.</i>
Chap. 8. <i>Of Preserves.</i>	Of all these in order.

CHAP. 1.

Of leaves of Herbs, or Trees.

1. **O**F leaves, choose only such as are green, and full of juice; pick them carefully, and cast away such as are any way declining, for they will putrify the rest. So shall one handful be worth ten of those you buy in Cheapside.

2. Note what places they most delight to grow in, and gather them there; for betony that grows in the shade, is far better than that which grows in the Sun, because it delights in the shade; so also such herbs as delight to grow near the water, shall be gathered near it, though haply you may find some of them upon dry ground: The treatise will inform you where every herb delights to grow.

3. The leaves of such herbs as run up to seed, are not so good when they are in flower as before (some few excepted, the leaves of which are seldom or never used) in such cases, if through ignorance they were not known, or through negligence forgotten, you had better take the top and the flowers, than the leaf.

4. Dry them well in the Sun, and not in the shade, as the saying of the physician is; for if the Sun draw away the virtues of the herb, it must needs do the like by hay, by the same rule, which

the experience of every country farmer will explode for a notable piece of nonsense.

5. Such as are artists in astrology (and indeed none else are fit to make physicians) such I advise; let the planet that governs the herb be angular, and the stronger the better; if they can, in herbs of Saturn, let Saturn be in the ascendant; in the herbs of Mars, let Mars be in the mid-heaven, for in those houses they delight; let the Moon apply to them by good aspect, and let her not be in the houses of her enemies; if you cannot well stay till she apply to them, let her apply to a planet of the same triplicity; if you cannot wait that time neither, let her be with a fixed star of their nature.

6. Having well dried them, put them up in brown paper, sewing the paper up like a sack, and press them not too hard together, and keep them in a dry place near the fire.

7. As for the duration of dried herbs, a just time cannot be given, let authors prate their pleasure; for,

1st, Such as grow upon dry grounds will keep better than such as grow on moist.

2dly. Such herbs as are full of juice, will not keep so long as such as are drier.

3dly. Such herbs as are well dried, will keep longer than such as are slack dried. Yet you may know when they are corrupted, by their loss of colour, or smell, or both; and, if they be corrupted, reason will tell you that they must needs corrupt the bodies of those people that take them.

8. Gather all leaves in the hour of that planet that governs them.

CHAP. II. *Of Flowers.*

THE flower, which is the beauty of the plant, and of none of the least use in physic, groweth yearly, and is to be gathered when it is in its prime.

2. As for the time of gathering them, let the planetary hour, and the plant they come off, be observed, as we shewed you in the foregoing chapter: as for the time of the day, let it be when

the sun shines upon them, that so they may be dry; for, if you gather either flowers or herbs when they are wet or dewy, they will not keep.

3. Dry them well in the sun, and keep them in papers near the fire, as I shewed you in the foregoing chapter.

4. So long as they retain the colour and smell, they are good; either of them being gone, so is their virtue also.

CHAP. III. *Of Seeds.*

1. **T**HE seed is that part of the plant which is endowed with a vital faculty to bring forth its like, and it contains potentially the whole plant in it.

2. As for place, let them be gathered from the place where they delight to grow.

3. Let them be full ripe when they are gathered; and forget not the celestial harmony before mentioned, for I have found, by experience, that their virtues are twice as great at such times as at others: "There is an appointed time for every thing under the sun."

4. When you have gathered them, dry them a little, and but a little, in the sun before you lay them up.

5. You need not be so careful of keeping them so near the fire, as the other before mentioned, because they are fuller of spirit, and therefore not so subject to corrupt.

6. As for the time of their duration, it is palpable they will keep a good many years; yet they are best the first year, and this I make appear by a good argument. They will grow soonest the first year they be set, therefore then they are in their prime; and it is an easy matter to renew them yearly.

CHAP. IV. *Of Roots.*

OF roots, choose such as are neither rotten nor worm-eaten, but proper in their taste, colour, and smell; such as exceed neither in softness nor hardness.

2. Give me leave to be a little critical against the vulgar re-

ceived opinion, which is, that the sap falls down into the roots in the autumn, and rises again in the spring, as men go to bed at night, and rise in the morning; and this idle talk of untruth is so grounded in the heads, not only of the vulgar, but also of the learned, that a man cannot drive it out by reason. I pray let such sapmongers answer me this argument: If the sap falls into the roots in the fall of the leaf, and lies there all the winter, then must the root grow only in the winter. But the root grows not at all in the winter, as experience teacheth, but only in the summer: Therefore, if you set an apple-kernel in the spring, you shall find the root to grow to a pretty bigness in that summer, and be not a whit bigger next spring. What doth the sap do in the root all that while? Pick straws? It is as rotten as a rotten post.

The truth is, when the Sun declines from the tropic of Cancer, the sap begins to congeal both in root and branch; when he touches the tropic of Capricorn, and ascends to us-ward, it begins to wax thin again, and by degrees, as it is congealed. But to proceed,

3. The drier time you gather the roots in, the better they are; for they have the less excrementitious moisture in them.

4. Such roots as are soft, your best way is to dry in the Sun, or else hang them in the chimney corner upon a string; as for such as are hard, you may dry them any where.

5. Such roots as are great, will keep longer than such as are small; yet most of them will keep a year.

6. Such roots as are soft, it is your best way to keep them always near the fire, and to take this general rule for it: If in winter-time you find any of your roots, herbs or flowers begin to be moist, as many times you shall (for it is your best way to look to them once a month) dry them by a very gentle fire; or, if you can, with conveniency, keep them near the fire, you may save yourself the labour.

7. It is in vain to dry roots that may commonly be had, as parsley, fennel, plantain, &c. but gather them only for present need.

CHAP. V. *Of Barks.*

BARKS, which physicians use in medicine, are of these sorts :
Of fruits, of roots, of boughs.

2. The barks of fruits are to be taken when the fruit is full ripe, as oranges, lemons, &c. but because I have nothing to do with exotics here, I pass them without any more words.

3. The barks of trees are best gathered in the spring, if of oaks, or such great trees ; because then they come easier off, and so you may dry them if you please ; but indeed the best way is to gather all barks only for present use.

4. As for the bark of roots, it is thus to be gotten. Take the roots of such herbs as have a pith in them, as parsley, fennel, &c. slit them in the middle, and when you have taken out the pith (which you may easily do) that which remains is called (though improperly) the bark, and indeed is only to be used.

CHAP. VI. *Of Juices.*

1. **J**UICES are to be pressed out of herbs when they are young and tender, out of some stalks and tender tops of herbs and plants, and also out of some flowers.

2. Having gathered the herb, if you would preserve the juice of it, when it is very dry, (for otherwise the juice will not be worth a button) bruise it very well in a stone mortar, with a wooden pestle, then having put it into a canvas bag, (the herb I mean not the mortar, for that will give but little juice,) press it hard in a press, then take the juice and clarify it.

3. The manner of clarifying it is this : Put it into a pipkin or skillet, or some such thing, and set it over the fire ; and when the scum ariseth, take it off ; let it stand over the fire till no more scum arise ; when you have your juice clarified, cast away the scum as a thing of no use.

4. When you have thus clarified it, you have two ways to preserve it all the year.

(1.) When it is cold, put it into a glass, and put so much oil on it as will cover it to the thickness of two fingers : the oil will

swim at the top, and so keep the air from coming to putrefy it: When you intend to use it, pour it into a porringer, and if any oil come out with it, you may easily skim it off with a spoon, and put the juice you use not into the glass again; it will quickly sink under the oil. This is the first way.

(2.) The second way is a little more difficult, and the juice of fruits is usually preserved this way. When you have clarified it, boil it over the fire, till (being cold) it be of the thickness of honey: This is most commonly used for diseases of the mouth, and is called *roba* and *saba*. And thus much for the first section, the second follows.

SECT. II.

The way of making and keeping all necessary Compounds.

CHAP. I. *Of distilled Waters.*

HITHERTO we have spoken of medicines which consist in their own nature, which authors vulgarly call simples, though something improperly; for in truth nothing is simple but pure elements: all things else are compounded of them. We come now to treat of the artificial medicines, in the form of which (because we must begin somewhere) we shall place distilled waters; in which consider,

1. Waters are distilled of herbs, flowers, fruits, and roots.
2. We treat not of strong waters, but of cold, as being to act Galen's part, and not Paracelsus's.
3. The herbs ought to be distilled when they are in the greatest vigour, and so ought the flowers also.
4. The vulgar way of distillations which people use, because they know no better, is in a pewter still; and although distilled waters are the weakest of artificial medicines, and good for little but mixtures of other medicines, yet they are weaker by many degrees, than they would be were they distilled in sand. If I thought it not impossible, to teach you the way of distilling in sand, I would attempt it.

5. When you have distilled your water put it into, a glass, covered over with a paper pricked full of holes, so that the excrementitious and fiery vapours may exhale, which cause that settling in distilled waters called the mother, which corrupt them, then cover it close, and keep it for your use.

6. Stopping distilled waters with a cork, makes them musty, and so does paper, if it but touch the water: it is best to stop them with a bladder, being first put in water, and bound over the top of the glass.

Such cold waters as are distilled in a pewter still (if well kept) will endure a year; such as are distilled in sand, as they are twice as strong, so they endure twice as long.

CHAP. II. *Of Syrups.*

1. **A SYRUP** is a medicine of a liquid form, composed of infusion, decoction, and juice. And, 1. For the more grateful taste. 2. For the better keeping of it: with a certain quantity of honey and sugar, hereafter mentioned, boiled to the thickness of new honey.

2. You see at the first view, that this aphorism divides itself into three branches, which deserve severally to be treated of, viz.

1. Syrups made of infusion.
2. Syrups made by decoction.
3. Syrups made by juice.

Of each of these (for your instruction-sake, kind countrymen and women) I speak a word or two apart.

1st, Syrups made by infusion, are usually made of flowers, and of such flowers as soon lose their colour and strength by boiling, as roses, violets, peach flowers, &c. My translation of the London Dispensatory will instruct you in the rest. They are thus made: Having picked your flowers clean, to every pound of them add three pounds or three pints, which you will, (for it is all one) of spring water, made boiling hot; first put your flowers into a pewter pot, with a cover, and pour the water on them; then shutting the pot, let it stand by the fire,

to keep hot twelve hours, and strain it out: (in such syrups as purge) as damask roses, peach flowers, &c. the usual, and indeed the best way, is to repeat this infusion, adding fresh flowers to the same liquor divers times, that so it may be the stronger; having strained it out, put the infusion into a pewter bason, or an earthen one well glazed, and to every pint of it add two pounds of sugar, which being only melted over the fire, without boiling, and scummed, will produce you the syrup you desire.

2dly, Syrups made by decoction are usually made of compounds, yet may any simple herb be thus converted into syrup: Take the herb, root, or flowers you would make into a syrup, and bruise it a little; then boil it in a convenient quantity of spring water; the more water you boil it in, the weaker it will be; a handful of the herb or root is a convenient quantity for a pint of water; boil it till half the water be consumed, then let it stand till it be almost cold, and strain it through a woollen cloth, letting it run out at leisure, without pressing: To every pint of this decoction add one pound of sugar, and boil it over the fire till it come to a syrup, which you may know, if you now and then cool a little of it with a spoon: Skim it all the while it boils, and when it is sufficiently boiled, whilst it is hot, strain it again through a woollen cloth, but press it not. Thus you have the syrup perfected.

3dly, Syrups made of juice, are usually made of such herbs as are full of juice, and indeed they are better made into a syrup this way than any other; the operation is thus: Having beaten the herb in a stone mortar, with a wooden pestle, press out the juice, and clarify it, as you are taught before in the juices; then let the juice boil away till about a quarter of it be consumed: To a pint of this add a pound of sugar, and boil it to a syrup, always skimming it, and when it is boiled enough, strain it through a woollen cloth, as we taught you before, and keep it for your use.

3. If you make a syrup of roots, that are any thing hard, as parsley, fennel, and grass roots, &c. when you have bruised them, lay them in steep some time in that water which you

intend to boil them in hot, so will the virtue the better come out.

4. Keep your syrups either in glasses or stone pots, and stop them not with cork nor bladder, unless you would have the glass break, and the syrup lost, only bind paper about the mouth.

5. All syrups, if well made, continue a year with some advantage; yet such as are made by infusion, keep shortest.

CHAP. III. *Of Juleps.*

1. **J**ULEPS were first invented, as I suppose, in Arabia; and my reason is, because the word julep is an Arabic word.

2. It signifies only a pleasant potion, as is vulgarly used by such as are sick, and want help, or such as are in health, and want no money to quench thirst.

3. Now-a-day it is commonly used,

1. To prepare the body for purgation.

2. To open obstructions and the pores.

3. To digest tough humours.

4. To qualify hot distempers, &c.

4. Simple juleps (for I have nothing to say to compounds here) are thus made: Take a pint of such distilled water as conduces to the cure of your distemper, which this treatise will plentifully furnish you with, to which add two ounces of syrup, conducing to the same effect; (I shall give you rules for it in the next chapter) mix them together, and drink a draught of it at your pleasure. If you love tart things, add ten drops of oil of vitriol to your pint, and shake it together, and it will have a fine grateful taste.

5. All juleps are made for present use; and therefore it is in vain to speak of their duration.

CHAP. IV. *Of Decoctions.*

1. **A**LL the difference between decoctions, and syrups made by decoction, is this; syrups are made to keep, decoctions only for present use; for you can hardly keep a decoction a week

at any time; if the weather be hot, not half so long.

2. Decoctions are made of leaves, roots, flowers, seeds, fruits or barks, conducing to the cure of the disease you make them for; and are made in the same manner as we shewed you in syrups.

3. Decoctions made with wine last longer than such as are made with water; and if you take your decoction to cleanse the passages of the urine, or open obstructions, your best way is to make it with white wine instead of water, because this is penetrating.

4. Decoctions are of most use in such diseases as lie in the passages of the body, as the stomach, bowels, kidneys, passages of urine and bladder, because decoctions pass quicker to those places than any other form of medicines.

5. If you will sweeten your decoction with sugar, or any syrup fit for the occasion you take it for, which is better, you may, and no harm.

6. If in a decoction, you boil both roots, herbs, flowers, and seed together, let the roots boil a good while first, because they retain their virtue longest; then the next in order by the same rule, viz. 1. Barks. 2. Herbs. 3. The seeds. 4. The flowers. 5. The spices, if you put any in, because their virtues come soonest out.

7. Such things as by boiling, cause sliminess to a decoction, as figs, quince-seed, linseed, &c. your best way is, after you have bruised them, to tie them up in a linen rag, as you tie up calf's brains, and so boil them.

8. Keep all decoctions in a glass close stopped, and in the cooler place you keep them, the longer they will last ere they be sour.

Lastly, The usual dose to be given at one time, is usually two, three, four, or five ounces, according to the age and strength of the patient, the season of the year, the strength of the medicine, and the quality of the disease.

CHAP. V. *Of Oils.*

1. **OIL** olive, which is commonly known by the name of

salad oil, I suppose, because it is usually eaten with salads by them that love it, if it be pressed out of ripe olives, according to Galen, it is temperate, and exceeds in no one quality.

2. Of oils, some are simple, and some are compound.

3. Simple oils are such as are made of fruits or seeds by expression, as oil of sweet and bitter almonds, linseed and rapeseed oil, &c. of which see in my Dispensatory.

4. Compound oils, are made of oil of olives, and other simples, imagine herbs, flowers, roots, &c.

5. The way of making them is this: Having bruised the herbs or flowers you would make your oil of, put them into an earthen pot, and to two or three handfuls of them pour a pint of oil, cover the pot with a paper, set it in the sun about a fortnight or so, according as the sun is in hotness: then having warmed it very well by the fire, press out the herb, &c. very hard in a press, and add as many more herbs to the same oil; bruise the herbs (I mean not the oil) in like manner, set them in the sun as before; the oftener you repeat this, the stronger your oil will be: At last, when you conceive it strong enough, boil both herbs and oil together, till the juice be consumed; which you may know by its leaving its bubbling, and the herbs will be crisp; then strain it while it is hot, and keep it in a stone or glass vessel for your use.

6. As for chymical oils, I have nothing to say here.

7. The general use of these oils is for pains in the limbs, roughness of the skin, the itch, &c. as also for ointments and plaisters.

8. If you have occasion to use it for wounds or ulcers, in two ounces of oil, dissolve half an ounce of turpentine, the heat of the fire will quickly do it; for oil itself is offensive to wounds, and the turpentine qualifies it.

CHAP. VI. *Of Electuaries.*

PHYSICIANS make more a quoil than needs by half, about electuaries. I shall prescribe but one general way of making

them up; as for ingredients, you may vary them as you please, and as you find occasion, by the last chapter.

1. That you may make the electuaries when you need them, it is requisite that you keep always herbs, roots, flowers, seeds, &c. ready dried in your house, that so you may be in readiness to beat them into powder when you need them.

2. It is better to keep them whole than beaten: for being beaten, they are more subject to lose their strength; because the air soon penetrates them.

3. If they be not dry enough to beat into powder when you need them, dry them by a gentle fire till they are so.

4. Having beaten them, sift them through a fine tiffany searce, that no great pieces may be found in your electuary.

5. To one ounce of your powder add three ounces of clarified honey; this quantity I hold to be sufficient. If you would make more or less electuary, vary your proportion accordingly.

6. Mix them well together in a mortar, and take this for a truth, you cannot mix them too much.

7. The way to clarify honey, is to set it over the fire in a convenient vessel till the scum rise, and when the scum is taken off, it is clarified.

8. The usual dose of cordial electuaries, is from half a dram to two drams: of purging electuaries, from half an ounce to an ounce.

9. The manner of keeping them is in a pot.

10. The time of taking them, is either in a morning fasting, and fasting an hour after them; or at night going to bed, three or four hours after supper.

CHAP. VII. *Of Conserves.*

THE way of making couderves is twofold, one of herbs and flowers, and the other of fruits.

2. Conserves of herbs and flowers, are thus made: If you make your conserve of herbs, as of scurvy-grass, wormwood, rue, and the like, take only the leaves and tender tops (for you

may beat your heart out, before you can beat the stalks small) and having beaten them, weigh them, and to every pound of them add three pounds of sugar: you cannot beat them too much.

3. Conserves of fruits, as of barberries, sloes, and the like, are thus made: First, scald the fruit, then rub the pulp through a thick hair sieve made for the purpose, called a pulping sieve; you may do it for a need with the back of a spoon; then take this pulp thus drawn, and add to it its weight of sugar, and no more; put it into a pewter vessel, and over a charcoal fire; stir it up and down till the sugar be melted, and your conserve is made.

4. Thus you have the way of making conserves; the way of keeping them is in earthen pots.

5. The dose is usually the quantity of a nutmeg at a time morning and evening, or (unless they are purging) when you please.

6. Of conserves, some keep many years, as conserves of roses: others but a year, as conserves of borage, bugloss, cowslips, and the like.

7. Have a care of the working of some conserves presently after they are made; look to them once a day, and stir them about: conserves of borage, bugloss, and wormwood, have got an excellent faculty at that sport.

8. You may know when your conserves are almost spoiled by this: you shall find a hard crust at top, with little holes in it, as though worms had been eating there.

CHAP. VIII. *Of Preserves.*

OF preserves are sundry sorts, and the operation of all being somewhat different, we shall handle them all apart. These are preserved with sugar:

1. Flowers.	3. Roots.
2. Fruits.	4. Barks.

1. Flowers are very seldom preserved: I never saw any that I remember, save only cowslip flowers, and that was a great fashion in Sussex when I was a boy. It is thus done: Take a

flat glass, we call them jar glasses; strew on a laying of fine sugar, on that a laying of flowers, and on that another laying of sugar, on that another laying of flowers, so do till your glass be full; then tie it over with a paper, and in a little time, you shall have very excellent and pleasant preserves.

There is another way of preserving flowers; namely, with vinegar and salt, as they pickle capers and broom-buds; but as I have little skill in it myself, I cannot teach you.

2. Fruits, as quinces, and the like, are preserved two ways:

(1.) Boil them well in water, and then pulp them through a sieve, as we shewed you before; then with the like quantity of sugar, boil the water they were boiled in into a syrup, viz. a pound of sugar to a pint of liquor; to every pound of this syrup, add four ounces of the pulp; then boil it with a very gentle fire to their right consistence, which you may easily know if you drop a drop of it upon a trencher; if it be enough, it will not stick to your fingers when it is cold.

(2.) Another way to preserve fruits is this: First, pare off the rind; then cut them in halves, and take out the core; then boil them in water till they are soft; if you know when beef is boiled enough, you may easily know when they are: Then boil the water with its like weight of sugar into a syrup; put the syrup into a pot, and put the boiled fruit as whole as you left it when you cut into it, and let it remain until you have occasion to use it.

3. Roots are thus preserved: First, scrape them very clean, and cleanse them from the pith, if they have any, for some roots have not, as eringo and the like: boil them in water till they be soft, as we shewed you before in the fruits; then boil the water you boiled the root in into a syrup, as we shewed you before, then keep the root whole in the syrup till you use them.

4. As for barks, we have but few come to our hands to be done, and of those, the few that I can remember are oranges, lemons, citrons, and the outer bark of walnuts, which grow without-side the shell, for the shells themselves would make

but scurvy preserves; these be they I can remember, if there be any more put them into the number.

The way of preserving these, is not all one in authors, for some are bitter, some are hot; such as are bitter, say authors, must be soaked in warm water, oftentimes changing till their bitter taste be fled: but I like not this way, and my reason is this; because I doubt when their bitterness is gone, so is their virtue also; I shall then prescribe one common way, namely, the same with the former, viz. First boil them whole till they be soft, then make a syrup with sugar and the liquor you boil them in, and keep the barks in the syrup.

5. They are kept in glasses, or glazed pots.

6. The preserved flowers will keep a year, if you can forbear eating of them; the roots and barks much longer.

7. This art was plainly and first invented for delicacy, yet came afterwards to be of excellent use in physic: For,

(1.) Hereby medicines are made pleasant for sick and squeamish stomachs, which else would loath them.

(2.) Hereby they are preserved from decaying a long time.

CHAP. IX. *Of Lohocks.*

1. **T**HAT which the Arabians call lohocks, and the Greeks eclegma, the Latins call linctus, and in plain English, signifies nothing else but a thing to be licked up.

2. They are in body thicker than a syrup, and not so thick as an electuary.

3. The manner of taking them is, often to take a little with a liquorice stick, and let it go down at leisure.

4. They are easily thus made: Make a decoction of pectoral herbs, and the treatise will furnish you with enough; and when you have strained it, with twice its weight of honey or sugar, boil it to a lohock; if you are molested with much phlegm, honey is better than sugar, and if you add a little vinegar to it, you will do well: if not, I hold sugar to be better than honey.

5. It is kept in pots, and may be kept a year and longer.

6. It is excellent for roughness of the wind-pipe; inflammations and ulcers of the lungs, difficulty of breathing, asthmas, coughs, and distillations of humours.

CHAP. X. *Of Ointments.*

1. **V**ARIOUS are the ways of making ointments, which authors have left to posterity, which I shall omit, and quote one which is easiest to be made, and therefore most beneficial to people that are ignorant in physic, for whose sake I write this. It is thus done:

Bruise those herbs, flowers, or roots, you will make an ointment of, and to two handfuls of your bruised herbs add a pound of hog's grease dried, or cleansed from the skins, beat them very well together in a stone mortar with a wooden pestle, then put it into a stone pot, (the herb and grease I mean, not the mortar) cover it with a paper, and set it either in the sun, or some other warm place, three, four, or five days, that it may melt; then take it out and boil it a little; then while it is hot, strain it out, pressing it out very hard in a press; to this grease add as many more herbs bruised as before; let them stand in like manner as long, then boil them as you did the former: If you think your ointment is not strong enough, you may do it the third and fourth time; yet this I will tell you, the fuller of juice the herbs are, the sooner will your ointment be strong: the last time you boil it, boil it so long till your herbs be crisp, and the juice consumed, then strain it, pressing it hard in a press, and to every pound of ointment add two ounces of turpentine, and as much wax, because grease is offensive to wounds, as well as oil.

2. Ointments are vulgarly known to be kept in pots, and will last above a year, some above two years.

CHAP. XI. *Of Plaisters.*

1. **T**HE Greeks made their plaisters of divers simples, and put metals into the most of them, if not all; for having reduc-

ed their metals into powder, they mixed them with that fatty substance whereof the rest of the plaister consisted, whilst it was yet hot, continually stirring it up and down, lest it should sink to the bottom; so they continually stirred it till it was stiff; then they made it up in rolls, which, when they needed for use, they could melt it by the fire again.

2. The Arabians made up theirs with oil and fat, which needed not so long boiling.

3. The Greeks emplaisters consisted of these ingredients: metals, stones, divers sorts of earth, feces, juices, liquors, seeds, roots, herbs, excrements of creatures, wax, rosin, gums.

CHAP. XII. *Of Poultices.*

1. **P**OULTICES are those kind of things which the Latins call *cataplasmata*, and our learned fellows, that if they can read English, that's all, call them cataplasms, because it is a crabbed word few understand; it is indeed a very fine kind of medicine to ripen sores.

2. They are made of herbs and roots, fitted for the disease, and members afflicted, being chopped small, and boiled in water almost to a jelly; then by adding a little barley-meal, or meal of lupins and a little oil, or rough sweet suet, which I hold to be better spread upon a cloth, and apply to the grieved place.

3. Their use is to ease pain, to break sores, to cool inflammations, to dissolve hardness, to ease the spleen, to concoct humours, and dissipate swellings.

4. I beseech you take this caution along with you: Use no poultices (if you can help it) that are of an healing nature, before you have first cleansed the body, because they are subject to draw the humours to them from every part of the body.

CHAP. XIII. *Of Troches.*

1. **T**HE Latins call them *placentula*, or little cakes, and the Greeks *prochikois*, *kukliscoi*, and *artiscoi*; they are usually

little round flat cakes, or you may make them square if you will.

2. Their first invention was, that powders being so kept, might resist the intermission of air, and so endure pure the longer.

3. Besides they are easier carried in the pockets of such as travel; as many a man (for example) is forced to travel whose stomach is too cold, or at least not so hot as it should be, which is most proper, for the stomach is never cold till a man be dead; in such case, it is better to carry troches of wormwood, or galangal, in a paper, in his pocket, than to lay a gallipot along with him.

4. They are made thus: At night when you go to bed, take two drams of fine gum tragacanth; put it into a gallipot, and put half a quarter of a pint of any distilled water fitting for the purpose you would make your troches for to cover it, and the next morning you shall find it in such a jelly as the physicians call mucilage: with this you may (with a little pains taken) make a powder into a paste, and that paste into cakes called troches.

5. Having made them, dry them in the shade, and keep them in a pot for your use.

CHAP. XIV. *Of Pills.*

1. **THEY** are called *pilulæ*, because they resemble little balls; the Greeks call them *catapolia*.

2. It is the opinion of modern physicians, that this way of making medicines, was invented only to deceive the palate, that so by swallowing them down whole, the bitterness of the medicine might not be perceived, or at least it might not be unsufferable: and indeed most of their pills, though not all, are very bitter.

3. I am of a clean contrary opinion to this. I rather think they were done up in this hard form, that so they might be the longer in digesting; and my opinion is grounded on reason too, not upon fancy, or hearsay. The first invention of pills was to purge the head; now, as I told you before, such infirmities as

lie near the passages were best removed by decoctions, because they pass to the grieved part soonest; so here, if the infirmity lies in the head, or any other remote part, the best way is to use pills, because they are longer in digestion, and therefore the better able to call the offending humour to them.

4. If I should tell you here a long tale of medicines working by sympathy and antipathy, you would not understand a word of it: They that are set to make physicians may find it in the treatise. All modern physicians know not what belongs to a sympathetical cure, no more than a cuckow what belongs to flats and sharps in music, but follow the vulgar road, and call it a hidden quality, because it is hidden from the eyes of dunces, and indeed none but astrologers can give a reason for it: and physic without reason, is like a pudding without fat.

5. The way to make pills is very easy, for with the help of a pestle and mortar, and a little diligence, you may make any powder into pills, either with syrup, or the jelly I told you before.

CHAP. XV. *The way of mixing Medicines, according to the Cause of the Disease, and Part of the Body afflicted.*

THIS being indeed the key of the work, I shall be somewhat the more diligent in it. I shall deliver myself thus;

1. To the vulgar.
2. To such as study astrology or such as study physic astrologically.

1st, To the vulgar. Kind souls, I am sorry it hath been your hard mishap to have been so long trained in such Egyptian darkness, even darkness which to your sorrow may be felt: The vulgar road of physic is not my practice, and I am therefore the more unfit to give you advice. I have now published a little book, (*Galen's Art of Physic*) which will fully instruct you, not only in the knowledge of your own bodies, but also in fit medicines to remedy each part of it when afflicted; in the mean season take these few rules to stay your stomachs.

1. With the disease, regard the cause, and the part of the body afflicted : for example, suppose a woman be subject to miscarry, through wind, thus do :

(1.) Look abortion in the table of diseases, and you shall be directed by that, how many herbs prevent miscarriage.

(2.) Look wind in the same table, and you shall see how many of these herbs expel wind.

These are the herbs medicinal for your grief.

2. In all diseases strengthen the part of the body afflicted.

3. In mixed diseases there lies some difficulty, for sometimes two parts of the body are afflicted with contrary humours, as sometimes the liver is afflicted with choler and water, as when a man hath both the dropsy and the jellow jaundice ; and this is usually mortal.

In the former, suppose the brain be too cool and moist, and the liver be too hot and dry ; thus do ;

1. Keep your head outwardly warm.

2. Accustom yourself to the smell of hot herbs.

3. Take a pill that heats the head at night going to bed.

4. In the morning take a decoction that cools the liver, for that quickly passeth the stomach, and is at the liver immediately.

You must not think, courteous people, that I can spend time to give you examples of all diseases : These are enough to let you see so much light as you without art are able to receive : If I should set you to look at the sun, I should dazzle your eyes, and make you blind.

2ndly, To such as study astrology, (who are the only men I know that are fit to study physic, physic without astrology being like a lamp without oil) ; you are the men I exceedingly respect, and such documents as my brain can give you at present (being absent from my study) I shall give you.

1. Fortify the body with herbs of the nature of the lord of the ascendant, it is no matter whether he be a fortune or infortune in this case.

2. Let your medicine be something antipathetical to the lord of the sixth.

3. Let your medicine be something of the nature of the sign ascending.

4. If the lord of the tenth be strong, make use of his medicines.

5. If this cannot well be, make use of the medicines of the light of time.

6. Be sure always to fortify the grieved part of the body by sympathetic remedies.

7. Regard the heart, keep that upon the wheels, because the Sun is the foundation of life, and therefore those universal remedies, *Aurum Potabile*, and the philosopher's stone, cure all diseases by fortifying the heart.

CULPEPPER'S

ENGLISH PHYSICIAN,

CONTAINING

THE MEDICAL PART.

A Physical and Astronomical Description of Man.

GOD, the omnipotent and wise Creator, having made all things out of nothing, and from a crude and undigested mass, according to his will, and by his word, brought all things into a decent frame and majestic structure ; out of a confused chaos made the heavens and the earth ; out of that which was dark and void he created light, he separated the waters from the earth, and gave bounds to the unruly waves ; and endued the dry and barren earth with prolific virtue, richly adorning it with grass, herbs, and fruit-trees ; he made the sun, moon, and stars, to divide the light from the darkness, to enlighten and rule both day and night, to be for signs, and to distinguish seasons, days, and years : by his word he created every living thing that moveth.

Having thus far proceeded in his so excellent and admirable workmanship of creation, he made MAN a summary of the world's fabric, a small draught of the divine nature : he was made after all other creatures, not only as the most perfect, but as the superintendant and master, of all things : created *Quod dominetur in*

piscis maris, et in volacres cæli, et in pecudes, et in universam terram, atque in omnia reptilia reptantia super terram. : “To rule over the fish in the sea, and over the fowls of the air, and over cattle, and over the earth, and over every creeping thing.” *Gen. i. 28.*

In man he ended his work; on man he stamped his seal and sign of his power, on him he has imprinted his own image and superscription, his arms and his portraiture. *Dixit Deus, faciamus hominem ad imaginem nostrum, secundum similitudinem nostram* : “God said, let us make man in our image, after our likeness.” *Gen. i. 26.* In the creation of man, God seemed to deliberate and take counsel with himself, how to epitomize and gather together all his works in so small a compass, to contract his book of creation into so small a volume. Hence he is called the *microcosm*, or little world, the recapitulation of all things, the ligament of angels and beasts, heavenly and earthly, spiritual and corporeal, the perfection of the whole work, the honour and miracle of nature. He created him naked, being a pure, neat, and delicate creature, made up of thin, subtile, well tempered and seasoned, humours, innocent, and far more beautiful than the rest.

He was created upright, but little touching the earth, quite opposite to the vegetable plant, whose root is therein fixed; far different also from the beast, who is a mean between a plant and himself, and goeth downward, his two extremes tending to the bounds of the horizon: this upright gait belonging only unto the human species, as the holiest and most divine creature, his head tending to the heavens, on which he looks, and contemplates with grateful adoration the omnipotence of his Creator.

His body being thus formed of pure subtile earth, as a house and habitation for the soul, God breathed into him *the breath of life, and he became a living soul.* *Gen. ii. 7.* So in the ordinary generation and formation, which is made of the seed in the womb, nature observeth the self-same order; the body is first formed, as well by the elementary force, which is in the seed and the heat of the matrix, as by the celestial influence of the

sun ; according to the adage, *Sol et homo generant hominem* : “ The sun and man do engender man ; ” which is done according to the opinion of the most eminent naturalists and physicians, in such order, that the first seven days the seed of the man and the ova of the woman mingle, and they curdle like cream, which is the beginning of conception ; the second seven days, the seed is changed into a formless bloody substance, and concocted into a thick and undigested mass of flesh, the proper matter of the child ; the next seven days, from this mass is produced and fashioned a gross body, with the three most noble parts, viz. the liver, heart, and brain ; the fourth seven days, or near thirty, the whole body is perfected, jointed, and organized, and is fit to entertain the soul, which invests itself into the body (according to the best authority) about the seven-and-thirtieth or fortieth day : at the third month, or thereabout, the infant has motion and sense ; and at the ninth month is brought forth. These times cannot be so exactly prefixed, but that by the strength or debility of the seed or matrix they may be either hastened or prolonged. But I shall not enter minutely upon this subject now, but give a more particular description of it hereafter.

The body of man consists of a number of bones and cartilages, which are the basis and upholding pillars of the whole fabric ; the joints are compacted with many ligaments, and are covered with innumerable membranes : the members are supplied with about thirty pair of sensitive nerves, as with little cords ; and all filled with as many arteries, like water-pipes, conveying vital spirits to all parts ; the empty places are filled up with above four hundred muscles of different sorts, all covered with a skin.

Man, for whom all things were made, is nourished by the balsamic spirits of vegetables, and therefore doth consist of all these faculties, that spring up as a token of health or sickness. The celestial planets have also great influence over him ; the moistening power of the Moon is represented by the marrow which flows from the brain ; in the genital part is Venus seated ; eloquence and comeliness are the effects of nimble-witted Mercury ; the Sun hath a near affinity to the heart ; benevo-

lent Jupiter hath his seat in the liver, the fountain of nutritive blood; the fiery fury of Mars is lodged in the gall; the spongy and hollow milt, the seat and receptacle of melancholic humours, is a perfect representation of the cold planet Saturn. Indeed, the spirits of the body do manifest and hold forth the quintessence of all things. The four humours in man answer to the four elements: as the bile, which is hot and dry, representeth the fire; hot and moist blood, the air; phlegm, cold and moist, water; cold and dry melancholy, the earth. Man is an admirable creature, the universe and epitome of the world, and the horizon of corporeal and incorporeal things. I shall conclude this part with the saying of Zoroaster: "O man: the workmanship of most powerful nature, the most artificial master-piece of God's hands!"

A DESCRIPTION OF THE HEAD.

THE head of man possesses the highest place in the body, and represents the uppermost and angelical region: it is the fort of man's mind, the seat of reason, the habitation of wisdom, the place of memory, judgement, and cogitation: it containeth the brain, cold and spongy by nature, inclosed with two skins, the one, more hard and thick, joining itself to the *dura mater*; the other, more thin and easy, wherein lieth the brain inclosed, called *pia mater*; it is soft and tender to the brain, and nourisheth it, as a loving mother doth her young and tender babe; from the *pia mater* issue the sinews and marrow that descendeth and falleth down through the *vertebræ* of the back to the reins. In the brain is the seat and throne of the rational soul, in which are a very great number of veins and arteries running through all the substance thereof, administering to the brain both spirit and life, vital and nutrimental nourishment, which comes from the heart and liver by very minute or small veins and arteries; and concocted and reconcocted, ela-

borated, and made very subtile, passing through those woven and interlaced, turning and winding, in which labyrinth the vital spirit, often passing and repassing, is perfected and refined, and becomes animal.

The *pia mater* divides the substance of the brain into three certain cells and divisions, the foremost part of which contains the most, the middle part less, and the hindmost part the least. In the foremost part of the brain *imagination* is seated; in the middle, *judgement*; in the hindmost part, *memory*. Imagination is hot and dry in quality, quick and active, from whence it cometh that frantic men, and such as are sick of hot maladies, are excellent in that which belongs to imagination; many, upon such a distemper, have been excellent in poetry and divination; it never sleepeth, but is always working, whether the man be sleeping or waking; and, by the vapours that arise from the heart, from variety of cogitations, which, wanting the regulation of judgement, *when man sleepeth*, becomes a dream.

Hence it appears that subtilty, promptitude, and that which they commonly call *wit*, belongeth to a hot imagination: it is active, stirring, undertaketh all, and sets all the rest to work; it gathers the kinds of figures of things, both present, by the use of the five senses, and absent, by the common sense.

Judgement is seated in the midst of the brain, there to bear rule over the other faculties; it is the seat of the rational soul, and the judge of men's actions: if you would know the mean whereby it knoweth and judgeth of things, some authors have been of opinion, that the spirit knoweth by the help of the senses, and that the understanding without the sense is but as white paper. *Nil est in intellectu, quod non feurit prius in sensu*: "There is nothing in the understanding which was not first in the sense." But this opinion is false, because the seeds of science and virtue are insinuated into our spirits, else is the state of the reasonable soul worse than the vegetative or sensitive which of themselves are able to exercise their functions. It were absurd to think that so noble and divine a faculty should beg assistance of so vile and corruptible a one as the senses, which apprehend

only the simple accidents, not the nature, or essence, of things : and were it so, it must follow, that they who have their senses most perfect should be most witty, whereas we see many times the contrary. Yet let no one think that the spirit hath no service from the senses ; for, in the beginning or discovery and invention of things, the senses do much service to the spirit, but the spirit dependeth not upon the senses. Some are of opinion, that it is hot and moist in quality ; others say, that a dry temperature is proper to the understanding, whereby it came to pass that aged persons excel those in understanding that are young, because, as years increase, moisture doth decrease in the brain ; hence it followeth, that melancholic persons, that are afflicted with want, and fast much, are wise and ingenious, for heaviness and fasting are great driers : *Splendor ficcus, animus sapientissimus, vexatio dat intellectum* ; “ Heat and drought refine the wit, affliction giveth understanding ; ” and that is the reason that great persons, who feed high, and take little or no care, that have nothing to vex them, are for the most part not very wise.

Beasts that are of a dry temperature, as ants, bees, elephants, &c. are cunning and ingenious ; on the contrary, they that are of a moist constitution are stupid and without spirit. Memory is seated in the hinder cell of the brain, as the grand accountant or register ; some say its temperature is cold and dry, and that is thought to be the reason why melancholic people have good memories ; others are of opinion that it is moist, because children have better memories than old men ; men are more apt for memory in the morning, by reason of the moisture gained by sleep in the night ; but, let it be as it may, it is most certain that those who have a good memory are not in general very wise.

It is true that many have been excellent in this faculty. Seneca repeated two thousand names as they were first spoken ; he also, hearing two hundred verses, rehearsed them, and began at the last. Cyrus and Scipio knew every soldier's name in their armies. Mithridates learned the languages of two-and-

twenty nations. Esdras the priest had the whole Jewish doctrine by heart. Julius Cæsar would dictate to four at the same time; and that which is more strange, Pliny would dictate to one, hear another, and read at the same instant. As these were so excellent and acute in memory, others were as dull: Atticus could never learn the letters of the alphabet by heart; others could not count above four. It is said, that Theodore Beza, two years before he died, as he languished, his mind grew so feeble that he forgot things present, yet held those things which were printed in his mind before time, when his understanding and memory were good. What shall we say of Messalla Cornivus, who forgot his own name? or Franciscus Barbarus, of Athens, a very learned man in the Greek tongue, who having received a blow on the head with a stone, forgot his learning which he had spent the greatest part of his life time upon, yet remembered all things else. These things are brought to pass either by the strength or debility of men's genitures, and from directions, and accidents thence proceeding; Wit and understanding, and all the faculties of the soul, depend on a certain temperament; and hence it comes to pass that those who are acute and wise in some things are stupid and dull in others.

OF THE INTERIOR PARTS OF THE HEAD.

THE sensitive faculty has its residence in the *pia mater*; it is that which gives virtue to all the particular senses, and keeps a harmony amongst them: they are five in number, viz. seeing, hearing, smelling, tasting, and feeling; although these are all united in one in the brain, yet operatively they are distinguished in their several seats and places of residence.

The SIGHT resides in the eyes, and particularly in the chrysaline humour; they are two in number, and collateral, planted in the highest stage, as centinels; they are the luminaries of the microcosm; Galen says, the brain and head were made for the eyes, that they might be in the highest, as a beholder in a tower; they are next in nature unto the soul; for in the eye is seen and

known the disturbances and griefs, gladness and joys, of the soul, as love, wrath, and other passions. They are compounded and made of seven tunicles, or coats, and three humours: they proceed out of the substance, they take a pannicle to defend it from annoyance. They meet, and are united into one sinew, about half an inch in length before they enter the skull and after divide into two, each going into one eye; they are called *nervi optici*, the optic nerves, and through these are brought *visible spirits* to the eye.

These are the most noble outward parts of the body, in beauty, utility, mobility, and activity. They are to the visage that which the visage is to the body; they are the face of the face, and, because they are tender, delicate, and precious, they are fenced on all sides with skins, lids, brows, and hair. The object of the eye or sight is colour, (according to the common opinion,) which is an adherent quality in bodies, whereof there are six simples, as white, yellow, red, purple, green, and blue; the compounds are infinite; to speak more fully, the true object is light, which is never without colour, and without which the colours are invisible.

The sense of seeing excelleth all the rest in many things; it apprehendeth farther off, and extendeth itself even to the stars. It is certainly reported, that Strabo had such acute eyes, that from Lilybæum he could discern ships going forth of the Carthaginian haven, and could number them; the distance was one hundred and thirty-five miles. It hath more variety of objects, for to all things, and generally in all, there is a light and colour, the objects of the eyes, as I hinted before. It is most exquisite, in the least and finest thing that presents itself. It is more prompt and sudden, for it apprehendeth even in a moment, and without motion, when the other senses require motion and time. It enjoyeth a liberty incomparable to others: the eye seeth, or seeth not, and therefore hath lids to open or shut: it is active; all the rest purely passive. But that which is most noble in this sense is, that the privation of the object thereof, which is darkness, brings fear, and that naturally, because then a man findeth himself robbed of

so excellent a guide ; the sight in the light is instead of company, wherein man much delighteth.

HEARING is the next sense to be considered, whose residence is in the ears ; it is in quality cold and dry, under the dominion of Saturn. They are placed on the outside of the head, in the self-same height as the eyes are, as the scouts of the body, porters of the spirit, the receivers and judges of the sounds, which always ascend. They have their entrance oblique and crooked, that so the sound may not enter all at once, whereby the sense of hearing might be hindered, and not so well able to judge ; and again, that the sounds, being fugitive, might there lurk, and abide under his shadow, till the instruments of hearing have gotten possession thereof. The sinews, that are the organs of hearing, spring each from the brain, and, when they come to the hole of the ear, they are wreathed together ; the end is like a worm, or little teat, into which is received the sound, and from thence carried to the common wits, to distinguish. The object of the ear, or hearing, is a sound or noise proceeding from the encounter of two bodies ; a pleasant and melodious sound sweeteneth and appeaseth the spirit, consequently the body too, and drives maladies from them both ; the sharp and penetrant doth trouble and wound the spirit. This sense hath many singularities ; for the service of the body, the sight is most necessary, but for the spirit, hearing hath the superiority ; it is spiritual, the agent of understanding ; many that have been blind have been great and wise philosophers, but never any that were deaf. In brief, science, truth, and virtue, have no entrance into the soul but by the ear. Christianity teaches, that faith cometh by hearing, which the sight doth rather hurt than help. Faith is the belief of those things which are not seen, which belief is acquired by hearing. For all these reasons, and many more that might be inserted, the wisest have so much commended hearing, the pure guardian from all corruption, the health of the inward man.

SMELLING is seated in the nose, governed by Mars, and is hot and dry in quality, and therefore martial creatures, or such

as are hot and dry of constitution, excel in this faculty, as dogs, &c. From the brain cometh two sinews to the holes of the brain-pan, where beginneth the concavity of the nose, and these two are the proper organs or instruments of smelling ; they have heads like paps, into which is received the virtue of smelling, and presenting it to the common sense. Over these two organs is placed *collatorium*, or the nostrils, which concavity or ditch was made for two causes : First, that the air, that bringeth the spirit of smelling, might rest therein, till it was received by its proper organs. Secondly, that the excrement of the brain might be hidden under it till it be fit to be ejected. From this concavity go two holes into the mouth, of which we may take notice of three conveniences : first, that when a man's mouth is closed, either by eating or sleeping, air might come through them to the lungs, or he would be forced to keep his mouth open always. Secondly, they are helpful to a man's speech ; for, when one or both of those passages are stopped, a man speaketh in the nose, as we commonly say. Thirdly, they are useful in the cleansing the concavities of the nose either by snuffing or drawing it through the mouth. The object of smell is an odour, or scent, which is a fume rising from an odoriferous object, ascending through the nose to the ventricles of the brain ; the strong and violent hurteth the brain ; the temperate and good doth rejoice, delight, and comfort. This sense is oftentimes very useful in discovering meats and drinks of an evil odour, which otherwise would much prejudice the stomach, and work evil effects in the body of the man.

The TASTE is hot and moist, and under the influence of Jupiter : this sense hath its residence in the palate of the mouth and tongue. Its office is to choose what food is congruous to the stomach, and what not. The skin of the palate of the mouth is the same with the inward part of the stomach, and the same with the way of the meat to the stomach ; and hence it cometh to pass, that when a man is touched upon the palate of the mouth, it tickleth the stomach ; and so much the nearer to the throat, so much more the stomach abhorreth. The object of tasting is

a savour or smack, whereof there are six simple kinds, as sweet, sour, sharp, tart, salt, and bitter; the compounds are many. And, being led to the mouth, it is not amiss if I speak a few words of the composition thereof. In the mouth are five parts to be considered, the lips, the teeth, the tongue, the uvula, and the palate of the mouth, of which I have already spoken. The lips are made of a musculous flesh; their office is first, as the door to the house, to keep the mouth close till the meat be chewed; secondly, they help to pronounce the speech. The teeth, the hardest members, are fastened into the mandible: their office is, first, to grind the meat before it goeth into the stomach, that so it may the better digest; secondly, that it might be a help to the speech, for they that want any of their teeth are defective therein. The number is uncertain, some have more, some have less; they who have their full number have thirty-two. The tongue is a carnous member, compound, and made of many nerves, ligaments, veins, and arteries, ordained principally for three purposes; first, that when a man eateth, the tongue might turn the meat in the mouth till it be chewed; secondly, by the tongue and the palate of the mouth near the root of the tongue, is received the taste of sweet or sour, and thence presented to common senses to pass judgement thereof: thirdly, and principally, the tongue is ordained for the pronunciation of speech, of which faculty I must crave leave to insist on, and that as briefly as may be. Speech is an excellent present, and very necessary, given only unto man, *inimi index & speculum*; it is the interpreter and image of the soul; the heart's messenger: the gate through which doth pass all that lieth within the dark and hidden corners of man: by this the spirit becomes visible. Of all the external and visible parts of the body, that which cometh nearest to the heart is the root thereof, and that which cometh nearest the thoughts is speech: "Out of the abundance of the heart the mouth speaketh." It is a powerful master, and imperious commander; it stirreth up, animateth, exasperateth, appeaseth, maketh sad, merry: it imprinteth whatever passion it handleth; feedeth the soul of the hearer; it ma-

keth him blush, wax pale, laugh, cry, tremble, mad with choler, leap for joy, what not ? It is the agent of all our concerns ; by it we traffic, peace is handled, affairs are managed ; it is the band of human society : hearing and speech answer and are accommodated the one to the other ; by these two the souls are poured the one into the other ; so that, if these two gates be shut (as it is in those that are deaf and dumb), the spirit remaineth solitary and miserable. Hearing is the gate to enter, by it the spirit receiveth all things from without. Speech is the gate to go out, through it the spirit sendeth forth that which was within. From the communication of these two, as from the stroke of two flints, there cometh forth the fire of truth, and so by the polishing and rubbing of these two, knowledge cometh to perfection ; but hearing is the first and principal, for there can nothing come forth which did not first enter ; and therefore he that is deaf altogether by nature is also dumb.

I might enlarge a great deal more in the description of the head, but, my purpose being to declare nothing but what may be pertinent in the manifestation of the human faculties and virtues, I shall conclude this discourse with a word or two of the sense of FEELING, which is of no particular quality, but of all hot, cold, dry, and moist ; it is deputed to no particular organ, but is spread abroad over the whole body ; it is the index of all tangible things, its object then must be heat or cold, drought or moisture, things pleasant and polite, sharp and smarting, motion, rest, tickling. It is known that man and other creatures may live without some particular sense ; it is the opinion of most, that a man cannot live without this sense of feeling, being only necessary unto life ; yet Augustine proveth the contrary, in the fourteenth book, *De Civitate Dei*, by example of a presbyter, that lay as though he were dead, and did not feel those that pulled him, nor would he stir though they burned him with fire ; yet confessed that he could then hear men speak (if they spoke aloud) as though they were far from him, by which it appears, that this he did, not by resisting, but for want of the sense of feeling, which afterwards was restored to him again. I shall pass by

what the English history relates of one Elizabeth Barton, a maid of Canterbury, who oftentimes was deprived of her senses by reason of a disease she had.

I shall also wave disputes concerning the number of the senses, some supposing there are no more in nature than are apparent in us. There may very well be more, yet it is greatly to be doubted that there are; it is impossible for us to know them, to affirm them, or to deny them, because a man shall never know the want of that sense which he never had: one sense cannot discover another; and, if a man want one by nature, yet he knows not which way to affirm it. A man that is born blind, and hath not heard what sight is, cannot conceive that he seeth not, nor desire to see. So man, being not able to imagine more than the five that he hath, cannot know how to judge whether there be more in nature. Who knoweth whether the difficulties that we find in many of the works of nature, and the effects of many creatures which we cannot understand, do proceed from the want of some sense that we have not? There are hidden properties which we see in many things, and a man may say that there are sensible faculties in nature, proper to judge and apprehend them, yet must conclude we have them not; who knoweth whether it be some particular sense that discovereth the hour of midnight to the cock, and moves him to crow, or how beasts are taught to chuse certain herbs for their cure, and many such like wonders?

OF THE STOMACH.

THE Stomach is a member compound and spermatic, sinewy and sensible, wherein is made the first perfect digestion of chyle: it is a necessary member to the body, for if it fails in its operations, the whole fabric is corrupted. It is in the little world the same as the terrestrial globe is in the great world; in it is expressed the sublunary part of the world; in it are contained the parts that serve for nutrition, concoction, and procreation. And this

leads me to discourse of the administering virtues in man, which are here seated, and to wind up all with a touch of the office of the microcosmical stars with as much brevity as may be. The stomach is framed of two panicles, the outer is carnous, the inner nervous, from which is stretched to the mouth the *æso-phagus*, or the way of the meat, by which the stomach draweth to itself meat and drink as with hands. By the virtue of the subtile will, which is in this *musculus longitudinalis*, is made the attractive virtue, which is hot and dry, by a quality active, or principal, which appears by the sun, the fountain of all heat, which is of an attractive quality, which is evident by his attracting and exhaling the humidity from this inferior globe into the airy region, as into the neck or higher part of an alembic; and, being dissolved into water, (by reason of their weight,) fall down again upon the earth, which is the vessel receiving: so, through continued distillations, by sublimation of the water, by cohabation, by drawing off the liquor, (being often poured on,) and fortified by the influence of the celestial and central sun, the body becomes endued with a concoctive, nutritive, and procreative, virtue. So in the stomach, by the active quality of the microcosmical sun, his benevolent rays, and friendly heat, meat and drink are desired, and attracted into the stomach, for the nourishment of the whole body.

In the stomach is a transverse muscle, to withhold or make retention; by this retentive virtue, those things that are brought into the stomach are kept and withholden until nature hath wrought her end, and every faculty hath executed its office. It is in quality cold and dry: cold, because the nature of cold is to compress or hold together, as you may see in ice; dry, because it is the nature of dryness to keep and hold what is compressed. It is under the influence of Saturn, and that is the reason why, for the most part, men that are cold and dry of temperature, or, as astronomers say, Saturnine people, are covetous and tenacious; and that is the reason that old men are naturally covetous, because Saturn ruleth old age, and, by the decay of nature, the temperature becomes cold and dry.

It hath the spleen, the representative of Saturn, lying toward the left side, and furnisheth the stomach with humours necessary to fortify the retentive virtue.

The digestive faculty, which is the chief and most principal (the others like handmaids attending it,) is hot and moist, nature's cook and principal workman, the archæus and central fire which in this philosophical vessel, viz. the stomach, digesteth the victuals into a chaos, or confused mass, that so a natural separation may be made. It is under the influence of Jupiter, who furnisheth it with friendly heat and moisture, by the liver, (the microcosmical Jupiter,) chafing and beating the right side of the stomach.

The stomach hath also a latitudinal muscle, or will, which makes the expulsive faculty; it is naturally cold and moist; cold, to compress the superfluity; moist, to make the matter slippery and fit for ejection, also to work a suitable disposition in the body. It is a necessary operation, by it, after the separation of the pure from the impure, the elements from the *caput mortuum*, or rather *fæces*, is removed and carried away, all that is needless or prejudicial to nature. It is under the dominion of the Moon, (with whom you may join Venus, being of the same nature,) whose epitome or microcosmical substitute, viz. the brain, sendeth a branch of nerves to the stomach, and thereby furnisheth it with humours, cold and moist, fit for expulsion.

OF THE HEART.

THE HEART hath two ventricles or concavities, and the left is higher than the right; the cause of its hollowness is to keep the blood for his nourishing, and the air to abate and temper the great heat which is included and shut up in the concavities.

As he is *sol coporis*, and centre of the rest of the members and ruler of the family, he communicates to them life and motion; yet by his heat he attracts what is needful for himself from the other members, as a subsidy or tax imposed upon his subjects. And

therefore to the right ventricle of the heart cometh a vein from the great vein, which receiveth all the substance of the blood from the liver ; this vein passeth to the right ventricle of the heart, and bringeth a great portion of the thickest and purest blood to nourish the heart. The residue that is left of this is made more subtile through the virtue and heat of the heart, and then sent into a concavity or pit, in the midst of the heart, between the two ventricles ; therein it is made hot and pure, and from thence it passeth to the left ventricle, and there is engendered in a spirit that is clearer, brighter, and subtiler, than any corporeal or bodily thing which is engendered of the four elements, for it is a mean between the body and the soul ; wherefore, of the philosophers, it is likened more to heavenly than earthly things.

From the left ventricle of the heart spring two arteries, the one having but one coat, and therefore is called *arteria venalis*, which carries blood from the heart to the lungs, which blood is vaporous and fit for its nourishment, and carrieth back air from the lungs to refresh the heart.

The other artery hath two coats : it is called, *vena arterialis*, or the great artery, of which springeth all the other arteries, that spread to every member of the body, which carry the spirits, which are the treasures of the soul's virtue ; thus it passeth till it come to the brain, and be made an animal spirit ; at the liver it is made nutrimental, and at the testicles generative. Thus by the heart is made a spirit of every kind, and (like the sun in the heavens) by his royal presence he doth confer life and liberty on his suppliants.

The motion of the heart is wonderful ; it continues to the utmost period of life, day and night, without a single moment's interruption or intermission ; and is performed more than an hundred thousand times every day. Here is, indeed, something like what the mechanists want, under the name of a perpetual motion ; and the stupendous wisdom of the Creator is in nothing expressed more gloriously.

OF THE LUNGS, LIVER, &c.

THE LUNGS are made of a substance very soft and spongi-ous ; supple to draw and inforce from, like a pair of bellows ; they are an instrument of respiration, whereby the heart is refreshed, drawing unto it the blood, the spirits, and the air, and disburthening itself of those fumes and excrements which oppress it. They are naturally cold and dry, accidentally cold and moist ; naturally cold and dry, waving about the heart, abating its heat by a refreshing blast ; they are accidentally moist, by reason of catarrhs and rheums, which they receive from the brain.

There are three principal parts in the lungs : One is a vein coming from the liver, which bringeth with it the crude and undigested part of the chyle to feed the lungs. Another is *arteria venalis*, coming from the heart, bringing the spirit of life to nourish the lungs. The third is *trachia arteria*, that bringeth air to the lungs, and it passeth through all the left part of them to do its office.

The lungs are divided into five portions or pellicles, three on the right side and two on the left side ; that in case any impediment or hurt should happen in any one part, the other should be ready to supply the office.

I shall give no farther description of the lungs, but describe the liver, which is a principal member in the little world, representing the planet Jupiter, *quasi juvenis pater*, hot and moist, inclining towards the right side, under the short ribs. The form of the liver is gibbous, or buncy, on the back side ; on the other side hollow, like the inside of a hand, that it might be pliable to the stomach (as a man's hand is to an apple, or any thing that is round) to further its digestion ; for its heat is to the stomach as the heat of a fire is to the pot which hangeth over it. It is the storehouse of the blood, the fountain of the veins, the seat of the natural nourishing faculty, or vegetative soul, engendered of the blood of that chyle which it draweth from the meseraic veins, and received by the *vena porta*, which entereth into the cavities thereof, and afterwards is sent and distributed through the whole bo-

dy, by the help of *vena cava*, which arise from the bunch or branches thereof, which are in great numbers as the rivers from the ocean.

The natural and nutrimental faculty hath its residence in the liver, and is dispersed through the whole body with the veins, from which are bred four particular humours, viz. blood, choler, phlegm, and melancholy.

Blood is made of meat perfectly concocted, in quality hot and moist, Jupiter's darling, the most perfect and necessary humour (the other three being superfluities, yet necessary too). The blood thus concocted is drawn out by the *vena cava*, whose branches, ramifying upwards and downwards, carry and convey it to all the other members of the body for their nourishment, where, by a third digestion, it is transmuted into flesh.

Choler or bile, is made of meat more than perfectly concocted ; it is the spume or froth of blood ; it clarifieth all the humours, heats the body, and nourisheth the apprehension. It is in quality hot and dry ; it fortifieth the attractive quality, as blood doth the digestive ; it moveth man to activity and valour : it is under the planet Mars, whose residence is in the gall, which is an official member, a purse or panicular vesicle placed in the hollowness of the liver, whose office is to receive the cholerick superfluities, which are engendered in the liver as aforesaid. This purse, or bag, hath three holes or necks. By the first it draweth to itself the choler from the liver, that so the blood be not hurt by the bile, or choler. By the second it sendeth choler to the bottom of the stomach, to fortify the attractive faculty. And, lastly, it sendeth choler regularly to every gut, from one gut to another, to cleanse them from superfluities and dross.

Phlegm is made of meat not perfectly digested : it fortifieth the virtue expulsive, and maketh the body fit for ejection ; it is kind to, and fortifieth the brain by its consimilitude with it ; it is antipathetical to the apprehension, and doth much injure it, therefore phlegmatic persons have but weak apprehensions : it is cold and moist in quality, its receptacle is in the lungs, it is governed by the Moon and Venus ; therefore it qualifies the bile, cools and

moistens the heart, thereby sustaining it and the whole body from the fiery effects which continual motion would produce.

Melancholy is the sediment of blood : it is cold and dry in quality ; it maketh men sober, solid, and staid, fit for study, or any serious employments ; it curbs the unbridled passions incident to the sanguine complexion ; it stayeth wandering and idle thoughts, and reduces them home to the centre ; it is like a grave counsellor to the whole body. It is governed by the planet Saturn, it strengtheneth the retentive faculty, and its receptacle is in the spleen ; which in the body is placed on the left side transversely linked to the stomach.

OF THE REINS AND KIDNEYS.

THE REINS and KIDNEYS are placed within the region of the nutrites backwards, and they are ordained to cleanse the blood from the watery superfluities ; they have two passages : by the one is drawn the water from the *vena kelis*, by two veins, which are called *venæ emulgentes*, the emulgent veins ; and by the other is sent the same water to the bladder, and this is called *poros urithedes*.

The kidneys are made of a hard substance, and full of hard concavities, and therefore the sores of them are hard to cure ; they are harder in substance than any other fleshy member, and that for two causes ; the first is, that they be not much hurt by the sharpness of the urine ; the other is, that the urine that passeth from them might be the better cleansed. The heart sendeth an artery to convey to them blood, heat, spirit, and life. And from the liver there cometh a vein, which bringeth nutrimental blood. Their fatness is as of other members, made of thin blood congealed by cold, there is the greater quantity in this place, because it should temper the heat of the kidneys, which they have from the biting sharpness of the urine.

The next thing is the bladder, which is compounded of two nervous panicles ; in complexion it is cold and dry ; its neck is carnous, and hath two muscles to withhold and to let it go ; in man it is long, and is contained with the yard passing through the

peritonæum ; but in women it is shorter, and is contained with the *vulva*. The place of the bladder is between the share-bone and *longaon*. In women it is between the aforesaid bone and the matrix. In the bladder are implanted the uterus, which bring the urine or water from the kidneys thither, and enter into the holes and panicles thereof, which is done by a natural motion between tunicle and tunicle, till the urine findeth the hole of the nether tunicle, where it entereth privily into the concavity. And the more the bladder is filled with urine, the straiter are the panicles compressed together; the holes are not set one against the other, so that, if the bladder be ever so full, none can go back again.

This is the microcosmical ocean, into which all the rivers of the body discharge themselves. There must needs be more than a watery substance in it, for many times in diseases it is plentifully made, though the patient drinketh little or nothing; and it is observed that creatures that drink nothing will make water. Physicians oftentimes foretel many things by its colour, thinness, and thickness. Salt you know is hid in meats, and that plants have very much salt in them you may find by distilling them: and it is very well known, that by the chemical art many kinds of salt may be fetched out of urine. The artificial *crysocolla* is made of urine. Nitre is made of earth moistened with urine and dung of living creatures.

OF THE GENERATIVE PARTS.

THE instruments of generation are of two sorts, male and female; their use is the procreation of mankind, the operation is by action and passion, the agent is the seed, the patient the blood. Although this cometh to be spoken of in the last place, yet it might have deservedly been put in the first; for nature regards not only the conversation of itself, but to beget its like and conceive its species. Venus hath the principal government of the members of generation, in which members there are many parts deserving our attention.

First; of the genitals of men:—The first thing to be considered is, that which anatomists call *vasa preparantia*, or preparing ves-

sels, which bring blood and vital spirit to the testicles; they are four in number, and before they come to the testicles they make a curious implication, intertexture, or twisting, the one with the other, the arteries into the veins, and the veins into the arteries. which physicians call *corpus varicosum*; some call it *pompini-formis*: the interweaving reacheth down even into the substance of them: their use is to mix the blood and vital spirit together, that so they may have a fit matter to work on.

The testicles are of a white, soft, and spongy substance, full of small veins and arteries; or else, when humours flow to them, they could not swell to such a bigness: their form is oval; of their bigness few are ignorant. Each testicle hath a muscle, which the learned call *cremaster*, which serveth to pull them up in the act of generation, as its name in the Greek signifieth, that so the vessels, being slackened, may better void the seed.

The seed being thoroughly concocted by the testicles, there are two other small pipes called *vasa deferentia*; they are also called spermatic pores: their office is to carry the seed to the seminary vessels, which are to keep it till need requireth its expulsion. From the stones they arise very near to the preparing vessels into the cavity of the belly; then going back again, they turn to the back side of the bladder, between it and the right gut, where they are joined to the seminal vessels, which are soft and spongy, somewhat like kernels, through which passeth the *urethra*, or common passage in the yard both for seed and urine.

Histories make mention, and experience evinceth, that some are born without testicles, some with one. Philip, Landgrave of Hesse, had three; he was so full of seed, and prone to venerous actions, that his wife could not suffer him so often as necessity urged him to it, he otherwise being chaste and honest; he, relating his mind to the priests, with the consent of his wife took a concubine.

It is unnecessary for me here to describe the yard, and all the parts thereof, as their form, office, texture, sympathy, &c. will hereafter be more particularly treated of in the anatomical analysis: in this place therefore I only mean to give a brief touch of the most considerable parts.

I now come to the generative parts of women ; and first of the *clitoris*, which is a sinewy and hard body much like the yard of a man, and suffers erection and falling, causeth lust in women, and giveth delight in copulation : Avicenna calleth it the wand, or *albathara* ; and Albucasis calleth it *tentigo* ; and Fallopius saith, that this hath sometimes grown so big, that women would copulate with others like men : This observe, that the passage of the urine is not through the neck of the womb ; near the passage of the urine are four caruncles or fleshy knobs ; they are called *myrtiformes*, because they resemble myrtle berries ; the uppermost of them is largest and forked, to receive the neck of the passage of the urine ; the others lie below this on the sides, and are to keep back the air or any hurtful thing from the womb. In virgins these knobs are joined together by a thin skin, interlarded with small veins, with a hole in the middle about the bigness of one's little finger, through which passeth the menstruous blood : this skin is a note of virginity, for the first act of copulation breaketh it. I believe that this was that note of virginity which God gave to the Hebrews. These knobs joined together do much resemble a rose not quite blown, therefore called a flower, whence comes the word to deflower a virgin. If I should take upon me to declare the opinions of authors, it would prove (almost) an endless task ; this I shall add, that I conceive it not a certain note of virginity, because it may be broken without the act of copulation ; as, namely, by applying pessaries to provoke the menses, or by a defluxion of sharp humours, &c. but it is probable that the Jewish virgins were more careful of it, their reputation depending thereon.

The womb in figure is almost perfectly round, in virgins about the bigness of a walnut, yet when a woman is conceived with child, it dilates itself to such a capacity, that it is able to contain the child ; the mouth of it is no bigger than to receive the glans of the yard, yet at the delivery, makes room for the child to come out, be it ever so big : this made Galen admire, and it may be a great admiration to all, if we consider the wonderful works of God in the creation of man : he who knows himself may know there is an all-powerful

God! and therefore it was engraven with letters of gold over the porch of the temple of Apollo, the god (according to the Panims) of knowledge and wisdom, this sentence—*Know thyself*—as a salutation unto all ; signifying, that he that would have access unto that divinity, and entrance into that temple, must first know himself.

The womb before conception is small, because the seed, being but little in quantity might be close embraced and cherished. Women have testicles or stones as men have, but they differ from men's in these particulars: they are within the belly in women, in men without; they are not so smooth in women as in men; they are less than the stones of men; they are not staid by muscles, but by ligaments; men's are oval, but women's are flattish; they have but one skin, men's have four, because they are without the body, and exposed to the cold; they are more soft and cold than men's are. But they are ordained both in men and women for the same use, viz. to concoct seed; and, though Aristotle denied seed in women, yet Hippocrates, one of the ancients of physic, was of this judgment; and reason and experience confirm it.

The *vasa preparantia*, preparing vessels, and *vasa deferentia*, carrying vessels, are of the same nature and office as they are in men; they differ only in this, that they are somewhat shorter, having a shorter way to go, the testicles being within the belly in women: but, lest the shortness of the passage should hinder their operation, God and nature have so provided, that they are more twisted and interwoven than they are in men, that they may the better mingle the blood and vital spirit.

Thus have I given you a short description of man, the masterpiece of God's workmanship; and in whom is comprised a small draught of all things in the universe. In man, as in a perspective glass, may our mother-earth with her innumerable offspring be discovered; in him may the unruly and restless waves of the ocean be delineated: nor doth he only epitomize the elemental world, but also the celestial; in him are discovered the prudent, majestic, sumptuous, magnificent, honourable, affable, and humane, solar

quality: the unsteadfast, timorous, soon-daunted, oft-changing, and shifting, temper, among men, answers to the various motions of the low and oft-changing Luna. Others in profundity of imagination, reservedness of words, austerity of actions, &c. are a fit portrait of the melancholy planet Saturn. There are yet a few in the world who are faithful lovers of fair dealing, beneficent to all men, doing glorious, honourable, and religious actions; just, wise, prudent, virtuous, &c. of the temper of benevolent Jupiter. There are (in our apprehensions) too many of the martial temper, who are valiant lovers of wars, frays, and commotions, subject to no reason, bold, confident, willingly obeying no body, &c. Nor is Venus excluded those people's affections who love mirth in words and actions, musical, delighting in venery, drinking, and merry meetings, who trouble not themselves with state-affairs, nor are inquisitive after armies or navies. Nor is Mercury without his party among us, who are subtile and politic, excellent disputants and logicians, sharp-witted, and able to learn any thing, men of unwearyed fancies, and fit for any employment, yet unconstant. The planetary influence in the good or ill disposition of the air is lively represented in man. A healthy sanguine constitution, or a delicate composure of heat and moisture, answers to a serene and temperate air, with seasonable moistening dews and showers, which are the sweet influence of the Sun, Jupiter, and Venus. The feverish, hot and parching, distempers of the body answer to the hot and scorching weather occasioned by the fiery beams of Mars. Nor is the cold, chilly, melancholy, weeping and lamenting, disposition of many people, less represented by the melancholy, dark, cold, and wet weather, proceeding from Saturn's influx. The intellectual world hath also in man its portraiture; witness the soaring contemplations of the soul of man, which cannot (like the body) be confined to any place, but in a moment surrounds this terrestrial globe; nor there content, but as soon mounts itself to the heavens, and searcheth their secret corners; nor there satisfied till he comes to the highest, for by his contemplations (having its original from the uncreated light) he reflects hither, viz. to the divine Majesty of heaven!

ANATOMICAL ANALYSIS

OF THE

HUMAN FRAME.

OF THE SKIN.

THE SKIN is a membranous covering of the body, similar, spermatic, having blood mixed with it, reddish, white, loose, and the instrument of feeling. It hath cutaneous veins and arteries, as also nerves: from the last of which it receives its quickness of sense. From the capillary veins and arteries it receives blood for nourishment and vital spirit for quickening. Its temperature is cold and dry, or rather exquisitely temperate, yet so that it may be the judge of feeling. The skin on the top of the head is thickest, that on the side thin, that on the face and palms of the hands thinner, that on the lips thinnest of all; that on the tops of the fingers is mean, so that the sense of touching may be more perfect: its texture is slight and very full of small holes or pores, for the insensible transpiration of fumes, vapours, and sweat. It takes its colour from the predominant humour, unless it be such from the birth, as in *Æthiopia*. It has a double substance; the one is external, called *cuticula*, or the scarf-skin, because it is placed upon the skin, as a cover or defence, every-where perforated with pores, without blood and without feeling: its connexion is to the true skin, from whence it has its figure and colour; but in black-moors, the *cuticula* being pulled off, the skin itself is white. It has no action, only use, which is to shut the pores of the skin that the ichorous substance may not issue from the veins and arteries; to defend the skin from immoderate heat or cold; and to make it smooth, beautiful, polished, and even. It is generated of a viscous, and oleaginous vapour of the blood. The other is the true skin of which we have first spoken, which is six times thicker than the

scarf-skin ; its pores will appear in winter time, if it be made bare, and exposed to the cold : for where they are, the *cuticula* will appear like a goose-skin. The skin receives two cutaneous veins, through the head and neck, from the jugulars : two through the arms, breast, and back, from the axillaries : two through the lower belly, loins, and legs, from the groins, which are conspicuous in women after hard labour, and in such as have the *varices* in many branches. It has few arteries, and those very small, in the temples and forehead, fingers, scrotum, and yard.

OF THE FLESH.

THE FLESH is a similar, soft, thick, substance, well compacted, made of blood alone, if it be red ; but of blood and seed, if it be white. It is four-fold, viz. muscular, viscerous, membranous, and glandulous ; of which the two first are very red, but the two latter white. Muscular flesh is soft and red, and that which is properly termed flesh. Viscerous flesh is that of the bowels, which is the proper substance of the lungs, heart, liver, spleen, and kidneys ; it is red, hard, fitted to prop up the vessels, and to assist them in their particular and various operations. Membranous flesh is the fleshy substance of every membranous part, as in the gullet, stomach, guts, womb, bladder. Glandulous flesh is the flesh of kernels ; it is white, thick, and spongy, formed of seed, (and therefore cannot properly be called flesh), of which some anatomists make many diversities ; but the true searcher may find the glandules differ not so much in substance as in their use and humour ; which are, first, to support the divisions of the vessels ; secondly, to drink up superfluous humours, because they are of a hollow spongy substance, and are therefore vulgarly termed *emunctories*, or cleansers of the noble parts, those in the neck being accounted cleansers of the head, those in the arm-pits of the heart, and those in the groin of the liver : thirdly, to moisten the parts for their more easy motion, or to prohibit dryness, such are those which are situated by the tongue, larynx, eye corners, &c.

OF THE MEMBRANES.

A MEMBRANE is a similar, spermatic, part; broad, soft, dilatable, white, containing and investing the parts, and carrying sense to them. If, being a hollow body, it receives something as the stomach, bladder gall, eye, it is called *tunica*, a coat; but if it embraces and covers a solid body, it is called *membrana*, a covering: and those which cover the brain are called meninges. It is endued with sense from itself. Membranes are the only true organs of feeling, serving the animal spirits to this purpose. Their use is, to invest the parts of the body, to defend it from injuries by reason of their hardness and compactness, to give them the sense of feeling, to strengthen them, to join parts to parts, and to keep them united; to separate also the parts, and to close the mouths of the vessels. Some membranes are thin, some thick: the thin membranes also differ; for the *periostion* of the ribs is thinner than the *pleura*; the *periostion* of the head is thinner than the *pericranium*; the *pia mater* is thinner than the *dura mater*. The proper membrane of the muscles is thin, and is knit unto the muscles by most thin filaments; its use is to clothe the muscles, to separate them one from another, and to impart to them sense and feeling. The thick membrane is called by some a membranous muscle, by others a nervous or fatty coat; it is called fleshy because in some places, as about the loins, neck, ears, forehead, &c. it retains a fleshy substance; but in the abdomen of a man ripe in years, it has no fleshy appearance at all. Its temperature is hot and moist, having its origin from the blood: it is situated under the fat, and stretched out over the whole body universally, and is the fourth covering of the body, (but in beasts it is next to the skin:) it has no figure but that of the body which it covers: its colour is various in divers places: in the neck, forehead, and privities, it is redder than elsewhere: in some places it is joined to the fat inseparably, in other places it may be separated; and it communicates with the principal parts by the extremities of the veins, arteries, and nerves. It is very sensible, so that the

rigour and trembling of the body depend thereupon: its use is to give foundation to the collecting and generating the fat, and to keep the fat in its due place, as also to divide one muscle from another, and all of them from the other flesh; to clothe the body, cherish the internal heat, and to defend it from external injuries: it sticks close to the fat, to the muscles, and to the ligaments of the bones, and is firmly joined to the back in fashion of a membrane, from whence it is said to arise; it is so closely joined to the *musculus latus*, that in the neck and forehead it can scarcely be separated from it, whereby it is thought to constitute the same: to the skin it sticks by very many veins, some few arteries, branches of nerves, and an innumerable quantity of membranous fibres.

OF A FIBRE.

A FIBRE is a similar spermatic part, dispersed through the skin, flesh, and membranes, to make them the more firm, and being naturally distended to contract again in the same manner. By reason of the various situations thereof, it is said to be either right, oblique, transverse, or round, whereby it may not only help the membrane, but strengthen it, as also the skin and flesh of muscles; and, when dilated, reduce them to their natural state. Each sort of fibre is said to perform a several action: as the right to attract or draw to; the oblique to expel or thrust forth: the transverse to retain or hold; and the round to constrain or bind. But these actions of the fibres are not made so much by their own singular virtue as by the virtue of the member which they serve, or belong unto, from which they have their sense and nourishment; for of themselves they are senseless.

OF A LIGAMENT.

A LIGAMENT, or band, is a similar, spermatic, dry, part, adhering firmly to the bones, tying the parts of the body mutually together. Its substance is solid, white, bloodless, softer than a

gristle, and harder than nerves and membranes; being of a middle substance between them. It is without cavity, sense, or motion: their substance is in some places softer and more membranous than others, as in all ligaments which go about the joints. Their use is like a cord to connect or bind the parts of the body one to another, chiefly the bones, and to keep them so together, that they may not be luxated or disjoined. As to situation, some are within or among the bones, as the gristly ligaments, which are thick and round: some are externally wound about the bones, which are thin and membranous. As to figure, some are broad, which are called membranous: others round and nervous: but they are called membranous and nervous only in respect to their external form or resemblance, not to their internal essence; for they are all void of sense, which they would not be were they composed of the true substance of a nerve or membrane. All the ligaments are solid, none hollow, except the slender ligaments of the womb.

OF A CARTILAGE OR GRISTLE.

A GRISTLE is a similar, spermatic part, drier and harder than a ligament, but moister and softer than a bone, rendering the articulation the more pliable, and defending several parts from external injuries. Some are softer, especially about the joints; others harder, and not much differing from the nature of a bone; and some are in process of time turned into bones, especially in aged people. It is without marrow, cavities, or sense, being endowed neither with nerves nor membranes. Its matter is the same with that of the bones, being a moist earthy part of the seed, partly clammy and gluey, and partly fat, but more viscous than fat: its use is to facilitate motion, that the bones rubbing one against another should not wear and fret; to defend some parts from external injuries, itself being scarcely subject to any: to shape parts prominent or hollow, as in the ears, *larynx*, &c. to fill up hollowness in the joints, as in the knees; to serve for a cover, as in the *epiglottis*; to sustain or under-

prop somewhat, as the gristles of the eye-lids to bear the hairs; and to make a connection or joining of the bones. Their situation, magnitude, and figure, are various, according to the bones they are joined with; their substance is sometimes harder, as those which in time become bony: sometimes softer, resembling a ligament, and are therefore called gristly ligaments; yet, though hard, they are flexible and tough, because encompassed with viscous slimy matter. As to their connection, some constitute parts in themselves, as that of the nose; others grow to the bones which knit them together, without any other medium, as in the share or breast bones; or by common ligaments coming between, as in that joining called loose articulation.

OF A TENDON.

A TENDON is a similar, spermatic, solid, part, cold and dry, having a peculiar substance, continued from the beginning to the end of a muscle, and the chiefest part thereof upon which the action of the muscle depends, and no where to be found out of a muscle. It has a nervous-like substance, yet extremely differing from a nerve; white, thick, hard, smooth, and extended according to the length of the muscle, being ten times bigger than a nerve. Its figure is either solid and round, as in the *musculus biceps*; or plain and membranous, as in the muscles of the abdomen; being also either short or long, and of a uniform substance in all its parts; so that, if it is nervous at the beginning, so it is at the end; but sometimes it is nervous at the end, when the head of it is fleshy; and, if its beginning is like small strings, they are united to form the tendon afterwards. The hard and stiff tendons have much fat about them, to soften them, that they may be the more pleasantly moved; and therefore those fibres dispersed among the flesh are nothing else but the tendon divided, and the tendon nothing else but fibres united; and therefore a tendon is either solid, compact, and united, or else disgregated, severed, and divided into fibres.

United is where the whole tendinous part appears white, and hard, either in the beginning, end, or middle, or in all those parts. Severed or divided, when produced into innumerable small fibres, scarcely discernible to the sight; being compassed about with flesh.

OF THE FAT.

FAT is a similar, soft, oily, white, insensible part: made to preserve the natural heat, to help chylickation, to facilitate motion, to moisten other parts, and to nourish the body in famine. Its substance, is two-fold, viz. grease and suet, which, although it is somewhat solid, yet is soft and oily, as may be perceived by handling: grease or *axungia*, is easily melted, but not so easily congealed; *sævum* or suet is not so easily melted, but more easily hardened. Its origin is from the thinner parts of the blood, sweating through the veins like dew, and congealing about the flesh: this is the essential matter of fat; its efficient cause is a moist and temperate heat, (which is also the quality thereof;) the cause of its congealing is the coldness of the membranes from whence it has its white colour: but this coldness is not simple, but respective to other parts. Melted lead or wax will congeal in hot places if the heat be less then that heat which will melt them: hence Galen determines fat to proceed from coldness; so that the fat, thin, and light, part of the blood, in colder constitutions is reserved; whilst in hotter bodies it turneth to nutriment, so that hot and dry bodies are hardly ever fat. Its situation is immediately under the skin, universally over the whole body, the forehead, eyelids, and privities, excepted: whence it is, that the fatty membrane is as large as the skin, and sticks firmly to it, neither can it be divided from it without scraping; and so also it sticks to the fleshy membrane. It cannot communicate with the principal parts, because it is not truly nourished; nor yet lives, unless by opposition, as stones do, nor is it indeed sensible; therefore it wants both veins, arteries, and nerves, yet all three of them pass through it to the skin. The fat of the belly has three veins: the external mamillary, descending from above; the *vena epigastrica*, arising

from beneath, or out of the crural vein, through the groin; and that coming out of the loins, having many veins accompanied with arteries: through these, and the vessels of the skin, cupping-glasses, and scarifications, draw humours out of the inward parts. It has a great number of kernels, which receive excrements out of the body into themselves; and they are more numerous in sickly persons, and such as abound with excrementitious moisture. Its uses are to cherish the natural heat; to help the concoction of the stomach; to moisten hot and dry parts, such as the heart; to facilitate motion in the principal parts, as in the gristles and jointings of the greater bones, and about certain ligaments, as also in the socket of the eye, lest by its continual motion it should become dry and withered; to serve as a pillow or bulwark against blows, bruises, and contusions, and therefore the palms of the hands, buttocks, and soles of the feet, have plenty of fat; to nourish the body in time of long fasting; to fill up the empty places in the muscles, and to underprop the vessels, that they may pass safely; and lastly, to fill up all the vacuities of the other parts, vessels, and skin, that the body may be rendered smooth, white, soft, fair and beautiful.

Hitherto we have treated of parts absolutely similar; those which are so only in appearance or to sense are in number five, viz. veins, arteries, nerves, muscles, and bones: of all which we shall now treat in order.

OF VEINS.

A VEIN is a similar, spermatic, membranous, round, long, hollow, part, every where joined by anastomoses to the arteries; allotted to receive and contain the blood from them, to be farther concocted, and to be carried to the heart and liver, and to distribute it over the whole body. The original of their dispensation, or place from whence they rise, is the liver, where blood is made; and that the first sanguification is made there, and not in the heart, is apparent, because there are no passages to convey the chylus to the heart, nor any receptacles for the excre-

ments of the first concoction placed by the heart; all which requisites are found in the liver. Moreover blood is carried from the liver to the heart, but not from the heart to the liver: for it cannot go out of the heart into the liver, because of the valves, though immediately, when it runs back out of the arteries, it may be carried thither. Also the *vena cava* and *porta* enter not into the heart, but the liver; and, in a child in the womb, the navel-vein with blood (which nourishes the child) goes not into the heart, but into the liver; nor is sanguification ever hurt but when the liver is hurt. The veins have only one tunicle, with many valves within, especially in the external joints; they are nourished with blood, not with that contained within themselves, but with that from the little arteries; for their connection is such with the arteries, that every vein is for the most part attended with an artery, over which it lies, and which it touches. Galen saith, a vein is seldom found without arteries: but no artery is ever found without a vein. Their form is that of a conduit-pipe: their magnitude according to their place: in the liver, and their original, they are great, because they are hot, soft, and in perpetual motion, and because all the blood in the body passes this way, out of the right into the left ventricle of the heart: in the heart they are great, by reason of its heat, and because it is to furnish the whole body with arterial blood, received in, and sent out, by continual pulsations. The emulgent veins are great, because of the plenty of blood, and serosities, brought back from the kidneys to the *vena cava*: but, where the substance of the part is lasting, and the heat small, the veins are less, as in the brain, bones, &c. and in all parts towards their ends they are very small, and called capillary veins, being divided minutely, sprinkled into, and for the most part confounded with, the flesh; by this way the arterial blood is mediately passed through the porous flesh to the veins; and, by the same way also, blood made of chyle in the liver is infused into the little branches of the *vena cava*. The veins and arteries conspire together, and the veins receive out of the

arteries spirit and blood ; and this is apparent, because, if the veins be quite emptied, the arteries are empty also : moreover, by a vein opened in the arm or hand, all the blood in the body may be drawn out ; also it is necessary in respect of the circular motion of the blood ; and in many places it may be demonstrated to the eye-sight, where the conjunctions of the veins with the arteries are visible. The veins are endowed with feeling both from the nerves that are near them, and from their own membrane, which is one only, where they are inserted into some bowel ; otherwise they are besides invested with a common membrane, or some external thick one, borrowed from the neighbouring parts, when either they are suspended and carried a long way without the bowels and muscles, or when they rest upon hard bodies. This happens in the abdomen to the veins and arteries from the *peritonæum* ; and in the chest from the *pleura*. Their use is to receive the blood not sufficiently elaborated from the arteries, and to return it to the liver and heart, there to be more perfectly concocted. For neither is the venal blood, nor do the veins carry any thing, useful for nutrition : but they bring back all the blood to the heart, only by circulation, either mediately by the liver, as the meseraic veins or immediately, as the *cava* ; and that either from the whole body, from the smallest branches to the greatest, by the upper and lower branch, or, from the liver, whether it be there generated, or is derived from the meseraics and arteries. Hence it appears, that the veins carry and re-carry the blood to the liver, and to this end the valves of the veins do conspire, which are so contrived, that they stand all wide open towards the heart, and afford an easy passage from the smallest veins to the greatest, and from thence to the heart, but, from the heart and great veins being shut, they suffer nothing to go back. The liver sends only to the heart, the heart only to the lungs and all the arteries. Seeing therefore the blood is thus sent into all parts, and cannot now be instantly repaired by diet, nor return back to the heart by the mitre-fashioned valves of the aorta ; nor abide still in the arteries, which are continually moving forward the same ; nor

lastly, that there can be so much spent by the parts to be nourished: it necessarily follows, that what remains over and above is brought back again to the heart, and enters the veins by circulation. The substance of the veins is membranous, that they may the more easily stretch and shrink in again: they have only one tunicle which is proper to them, which is thin and rare: it is so thin, that through it the blood may be received after the parts are nourished, and so be re-carried to the heart, to be there again perfected. The valves of the veins are little foldings, or gates: they are made of most thin little membranes in the inner cavities of the veins, and certain particles as it were of the coats of the veins: they are situated in the cavities of the veins chiefly of the limbs, viz. of the arms and legs, after the glandules of the arm-holes and groins, beginning presently after the rises of the branches, but not in the rises themselves; nor is there any of them in the external small veins, because they need them not; nor in the jugulars (except two in the inner orifice, looking from above downwards), because the blood doth hardly descend upwards; nor in the *vena cava*, because the valves in the divarications do sufficiently hinder the regress of the blood: they are also found in the emulgents, and the branches of the mesentery, looking towards the *vena cava* and *porta*, as also in the milky veins. They all of them look the same way, one after another, towards the heart: and are placed at convenient distances, as two, three, four, or five fingers between each, according to the length of the vessel. As to their magnitude, they are greater where the plenty and recourse of the blood is most vehement, being in form like the nail on a man's finger, or the horned moon, as the sigma-shaped valves of the heart; and in their substance exceeding thin, but very compact, lest they should break by a strong intercourse of the blood. The uses of the valves are, 1. To strengthen the veins, whereas the arteries are otherwise made strong by the double coats. 2. To stop the too violent motion of the blood, lest it should move violently out of the great veins into the little ones, and tear them. 3. To hinder the blood from regurgitating, or going backwards. Hence

the cause of a *varix* is apparent, because thick heavy blood long retained against the valves makes a dilatation; for without the valves the veins would swell uniformly and all of an equal bigness, and not in the manner of *varices*.

The chief veins of the whole body are of three kinds: first, the *vena cava*; secondly, *vena porta*; thirdly, *venæ lacteæ*; from which several other eminent veins arise, having particular denominations. The *vena cava* or *magna* is so called because of its largeness, being the greatest in the whole body, and the original of all other veins which do not proceed from the *vena porta*. It takes its beginning from the liver, where, having spread many veins through the upper parts thereof, they are about the top collected into one trunk, which is presently divided into two parts, viz. the upper or ascending trunk, and the lower or descending trunk.

The ascending trunk of the *vena cava*, which is the greater, perforates the *diaphragma* or midriff, and is spread through the breast, neck, head, and arms. It is carried undivided as far as the *jugulum*, and has four branches; viz. 1. *Phrenica vena diaphragmatica*; the midriff veins, on each side one, which send their branches to the *pericardium* and *diaphragma*. 2. The *vena coronaria*, which is sometimes double, encompassing the basis of the heart, at whose rise a little valve is placed to hinder the blood returning to the trunk; and with a continued passage it is joined to the artery, that it may therefrom receive the blood, which is to return to the cava. 3. *Azygos sine pari*, the solitary vein, sends chief intercostal branches to the eight lower ribs arising about the fifth vertebra of the breast, from the hinder part of the *vena cava*; then about the fleshy appendices of the *diaphragma*, it enters the cavity of the abdomen, where on the left side it is inserted in the emulgent vein; on the right side into the trunk of the cava. 4. *Subclavii*, or branches of the cava by the channel-bones, are divided into only two branches, one on each side; each of which is divided into two others, called the *subclavii*, and *axillaris*. From the *subclavii*, come forth two se-

veral branches, a superior and inferior. From the superior proceeds, first, the *muscula superior*, spread out into the skin and muscles of the hinder part of the neck : secondly, the jugular veins, by the sides of the neck ; and they are either external or internal. The external jugular creeps up to the neck, chin, head and face : under the root of the ear it is divided into internal and external branches : the internal goes to the muscles of the mouth, fauces, hyoides, &c. from this branch spring the veins which are opened under the tongue. The external is propped with kernels, and is divided into two parts : the one is carried to the fore-parts of the face, cheek, and nose ; and in the middle of the forehead, being joined with a branch of the other side, it makes the vein of the forehead ; the other is carried through the sides, the temples, and the *occiput*. The internal jugular is called *apoplecta*, and ascends to the side of *trachea* to which it sends branches : and, going to the basis of the skull in its hinder part, it is divided into two branches : the greater of which is carried backward through the hole of the *os occipitus*, and enters into the cavity of the *dura mater*, or thick meninx of the brain ; the last enters in at the hole or *sinus* of the third and fourth pair, and is carried also to the *dura mater*. From the inferior branch, proceed five veins, the *mammaria*, *intercostalis superior*, *mediastina cervicalis*, and *muscula inferior*.

The *vena axillaris*, or arm-vein, when it comes to the arm-pit, is divided into two veins, viz. the *vena cephalica*, or upper branch ; and the *vena basilica*, or lower branch, to which is added the *mediana*. The *cephalica*, or head-vein, is carried in the surface of the cody between the fleshy membranes and coat of the muscles. The *basilica*, or liver-vein, is placed near a nerve of the third and fourth pair ; and therefore surgeons in opening of it ought to be careful, lest they wound it, from whence follow great pain, fever, convulsion, and death. From the *basilica*, or lower branch, arise two veins : first, *thoracica superior*, which goes into the muscles of the chest, and into women's breasts : 2dly, *thoracica inferior*, which sometimes grows out of the superior, creeping all over the side of the chest ; its branches are joined by anastomosis with the

branches of the *ozygos*, which proceed out of the chest. The *basilica* is divided (under the tendon of the pectoral muscle) into three branches: the first goes with the nerve of the arm, the second is divided into an external, which sends veins to the thumb, fore and middle fingers; and an internal, running along the middle bone of the cubit, sending branches along the fingers to the internal muscle of the hand; the third, called *subcutaneus*, at the inner swelling of the arm, is the inner branch of the *cephalica*, which constitutes in part the *mediana*.

The descending trunk of the *vena cava*, which is smaller and narrower, proceeds undivided as far as the fourth vertebra of the loins; and sends forth the four following branches. 1. *Venæ adiposæ*, which furnish the coats of the kidneys, and their fat, the sinister being commonly higher than the dexter. 2. The *emulgens*, or emulgent veins, descending to the kidneys by a short and crooked passage, bringing back the blood, being purified, from the kidneys to the *vena cava*. 3. The *spermaticæ*, or spermatic veins, the right arising a little below the rise of the emulgent; and the left arising from the emulgent, seldom from the *cava*, sometimes from both. 4. *Lumbares*, or loin-veins sometimes two, three, or four, which are carried between the four vertebra of the loins. 5. After these branches the trunk goes towards the *os sacrum*, and at the fourth vertebræ of the loins it goes under the aorta, and is divided into two branches, called *rami ilii* or *iliaci*, because they go over the *os ilii* and *os pubis*, to the thigh: these iliac branches as soon as they have left the cavity of the belly, are called *venæ crurales*, or the leg veins.

From the *rami ilii* arise two veins: first, *muscula superior*, which sends veins to the *peritoneum*, and muscles of the loins and belly; secondly, *vena sacra*, which is sometimes single, sometimes double, for the marrow of the *os sacrum*. From thence the *ramus iliacus* is forked out on each side into the external greater and internal smaller. From the internal smaller proceed two veins: first, *muscula media*, without, which sends veins to the muscles on the outside of the hip and skin of the buttocks; secondly, *hypogastrica*,

which is sometimes double, sending veins to many parts of the hypogastricum, as to the bladder and its neck, to the penis or yard, to the muscles of the intestinum rectum, whence are the hemorrhoides externæ, and to the lower side and neck of the womb, whence are those veins by which the courses flow in maidens and women with child; but when the courses are naturally voided, they flow from the arteries, as appears from their excellent colour and the common office of the arteries. From the external-greater proceed three veins: 1. *Epigastrica*, which sends branches to the peritoneum and muscles of the abdomen; the principal parts ascend under the right muscles to the mammariæ, with which they are often joined about the navel. 2. *Pubenda*, which sends to the privities in men and women, and goes across to the middle of the os pubis. 3. *Muscula inferior*, which, passing over the hip, serves the muscle and skin of the part; from hence downwards the iliac branches, as soon as they have left the belly, are called *crurals*.

The *crural veins* are interwoven with little glandules in the bending of the thigh, and from them proceed six branches. 1. The *ischias* or *ischiatrica minor*, which is opposite to the *saphæna*, and serves the skin and muscles of the hip. 2. *Ischias* or *ischiatrica major* sends branches to the hip, and a part of the muscles of the calf, and then divides itself into ten branches, bestowing a couple upon each toe. 3. *Poplitea*, the ham-vein, made of a double crural branch, mixed together: it runs strait under the skin behind, through the midst of the bending of the ham to the heel, and sometimes to the skin of the external ancle. 4. *Suralis*, a great vein, and is divided into the external and smaller, and internal and greater; and each of them again into exterior and interior: all which send veins to the muscles of the calves of the legs. Those on the back of the foot, being mixed with the *poplitea*, make the same various texture of veins, which are seen under the skin. 5. *Sepæna*, (so termed from its apparency) or *vena maleoli*, the ancle-vein, is long and large, carried on through the inside of the thigh, between the skin and membrane carnosæ, to the knee; and from thence, by

the inner part of the leg, it runs to the inner ankle, and to the upper part of the foot and toes. 6. The *muscula*, a vein arising from the trunk or branch hidden among the muscles: it is double, and remarkable, giving veins to the muscles of the thigh. As to the veins of both arms and legs, it is to be noted; first, that their various branches send divers twigs outward to the skin, called cutaneous veins: secondly, that even the grand branches are variously distributed in every person, being seldom in one man as they are in another: and that the right arms or legs rarely agree with the left. In opening the veins of the foot, you may indifferently make choice of any, seeing they are all derived from one and the same trunk.

The *vena porta*, or gate-vein, is the next great vein to the cava; its prime original is the *vena umbilicalis*, or navel-vein, the first of all the veins arising from seed, and that by which the child is nourished in the womb; afterwards it rises out of the hollow part of the liver, where with many roots it is inserted. The trunk, before it is divided into lower branches, sends two small veins to the gall-bladder, called *venæ cysticae*; and another vein to the stomach, called *gastrica dextra*, which is divided about the lower orifice of the stomach. Afterwards the trunk is divided into two eminent lower branches, viz. the splenic, and the mesenteric. *Ramus splenicus* goes into the spleen. Before it is divided, it sends from itself two upper branches to the stomach; first *gastrica sinistra*, or *major*, (the largest of all the stomach veins) which afterwards constitute the *coronaria*; then it sends lower branches, one to the omentum or caul, and one to the pancreas. Afterwards the trunk of the *ramus splenicus*, is divided into the upper and lower branches: the former produces the *vas breve* and other little branches carried into the spleen: the latter produce, 1. *Gastroepiploica sinistra*, which runs out upon the bottom of the stomach, and gives many branches both to the stomach itself and to the omentum. 2. *Vena epiplois*, which runs out upon the same parts; and a multitude of other small branches, which are sent up and down all over the spleen. The mesenteric branches of the *vena porta*, called *ramus dexter*, whose principal part goes into the mesentery, sends

forth two veins; one to the middle of the *duodenum*, from whence certain capillary twigs go through the pancreas and omentum upwards; and another to the right side of the stomach and omentum. Afterwards the trunk of the *ramus mesentericus* is divided into two parts, the right and the left. The right-hand branch is two-fold: 1. *Gastroepiploica dextra*, which runs to the bottom of the stomach, and joins with the *gastroepiploica sinistra*, sending branches through the omentum and stomach. 2. The right mesenteric branch itself, which is divided into fourteen nameless little branches, and those again into innumerable other little veins, which are called meseraic veins, and are dispersed into the *jejunum*, *ileon*, *cæcum*, and part of the *colon*. The left hand mesenteric branch, first sends out the *vena hæmorrhoidalis interna*, which diffuses itself through the mesentery, and sends forth branches to the spleen, womb, and *intestinum rectum*, which is the internal hæmorrhoidal vein: hence appears a communion between the womb and the hæmorrhoidal of the anus, and that possibly the courses or terms may be conveyed also this way. Afterwards the left mesenteric branch spreads itself abroad into the left and central part of the mesentery, whence come *vena cæcalis*, which goes to the blind gut; and *ramus mesocolicus*, which from the left side of the stomach goes to the colon. *Vena cava* first receives the cruder blood from the arteries, and remits it to the heart: the *vena porta* takes the blood not sufficiently elaborated from the arteries, and carries it to the liver, for the more perfect concoction and separation of the choler.

The *hæmorrhoidal veins* are situate in the fundament or *intestinum rectum*, and are of two kinds, either internal or external. The internal proceed from the *vena porta*; the external from the *vena cava*, with which the hæmorrhoidal arteries are associated, and through which the humours to be evacuated are carried off. In their evacuation, the internal have a flux, not very plentiful, attended with a great deal of pain; the external emit a flux so large as may sometimes cause death, or some grievous disease, but without any pain at all. The internal descend alone, not associated with arteries; however, the arteries are either hidden, or they de-

pend on arteries not far off: the external descend with arteries to the muscles of the anus; and therefore the external hæmorrhoids may more properly be called *vasa hæmorrhoidalia*, whereby the arteries are included with the veins.

The *venæ lacteæ*, or milky veins, are peculiar passages, much differing from the meseraics: they are called *lacteæ* from milk, which they resemble in whiteness, softness, and fatness. Their situation is in the abdomen, where they are for the most part accompanied with fat, to cherish the natural heat for the attraction and concoction of the chylus. The great lactean vein, lying between the *arteria aorta* and the vertebræ of the loins, covered with fat, runs upward, and, above the heart, ascends by the gullet to the left subclavian vein, where it ends in one, two, or three branches: here a most thin valve occurs at the very end of the vein, looking inwardly, that the chyle might not run back again, or run farther into the arm: out of this subclavian they descend by the ascending trunk of the *vena cava* into the right ventricle of the heart, that there, by the help of the heat and the natural faculty, they may be changed into blood. Their substance is the same with that of a vein itself, which it resembles in all things, the milky juice only excepted: having but a single membrane, though in the mesentery they receive from it another external coat. They grow continually one to another, of an unequal magnitude; being for the most part small, lest the thick and unprofitable parts of the chyle should go into them, or lest they should make a distribution thereof too suddenly: they are also infinite in number, dispersed through the liver, mesentery, pancreas, and bowels. They are colder and moister than the ordinary veins; very thin, exceeding subtil, (where they enter into the body of the liver,) tender, smooth outwardly, rare, but rough by reason of the fibres within them. Their action and use are, 1. To carry or convey the chyle to the liver. 2. To digest and better concoct the chyle, to make it more fit to receive the form of blood in the liver: for the chyle is not changed at all till it comes into the liver, where it grows red by little and little. 3. To shew a ready way for the distribution of

The Arteries of the Human Body

the chyle: that the blood is made in the liver, not in the veins; and that the sucking of the veins is no cause of hunger, because none are carried to the stomach. To shew the causes of some diseases, before obscure: as, of the chylus flux; or hypochondriac melancholy; of an atrophica, or pining away of the body for want of nourishment, by reason of the glandules of the mesentery being filled with schirrous swellings; of intermitting agues quartered in the *mesaræum*, &c.

The best method of tracing the general course of the veins, is to begin with the main trunks or primary veins, and end with their ramifications and capillary extremities, according to their several divisions and subdivisions. In this manner they are traced in the annexed Plate, where fig. 1 represents the veins as attached to the body; fig. 2 the veins abstracted from the body; and fig. 3 the pulmonary vein: of each of which the following is an explanation.

1. Vena cava, (fig. 1 and 2)	10. 10. Auxiliary veins
2. Cava descendens	11. 11. Cephalic veins
3. Cava ascendens	12. 12. Basilic veins
4. Vena azygos	13. 13. Vena mediana
5. 5. Subclavian veins	14. 14. Diaphragmatic, hepatic,
6. 6. Jugular veins external	and renal or emulgent veins
7. 7. Jugular veins internal	15. 15. Spermatic and iliac veins
8. The intercostals	16. 16. Hypogastric, epigastric,
9. 9. The mammary	and crural veins.

Fig. 3. represents the pulmonary vein in the time of expiration; *a*, being its trunk, cut close to the base of the heart; *b, b*, its divisions to the right and left lobe of the lungs; *c*, the canalis arteriosus; *d, d*, the extremities of the arteries freed from the vessicles of the lungs, and their inosculations with the pulmonary vein.

OF THE ARTERIES.

AN ARTERY, is a similar, spermatic, membranous, long, round, hollow, part, a common pipe-like organ, consisting of a double coat proceeding from the heart, joined every where to the

veins, by the assistance of many osculations, containing and carrying the nutritious blood and vital spirits to all parts of the body. It is called *arteria*, from its containing and preserving air or spirit, and therefore the ancients, as, Hippocrates, Plato, and Aristotle, call the wind-pipe *arteria magna* : but Galen makes a distinction, and calls the wind-pipe *aspera arteria*, the rough artery, and those of which we here speak *arteriæ leves*, the smooth arteries, which Aristotle calls sometimes *venam aortam*, and sometimes simply *aorta*. Their matter is a cold clammy part of the seed : the original of their dispensation is the heart, and they proceed out of the left ventricle thereof, and not the middle (as Aristotle would have it) ; and therefore the aorta, or *arteria magna*, proceeds particularly from the left ventricle ; but the *pulmoniac arteria* (falsely called by the ancients *vena arteriosa*) from the right ventricle. Their use is, first, to carry the vital blood and spirits, made in the heart, to all parts of the body : secondly, to breed animal spirits in the noble ventricle of the marrow, (to wit) the brain : thirdly, for the nourishment of the body and all its parts, which are only nourished by the arterial blood, and not by the venal : fourthly, to carry the excrements of the body and blood, either to the outward parts of the body, or to the kidneys, or mesentery or womb, or hæmorrhoidal veins, &c. The arteries flow only by pulsation : whereby, first, the heat of the parts is cooled and tempered : secondly, the nourishing arterial blood is cast continually into the smallest and most remote arteries : which is proved by the continual pulsation of the heart, which drives the blood into the greater arteries : thirdly, the stagnation of the venal blood is thereby prevented : for the pulsation keeps it always in motion, by forcibly casting the more than necessary arterial blood for nourishment into the veins, which convey it to the heart for supply, lest it should be destitute of its sanguine humour by its continual expulsion. The cause of the pulsation, or pulse, is, according to Bartholine, from both the blood filling, and the faculty of the arteries directing. But I judge the cause to be from spirit, wind, air, or breath : for, if you blow

with a reed or pipe being put into water, it will make an apparent pulsation, or bubbling, much more if the water was contained in long narrow vessels with valves, that it might not return back; but, if you suck with the pipe, then it runs smoothly, without pulsation or leaping: therefore the blood in the arteries flows with pulsation, from the expulsive faculty of the heart, caused by its spirits; but it flows in the veins smoothly, or without pulsation because it is sucked or drawn back again by the attractive faculty, caused by want of spirits, or blood, or by their being wasted by the heart's perpetual expulsion. The situation of the arteries is deep, always under the veins both in the external and internal parts, the abdomen, a little below the kidneys, only excepted; for, after that the vena cava and aorta descending from the diaphragma have passed the region of the kidneys, the cava hides itself under the aorta, through all that region, till they pass out of the abdomen; and then the artery again hides itself under the cava. The magnitude of the aorta is very great, but the descendant part is greater than the ascendant, because the number of the internal parts is greater than of the external. The number of arteries is less than of veins, because the passage of the blood is quick through the arteries, but slow through the veins; but there are more arteries than we can well discern, because the capillary arteries are very much like the veins. Their substance is membranous, so that they can be both distended and contracted more than the veins; and it consists of two peculiar tunics; the exterior is thin, soft, and rare, like the tunic of a vein; the interior is compact, hard, and very thick, five times thicker than the tunic of the veins; that thereby the arteries may be strong to endure their perpetual motion, and to keep in their thin and spirituous blood, which would soon vanish and fly away.

The *arteria magna*, or aorta, the great and chiefest artery, comes from the left ventricle of the heart, with a wide orifice; it has a double tunic, the innermost of which is five times thicker, lest, by continual pulsation about the hard and solid parts, it might incur an incurable rupture. From the ventricle

of the heart, before it perforates the *pericardium*, it sends forth to the heart itself the coronary artery, which compasses the basis of the heart, sometimes single, sometimes double. Afterwards coming through the *pericardium* or heart-bag, it is divided into two trunks, the smaller ascending and the greater descending.

The smaller or ascending trunk of the aorta, or *arteria magna*, resting upon the wind-pipe, provides for all the parts about the heart, and is divided into two subclavial branches, the latter rising lower, and going more obliquely to the arm; the others, before they go out of the thorax, (for afterwards they are called *axillares*) produce the *intercostales superiores*, proper to three or four upper ribs; from their upper part arise four arteries: 1. *mammariæ*, which go to the paps; 2. *cervicales*, which go to the muscles of the neck; 3. *arteria musculæ*, which are approximate to the jugular veins; 4. the *carotides*, or sleep-arteries, which are two, unequal, and ascend upwards to the head by the sides of the wind-pipe, being knit to the internal jugulars: when they come to the *fauces*, before they enter the scull, they give branches to the larynx and tongue, and then they divide themselves into the *carotis externa* and *carotis interna*. The *carotis externa*, being the smaller, furnishes the cheeks and muscles of the face: at the root of the ears it is divided into two branches: the first is sent to the hinder part of the ear, whence arise two other branches, which go to the lower jaw, and the root of all the lower teeth; the second goes to the temples, the forehead, and muscles of the face. The *carotis interna* at the saddle of the *os sphæmoides*, under the *dura mater*, makes the *reta mirabile*, then passes through the *dura mater*, and sends forth two branches: the first, which is the smaller, goes with the optic nerve to the eyes: the second which is the greater, ascends to the side of the *glandula pituitaria*, and is distributed through the *pia mater* and the substance of the brain.

When the subclavial branches have left the breast or thorax, they are called *axillares*, and carry nourishment to the outward

part of the breast, and to the whole arm. From the axillares arise the *thoracica superior*, or upper breast artery; *thoracica inferior*, or lower breast-artery; the *scapularis*, or shoulder-blade artery. From the upper part of the axillares arises the *humeralia*; the remainder goes from the axillary on each side to the arm; where it is carried along through the arm, descending between the muscle, with a vein and nerve of the arm. Under the bending of the elbow, it is divided into two branches, the upper and the lower, which accompany the branches of the *vena cava*, and are called by the same names. The upper goes right forwards through the middle to the wrist, where the pulse is commonly felt: from thence, proceeding under the ring-shaped ligament, it bestows branches upon the thumb, fore-finger, and middle finger. The lower branch runs through the *ulna* to the wrist, and sends twigs to the ring or little finger, and so proceeds to the wrist beneath, where the pulse may also be felt, especially in such as are lean, and have a strong pulse; but the beating of the pulse, is much better felt in the upper branch, that being less covered or hid by the tendon.

The descending trunk of the aorta sends out branches from itself unto the thorax, abdomen and thighs. From the thorax it sends forth two arteries: 1. the *intercostales inferiores*, which runs to the intervals of the eight lower ribs, and the neighbouring muscles; 2. the *phrenica*, which sends to the diaphragma or midriff, and *pericardium* or heart bag. The rest of the trunk pierces through the clift of the *septum*, and sends ramifications through the abdomen; some of which go along with branches of the *vena porta*; others the branches of the *vena cava*.

Afterwards the *arteria magna*, or aorta, hastens the beginning of the os sacrum, where it goes above the *vena cava*, and no longer under, lest, by reason of its continual motion, it should be hurt against some bone; and here it is called the iliac artery. It is divided like the *vena cava* into two iliac trunks, and each trunk into an inner and less branch, and into an outward and greater, which go to the thigh. These trunks send out on each side six

branches : 1. The *sacra*, immediately after the bipartition ; 2. *muscula inferior* ; 3. *hypogastrica* ; 4. *umbilicalis* ; which last three come from the inner trunk ; 5. *epigastrica* ; 6. *pudenda* : which two last come from the exterior trunk.

The rest of the artery (out of the abdomen), being carried to the thigh, changes its name, and there makes the crural arteries ; from whence on each side spring branches above and under the ham. Above the ham, from the outward part of the trunk : 1. *muscula cruralis externa*, to the foremost muscles of the thighs, from the inner ; 2 *muscula cruralis interna*, which go to the inner muscles of the thigh ; and this is mixed at the knee with a little twig of the *hypogastrica*. Under the ham arise, 1. *popliteus*, which goes to the hinder muscle of the thigh : 2. *suralis*, which is divided into, 1st, *tibicus exterior* ; 2d, *posterior altus* ; 3d, *posterior humilis*, for the muscles of the leg : 3. the last of them is sent to the foot and toes, all along accompanied with the veins, from which they borrow their names. To enter into a more minute detail of their subdivisions would be useless ; the arteries being all delineated on the annexed plate with references to their several names, as follows :

1. Aorta, cut from its origin, at the left ventricle of the heart. 2. 2. Trunks of the coronal arteries. 3. The three semilunar valves. 4. 4. Subclavian arteries. 5. 5. Carotid arteries. 6. 6. Vertebral arteries. 7. 7. Arteries of the tongue, &c. 8. 8. Temporal arteries. 11. 11. Occipital arteries. 13. 13. Contortions of the carotides. 15. 15. Ophthalmic arteries. 16. 16. Arteries of the cerebellum. 18. 18. Ramifications of the arteries within the skull. 19. 19. Arteries of the larynx. 21. 21. Mammary arteries. 23, 24, 25, 26. Arteries of the arm. 27. Arteries of the hand and fingers. 28. 28. Descending trunk of the aorta. 29. Bronchial artery. 31. 31. Intercostal arteries. 32. Trunk of the cœliac artery. 33. 33. Hepatic arteries. 34. Arteria cystica. 35, 36, 37, 38, 39. Arteries of the stomach, pylorus, and epiplois. 40. 40. Phrenic arteries. 41. Trunk of the splenic artery. 43. 44, 45, 46, 47. Mesenteric arteries. 49. 49. Emulgent arteries. 51. 51. Spermatic arteries. 52. Arteria sacra. 53. 53. Iliac

Fig 2

The Nerves of the Human Body

Fig 1

The Nerves of the Human Body

arteries. 54. 54. 58. 58. Iliaci externi. 55. 55. 59. 59. Iliaci interni. 56. 56. Umbilical arteries. 57. 57. Epigastric arteries. 60. 62. Arteries of the penis and pudendum. 61. 61. Arteries of the bladder. 69. 69. 70. 70. Crural arteries. 72. Arteries of the leg. 73. Arteries of the foot.

OF THE NERVES.

A NERVE or sinew is a similar, spermatic, membranous, long, and white, hollow part : a common organ, serving to carry the animal spirits into all parts of the body for sense and motion. Its efficient cause is the *vis nervifica*, the nerve-making power or faculty : its matter is a cold and clammy part of the seed. The original dispensation is from the *medulla oblongata*, partly as it is within the skull, and partly as it is in the back-bone. Their end and use is to carry the animal faculty with the animal spirits from the brain, for the sense and motion of the whole body. And therefore the nerves inserted into the parts give either sense alone, or both sense and motion, there being neither without help of a nerve : for, a nerve being cut, the sense and motion of the part is lost. But this sense or motion is according to the parts where they are disseminated, because the nerves of themselves are neither sensitive nor motive ; if they are inserted into muscles, (the organs of motion) they are termed *nervi motorii*, motive nerves : if into the instrument of sense, *nervi sentientia*, the sensitive. Their situation is, for security, deeper than that of an artery : their magnitude is various, according to the nature of the organ, and dignity of the action. Those of the eyes are large, because of the action ; those of the limbs very large and thick, because of their distance and magnitude ; those of the sensory parts are in a middle proportion ; those of the nearest parts, as in the muscles of the face, are the smallest of all. The number of the nerves are taken from their conjugations or pairs, and are so called from their coupling or being double ; for they sprout out on both sides, except the last or lowest, proceeding from the spinal marrow. The form or figure of the nerve

is long, round, and smooth, like conduit pipes : solid to appearance, having no such hollowness as the veins and arteries have ; but they have cavities or pores, for the carrying off the animal spirits, though not perceptible to the eyes. The substance of all the nerves is composed of many nervous fibres, which grow mutually together by little membranes ; and this substance is thought to be three-fold : 1. the internal white and marrowish, from the marrow of the brain, but more compact and thickened ; 2. an inner coat, from the *pia mater* ; 3. an outward coat, from the *dura mater* ; but these things sense cannot discover. The substance of the nerves is also either harder or softer : the harder are such as either go a great way, or through some hard body, or by a crooked way, or are ordained for motion, which requires strength ; and all parts which have voluntary motion have hard nerves ; for that which is hard is fitted to act, that which is soft to suffer : the softer nerves are such as are the shortest, and which belong to the organs of the senses, as the seeing, tasting, hearing, and smelling, which last are the softest of all ; and these require soft nerves, as being the objects of suffering. As their use is to carry the animal spirits and faculties into all parts for sense and motion ; so, if they be obstructed in their original, or beginning, or totally, they both perish, and an apoplexy is caused : if the obstruction be but in part, then one part is deprived of sense and motion : if they are cut asunder, the motion of the part into which they are inserted is lost : moreover, the nerves diffuse animal light into the parts, by which they are directed in their operations. Hence it appears how necessary it is for a physician to know the nerves, their original, differences, and distribution, that he may understand to what part of the *spina dorsii* topic medicaments are to be applied, when sense or motion is hurt in the face, neck, arms, hands, muscles of the belly, womb, bladder, anus, yard, thighs, legs, or feet. Moreover, the cause of the gout seems chiefly to be the extravasating of the nervous juice ; for the nervous juice, being over-heated or rarified by too much heat, cannot be contained in its proper place ; but seeking more room

flies out of the solid capacity of the nerve (its proper domicile) into the hollow of the nerve, the channel of the animal spirits, thereby interfering with them, causing an extension of the nerve, opposition, and consequently pain. In the annexed plates all the nerves are delineated, agreeable to the following description and arrangement.

The nerves of the brain are nine pair. 1. The olfactory pair, (fig. 2.) *a. a.* which passing through the os cribrosum, are spread over the membrane of the nostrils. 2. The optic pair, *b b*, which by their expansion form the retina of the eye. 3. The motary pair of the eyes, *c c*, each of which is divided, near the orbit, into six parts, or branches ; of which, in human subjects, the first branch goes to the elevator palpebræ ; the second, to the elevator of the eye ; the third, to the depressor ; the fourth, to the adducent ; the fifth, to the inferior oblique muscle ; and the sixth into the tunics of the eye ; but in other animals, they are divided much otherwise. 4. The pathetic pair, *d d*, which are very small, and run to the trochlear muscle of the eye. 5. The gustatory pair, which are very large, and divided within the cranium into three branches, *ff*, immediately under the dura mater ; of these the first branch, called the ophthalmic, runs to various parts of and about the eye, the eye-lids, the muscles of the forehead and nose, and the integuments of the face. The second branch may be called the superior maxillary one, as being finally distributed through all parts of the upper jaw, the lips, nose, palate, uvula, gums, teeth : a branch of it also runs to the ear, and, joining with a branch of the seventh pair, forms the chorda tympani. The third branch may be called the maxillaris inferior, as being distributed over the several parts of the lower jaw, the tongue, and other parts of the mouth ; whence the whole pair of nerves has obtained the name of *par gustatorium* ; though a great part of them serves to very different purposes, and is carried to parts that have nothing to do with tasting. 6. The abducent pair, *g g*, except a branch for the formation of the intercostal nerve, is wholly carried to the abducent muscle of the

eye: whence its name. The intercostal nerve (fig. 1. and 2.), *i i i*, *l l*, *m*, &c. is formed either of ramifications of the two preceding nerves, or only of those of the sixth pair. It makes its way out of the cranium by the passage of the internal carotid, and descends near the eighth pair through the neck; and thence through the breast and abdomen, even to the pelvis; and, in its way, makes various plexuses and ganglia, and sends branches to almost all the parts contained in the breast and abdomen. 7. The ruditory pair, *h h*, arise with two trunks; the one of which is called the *portio dura*, or hard portion; the other the *portio mollis*, or soft portion. The last enters the foramen of the os petrosum, and thence through various little apertures gets into the labyrinth of the ear, where it is expanded over all its parts, and constitutes the primary organ of hearing. The harder portion, passing the aqueduct of Fallopius, sends back one branch into the cavity of the cranium; it also sends off another branch, which helps to form the *chorda tympani*; and others to the muscles of the tympanum. The rest of this pair goes to the external ear; the pericranium, the muscles of the os hyoides, the lips, the eye-lids, and the parotids. 8. The par vagum, *k k k*, with the *accessorius* of Willis, pass out near the lateral sinuses of the dura mater; and, descending through the neck and thorax to the abdomen, send out branches by the way to the larynx, the pharynx, the heart, the lungs, and especially to the stomach. It also sends off from the upper part of the thorax large branches, which are variously implicated in the neck, thorax, and abdomen, with the linguals, the cervicals, and the intercostals. 9. The lingual pair go immediately to the tongue, and are called by some the motory nerves of the tongue; but, by others, with more justice, the gustatory nerves.

We are to observe, says Heister, that the pair of nerves, which the generality of writers have called the tenth pair of the head, are, for many unanswerable reasons, to be properly called the first pair of nerves of the neck. Of the nerves which arise from the spinal marrow there are properly thirty-two pair. Those

of the neck are no less than eight pair; and from them are innumerable branches distributed through the muscles of the head, the neck, the scapula, and the humerus, marked A, B, C, D, &c. to O O, the eighth and last pair: from the third, fourth, and fifth pair, are formed the nerves of the diaphragm; and the sixth, seventh, and eighth pair, together with P P, the first pair of the back, from the six robust nerves of the arm and hands. To this division is the accessory spinal nerve of Willis to be referred, which arises about the origin of the third or fourth pair.

The nerves of the back are twelve pair, marked PP, QQ, R, S, &c. to Z, and α , β , &c. which, besides the branch they give to the brachial nerves, run entirely in the same furrow along the course of the ribs, and are dispersed over the pleura, the intercostal, pectoral and abdominal, muscles, the breast and other parts of the thorax.

The nerves of the loins are five pair, marked τ , ϕ , ω , Γ , Θ , with their branches ν , χ , ψ , &c. These are in general dispersed over the loins, the peritonæum, and the integuments and muscles of the abdomen: and, besides this their first pair often gives, on each side, a branch of the diaphragm. The second pair, after inosculating with the branches of the first, third, and fourth pair, forms the crural nerves, 6 6, 7 7, 8 8, &c. which are distributed over the anterior part of the thigh: and, in the same manner, a branch is formed of the conjunctions of the second, third, and fourth, pair, which passeth through the great foramen of the os pubis to the scrotum, the testicles and the adjoining parts. The fourth and fifth pair of the nerves of the loins, joining with the first, second, third, and fourth, pair of the os sacrum, compose the nerve called *ischiatric*, which is the largest in the body, being marked 3 3, in fig. 2. it descends along the hinder part of the thigh, and its branches are distributed over the whole leg, the foot, and toes; being marked 15, 17, 18, &c.

The nerves of the sacrum form five or six pair, though not always determinately and regularly so: they pass through the

foramina of this bone, and the superior ones of them, as already observed, compose the ischiatic nerve; and what remains is dispersed, in a multitude of ramifications, over the parts contained in the pelvis, the intestinum rectum, the bladder, the parts of generation, and the parts adjacent. They are marked, in the figure, Λ , Ξ , Π , Σ , &c.

We shall only add, that 1 1, fig. 2, represent the brachial nerves; 2 2, &c. the communications of the vertebral nerves with the intercostals; $l\ l$, remarkable communications between the phrenic nerves and the intercostals; $l\ u, u$, &c. the accessory nerve of the eighth pair; x, x , the phrenic nerves; and z, z , the nerves which go to the testes, uterus, &c.

OF THE MUSCLES.

A MUSCLE, is a similar, spermatic, sanguinous, membranous, fleshy, fibrous, part, and the instrument of voluntary or free motion. It is composed of fibres, for the intention of the motion; of flesh, for the substance; of tendons, which perform the action; of arteries, by which it is nourished; of veins, which carry back the superfluous nourishment; of nerves, which give sense, and convey the motive faculty to the brain; of membranes, which encompass and keep the muscles together; of fat, which moistens them and keeps them from being dried by too much motion. The fibres and flesh are only extended according to the straight position of the fibres; the tendon is in the beginning and end; the arteries and veins run through the substance of the muscle; the nerve, as soon as it is entered into the substance, is dispersed into a great number of twigs, which end in it, and become inconspicuous; the membrane is proper to the muscle only, and springs either from the tendons, or is framed by nature in the first conformation of the parts; the fat lies in void spaces to prevent a vacuum or emptiness. The action of a muscle is voluntary or free motion. This action or motion is three-fold: first, when the muscle is contracted towards its head within itself,

thereby relaxing the opposite muscle : secondly, when the motion is tonic, so that being contracted it remains so ; these two motions are primary, *per se*, and not accidental ; thirdly, when (after contraction) it is relaxed, or restored to its former position, which motion is accidental and proceeds from another : and therefore muscles are always placed one against another as antagonists. The manner of this action or motion varies according to the variety of parts ; for, in the throat, it is swallowing ; in the arm, bending and stretching forth ; in the anus, expulsion and retention, &c. This motion is voluntary or free ; for we can hasten or slacken, make or stop, this motion, as we please ; but there are some singular muscles, as of the inside of the ear, the midriff, the muscles of the chest, and of the eye-lids, whose motion is partly voluntary, partly natural, because they often perform their actions when we have no thought or will thereto. Those muscles which only perform continual or strong motions, which are all such as are appointed for moving the bones, have tendons ; but those which move other parts, as the tongue, lips, forehead, face, bladder, anus, &c. seldom have any ; for the muscles move themselves only, as those of the anus and bladder ; or they move with themselves and the skin also, as in the lips, forehead, and face ; or they move a bone, and such, by reason of the strong motion, require tendons. The diversity of this motion comes from the diversity of the situation : so a straight muscle has a straight motion : a transverse, a transverse motion ; an oblique, an oblique motion ; and that which compasses a part has an orbicular motion, as the sphincters. The efficient cause of these actions, or motions, is the soul of the creature, inclined thereto by the appetite or will : now the soul uses three instruments to perform the action : first, the brain, to receive the charge ; secondly, the nerve, to carry it to the muscle ; thirdly, the muscle, to perform the action itself. The differences of muscles are various : first, from their substance ; some are fleshy, as several of the tongue and larynx ; some membranous, as the constrictores of the nose ; some partly fleshy, partly nervous,

as the temporal muscles : secondly, from their quantity : the greatest of all is the first of those which extend over the breast ; for it ascends from the end of the os sacrum, to the first vertebra of the thorax : the least of all is the internal muscle of the ear : thirdly, from their situation, fourthly, from their figure, or form or number, as the muscle *deltoides* ; the muscle *bicipites*, having two heads ; also some have two tails ; fifthly, from their beginnings ; some proceed from bones, some from cartilages, as those of the larynx ; some from tendons, as the *lumbricales* ; sixthly, from the action ; some move by sympathy, as the *fraterni*, or *congeneres* ; or by antipathy, as the *antagonistæ* ; some move themselves only, as the sphincters ; some move other parts ; some have only one motion, as most of the muscles ; some have more than one, as the *masseter* and *trapezius* ; some are *flexores* some *extensores*, some *rotatores*, some *supinatores*. As to its being a similar part, it is only said to be so according to sense or appearance ; and that is such, it appears, forasmuch as it forms not of itself alone the most simple organical part, as a finger or toe, &c. but they take into their composition, with a muscle, several other similar parts, as bones, cartilages, membranes, skin, &c. Moreover, a truly dissimilar or organical part is only found in itself, not in other parts : but a muscle, as it is but a part of all dissimilar parts, so it goes universally or every where to the constitution of all organical parts, which even the most simple organical parts do not.

The muscles of the head are either proper, from which comes the primary motion upon the first vertebra, to which it is immediately and closely joined, being bent forward and backward, or turned round ; and they are in number eighteen single, or nine pair : or common, which are those, which together with the head move the neck, and these are the muscles of the neck, of which in their proper place. The first pair is called *splenius* or *splenicus*, or *triangularis* ; it proceeds from the first vertebra of the breast, is spread out on each side upon the vertebra, reaching to the third vertebra of the neck, from whence it is carried to the

middle of the occiput: its use is to draw the head directly backwards: but, if only one of the muscles act, the motion is circular to one side. The second pair is called *complexus* or *trigeminus*; it is a large muscle assisting the other. It has divers beginnings at the seventh vertebra of the neck, and at the first, third, and fourth, of the breast, and is after a different manner terminated in the *occiput*. The third pair is called *sub-secundo*, and inserted into the hindermost root of the *processus mamillaris*: its use is lightly to bring the head backwards; or backwards to one side, if but one muscle acts. The fourth pair, called *recti majores*, are small, fleshy, and lean, and spring from the edge of the second spondil or vertebra of the neck, ending in the middle of the occiput. The fifth pair, called *recti minores*, lie concealed under the former, proceeding from the back part of the first spondil, or vertebra of the neck, and is inserted into the occiput; its use is the same with the third and fourth pair. The sixth pair is called *obliqui majores*; it lies beneath and springs from the process of the first vertebra, and ends in the occiput, by the outside of the *recti*. The seventh pair, is called *obliqui minores*; it arises from the second vertebra of the neck, is inserted into the transverse process of the first vertebra, and terminates in the occiput: the use of these two oblique pair is to bring the head about to the sides. The eighth pair, called *mastoïdes*, is placed in the forepart; they arise for the most part double, long, and round, in the fore part of the neck, from the upper part of the *sternum* or breast bone, and midst of the *clavicula*, and is obliquely inserted into the mamillary process, which it embraces; its use is to turn the head. The ninth pair, called *fallopiani*, lies under the throat in the forepart of the neck, and near the first pair of the neck; it arises nervous from the ligaments of the vertebra of the neck, and is inserted into the basis of the head, which it turns in like manner as the former.

The muscles of the forehead have their original from the upper parts of the forehead and skull, near the coronal suture, and being spread out upon the bone thereof, they end at the eye-brows,

that they might lift them up, being served in the midst of the forehead, right above the nose: but knit at the sides to the temporal muscles.

The muscles of the occiput, or hind part of the head, are rather membranes, which draw backwards the skin of the head, in such persons as have the skin moveable.

The two eye-lids are moved by four muscles: the first is the *frontalis*, which is straight, belonging to the upper eye-lid, to lift up the brow. The second is the *musculus ciliaris primus*, which compasses about each of the eye-lids. The third is the *musculus ciliaris secundus*, which is drawn out under the eye-lids, and arising from the circumference of the *orbita*, or socket of the eye; the use of these *ciliares* is to shut the eye-lids. The fourth is *orbicularis major*; it is of a finger's breadth, encompasses the surface of the *orbita*, or socket, and being placed under each eye-lid, and reaching as far as the eye-brow, it closely shuts the eye-lids, by lifting up the lower, and drawing down the eye-brow.

The eye hath six muscles, of which four are straight, and two oblique or circular; they are all seated within the cavity of the skull, and accompany the optic nerve. The first muscle is called *attolens* or *superbus*; it is the upper and thicker, and is the lifter up of the eye, being the proud or scornful muscle. The second is called *deprimens* (the depresser) and *musculus humilis*; it is placed opposite to the other, and draws the eyes downwards towards the cheeks. The third is called *adducens*, the drawer to; also *lectorius*, the reading muscle, because it moves the eye inwards towards the nose. The fourth is called *abducens*, the drawer from, because it draws the eye to the outward corner; it is also termed the *indignatorious*, as being the muscle of indignation. All these four muscles have the same original, progress, and end; the beginning of them all is acute, near the hole where the optic nerve enters into the socket of the eye, from the membrane whereof they arise; their belly is fleshy and round, and their end a very small tendon: by all these four act-

ing together, the eye is kept from stirring. The fifth muscle, called *obliquus major*, or *superiour*, arises from a common beginning with the first four, is carried right out to the inner corner of the eye, where it passes out and ascends in a right angle to the upper side of the cornea : this muscle is the smallest of all, and has the longest tendon, by which it wheels the eye about unto the inner corner. The sixth muscle, called *obliquus internos minor et inferior*, is a short, lean, round and oblique, muscle, seated between the eyes and tendons of the second and third muscle : it springs from the lower and almost outward part of the orbit of the eye, and ascending by the outward corner to the upper part of the eye, is inserted into the *cornea* by the region of the *iris*. It whirls about the eye obliquely downwards to its external or outward corner.

The muscles of the external part of the ear are four pair : of the internal part, two pair ; but in most people the ears are immoveable, because of the smallness of the muscles and little need of their motion. Of the four first muscles, three are common with other parts ; the fourth is proper to itself. The first muscle is called *deprimens*, common to the ear and each lip, and is a part of the first muscle which moves the cheeks and skin of the face, and is called *quadratus*, the square muscle, very thin and broad, and is implanted into the root of the ear, and pulls it down. The second is called *antrorsum ducens*, or the drawer forwards ; it is a part of the frontal muscle, which is carried above the temporal muscle, and is inserted into the upper part of the ear. The third muscle is called *retrorsum ducens*, or *abducens ad posteriora*, the drawer back, and arises from a part of the occipital muscle, above the *processus mammillaris*, with a narrow beginning, from whence, growing broader, it is carried downwards transversely, and inserted into the hinder part of the ear. The fourth muscle is called *triparitus*, or *attolens*, the lifter up ; it arises from the *processus mammillaris*, and being broad it grows narrow by little and little, till at last it ends in a tendon, and is inserted into the root of the ear. This is the only

proper muscle to the ear, and is rather three-fold, because it has three insertions, though all spring from one place. The fifth muscle which belongs to the internal part of the ear is called *externus*; it is very small, springing from the skin and membrane which cover the passage of the ear; then, becoming fleshy, it passeth by a short tendon to the outward part of the *tympanum*, and is inserted about the centre of it. The sixth muscle which belongs to the internal part of the ear, is called *internus*, it is small, and placed within the *os petrosum*, with a double tendon, one part of which is fixed to the higher process of the *malleolus* or hammer, the other to its neck. It arises from the basis of the wedge-like bone, then becomes somewhat fleshy, afterwards narrower, and ends in a double tendon. Its use is to draw the head of the hammer obliquely inward.

The nose has eight muscles, or four pair, especially in large-nosed people, but they are small because the motion of the nose is little. The first pair are called *openers* or *wideners*; they are fleshy, arise from the cheek-bone near the muscle of the lips and sides of the nose; they are inserted partly into a part of the upper lip, partly into the lower wing, and end in the top of the nose. The second pair are called *erectores* or *aperientes*, *openers*: they are mostly triangular, and with a sharp and fleshy beginning spring from the suture of the forehead by the *foramen lachrymale*, under the tear-glandule, and, cleaving to the bone, are outwardly inserted and carried to the *pinnæ*, wings, or sides of the nose. The third pair are called *constringentes*, or *pulling together*: they are little, arise fleshy about the roots of the *pinnæ*, are carried along transversely, and inserted in the corners of the wings: their use is a little to shut the nostrils. The fourth pair are called *deprimentes*: these are exceeding firm and membranous, lie hid under the coat of the nostrils in the inner part: they arise from the extremity of the *os nasi*, and are implanted into the *pinnæ* or wings; their use is to depress the nose, or pull it downwards.

The muscles common to both cheeks and lips are, 1. *Zigomaticus*, or *quadratus detrahens*: it is a thin muscle like a mem-

brane, interlaced with fleshy fibres. It arises from the *vertebræ* of the neck, in the outward side, and ascending up by the oblique fibres to the face is implanted in the chin, and terminated in the meeting of the two lips: this pair draws the lips backwards.

2. *Buccinator*, the trumpeter, or cheek-driver or mover: this pair lieth under the former in the upper part of it; and makes all that part of the cheek which is blown up when a trumpet is sounded. It arises from the top of the gums near the farthest grinders, and ends in each lip. The muscles proper to the lips, are either proper to each, or common to both. The upper lip has two pair of muscles proper to it; the lower has but one. The first pair is *attolens sursum trahens*, which draws the lip upwards: it springs from the corner between the eyes and the nose, and is inserted into the substance of the upper lip. The second pair, called *deorsum movens*, arises from the upper jaw-bone, just in the cavity of the cheeks, under the socket of the eye, thin, but broad and fleshy. The third pair, called *dehorsum trahens*, proper to the lower lip only, arises from the middle of the chin, with a broad beginning, and ascends directly to the middle of the lower lip, which it moves upwards. The muscles common or belonging to both lips are also three pair: First, *oblique sursum trahens* that which obliquely draws upwards. The second pair common is *oblique deorsum trahens*, or *deprimens*, moving the lips obliquely downwards. The third common to both lips, is circular, encompassing and constituting the whole mouth, making the proper substance of the lips: by help whereof, the mouth is pursed or drawn together.

The muscles of the lower jaw are in number twelve, viz. six pair, being six on either side. 1. *Temporalis, crotaphites*, the temporal muscle so called from its situation, because it possesses the cavities of the temples: it is the greatest of all the jaw muscles, being very firm and strong, it runs along under the *os zigoma*, and is by a very strong and nervous tendon inserted into the sharp process of the jaw-bone. Its use is forcibly to pull up the lower jaw, and to shut the mouth. 2. *Massetur*, the chewing-muscle, or first chewer:

it is placed in the cheeks, and arises from a double head. It is inserted into the inferior jaw bone, by a very broad and strong connection. 3. *Alare externum*, the outward wing muscle. It arises from the *os sphænoides*, and the external *processus alaris*, with a beginning partly nervous and partly fleshy, and is inserted into the neck of the lower jaw-bone, and in the inner seat of the head. Its use is to move forward and thrust out. 4. *Massetur internus*, the other chewer, is thick and short, and is implanted into the inner and hinder part of the jaw, with a broad and strong tendon. Its use is to assist the temporal muscle. 5. *Musculus latus*, the double-bellied muscle, or broad muscle. It is nervous in the middle, and fleshy at the ends, and is inserted into the chin, under the bending of the jaw, fastened to a ligament, lest it should go too far back. Its use is to draw the jaw downwards to open the mouth. 6. *Musculus latus*, the broad or broadest muscle. It arises from the upper part of the sternum, the clavícula, and shoulder-point, and covering the whole neck and face, it cleaves firmly to the inferior jaw, and is fixed in the middle of the chin. The four last muscles draw the jaw upwards, and are exceeding strong; the last two only draw it downwards, because it would be apt to depress itself.

The muscles of the *os hyoides* or tongue-bone, which is the foundation of the tongue, are in number four pair. 1. *Sterno-hyoides*: it arises from the inner but upper part of the sternum, and resting upon the wind-pipe lies concealed in the fore-part under the skin. 2. *Genio-hyoides*, which arises from the inner part of the chin, fleshy, broad, short, and is inserted into the middle or hollow of the *os hyoides*. Third, *Stylocerato hyoides*: it arises from the root of the *processus styloides*, being lean, round, and seated under the chin. 4. *Ceraca hyoides*: it arises at the first, small, lean, and long, from the upper side of the *scapula*, becomes fleshy about the neck, and passing under the levator of the shoulder-blade, is inserted into the point of the *hyoides*. This pair is long, and has two bellies, being extenuated in the middle like a tendon.

The muscles moving the tongue are in number five pair: 1. *Styloglossum*, arising from the outside of the *appendix styloides*, and

ending with transverse fibres, in both sides of the tongue; it moves the tongue inwards; and by reason of the interwoven fibres, they lift the tongue upwards, if they act both together; or upwards only on one side, if only one acts. 2. *Myloglossum*, arising from the sides of the lower jaw, at the roots of the grinding teeth, and ending under the basis of the tongue in the ligament: when both act, they move the tongue to the palate and upper teeth; but when one acts the tongue is moved obliquely upwards. 3. *Genioglossum*, arising inwardly from the middle of the chin, and terminating almost in the middle of the tongue inwardly. Its use is to thrust the tongue out of the mouth, and also to draw it in again, so that it seems to perform contrary actions. 4. *Hypsiloglossum*, arising fleshy out of the upper and middle region of the os hyoides, runs along according to the length of the tongue; and is terminated into the middle of it: this pair draws the tongue inward. 5. *Ceratoglossum*, which arises from the upper horns of the hyoides, and is obliquely inserted into the sides of the tongue, near the root thereof. It moves the tongue downward toward the inward parts, when both act; but to the right or left side, if only one be contracted.

The muscles of the larynx, or windpipe, are either common or proper: the common are two pair, *sternothyroides* and *hyothyroides*. 1. *Sternothyroides* arises from the inner side of the sternum, runs along by the larynx, and is inserted beneath into the sides of the scutiformis, or shield-fastened gristle. This straightens the chink of the larynx, by drawing down the scutiformis. *Hyothyroides*, arises from the lower side of the os hyoides, being broad and fleshy, and touches the scutiformis, and is inserted into its basis; it widens the chink by lifting up the scutiformis. These common muscles are implanted into the larynx, but do not arise therefrom. The proper muscles are five pair: 1. *Thyrocyroides*, arises from the lowest part of the scutiformis, and ends at the annularis, and is inserted into the lateral parts of the thyroides. 2. *Crycothyroides*, rises from the hinder side of the annularis, fleshy; and is inserted into the lower part of the *glottalis*, with a nervous end,

opening the larynx, by drawing asunder the two gristles called *arytenoides*. 3. *Crycoarythenoides lateral*, springs above from the side of the annularis, and is implanted at the sides of the glottalis into the joint, and opens the larynx with the same oblique motion of the gristles. 4. *Thyroarytenoides*, or *glottoides*; this helps the former, and, springing from the inner and forepart of the thyroides, is terminated into the lateral part or sides of the glottalis, or arytenoides, which shuts the larynx by a straight passage; if this pair is inflamed in a quinsy, it is mortal, because it exactly shuts the chink. 5. *Arytenoides*, is a round muscle, compassing the ewer-like cartilage: it arises from the hinder line of the guttalis, and, being carried along with transverse fibres, is inserted into the sides thereof.

The *uvula* has two pair of muscles, two on either side, viz. an external and internal pair. 1. *Ptery-staphylinus externus* rises from the upper jaw and under the last grinding tooth, ends in a small tendon, which passes through a chink on the upper side of the pterygoides. 2 *Ptery-staphylinus internus* proceeds from the lower part of the internal wing of the pterygoides, and ascending according to the longitude of the wing is inserted in like manner into the *uvula*.

The *pharynx* or throat which is the beginning of the *æso-phagus* or gullet, has seven muscles belonging to it, viz. three pair, and one without a fellow. 1. *Sphæropharingæus*, which springs from the sharp point of the *sphænoides*, and, passing downwards, is inserted into the lateral parts of the *pharynx*, or throat, to pull up the mouth of the stomach, that it may receive the meat. 2. *Chephalepharyngæus*, which springs from the part where the head is joined to the neck, and running down, is spread about the *pharynx* or *æso-phagus*, seeming to make the membrane of it. 3. *Stylopharingæus*, which springs from the styloides process, and is inserted into the sides of the *pharynx*, both to dilate and amplify it. 4. *Æso-phagus*, the muscle without a fellow, being only a spincture-like muscle, encompassing the gullet. It springs from one side of the thyroides, and circularly encompassing the hinder

part of the pharynx is tied to both the sides of the thyroids, to contract the mouth of the stomach as the spincter doth the anus.

The muscles of the neck are four pair. The two first pair, to wit, *musculus longus* and *musculus scalenus*, bend the neck; the two latter pair, viz. *musculus transversalis* and *musculus spinatus* extend it. 1. *Longus*, lies under the *æso-phagus* or *gullet*, springs from the fifth vertebra of the breast, with a beginning fleshy and sharp, ascends laterally, annexed to all the bodies of the vertebræ, terminating in the extuberant process of the vertebræ, with an acute tendon, and sometimes is inserted into the occiput near its great hole. 2. *Scalenus*, it arises fleshy, at the side of the neck, from the first rib and is inserted inwardly, by oblique fibres, into all the transverse processes of the vertebræ of the neck; through this pair the veins and arteries enter into the arm. 3. *Transversalis*, arising from the transverse eminences or processes of the six uppermost vertebræ of the breast, and is inserted into all the external transverse eminences of the neck. 4. *Spinatus*, arising from the roots of the seven uppermost vertebræ of the breast, five of the neck, and is inserted into the spine or point of the second vertebra of the neck.

The muscles of the breast or thorax are in number sixteen, viz. eight on either side, of which the first five widen or lift up the breast; the last three contract it; to these add, as a ninth, one peculiar muscle, called *diaphragma* or midriff. 1. *Subclavius*, it arises from the inner part of the *clavicula*, is of the fleshy substance, and is drawn upwards and outwards, and inserted into the upper part of the first rib. 2. *Serratus major*, the greater saw-like muscle; it reaches from the inner basis of the scapula unto six and sometimes seven of the ribs. *Serratus posticus superior*, which grows out of the sharp points or spines of the three lower vertebræ of the neck, and the first of the back, and is inserted into the three upper ribs, and sometimes into the fourth. 4. *Musculi intercostales externi*, these are eleven pair in number, but perform the office of one muscle only; are interwoven, totally fleshy, and arise from the lower parts of the upper

ribs, and descending obliquely towards the back parts, are inserted into the upper parts of the lower ribs, terminating on the cartilages. 5. *Triangularis*, it is small and thin in lean persons, springs out of the inner and lower part of the sternum, and is inserted into the cartilages of the lower ribs, as far as the third or fourth of the bastard ribs. 6. *Sacrolumbus*, which springs from the *os sacrum*, and the spinous processes of the loins, and is inserted into the upper ribs near their roots, bestowing upon each rib a double tendon, one external, the other internal. 7. *Serratus posticus inferior*, it is opposite to the superior ; and both of them, by a broad and membranous tendon, so grow together, that they serve instead of a band to keep the hinder muscle of the back-bone together : it grows out of the spines or processes of the three lowest vertebræ of the back, and first of the loins, is terminated into three or four of the lower ribs. 8. *Musculi intercostales interni*, these are the same in number and place with the *externi*, and lie directly under them ; they are carried obliquely from the nether rib to the uppermost and have fibres contrary to those of the external, crosswise intersected. 9. *Diaphragma* or midriff, called also *precordia*, because it is stretched out before the heart ; and *phrenes*, because, being affected, the mind and senses are disturbed, by reason of the consent it has with the brain : so that, when the midriff is inflamed, a phrenzy is caused. It is one in number, an instrument of free motion, and an admirable kind of muscle, both in regard of its composition and continual action or motion, serving also as a wall of partition to sever the vital and natural parts one from another. The head of it is in the nervous centre, but the tail in the circumference of the lower short ribs, from whence it arises, and through which it is obliquely drawn about as far as to the vertebra of the loins. It has a double membrane for strength-sake : the upper is from the pleura, to which the pericardium is firmly fastened, and sometimes also the lobes of the lungs ; the lower is from the peritonæum.

The muscles of the back and loins are four pair ; the first pair is *quadratum*, adhering to the transverse processes of the vertebra

of the loins, arising inwardly from the os ilium and os sacrum, broad and fleshy. Its use is to bend the vertebra of the loins. 2. *Longissimum*, arises with an acute and strong tendon from the extremity of the os sacrum, the vertebra of the loins, and os ilii, having the same beginning with the sacrolumbus; to the vertebra of the back it gives tendons like clasps, terminating sometimes in the first vertebra of the breast, and sometimes at the *mamillary processes*. 3. *Sacrum* arises from the os sacrum behind, being fleshy, and terminates in the twelfth vertebra of the breast. 4. *Semispinatum*, which arises where the former ends, and embracing all the spines of the vertebra of the breast, and giving them tendons, it terminates in the spine of the first vertebra of the breast. The uses of these three last are to extend the breast, loins, and their vertebræ: if all the eight muscles act, they hold the back straight, and as it were uphold a man.

The muscles of the abdomen or belly cover the lower belly, and have their names partly from their situation and rise, and partly from their figure. They are in number ten, or five pair, whose principal uses are to impel the internal parts, and to move the os sacrum and ilium; or to make a proper retention and compression of the parts in the belly: to provoke voiding the excrements, or help the expulsive faculty of the womb and bladder. Their temperament is hot and moist, to cherish natural heat and concoction; they are moderately thick, to defend the parts, and, when very fleshy, they add much to the comeliness of the body. The first pair is *obliquus descendens*, so called by reason of its fibres, which descend obliquely; it rises in the breast from the lower part of the sixth, seventh, and eighth ribs, and terminates in the white line by a broad tendon. 2. *Obliquus ascendens* is situated next the former, in a triangular figure, rising fleshy from the rib of the os ilii, but membranous from the sharp processes of the vertebræ of the loins, and from the sharp points of the os sacrum; it ascends obliquely; and terminates in a double tendon embracing the musculus rectus like a sheath; but the duplicity appears only above the navel, for below it is united inseparably. 3. *Musculus rectus*; its original is

fleshy, from the sternum, on each side the sword-like cartilage, and from the cartilages of the four bastard ribs: it has three nervous insertions which strengthen it; and veins which run along the longitude of it, viz. the *mammariæ descendentes* from the breasts, and the *epigastricæ ascendentes* from the womb in women, but from the vena cava in men; which meet about the middle of this muscle, extending as far as the region of the navel, and are there terminated. These two veins are joined by *anastomosis*, from whence the consent of the womb with the breasts is caused; which, being handled, excites women to venery. 4. *Musculi pyramidales*, the pyramidal muscles, lie upon the extremities of the musculi recti, and rise with a fleshy beginning from the external share bone, where all the nerves enter; and growing narrower by degrees, they terminate with a sharp point in the tendon of the transverse muscle. Their office is to compress the bladder, and therefore they send their tendons, between the musculi recti, into that part of the peritonæum which includes the bladder. 5. *Musculi transversi*, the cross muscles, arising from a certain ligament which springs out of the os sacrum; and terminating by a broad membranous tendon in the linea alba, stick extremely fast to the peritonæum every where except about the pubis. Their proper use is to compress the colon.

The muscles of the *os ilium* and *sacrum* are moved forward in coition by the *musculi recti* and *obliqui descendentes* of the belly, the breast resting and the thigh remaining unmoved. They are moved backwards by the *musculus sacer* and *semispinatus*, which arise from the vertebræ of the back, &c.

The muscles of the *penis* or yard are two pair; the first pair is called *erector*, or *director*; the latter, *accelerator*. 1. *Erector*, or *penem erigens*, is a short and thick pair, arising nervous under the beginning of the yard, from the innermost bunching out of the *ischium*, and, being knit unto the ligament of the yard, growing fleshy, it reaches side-ways as far as the middle of the body thereof: their uses are to erect and keep up the yard in coition. 2. *Musculi acceleratores*, or *par urcthrum dilatans*, are longer than

the former, but thinner or leaner ; they arise both from the sphincter of the anus and internal tuberosity of the ischium or hucklebone, are spread out under the urethra, carried beneath, and inserted into the sides thereof, about its middle : their use is to dilate or widen the urethra both for the passage of the urine and for the seed in coition. These are the muscles where an apertion is commonly made in cutting for the stone.

The muscles of the *clitoris*, proper to female subjects, are like those in a man's yard, the same in number, and to the same intent. The two uppermost, being round, rise from the internal knob of the ischium, and being placed by the lateral ligaments, cause the erection of it. The two lower are broad and smooth, and proceed from the sphincter of the anus.

The muscles of the testicles are either proper or common. The proper muscles are only the pair called *cremaster*, arising from a strong ligament in the os pubis, where the transverse muscles of the belly end, of which they seem to be parts ; they pass through the production of the peritonæum, which they compass nearly about, and pass with the spermatic vessels to the stones ; they are shorter in women than in men, and are placed above the production of the peritonæum : their use is to sustain or hold up the stones. The common muscle is the membrane of the scrotum called *dartos*, being a continuation of the fleshy membrane ; and this musculous membrane suspends both testicles.

The bladder has but one muscle, called *sphincter*, which encompasses the neck of the bladder, in an orbicular form, as also do the fibres. It is fleshy, drawn back over the *prostatae* or auxiliary testicles ; it ejaculates the seed in coition. In women it reaches to the hole by which the urine passes, and it seems to form it.

The muscles of the *anus*, or fundament, are either the *sphincter* or the *levatores* ; the *sphincter* muscle, called *ani constrictor*, the shutter or contractor, is fleshy, (and without the straight gut two inches broad ;) arises from the lower vertebra of the os sacrum ; and is encompassed with the transverse fibres all along the anus : it is fastened on the fore part to the passage of the bladder by fi-

brous couplings ; to the yard, to whose muscles it gives beginning ; and to the neck of the womb : on the hinder part it is inserted into the *coccyx* or crupper-bone, and at the sides it is fastened into the *os coxæ*. The *musculi levatores* are four, or two pair ; one pair of which are broad, and one narrow. *Musculi levatores lati*, arise from the *os sacrum* and *os ilium*, and are inserted into the larger sphincter. *Musculi levatores tenues*, the narrow muscles : of which the foremost arises from the transverse ligament ; the hindermost from the *coccyx*, whereunto they are terminated.

The muscles of the shoulder-blade, or *scapula*, are four, according to the number of its motions, viz. forward and backward, upward and downward : 1. *Serratus minor*, the smaller saw-like muscle, arising from the four upper ribs, and ascending obliquely upwards, with an end partly fleshy, partly tendinous, and is inserted into the scapula ; its use is to draw forwards into the breast. 2. *Trapezius cacularis*, arises fleshy from the hinder part of the head towards the ear, from whence it descends to the eighth vertebra of the breast, and from thence growing small by degrees, it is inserted into the back-bone, top of the shoulder, and clavicle ; it moves the scapula variously, according to its oblique fibres. 3. *Rhomboides*, or diamond-like muscle, situate under the *cucularis*, thin and broad, arises from the three lower vertebræ of the neck and the three upper vertebra of the breast, and in the same breadth is inserted into the external basis of the scapula ; it draws back a little obliquely upwards. 4. *Levator musculus patientiæ*, arises from the transverse apophysis of the second, third and fourth, vertebræ of the neck, and is inserted into the higher and lower corners of the scapula ; its use is to lift the shoulder up.

The arm is variously moved, therefore has it many muscles, to wit, nine in number. 1. *Pectoralis* is great and fleshy, arising from the whole breast-bone, and gristle thereof, the sternum, and above half the clavicle, and is by a sharp tendon inserted into the shoulder-bone, between the deltoides and the biceps. 2. *Deltoides*, from likeness to the letter Δ , springs from the middle of the clavicle, and the acromium, and is inserted into the middle of the arm

or shoulder bone. 3. *Latissimus*, springs from the vertebræ of the loins, and of nine vertebræ of the back, and is inserted into a part of the arm, between the pectoral and round muscle, with a strong, short, and broad, tendon: this with its fellow of the other arm covers almost the whole back: it is called *ani sculptor*, because it draws the arm backwards and downwards. 4. *Rotundus major* is fleshy, thicker and rounder than the rest, obliquely seated behind under the axilla, and arises from the lower rib of the scapula, which, ascending a little with its tendon, short, broad, and strong, is inserted (with the pectoral muscle) into the middle of the arm. 5. *Rotundus minor*, is short, round, quite fleshy, and arises with a sharp beginning out of the lower corner of the scapula, terminating with an acute end in that ligament, with which the head of the shoulder is involved. 6. *Infra-spinatus*, arises in the middle between the smaller round muscle and the spina, covers the whole external bunching part of the scapula; then becoming more narrow, it is inserted into the neck of the arm, or shoulder. 7. *Supra-spinatus* is fleshy, and arises out of the spine of the upper rib of the scapula, then being conveyed under the acromium, it is inserted with a broad and strong tendon into the neck of the arm, at the ligament of the joint. 8. *Subscapularis*, or *immersus*, is very fleshy, and passes between the scapula and ribs, possessing the hollow and inward part of the shoulder-blade, then is carried out, and inserted, with a broad tendon, internally into the second ligament of the humerus. 9. *Coracoides*, is inserted into the inner part of the shoulder, about the middle of the arm, by the tendon of the deltoides. Its beginning is nervous and short: and its belly has an hole in it (whence its name) to give a passage to the nerves running to the muscles of the cubit.

The *cubit* or elbow has two bones, the *ulna* and *radius*: the *ulna* serves for flexion and extension; but the *radius* for pronation and supination. The *ulna* is bended by two muscles, the *biceps* and *brachieus internus*, and extended by four, viz. *longus*, *brevis*, *cubitalis*, and *brachieus externus*. 1. *Biceps*, arises from

the scapula, round and tendinous, which is inserted into the inner part of the radius. 2. *Brachieus internus* is placed beneath the biceps, smaller than the former, and arising from the middle of the os brachii, and is inserted before into the common beginning of the radius and ulna. 3. *Longus*, or *extendens primus*, arises from the lower rib of the shoulder-blade, near the neck, with a double beginning, and is terminated in the elbow. 4. *Brevis extendens secundus*, springs from the hinder neck of the arm, mixed with the foregoing muscle, clothes the humeri, and terminates on the outside of the elbow. 5. *Anconeus extendens tertius* is situate in the bending of the cubit, on the hinder side; it arises out of the lower and hinder part of the arm, between the ulna and radius, and is inserted by a nervous tendon into the side of the cubit. *Brachieus externus*, being spread out upon the outside of the brachium: it is a fleshy lump, made of the two former, and is placed under them, being inserted into the same place.

The radius has four muscles, two of which are *pronatores*, or pullers down; and two *supinatores*, or pullers up. 1. *Pronator superior* arises from the inner apophysis of the arm, by a strong and fleshy beginning, and ends with a membranous tendon, obliquely running into the middle of the radius. 2. *Pronator inferior*, from the lower part of the cubit ulna, unto the lower part of the radius, and is there inserted. 3. *Supinator longior*, from the top of the brachium, above the external knob, and, being drawn out upon the radius, is inserted on the inside of the lower epiphysis thereof. 4. *Supinator brevior*, springs from the outward apophysis of the arm, fleshy within, membranous without, and is inserted nearly into the middle of the radius.

To the wrist belong four muscles, of which the first two bend it and the latter two extend it. 1. *Cubiteus internus*, the first bender, arises from the internal apophysis of the arm, and being stretched over the elbow, is inserted with a thick tendon into the fourth bone of the wrist. 2. *Radius internus*, the second bender, is drawn along the radius, arises from the beginning

with the former, and terminates in the first bone of the metacarpium, under the fore-finger. 3. *Radieus externus*, arises with a broad beginning, from the external apophysis of the arm, and terminates in a double tendon at the first and second bones of the os metacarpi. 4. *Cubiteus externus* arises from the same beginning, through the length of the cubit; when it comes to the wrist, it becomes a strong round tendon, and is inserted into the upper part of the fourth bone of the metacordus, under the little finger.

In the palm or hollow of the hand are two muscles, called *palmares*, of which the one is long, the other short. 1. *Palmaris longus*, arises from the inward apophysis of the arm, with a round and tendinous beginning, is spread into the hollow of the hand, cleaving exceeding fast to the skin, where, under the skin, in the hollow of the palm, is a broad tendon, giving exquisite sense to that part; it is terminated into the first intervals between the joints of the fingers. 2. *Palmaris brevis*, is a certain four-square fleshy substance, springing from the membrana carnososa, from whence it is carried under the former muscle, to the middle of the palm of the hand, and is inserted into the outside of that tendon, which bears the little finger from the rest.

The thumb is bent by two muscles, extended by two, and drawn side-ways by six. *Flexor primus*, arising from the upper part of the radius, is inserted into one of the joints. 2. *Flexor secundus*, arising from the wrist-bone, is inserted into the middle of the thumb, and lies wholly under the former. 3. *Extensor primus*, arising out of the upper and outward side of the cubit, runs along the radius, is carried beyond the wrist, and is inserted into the first and second joint of the thumb, by a double and sometimes a triple tendon. 4. *Extensor alter*, arises from the same part of the cubit, but lower near the wrist, and is inserted into the third joint of the thumb. *Adducens primus*, is joined unto and seated beneath the thenar, arising out of the three lower bones of the metacarpium, and is inserted into the second joint of the thumb; this draws the thumb to the fore-

finger. 6. *Adducens secundus*, the second drawer of the thumb to the fore-finger; it arises out of the metacarpium, and is inserted as the other. 7. *Adducens tertius*, drawing also the thumb to the fore-finger, arises out of the external side of the metacarpium, which sustains the thumb, and is inserted into the first joint. 8. *Adducens primus*, or *thenar*, the first drawer away, arises from the inside of the wrist, and is inserted into the second joint of the thumb, to draw it from the fingers. 9. 10. *Adducens secundus* and *tertius*, arise and are inserted as the former, to draw the thumb also from the fore-finger.

The fingers are bent, extended, and moved laterally, for the performance of which are seventeen muscles; they are as follows: *Sublimis* or *perforatus*, it arises from the inner apophysis of the arm, it is divided into four tendons inclosed in a ligament, as it were in a ring, which are inserted into the second jointing of the fingers, a cleft being first made, through which the tendons of the following muscles pass. *Profundus* or *perforans*, is spread out under the former, and is inserted through the clefts of the former tendons into the third jointings of the fingers; it arises from the upper parts of the ulna or radius under the joint, and is divided into four tendons. *Hypothenar digitaminimi*, *proprius auricularis*, the muscle proper to the little finger; it arises in the hollow of the hand, from the third and fourth wrist-bones of the second rank, and is inserted externally into the side of the first joint of the said finger. *Extensor magnus*, arises from the exterior *apophysis* of the arm, about the wrist, and the ring-fashioned ligament; is divided into four tendons, which end in the lowermost joints of the fingers. *Indicator indicis extensor*; it arises from the middle and external part of the cubit or *ulna*, and is terminated with a double tendon into the second interjointure of the fore-finger. *Auricularis*, the extensor of the little finger; it arises from the upper part of the radius, and, being carried along with the *ulna* and *radius*, is externally inserted into the little finger with a double tendon. *Lumbricales*, *adducens primus*, *secundus*, *tertius*, *quartus*, the four worm-like

muscles; they arise from the tendons of the *musculus profundus* by the wrist; and, being drawn out along the sides of the fingers, are obliquely carried and inserted into the third joint of every finger. *Abductores interossei externi* and *interni*, the drawers from the thumb; they arise from the upper parts of the bones of the metacarpium near the wrist; and in the first inter-nodum or space between the joints, with a very small tendon, which, joining with the *vermiculares*, run along the sides of the fingers, over the three bones, till they come to the roots of the nails; in the former and upper part whereof, the tendons, being first united, are terminated. *Abductor indicis*; it arises from the first interjointing of the thumb, and is inserted into the bones of the fore-finger, by which it is drawn from the rest of the fingers towards the thumb.

The thighs are capable of being bent, extended, drawn to or wheeled inward, or turned about outwards; for the performance of which, they have the following sixteen muscles. 1. *Psoas primus lumbarus*, the first loin muscle; it arises from the vertebræ of the loins, and is inserted into the fore part of the small trochanter, with a round and strong tendon. 2. *Psoas minor*, it is sometimes spread over, sometimes under, the former; its beginning is fleshy, sometimes one, two, or three fingers broad in its middle; its original, with a small and flat tendon, being carried over or under the *psoas*, comes to the iliac, and with a very broad and strong tendon is inserted into the upper brim of the *os ilii*. 3. *Iliacus musculus*, rises out of the internal cavity of the *os ilium*, is joined by its tendon with the lumbal muscle, and is terminated between the great and little trochanter. 4. *Musculus pectineus*, the comb muscle, springs out of the upper part of the *os pubis*, and is inserted with a short tendon into the inner side of the thigh. 5. *Triceps primus*, arises from the upper jointing of the *os pubis*, and passing by the inner head of the thigh-bone, is inserted into the middle of the thigh. 6. *Triceps secundus*, arises from the lowest jointing of the *os pubis*, and, passing by the inner head of the thigh, runs along to the end of the thigh.

7. *Triceps tertius*, arises from the middle of the os pubis, and is inserted just below the neck of the thigh-bone. These three muscles many reckon but one, and call it *triceps*, from its three-fold beginning: but, so accounted, it is the greatest of all the muscles of the body, and often ends in one musculous tendon, inserted into the hinder part of the bone. 8. *Gluteus major*, arises from the coccyx or crupper (the spine of the ilii and os sacrum), and is inserted into the os femoris, under the great trochanter. 9. *Gluteus medius*, the middlemost both in situation and magnitude, arises from the inner side of the spine of the os ilii, and is inserted into the great trochanter with a broad and strong tendon. 10. *Gluteus minimus internus*, springs from the back of the os ilii, near the acetabulum, with a broad and strong tendon, and is inserted into the great trochanter: these last three make up the fleshy substance of the buttocks. 11. *Quadrigeminus primus*, it arises from the lower part of the os sacrum, and is placed upon the articulation of the thigh, in the hinder part thereof. 12. *Quadrigeminus secundus*, arises from the tuberosity of the huckle-bone, and covers the articulation of the thigh, as aforesaid. 13. *Quadrigeminus tertius*, is contiguous to the former, and arises from the same part; these three are last inserted into the cavity of the great trochanter. 14. *Quadrigeminorum quartus*, is broader and more fleshy than the other three, being distant from the third of the quadrigemini two fingers' breadth; it springs from the inner side of the apophysis of the ischium, or huckle-bone, and is inserted into the external part of the great trochanter. 15. *Obturator externus* takes up the wide hole between the os pubis and os ischii, and arises from the outward circle of the os pubis, is circumducted through the neck of the thigh, and carried into the cavity of the great trochanter, under the fourth quadrigeminal muscle. 16. *Obturator internus* rises from the inward circle of the os pubis, and by a tripartite tendon is inserted into the cavity of the great trochanter.

To the legs belong eleven muscles, viz. 1. *Biceps*, having two heads; the first springs from the joining of the os pubis, the

second from the outward part of the thigh; both of them are inserted with one tendon into the hinder or inward part of the leg. 2. *Semimembranosus*, arises from the swelling in the ischium, and is inserted into the inner side of the leg backwards. 3. *Seminervosus*, has the same original and insertion with the former, only in the hinder part is carried a little forwards obliquely, before it terminates at the inside of the leg. 4. *Gracilis* and *gracilis posticus*, rises from that line where the hip-bone and share-bones join together, and, descending along the inside of the thigh, is inserted into the inner part of the leg. 5. *Rectus gracilis* springs with an acute tendon out of the outward and lower spine of the os ilium, is carried along the thigh, and terminates in the fore part of the leg. 6. *Vastus externus* borders upon the rectus gracilis, and arises out of the great trochanter, and is inserted into the leg, a little below the patella on the outside. 7. *Vastus internus*, borders as the former on the rectus gracilis, and arises out of the root of the small trochanter, and falls into the inner side of the leg, a little below the patella. 8. *Crureus*, arises out of the thigh-bone between the two trochanters, and, cleaving to the thigh, produces its tendon over the epigonatis, unto the fore-part of the leg; the four last muscles are inserted all into one tendon, which terminate in the beginning of the leg. 9. *Musculus longus*, it is nearly the longest of all the muscles; arises from the former spine of the os ilii, and descends obliquely into the inner and fore-part of the leg. 10. *Poplitæus*; it arises from the lower and exterior tubercle of the thigh, and is inserted four-square into the inner and upper part of the leg, obliquely. 11. *Membranosus fascia lata*, rises from the spine of the os ilii, runs obliquely into the outward part of the leg, and, with a broad and long tendon, invests almost all the muscles of the thigh.

The foot, or instep, has eight muscles. 1. *Tibiæus anticus*, it is fastened to the leg, and arises near the fibula, and, cleaving to the tibia all along, it degenerates into a tendon, which beneath the ring-like ligament of the foot is divided into two tendons.

2. *Peroneus anticus*, joined to the *peroneus posticus*, and has its rise with two heads, one from the middle and external part of the perone or smaller focile; the other from the upper epiphysis of the fibula; these, being carried through the chink of the ancle, terminate in a double tendon, the smaller of which is carried into the bone of the little toe; the greater running obliquely under the sole of the foot. 3. *Gemellus externus*; this has two heads; they both arise from under the ham, the one from the inner, the other from the outward parts of the end of the thigh-bone, and pass down the back part of the leg, then become tendinous, and, being united, make one strong, broad, and nervous, tendon, which is inserted into the heel. 4. *Gemellus internus*; this with the other constitutes the ancle, and lies under the former, of a livid colour; it arises under the ham, by a strong nervous substance; having passed the middle of the tibia, it becomes narrower and tendinous: it is inserted into the heel. These make the belly or calf of the leg. 5. *Soleus*, it is a broad and thick muscle arising from the upper and hindermore appendix of the fibula, and is inserted by a tendon into the heel. 6. *Tibiæus posticus adducens pedem*, it arises from the upper part of the tibia, or greater and smaller focile, and from the ligament which ties them together, runs along the tibia, and through the cleft of the ancle-bone, where it produces two tendons. 7. *Peroneus posticus*, it arises from the upper but hinder part of the small focile, by a nervous and strong beginning, and, cleaving to the outside of the perone, it runs down round and fleshy: it is inserted under the sole of the foot, into the bone set before the great toe. 8. *Plantaris* covers the whole sole of the foot; and springing from the outer part of the thigh-bone under the ham, by a round and fleshy beginning, passing within the leg, between the gemelli, it goes thence to the sole, and is inserted into the five toes.

The great toe has five muscles. 1. *Primus* or *flexor pollicis*, arises from the upper part of the fibula, and is inserted into the third joint of the great toe. 2. *Secundus*, or *extensor pollicis*, arises from the middle of the fibula, or from the outside of the

tibia, where it is separate from the fibula, creeps along the surface of the foot, and ends in two tendons, the one of which is inserted into the upper side, the other into the lower side, of the great toe.

3. *Tertius pollicis, adductor primus*, that which draws the toe inward, and springs from the ligament which ties the heel-bone and the taulis, is fastened inwardly to the bone set before the great toe, and by a round tendon is inserted into the first joint of the same. 4. *Quartus pollicis, adductor secundus*, it arises from the ligament of the first interjuncture of the little toe, then, becoming fleshy, runs over the first joint of the toes, and with a short and broad tendon is inserted a little inwards into the first joint of the great toe. 5. *Quintus pollicis, abductor ejusdem*, it arises fleshy, from the inner part of the heel, and is inserted extrinsically into the first bone of the great toe.

The muscles of the four little toes are eighteen, having tendons comprehended with a circular and transverse ligament, which encompasses them beneath the ancles, just as in the wrist. *Musculus major*, arising from the upper apophysis of the tibia under the ham, by a long and fleshy beginning, passes under the inner ancle, and by the hollowness of the heel goes to the sole of the foot, where it is divided into four tendons, inserted into the third and last joint of the four toes. *Flexor minor*, lies in the midst of the sole of the foot, arising from the inner part of the heel-bone, and is divided into four round tendons, which are carried and inserted into the second articulation of the four toes. *Extensor longus*, arises with a nervous and short beginning from the upper appendix of the tibia, and cleaving to the ligament which unites the fociis, runs down to the foot, passing first under the transverse ligament; then, being divided into four tendons, they are inserted into the second and third joints of the four toes. *Extensor brevis*, lies under the former, arises from the transverse ligament, fleshy and broad, and is by four tendons inserted into the first joints of the four toes. *Lumbricales quatuor*, they arise from the tendons of the perforans, small and round, and are inserted by so many small tendons into the sides

of the first joints of the four toes. *Interossei decem*, they arise from the bones of the pedium, and are placed between the bones of the foot, filling the void spaces of the metapodium, being ten in number, five external and five internal. They arise by the sides of the bones of the instep, the former to the first inter-jointings; the ninth of the interossei is the abductor of the great toe, the tenth and last is the special abductor of the little toe.

As to the number of muscles in the human body, authors are strangely disagreed about it: however they are certainly more than five hundred; the principal whereof are represented in the two annexed plates; those conspicuous in the fore-part of the human body being expressed in Plate I. where 1. 1. are the frontal muscles; 2. 2. the obiculares palpebrarum; 3. the attollens auriculam; 4. the temporalis; 5. the masseter; 6. represents the muscle called constrictor, or depressor pinnae narium; 7. the dilatator alae nasi; 8. the zigomaticus; 9. the place of the elevator labiorum communis, called by Lancisi, gracilis; 10. the elevator labii superioris proprius; 11. 11. the constrictor, or sphincter labiorum, or orbicularis labiorum; by some called osculatorius; 12. the buccinator; 13. 13. the musculi mastoidei; 14. 14. the sternohyoidei; 15. 15. those parts of the muscles which arise from the clavicle; 16. 16. the caracohyoidei; 17. the scaleni; 18. represents part of the cucullaris on the right side; 18. on the left side, is the levator, or elevator scapulæ, otherwise called musculus patientiæ; 19. 19. the place where the fibres of the pectoralis unite in some measure with those of the deltoides; 20. 20. the deltoides; 21. the place in the carpus where the palmaris longus passes through a ring in the annular ligament; 22. a remarkable union of the tendons of the extensors of the three last fingers; 23. 23. the productions of the peritonæum, which perforating the muscles of the abdomen at the rings, descend to the scrotum; 24. 24. the place where the three tendons of the sartorius, gracilis, and semitendinosus, are inserted into the interior part of the tibia, just under the knee; 25. 25. the tendons of the extensors of the toes, which

are secured by a ligament at the ancle, as appears on both sides; but on the right side, internally, another ligament is represented, which fixes the tendons of the extensor longus digitorum, the tibiæus, posticus, and the flexor pollicis; 26. 26. the musculus pectoralis; 27. the triceps extensor cubiti on the right side; 28. and 30. the biceps on the left side, according to Lancisi's explication; 29. part of the triceps extensor on the left side; 30. the biceps on the right side; 31. the branchiæus internus; 32. the anconæus; 33. the prenator rotundus; 34. 34. the supinator longus; 35. 35. the radius externus, according to Lancisi; 36. the extensor carpi ulnaris; 37. 37. the cubitæus internus, according to Lancisi; 38. the radius internus, according to Lancisi; 39. the palmaris with its tendinous expansion; 40. 40. the tendons of the muscles of the thumb; 41. the tendon of the adductor pollicis; 42. the extensor magnus digitorum; 43. ligamentum carpi; 44. 44. the tendons of the iliaci interni; 45. the pectinæus; 46. one of the heads of the triceps; 47. 47. the rectus femoris on each side; 48. 48. the vastus externus on each side; 49. 49. the vastus internus on each side; 50. the gracilis; 51. the seminervosus; 52. the sartorius on each side; 53. a part of the origin of the vastus externus; 54. 54. the membranosus; 55. the tibialis anticus; 56. the gemelli; 57. 57. the solæi; 58. the tendon Achilles; 59. according to Lancisi, is the extensor digitorum longus; 60. the tendons of the extensors of the toes; 61. the tendons of the extensor longus, tibiæus posticus, and flexor pollicis: A. A. portions of the latissimus dorsi on each side; B. B. the indentations of the serratus major anticus; C. C. the sternum.

The second plate represents the muscles of the back part of the human body; where 1. 1. express the two muscles upon the occiput, called by Eustachius, quadrati; 2. the musculus cucullaris; 3. the splenius; 4. the musculus mastoideus; 5. the musculus patientiæ, or levator scapulæ proprius; 6. the rhomboides; 7. the articulation of the clavicle with the scapula on the right side; 8. the deltoides; 9. the teres minor; 10. the

teres major; 11. 11. the latissimus dorsi on each side; 12. the glutæus major; 13. the glutæus medius; 14. the musculus pyramiformis; 15. the quadratus femoris; 16. the biceps femoris; 17. the semimembranosus; 18. the membranosus, according to Lancisi; 19. 19. the vasi externi; 20. the gastrocnemii; 21. the soleus; 22. the plantaris.

OF THE BONES,

OR

HUMAN SKELETON.

A BONE is a similar, spermatic part, cold and dry, endowed with hardness, strength, and solidity, that it might give force to the body, sustain it, and help its motion. Its substance is naturally hard and solid, covered with a membrane, called *periostion*, white, with some redness; hollow in the middle, (except the ribs, &c.) smooth: covered in its extremities with a cartilage, and moistened with a fat humour, called *medulla*, or marrow. Some bones are perfectly generated in the womb, as those in the ear, being the smallest in the whole body; they are nourished by arterial blood, as may appear in the bones of young animals, whose marrow is yet bloody, as also by blood contained in the marrow: but the proximate and immediate nutriment of hollow bones, is the marrow; but of bones not hollowed, thick blood sent in through the pores. The proper matter therefore of a bone is seed, which consists of humours and spirits. The efficient cause is the *vis ossifica*, or an innate faculty acting by the assistance of heat.

The bones are joined together, either by *symphysis*, for firmness and union; or by *arthrosis*, articulation or jointing. Natural union or growing together, is when the connection or joining of bones is without motion: and this is with, or without, a medium. *Symphysis* without a medium is three-fold, viz. by *sutura*, *harmonia*, and *gomphosis*. *Sutura*, a suture, is the joining of

The Bones of the Human Body

bones by indenture, as if the teeth of two saws were thrust one into another, as in the bones of the *cranium* or skull. *Harmonia*, is the joining of bones by a single line, whether strait, oblique, or circular, as in the bones of the nose and upper jaw, and so all *epiphyses* in a manner are joined. *Gomphosis*, or nailing, when one bone is fastened into another, as a nail in a post, so the teeth are fastened in the jaw-bones.

The whole structure of the bones of the head is called *cranium*, the skull, because it is as it were an helmet; it is also called *calva* and *calvaria*: its substance is bony, to secure the brain; but, in new-born children, it is softer than ordinary.

The bones of the head are either proper or common; the proper are in number six: 1. *os frontis*; 2, 3. *ossa sincipitis*; 4. *occipitis*; 5, 6. *ossa temporum*. The common bones are only two in number: *os sphænoides*, and *os ethmoides*. *Os frontis*, the forehead-bone, called also *coronale*, is bounded before by the coronal and first common suture, and in the sides by the temporal bones; it is but one in those of ripe age, but in children it is double, being divided by a suture passing from the coronal to the nose; it also has a two-fold table, an internal and an external: on each side of this bone, above the eye-brows, there are large cavities, commonly two in number, between the two tables, clothed sometimes with a green membrane, and containing a soft, clammy, and marrowish, substance; from whence two holes pass into the wide spaces of the nostrils; and another, which ends into the skull above the *septum* of the *os ethmoides*, to distinguish the organs of smelling.

Ossa sincipitis, the bones of the fore-part of the head: these cover the moistest part of the brain, are in shape four-square and unequal, and of a more rare or spongy substance than the other bones, whence the wounds of the *sinciput* are deadly: they are joined before with the bones of the forehead, with the *coronal suture*; to the *os occipitis*, by the *lambdoide suture*; and to the *ossa temporum*, by the *suturæ squamosæ*; without they are smooth, but within unequal, by reason of the prints which the jugular veins of the *dura mater* leave behind them.

Os occipitis, the bone of the hinder part of the head, constitutes almost all the hinder part of the skull; and is in children three or four bones, but in grown persons but one. Its form is that of a spherical triangle, and is joined to the crown-bones by the *suture lambdoides*. It is the thickest and most compact of all the bones of the head, chiefly at the basis of the skull; (because there the noble ventricle is seated, and from thence the nerves arise as from a fountain;) but at the edges it is the thinnest of all. It is smooth without, but within it has many sinuosities to receive meninges safely. It has five holes, through the greatest whereof the *spinalis medulla* passes to the back-bone. The smaller serve for the going forth of the nerves, and entrance of veins and arteries. It has nine cavities, seven within and two without; and two broad processes at the basis, covered with a gristle, which is more eminent, and inserted into the cavities of the first *vertebra* for the motion of the head; as also another small process behind joined to the first *vertebra*.

Ossa temporum, the bones of the temple. Their form is uneven, almost circular, because of their various substance, which is like rocks and craggy cliffs, for which cause they are also called *ossa petrosa*, the stony or rocky bones. In their upper part they are attenuated like a scale, so as to be transparent, and are joined to the bones of the *sinciput* like scales; before they are joined to the first bone of the upper jaw, by its first process; and to the *os occipitis*, by the bastard suture; they have six holes without, two within: the first external hole is large, viz. the auditory passage; the other five are small, for vessels to pass through. They have two cavities, an outer, covered with a gristle, which receives the lower jawbone; and an inner, which is rather long, and common to the *os occipitis*. The *auricularis* is internal, with a long protuberancy, wherein there is a three-fold cavity, viz. the *drum*, the *labyrinth*, and the *cochlea*. The *tympanum* or *drum*, called also *pelvis*, which contains the internal or inbred air, and the four bones, called *malleolus*, *incus*, *stapes*, and *orbiculare*; as also a ligament, two *fenestræ*, or windows, (which are little holes in the cavity,) and a water passage; from this cavity goes a chan-

nel into the palate of the mouth. The *labyrinthus*, called also *fodina*, is a cavity full of crooked and manifold turnings; the entrance hereinto is the *oval fenestra*, and joins itself to the following cavity; it has four holes besides the oval, and a fifth, which is terminated in the *cochlea* or third cavity. The *cochlea* has three or four windings, (with a wreathed or snail-like figure,) the windings mutually receiving one another: those that are thick of hearing have only one or two of those windings; this cavity is clothed with an exceeding thin and soft membrane, and adorned with multitudes of little veins, which turn themselves about the wreathings of the *cochlea*, and by many branches creep into the secret turnings of the *labyrinth*.

Os sphenoides, or the wedge-fashioned bone, because it is seated as a wedge in the middle of the bones of the skull; at the sides it goes along with the *os petrosum*, from whence it is separated by a rough chink; above it touches the first, fourth, and sixth bones of the upper jaw; below it touches the bones of the palate of the mouth, and is placed under the brain, as a foundation, so that it touches almost all the bones of the head and upper jaw; in children it is made of four bones, but in grown persons it is but one. It is solid, and the thickest of all the bones of the head, where it makes the basis of the skull. In the external table are two remarkable *apophyses*, near the sides of the holes of the nose, formed like the wings of a bat. In the internal table are four little processes, in shape of a Turkish saddle, called *sella Turcica*, full of little holes, whose uses are to elaborate the in-breathed air, to make spirits, and to pass out pituitous excrements through the funnel, out of the ventricles of the brain. It has sundry perforations, by which the optic and motory nerves of the eye, and other nerves for the motion of other parts, as also veins and arteries for nourishment, pass.

Os ethmoides, the sponge or sieve-fashioned bone, having in it many holes, (by which smells pass to the brain,) especially in the inner side of it, where it joins the head, and this part is properly called *cribrosa*: from this within the skull arises a sharp apophysis, resembling a cock's-comb, by which the *ethmoides* is divided

into two parts; from this process is opposed another, without the nostrils, and distinguishing them, called the divider of the nostrils, as also *septum nasi*. The chief use of the ethmoides is to alter the air drawn in with smells, that the species of odours may, with the air, be carried to the organs of smelling, which end in these holes; and therefore in a coryza, this bone being obstructed, the smelling is lost: also hereby the brain is purged, for phlegm is not only evacuated by the *glandula pituitaria* into the palate, but also by the *os cribrosum* into the nostrils.

The bones in the upper jaw are in number eleven, five on either side, and one without a fellow: first pair, *ossa zygomatica*, the yoke bones, is in a manner triangular, and constitutes the greatest part of the *os zygomaticis* or jugale, and a great part of the orbita and outward angles of the eye, on the lower side. Second pair, *os lacrymale*, is a round, little, and thin bone, in the inner corner of the eye: by this a branch of the fifth pair of nerves of the brain pass to the inner membrane of the nose. Third pair, *os maxillare*, the cheek-bone, the greatest and thickest of them all; it contains all the upper teeth, and makes up the holes of the nose, and most of these bones which belong to the upper part of the face: it has large cavities on both sides very remarkable, both that it might be less ponderous, and that it might contain marrow to nourish the bones and upper teeth. Fourth pair, *os nasi*, the bone that constitutes the external and prominent bony part of the nose; it is thin, hard, solid, and quadrangular: these two bones are joined with a suture; within they are rough, that the gristles of the nose may be the better fastened. Fifth pair, *os palati*, seated at the end of the palate, where the holes of the nostrils go into the fauces or throat; they are thin, solid, and broad, and constitute the hinder part of the cavity of the palate and nostrils. Sixth, *vomer*, the bone without a fellow, like a plough; it is in the inmost and middlemost under the *sphœnoides*, and above the palate: it holds up the bridge of the nose like a partition wall, to which it is joined by the suture harmonia. Six bones constitute the orbit of the

eye: 1. the *frontale*, which makes the upper vaulted part; 2. *zygomaticum*, that on the outside, where the smaller corner is, and a portion of the *os sphœnoides*; 3. another on the outside, concurring with the former part of the *os sphœnoides*; 4. *maxillare*, and 5. *lachrymale*, which constitute the inner part; 6. the scaly table of the *os ethmoides*, which makes up the lower side, all united partly by common, partly by proper, sutures.

In children, till about seven years of age, the lower jaw consists of two bones, which are joined together by *syncondroosis*; but in grown persons it is but one. The arched part of this bone is the chin; at each end of the shanks are two processes, whereof one is sharp, called *corone*, going forward, into which the tendon of the temporal muscle is implanted; the other *articularis*, because it serves for articulation with the temple bones, which articulation is covered with a common membranous ligament. Its substance is exceeding hard and strong, that it may hold out in biting and chewing; within it, there is a long cavity, where marrow is contained to nourish the teeth, and by which a branch of our fifth pair of nerves of the brain runs unto the roots of the teeth with a little vein and artery: this cavity goes quite through the jaw-bone like a pipe, so that a copper wire, put in at one end, will come out at the other. It is moveable, and contains sockets for the teeth; and in old age, when the teeth fall out, the sockets draw together, and become sharp.

The teeth are bones properly so called, white, smooth, hard, and solid, being indeed harder than other bones, that they might bite and chew hard things, not much inferior in hardness to stones. They are naked, without any periostion, yet endowed with a kind of sense, as may be perceived by cold drink, or when set on edge; which sense is lodged in the inner, softer, and more nervous, part. They receive into their cavities nerves, which other bones do not, and by which they are tied to the mandible with a *sinneurosis*. The teeth continually grow, all a man's life, because they are daily worn by biting and grinding. The cavities of the teeth are clothed with a little membrane of

exquisite sense, whence it is that pains of the teeth are so exceeding vehement: they have five little nerves from our first pair, which are spread abroad within, and by small twigs mixed with the mucilaginous substance in the middle of the teeth; as also little arteries to give natural heat and nourishment, and little veins to carry back the blood after nutrition.

The tongue-bones are seated under the lower jaw, and in the uppermost part of the larynx. They are commonly accounted but one bone, though made up of three. The use of these bones is to keep the throat open both for the passage of the food, and for receiving in of the air in speaking or breathing.

The bones of the ears are the least of all, being the bones subservient to hearing; and are four on each side. They are all placed in the first cavity; their substance is hard and dense; but hollow within, that they might be lighter, and contain marrow for their nourishment; they are as big in new-born babes as in men, but not so hard. The principal of these bones are called *malleus*, the hammer; *incus*, the anvil; *stapes*, the stirrup; and *os orbiculare*, which is round and small, joined by a small ligament to the stirrup side, where it is joined to the anvil. The uses of these bones are to serve the sense of hearing, and to make a passage for the excrements of the ears: for the stirrup, shutting the oval, is moved by the anvil, and the anvil being smitten by the hammer, and the hammer by the membrane of the drum, through the impulse of the external air, the membrane of the drum is in the mean while driven inwards, whereby the inbred air is affected, which, passing through the cochlea, causes the branches of the auditory nerve to receive the species of sounds, and to communicate the same to the brain.

The bones of the neck, and the whole vertebræ of the back, from the cranium or the skull to the os coccygis or crupper-bone, are termed *spina*, the thorn, because the hinder part of it is sharp-pointed like a thorn-branch. The parts of the spine are called *vertebræ*, whirl-bones, because by their means the body is turned several ways. All these vertebræ are hollowed to contain

the spinal marrow; they are many, for the conveniency of motion. The figure is sometimes inclining inwards, as the vertebræ of the neck, to sustain the gullet; and aspera arteria; and the vertebræ of the loins, to uphold the trunks of the aorta, and cava descending: sometimes outwards, as the vertebræ of the back, and a little of the os sacrum, that there may be a larger space for the heart, lungs, bladder, anus, womb, &c. The figure of each vertebræ, above and below, is plain and broad, that luxation may not easily be made: round within, convex, and bunching out; but in the neck broader, and more even.

The vertebræ of the back are in number twelve, to which as many ribs answer. These vertebræ are round on the fore-part, but behind somewhat hollow. They are thicker than those of the neck, less solid, and full of little holes for the passage of the nourishing vessels.

The vertebræ of the loins are five in number; and belong to the abdomen or lower belly: they are thicker and greater than those of the breast, because they uphold them, and the lowermost are biggest. Their figure is long and semicircular; their substance spongy, and full of holes to give passage to the veins; their connection is looser than that of the back, that we might the more easily stoop to the ground.

The *os sacrum* is broad and immoveable, being the basis or foundation of the back, upholding the whole frame of the vertebræ. In infants it is commonly composed of six bones united by a cartilage, but in men of ripe years it seems but one bone, at the first view, yet, being boiled a long time in oil, it is divided for the most part into six several vertebræ; for each of them has a body, and processes, and has a large hole to receive the spinalis medulla. But in this they differ from the other vertebræ, because in those the lower part is the bigger, but in these the smaller; wherefore, the uppermost is the biggest, and the lowest the least. Its figure is almost triangular: in its forepart hollow, smooth, and even; in its hinder-part, bunching and rough, with little holes to send out nerves.

The *os coccygis*, the crupper or rump-bone, is under the former, consisting of three bones and two gristles, and is called *os coccygis*, the cuckoo's bill, from the likeness thereof. It is joined by a cartilage; for the first bone of it has a small hollowness which receives the last vertebræ of the *os sacrum*. Of these three bones, the lower is still the smaller; and in men, they are bent inwards to stay the great gut, and the sphincter muscle, which are tied to it: but in women they bend outward to give way to the womb in the time of travail. These bones are of a spongy and soft substance, and have neither process nor any hollowness. Their union with the *os sacrum* is loose, to give way for the exclusion of large excrements; for otherwise a luxation might happen, causing exceeding great pains; as in hard labour it now sometimes happens.

The *os innominatum*, the hoop-bone, or flank-bone, consists of three bones, viz. *os ilium*, *os ischion*, and *os pubis*, all which are joined together by gristles till about the seventh year: afterwards, especially in those of ripe years, the cartilages being dried, they seem to be but one bone. These three bones, together with the *os sacrum*, make that cavity which is called *pelvis*, the bason or bowl, which is bigger in a woman than in a man, that the womb of a woman with child may the better rest upon it. In hard labour, the share bone, or *os pubis*, and the *os sacrum*, will part, the cartilages and ligaments (being bedewed with superfluous humidity) giving way. 1. *Os ilium*, the huckle-bone, so called because it contains the gut ilium, is the first part, the highest, the broadest, and the greatest, in figure semi-circular, arched without and hollow within: the semicircle is called *spina*, the arched part *dorsum*, and the hollow part *costa*. 2. *Os pubis*, the share-bone, is seated in the fore-part; and is parted in the middle by a cartilage not very hard: it is joined to the bone of the other side by syncondrosis, which in women is twice as thick and as wide as in men, that these bones in child-bearing may not be luxated or disjoined, but only loosened and made wide for the coming forth of the child. 3. *Os ischion*, the hip-bone, is

the lower and more outward part, wherein is a large and deep cavity, called *acetabulum*, the saucer, or *pixis*, the box, which receives the large head of the thigh-bone: the cartilaginous process of this cavity is called *supercilium*, the brow. The *coxendix* is placed between the huckle and share-bones, and is knit to the os sacrum by a double ligament; the one is inserted into the sharp process of the hip; the other behind, into its appendix, that the intestinum rectum and its muscles may be sustained.

The *costæ*, or ribs, in figure resemble a bow, or segment of a circle; their original from the vertebræ, is narrower and rounder, growing broader as they come to the breast; in their upper sides they are blunt and thick; in their under part sharp and thin: the uppermost ribs are more crooked and shorter; the middlemost are longer and broader; the lower are cut again shorter. Their substance is partly cartilaginous, and partly bony, the bony part being towards the vertebræ; where they are furnished with two little apophyses or knobs: the first of which is articulated with the hollow of the vertebræ: the second is joined to the transverse process of the vertebræ; but the five lower ribs by a simple knob. The number of the ribs are twelve on each side: seldom thirteen, more rarely eleven: and when they are so found, you may account their numbers either supernumerary or deficient. They are two-fold, viz. either legitimate and true, or illegitimate and false. The true or legitimate are the seven upper ribs, because they touch the breast-bone by their length, and make as it were a circle: they also make a perfect articulation with the breast-bone. The illegitimate or bastard ribs are the five lower ribs, which are shorter, smaller, and softer, not reaching to the breast bone: they are semi-circular and arched without, hollow within: they terminate into longer gristles than the true ribs, which, being turned back upwards, stick one to another, the last excepted, which is the least, and sticks to none. The eleventh rib, and sometimes the twelfth, are tied to the septum transversum; and sometimes

the last grows to the oblique descendent muscles of the belly, without the midriff; or has the circumscription of its proper muscle. The use of the ribs is to defend the breast, and the heart, lungs, and other bowels, therein contained; as also to help the motion of the breast and parts adjacent, in sustaining the muscles and fleshy parts thereof.

The *sternum*, or breast-bone, is placed upon the fore-part of the chest, and rests upon the ribs: its substance is partly bony, but spongy and red; partly gristly; its figure is convex, broad, and long. It is composed of three bones, as may be seen in young people; but in old men it commonly appears but one: they are distinguished by transverse lines, and are knit together by synchondrosis, for gristles are interposed like ligaments. Under this is the pit of the stomach, where the upper and left orifice is, called *scrobiculus cordis*. The use of the sternum is, first, to defend the heart (like a shield) from outward dangers: secondly, to uphold the mediastinum: thirdly, to collect and fasten the ribs.

The collar bones, being in number two, are called *claviculæ*, keys, because they shut up the breast or thorax; and as it were lock the scapula, or shoulder-blades, to the sternum. They are situated cross-wise, under the lower part of the neck, on the top of the thorax on each side: externally, they are convex, on the inside a little concave: their substance is thick, but fistulous and spongy, and therefore easily broken; their superficies are rough and uneven. Their use is to assist in the various motions of the arms; as also to uphold the shoulder-blades, that they should not fall upon the breast, together with the shoulder-bone: moreover the bone of the arm rests upon this bone, as upon a prop, that it may be the more easily moved upwards and backwards. Hence brutes have no collar-bone, the ape, squirrel, hedge-hog, and mouse, excepted.

The shoulder-blade is a broad and thin bone, resting upon the upper ribs behind, like a shield. Its substance is hard and solid; its figure almost triangular, the outside somewhat arch-

ed, but the inside hollow; it has also a spine or sharp point, looking both above and beneath the cavities, called *interscapulia*. In the inside of this bone, about the middle, there is a hole, by which a vein doth pass for its nourishment. It has five epiphyses, three at the inside, and two at the basis: it has also ligaments, which join its head to the *humerus* and the *acromion*, or shoulder to the *clavicula*; and common, thin, and membranous, ligaments, which compass the joint of the shoulder-blade and arm. Its uses are, 1. to strengthen the ribs; 2. for the articulation of the *humerus* and *clavicula*; 3. for the insertion of the muscles; 4. to cover the heart, and defend the back from being hurt.

Os brachii, or bone of the arm, called also the shoulder-bone, is but one, great, strong, long, roundish, and uneven. Its substance is hard and solid; it is hollow all along within, containing marrow, but at the two ends more broad, and a little spongy. In its upper part it has an appendix, *epiphysis*, or great head, growing to it; which is round, covered with a gristle, and articulated with the *scapula* or *diarthrosis*. In the top of it is also a long chink, through which the nervous head of the *musculus biceps* doth pass. The longer part is articulated to the *ulna* and *radius*, where there are two apophyses; an external which is less, and crusted with a gristle; and an internal, having two cavities, representing a pulley, with which the cubit is joined by *ginglymus*, so that it may be bent to a most acute angle, but not extended beyond a right line.

The bones of the cubit, or elbow, are two: the smaller above, called *radius*, and a larger below, called *ulna*. They are shorter than the shoulder, have epiphyses on either side, and, resting mutually one upon another, are joined by a membranous ligament: above, the *ulna* receives the *radius*; but below, the *radius* receives it. Their substance is firm and solid: they are long, and contain a marrowy substance; but their surface is somewhat rough, by reason of the lines appointed for the muscles.

Carpus, the wrist, hath eight distinct bones, all of them unequal, and differing in shape and magnitude. At first they are gristles, afterwards spongy bones, covered with very strong gristly ligaments, which fasten them together as if they were but one bone: these ligaments, arising from the lower processes of the *ulna* and *radius*, serve for articulation: but there are angular or ring-shaped ligaments, which are transverse, and compass the wrist, to comprehend, strengthen, and safely carry, the tendons, which pass through the carpus; these are many, though they seem to be but one ligament, the internal comprehend the tendons of the muscles which bend the fingers; the external, the tendons of the muscles which extend them.

The *metacarpus*, or palm of the hand, has four bones, of a hard and solid substance, and hollow, containing marrow; they are round, and bigger than those of the fingers; that which answers to the fore-finger is biggest, and so still the lowermost are smaller. Between each bone a distance is left for the *musculi interostæi* of the fingers: and in the palm there is a transverse ligament, which ties the bones of the fingers to the *metacarpium*. Above and beneath they have epiphyses: by the upper, they are joined to the *carpus*, or wrist; by the lower, they enter into the hollowness of the fingers.

The bones of the fingers are in number fifteen, each of them having three bones, and answering the bones of the metacarpus, the thumb excepted. The thumb has no connection with the bones of the metacarpium, because it is articulate with the wrist, with a manifest motion; whereas the bones of the palm are joined to the wrist without manifest motion; as also because the upper joint of the thumb is shorter than the bones of the *metacarpium*, and not answerable to them. Each finger has ligaments on their insides, according to their length, like channels, whereby they are fastened one to another.

The thigh has but one bone, which is the greatest and longest in the whole body. In its superior extremity, the head is round, to which a slender part is added, called the neck from the neck;

are two *apophyses* produced, to which the muscles, called *rotatores*, are fastened, and therefore they are called *trochanters*. The lower part of the thigh has two low prominences or heads, called *condyli*, a cavity being left between of a thumb's breadth, through which the vessels pass, with a nerve of the fourth pair, which cavity also admits the middle and eminent *apophysis* of the *tibia* or leg: in like manner the *condyli* are received by the cavities of the leg, by a loose articulation, called *ginglymus*: the inner of these heads is more thick, the outer more broad and flat. The upper part of this articulation is called the knee, the hindermost the ham.

The *patella*, or knee-pan, is somewhat round, about two inches broad; plain, without having many holes, but within bunched, and there covered with a cartilage: its substance in young children is cartilaginous, but in grown persons bony; its figure is almost like a buckler or shield; its situation is upon the jointing of the thigh and leg, where the knee is compassed with a membranous ligament, the *patella* excepted. It grows to, and is fastened by, certain thick tendons of some muscles of the thigh; as the second, third, and fourth, muscles which extend the *tibia*, and pass by the knee to it, and are inserted into the fore-knob of it: its use is taken from its situation, being set before the thigh bone and *tibia*, to strengthen the articulation, lest the thigh bone, in going down any hill should slip out forwards; as also to defend the tendons of the muscles.

The shank, or leg, is composed of two bones; the one, being the inner and the greater, is called *tibia*; the other *fibula*. *Tibia*, the shank-bone, has in its upper part a process in the middle, which is received by the cavity of the thigh-bone. It is joined to the thigh-bone by *ginglymus*: the *fibula* only cleaves to the *tibia*, and touches not the thigh-bone. In the lower part there is an apophysis void of flesh, sticking out with a bunch near the foot, which is called *malleolus internus*, the inner ancle-bone; as the process of the *fibula* is called *malleolus externus*, the outward ancle-bone. *Fibula*, the button, (because it seems to button toge-

ther the muscles of the shank) which is also called *sura*, the calf, is a firm bone, being drawn along before the tibia without, as the radius before the cubit. The upper end with its round head subsists between the knee: but with its hollowness, it receives the lateral knob, which is under the epiphysis in the upper end of the tibia. In the middle there is a distance between the tibia and fibula; in which space is a thin broad ligament, joining these bones in longitude, and where also the muscles of the feet are placed.

The bones of the *tarsus*, or instep, are seven. *Astragalos*, the game bone, to which are joined the great and small foci. *Pter-na*, the spur of the foot, or heel-bone, into which the greatest and strongest chord or tendon in the whole body is inserted. *Os naviculare*, from its likeness to a boat; it is long, bunched without, and hollow within, and covered with a cartilage. *Os tesseræ*, or die-shaped bone, because it hath six sides; it is greater than the rest, and placed before the heel, joined to the fourth and fifth bone of the metatarsus: in the hinder with the heel-bone: the other sides are joined to no bones. *Cuneiformia*, *calcoidea*, the wedge-like bones, or bones of the foot, and are articulated with the scaphoides, or os naviculare: being joined, they represent a vault: for above they are convex, beneath hollow, to receive the tendons and muscles.

The *metatarsus*, or sole of the foot, has five bones, which are solid without, hollow within, longer than the bones of the back of the hand, and knit to the bones of the tarsus. That which stays the great toe is the thickest, that which stays the next toe is the longest, the next is shorter, and the rest each shorter in order. The lower end of that which stays the great toe, is received by the cuneiforme majus: the second by the cuneiforme minus: the third, by the third wedge-like bone: the other two, by the two tops of the os cubiforme.

The bones of the toes are in number fourteen: the great toe has only two, the rest three apiece. They are solid without, hollow within; and have three joints and two processes, answer-

ing in all things to the bones of the hand. The lowermost joints have two knobs, received by the ends of the middlemost joints, but the uppermost receiveth: the uppermost joints have also a deep hollowness, because they receive the ends of the bones of the foot.

1. There are certain little bones called *sesaminia* or *sesamoides* being almost like seeds, both in form and magnitude, being for the most part in number fifty eight. They are round and a little flat, and less in the feet than in the hands, excepting those in the great toe. 2. They are most commonly twelve in each hand, or twenty-four in both hands, and so many in each foot. They grow to the tendons of the muscles which move the fingers and toes, under which they lie, wrapped up in the ligaments, and come away in cleansing the bones, unless great care be used. The uses of these *sesamoides* bones are to defend the tendons; to strengthen the joints, and preserve them from luxation.

The annexed Plate demonstrates the Skeleton, or Bones, of the Human Body, which consists of 239, exclusive of the *sesamoides* or *hyoides*, and bones of the ears; which, being added would make the total number 308.

1. Os frontis, or frontal bone; 2. sutura coronalis, or coronal suture; 3. vertex sinister; 4. sutura squamosa; 5. processus ossis sphenoides; 6 os temporis, or temporal bone; 7 processus mastoideus; 8 os mali; 9 ossa nasi, or bones of the nose; 10 11 the superior and inferior maxillary bones: *a* vertebræ of the neck; *b* vertebræ of the back; *c* vertebræ of the loins; 12 os sacrum; 13 the sternum, or breast-bone; + the costæ; 14 the clavicula, or clavicles; 15 the scapula; 16 the humerus, or arm-bones; 17 the ulna; 18 the radius; 19 the carpus, or wrist; *d* the metacarpus; *e* the pollex; *i* ossa digitorum manus; 20 the os ilium; *o* the os ischium; 22 the os pubis; 23 tuber ischii; 24 foramen magnum; 25 os femoris; *r* collum ossis femoris; *s* caput ossis femoris; 26 the trochanter major; 27 the trochanter minor; *t* the patella; 28 the tibia; 29 the fibula; *u* the talus; 30 the calcaneus; 31 the metatarsus; *z* ossa digitorum pedes.

OF THE ABDOMEN,
OR
BELLY IN GENERAL.

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THE abdomen is all that part, distinguished within (by the midriff) from the chest to the *os pubis*. It is bounded by the *cartilago mucronata*, vertebræ of the loins, *os sacrum*, hip-bones, *os pubis*, and the bastard ribs on either side. It is divided into three regions or parts: First, the uppermost, called *epigastrium*, each side of which is called *hypochondrium*, lying under the gristles of the short ribs: it is bounded between the *cartilago mucronata*. Secondly, the middle part, called *regio umbilicalis*, which extends from three inches above the navel to three inches below it: the lower part, called *hypogastrium*; the lateral parts are called *inguina*, the groins: in the right sides of which, are parts of the colon and *cæcum*, which are tied together; in the left, a great part of the *colon* and *intestinum rectum*; the forepart of it is called *aqualiculus*, and the lowest part, which is covered with hair, is called *pubis*, the share; the hair begins to appear here in girls about the twelfth year, but in boys about the fourteenth year, of age. Under this region in women are contained the bladder, matrix, and *intestinum rectum*.

The *peritonæum* is so called from stretching and spreading about, being drawn over all the parts between the midriff and thighs. Its original is from the first formation, at the third vertebra of the loins, where it is thicker, so that it cannot, in that place, be separated without breaking. The muscles of the belly being taken away, the *peritonæum* comes to view; it is tied above to the midriff; below to the share and flank bones; in the forepart firmly to the transverse muscles, but chiefly to their tendons about the *linea alba*; behind to the fleshy heads of these muscles. It is spermatical, cold and dry by nature, and of a substance not simple and uniform, but

double and unequal in thickness. It is a membrane double in all places, but it is most apparent about the vertebra of the loins, where, between the duplications, lie the vena cava, the aorta, and the kidneys. Its use is to send connections to all the parts; to bestow coats upon all the bowels of the abdomen: to give a covering to the diaphragm, liver, and spleen; to produce the ligament which upholds the liver; to make a communion with all the principal parts by veins, arteries, and nerves; to produce the omentum; and, by its reduplication, the mesentery.

The *omentum*, or caul, so called, because it floats or swims upon the guts: it lies under the peritonæum, and is situated at the liver, spleen, and bottom of the stomach: in some it ceases at the navel, in others it falls below the navel, and sometimes it reaches to the os pubis, where it is inserted. It is a thin membrane, endowed with much fat, double, and disjoined. In men, when it descends into the scrotum, it causes the rupture epiploce, which happens most commonly on the left side, because it is extended rather to the left than to the right side. Its substance is membranous, that it might admit dilatation and extension; it is compact, to hinder the dissipation of the internal heat, and to expel the external cold: it is tied to the stomach, being a middle part between the colon and the spleen. Its uses are to cherish and strengthen the internal heat of the stomach and intestines; to give nourishment to the parts in time of famine; to contain the humours flowing from the intestines, which the glandulous cannot receive wholly at one time; to prop up the branches of the veins and arteries of the stomach, duodenum, colon, and spleen; and to generate the fat.

The stomach, called *ventriculus*, from its cavity, is situated in the epigastrium a place encompassed with no bones, that it might stretch the more easily, immediately under the midriff, which it toucheth, so that if it be too full, it causeth a difficulty of breathing, by hindering the motion of it. In the forepart and on the right side, it is covered with the hollow of the liver; in the left by the spleen; so that the stomach is as it were between two fires, bending a little towards the left hypochondrium, and towards the

back part it leans on the aorta, the cava, and the pancreas, which helps its heat. It is less in women than in men, to give way to the distention of the matrix, and it is composed of three tunics; the outwardmost is common to the peritonæum, and is the thickest; the middlemost is proper to itself, and fleshy; the innermost is from the *dura meninx*, and wrinkled, as also hairy like a piece of silk; this is continued with the tunicle of the œsophagus, mouth, and lips, that nothing may be received in which is ungrateful to the stomach: hence it is, that, when choler is in the stomach, the tongue is bitter and yellow; It is spongy, and has passages like short fibres, from this inner surface to the outward, that the thinner chylus may be the better detained. The inmost coat serves chiefly for sense; the middlemost for the office of motion: and the third, that it might be as a covering for the whole. The stomach has two orifices, and both of them in the upper region thereof; the left is called *os stomachi*; the right the *pylorus*, or porter: the *os stomachi*, or left orifice, has orbicular fibres, that, the meat and drink being once received within the capacity of the stomach, it may, by a natural instinct, exactly shut up the mouth of the stomach, lest the fumes and heat should break out, which might not only go into the brain and breed diseases there, but also hinder concoction. The right orifice is of equal height with the other; lest the meat and drink should slip through before they are digested. It is not wide like the former, because it is to transmit the elaborated chyle, which is done by the strength of the stomach, in contracting itself. Wherefore the *pylorus*, besides its transverse fibres, has a thick and compact circle, representing the sphincter muscle, that it might the more easily shut and open. The stomach has arteries from the *ramus cæliacus*, which accompany every vein, that blood may be supplied from the heart for nourishment of the part: it has likewise many nerves; viz. two in its orifice from the stomach branches, which being produced, after they have run back in the thorax, and furnished the lungs and pericardium, are covered with strong membranes. These so cross one another, that they are carried obliquely, and without doubt

with greater safety. The right branch compasses the fore and left part of the mouth of the stomach; the left branch, the hinder and right part of the same: from these branches of nerves are sent downwards, to the very bottom; a branch goes from the left nerve, along the upper part of the stomach, to the pylorus, which it infolds with certain branches, and goes to the hollow of the liver: other two nerves also go to the bottom of the stomach, from the branches which run along by the roots of the ribs. Hence it is, that when the brain is hurt, the stomach is sick, and falls a vomiting, as in a vertigo hemicrania, &c. also, when the stomach is affected, the head and brain are ill, or afflicted with pain; and by reason that the orifice of the stomach is so compassed with nerves, as if it were altogether made of nerves, it becomes of a most exquisite sense; and hence it is that vomiting so often succeeds in many diseases, where there is a consent of parts with the stomach. The stomach is the seat of hunger, and does the first of all parts feel the want of food; (afterwards the other parts by faintness and universal debility;) for the blood being spent upon the nourishment of the body, the fibres of the internal membrane of the stomach are contracted, and so this pain, which is called hunger and thirst, is caused.

The intestines, or guts, begin at the pylorus and end in the anus or fundament. They are called *intestina*, or inwards because they are in the inmost seat of the body. They are of a round figure, that they might the better contain the nourishment; of a membranous substance, the better to have constriction and dilatation; and indeed their substance is almost the same with the stomach, having three coats, one common and external, being bred immediately from the *mesenterium*, but mediately from the *peritonæum*. The second, which is the middlemost, is proper, being membranous, strong, and furnished with fleshy fibres. The third, which is the innermost, is also proper, nervous, and lined with a crusty substance, framed of the excrements of the third concoction of the guts, glazed as it were with a mucus or phlegmatic substance, bred in the first concoction, by which

excoriation is not only hindered, when sharp humours pass through the guts, but also by its assistance the expulsion of the fæces is furthered. This internal membrane has such a crusty substance, that the mouths of the meseraic veins might not be stopped; and that neither they nor the coat itself might be made callous by the continual thoroughfare of the chyle. The fibres of the internal membrane of the small guts are oblique, but of the external coat transverse; because these are appointed for the retention and expulsion of the chyle; but, in the thick guts, the inner coat has transverse fibres, the outward has oblique and straight, because they are appointed for the expulsion of the excrements: the inner membrane also of the small guts is full of wrinkles to stay the chylus from passing too soon. As to the length of the intestines, they are in general six times as long as the whole body: it is wonderful that the guts (of so great a length) should be comprehended in so small a compass, so as that they are not above a span distant from the centre. They have a motion, which is peristaltic, or the worm-like motion, by which they move themselves all over by a contraction from the upper parts downwards; moreover they have many turnings and windings, or bendings, which serve to keep the nutriment, till the concoction is perfectly finished, and chyle distributed.

The *mesentery* is so called, because it is the middle of the guts. It is one in number, but divided into two parts, the *mesareum mesocolon*. By the *mesareum*, the small guts are knit together; by the *mesocolon*, the thick guts are tied together. The substance of the mesentery is a double membrane, one above another. Its situation is in the middle of the abdomen, sticking to the transverse processes of the vertebra by ligaments, whence it is original: for it arises from the first and third vertebra of the loins, where membranous fibres are produced from the peritonæum, which turn into strong membranes. The vessels of the mesentery are veins, arteries, and nerves, which pass to and from the guts, between the membranes. The veins are called *meseraicæ*, and they are two-fold, viz. *sanguinæ* and *lactæ*, both which are almost innumerable. The *venæ sanguinæ* or *meseraicæ*

receive the blood from the arteries, after nourishing of the parts, and so convey it back again to the liver. The *venæ lactæ*, ascending from the guts, and carrying the chyle, do centre in the glandules, or receptacles of the chyle. These glandules of the mesentery, are to prop up and support sundry distributions of the branches to the *vena porta* and *arteria magna*; and hence it is, that about the centre of the mesentery are the greatest kernels, because there is the distribution of the greater and more collected vessels: if those become schirrous, an atrophy, or extenuation of the whole body, viz. a wasting, leanness, and pining, follows, because the passing of the chyle is hindered, whereby the nourishment of the body is lost. Their substance in men is glandulous and solid, like other glands of the mesentery, watered as it were with the *venæ lactæ*, yet capable of chyle in their least corners. Their connection is in the hinder part *vertebræ lumbares*: in the fore-part they are joined to the mesentery by small milky branches, which carry the chyle to these fountains or receptacles. The use of these milky glandules is to receive and contain the chyle coming from the *venæ lactæ* or the mesentery: as also to digest and prepare it by the help of the neighbouring hot vessels, viz. the artery and vein, and then, being prepared, to thrust it out into the *thoracices*, and other parts, as the liver, which is easily proved by ligature; for, if these *lactæ*, whether in the thorax or going to the liver, be bound, they always swell on that side next to the glandules or mesentery, and grow empty on the other sides; they also squeeze out the serum, being separated from the chyle in that light preparation, and expel it either into the reins adjacent to them; or into the emulgent arteries, to which they send branches; or into the *capsulæ atribiliaræ*, appointed for melancholy; or, lastly, into the doubling of the peritoneum, in which they abide, which is sometimes the cause of the dropsy ascites: and herein we have reason why a dropsy is many times ended by diuretics and dissolved by urine; and how those, who are extreme drinkers do so immediately evacuate what they have drunk; for that the

ordinary way through the liver, heart, arteries, emulgent veins, ureters, and bladder, is vastly longer, and more tedious : hence also the cause is seen, why, in a real diabetes, the drink is so voided through the bladder in a very short space, as it is received, without change of consistency, colour, taste or smell ; hence too appears the reason of an *atrophia* of the parts, especially those of the *thorax*, which draw the chyle out of the milky receptacles ; for that they are sometimes pressed together, whereby the distribution of the chyle is obstructed ; sometimes also they are inflamed, tumified, and afflicted with a *scirrhus*. Hence it is that lithontriptic or nephritic medicaments do presently ease such as have a pain in their reins : as likewise cantharides, and such as incite to lust, do immediately, without stopping the passage, come to the arteries emulgent and spermatic ; because that, in the accustomed journey, (much the longer way), the virtue of the medicaments would easily be enervated. And here the reason is obvious why diuretic and nephritic medicaments make such an impression of smell and colour in urine, as is manifest in cassia, turpentine, juniper, asparagus, and other like things. Many of the *lactæ* of the mesentery, coming through the greater glandules, and the sides of the *portæ*, are grafted into the liver. Their entrance is about the third lobe, to which many of the *lactæ* from the mesentery and *appendices* of the stomach do come. From the upper part of the milky glandules, immediately under the *diaphragma*, there arise as many milky branches as there are glandules, which, through the middle of the spina, pierce the *diaphragma*, and, by mutual insertion, two of them are joined about the first *vertebra* of the loins ; another branch, coming out of the second glandule, about the twelfth *vertebra* of the back, enters a little above the other insertion ; but the third, rising from the third glandule, is to be seen near the eleventh *vertebra*, from whence it arises as a solitary branch, through the middle of the back, by the side of the *aorta*, and the vein *azygos*, between both, under the *æso-phagus*, to which it is firmly knit by its membranes.

These milky *thoracics* departing from the spinal, (about the third or fifth vertebra of the back,) through the midst of which they crept all this way, turn a little to the left, and creeping up under the *æso-phagus* and *aorta*, and under the *subclavial* artery and the glandules of the *thymus*, they go forward to the left *clavicula* and left axillary vein; they enter the vein just where the outward jugular pours itself forth into the axillary aforementioned. From hence we learn, that these *thoracics* carry the chyle out of the milky glandules or receptacles of the mesentery to the subclavials; but the *lactæ meseraicæ* carry the chyle from the intestines either to the receptacle or to the liver: also that the chyle goes not to the head nor to the joints, but is carried to the heart with blood that runs down in circulation, where it is changed into the sanguineous humour: and hence the *lactæ* of the *thorax* receive their restorative force from nutriment, cordials, and medicaments, out of the stomach or *æso-phagus*, by the *glandulæ lactæ*, and carry them straight-way to the heart: whence it is, that drinking vinegar, wine, cordials, and other like things, so immediately cause the strength to be restored; and presently at meat a man is strengthened, and his hunger stayed; this virtue is conveyed by the milky branch which is near the *æso-phagus*, and the short passage of the rest of the *lactæ* to the heart: also vulnerary potions and pectoral drinks come a shorter and surer way to the heart and lungs, to which, by the long way about through the bowels and veins, they could not come so safe and secure; and by the same reason poisons as swiftly overcome the heart, infect the vital spirit, and destroy their harmony.

The liver is an organic part, and an instrument of the blood, (both for generating and perfecting it), seated in the abdomen, just under the *diaphragma*, or midriff, in the right *hypo-chondrium*, about a finger's breadth distance therefrom; is covered by the ribs for safety, but covers, or lightly rests upon, a great part of the stomach. It is divided as it were into two parts by the umbilical vein, which after the birth serves it for a ligament.

It is said to be the original or beginning of the veins, because therein the roots of the two greatest veins appear dispersed, viz: of the *cava* and *portæ*, as roots implanted in the earth; also here are to be seen inserted, trunks and branches of the *vena lactæ*, arising from the *pancreas mesenterii*. It is a great, thick, and hard body; of a red colour, consisting of a substance proper to itself, fitted and ordained for that end. It differs from the livers of beasts, in that it has seldom any lobes, yet the hollow part of it has a fissure or chink, where the umbilical vein is implanted. Its magnitude is exceeding great, beyond all the other viscera; and bigger in man than in any other living creature, the proportion of body being considered; and this seems to be necessary, considering the noble uses and functions to which it is ordained. The action of the liver is sanguification; for the chyle, being conveyed to the liver by the *vena lactæ*, is there sanguified, or made chymus; for the substance of the liver doth not only sustain the veins, but is also the efficient of sanguification, and of perfecting the blood by its circular motion: and, together with the blood, it generates natural spirits.

The gall bladder and choler-chuated are situated on the right side of the liver, in the under or hollow part thereof. The branches of both these, together with the branches of the *vena portæ*, are comprehended in a common bladder, called *capsula*. These branches of the *vesica fellis*, and *ductus choledochus*, or *biliarius*, being detained in the liver, are dispersed through its whole *parenchyma*, every where included in the aforementioned *capsula*, which is red, about the thickness of an artery, and takes its original from the peritonæum. The gall-bladder is a vessel long and round, much like a pear, hollow, furnished with a double membrane. Its magnitude is small, compared to the spleen or kidneys, being about two inches in length, and in some persons nearly three inches. The use of the gall is, 1. to cause a new and more perfect fermentation of the chyle: 2. to prick the guts by its sharpness to stir up their peristaltic

Liver of a new-born Child

Blood Vessels of the Liver

motion, that they may drive down the chyle, and expel the excrements : 3. to mix with the chyle in such proportion, that, being converted into blood, the blood might thereby be kept from congelation.

To illustrate this subject more amply, we have subjoined a representation of the liver of a new born child; where A A A A, represents the circumference of the liver : B B B B, the lower part of the liver, in which there are several irregularities ; C, the gall-bladder ; D, the umbilical vein, running with a single trunk from the navel to the liver ; E E E, the sinuses of the vena portæ, into which alone the umbilical vein inserts itself, with a single trunk ; F, the trunk of the vena portæ cut off ; G G G G, the principal branches of the sinus of the vena portæ distributed through the liver, which become conspicuous when a small part of the superficies of the liver is abraded off ; H, the trunk of the vena cava ; I I, the canalis venosus, or ductus venosus, arising from the sinus of the vena portæ, over-against the ingress of the umbilical vein, and inserting itself into the vena cava : this, in the uterus, carries a great part, and probably the greater part, of the blood, carried through the umbilical vein to the liver of the fœtus, by a large passage to the vena cava and the heart ; but this, after the birth of the fœtus, gradually grows narrower and closes ; K, the entrance of the umbilical vein into the sinus of the vena portæ. To this description of the external part of the liver, it may not be improper to add that of its blood-vessels, together with their numerous ramifications, freed from the parenchymatous substance. Fig. 1, represents the under side of these vessels ; A, being that part of the liver which lies next to the back ; B, its right side ; C, its anterior edge ; D, its left side ; E, the vena cava, where it passes through the diaphragm ; E 1, E 2, E 3, its three principal branches, distributed almost through the whole liver ; F, the vena portæ turned upwards, that other vessels may be more easily seen ; F 1, F 2, F 3, F 4, four branches of the vena portæ distributed to several quarters of the flat part of the

liver, but the fifth branch is not observed on this side; G, the gall-bladder: H H, the vena umbilicalis become a ligament; I, the ductus communis choledochus: K, the canalis venosus, now performing the office of a ligament; L, the trunk of the vena cava descendens; *a*, a small portion of the membrane investing the liver; *b*, that part of the diaphragm which surrounds the vena cava; *c*, the biliary duct; *d*, the cystic duct; *e*, the place where these vessels meet; *f*, the hepatic artery; *o o*, the hepatic nerves; *p p p p*, the common capsula laid open; *q q*, the lymphæducts; *m m m*, &c. the smaller branches of the vena portæ; *n n n*, the small branches of the vena cava.

The spleen, or milt, is situated in the left side under the short ribs, over against the liver, and under the midriff, between the ribs and the stomach, near to the back part. Its colour in new born infants is red, because they have been fed with elaborate blood; but in those of ripe age it is of a darkish red colour, and sometimes almost black. It is connected by thin membranes arising from the peritonæum, to the peritonæum itself, caul, and to the left kidney, and sometimes also to the septum or diaphragma. The action and office of the spleen is not to be either the receptacle or the place of the generation of melancholy, (as several learned men have thought) nor to make blood (as many others have imagined), but to highly perfect the blood already made, that it may serve as a *fermentum*, both to the daily generated chyle and all the rest of the blood in the body: the excrementitious blood which cannot be separated from the spleen, if it be thin and watery, is purged out, first by the arteries, not only to the guts, but also the kidneys, by the emulgent veins; hence, in diseases of the spleen, the urine is many times black, in which case we commonly administer diuretics. Secondly, by the stomach; whence, in the scurvy and a quartan ague, the sick spits exceedingly; but, if this excrementitious blood be thick and earthy, it is voided directly by the anus by proper arteries from the guts, by which means

the ordure is black, as also by the internal hæmorrhoidal veins, as the great Hippocrates has often shewn.

The reins, or kidneys, are situated under the liver and spleen, by the loins, between the two coats of the peritonæum, at the sides of the cava and aorta, under which very great nerves lie hid, and rest upon the muscles of the thigh: whence it is that, a stone being in the kidneys, a numbness is felt in the thigh and leg of that side. The left kidney is for the most part highest: the right is lowest to give way to the liver, reaching by its end the third vertebra of the loins. They consist of a substance solid, fleshy, thick, hard, and compact, almost as the heart, but not so fibrous. They are connected by an external membrane from the peritonæum to the loins and diaphragm; by the emulgent vessels to the cava and aorta: and by the ureters to the bladder. The right kidney is tied to the cœcum, sometimes also to the liver: the left to the spleen and colon; hence pains of the reins are exasperated by plenty of wind and excrements. The colour of the flesh of the kidneys is red; and through their hollowed sides are carried the emulgent veins and arteries, proceeding from the trunks of the cava and aorta: they have also emulgent arteries, which are large, and derived from the trunk of the aorta, which carry blood for nourishment, and that therefrom the *serum* (which is plentiful in the arterial blood) may be separated; they have also one very small nerve on each side which springs from the ramus stomachicus, proceeding from the par vagum, and is inserted into the proper membrane of the kidney; whence arises the sympathy between the stomach and reins; and that they who are diseased in the kidneys, by the stone, or some other distemper, are for the most part sick at stomach, and troubled with vomiting. The use of the kidneys is to attract the sanguineous serosity by the emulgent arteries, that so the mass of blood may be cleansed: which blood, going through these vessels, is always carried through the branches of the emulgents, disseminated abroad through the whole parenchyma of the kidneys, and runs at length into very small pas-

sages, so that at last the wheyish humour is thrust quite out into the flesh of the kidneys, the good blood remaining partly to nourish them, and partly to return by the little emulgent veins, which are open into the cava, and so to the heart. The serous part is strained through the papillary caruncles, which have holes into the branches of the ureters, and after grow together into one cavity or expansion of the ureter, into which the serum is emptied : through the ureters it passes into the bladder, where it becomes urine.

The *deputy kidneys*, or black choler cases, are so seated that they rest upon the upper part of the kidneys, on the outside, where they look towards the *vena cava*, being covered with fat membranes. In figure and substance they for the most part resemble the kidneys, save that their flesh is a little looser : so that they seem like little kidneys resting upon the great ones. They have an apparent internal cavity furnished with a dreggy and black humour : and are strongly concocted, where they rest, to the external membrane of the reins, and to the *septum transversum*, to which they commonly stick in dissection.

The *ureters* are white vessels, like veins, but thicker, whiter, and more nervous ; consisting of a single membranous substance, inclosed in a duplication of the peritonæum. They are as long as between the kidneys and bladder, and commonly as thick or wide as goose quills : but, in dissection of persons troubled with the stone, they have been so wide as to admit of two fingers. Their original is in the kidneys, within whose cavities they are divided into nine or ten little pipes or channels, which are fitted to the little fleshy teats or *carunculæ papillares*, that they may distil the serum into the pelvis, or basin, or large cavities of the ureters within the kidneys. The ureters descending within the duplicature of the peritonæum, upon the muscles of the loins, to the bladder, are inserted obliquely into its neck ; then, ascending upwards between its membranes, they perforate the innermost coat together, and

through the same hole they both enter the bladder; in the implantation of the ureters, two little membranes or valves are placed, like the valves in bellows, shutting up the passages of the ureters, so that the urine cannot go back. They receive small veins and arteries from the neighbouring parts, and nerves from the *par vagum* and marrow of the loins. Their use is to convey the urine from the kidneys into the bladder.

The *bladder*, or receptacle of urine, is seated between the duplicature of the peritonæum, in the cavity of the hypogastrium, which is called pelvis, or the bason; which in a man lies between the os pubis and intestinum rectum; in a woman, between the os pubis and the neck of the womb. Its figure is oval or globical, that it might hold the more; from the bottom it is by little and little straightened into a narrow neck. Its magnitude is various; and, according to the greatness of the lungs, such is the greatness of the bladder; and such animals as have no lungs have no bladder: man, according to his magnitude, has of all living creatures the greatest bladder. Its substance is partly membranous, for strength sake, as also that it might extend and wrinkle together. It has two membranes and one muscle, which most anatomists make to be a third membrane and not a muscle. The bottom is fastened to the peritonæum, and to the navel by a middle ligament called *urachus*, and the two navel arteries dried up. The neck of the bladder is tied in men to the *intestinum rectum*; but in women to the *vagina uteri*, or the neck of the womb, and to the neighbouring hip-bones. The bladder has three holes; two a little before the neck, where the ureters are inserted, and a third in the neck, through which the urine is voided. The neck is fleshy and fibrous, furnished with a sphincter muscle to purse it up, that the urine may not pass out against our will; in men this neck is long, narrow, and wreathed, because, being placed under the bodies which constitute the yard, it runs upwards under the share-bones, from the fundament to the origin of the yard. In women it is short and broad, stretched forth down-

wards, and implanted above into the neck of the womb. The bladder has arteries from the hypogastrica in men, and from those which go from the neck of the womb in women; by these it is nourished; it has veins also from the vena hypogastrica implanted into the sides of its neck, variously disseminated through the bladder, which are mutually conjoined one with another and with the arteries by open holes, that nutritive blood may return; and it has nerves from the par vagum, and from the medulla of the os sacrum.

The spermatic vessels in men, called *vasa preparantia*, are two fold, viz, the two spermatic veins, and the two spermatic arteries. The right-side vein springs from the trunk of the vena cava, a little below the rise of the emulgent, otherwise it must go over the aorta, and then there would be danger of breaking; or, at least, by reason of the pulsation of the artery, the venal blood might be hindered. Both the seminal arteries arise from the trunk of the aorta, about two inches distant from the emulgents: these vessels, being a little distant one from another, are tied together by a thin membrane from the peritonæum. These spermatic preparers are greater in men than in women, and the arteries are greater than the veins, because very much heat, vital spirit, and arterial blood, are requisite to make seed. These vessels are carried obliquely above the ureters to the groins; but in their progress they are joined by infinite anastomoses or inosculation; so that the arteries are so coupled within the coats of the veins, as if they were but one vessel, and they are knit together by a membrane arising from the peritonæum, and afterwards carried to the beginning of the testicles, like a tendril of a vine, being so interwoven that a curious eye cannot distinguish a vein from an artery. This intertexture of veins and arteries, being the twistings of the vasa preparantia, makes a long, thick, glandulous, but hard cord, called *corpus varicosum*, which is without any remarkable cavity. These vessels do not pass through the peritonæum, as in dogs, but are carried between its double coat, with a small

nerve from the *par vagum* and the muscle *cremaster*, and, passing to the bottom of the testicle, end at the *vas deferens*. These arteries carry blood and spirits (in whose admirable windings they are more elaborated) to the testicles, from whom they have a virtue seminal: with this blood the stones are nourished, and part of it becomes seed: the veins are closely interwoven with the arteries about the testicle, and joined to them by mutual anastomose; that they may carry back the blood which remains under the left emulgent, or to the vena cava on the right side, from whence the spermatic vein commonly springs. If one or both the spermatic arteries be injured, or wanting, as they are sometimes, such persons doubtless, cannot get children, but must necessarily be barren.

The *testicles* in men, are glandulous bodies, flaggy, spongy, soft, and white, without any cavity, full of small veins and arteries, such as are not in any other part of the body. Their figure is oval, but it sometimes varies, according to the turgency of any of the neighbouring vessels. The right testicle is hotter, and better concocts the seed, than the left: because the former receives the arterial blood immediately from the aorta, the latter from the emulgent. They are seated externally without the abdomen, under the belly, at the root of the yard, in the scrotum or covering: being commonly in men answerable to the bigness of a small hen's egg. The membranes being taken away, the substance of the testicle comes in sight, upon which, athwart, is placed a small body, called *corpus vermiforme*, to the one end whereof cleaves the *vas spermaticum deferens*, the carrying spermatic vessel, which enters into the substance of the testicle, and empties the seminal matter thereinto: from the other end arises the *vas ejaculatorium*, which in the beginning is full of turnings and windings, and cleaves firmly to the testicle, by its end, being loose, and separate in its middle. They have vessels of all sorts, veins and arteries from the seminal vessels, and a large nerve from the *par vagum*: sometimes also they have two nerves from the twenty-first pair of the

spinal marrow, which being conjoined with the spermatic vessels, are carried with them through the production of the peritonæum, and disseminated into the tunicles. They have on each side one proper muscle, called *cremaster* or *suspensor*; and a common muscle, from the membrane of the scrotum, called *dartos*. The testicles have also several tunicles, coats, or coverings; of which two are common; three proper to themselves only. The first coat (which is to defend the part) is constituted of the skin and scarf-skin, and is called *scrotum*, or *bursa scroti*, because it is like a purse or bag: it is soft, wrinkled, and void of fat: having in its lower part a line according to the length thereof; which divides into a right and left part, and is called *sutura*, or a seam. The second common coat consists of a fleshy membrane, springing from the *membrana carnosa*, which is here thinner than in other places, and full of veins and arteries, and is called *dartos*: this by many is comprehended under the term *scrotum*. The first proper coat is called *vaginalis*, the scabbard coat; and *elicoïdes*, from its thinness, which is yet strong and full of veins, arising from the processes of the peritonæum, and cleaving to the *dartos* by many membranous fibres, whence its exterior part is rough, its interior smooth. The second proper coat is called *erythroïdes*, because of its redness: it has some fleshy fibres from the *cremaster*, from which it is propagated, and is spread over the *vaginalis*. The third and innermost, called *albiginea*, arising from the coats of the spermatic vessels, immediately encompasses the substance of the stones, and as it were binds the same, being white, thick, and strong. The use of the testicles is to elaborate the seed, and to make it by their heat and inbred faculty: for the efficient cause of the seed is the proper parenchyma of the testicles, both in regard of their hot and moist temper, and of their specific property; for, the blood being prepared, they convert it into seed; what remains over and above serves for nourishment of the part, and the remainder is conveyed back, by the spermatic veins, to the heart.

The *vasa deferentia* are the vessels carrying away the seed; and these begin at the testicles, and end at the root of the yard, whither they carry and ejaculate the seminal humour; being in number two, on each side one. Now these *vasa deferentia*, called also *meatus seminales*, are divided into three parts; the beginning, middle, and end; under which are comprehended, the *parastatæ*, the *vasa ejaculatoria*, the *vesiculæ seminales*, and the *prostatæ*. The *parastatæ*, or assistants, are the beginnings of the *vasa deferentia*. Their substance is of the middle nature, between that of the testicles and that of the *vasa ejaculatoria*, being within glandulous and spongy, but without membranous. They have their origin in the stones, making many anastomoses there, with the *vasa preparantia*, by means of innumerable small pipes, or white fibres. The use of the *parastatæ* is to perfect and finish the seed, by a virtue which they receive from the testicles; and, while the seed is lodged in them, frequent lust is not provoked. The *vasa ejaculatoria* are the middle of the *vasa deferentia*, properly so called; these convey the seed from the *parastatæ* or corpora variosca to the *vesiculæ seminales*. Their substance is white and nervous: their figure long and round, with an obscure cavity or hollowness: their situation is partly in the testicles, partly in the cavity of the abdomen, above the os pubis or share-bone; for they run upwards, and are knit to the *vasa preparantia* by a thin membrane, and so are carried along to the flanks and share-bone, which for that purpose have a slight cavity. After being turned back downwards, they pass above the ureters, and under the hinder part of the bladder; above the *intestinum rectum*, at the neck of the bladder, they are on each side widened, and there constitute the seminal bladders. *Vesiculæ seminales*, the seminal bladders, are the end or termination of the *vasa deferentia*: after the constitution of these bladders, these carrying vessels are united into one small passage, and are inserted into the *prostatæ*. These bladders are many in number like little cells, and seem to make on each side one remarkable great and winding

one, for that they go one into another, much resembling a bunch of grapes. Their substance is nervous, and they are seated between the ligaments of the bladder and the rectum, by the sides of the vasa ejaculatoria a little before the said vessels grow thick and unite. Their use is to contain the seed being perfected, and to reserve the same till the time of coition, that so there may be a sufficiency for generation. The *prostatae*, standers before, stoppers, or conductors, are two certain caruncles (in which the vasa deferentia terminate) manifestly differing from the vesiculæ seminales in use, form, situation, and magnitude. Their situation is at the root of the yard, above the sphincter of the bladder, on each side at the neck thereof. Their substance is spongy, yet harder and whiter than other kernels, and they are also covered with a thicker membrane, being of exquisite sense, that they might cause pleasure in coition. They are flat before and behind, but round on the sides ; their magnitude is usually as big as a walnut, and they are open by certain pores into the urethra or urinal passage, which is evidently apparent in such as have died of a gonorrhea, where they have been dilated, and in whom the seat of that disease did lodge. Their use is to contain a viscous and slippery humour, to moisten the urethra, for the more easy and speedy passage of the seed ; and they also serve to stay the involuntary effusion of the seed, and to hinder its regurgitation being once emitted. They terminate in a small caruncle upon the urethra, which as a valve serves to hinder the coming of urine into them : under and by this caruncle, on each side, there are inconspicuous holes, or pores, through which the seed passes into the urethra, just as quicksilver passes through leather, which it does by virtue of its being replete with a vast quantity of subtle and penetrating spirits. In these pores of the *prostatae*, and in the seminal bladders, the seat of a virulent gonorrhea lies ; and therefore, if they be broken, hurt, or dilated, either by a catheter putting into the bladder, or by any other means, there follows immediately an incurable gonorrhea. The distance

between the root of the scrotum and the podex is called *perinæum* : this, as well as the pubes and scrotum, is furnished with hair, because glandules are placed here which abound with plenty of humidity, a part of which they send to the skin for the generating thereof.

The *penis*, or yard, is an organical part, long, and roundish, but broader on the upper side than where the urethra is, being the male instrument of generation, and appointed for the evacuation of the seed and urine. It is seated under the os pubis, exactly in the middle, because it is only one in number. Its magnitude is extremely various in different subjects, being for the most part larger than ordinary in little men ; also in such as have large noses, for the proportion of the yard very much answers that of the nose : in such as have thick, full, large beards ; and in Ethiopians, or blackamoors. It consists of a scarf-skin, fleshy membrane, and a proper substance of its own ; but is void of fat even in the fattest men, lest thereby its most exquisite sense should be dulled. Its proper substance is four-fold : first, the urethra ; secondly, the glans ; thirdly and fourthly, the two nervous bodies, one on each side. The *urethra*, or passage of the urine and seed, is a pipe of a nervous substance, of the same bigness from the neck of the bladder (to which it is joined) to the end of the yard, or beginning of the glans, for in the middle of the glans it has a greater hollowness. Its substance also is thick, loose, and soft, like that of the two lateral ligaments or nervous bodies. This urethra has also two membranes, and a substance proper to itself. The one membrane is internal, thin, and of exquisite sense, with which also the glans is covered ; this springs from the thin membrane which clothes the nerves of the yard : the other is external, more thick and fleshy, and furnished with nerves : the middle part, which is its proper substance, is loose, spongy, and black, that may be distended or contracted with the other parts. In the beginning of its channel are these pores through which the seed is ejaculated, as also a little membrane

or caruncle like a valve stretched before it, to keep the vessel and urine from returning into the spermatic vessels: if it be broken or corroded by sharp humours, or the unskilful use of a catheter, there follows an incurable gonorrhea. Its use is to be the common passage of the urine and seed. *Balanus*, glans, the head or nut of the yard, is an hollowed kernel, wider in the middle than at the external orifice: of a globular form, even, and compassed with a circle or crown. Its substance is flesh more solid than the rest of the yard, of a most exquisite sense, and covered with an exceeding thin membrane, soft and red. It is covered with the duplication of the external skin of the yard called *preputium*, (a *putanda* from cutting off,) the foreskin: this is that which the Jews cut off in circumcising. The skin is tied at the root of the glans, by a certain ligament, called *frænum*, the bridle, arising from a combination of the tendons of the yard and a nerve, terminating in the extreme hollowness of the nut. The two nervous bodies, or hollow ligaments, one on each side, constitute the remaining and greatest part of the yard; the whole substance whereof being like a thick spongy artery, stuffed with flesh. Their external substance is long, thick, compact, hard, and nervous; their internal substance is spongy, thin, hollow, of a net-like texture, framed of innumerable twigs of veins and arteries, of a dark red colour, inclining to black, and filled with a great abundance of black blood, very full of spirits, which, waxing hot causes a distention and erection of the yard. These two bodies (where they are thick and round) spring from the lower parts of the share-bone, or hip-bones, to which they are strongly tied with two ligaments. In their beginnings they keep some distance, being separate one from another, almost like a Y, that the urethra may pass between them; but, when they cease to remain perfectly separate, viz. when they come to the joining at the share-bone, they lose near a third part of their nervous substance; yet they still remain distinct by the coming between of a single membranous partition, called *septum lucidum*.

This membrane is white, thin, transparent, and full of nervous fibres: it arises from the upper part of the commissure of the os pubis, and upholds the said two lateral ligaments, and the urethra, as a stay, the like of which is also found in woman. The yard has all sorts of vessels, as veins, 1. external, running up and down in the skin, from the pudenda; 2. internal ones, from the venæ hypogastricæ, which are spread through its whole body. It has arteries, two internal remarkable ones, arising from the hypogastrica, which are inserted into the beginning of the growing together of the two nervous bodies, which are scattered up and down according to the length of the part; but in the middle, where the septum lucidum is thinnest, they send branches through the spaces of the fibres, the right artery, into the left nervous body, and the left into the right, carrying spirits and blood to fill up, erect, and nourish, the yard. It has two nerves from the marrow of the *os sacrum*, which disseminate themselves through all parts of the yard, both internal and external; ascending through the middle of the forked division, they spread themselves into the muscles, the whole body of the yard, and the glans, that there might be an exquisite sense and delectation. It has also four muscles, two erectors, and two accelerators or ejaculators, under which muscles lie hid the two nervous bodies.

The spermatic vessels in woman are the same with those in men, and agree in their number, nature, original and offices; but they differ from those in men in the following things; first, they differ in their longitude; in woman they are shorter, by reason of the shortness of the passage, but they have more wreathings, windings, and turnings, where they make the corpus varicosum about the testicle, that the seed may have a sufficient stay for its due preparation; secondly, in their insertion; in woman they pass not whole to the testicles, as in a man, but are divided in the midway: whence the greater part goes to the testicles to form the corpus varicosum; the smaller part to the womb, into whose sides it is disseminated, especially to the

upper part of the bottom, to nourish the womb, and the child therein: and that by those vessels some part of the menstrual blood may be purged forth in such as are not with child. This smaller part is tripartite, being divided below the testicle into three branches, of which one runs out into the womb, as aforesaid: the second is distributed to the *vas deferens*, or trumpet of the womb, and to the round ligament; the third creeps along the sides of the womb, insinuating itself among the *venæ hypogastricæ*, with which and the arteries they are joined by anastomoses: thirdly, the spermatic veins receive the hypogastric arteries as they pass by the sides of the uterus, that the blood might be the better elaborated; and they are intermixed with many wonderful anastomoses for the preparation of the seed.

OF THE THORAX.

THE thorax, chest, or breast, is that which is called the middle ventricle, being circumscribed above by the *claviculæ*; beneath by the diaphragma; on the fore side by the sternum; on the hinder part by the back bones; and on each side by the *costæ* or ribs. Its situation is between the upper ventricle or head, and the abdomen, being the seat of the vital spirits, and consisting of the parts appointed for cherishing the natural heat. Its figure is almost oval, somewhat flat before and behind, whereas in beasts it is somewhat sharp, so that of mankind only lies on the back. Its substance is partly bony, partly fleshy; bony, because it contains not any parts much to be distended; fleshy, because it contains parts which ought to be moved, as the heart and lungs.

The breast, or dugs, are common to both sexes; in men they are framed of the cutis, the *membrana carnea*, fat and the nipple, and are called *mammillæ*. The dugs in woman have besides many remarkable vessels, glandules, and pipes, to make and contain milk. The nipple or teat, called *papilla*, is spongy, like the gians of a man's yard, and perforated through the

middle with many small holes for the milk to pass through. It is rougher than the other parts, that the infant may the more firmly hold it, and of exquisite sense, that the nurse should find pleasure when she gives suck: round about it there is a circle, called *arcola*; in virgins it is pale and knotty; in nurses, brown; and in old women, black. The veins are twofold, viz. external and internal: the external arise from the axillary, and are placed under the skin which moves the dugs, and are called *thoracicæ superiores*, the upper breast-veins: these, in women with child and such as give suck, are often seen very blue. The internal arise or descend from the trunk of the axillary vein, or *ramus subclavius*; and are called *mammariæ venæ*, or dug-veins: these are met by other ascendant veins from the womb, and therefore, the child being born, the blood is carried no longer to the womb, but to the breast; and hence it is that the women which give suck seldom have their courses. How milk is generated and made, the opinions of men are various: some think it to be made of the venal blood, but they are absolutely deceived: some think it to be made only of arterial blood, and these err also from the truth: others say, it is made of blood and chyle: but our opinion is that it proceeds from, and is generated of, the chylous juice, and a serous part of the arterial blood: for that the serosity of the arterial blood (and not the substance of the blood itself) does help to generate and constitute the milk, we are induced to believe, not only from the foregoing reason, but because no anastomoses of the arteries with the lacteal pipes of the dugs could ever yet be found out: and truly this opinion Bartholine seems to favour, where he saith, that all the blood which is poured out of the arteries into the breasts, is not turned into milk, but only the more serous or wheyish part thereof; the rest (that which serves for nourishment excepted) running back again, by the veins, into the heart.

The *pleura*, or inner covering of the ribs, is a membrane white, thin, hard, and resembling the peritonæum, but thicker

and stronger. It arises from the tunics which cover the intercostal nerves proceeding from the back-bone, by means of which it is continued with the coats of the brain: and therefore it is thicker in the back, to whose vertebræ it cleaves as it were inseparably. It is every where double, that the vessels may be carried within the foldings thereof; the inner part, looking towards the lungs and inwards, is thickest, smoothest, and as it were bedewed with a waterish humour, that it should not hurt the lungs by any roughness; the outer part is thinner and rougher, that it might cleave the more firmly to the ribs: between these the matter of the pleurisy is many times collected, and not only between the pleura and muscles. As to its figure, it is arched without, hollow within; above it is narrower, below broader, principally towards the sides. From it arise some nervous fibres, by which the lungs are tied to it; if these be too straight, the motion of the lungs is hindered, which causes an incurable difficulty of breathing. Its uses are to cover the whole cavity of the thorax, and render it smooth, that the lungs might not be hurt; and to wrap in all the vital parts, and to defend them from all external injuries. The *mediastinum* is a membrane standing in the middle of the breast, dividing the right side from the left. It arises from the pleura, being a double membrane. Its substance is membranous, yet softer than the pleura: its exterior part is rougher, because of the fibres by which it is knit to the pleura; but its inner side, towards the lungs, is smooth; and about the vessels it is commonly full of fat like the caul. The uses of the mediastinum are, first, to divide the thorax into two parts, that, the breast and lungs being hurt or wounded on the one side, the other might be safe: secondly, to hold up the pericardium firmly, wherein the heart is contained, that it should not rest upon the back-bone, when we lie upon our back; or, that it should not fall upon the breast bone, when we bend ourselves towards the ground; nor touch the ribs when we lie upon our sides: thirdly, to give a safe passage to the vessels which run through it, as also to sustain the

N° 3

N° 1

The Human Heart

midriff, lest it should, by the weight of the bowels, be drawn too much downwards.

The *pericardium*, or *cystis* of the heart, is a membrane encompassing the whole heart, whose pyramidal figure it hath. It is so far distant from the heart as is sufficient to give any way for the motion of the same, and to contain the waterish humour. It has two membranes, one exterior from the mediastinum, tied before and behind to the *pleura*, and is fibrous; and one interior, from the external tunics of the vessels of the heart; for within the pericardium the vessels want their common tunicle, it having been spent upon the pericardium. The original therefore of the pericardium is at the basis from the tunics which compass the vessels of the heart, which proceed from the *pleura*. It is connected circularly to the mediastinum, and the neighbouring parts, with many fibres; but especially to the nervous circle of the diaphragma, to which it cleaves so exceeding fast that it cannot be separated from it without rending: whereby the motion of the heart is directed. Within this pericardium (besides the heart) is contained a serous or watery humour, transparently clear, and in some like water wherein flesh has been washed: in taste it is neither sharp, salt, nor acid. It proceeds out of the vessels of the heart, being a watery part of the blood, as lymph, and other juices, which go to their proper receptacles. The use of the juice is to cool and moisten the heart, and to make it slippery, thereby to facilitate its motion: also, that the heart, by swimming therein, may be less ponderous, and not strike against any part. Those who have this humour consumed have their hearts dry; if it be in too great a quantity, it causes a palpitation of the heart, and suffocation, and death follows therefrom; if it be quite consumed, a consumption of the body happens.

The heart is a muscular body, included in the pericardium, and situated nearly in the middle of the breast between the lobes of the lungs; being the primary organ of the circulation of the blood, and consequently of life. Its figure is nearly co-

nic, the larger end being called its base, and the smaller end its apex. Its lower part is plain, and the upper part convex. Its situation is nearly transverse or horizontal; so that its base is in the left side of the thorax: and consequently it is there that the pulsation is felt. The plain surface of the heart lies on the diaphragm; the convex one is turned upwards. The heart is connected, 1st. by the intervention of the pericardium with the mediastinum, and with a large part of the middle of the diaphragm: this is contrived by nature, to prevent its being displaced, inverted. or turned too rudely about, in consequence of the various motions of the body. 2. Its base is connected to its common vessels: but its apex is free, and is received in a kind of cavity in the left lobe of the lungs. The length of the human heart is about six fingers breadth; its breadth at the base is about five fingers; and its circumference about thirteen. It is both externally and internally surrounded with a smooth membrane. There is a quantity of fat about it, which covers its base and its apex, and serves, for lubricating it, and for facilitating its motion. Its blood-vessels are of two kinds, common and proper; its common or peculiar vessels being the coronary arteries and veins. The common vessels of the heart are two veins, called the *vena cava*, and the *vena pulmonalis*; and two arteries, the pulmonary one and aorta. The nerves of the heart are small, and arise from the par vagum and intercostals: the auricles are two. There are also two cavities in the heart, called its ventricles: of these the right is thinner and weaker in its circumference, but usually much more capacious, than the left: it receives the blood from the *vena cava* and the right auricle, and delivers it into the pulmonary artery, to be carried to the lungs. The left ventricle is much stronger and thicker in its sides; but it is narrower and smaller than the right; it receives the blood from the pulmonary vein, and the left auricle, and extrudes it very forcibly into the aorta. The right ventricle is in the anterior part of the thorax: so that

they might be called the anterior and posterior ventricles, much more properly than the right and left. There are in the sides of both the ventricles of the heart, and of both its auricles, several *columnæ carneæ*, or *lacertuli*, with furrows between them, seeming so many small and distinct muscles; and, from the concurrence of the tendinous fibres of these in the heart, there are formed peculiar membranes situated at the orifices of the auricles of the heart: and there are also other columns of this kind, which run transversely from one side of the ventricles to the other: these serve partly to assist the contraction of the heart in its systol, and partly to prevent its too great dilatation in its diastole. The *valvulæ*, of the heart are of three kinds, 1. The *tricuspidales*; these are three in number, and are situated at the ingress of the vena cava in the right ventricle. 2. The *mitrales*; these are two, and are situated in the left ventricle at the ingress of the pulmonary vein: these serve to hinder the ingress of the blood from the heart into the veins again, while they are constricted. 3. The *semilunar* ones; these are three, and are situated at the origin of the aorta and pulmonary artery, and serve to prevent the reflux of the blood from them into the heart: these, for the sake of strength, are furnished with a number of fleshy fibres and spheroidal corpuscles. The orifices of the veins of Thebesius and Verbeyen, in the hollows of the heart, and for carrying back the blood from the substance of the heart to its cavities, The fibres of the heart are of a muscular substance, and of a most amazing fabric. They are of two kinds, 1. straight ones in the left ventricle; and, 2. spiral ones, common to both ventricles, and of two orders. The exterior ones run to the left, from the base of the heart: the interior ones run to the right, and intersect the others; and, when they act, they closely constrict the cavities of the heart, and drive out the blood from them. According to the fabric, the heart may be resolved into two muscles, each of which constitutes one of its ventricles. The use of the heart is for the circulation of the blood: it receives the

blood from the veins, running from all parts of the body; and propels it again by its own motion, to all those parts, through the arteries. On this depends life itself, the preservation of the frame and the motions and actions of all its parts. But, that the reader may have as distinct an idea as possible of this primary organ of life, we shall lay before him several views of it in the plate annexed; where No. 1. represents the human heart seen in its convex part, and in its natural situation; B marks the branches of the coronary vein; C, the coronary artery; D, the right auricle; E, branches of veins going from the right auricle; G, the trunk of the aorta; H, the trunk or the pulmonary artery; I, the ascending trunk of the vena cava; K, L, &c. branches of the aorta, rising upwards; M, one of the branches of the pulmonary artery; N, N, &c. branches of the pulmonary vein. No. 2. represents the heart opened, to shew the structure and form of its ventricles; where A expresses the muscular septum, or partition, which divides the ventricles; B, the right ventricle opening into the right auricle, and into the trunk of the pulmonary artery; C, the left ventricle, opening into the left auricle, and into the great trunk of the aorta. No. 3, and No. 4, represent the heart in different positions; where A marks the ascending trunk of the vena cava; B, the trunk of the aorta; C, branches of the pulmonary vein; D, the descending trunk of the vena cava; and E, part of the right auricle, cut away, to shew the different arrangement of the internal fibres and venous ducts.

The lungs, or lights, are the instruments of breathing, and are the largest viscus of the thorax: they are situated in the two sides of it, with the heart, as it were, between them: and are connected, by means of the mediastinum, with the sternum and vertebræ; with the heart, by means of the pulmonary vessels, and immediatley with the aspera arteria. The colour of the lungs, in infants, is a fine florid red; in adults, it is darker; and in old people, livid, or variegated with black and white. When inflated, they have some resemblance to the

hoof of an ox; and are convex on the upper side, and concave underneath. They are divided into two large lobes, the right and left; the left, which is the smaller, is divided again into two; and the right, which is larger into three small ones. The membrane with which the lungs are surrounded is continuous with the pleura. The substance of the lungs is spongy, or vesiculous, and they seem, indeed, entirely composed of a number of small vesicles of a fleshy texture, and of a variety of vessels. The vessels of the lungs are the *bronchia*, the *bronchial* artery and vein, the nerves, and the lymphatics. The uses of the lungs are, 1. To perform the office of respiration, by which the blood is attenuated in the plexus of the arteries called the *rete vasculosum*. 2. To be assistant to the voice in speaking, and to the sense of smelling. They are also emunctories of the blood, and are of many other important services. The principal diseases to which the lungs are subject, are the asthma, consumption, peripneumony, &c.

OF THE GENERATION AND CIRCULATION OF THE BLOOD.

THE origin of the blood is in the chyle, which, passing the lacteals, is delivered into the subclavian; where, mixing with the blood, they proceed together to the right ventricle of the heart; and there, being yet more intimately mixed, they circulate together through the whole body: till, after several circulations, and secretions at the several strainers of the body, they are assimilated so as to make one uniform compound mass, which appears to be nothing else but chyle altered by the artifice of nature, and exalted into blood; there being no appearance of any thing extraneous mixed with the liquor circulating in the blood-vessels, but chyle; excepting what had been before separated from it for some particular purposes, which being once served, it is returned to it again: unless, perhaps, it may receive some portion of air in the lungs.

The blood, while in its vessels, appears to the naked eye uniform and homogeneous; but, when let out and cold, it separates spontaneously into two different parts, the one red and fibrous, which coheres into a mass, and is called the *cruor*; the other thin and transparent, which retains fluidity when cold, and, being supposed specifically heavier than the other, sustains and bears it up, and is called the *serum*. If the red part of the blood bears too great a proportion to the serum, which is the case of athletic persons, and others who do not take a sufficient quantity of drink with their meat, the fault may be corrected by lessening the meat, or by increasing their drink. In the beginning of fevers, the proportion of the red part of the blood to the serum is greater, and at the end of them less, than it is in health. The change of this proportion is owing to persons under this disorder living wholly on drink and liquid nourishment; and bodies loaded with serous moisture, being an argument of too small a proportion of the red part of the blood to the serum, have been freed from their load by abstaining wholly from drink. There are other causes besides the bare quantities of meat and drink, which vary the proportion of the red part of the blood to the serum; for this proportion is greater in country-people than in citizens, in persons, who use exercise than in persons who are inactive, and in persons who live upon flesh meats and fermented liquors than in persons who live upon vegetables and water. In short, this proportion is increased by things which dry the body and strengthen the fibres, and lessened by things of a contrary nature. Too great a proportion of the red part of the blood to the serum renders bodies subject to inflammatory fevers on taking cold. The blood is found to consist chiefly of phlegm, as the basis or vehicle; for from the best experiments it appears, that in seven ounces of human blood there are five ounces two drachms of phlegm, three drachms of a subtile spirituous oil, a small quantity of a thicker oil, two drachms of salt, and about two of earth. From these constituent parts of the blood, vari-

ously combined and distributed by the circulatory motion impressed by the heart, and by the oscillatory expansive motion of the interspersed air, and the re-action of the contractile vessels, flow all the properties and operations of the blood. From this mixture of elements, and their lax composition, it becomes susceptible of various alterations and impressions; the principal whereof are coagulation, which usually attends it out of the body, sometimes in it, and scarcely ever without an artificial procurement, but always mortal; and dissolution, which is just opposite to the former, and consists in such a communion of the fibrous parts of the blood as indisposes it for the separation of the cruor from the serum. This is frequently the consequence of malignant and pestilential fevers, &c. and is likewise occasioned by some kinds of poisons.

The circulation of the vital blood is performed through the arteries: and its course is from the heart towards the extremes of the body: and this from every part of the body, internal and external; still out of a wider part into a narrower, out of the trunk into the branches. And it is on this principal alone, that all the blood may be derived into an artery, and evacuated at it. For it is evident that all the arteries of the body are continually bringing the blood from the left part of the heart, through the trunks of the arteries, into the branches; and on the contrary that all the veins, excepting the porta, are perpetually bringing back the blood from the extreme parts into the heart. The blood being arrived here, its motion or circulation, is continued as follows. The auricles of the heart, being large hollow muscles, are furnished with a double series of strong fibres proceeding with a contrary direction to two opposite tendons, the one adhering to the right ventricle, the other to the sinus venosus: as also with innumerable veins and arteries; by the contractile force of these auricles, the blood is vigorously expressed, and driven into the right ventricle; which, upon this contraction, is rendered flaccid, empty, and disposed to admit it. If now the right ventricle, thus full of blood, by

the contraction of its fibres presses the blood towards the aperture again, venous blood, at the same time pouring in, will drive it back again into the cavity and mix it more intimately; till rising up against the parietes, it raises the *valvulæ tricuspidæ*, which are so connected to the fleshy columns extended on the opposite side, as that when laid quite down they cannot close the parietes of the right ventricle: these it thrusts towards the right auricle, till being there joined they stop the passage very closely, and prevent any return. By the same means the same blood rises up into the three semilunar valves, placed in the extremity of the other mouth, and lying open to the pulmonary artery: these it shuts close against the sides of the artery: and leaves a passage into the artery alone. The venous blood, therefore, that is, the blood of the whole body, continually moves out of the *sinus*, or trunk of the *vena cava*, through the right auricle and right ventricle, into the pulmonary artery, in a continued and forcible stream. The blood carried by this artery into the lungs, and distributed by its branches through the whole substance thereof, is first admitted into the extremities of the pulmonary vein, called *arteria venosa*; whence, passing into four large vessels, which unite together, it is brought to the left *sinus venosus*, or trunk of the pulmonary vein; by the force of whose musculous structure it is driven into the left ventricle, which on this occasion is relaxed, and by that means prepared to receive it. Hence, as before, it is driven into the left ventricle, which is relaxed by the same means; and the *valvulæ mitrales*, opening, admit it into the left ventricle, and hinder its reflux into the pulmonary vein. From hence it is forced into the aorta; at whose orifice there are three semilunar valves, which also prevent a reflux by closing the same. And thus is circulation effected: and all the blood sent into the lungs, and received in the *arteria venosa*, *sinus venosus*, left auricle and ventricle, being here continually propelled into the *aorta*, whose ramifications are spread throughout all the rest of

the body, with a violent motion. Thus is all the blood, in its return from every part of the body, internal and external, and from every part of the heart and its auricles, impelled into the right ventricle: out of that into the lungs; thence into the left ventricle, and thence through the whole extent of the body; and thence again brought back to the heart.

In a *fœtus*, the apparatus for the circulation is somewhat different from that above described. The *septum*, which separates the two auricles of the heart, is pierced through with an aperture, called the *foramen ovale*; and the trunk of the pulmonary artery, a little after it has left the heart, sends out a tube in the descending aorta, called the communicating canal. The blood in the lungs of the *fœtus* has none of the advantages of air or respiration; which yet being necessary, nature, it is supposed, takes care that it receives a portion of air, mixed together with its mother's blood, and transmitted to it by the umbilical vessels, to be diffused through the body. This is confirmed hence; that, by constringing the navel-string very tight the child dies like a man strangled; which appears to be owing to nothing but the want of air. And to this, that, as soon as the mother ceases to respire, the *fœtus* expires.

As to the velocity of the circulating blood, and the time wherein the circulation is completed, several computations have been made. By Dr. Keill's account, the blood is driven out of the heart into the *aorta*, with a velocity which would carry it fifty-two feet in a minute; but this velocity is continually abated in the progress of the blood through the numerous sections, or branches, of the arteries; so that, before it arrives at the extremities of the body, its motion is infinitely diminished. The space of time wherein the whole mass of blood may ordinarily circulate, is variously determined. Some of the latest writers state it thus: supposing the heart to make two hundred pulses in an hour, and that at every pulse there is expelled an ounce of blood; as the whole mass is not ordinarily computed to exceed twenty-four pounds, it must be circu-

lated seven or eight times over in the space of an hour. The *impetus*, occasioning the circulation, is great enough in some animals to raise the blood six, seven, or eight, feet high from the orifice it spins out at; which, however, is far exceeded by that of the sap of a vine in bleeding-time, which will sometimes rise upwards of forty feet high. The heat and motion of the blood are always greater, from a greater activity in the soul, in the day than in the night: and they are likewise ever greater from the food taken in the day-time: for the pulse is always quicker after eating than before it; after a full meal than after a spare one; and after a meal of drier and stronger food, than after a meal of food that is moister and weaker.

OF THE PULSES.

THE *pulse* is that reciprocal motion of the heart and arteries, whereby the warm blood, thrown out of the left ventricle of the heart is so impelled into the arteries, and so distributed throughout the whole body, as to be perceived by the finger. It is certain, that life, health, and the due order of the whole body, depend upon the proper and equable circulation of the blood and humours through the solid parts; so that, the better regulated and the more equable the circulation is, the more perfectly nature preserves herself, and cures the diseases incident to her; and, on the contrary, the more this circulation recedes from a due and equable state, the weaker nature is found to be, and the more subject to misfortunes and diseases. Now every one must own, that the circulation of the blood cannot be better investigated than by feeling the pulse, not in a superficial manner, but for a sufficient time; for the pulse not only discovers the imperfection and strength of the whole body, but also the nature of the blood and the state of the various secretions. And, as a pendulum of a clock, by its equable and regular vibrations, manifests the worth of the clock, so

the pulse discovers the habit of the patient, and the vigour or deprivation of all the functions.

A moderate, constant, and equal pulse, is the rule and measure by which we are to judge of the rest. A moderate pulse, is that which is large, but neither quick nor slow, hard nor unequal: this is the pulse with which all others ought to be compared, and which denotes the best state of health, the absence of all preternatural and foreign things, and a due and temperate degree of heat: for, when such a pulse is present, the fluids are duly spirituous, the fibres possessed of their naturale tone, the blood temperate and fluid, and consequently the transpiration free, the nutrition good, the animal functions vigorous, the secretions duly carried on, and the patient in a state of good health. But when the pulse is quicker, and consequently more frequent than usual, it indicates, a preternatural irritation of the heart, as the ancients express it, unless it proceeds from external causes. But, if such a pulse continues long, it infallibly denotes a disorder accompanied with an increase, and even a fever. It is generally produced by an intestine motion of the blood, and a change induced on the crasis of the spirits, by an admixture of heterogeneous and often caustic particles. When the pulse is vehement, and at the same time quick, it indicates a feverish intemperature, an admixture of something heterogeneous with the blood, lymph, and spirits: but at the same time a larger quantity of health and spirits. If a vehement and quick pulse is also large, the circulation of the blood is brisk, the heat and thirst great and the whole habit red and turgid. Where the pulse is small, and little blood is conveyed from the heart to the arteries, and from the veins to the heart, the circulation of the blood is faint and languid. Hence the transpiration and secretions are but small, and the strength little: but, if a small pulse is at the same time weak, frequent, and thick, it denotes a great languor of the strength, a preternatural intestine motion, and a weak circulation of the

blood; and, if this species of pulse continues long, it indicates malignity and great danger.

A slow pulse generally denotes a viscosity, thickness, and weak circulation, of the blood, together with a languor of the secretions; but, if it is at the same time weak, it is dangerous, and raises a suspicion of a total loss of strength. But a pulse which is slow and large denotes sufficient remains of strength, tension, and thickness, of the fibres of the heart and arteries; and a viscid and tenacious blood. All unequal pulses are very bad, since they denote that there is neither a due influx of the spirits, nor a proper and equal mixture of the blood; but particularly such pulses alwas prognosticate unlucky events, when they are weak. Intermittent pulses are also of a bad kind, or generally accounted the presages of death. But it is not universally so; for an intermittent pulse frequently happens without danger, where, for instance, the symptoms are of a bad kind, and the patient's strength still entire. Hence this species of a pulse frequently happens in hypochondriac and melancholic patients, where the intestine motion of the blood is diminished by its thickness. But when the pulse is weak and quick at the same time, it generally prognosticates death. An hard pulse generally indicates pains, spasms, and convulsions, because the fibres of the heart and arteries are spasmodically constricted. The irregular, caprizating, and discontinued, pulses, denote a very bad state of the body, both with respect to the fluid and solid parts.

It is carefully to be observed, that one kind of pulse is not found in all persons; for the pulse depends on the tone of the muscular fibres, on the influx of the spirits, and the nature and temperament of the blood; and, as all these are suprisingly various in human bodies, with respect to age, sex, the season of the year, the climate, the method of life, the sleep, and the passions of the mind, so also the pulses differ from each other according as these circumstances differ. Thus men generally have a large and vehement pulse, and women one of a

more slow and weak kind; for the former have stronger fibres and a hotter blood than the latter. For this reason also, the circulation of the blood is brisker in men than in women; and the former do not generate such loads of redundant blood and humours as women, who are generally weaker, and more subject to diseases. Choleric persons, and those of sanguineo-choleric constitutions, have a larger, quicker, and more vehement pulse, than phlegmatic and melancholic persons; for which reason the fluids move more quickly, the excretions are made more expeditiously, and the blood is more fluid, in the former than in the latter; for the blood of the former is impregnated with a larger quantity of oleous and sulphureous parts, which are the source and matrix of heat and spirituous quantity. Thus also, those of a slender habit, who have strong fibres, and large vessels, have a larger and stronger pulse than those who are fat, have lax fibres, and narrow vessels. Hence they are also sounder, more robust, and more capable of enduring fatigue. This is also the reason why those who are naturally thick and fat are more readily seized with sickness, and destroyed by it, than those of slender habits. In infants and children, the pulse is frequent and soft; whereas, in old persons, it is slow and large, whilst in young persons, and those full grown, it is large and vehement; for generally infants and children generate a large quantity of humours (which are necessary to their growth), and collect a great deal of sordes, which is the reason why infants and children are more generally seized with sickness, and more readily die of it, than youths and adults. Old persons have thick blood, but rigid fibres: for which reason their pulse is hard, and makes a forcible impression on the touch; but in infants and children the pulse is soft, on account of the tenderness and laxity of the fibres. The pulse is also changed by the season of the year, the exercise of the body, the aliments, and the affections of the mind. In the middle of the spring, the pulse is large and vehement; at this season also the strength is greater; for which reason persons

are at that time most rarely sick, and recover most easily : in the middle of the summer the pulse is quicker and weaker, because by the intense heat the strength is impaired, while the intestine motion of the fluids is greater than it usually is. In autumn the pulse is slower, softer, and weaker, than at the middle of the summer, those which are cold, to the winter, and such as are temperate to the spring.

Exercise increases the pulse, and consequently the circulation of the blood, whilst an idle and inactive state renders the pulse slow, weak, and languid, and diminishes the circulation of the fluids, Spirituous aliments render the pulse, large, vehement, and frequent. The pulse of such as are asleep is slow, small, and languid; but, as soon as they awake, it forthwith becomes large, quicker, and stronger; the pulse of those who are angry is large, vehement, and quick; that of such as are frightened, frequent, small, and inactive; and of those who are sorrowful, small, languid, and slow; hence the common and ordinary affections of the body change the pulse, so that, without duly adverting to these affections, the pulse cannot be certainly understood, nor can it be determined how far it recedes from a natural state in consequence of diseases.

The natural pulse is therefore to be felt and to be observed not immediately after exercise, bathing, immoderate eating, drinking wine, or other causes which exagitate the heart and spirits; for we are to determine nothing about the pulse till the force of external causes has ceased, and all perturbations of the body are allayed; for the pulse is the most certain sign and criterion for judging of the motion of the heart and blood; but, if the pulse alone is observed, without paying a due regard to other circumstances, it may lay a foundation for forming a false judgment; since the pulse may be disturbed by a thousand abstract causes.

All authors, both ancient and modern, agree, that a frequent pulse, in every species of fever, whether continual or intermittent, whether benign or malignant, whether in its beginning

or at its height, proves such a fever to be present; hence the quick or frequent pulse is considered as the true essential sign of fevers; but this frequently is either greater or less, and associates itself with the great or vehement, or with the small and weak, according to the diversity of fevers, and the times of the disease. A frequent pulse when weak and small, is scarcely ever good; since it denotes a languid and slow circulation of the blood; but a frequent, large, and vehement, pulse, such as is generally observed in the height of continual fevers, denotes a brisk circulation of the blood, and an increased heat of the body. In investigating the cause of a frequent pulse, which is generally preternatural, and accompanies several disorders, we shall follow the accurate Bellini, who accounts for the motion of the heart from the influx of the blood through the coronary arteries, and of the nervous fluid through the nerves, into the fibres of the heart; whence he concludes, that the muscles of the heart are most frequently moved when the nervous fluid is most frequently conveyed into them, which happens when it is forced into them by a sufficient quantity of blood flowing forcibly into the brain. Now by a frequent contraction of the heart a frequent pulse is produced, which indicates that a proper quantity of blood is conveyed to the brain, and that the brain is forcibly pressed, which will happen, either when the blood stagnates therein, in consequence of an obstruction of its veins, or when the blood contained in these veins cannot flow in other parts, or in the lungs; or when the blood is thrown into a state of effervescence, by which it assumes a tendency to move in every direction with a greater impetus, and by that means presses the brain more powerfully: the muscles of the heart also move more frequently when irritated by any stimulus. If, therefore, the blood is too acid or hot, so as to stimulate the sinuses of the heart, the heart will be more frequently contracted, and the frequency of the pulse will indicate a stimulating quality in the blood.

Since from the pulse we thus form a judgement not only of

the circulation and temperature of the blood, but also of the motion of the spirits, and the strength of the patient, so the knowledge of the pulse, and a due attention to it, become of singular service, not only in investigating the nature of disorders, and forming a right judgement concerning them, but also in prescribing medicines for their cure. But they must be carefully, not superficially, consulted. The physicians of China are far more careful in this respect than those of Europe; for, the Chinese often spend a whole hour in feeling the pulse, whilst the English physicians have hardly patience to feel above two pulsations; a practice highly culpable, since, after ten strokes of the artery, an inequality or intermission often occurs which happens when the unequally-mixed blood passes through the heart. The pulse is also to be felt in both wrists, in the neck, and in the temples; since it is certain from experience, that the pulse in the wrists frequently varies, and may be more commodiously felt in one than another. We ought also to advert to the pulses of other parts; thus, sometimes hypochondriac patients perceive a large pulse under the ribs on the left side, which happens when a quick and viscid blood, exagitated by heat, or any other cause, endeavours to procure a quick passage through the pancreas and spleen, but, stopping in their narrow vessels, produces a pulsation, and a kind of prickling pain,

In continual and malignant fevers a large internal pulsation in the veins of the head generally denotes a subsequent delirium; since it is a sign that the blood there congested circulates slowly, till at last, becoming stagnant, it produces a violent inflammation of the meninges. If a large pulse arises from an excessive ebullition of the blood, so that in fevers the veins of the temples beat, and the face is turgid, without a softness of the præcordia, there is reason to suspect that the disease will be long, and that it will not terminate without a large hæmorrhage from the nose, an hiccough, convulsions, or sciatic pains. The reason of this is, that, the redundant blood seeks for an

outlet either by the nose or the hæmorrhoidal veins; and, the sooner this happens, the sooner the patient is free from his disorder.

When a pulsation is observed in any part of the body, where at other times it is not felt, we may certainly conclude, that the part is inflamed and disposed to a suppuration, especially when it is accompanied with tumour and pain. An hard pulse is almost an infallible sign in the membranous parts; for this hardness of the pulse, or excessive tension and vibration of the artery, indicates something of a spasmodic nature, arising from the consent of the parts, and produced by the inflammation and pain. The pulse of persons labouring under disorders of the breast, or a palpitation of the heart, is frequent, unequal, and languid; but such a pulse, unless when vehement, is accompanied with no preternatural heat, and happens because the blood does not pass through the sinuses of the heart and lobes of the lungs. In weakness, and a disposition of syncope, the pulse is generally small, rare and languid; but, if the pulse is absolutely imperceptible, the body covered with a cold sweat, and the functions of the mind are not totally destroyed, I have observed, that the patient infallibly dies in six hours; and such a situation I have seen produced by corrosive poison. It is to be observed, that about the critical times in fevers, when nature endeavours to throw off the superfluous and peccant matter by stool or sweat, the pulse, though languid, is yet more regular and less frequent, which is a certain sign of recovery. But, if the pulse is soft and undulating, it is a sign that a salutary and critical sweat is just coming on.

It is also to be observed, that the pulse is changed by medicines. Thus, after drastic purgatives, which procure too many stools, the pulse is generally preternaturally quick. After venæsection, especially in plethoric habits, the pulse becomes quicker, a sign that the circulation of the blood, in consequence of its having a larger space, is happily increased, since by this means a suppression of the menses or hæmorrhoids is generally

removed. It is certain, not only from the authority of Sydenham, but also from experience, that, after the use of chalybeats, the pulse is quicker, the face redder, and the heat greater. Strong sudorifics, composed of volatile oleous substances, greatly increase the pulsation of the heart and arteries; on the contrary, anodynes, opiates, preparations of nitre, precipitating powders, acids, and such things as diminish the intestine motion of the blood and fix its sulphur, render the pulse calm and moderate in pains, inflammations, and febrile intemperature. Some very useful and important rules for the exhibition of medicines are drawn from the state of the pulse: thus purging and vomiting are contraindicated by a too quick and vehement pulse: for, when the blood is in a violent motion and ebullition, the secretions are generally very languid. If the strength is defective, which may be known by the languid state of the pulse, emetics and purgatives diminish the strength still more: so that the physician ought to consult the pulse before he exhibits them. For when the pulse is strong, and the motion of the blood regular, these artificial evacuations are most beneficial, and succeed best. The same caution is necessary in the exhibition of sudorifics and all analeptics, which convey heat and motion to the blood; for, if the pulse is strong, and frequent, such spirituous substances do more injury than good; they rarify the blood too much, and accelerate its intestine motion; by which means a delirium and other inflammations are frequently brought on. Great circumspection and attention to the pulse are also requisite in the exhibition of narcotics or opiates; for, as these are possessed of a power of stopping the motion of the blood and spirits, and consequently of impairing strength, so they ought never to be exhibited when the pulse is weak, languid, and small, but are to be avoided like poison.

OF DISEASES IN GENERAL, THEIR PREVENTION, AND CURE.

DISEASE, introduced the art of Medicine, which, in a primitive sense, communicates the means of preserving health when present, and of restoring it when lost. If we look back into the origin of the medical art, we shall find its first foundation to be owing to accidental events, and natural instinct. In the early ages, the sick were placed in cross ways, and other public places, to receive the advice of such passengers as knew a remedy suitable to their complaints; and, the better to preserve the memory of every remarkable cure, both the disease and the remedy were engraved on pillars, that patients in the like cases might resort to them for instruction and relief. Hence an insight into the virtue of herbs and plants, of metals and minerals, was originally acquired.

As to the part which reason had acted in the improvement of medicine, it seems to have consisted in observing: 1. That diseases attended with particular circumstances, called symptoms, were sometimes cured without the assistance of art, by spontaneous evacuations, as hæmorrhages, diarrhœas, vomitings, or sweats; whence bleeding, purges, and vomits, took their rise. 2. That the patients were often relived by the breaking out of various tumours; whence arose the applications of topical remedies. And indeed, it is the best method of improving physic, to observe carefully what means nature, unassisted by art, employs to free the constitution from distempers; since many important hints may be thence taken, for the relief of other patients under the like circumstances. He, who would advance the healing art, ought to collect a select treasure of practical observations, rest satisfied with a few but well chosen medicines, be thoroughly acquainted with their virtues and efficacy in different constitutions and diseases, despise the cumbersome load of recipes with which practical writers of an infe-

rior rank abound, reject the so much extolled medicines of the chemists, and attempt the relief of patients by a proper diet and exercise, and such medicines as observation and sound philosophy recommend; for to the improvement of anatomy and natural philosophy is much of the success of physic to be attributed. The knowledge of medicines, or suitable remedies, is also highly necessary in those, who, in order to moderate the impetus in acute disorders, make evacuations, blunt acrimony, dilute too thick fluids, condense those that are too thin, brace up too lax parts, and relax such as are too much constricted: they also drive the humours to parts where they will be least prejudicial, upon occasion mitigate pain, and in languors use stimulating medicines. Wine, vinegar, barley, nitre, honey, rhubarb, opium, and other simples, are found both safe and powerful medicines. Sydenham tell us, that all manner of diseases may be cured by bleeding, purging, with a subsequent opiate, and proper regimen. In chronical diseases mineral waters, salts, diaphoretics, soap, mercury, steel, with a few vegetables, and proper exercise will generally effect the cure. In a word, what is there in the most elaborate preparation, that is worth half the pains taken about it? Mercury, opium, the Peruvian bark, and other simples, with fire and water, are acknowledged as the surest remedies by the ablest master of the art; and these are found to be more efficacious in that crude state, in which bountiful nature has imparted them to us, than after the most operose and artificial preparations. We can despair of nothing, while we follow simplicity; but the event of intricate labour is fallacious.

Diseases, in this and other countries, often flow from local circumstances; whence they admit of great mitigation, and sometimes of being entirely prevented, particularly if proper and timely means be taken for that purpose. Diseased parents, unwholesome food, confined air, and uncommonly wet, cold, damp, or hot seasons, are the forerunners of various disorders, and, as these are generally foreseen and known, it

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should be the duty of every individual to guard against them.

Men are also exposed to particular diseases from the occupations which they follow. Chemists, founders, glass-makers, and several other artists, are hurt by the unwholesome air which they are obliged to breathe. This air is not only loaded with the noxious exhalations arising from metals and minerals, but is so charged with phlogiston as to be rendered unfit for expanding the lungs sufficiently, and answering the other important purposes of respiration. Hence proceed asthmas, coughs, and consumptions of the lungs, so incident to persons who follow these employments. Such artists ought never to continue too long at work; and when they give over they should suffer themselves to cool gradually. They ought never to drink large quantities of cold, weak, or watery liquors, while the body is hot, nor to indulge in any thing that is cold on the stomach.

Miners, and all who work under ground, are likewise hurt by unwholesome air. The air, by its stagnation in deep mines, not only loses its proper spring and other qualities necessary for respiration, but is often loaded with such noxious exhalations as to become a most deadly poison. Miners are not only hurt by unwholesome air, but likewise by the particles of metal which adhere to their skin, clothes, &c. These are absorbed, or taken up into the body, and occasion palsies, vertigoes, and other nervous affections, which often prove fatal. Fallopius observes, that those who work in mines of mercury seldom live above three or four years. Lead, and several other metals, are likewise very pernicious to the health.

All who work in mines or metals ought to wash carefully, and to change their clothes as soon as they give over working. Nothing would tend more to preserve the health of such people than a strict and almost religious regard to cleanliness. Plumbers, painters, gilders, smelters, makers of white lead, and many others who work in metals, are liable to the same diseases as miners, and ought to observe the same directions

for avoiding them. Tallow-chandlers, boilers of oil, and all who work in putrid animal substances, are likewise liable to suffer from the unwholesome smells or effluvia of these bodies. They ought to pay the same regard to cleanliness as miners: and when they are troubled with nausea, sickness, or indigestion, they should take a gentle purge.

Those who follow laborious employments are in general the most healthy of mankind; yet the nature of their occupations, and the places where they are carried on, expose them to some particular diseases. Husbandmen, for example, are exposed to all the vicissitudes of the weather, which, in this country, are often very great and sudden, and occasion colds, coughs, quinsies, rheumatisms, fevers, and other acute disorders. They are likewise forced to work hard, and often carry burdens above their strength, which, by overstraining the vessels, occasions asthmas, ruptures, &c.

Such as bear heavy burdens, as porters, labourers, &c. are obliged to draw the air with much greater force, and also to keep their lungs distended with more violence, than is necessary for common respiration: by this means the tender vessels of the lungs are overstretched, and often burst, insomuch that a spitting of blood or fever ensues. Hippocrates mentions an instance to this purpose, of a man, who, upon a wager, carried an ass; but was soon after seized with a fever, a vomiting of blood, and a rupture. Carrying heavy burdens is generally the effect of mere laziness, which prompts people to do at once what should be done at twice. Sometimes it proceeds from vanity or emulation. Hence it is, that the strongest men are most commonly hurt by heavy burdens, hard labour, or feats of activity. It is rare to find one who boasts of his strength without a rupture, a spitting of blood, or some disease, which he reaps as the fruit of his folly. When the muscles are violently strained, frequent rest is necessary, in order that they may recover their tone; without this, the strength and constitution

will soon be worn out, and a premature old age brought on.

Labourers in the hot season are apt to lie down and sleep in the sun. This practice is so dangerous, that they often wake in a burning fever. Those ardent fevers, which prove so fatal about the end of summer and beginning of autumn, are frequently occasioned by this means. Fevers of a very bad kind are often occasioned among labourers by poor living. When the body is not sufficiently nourished, the humours become vitiated, and the solids weak; from whence the most fatal consequences ensue. Poor living is likewise productive of many of those cutaneous diseases so frequent among the lower class of people. It is remarkable that cattle, when pinched in their food, are generally affected with diseases of the skin, which seldom fail to disappear when they are put upon a good pasture. This shews how much a good state of the humours depends upon a sufficient quantity of proper nourishment. Poverty not only occasions, but aggravates, many of the diseases of the laborious, and makes them miserable indeed. Here the godlike virtue of charity ought always to exert itself. To relieve the industrious poor in distress, is surely the most exalted act of religion and humanity. They alone who are witnesses of those scenes of calamity, can form a notion of what numbers perish in diseases, for want of proper assistance, and even for want of the necessaries of life.

Soldiers suffer many hardships from the inclemency of seasons, long marches, bad provisions, hunger, watching, unwholesome climates, bad water, &c. These occasion fevers, fluxes, rheumatisms, and other fatal diseases, which generally do greater execution than the sword, especially when campaigns are continued too late in the year. A few weeks of cold rainy weather will often prove more fatal than an engagement. Sailors may also be numbered amongst the laborious. They undergo great hardships from change of climate, the violence of the weather, hard labour, &c. One great source of the dis-

eases of seafaring people is excess. When they get on shore, after having been long at sea, without regard to the climate, or their own constitutions, they plunge headlong into all manner of riot, and even persist till a fever puts an end to their lives. Thus intemperance, and not the climate, is often the cause why so many of our brave sailors die on foreign coasts. Such people ought not to live too low; but they would find moderation the best defence against fevers, and many other maladies. We have reason to believe, if due attention were paid to the diet, air, clothing, and above all things to the cleanliness, of sea-faring people, they would be the most healthy set of men in the world; but, when these are neglected, the very reverse will happen.

Nothing can be more contrary to the health and nature of man than a sedentary life, yet this class comprehends the far greater part of the species. Almost the whole female world, and in manufacturing countries the major part of the males, may be reckoned sedentary. But, though sedentary employments are necessary, yet there seems to be no reason why any person should be confined for life to these alone. It is constant confinement that ruins the health. A man will not be hurt by sitting five or six hours a-day; but, if he be obliged to sit ten or twelve, in confined air, he will soon become injured in his health. Unwholesome air is the cause of many disorders. Few are aware of the danger arising from it. People generally pay some attention to what they eat and drink, but seldom regard what goes into the lungs, though the latter often proves more suddenly fatal than the former. A sedentary life seldom fails to occasion an universal relaxation of the solids. This is the great source from whence most of the diseases of sedentary people flow. The scrophula, consumption, hysterics, and nervous diseases, now so common, were very little known in this country before sedentary artificers became so numerous: and they are very little known still among such of our people as follow active employments without doors, though in great

towns at least two-thirds of the inhabitants are afflicted with them. Instead of multiplying rules for preserving the health of the sedentary, we shall recommend to them the following plan, viz. That every person who follows a sedentary employment should cultivate a piece of ground with his own hand. This he might dig, plant, sow, and weed, at leisure hours, so as to make it an exercise and amusement, while it produced many of the necessaries of life. After working an hour in a garden, a man will return with more keenness to his employment within doors, than if he had been all the while idle. Labouring the ground is every way conducive to health. It not only gives exercise to every part of the body, but the very smell of the earth and fresh herbs revives and cheers the spirits, whilst the perpetual prospect of something coming to maturity delights and entertains the mind. We are so formed as to be always pleased with somewhat in prospect, however distant or however trivial. Hence the happiness that men feel in planting, sowing, building, &c. These seem to have been the chief employments of the more early ages: and, when kings and conquerors cultivated the ground, there is reason to believe, that they knew as well wherein true happiness consisted as we do. In a word, exercise without doors, in one shape or another, is absolutely necessary to health. Those who neglect it, though they may drag out life, can hardly be said to enjoy it. Weak and effeminate, they languish for a few years, and soon drop into an untimely grave.

Every disease may be considered as an assemblage of symptoms, and must be distinguished by those that are most obvious and permanent; for, by a due attention to them, the investigation of diseases in general will be found a much less difficult matter than people are ready to imagine. A proper attention to the patient's age, sex, temper of mind, constitution, and manner of life, will likewise greatly assist, both in the investigation and treatment of diseases. In childhood the fibres are lax and soft, the nerves extremely irritable, and the fluids thin; whereas in

old age the fibres are rigid, the nerves become almost insensible, and many of the vessels imperviable. These and other peculiarities render the diseases of the young and aged very different, and of course they must require a different method of treatment. Females are liable to many diseases which do not afflict the other sex: besides, the nervous system being more irritable in them than in men, their diseases require to be treated with greater caution. They are less able to bear large evacuations; and all stimulating medicines ought to be administered to them with a sparing hand. The temper of mind ought to be carefully attended to in all diseases. Fear, anxiety, and a fretful temper, both occasion and aggravate diseases. In vain do we apply medicines to the body to remove maladies which proceed from the mind. When that is affected, the best medicine is to sooth the passions, to divert the mind from anxious thought, and to keep the patient as easy and cheerful as possible. Few things are of greater importance, in the cure of diseases, than cleanliness. When a patient is suffered to lie in dirty clothes, whatever perspires from his body is again resorbed, or taken up into it, which serves to nourish the disease, and increase the danger. Many diseases may be cured by cleanliness alone; most of them may be mitigated by it, and in all of them it is highly necessary both for the patient and those who attend him.

OF FEVERS.

FEVERS are not only the most frequent of all diseases, but they are likewise the most complex: in the most simple species of fever there is always a combination of several different symptoms. The distinguishing symptoms of fever are, increased heat, frequency of pulse, loss of appetite, general debility, pain in the head, and a difficulty in performing some of the vital and animal functions. The other symptoms usually attendant on fevers are, nausea, thirst, anxiety, delirium, wea-

riiness, wasting of the flesh, want of sleep, or the sleep disturbed and not refreshing. As a fever is only an effort of Nature to free herself from an offending cause, it is the business of those who have the care of the sick, to observe with diligence which way Nature points, and to endeavour to assist her operations. Our bodies are so framed, as to have a constant tendency to expel or throw off whatever is injurious to health. This is generally done by urine, sweat, stool, expectoration, vomit, or some other evacuation. There is reason to believe, if the efforts of nature, at the beginning of a fever, were duly attended to and promoted, it would seldom continue long; but, when her attempts are either neglected or counteracted, it is no wonder if the disease proves fatal. There are daily instances of persons, who, after catching cold, have all the symptoms of a beginning fever; but, by keeping warm, drinking diluting liquors, bathing the feet in warm water, &c. the symptoms in a few hours disappear, and the danger is prevented. When fevers of a putrid kind threaten, the best method of obviating their effects is by repeated vomits. Almost every person in a fever complains of great thirst, and calls out for drink, especially of a cooling nature. This at once points out the use of water and other cooling liquors. What is so likely to abate the heat, attenuate the humours, remove spasms and obstructions, promote perspiration, increase the quantity of urine, and, in short, produce every salutary effect in an ardent or inflammatory fever, as drinking plentifully of water, thin gruel, or any other weak liquor of which water is the basis? The necessity of diluted liquors is pointed out by the dry tongue, the parched skin, and the burning heat, as well as by the unquenchable thirst, of the patient. Many cooling liquors which are extremely grateful to patients in a fever, may be prepared from fruits, as decoctions of tamarinds, apple-tea, orange-whey, and the like. Mucilaginous liquors might also be prepared from marshmallow-roots, linseed, lime-tree buds, and other mild vegetables particularly pointed out in the Herbal.

These liquors, especially when acidulated, are highly agreeable to the patient, and should never be denied him. In fevers, the mind as well as the body should be kept easy. Company is seldom agreeable to one that is sick. Indeed every thing that disturbs the imagination increases the disease; for which reason every person in a fever ought to be kept perfectly quiet, and neither allowed to see or hear any thing that may in the least affect or discompose his mind. What food the patient takes should be in small quantity, light, and of easy digestion. It ought to be chiefly of the vegetable kind, as panada, roasted apples, gruels, and such like. The fresh air should likewise be taken as much as possible; it not only removes his anxiety, but cools the blood, revives the spirits, and proves every way beneficial. Among common people, the very name of a fever generally suggests the necessity of bleeding. This notion seems to have taken its rise from most fevers in this country having been formerly of an inflammatory nature; but true inflammatory fevers are now seldom to be met with. Sedentary occupations, and a different manner of living, have so changed the state of diseases in Britain, that there is now hardly one fever in ten where the lancet is necessary. In most low, nervous, and putrid, fevers, which are now so common, bleeding is really hurtful, as it weakens the patient, sinks his spirits, &c. We would recommend this general rule, never to bleed at the beginning of a fever, unless there be evident signs of inflammation. Bleeding is an excellent medicine when necessary, but should never be wantonly performed. It is likewise a common notion, that sweating is always necessary in the beginning of a fever. When the fever proceeds from an obstructed perspiration, this notion is not ill-founded. If the patient only lies in bed, bathes his feet and legs in warm water, and drinks freely of water-gruel, or any other weak diluting liquor, he will seldom fail to perspire freely. The warmth of the bed, and the diluting drink, will relax the universal spasm, which generally affects the skin at the beginning of a fever; it will open the

pores, and promote the perspiration, by means of which the fever may often be carried off. But, instead of this, the common practice is to heap clothes upon the patient, and to give him things of a hot nature, as spirits, spiceries, &c. which fire his blood, increase the spasms, and render the disease more dangerous. In all fevers a proper attention should be paid to a patient's longings. These are the calls of Nature, and often point out what may be of real use. Patients are not indeed to be indulged in every thing that the sickly appetite may crave; but it is generally right to let them have a little of what they eagerly desire, though it may not seem altogether proper. What the patient longs for, his stomach will generally digest; and such things have sometimes a very happy effect.

OF INTERMITTENT FEVERS, OR AGUES.

THE several kinds of intermittent fevers, or agues, take their names from the period in which the fit returns, as quotidian, tertian, quartan, &c. They are generally occasioned by effluvia from putrid stagnated water. This is evident from their abounding in rainy seasons, and being most frequent in countries where the soil is marshy, as in Holland, the Fens of Cambridgeshire and Huntingdonsire, the Hundreds of Essex, &c. This disease may also be occasioned by eating too much stone-fruit, by a poor watery diet, damp houses, evening dews, lying upon the damp ground, watching, fatigue, depressing passions, and the like. When the inhabitants of a high country retire to a low one, they are apt to prove fatal. In a word, whatever relaxes the solids, diminishes the perspiration, or obstructs the circulation in the capillary or small vessels, disposes the body to agues.

CURE.—As the chief intentions of cure in an ague are to brace the solids, and promote perspiration, the patient ought to take as much exercise between the fits as he can bear. If he be able to go abroad, riding on horseback, or in a carriage,

will be of great service. But, if he cannot bear that kind of exercise, he ought to take such as his strength will permit. Nothing tends more to prolong an intermitting fever, than indulging a lazy indolent disposition. In this disease, the stomach is generally loaded with cold viscid phlegm, and frequently great quantities of bile are discharged by vomit; which plainly points out the necessity of such evacuations. Vomits are therefore to be administered before the patient takes any other medicine. But, if the patient be afraid to take a vomit, he ought to cleanse the bowels by a dose or two of Glauber's salt, jalap, or rhubarb: after this, two ounces of the best Peruvian bark, finely powdered, may be divided into twenty-four doses. These may either be made into bolusses, as they are used, with a little syrup of lemon, or mixed in a glass of red wine, a cup of camomile-tea, water-gruel, or any other drink that is more agreeable to the patient. In an ague which returns every day, one of the above doses may be taken every two hours during the interval of the fits. In a tertian, or third-day ague, it will be sufficient to take a dose every third hour during the interval; and in a quartan, every fourth. If the patient cannot take so large a dose of the bark, he may divide each of the powders into two parts, and take one every hour, &c. For a young person, a smaller quantity of this medicine will be sufficient, and the dose must be adapted to the age, constitution, and violence of the symptoms. The above quantity of bark will frequently cure an ague; the patient, however, ought not to leave off taking the medicine as soon as the paroxysms are stopped, but should continue to use it till there is reason to believe the disease is entirely overcome. Most of the failures in the cure of this disease are owing to patients not continuing to use the medicine long enough. They are generally directed to take it till the fits are stopped, then to leave it off, and begin again at some distance of time; by which means the disease gathers strength, and often returns with as much violence as before. A relapse may always be prevented

and the cure greatly facilitated, by using the following infusion for some considerable time as a drink: Take an ounce of gentian-root; of calamus aromaticus, and orange-peel, each half an ounce, with three or four handfuls of camomile flowers, and a handful of coriander seed, all bruised together in a mortar; put half a handful of these ingredients into a tea-pot, and pour thereon a pint of boiling water. A large tea-cup full of this infusion should be drunk three or four times a day; by which means a smaller quantity of bark than is generally used will be sufficient to cure an ague. There is no doubt but many of our own plants or barks, which are very bitter and astringent, would succeed in the cure of intermittent fevers, especially when assisted by aromatics; and it is only by the use of sundry of those herbs recommended in the Herbal as antidotes against agues, that many old women in country places so effectually cure the ague, after it has baffled every exertion of the doctor. In obstinate agues, when the patient is old, the habit phlegmatic, the season rainy, the situation damp, or the like, it will be necessary to add to the above two ounces of the bark, half an ounce of Virginian snake-root, and a quarter of an ounce of ginger, or some other warm aromatic; or, if the symptoms be of an inflammatory nature, half an ounce of salt of wormwood or salt of tartar may be added to the above quantity of bark. As autumnal and winter agues generally prove much more obstinate than those which attack the patient in spring or summer, it will be necessary to continue the use of the foregoing medicines longer in the former than in the latter. If agues are not properly cured, they often degenerate into obstinate chronical diseases, as the dropsy, jaundice, &c. For this reason all possible care should be taken to have them radically cured, before the humours be vitiated, and the constitution spoiled. To prevent agues, people should endeavour to avoid their causes. The following preventive medicine may however be of use to such as are obliged to live in low marshy countries, or who are liable to frequent attacks of this disease:—Take an ounce of

the best Peruvian bark; Virginian snake-root, and orange-peel, of each half an ounce: bruise them all together, and infuse for five or six days in a bottle of brandy, Holland gin, or wine; afterwards pour off the clear liquor, and take a wine-glass of it twice or thrice a-day. Those who can bring themselves to chew the bark will find that method succeed very well. Gentian-root, or calamus-aromaticus, may also be chewed by turns for the same purpose. All bitter herbs are antidotes to agues, especially that are warm and astringent.

OF AN ACUTE CONTINUAL FEVER.

THIS fever is denominated acute, ardent, or inflammatory. It most commonly attacks the young, or persons about the prime or vigour of life, especially such as live high, abound with blood, and whose fibres are strong and elastic. It seizes people at all seasons of the year; but is most frequent in the spring and beginning of summer. It may be occasioned by any thing that overheats the body, or produces plethora; as violent exercise, sleeping in the sun, drinking strong liquors, eating spiceries, a full diet, with little exercise, &c. It may likewise be occasioned by whatever obstructs the perspiration; as lying on the damp ground, drinking cold liquor when the body is hot, night-watching, or the like.

CURE.—As this disease is always attended with danger, the best medical assistance ought to be procured as soon as possible; and such medicines should be used as are calculated to dilute the blood, correct the acrimony of the humours, allay the excessive heat, remove the spasmodic stricture of the vessels, and promote the secretions. For this purpose let the patient drink plentifully of diluting liquors; as water-gruel, or oatmeal-tea, clear whey, barley-water, balm-tea, or apple-tea; which may be sharpened with juice of orange, jelly of currants, raspberries, and such like. If the patient be costive, an ounce of tamarinds, with two ounces of stoned raisins of the

sun, and a couple of figs may be boiled in three English pints of water to a quart. This makes a very pleasant drink, and may be used at discretion. The patient's diet must be very spare and light; and it will afford him great relief, especially in a hot season, to have fresh air frequently let into his chamber. This, however, must be done in such a manner as not to endanger his catching cold. It is too common in fevers to load the patient with bed-clothes, under the pretence of making him sweat, or defending him from the cold. This custom has many ill effects. It increases the heat of the body, fatigues the patient, and retards instead of promoting the perspiration. In this and all other fevers, attended with a hard, full, quick pulse, bleeding is of the greatest importance. This operation ought always to be performed as soon as the symptoms of an inflammatory fever appear. The quantity of blood to be taken away must be in proportion to the strength of the patient and the violence of the disease. If after the first bleeding the fever should rise, and the pulse become more frequent and hard, there will be a necessity for repeating it a second, and perhaps a third, or even a fourth time, which may be done at the distance of twelve, eighteen, or twenty four hours from each other, as the symptoms require. If the pulse continues soft, and the patient is tolerably easy after the first bleeding, it ought not to be repeated. If the heat and fever be very great, forty or fifty drops of the dulcified or sweet spirit of nitre may be made into a draught, with an ounce of rose-water, two ounces of common water, and half an ounce of simple syrup, or a bit of loaf-sugar. This draught may be given to the patient every three or four hours, while the fever is violent; afterwards, once in five or six hours will be sufficient. If about the tenth, eleventh, or twelfth day, the pulse becomes more soft, the tongue moister, and the urine begins to let fall a reddish settlement, there is reason to expect a favourable issue to the disease. But if, instead of these symptoms, the patient's spirits grow languid, the pulse sinks, and his breathing becomes diffi-

cult, with a stupor, trembling of the nerves, startling of the tendons, &c. there is reason to fear that the consequences will be fatal. In this case blisters must be applied to the head, ankles, inside of the legs or thighs, as there may be occasion; poultices of wheat-bread, mustard, and vinegar, may likewise be applied to the soles of the feet, and the patient must be supported with cordials, as strong white-wine whey, negus, sago-gruel with wine in it, and such like. Should the patient recover, he ought to take some gentle laxative. An ounce of tamarinds and a drachm of senna may be boiled for a few minutes in a pint of water, and an ounce of manna dissolved in the decoction; afterwards it may be strained, and a tea-cup full drunk every hour till it operates. This dose may be repeated twice or thrice, five or six days intervening betwixt each, and the patient should be kept easy till his strength and spirits are sufficiently recruited.

OF THE PLEURISY.

THE pleurisy is an inflammation of that membrane called the *pleura*, which lines the inside of the breast. It may be occasioned by whatever obstructs the perspiration: as cold northerly winds; drinking cold liquors when the body is hot; sleeping without doors on the damp ground; wet clothes, plunging the body into cold water, or exposing it to the cold air, when covered with sweat, &c. It may likewise be occasioned by drinking strong liquors: by the stoppage of useful evacuations; as old ulcers, issues, sweating of the feet or hands, &c. the sudden striking-in of any eruption, as the itch, the measles, or the small-pox. A pleurisy may likewise be occasioned by violent exercise, as running, wrestling, leaping, or by supporting great weights, blows on the breast, &c. The pulse in this disease is commonly quick and hard, the urine high coloured; and if blood be let it is covered with a tough crust, or buffy coat. The patient's spittle is at first thin, after-

wards it becomes grosser, and is often streaked with blood.

CURE.—Nature generally endeavours to carry off this disease by a critical discharge of blood from some part of the body, by expectoration, sweat, loose stools, thick urine, or the like. We ought therefore to second her intentions by lessening the force of the circulation, relaxing the vessels, diluting the humours, and promoting expectoration. Copious bleeding in the beginning of a pleurisy, has a much better effect than repeated small bleedings. A man may lose twelve or fourteen ounces of blood as soon as it is certainly known that he is seized with a pleurisy. For a younger person, or one of a delicate constitution, the quantity must be less. If, after the first bleeding, the stitch, with the other violent symptoms, should continue, it will be necessary, at the distance of twelve or eighteen hours, to let eight or nine ounces more. If the symptoms do not then abate, and the blood shows a strong buffy coat, a third, or even a fourth bleeding may be requisite. But this operation is seldom necessary after the third or fourth day of the fever, and ought not then to be performed, unless in the most urgent circumstances. The blood may be attenuated without bleeding; and the pain of the side abated by fomenting, blistering, &c. Fomentations may be made by boiling a handful of the flowers of elder, camomile, and common mallows, or any other soft vegetables, recommended for this complaint in the Herbal. The herbs may either be put into a flannel bag, and applied warm to the side, or flannels may be dipped in the decoction, afterwards wrung out, and applied to the part affected, with as much warmth as the patient can easily bear. Fomentations not only ease the pain, but relax the vessels, and prevent the stagnation of the blood and other humours. Leaves of various plants might likewise be applied to the patient's side with advantage. I have often seen great benefit from young cabbage-leaves applied warm to the side in a pleurisy. These not only relax the parts, but likewise draw

off a little moisture, and may prevent the necessity of blistering plasters; which, however, when other things fail, must be applied. What is called the crisis, or height of the fever, is sometimes attended with very alarming symptoms, as difficulty of breathing, an irregular pulse, convulsive motions, &c. These are apt to frighten the attendants, and induce them to do improper things, as bleeding the patient, giving him strong stimulating medicines, or the like. But they are only the struggles of Nature to overcome the disease, in which she ought to be assisted by plenty of diluting drink, which is then peculiarly necessary. If the patient's strength however be much exhausted by the disease, it will be necessary at this time to support him with small draughts of white-wine whey, negus, or the like. When the pain and fever are gone, it will be proper, after the patient has recovered sufficient strength, to give him some gentle purges. He ought likewise to use a light diet of easy digestion, and his drink should be of a cleansing nature.

The *paraphrenitis*, or inflammation of the diaphragm, is so nearly connected with the pleurisy, and resembles it so much in the manner of treatment, that it is scarcely necessary to consider it as a separate disease. It is attended with a very acute fever, and an extreme pain of the part affected, which is generally augmented by coughing, sneezing, drawing in the breath, taking food, going to stool, making water, &c. Hence the patient breathes quick, and draws in his bowels to prevent the motion of the diaphragm; is restless, anxious, has a dry cough, a hiccup, and often a delirium. Every method should be taken to prevent a suppuration, as it is impossible to save the patient's life when this happens. The regimen and medicine are in all respects the same as in a pleurisy. We shall only add, that in this disease emollient clysters are peculiarly useful, as they relax the bowels, and by that means make a derivation from the part affected.

OF INFLAMMATION OF THE LUNGS.

THIS disease is generally fatal to those who have a flat breast, or narrow chest, and to such as are afflicted with an asthma, especially in the decline of life. Sometimes the inflammation reaches to one lobe of the lungs only, at other times the whole organ is affected; in which case the disease can hardly fail to prove fatal. An inflammation of the lungs is sometimes a primary disease, and sometimes it is in consequence of other diseases, as a quinsey, a pleurisy, &c. Most of the symptoms of a pleurisy likewise attend an inflammation of the lungs; only in the latter the pulse is more soft, and the pain less acute; but the difficulty of breathing and oppression of the breast, are generally greater.

CURE.—Bleeding and purging are generally proper at the beginning of this disease; but, if the patient's spittle is pretty thick, as well as concocted, neither of them are necessary. It will be sufficient to assist the expectoration by some of the sharp medicines recommended for that purpose in the pleurisy; blisters ought to be applied pretty early. If the patient does not spit, he must be bled according as his strength will permit, and have a gentle purge administered. Afterwards his body may be kept open by clysters, and the expectoration promoted by taking every four hours two table-spoonfuls of the solution of gum ammoniac, with oxymel of squills, &c. When an inflammation of the breast does not yield to bleeding, blistering, and other evacuations, it commonly ends in a suppuration, which is more or less dangerous according to the part where it is situated. When this happens in the pleura, it sometimes breaks outwardly, and the matter is discharged from the wound. If the suppuration happens within the substance or body of the lungs, the matter may be discharged by expectoration; but, if the matter floats in the cavity of the breast, between the pleura and the lungs, it can only be discharged by an incision made

betwixt the ribs. If the patient's strength does not return after the inflammation is to all appearance removed; if his pulse continues quick though soft, his breathing difficult and oppressed; if he has cold shiverings at times, his cheeks flushed, his lips dry; and if he complains of thirst, and want of appetite; there is reason to fear a suppuration, and that a consumption of the lungs will ensue; the proper treatment of which we shall next consider.

OF CONSUMPTIONS.

CONSUMPTIONS prevail more in England than in any other part of the world; owing perhaps to the great use of animal food and malt-liquors, the general application to sedentary employments, and the great quantity of pit-coal which is burnt; to which we may add the perpetual changes in the atmosphere, or variableness of the weather. As this disease so frequently proves fatal, we shall point out its causes, in order that people may as much as possible endeavour to guard against it: these are, confined or unwholesome air; violent passions, exertion, or affections of the mind; grief, disappointment, anxiety, or close application to study:—great evacuations; as sweatings, diarrhœas, diabetes, excessive venery, the fluor albus, an over-discharge of the menstrual flux, giving suck too long:—also the sudden stoppage of customary evacuations; as the bleeding piles, sweating of the feet, bleeding at the nose, the menses, issues, ulcers, or eruptions of any kind. Consumptions are likewise caught by sleeping with the diseased; for which reason this should be carefully avoided; but more consumptive patients date the beginning of their disorders from wet feet, damp beds, night air, wet clothes, or catching cold after the body has been heated, than from all other causes put together. This disease however is sometimes owing to an hereditary taint, or a scrophulous habit; in which case it is generally incurable—yet, let none despair.

CURE.—On the first appearance of a consumption, if the patient lives in any place where the air is confined, he ought immediately to quit it, and to make choice of a situation in the country, where the air is pure and free. Here he must not remain inactive, but take every day as much exercise as he can bear. It is a pity those who attend the sick seldom recommend riding in this disease, till the patient is either unable to bear it, or the malady has become incurable: patients are likewise apt to trifle with themselves. They cannot see how one of the common actions of life should prove a remedy in an obstinate disease, and therefore they reject it, while they greedily hunt after relief from medicine, merely because they do not understand it. Next to proper air and exercise, a due attention should be paid to diet, which ought to be calculated to lessen the acrimony of the humours, and to nourish and support the patient. For this purpose he should keep chiefly to the use of vegetables and milk. Milk alone is of more value in this disease than the whole *materia medica*. Asses milk is commonly reckoned preferable to any other; but it cannot always be obtained; besides, it is generally taken in very small quantity; whereas, to produce any effects, it ought to make a considerable part of the patient's food. Some extraordinary cures in consumptive cases have been performed by women's milk; and, could it be obtained in sufficient quantity, we would recommend it in preference to any other. It is better if the patient can suck it from the breast, than to drink it afterwards. A man who was reduced to such a degree of weakness in a consumption, as not to be able to turn in bed, sucked his wife's breasts, not with a view to reap any advantage from the milk, but to make her easy. Finding himself however greatly benefited by it, he continued to suck her till he became perfectly well, and is at present a strong and healthy man. Some prefer butter-milk to any other, and it is indeed a very valuable medicine, if the stomach be able to bear it. It does not agree with every person at first: and is therefore often laid aside

without a sufficient trial. It should at first be taken sparingly, and the quantity gradually increased, until it comes to be almost the sole food. I never knew it succeed unless where the patient almost lived upon it. Wholesome air, proper exercise, and a diet consistent therewith, is the only course that can be depended on in a beginning consumption. If the patient has strength and sufficient resolution to persist in such a course, he will seldom be disappointed of a cure. In the first stage of a consumption, the cough may sometimes be appeased by bleeding; and the expectoration may be promoted by the following medicines. Take fresh squills, gum-ammoniac, and powdered cardamum-seeds, of each a quarter of an ounce; beat them together in a mortar, and, if the mass proves too hard for pills, a little of any kind of syrup may be added to it. This may be formed into pills of a moderate size, and four or five of them taken twice or thrice a-day, according as the patient's stomach will bear them. A mixture made of equal parts of lemon-juice, fine honey, and syrup of poppies, may likewise be used. Four ounces of each of these may be simmered together in a saucepan, over a gentle fire, and a table-spoonful of it taken at any time when the cough is troublesome. It is common in this stage of the disease to load the patient's stomach with oily and balsamic medicines. These, instead of removing the cause of the disease, tend rather to increase it, by heating the blood, while they pall the appetite, relax the solids, and prove every way hurtful to the patient. Whatever is used for removing the cough, besides riding and other proper regimen, ought to be medicines of a sharp and cleansing nature; as oxymel, syrup of lemons, &c. For the patient's drink we would recommend infusions of the bitter plants mentioned in the Herbal, such as ground-ivy, the smaller centaury, camomile-flowers, water-trefoil, &c. These infusions may be drunk at pleasure. They strengthen the stomach, promote digestion, rectify the blood, and at the same time answer all the purposes of dilution, and quench thirst much better than things

that are luscious or sweet. But, if the patient spits blood, he ought to use, for his ordinary drink, infusions or decoctions of the vulnerary roots, plants, &c. There are many other mucilaginous plants and seeds of a healing and agglutinating nature, recommended in the Herbal, from which decoctions or infusions may be prepared with the same intention; as the orchids, the quince-seed, coltsfoot, linseed, sarsaparilla, &c. The conserve of roses is here peculiarly proper. It may either be put into the decoction above described, or eaten by itself. No benefit is to be expected from trifling doses of this medicine. It seldom proves of any service, unless three or four ounces at least are used daily for a considerable time. In this way I have seen it produce very happy effects, and would recommend it wherever there is a discharge of blood from the lungs. When the spitting up of gross matter, oppression of the breast, and the hectic symptoms, show that an imposthume is formed in the lungs, the Peruvian bark is the only drug which has any chance to counteract the general tendency which the humours then have to putrefaction. An ounce of it in powder may be divided into eighteen or twenty doses, of which one may be taken every three hours through the day, in a little syrup, or a cup of horehound tea. We would not recommend the bark while there are any symptoms of an inflammation of the breast; but, when it is certainly known that matter is collected there, it is one of the best medicines which can be used. Few patients indeed have resolution enough to give the bark a fair trial at this period of the disease, otherwise we have reason to believe that great benefit might be reaped from it.

A NERVOUS CONSUMPTION is a wasting or decay of the whole body, without any considerable degree of fever, cough, or difficulty of breathing. It is attended with indigestion, weakness, and want of appetite, &c. Those who are of a fretful temper, who indulge in spirituous liquors, or who breathe an unwholesome air, are most liable to this disease.

We would recommend; for the cure of a nervous consumption, a light and nourishing diet, plenty of exercise in a free open air, and the use of such bitters as brace and strengthen the stomach; as the Peruvian bark, gentian root, camomile, horehound, &c. These may be infused in water or wine, and a glass of it drunk frequently. Agreeable amusements, cheerful company, and riding about, are preferable to all medicines in this disease. For which reason, when the patient can afford it, we would recommend a long journey of pleasure, as the most likely means to restore his health. What is called a *symptomatic consumption* cannot be cured without first removing the disease by which it is occasioned. Thus, when a consumption proceeds from the scrophula or king's-evil, from the scurvy, the asthma, the venereal disease, &c., a due attention must be paid to the malady from whence it arises, and the regimen and medicine directed accordingly. When excessive evacuations of any kind occasion a consumption, they must not only be restrained, but the patient's strength must be restored by gentle exercise, nourishing diet, and generous cordials. Young and delicate mothers often fall into consumptions by giving suck too long. As soon as they perceive their strength and appetite begin to fail, they ought immediately to wean the child, or provide another nurse, otherwise they cannot expect a cure.

OF THE SLOW OR NERVOUS FEVER.

NERVOUS FEVERS may be occasioned by whatever depresses the spirits, or impoverishes the blood; as grief, fear, anxiety, want of sleep, intense thought, living on poor watery diet, unripe fruits, cucumbers, melons, mushrooms, &c. They may likewise be occasioned by damp, confined, or unwholesome, air. Hence they are very common in rainy seasons, and prove most fatal to those who live in dirty, low, houses, crowded streets, hospitals, jails, or such-like places. Persons whose

constitutions have been broken by excessive venery, frequent salivations, too free an use of purgative medicines, or any other excessive evacuations, are very liable to this disease.

CURE.—The patient must not be kept too low. His strength and spirits ought to be supported by nourishing diet and cordials. For this purpose his gruel, panada, or whatever food he takes, must be mixed with wine according as the symptoms may require. Pretty strong white-wine whey, or small negus, sharpened with the juice of orange or lemon, will be proper for his ordinary drink. Where a nausea, load, and sickness at stomach, prevail at the beginning of a fever, it will be necessary to give the patient a gentle vomit. Fifteen or twenty grains of ipecacuanha in fine powder will generally answer this purpose very well. This may be repeated any time before the third or fourth day, if the above symptoms continue. Vomits not only clean the stomach, but, by the general shock which they give, promote the perspiration, and have many other excellent effects in slow fevers, where there are no signs of inflammation, and nature wants rousing. Such as dare not venture upon a vomit, may clean the bowels by a small dose of Turkey rhubarb, or infusion of senna and manna. In all fevers, the great point is to regulate the symptoms, so as to prevent them from going to either extreme. Thus, in fevers of the inflammatory kind, where the force of the circulation is too great, or the blood dense, and the fibres too rigid, bleeding and other evacuations are necessary. But in nervous fevers, where nature flags, where the blood is vapid and poor, and the solids relaxed, the lancet must be spared, and wine, with other cordials, plentifully administered. Though bleeding is generally improper in this disease, yet blistering is highly necessary. Blisters may be applied at all times of the fever with great advantage. If the patient is delirious, he ought to be blistered on the neck or head; and it will be the safest course, while the insensibility continues, as soon as the discharge occasioned

by one blister abates, to apply another to some other part of the body, and by that means keep up a continual succession of them till he be out of danger. A miliary eruption sometimes breaks out about the ninth or tenth day. As eruptions are often critical, great care should be taken not to retard Nature's operation in this particular. The eruption ought neither to be checked by bleeding or other evacuations, nor pushed out by a hot regimen; but the patient should be supported by gentle cordials, as wine-whey, small negus, sago-gruel, with a little wine in it, and such like. He ought not to be kept too warm; yet a kindly breathing sweat should by no means be checked. In desperate cases, where the hiccup and starting of the tendons have already come on, we have sometimes seen extraordinary effects from large doses of musk frequently repeated. Musk is doubtless an antispasmodic, and may be given to the quantity of a scruple three or four times a-day, or oftener if necessary. Sometimes it may be proper to add to the musk a few grains of camphire, and salt of hartshorn, as these tend to promote perspiration and the discharge of urine. Thus fifteen grains of musk, with three grains of camphire, and six grains of salt of hartshorn, may be made into a bolus with a little syrup, and given as above. If the fever should intermit, which it frequently does toward the decline, or if the patient's strength should be wasted with colliquative sweats, &c., it will be necessary to give him the Peruvian bark. Half a dram, or a whole dram, if the stomach will bear it, of the bark in fine powder, may be given four or five times a-day, in a glass of red port or claret. Should the bark in substance not sit easy on the stomach, an ounce of it in powder may be infused in a bottle of Lisbon or Rhenish wine, for two or three days; afterwards it may be strained, and a glass of it taken frequently.

OF THE MALIGNANT, PUTRID, OR SPOTTED, FEVER.

THIS fever is occasioned by foul air, from a number of peo-

ple being confined in a narrow place, not properly ventilated; from putrid animal and vegetable effluvia, &c. Hence it prevails in camps, jails, hospitals, and infirmaries, especially where such places are too much crowded, and cleanliness is neglected. Putrid, malignant, or spotted fevers, are highly infectious; and are therefore often communicated by contagion. For which reason all persons ought to keep at a distance from those affected with such diseases, unless their attendance is absolutely necessary. Putrid fevers may be distinguished from the inflammatory by the smallness of the pulse, the great dejection of mind, the dissolved state of the blood, the petechiæ, or purple spots, and the putrid smell of the excrements. They may likewise be distinguished from the low or nervous fever by the heat and thirst being greater, the urine of a higher colour, and the loss of strength, dejection of mind, and all other symptoms, more violent.

CURE.—The duration of putrid fevers is extremely uncertain; sometimes they terminate betwixt the seventh and fourteenth day, and at other times they are prolonged for five or six weeks. Their duration depends greatly upon the constitution of the patient, and the manner of treating the disease; in which we ought to endeavour, as much as possible, to counteract the putrid tendency of the humours; to support the patient's strength and spirits; and to assist nature in expelling the cause of the disease, by gently promoting perspiration and the other evacuations. Besides the frequent admission of fresh air, which is extremely necessary, we would recommend the use of vinegar, verjuice, juice of lemon, Seville orange, or any kind of vegetable acid that can be most readily obtained. These ought frequently to be sprinkled upon the floor, the bed, and every part of the room. The fresh skins of lemons or oranges ought likewise to be laid in different parts of the room, and they should be frequently held to the patient's nose. The use of acids in this manner would not only prove very refreshing to the patient, but would likewise tend to prevent the infection

from spreading among those who attend him. Strong-scented herbs, as rue, tansy, rosemary, wormwood, &c. may likewise be laid in different parts of the house, and smelled to by those who go near the patient. If a vomit be given at the beginning of this fever, it will hardly ever fail to have a good effect; but, if the fever has gone on for some days, and the symptoms are violent, vomits are not so safe. The body however is always to be kept gently open by clysters, or mild laxative medicines. Bleeding is seldom necessary in putrid fevers. If there be signs of an inflammation, it may sometimes be permitted at the first onset; but the repetition of it generally proves hurtful. Blisters are never to be used unless in the greatest extremities. If the petechiæ or spots should suddenly disappear, the patient's pulse sink remarkably, and a delirium, with other bad symptoms, come on, blistering may be permitted. In this case the blisters are to be applied to the head, and inside of the legs or thighs. But, as they are sometimes apt to occasion a gangrene, we would rather recommend warm cataplasms or poultices of mustard and vinegar to be applied to the feet, having recourse to blisters only in the utmost extremities. It is common in the beginning of this fever to give the emetic tartar in small doses, repeated every second or third hour, till it shall either vomit, purge, or throw the patient into a sweat. This practice is very proper, provided it be not pushed so far as to weaken the patient. In the most dangerous species of this disease, when it is attended with purple, livid, or black, spots, the Peruvian bark should be administered; it must not only be given in large doses, but be duly persisted in. The best method of administering it is certainly in substance; but, for those who cannot take it in substance, it may be infused in wine. For preventing putrid fevers, we would recommend a strict regard to cleanliness, a dry situation, sufficient exercise in the open air, wholesome food, and a moderate use of generous liquors. Infection ought above all things to be avoided. No constitution is proof against it; and, when a putrid fever seizes any person in a family, the

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greatest attention is necessary to prevent the disease from spreading. Any one who is apprehensive of having caught the infection, ought immediately to take a vomit, and to work it off by drinking plentifully of camomile-tea. This may be repeated in a day or two, if the apprehensions still continue, or any unfavourable symptoms appear.

OF THE MILIARY FEVER.

SO called, from the small pustules or bladders which appear on the skin, resembling, in shape and size, the seeds of millet. The pustules are either red or white, and sometimes both are mixed together. It chiefly attacks the idle and the phlegmatic, or persons of a relaxed habit. The young and the aged are more liable to it than those in the vigour and prime of life. It is likewise more incident to women than men, especially the delicate and the indolent, who, neglecting exercise, keep continually within doors, and live upon weak watery diet. Such females are extremely liable to be seized with this disease in childbed, and often lose their lives by it. When this is a primary disease, it makes its attack, like most other eruptive fevers, with a slight shivering, which is succeeded by heat, loss of strength, a low quick pulse, difficulty of breathing, with great anxiety, and oppression of the breast, and in childbed women the milk generally goes away, and the other discharges stop.

CURE.—Sometimes the miliary fever approaches towards a putrid nature, in which case the patient's strength must be supported with generous cordials, joined with acids; and, if the degree of putrescence be great, the Peruvian bark must be administered. If the head be much affected, the body must be kept open by emollient clysters. If the food and drink be properly regulated, there will be little occasion for medicine. Where nature flags, and the eruption comes and goes, it may be necessary to keep up a stimulus, by a continual succession

of small blistering plasters; but we would not recommend above one at a time. If however the pulse should sink remarkably, the pustules fall in, and the head be affected, it will be necessary to apply several blisters to the most sensible parts, as the inside of the legs and thighs, &c. Bleeding is seldom necessary in this disease, and sometimes it does much hurt, as it weakens the patient, and depresses his spirits. If the disease prove tedious, or the recovery slow, we would recommend the Peruvian bark, which may either be taken in substance, or infused in wine or water as the patient inclines. To avoid this disease, a pure dry air, sufficient exercise, and wholesome food, are necessary. Pregnant women should guard against costiveness, and take daily as much exercise as they can bear, avoiding all green fruits, and other unwholesome things; and, when in child-bed, they ought strictly to observe a cool regimen.

OF THE REMITTING FEVER.

THIS fever takes its name from a remission of the symptoms, which happens sometimes sooner, and sometimes later, but generally before the eighth day. The remission is commonly preceded by a gentle sweat, after which the patient seems greatly relieved, but in a few hours the fever returns. These remissions return at very irregular periods, and are sometimes of longer, sometimes of shorter, duration; the nearer however that the fever approaches to a regular intermittent, the danger is the less. They are most frequent in close calm weather, especially after rainy seasons, great inundations, or the like. No age, sex, or constitution, is exempted from the attack of this fever; but it chiefly seizes persons of a relaxed habit, who live in low dirty habitations, breathe an impure stagnated air, take little exercise, and use unwholesome diet. The first symptoms of this fever are pains and giddiness in the head, with alternate fits of heat and cold. The pulse is sometimes a little hard, but seldom full, and the blood, when let, rarely

shows any signs of inflammation. In order to cure this fever, endeavours should be used to bring it to a regular intermission. This intention may be promoted by bleeding, if there be any signs of inflammation; but, when that is not the case, bleeding ought by no means to be attempted, as it will weaken the patient, and prolong the disease. A vomit however will seldom be improper, and is generally of great service. Twenty or thirty grains of ipecacuanha will answer this purpose very well; but, where it can be obtained, we would rather recommend a grain or two of emetic tartar, with five or six grains of ipecacuanha, to be made into a draught, and given for a vomit. This may be repeated once or twice at proper intervals, if the sickness or nausea continues. The body ought to be kept open either by clysters or gentle laxatives, as weak infusions of senna and manna, small doses of the lenitive electuary, cream of tartar, tamarinds, stewed prunes, or the like; but all strong drastic purgatives are to be avoided. By this course the fever in a few days may generally be brought to a pretty regular or distinct intermission, in which case, the Peruvian bark may be administered, and it will seldom fail to perfect the cure.

OF THE SMALL-POX.

THE small-pox is commonly caught by infection. Since the disease was first brought from Arabia into Europe, the infection has never been wholly extinguished: nor have any proper methods been taken for that purpose; so that now it has become in a manner constitutional. Children who have overheated themselves by running, wrestling, &c. or adults after a debauch, are most apt to be seized with the small-pox. The disease is so generally known, that a minute description of it is unnecessary. Children commonly look dull, seem listless and drowsy, for a few days before the more violent symptoms of the small pox appear. They are likewise more inclined to drink

than usual, have little appetite for solid food, complain of weariness, and, upon taking exercise, are apt to sweat. These are succeeded by slight fits of cold and heat in turns, which, as the time of the eruption approaches, become more violent, and are accompanied with pains of the head and loins, vomiting, &c. The pulse quick, with a great heat of the skin, and restlessness. When the patient drops asleep, he awakes in a kind of horror, with a sudden start, which is a very common symptom of the approaching eruption; as are also convulsion-fits in very young children. The most favourable symptoms are a slow eruption and an abatement of the fever as soon as the pustules appear. In a mild distinct kind of small-pox, the pustules seldom appear before the fourth day from the time of sickening, and they generally keep coming out gradually for several days after. Pustules which are distinct, with a florid red basis, and which fill with thick purulent matter, first of a whitish, and afterwards of a yellowish, colour, are the best. It is a most unfavourable symptom when petechiæ, or purple, brown, or black spots, are interspersed among the pustules. These are signs of a putrid dissolution of the blood, and show the danger to be very great. Bloody stools or urine, with a swelled belly, are bad symptoms; as is also a continual strangury. Pale urine and a violent throbbing of the arteries of the neck are signs of an approaching delirium, or of convulsion-fits. When the face does not swell, or falls before the pock comes to maturity, it is very unfavourable. If the face begins to fall about the eleventh or twelfth day, and at the same time the hands and feet begin to swell, the patient generally does well; but, when these do not succeed to each other, there is reason to apprehend danger.

CURE.—All that is necessary during the eruptive fever, is to keep the patient cool and easy, allowing him to drink freely of some weak diluting liquor, as balm-tea, barley-water, clear whey, gruels, &c. Much mischief is done at this period by confining the patient to his bed, and plying him with warm cor-

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dials or sudorific medicines. Every thing that heats and inflames the blood increases the fever, and pushes out the pustules prematurely. This has numberless ill effects. It not only increases the number of pustules, but tends likewise to make them run into one another; and, when they have been pushed out with too great violence, they generally fall in before they come to maturity. The food ought to be very light, and of a cooling nature, as panada, or bread boiled with equal quantities of milk and water, good apples roasted or boiled with milk, and sweetened with a little sugar, or such like. The most dangerous period of this disease is what we call the secondary fever. This generally comes on when the pock begins to blacken or turn on the face, and most of those who die of the small-pox are carried off by this fever. Nature generally attempts, at the turn of the small-pox, to relieve the patient by loose stools. Her endeavours by this way are by no means to be counteracted, but promoted; and the patient at the same time supported by food and drink of a nourishing and cordial nature. If, at the approach of the secondary fever, the pulse be very quick, hard, and strong, the heat intense, and the breathing laborious, with other symptoms of an inflammation of the breast, the patient must immediately be bled. The quantity of blood to be let must be regulated by the patient's strength, age, and the urgency of the symptoms. But, in the secondary fever, if the patient be faintish, the pustules become suddenly pale, and if there be great coldness of the extremities, blisters must be applied, and the patient must be supported with generous cordials. Wine and even spirits have sometimes been given in such cases with amazing success. It is generally necessary, after the small-pox is gone off, to purge the patient. If however the body has been open through the whole course of the disease, or if buttermilk and other things of an opening nature have been drunk freely after the height of the small-pox, purging becomes less necessary; but it ought never to be wholly neglected. For very young children, an infusion of senna and

prunes, with a little rhubarb, may be sweetened with coarse sugar, and given in small quantities till it operates. Those who are farther advanced must take medicines of a sharper nature. For example, a child of five or six years of age may take eight or ten grains of fine rhubarb in powder over night, and the same quantity of jalap in powder next morning. This may be worked off with fresh broth or water-gruel, and may be repeated three or four times, five or six days intervening betwixt each dose. For children farther advanced, and adults, the dose must be increased in proportion to the age and constitution. When a cough, a difficulty of breathing, or other symptoms of a consumption, succeed to the small-pox, the patient must be sent to a place where the air is good, and put upon a course of asses' milk, with such other treatment as hath already been directed in consumptions.

OF INOCULATION.

THIS salutary invention, which is the only effectual means of stopping the ravages of the small-pox, has been known in Europe above half a century; yet, like most other useful discoveries, it made at first but slow progress. No discovery can be of general utility, while the practice of it is kept in the hands of a few. The fears, the jealousies, the prejudices, and the opposite interests, of the faculty, are, and ever will be, the most effectual obstacles to the progress of any salutary discovery. Hence it is that the practice of inoculation never became, in any measure, general, even in England, till taken up by men not bred to physic. These not only rendered the practice more extensive, but likewise more safe, and, by acting under less restraint than the regular practitioners, taught them that the patient's greatest danger arose, not from the *want* of medical care, but from the *excess* of it. The present method of inoculating in Britain is to make two or three slanting incisions in the arm, so superficial as not to pierce quite through the skin,

with a lancet wet with fresh matter taken from a ripe pustule; afterwards the wounds are closed up, and left without any dressing. Some make use of a lancet covered with the dry matter; but this is less certain, and ought never to be used unless where fresh matter cannot be obtained; when this is the case, the matter ought to be moistened by holding the lancet for some time in the steam of warm water. We do not find that inoculation is at all considered as a medical operation in foreign countries. In Turkey, whence we learned it, it is performed by the women, and in the East Indies by the brachmins or priests. In this country it has been practised by numbers of the common people with astonishing success; and as the small-pox is now become an epidemical disease in most parts of the known world, there seems no other choice left, but to render the malady as mild as possible. It is a matter of small consequence, whether a disease be entirely extirpated or rendered so mild as neither to destroy life nor hurt the constitution; and that this may be done by inoculation, does not now admit of a doubt. The numbers who die under inoculation hardly deserve to be named. In the natural way one in four or five generally dies; but by inoculation not one of a thousand. Nay, some can boast of having inoculated ten thousand without the loss of a single patient. The most proper age for inoculating children is at two or three months old, before the teething begins. Those who have constitutional diseases may nevertheless be inoculated; it will often mend the habit of body; but ought to be performed at a time when they are most healthy. Accidental diseases should always be removed before inoculation. It is generally thought necessary to regulate the diet for some time before the disease be communicated. In children, however, great alteration in diet is seldom necessary, their food being commonly of the most simple and wholesome kind, as milk, water-gruel, weak broths, bread, light pudding, mild roots, and white meats. We would recommend no other medical preparation than two or three mild purges, which ought to be suited to the age and strength of the patient. The success of inoculators does not de-

pend on the preparation of their patients, but on their management of them while under the disease. Their constant care should be to keep them cool, and their bodies gently open, by which means the fever is kept low, and the eruption greatly lessened. The danger is seldom great when the pustules are few; and their number is generally in proportion to the fever which precedes and attends the eruption. Hence the chief secret of inoculation consists in regulating the eruptive fever, which generally may be kept sufficiently low by the methods mentioned above. The regimen during the disease is in all respects the same as under the natural small-pox. The patient must be kept cool, his diet should be light, and his drink weak and diluting, &c. Should any bad symptoms appear, which is seldom the case, they must be treated in the same way as directed in the natural small-pox. Purging is not less necessary after the small-pox by inoculation than in the natural way, and ought by no means to be neglected.

VACCINE INOCULATION is the term for a practice lately introduced of inoculating persons with the matter drawn from pustules which rise upon the teats of cows: this is said (by its supporters) to prevent patients from ever taking the natural small-pox. It has so far succeeded, as to procure its inventor, Dr. Jenner, grants from the parliament of 30,500*l.* sterling for the communication of his discovery.

OF THE MEASLES.

THIS disease, like the small-pox, proceeds from infection, and is more or less dangerous according to the constitution of the patient, the season of the year, the climate, &c. It is usually preceded by a short cough, a heaviness of the head and eyes, drowsiness, and a running at the nose. There is an inflammation and heat in the eyes, with a defluxion of sharp tears, vomiting, and great acuteness of sensation, so that the patient cannot bear the light without pain. About the fourth day, small spots, resembling flea-bites, appear, first upon the face, then upon the breast, and afterwards on the extremities: these may be distinguished from

the small-pox by their scarcely rising above the skin. The fever, cough, and difficulty of breathing, instead of being removed by the eruption, as in the small-pox, are rather increased; but the vomiting generally ceases. About the sixth or seventh day from the time of sickening, the measles begin to turn pale on the face, and afterwards upon the body; so that by the ninth day they entirely disappear. Such as die of the measles generally expire about the ninth day from the invasion, and are commonly carried off by inflammation of the lungs. The most favourable symptoms are, a moderate looseness, a moist skin, and a plentiful discharge of urine. When the eruption suddenly falls in, and the patient is seized with a delirium, he is in the greatest danger. If the measles turn too soon of a pale colour, it is an unfavourable symptom, as are also great weakness, vomitings, restlessness, and difficulty of swallowing. Purple or black spots appearing among the measles, are very unfavourable. When a continual cough, with hoarseness, succeeds the disease, there is reason to suspect an approaching consumption of the lungs.

CURE.—Our business in this disease is to assist nature by proper cordials, in throwing out the morbid matter, if her efforts be too languid: but, when they are too violent, they must be restrained by evacuations, and cool diluting liquors, &c. We ought likewise to endeavour to appease the most urgent symptoms, as the cough, restlessness, and difficulty of breathing. A cool regimen is necessary here, as well as in the small pox. The food too must be light, and the drink diluting. The most suitable liquors are decoctions of liquorice, with marsh-mallow roots and sarsaparilla, infusions of linseed, marygolds, elder-flowers, balm-tea, clarified whey, barley-water, and such like. Bleeding is commonly necessary, particularly when the fever runs high, with difficulty of breathing, and great oppression of the breast; but, if the disease be of a mild kind, bleeding may be omitted. If at the turn of the disease the fever assumes new vigour, and there appears great danger of suffocation, bleeding must be used according to the patient's strength, and blisters must be applied, with a view to prevent the load from being thrown on the lungs, where, if an

inflammation should fix itself, the patient's life will be in imminent danger. In case the measles should suddenly disappear, the patient must be supported with wine and cordials. Blisters must be applied to the legs and arms, and the body rubbed all over with warm flannels. Should a cough, with difficulty of breathing, and other symptoms of a consumption, remain after the measles, small quantities of blood may be frequently let at proper intervals, as the patient's strength and constitution will permit. He ought likewise to drink asses' milk, to remove into a free air, and to ride daily on horseback.

OF THE SCARLET FEVER.

THE scarlet fever is so called from the colour of the patient's skin, which appears as if it were tinged with red wine. It begins, like other fevers, with coldness and shivering, without any violent sickness. Afterwards the skin is covered with red spots, which are broader, more florid, and less uniform than the measles. They continue two or three days, and then disappear; after which the cuticle, or scarf-skin, falls off.

CURE.—There is seldom any occasion for medicine in this disease, unless it is attended with putrid or malignant symptoms, in which case it is always dangerous; the patient is then not only affected with coldness and shivering, but with languor, sickness, and great oppression; to these succeed excessive heat, nausea, and vomiting, with a soreness of the throat; the pulse is extremely quick, but small and depressed; the breathing frequent and laborious; the skin hot, but not quite dry; the tongue moist, and covered with a whitish mucus: the tonsils inflamed and ulcerated. When the eruption appears, it brings no relief: on the contrary, the symptoms generally grow worse, and fresh ones come on, as purging, delirium, &c. Should this disease be mistaken for a simple inflammation, and treated with repeated bleedings, purgings, and cooling medicines, as is sometimes the case, it generally proves fatal. The only medicines that can be depended on are cordials and antiseptics, as the Peruvian bark, wine, snake-root,

and the like. The treatment must be in general similar to that of the putrid fever, or of the malignant ulcerous sore throat.

OF THE BILIOUS FEVER.

A CONTINUAL remitting or intermitting fever, accompanied with a copious evacuation of bile, either by vomit or stool, is denominated *bilious*. It generally makes its appearance about the end of summer, and ceases towards the approach of winter. It is most fatal in warm countries, especially where the soil is marshy, and when great rains are succeeded by sultry heats. Those who work without doors, and are exposed to the night air, are most liable to this kind of fever.

CURE.—If there are symptoms of inflammation, it will be necessary to bleed, and to put the patient upon cool diluting regimen, recommended in the inflammatory fever. Saline draughts may likewise be frequently administered, and the patient's body kept open by clysters or mild purgatives. But, if the fever should remit or intermit, bleeding will seldom be necessary. In this case a vomit may be administered, and, if the body be bound, a gentle purge; after which the Peruvian bark will generally complete the cure.

OF THE ERYSIPELAS, OR ST. ANTHONY'S FIRE.

THE erysipelas may be occasioned by violent passions or affections of the mind; as fear, anger, &c. When the body has been heated to a certain degree, and is immediately exposed to the cold air, so that the perspiration is suddenly checked, an erysipelas will often ensue. It may also be occasioned by drinking to excess, by continuing too long in a warm bath, or by any thing that overheats the blood. If any of the natural evacuations be obstructed, or in too small quantity, it may cause an erysipelas. The same effect will follow from the stoppage of artificial evacuations; as issues, setons, or the like. The disorder comes on with shivering, thirst, loss of strength, pain in the head and back, heat, restlessness, and a quick pulse: to which may be added vomiting, and

sometimes a delirium. On the second, third, or fourth day, the part swells, becomes red, and small pustules appear: at which time the fever generally abates. When the erysipelas is large, deep, and affects a very sensible part of the body, the danger is great. If the red colour change into a livid or black, it will end in a mortification. Sometimes the inflammation cannot be discussed, but comes to a suppuration; in which case fistulas, a gangrene, or mortification often ensue. Such as die of this disease are commonly carried off by the fever, which is attended with difficulty of breathing, and sometimes with a delirium and great drowsiness. They generally die about the seventh or eighth day.

CURE.—In this complaint much mischief is often done by medicines, especially by external applications: whereas the principal object should be to promote perspiration, which has a great tendency to carry off the disease. It is common to bleed in the erysipelas; but this likewise requires caution. If however the fever be high, the pulse hard and strong, and the patient vigorous, it will be proper to bleed; but the quantity must be regulated by these circumstances, and the operation repeated as the symptoms may require. If the patient has been accustomed to strong liquors, and the disease attacks his head, bleeding is absolutely necessary. Bathing the feet and legs frequently in lukewarm water, when the disease attacks the face or brain, has an excellent effect. It tends to make a derivation from the head, and seldom fails to relieve the patient. When bathing proves ineffectual, poultices, or sharp sinapisms, may be applied to the soles of the feet for the same purpose. In cases where bleeding is requisite, it is likewise necessary to keep the body open. This may be effected by emollient clysters, or small doses of nitre and rhubarb. Some indeed recommend very large doses of nitre in the erysipelas; but nitre seldom sits easy on the stomach when taken in large doses. It is however one of the best medicines when the fever and inflammation run high. Half a dram of it, with four or five grains of rhubarb, may be taken in the patient's ordinary drink four times a-day. When the erysipelas seizes the head, so as to occasion a

delirium or stupor, blisters must be applied to the neck, or behind the ears, and sharp cataplasms laid to the soles of the feet. In what is commonly called the *scorbutic erysipelas*, which continues for a considerable time, it will only be necessary to give gentle laxatives, and such things as purify the blood, and promote the perspiration; and after the inflammation has been checked by opening medicines, the decoction of woods and bitter herbs may be drunk, as recommended for this disease in the Herbal.

OF THE INFLAMMATION OF THE BRAIN.

THE symptoms which usually precede a true inflammation of the brain, are pain of the head, redness of the eyes, a violent flushing of the face, disturbed sleep, or a total want of it, great dryness of the skin, costiveness, a retention of urine, a small dropping of blood from the nose, singing of the ears, and extreme sensibility of the nervous system. When the brain itself is inflamed, the pulse is always soft and low; but when the inflammation only affects the integuments of the brain, viz. the *dura* and *pia mater*, it is hard.

CURE.—As this disease often proves fatal in a few days, it requires the most speedy applications. When it is prolonged, or improperly treated, it sometimes ends in madness, or a kind of stupidity which continues for life. Two things are chiefly to be attended to in the cure, viz. to lessen the quantity of blood in the brain, and to retard the circulation towards the head. Nothing more certainly relieves the patient than a free discharge of blood from the nose. When this comes of its own accord, it is by no means to be stopped, but rather promoted by applying cloths dipped in warm water to the part. When bleeding at the nose does not happen spontaneously, it may be provoked by putting a straw, or any other sharp body, up the nostril. Bleeding in the temporal arteries greatly relieves the head; but, as this operation cannot always be performed, we would recommend in its stead bleeding in the jugular veins. When the patient's pulse and spirits are so low, that he cannot bear bleeding with the lancet, leeches

may be applied to the temples. These not only draw off the blood more gradually, but, by being applied nearer to the part affected, generally give more immediate relief. If the inflammation of the brain be occasioned by the stoppage of evacuations either natural or artificial, as the menses, issues, setons, or such like, all means must be used to restore them as soon as possible, or to substitute others in their stead. The patient's body must be kept open by stimulating clysters or smart purges; and small quantities of nitre ought frequently to be mixed with his drink. Two or three drams, or more, if the case be dangerous, may be used in the space of twenty-four hours. If the disease proves obstinate, and does not yield to the medicines, it will be necessary to apply a blistering-plaster to the whole head.

OF THE INFLAMMATION OF THE EYES.

THIS disorder is attended with acute pain, heat, redness, and swelling.—The patient is not able to bear the light, and sometimes he feels a pricking pain, as if his eyes were pierced with a thorn. The pulse is generally quick and hard, with some degree of fever. When the disease is violent, the neighbouring parts swell, and there is a throbbing or pulsation in the temporal arteries, &c. A slight inflammation of the eyes, especially from an external cause, is easily cured: but, when the disease is violent, and continues long, it often leaves specks upon the eyes, or dimness of sight, and sometimes total blindness.

CURE.—The patient must abstain from every thing of a heating nature. His food should consist chiefly of mild vegetables, weak broths, and gruels. His drink may be barley-water, balm-tea, common whey, and such like. Bleeding, in a violent inflammation of the eyes, is always necessary. This should be performed as near the part affected as possible. An adult may lose ten or twelve ounces of blood from the jugular vein, and the operation may be repeated according to the urgency of the symptoms. If it should not be convenient to bleed in the neck,

the same quantity may be let from the arm; or any other part of the body. Leeches are often applied to the temples, or under the eyes, with good effect. The wounds must be suffered to bleed for some hours; and, if the bleeding stop soon, it may be promoted by the application of cloths dipt in warm water. In obstinate cases, it will be necessary to repeat this operation several times. Opening and diluting medicines are by no means to be neglected; but, if the inflammation does not yield to these evacuations, blisters must be applied to the temples, behind the ears, or upon the neck, and kept open for some time. I have seldom known these, if long enough kept open, fail to remove the most obstinate inflammation of the eyes; but, for this purpose, it is often necessary to continue the discharge for several weeks. Those who are liable to frequent returns of this disease, ought constantly to have an issue in one or both arms, or a seton cut betwixt the shoulders. Bleeding or purging in the spring and autumn will be very beneficial to such persons.

OF THE QUINSY, OR INFLAMMATORY SORE THROAT.

THIS disease is frequently attended with great danger. When the inflammation comes on, the parts appear red and swelled; the patient complains of pain in swallowing; his pulse is quick and hard, with other symptoms of a fever. If blood be let, it is generally covered with a tough coat of a whitish colour, and the patient spits a tough phlegm. As the swelling and inflammation increase, the breathing and swallowing become more difficult; the pain affects the ears; the eyes appear red; and the face swells. When the breathing is laborious, with straitness of the breast, and anxiety, the danger is great. Though the pain in swallowing be very great, yet, while the patient breathes easy, there is not so much danger. An external swelling is no unfavourable symptom; but if it suddenly falls, and the disease

affects the breast, the danger is very great. When a quinsy is the consequence of some other disease, which has already weakened the patient, his situation is dangerous. A frothing at the mouth, and a swelled tongue, a pale ghastly countenance, and coldness of the extremities, are fatal symptoms.

CURE.—It is peculiarly necessary that the neck be kept warm; for which purpose several folds of soft flannel may be wrapt round it. The jelly of black currants is a medicine very much in esteem for complaints of the throat; and indeed it is of some use. It should be almost constantly kept in the mouth, and swallowed down leisurely. It may likewise be mixed in the patient's drink, or taken any other way. When it cannot be obtained, the jelly of red currants, or of mulberries, may be used in its stead. Gargles are also very beneficial: they may be made of sage-tea, with a little vinegar and honey; and may be used three or four times a-day; and, if the patient be troubled with tough viscid phlegm, the gargle may be rendered more sharp and cleansing by adding to it a teaspoon-full of spirit of sal ammoniac. There is no disease wherein the benefit of bathing the feet and legs in lukewarm water is more apparent: that practice ought therefore never to be neglected. If the inflammation be violent, it will be proper as soon as the symptoms appear, to bleed in the arm, or rather in the jugular vein, and to repeat the operation if circumstances require. The body should likewise be kept gently open. This may be done by giving the patient for his ordinary drink a decoction of figs and tamarinds, or small doses of rhubarb and nitre. Good effects are often produced from a bit of sal prunel, or purified nitre, held in the mouth, and swallowed down as it melts. This promotes the discharge of saliva, by which means it answers the end of a gargle, while at the same time it abates the fever, by promoting the discharge of urine, &c. Blistering upon the neck or behind the ears, in violent inflammations of the throat, is very beneficial; and in bad cases it will be very necessary to lay a blistering plaster quite across the throat, so as to reach from

ear to ear. After the plasters are taken off, the parts ought to be kept running by the application of issue-ointment, till the inflammation is gone; otherwise, upon their drying up, the patient will be in danger of a relapse. When a difficulty of swallowing is not attended with an acute pain or inflammation, it only requires that the part be kept warm, and the throat frequently gargled with something that may gently stimulate the glands, as a decoction of figs with vinegar and honey; to which may be added a little mustard, or a small quantity of spirits. But this gargle is never to be used where there are signs of inflammation. Those who are subject to inflammations of the throat, in order to avoid that disease, and many others, ought to live temperately. Such as do not choose to observe this rule must have frequent recourse to purging and other evacuations, to discharge the superfluous humours. They ought likewise to beware of catching cold, and should abstain from aliment and medicines of an astringent or stimulating nature.

OF THE MALIGNANT OR ULCEROUS SORE THROAT.

THIS is evidently a contagious distemper, and is generally communicated by infection. Whole families, and even entire villages, often receive the infection from one person. Whatever tends to produce putrid or malignant fevers may likewise occasion the putrid ulcerous sore throat, as unwholesome air, damaged provisions, neglect of cleanliness, &c. It begins with alternate fits of shivering and heat. The pulse is quick, but low and unequal, and generally continues so through the whole course of the disease. The tongue is white, and generally moist, which distinguishes this from an inflammatory disease. Upon looking into the throat, it appears swelled and of a florid red colour. Pale or ash-coloured spots, however, are here and there interspersed, and sometimes one broad patch or spot, of an irregular figure, and pale white colour, surrounded with flo-

rid red, only appears. These whitish spots or sloughs cover so many ulcers. The putrid ulcerous sore throat may be distinguished from the inflammatory by the vomiting and looseness with which it is generally ushered in; the foul ulcers in the throat covered with a white or livid coat; and by the excessive weakness of the patient; with other symptoms of a putrid fever.

CURE.—The treatment in this kind of sore throat is entirely different from that which is proper in the inflammatory. All evacuations, as bleeding, purging, &c. which weaken the patient, must be avoided. Cooling medicines, as nitre and cream of tartar, are likewise hurtful. Strengthening cordials alone can be used with safety; and these ought never to be neglected. If, at the beginning, there is a great nausea, or inclination to vomit, the patient must drink an infusion of green tea, camomile-flowers, or *carduus benedictus*, in order to cleanse the stomach. If these are not sufficient, he may take a few grains of the powder of ipecacuanha, or any other gentle vomit. If the disease is mild, the throat may be gargled with an infusion of sage or rose leaves, to a gill of which may be added a spoonful or two of honey, and as much vinegar as will make it agreeably acid; but, when the symptoms are urgent, it will be of great benefit if the patient frequently receives into his mouth, through an inverted funnel, the steams of warm vinegar, myrrh, and honey. But, when the putrid symptoms run high, and the disease is attended with danger, the only medicine that can be depended upon is the Peruvian bark. It may be taken in substance, if the patient's stomach will bear it. If not, an ounce of bark grossly powdered, with two drams of Virginian snake-root, may be boiled in a pint and a half of water to half a pint; to which a tea-spoonful of the elixir of vitriol may be added, and an ordinary tea-cupful of it taken every three or four hours. Blisters are very beneficial in this disease, especially when the patient's pulse and spirits are low. They may be applied to the throat, behind the ears, or upon the back part of the neck. If the discharge of blood from the nose happens,

the steams of warm vinegar may be received up the nostrils frequently; and the drink must be sharpened with spirits of vitriol, or tincture of roses. In case of a strangury, the belly must be fomented with warm water, and emollient clysters given three or four times a-day. After the violence of the disease is over, the body should still be kept open with mild purgatives; as manna, senna, rhubarb, or the like.

OF COLDS AND COUGHS.

COLDS are the effect of an obstructed perspiration; and almost every cold is a kind of fever, which only differs in degree from some of those that have already been treated of. No age, sex, or constitution, is exempted from this disease; neither is it in the power of any medicine or regimen to prevent it. The inhabitants of every climate are liable to catch cold, nor can even the greatest circumspection defend them at all times from its attack. Indeed, if the human body could be kept constantly in an uniform degree of warmth, such a thing as catching cold would be impossible: but, as that cannot be effected by any means, the perspiration must be liable to many changes. When oppression of the breast, a stuffing of the nose, unusual weariness, pain of the head, &c. give ground to believe that the perspiration is obstructed, or, in other words, that the person has caught cold, he ought immediately to lessen his diet, at least the usual quantity of his solid food, and to abstain from all strong liquors. Would people sacrifice a little time to ease and warmth, and practise a moderate degree of abstinence, when the first symptoms of a cold appear, we have reason to believe that most of the bad effects which flow from an obstructed perspiration might be prevented. But, after the disease has gathered strength by delay, all attempts to remove it often prove vain. A pleurisy, a peripneumony, or a fatal consumption of the lungs, are often the effects of common colds, notwithstanding people affect to treat them with so much indifference and neglect, merely because they are only colds. Hence

it is, that colds destroy such numbers of mankind. Like an enemy despised, they gather strength from delay, till, at length, they become invincible. It is certain, however, that colds may be too much indulged. When a person, for every slight cold, shuts himself up in a warm room, swallows medicine, and drinks great quantities of warm liquor, it may occasion such a general relaxation of the solids as will not be easily removed. Bathing the feet in warm water, lying in bed, and drinking warm water-gruel, or other weak liquors, will sooner take off spasm, and restore the perspiration, than all the hot sudorific medicines in the world. This is all that is necessary for removing a common cold; and, if this course be taken at the beginning, it will seldom fail. When the symptoms do not yield to abstinence, warmth, and diluting liquors, there is reason to fear the approach of some other disease, as an inflammation of the breast, an ardent fever, or the like; and the patient should then be treated accordingly. The chief secret of preventing colds lies in avoiding, as far as possible, all extremes either of heat or cold, and in taking care, when the body is heated, to let it cool gradually.

OF A COMMON COUGH.

A COUGH is generally the effect of a cold, which has either been improperly treated or entirely neglected. When it proves obstinate, there is always reason to fear the consequence, as this shows a weak state of the lungs, and is often the forerunner of a consumption. If the cough be violent, and the patient young and strong, with a hard quick pulse, bleeding will be proper; but, in weak and relaxed habits, bleeding rather prolongs the disease. When the patient spits freely, bleeding is unnecessary, and sometimes hurtful, as it tends to lessen that discharge. When a cough is occasioned by acrid humours tickling the throat and fauces, the patient should keep some soft pectoral lozenges almost constantly in his mouth; as the Pon-

tefract liquorice-cakes, barley-sugar, the common balsamic lozenges, Spanish-juice, &c. These blunt the acrimony of the humours, and, by taking off their stimulating quality, help to appease the cough. In obstinate coughs, proceeding from a flux of humours upon the lungs, it will often be necessary, besides expectorating medicines, to have recourse to issues, setons, or some other drain. In this case I have often observed the most happy effects from a Burgundy-pitch plaster applied between the shoulders. About the bulk of a nutmeg of Burgundy-pitch may be spread thin upon a piece of soft leather, about the size of the hand, and laid between the shoulder-blades. It may be taken off and wiped every three or four days, and ought to be renewed once a fortnight or three weeks. This is indeed a cheap and simple medicine, and consequently apt to be despised; but we will venture to affirm, that the whole *materia medica* does not afford an application more efficacious in almost every kind of cough. It has not, indeed, always an immediate effect; but, if kept on for some time, it will succeed where most other medicines fail. But coughs proceed from many other causes besides defluxions upon the lungs. In these cases the cure is not to be attempted by pectoral medicines. Thus, in a cough proceeding from a foulness and debility of the stomach, syrups, oil, mucilages, and all kinds of balsamic medicines, do hurt. The *stomach-cough* may be known from one that is owing to a fault in the lungs by this, that in the latter the patient coughs whenever he inspires, or draws in his breath fully: but in the former that does not happen.

CURE.—The cure of this cough depends chiefly upon cleansing and strengthening the stomach; for which purpose gentle vomits and bitter purgatives are most proper. Thus, after a vomit or two, the sacred tincture, as it is called, may be taken for a considerable time in the dose of one or two table spoonfuls twice a-day, or as often as it is found necessary, to keep the body gently open. People may make this tincture themselves, by infusing an ounce of *hiera picra* in an English pint

of white-wine, letting it stand a few days, and then straining it. In coughs which proceed from a debility of the stomach, the Peruvian bark is likewise of considerable service. It may either be chewed, taken in powder, or made into a tincture along with other stomachic bitters. A *nervous cough* can only be removed by change of air and proper exercise. Immersing the feet and hands in warm water will often appease the violence of a nervous cough. When a cough is only the symptom of some other malady, it is in vain to attempt to remove it without first curing the disease from which it proceeds. Thus, when a cough is occasioned by *teething*, keeping the body open, scarifying the gums, or whatever facilitates the cutting of the teeth, likewise appeases the cough. In like manner, when *worms* occasion a cough, such medicines as remove these vermin will generally cure the cough; as bitter purgatives, oily clysters, and such like. Women, during the last months of pregnancy, are often greatly afflicted with a cough, which is generally relieved by bleeding and keeping the body open. They ought to avoid all flatulent food, and to wear a loose easy dress.

OF THE WHOOPING OR CHIN COUGH.

THIS cough seldom affects adults, but proves often fatal to children. Whatever hurts the digestion, obstructs the perspiration, or relaxes the solids, disposes to this disease: consequently its cure must depend upon cleansing and strengthening the stomach, bracing the solids, and, at the same time, promoting perspiration and the different secretions.

CURE.—One of the most effectual remedies in the chin-cough is change of air. This often removes the malady, even when the change seems to be from a purer to a less wholesome air. This may in some measure depend on the patient's being removed from the place where the infection prevails. Most of the diseases of children are infectious; nor is it at all uncommon to find the chin-cough prevailing in one town or village, when

another, at a very small distance, is quite free from it. But, whatever be the cause, we are sure of the fact. No time ought therefore to be lost in removing the patient to some distance, from the place where he caught the disease, and, if possible, into a more pure and warm air. When the disease proves violent, and the patient is in danger of being suffocated by the cough, he ought to be bled, especially if there be a fever with a hard full pulse. But as the chief intention of bleeding is to prevent an inflammation of the lungs, and to render it more safe to give vomits, it will seldom be necessary to repeat the operation; yet, if there be symptoms of an inflammation of the lungs, a second, or even a third, bleeding may be requisite. Vomits not only cleanse the stomach, which in this disease is generally loaded with viscid phlegm, but they likewise promote the perspiration and other secretions; and ought therefore to be repeated according to the obstinacy of the disease. They should not be strong; gentle vomits frequently repeated are less dangerous, and more beneficial, than strong ones. Many people believe that oily, pectoral, and balsamic medicines, possess wonderful virtues for the cure of the chin-cough, and accordingly exhibit them plentifully to patients of every age and constitution, without considering that every thing of this nature must load the stomach, hurt the digestion, and of course aggravate the disorder. The *millepedes*, or woodlice, are greatly recommended for the cure of a chin-cough. Those, who choose to make use of these insects, may infuse two ounces of them bruised in an English pint of small white-wine for one night. Afterwards the liquor may be strained through a cloth, and a table spoonful of it given to the patient three or four times a-day. Opiates are sometimes necessary to allay the violence of the cough. For this purpose a little of the syrup of poppies, or five, six, or seven, drops of laudanum, according to the age of the patient, may be taken in a cup of hyssop or penny-royal tea, and repeated occasionally.

The garlic ointment is a well-known remedy in North Britain for the chin-cough. It is made by beating in a mortar garlic with an equal quantity of hog's lard. With this the soles of the feet may be rubbed twice or thrice a-day; but the best method is to spread it upon a rag, and apply it in the form of a plaster. It should be renewed every night and morning at least, as the garlic soon loses its virtue. This is an exceeding good medicine both in the chin-cough and in most other coughs of an obstinate nature. It ought not, however, to be used when the patient is very hot or feverish, lest it should increase those symptoms.

INFLAMMATION OF THE STOMACH.

AN inflammation of the stomach may proceed from any of the causes which produce an inflammatory fever; as cold liquor drunk while the body is warm, obstructed perspiration, or the sudden striking in of any eruption. It is attended with a fixed pain and burning heat in the stomach; great restlessness and anxiety; a small, quick, and hard, pulse; vomiting, or, at least, a nausea and sickness; excessive thirst; coldness of the extremities; difficulty of breathing; cold clammy sweats; and sometimes convulsions and fainting fits. The stomach is swelled, and often feels hard to the touch. One of the most certain signs of this disease is the sense of pain, which the patient feels upon taking any kind of food or drink, especially if it be either too hot or too cold.

CURE.—All the acrimonious, heating, and irritating, food and drink are carefully to be avoided. The weakness of the patient may deceive the by-standers, and induce them to give him wines, spirits, or other cordials; but these never fail to increase the disease, and often occasion sudden death. The inclination to vomit may likewise impose on the attendants, and make them think a vomit necessary; but that too is almost certain death. Bleeding is absolutely necessary, and is almost the

only thing that can be depended on. When the disease proves obstinate, it will often be proper to repeat this operation several times, nor must the low state of the pulse deter us from doing so. The pulse indeed generally rises upon bleeding, and, as long as that is the case, the operation is safe. Frequent fomentations with lukewarm water, or a decoction of emollient vegetables, as recommended in the Herbal, are likewise beneficial. Flannel cloths dipped in these must be applied to the region of the stomach, and removed as they grow cool. In this, and all other inflammations of the bowels, an epispastic, or blistering-plaster, applied over the part affected, is one of the best remedies known. The only internal medicines which can with safety be recommended are mild clysters. These may be made of warm water, or thin water-gruel; and, if the patient be costive, a little sweet oil, honey, or manna, may be added. Clysters answer the purpose of an internal fomentation, while they keep the body open, and at the same time nourish the patient, who is often in this disease unable to retain any food upon his stomach. For these reasons they must not be neglected, as the patient's life may depend on them.

INFLAMMATION OF THE INTESTINES

THIS is one of the most painful and dangerous diseases that mankind is liable to. It generally proceeds from the same causes as the inflammation of the stomach; to which may be added costiveness, worms, eating unripe fruits, or great quantities of nuts, drinking hard windy malt liquors, as stale bottled beer or ale, sour wine, cider, &c. The inflammation of the intestines is denominated *iliac passion*, *enteritis*, &c. according to the name of the parts affected. The treatment however is nearly the same, whatever part of the intestinal canal be the seat of the disease. The symptoms are nearly the same as in the foregoing disease; only the pain, if possible, is more acute, and is situated lower. The vomiting is likewise more

violent, and sometimes even the excrements, together with the clysters and suppositories, are discharged by the mouth. While the pain shifts, and the vomiting only returns at certain intervals, and while the clysters pass downwards, there is ground to hope; but, when the clysters and fæces are vomited, and the patient is exceeding weak, with a low fluttering pulse, a pale countenance, and a disagreeable or stinking breath, there is great reason to fear that the consequences will prove fatal. Clammy sweats, black foetid stools, with a small intermitting pulse, and a total cessation of pain, are signs of a mortification already begun, and of approaching death.

CURE.—Bleeding, in this as well as in the inflammation of the stomach, is of the greatest importance. It should be performed as soon as the symptoms appear, and must be repeated according to the strength of the patient and the violence of the disease. A blister is likewise to be applied immediately over the part where the most violent pain is. This not only relieves the pain of the bowels, but even clysters and purgative medicines, which before had no effect, will operate when the blisters begin to rise. The patient's feet and legs should frequently be bathed in warm water, and cloths dipped in it applied to his belly. Bladders filled with warm water may likewise be applied to the region of the navel, and warm bricks, or bottles filled with warm water, to the soles of the feet. If the disease does not yield to clysters and fomentations, recourse must be had to pretty strong purgatives; but, as these, by irritating the bowels, often increase their contraction, and by that means frustrate their own intention, it will be necessary to join them with opiates, which, by allaying the pain, and relaxing the spasmodic contractions of the guts, greatly assist the operation of purgatives in this case. What answers the purpose of opening the body very well, is a solution of the bitter purging salts. Two ounces of these may be dissolved in an English pint of warm water, or thin gruel, and a teacup-full of it taken every half-hour till it operates. At the same time fifteen,

twenty, or twenty-five, drops of laudanum may be given in a glass of peppermint or simple cinnamon-water, to appease the irritation, and prevent the vomiting, &c. But it often happens that no liquid whatever will stay on the stomach. In this case the patient must take purging pills. I have generally found the following answer very well: Take jalap in powder, and vitriolated tartar, of each half a dram; opium one grain; Castile soap as much as will make the mass fit for pills. These must be taken at one dose, and, if they do not operate in a few hours, the dose may be repeated. If a stool cannot be procured by any of the above means, it will be necessary to immerse the patient in warm water up to the breast. This often succeeds when other means have been tried in vain. The patient must continue in the water as long as he can easily bear it without fainting; and, if one immersion has not the desired effect, it may be repeated as soon as the patient's strength and spirits are recruited. It is more safe for him to go frequently into the bath than to continue too long at a time; and it is often necessary to repeat it several times before it has the desired effect. In desperate cases it is common to give quicksilver. This may be given to the quantity of several ounces or even a pound, but should not exceed that. When there is reason to suspect a mortification of the guts, this medicine ought not to be tried: in that case it cannot cure the patient, and will only hasten his death. But, when the obstruction is occasioned by any cause that can be removed by force, quicksilver is not only a proper medicine, but the best that can be administered, as it is the fittest body we know for making its way through the intestinal canal.

OF THE CHOLIC.

THE cholic has a great resemblance to the two preceding diseases, both in its symptoms and method of cure. It is generally attended with costiveness and acute pain of the bowels;

and requires diluting diet, evacuations, fomentations, &c. Cholics are variously denominated, according to their causes, as the *flatulent*, the *bilious*, the *hysteric*, the *nervous*, &c.

CURE.—When the disease proceeds from windy liquor, green fruit, sour herbs, or the like, the best medicine on the first appearance of the symptoms is a dram of brandy, gin, or any good spiritts. The patient should likewise sit with his feet upon a warm hearth-stone, or apply warm bricks to them; and warm cloths may be applied to his stomach and bowels. This is the only cholic wherein ardent spirits, spiceries, or any thing of a hot nature, may be ventured upon. Nor indeed are they to be used here unless at the very beginning, before any symptoms of inflammation appear. The *bilious* cholic is attended with very acute pains about the region of the navel. The patient complains of great thirst, and is generally costive. He vomits a hot, bitter, yellow-coloured, bile, which, being discharged, seems to afford some relief, but is quickly followed by the same violent pain as before. As the distemper advances, the propensity to vomit sometimes increases so as to become almost continual, and the proper motion of the intestines is so far perverted, that there are all the symptoms of an impending iliac passion. If the patient be young and strong, and the pulse full and frequent, it will be proper to bleed, after which clysters may be administered. Clear whey or gruel, sharpened with the juice of lemon, or cream of tartar, must be drunk freely: it will be necessary likewise to foment the belly with cloths dipped in warm water; and, if this should not succeed, the patient must be immersed up to the breast in warm water. In the bilious cholic the vomiting is often very difficult to restrain. When this happens, the patient may drink a decoction of toasted bread, or an infusion of garden-mint in boiling water. Such as are liable to frequent returns of the bilious cholic should use flesh sparingly, and live chiefly upon a light vegetable diet. They should likewise take frequently a dose of cream of tartar with tamarinds, or any other cool acid purge.

The *hysteric* cholic bears a great resemblance to the bilious. It is attended with acute pains about the region of the stomach, vomiting, &c. But what the patient vomits in this case is commonly of a greenish colour. There is great sinking of the spirits, with dejection of mind and difficulty of breathing, which are the characteristic symptoms of this disorder. Sometimes it is accompanied with the jaundice; but this generally goes off of its own accord in a few days. In this cholic all evacuations, as bleeding, purging, vomiting, &c., do hurt. Every thing that weakens the patient, or sinks the spirits, is to be avoided. If however the vomiting should prove violent, lukewarm water, or small posset, may be drunk to cleanse the stomach. Afterwards the patient may take fifteen, twenty, or twenty-five, drops of liquid laudanum in a glass of cinnamon-water. This may be repeated every ten or twelve hours till the symptoms abate. The *nervous* cholic prevails among miners, smelters of lead, plumbers, the manufacturers of white lead, &c. It is very common in the cider-counties of England, and is supposed to be occasioned by the leaden vessels used in preparing that liquor. No disease of the bowels is attended with more excruciating pain than this. Nor is it soon at an end. I have known it to continue eight or ten days with very little intermission, the body all the while continuing bound in spite of medicine; yet at length yield, and the patient recover. It generally however leaves the patient weak, and often ends in a palsy. The general treatment of this disease is the same with that of the iliac passion, or inflammation of the bowels.

INFLAMMATION OF THE KIDNEYS.

THIS disease may proceed from any of those causes which produce an inflammatory fever. It may likewise be occasioned by wounds or bruises of the kidneys small stones or gravel lodging within them; by hard riding or walking, especially in hot weather; or whatever drives the blood too forcibly into the kidneys, may occasion this malady.

CURE.—Every thing of a heating or stimulating nature is to be avoided. Emollient and thin liquors must be plentifully drunk; as clear whey, or balm tea sweetened with honey, decoctions of marsh-mallow roots, with barley and liquorice, &c. Bleeding is generally necessary, especially at the beginning. Ten or twelve ounces may be let from the arm or foot; and, if the pain and inflammation continue, the operation may be repeated in twenty-four hours, especially if the patient be of a full habit. Leeches may likewise be applied to the hæmorrhoidal veins, as a discharge from these will greatly relieve the patient. Cloths dipped in warm water, or bladders filled with it, must be applied as near as possible to the part affected, and renewed as they grow cool. If the bladder be filled with a decoction of mallows and camomile-flowers, to which a little saffron is added, and mixed with about a third part of new milk, it will be still more beneficial. Emollient clysters ought frequently to be administered; and, if these do not open the body, a little salt and honey or manna may be added to them. The same course is to be followed where gravel or a stone is lodged in the kidney; but, when the gravel or stone is separated from the kidney, and lodges in the ureter, it will be proper, besides the fomentations, to rub the small of the back with sweet oil, and to give gentle diuretics; as juniper-water sweetened with the syrup of marsh-mallows; a tea-spoonful of the sweet spirits of nitre, with a few drops of laudanum, may now and then be put up in a cup of the patient's drink. He ought likewise to take exercise on horseback, or in a carriage, if he be able to bear it.

INFLAMMATION OF THE BLADDER.

THE inflammation of the bladder proceeds, in a great measure, from the same causes as that of the kidneys. It is known by an acute pain towards the bottom of the belly, and difficul-

ty of passing urine, with some degree of fever, a constant inclination to go to stool, and a perpetual desire to make water. This disease must be treated on the same principles as the one immediately preceding. The patient should abstain from every thing that is of a hot, acrid, and stimulating, quality, and should live entirely upon small broths, gruels, or mild vegetables. But a stoppage of urine may proceed from other causes besides an inflammation of the bladder; as a swelling of the hæmorrhoidal veins; hard *fæces* lodged in the *rectum*; a stone in the bladder; excrescences in the urinary passages, a palsy of the bladder, hysteric affections, &c. In all which cases, mild and gentle applications are the safest; strong diuretic medicines, or things of an irritating nature, generally increase the danger. I have known some persons kill themselves by introducing probes into the urinary passages, to remove, as they thought, somewhat that obstructed the discharge of urine; and others bring on a violent inflammation of the bladder, by using strong diuretics, as oil of turpentine, &c., for that purpose.

INFLAMMATION OF THE LIVER.

THIS disease is known by a painful tension of the right side under the false ribs, attended with some degree of fever, a sense of weight, or fulness of the part, difficulty of breathing, loathing of food, great thirst, with a pale or yellowish colour of the skin and eyes. This disease, if properly treated, is seldom mortal. If it ends in a suppuration, and the matter cannot be discharged outwardly, the danger is then great. When the scirrhus of the liver ensues, the patient, if he observes, a proper regimen, may nevertheless live a number of years; but, if he indulge in animal food and strong liquors, or take medicines of an acrid or irritating nature, the scirrhus will be converted into a cancer, which must infallibly prove fatal.

CURE.—The same regimen is to be observed in this as in
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other inflammatory disorders. All hot things are to be carefully avoided; and cool diluting liquors, as whey, barley-water, &c., drunk freely. The food must be light and thin, and the body, as well as the mind, kept easy and quiet. Bleeding is proper at the beginning, and it will often be necessary, even though the pulse should not feel hard, to repeat it. All violent purgatives are to be avoided; the body however must be kept gently open. A decoction of tamarinds, with a little honey or manna, will answer this purpose very well. The side affected must be fomented in the manner directed in the foregoing diseases. Mild laxative clysters should be frequently administered; and, if the pain should notwithstanding continue violent, a blistering-plaster may be applied over the part affected. Medicines which promote the secretion of urine have a very good effect here. For this purpose, half a dram of purified nitre, or a tea-spoonful of the sweet spirits of nitre, may be taken in a cup of the patient's drink three or four times a-day. All inflammations of the viscera must in general be treated upon the same principles as those already mentioned. The chief rule with respect to all of them, is to let blood, to avoid every thing that is strong, or of a heating nature, to apply warm fomentations to the part affected, and to cause the patient to drink a sufficient quantity of warm diluting liquors.

OF THE CHOLERA MORBUS.

THE cholera morbus is a violent purging and vomiting, attended with gripes, sickness, and a constant desire to go to stool. It comes on suddenly, and is most common in autumn. There is hardly any disease that kills more quickly than this, when proper means are not used in due time for removing it. It is generally preceded by the heart-burn, sour belchings, and flatulencies, with pain of the stomach and intestines. To these succeed excessive vomiting, and purging of green, yellow or

blackish, coloured bile, with a distension of the stomach, and violent griping pains. There is likewise a great thirst, with a very quick unequal pulse, and often a fixed acute pain about the region of the navel. As the disease advances, the pulse often sinks so low as to become quite imperceptible, the extremities grow cold, or cramped, and are often covered with a clammy sweat; the urine is obstructed, and there is a palpitation of the heart. Violent hiccup, fainting, and convulsions, are the signs of approaching death.

CURE.—At the beginning of this disease, the efforts of nature to expel the offending cause should be assisted, by promoting the purging and vomiting. For this purpose the patient must drink freely of diluting liquors; as whey, butter-milk, warm-water, thin wathr-gruel, small posset, or, what is perhaps preferable to any of them, very weak chicken broth. This should not only be drunk plentifully to promote the vomiting, but a clyster of it given every hour in order to promote the purging. Warm negus, or strong wine whey, will likewise be necessary to support the patient's spirits, and promote perspiration. His legs should be bathed in warm water, and afterwards rubbed with flannel cloths, or wrapped in warm blankets, and warm bricks applied to the soles of his feet. Flannels wrung out of warm spiritous fomentations should likewise be applied to the region of the stomach. When the violence of the disease is over, to prevent a relapse, it will be necessary, for some time, to continue the use of small doses of laudanum. Ten or twelve drops may be taken in a glass of wine, at least twice a-day, for eight or ten days. The patient's food ought to be nourishing, but taken in small quantities, and he should use moderate exercise. As the stomach and intestines are generally much weakened, an infusion of the bark, or bitter herbs, in small wine, sharpened with the elixir of vitriol, may be drunk for some time.

OF A DIARRHŒA, OR LOOSENESS.

A LOOSENESS, in many cases, is not to be considered as

a disease, but rather as a salutary evacuation. It ought therefore never to be stopped unless when it continues too long, or evidently weakens the patient.

CURE.—A looseness, occasioned by the obstruction of any customary evacuation, generally requires bleeding. If that does not succeed, other evacuations may be substituted in the room of those which are obstructed. At the same time every method is to be taken to restore the usual discharges, as not only the cure of the disease, but the patient's life, may depend on this. A diarrhœa, or looseness, which proceeds from violent passions or affections of the mind, must be treated with the greatest caution. Vomits in this case are highly improper. Nor are purges safe, unless they be very mild, and given in small quantities. Opiates, and other anti-spasmodic medicines, are most proper. Ten or twelve drops of liquid laudanum may be taken in a cup of valerian or penny-royal tea, every eight or ten hours, till the symptoms abate. Ease, cheerfulness, and tranquillity of mind, are here of the greatest importance. When a looseness proceeds from acrid or poisonous substances taken into the stomach, the patient must drink large quantities of diluting liquors, with oil or fat broths, to promote vomiting and purging. Afterwards, if there be reason to suspect that the bowels are inflamed, bleeding will be necessary. Small doses of laudanum may likewise be taken to remove their irritation. From whatever cause a looseness proceeds, when it is found necessary to check it, the diet ought to consist of rice boiled with milk, and flavoured with cinnamon; rice-jelly; sago, with red port; and the lighter sorts of flesh-meat roasted. The drink may be thin water-gruel, rice-water, or weak broth made from lean veal, or with a sheep's head, as being more gelatinous than mutton, beef, or chicken broth.

OF VOMITING.

VOMITING may proceed from various causes; as, excess

in eating and drinking, foulness of the stomach, the acrimony of the aliments, or a translation of the morbid matter of ulcers, of the gout, the erysipelas, or other diseases, to the stomach and bowels.

CURE.—When vomiting proceeds from a foul stomach or indigestion, it is not to be considered as a disease, but as the cure of a disease. It ought therefore to be promoted by drinking lukewarm water or thin gruel. If this does not put a stop to the vomiting, a dose of ipecacuanha may be taken, and worked off with weak camomile-tea. If vomiting proceeds from weakness of the stomach, bitters will be of service. Peruvian bark infused in wine or brandy, with as much rhubarb as will keep the body gently open, is an excellent medicine in this case. The elixir of vitriol is also a good medicine; it may be taken in the dose of fifteen or twenty drops, twice or thrice a-day, in a glass of wine or water. Habitual vomitings are sometimes alleviated by making oysters a principal part of the diet. A vomiting, which proceeds from acidities in the stomach, is relieved by alkaline purges. The best medicine of this kind is the magnesia alba, a tea-spoonful of which may be taken in a dish of tea or a little milk, three or four times a-day, or oftener if necessary, to keep the body open. I have always found the saline draughts, taken in the act of effervescence, of singular use in stopping a vomiting, from whatever cause it proceeded. These may be prepared by dissolving a dram of the salt of tartar in an ounce and a half of fresh lemon juice, and adding to it an ounce of peppermint-water, the same quantity of simple cinnamon water, and a little white sugar. This draught must be swallowed before the effervescence is quite over, and may be repeated every two hours, or oftener, if the vomiting be violent.

OF THE DIABETES.

IN a diabetes, the urine generally exceeds in quantity all the

liquid food which the patient takes. It is thin and pale, of a sweetish taste, and an agreeable smell. The patient has a continual thirst, with some degree of fever; his mouth is dry, and he spits frequently a frothy spittle. The strength fails, the appetite decays, and the flesh wastes away till the patient is reduced to skin and bone. There is a heat of the bowels; and frequently the loins, testicles, and feet, are swelled.

CURE.—This disease may generally be cured at the beginning: but, after it has continued long, the cure becomes very difficult. Every thing that stimulates the urinary passages, or tends to relax the habit, must be avoided. For this reason the patient should live chiefly on solid food. His thirst may be quenched with acids; as sorrel, juice of lemon, or vinegar. The mucilaginous vegetables, as rice, sago, and salop, with milk, are the most proper food. Of animal substances, shell-fish are to be preferred; as oysters, crabs, &c. The drink may be Bristol water, (a constant course of which has done wonders in this disorder, and is reckoned a specific;) when that cannot be obtained, lime water, in which a due proportion of oak bark has been macerated, may be used. The patient ought daily to take exercise, but it should be so gentle as not to fatigue him. He should lie upon a hard bed or mattress. Nothing hurts the kidneys more than lying too soft. Gentle purges, if the patient be not too much weakened by the disease, have a good effect. They may consist of rhubarb, with cardamum seed, or any other spiceries, infused in wine, and may be taken in such quantity as to keep the body gently open. The patient must next have recourse to astringents and corroborants. Half a dram of powder, made of equal parts of alum and the inspissated juice commonly called *Terra Japonica*, may be taken four times a-day, or oftener, if the stomach will bear it; otherwise, Peruvian bark steeped in red wine. Opiates are of service in this disease, even though the patient rests well. They take off spasm and irritation, and at the same time lessen the force of the circulation. Ten or twelve drops of liquid lau-

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danum may be taken in a cup of the patient's drink three or four times a-day.

OF A SUPPRESSION OF URINE.

A SUPPRESSION of urine may proceed from various causes; as an inflammation of the kidneys or bladder, small stones or gravel lodging in the urinary passages, hard fæces lying in the rectum, pregnancy, a spasm or contraction of the neck of the bladder, clotted blood in the bladder itself, a swelling of the hæmorrhoidal veins, &c.

CURE.—We would chiefly recommend, in all obstructions of urine, fomentations and evacuants. Bleeding, as far as the patient's strength will permit, is necessary, especially where there are symptoms of topical inflammation. Bleeding in this case not only abates the fever, by lessening the force of the circulation, but, by relaxing the solids, it takes off the spasm or stricture upon the vessels which occasioned the obstruction. After bleeding, fomentations must be used. These may either consist of warm water alone, or of decoctions of mild vegetables; as mallows, camomile-flowers, and such other herbs as are recommended in the Herbal. Cloths dipped in these may either be applied to the part affected, or a large bladder filled with the decoction may be kept continually upon it. Persons subject to a suppression of urine ought to live very temperate. Their diet should be light, and their liquor diluting. They should avoid all acids and austere wines; should take sufficient exercise, lie hard, and avoid study and sedentary occupations.

OF THE GRAVEL AND STONE.

THE stone and gravel may be occasioned by high living; the use of strong astringent wines; a sedentary life; lying too hot, soft, or too much on the back; the constant use of water

impregnated with earthy or stony particles; aliments of an astringent or windy nature, &c. It may likewise proceed from an hereditary disposition. Persons in the decline of life, and those who have been much afflicted with the gout or rheumatism, are most liable to it.

CURE.—Persons afflicted with the gravel or stone should avoid aliments of a windy or heating nature, as salt meats, sour fruits, &c. The diet ought chiefly to consist of such things as tend to promote the secretion of urine, and to keep the body open. Artichokes, asparagus, spinage, lettuce, parsley, succory, purslane, turnips, potatoes, carrots, and radishes, may be safely eaten. Onions, leeks, and celery, are, in this case, reckoned medicinal. The most proper drinks are whey, butter-milk, milk and water, barley-water; decoctions or infusions of the roots of marsh-mallows, parsley, liquorice, or of other mild mucilaginous vegetables, as linseed, lime-tree buds or leaves, &c. If the patient has been accustomed to generous liquors, he may drink small gin-punch without acid. In what is called a fit of the gravel, which is commonly occasioned by a stone sticking in the ureter or some part of the urinary passages, the patient must be bled; warm fomentations should likewise be applied to the part affected, emollient clysters administered, and diluting mucilaginous liquors drunk, &c. The treatment in this case must be the same as pointed out for an inflammation of the kidneys and bladder, &c. Patients who are subject to frequent fits of gravel in the kidneys, but have no stone in the bladder, are advised to drink every morning, two or three hours before breakfast, an English pint of oyster or cockle shell lime-water; for, though this quantity might be too small to have any sensible effect in dissolving a stone in the bladder, yet it may very probably prevent its growth. When a stone is formed in the bladder, Alicant soap, and oyster or cockle shell lime-water, may be taken in the following manner: The patient must swallow every day, in any form that is least disagreeable, an ounce of the internal part of Alicant soap,

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and drink three or four English pints of oyster or cockle shell lime-water. The soap is to be divided into three doses; the largest to be taken fasting in the morning early; the second at noon; and the third at seven in the evening; drinking with each dose a large draught of the lime-water; the remainder of which he may take any time betwixt dinner and supper, instead of other liquors. The caustic alkali, or soap-lees, is the medicine chiefly in vogue at present for the stone. It may be prepared by mixing two parts of quick-lime with one of pot-ashes, and suffering them to stand till the lixivium be formed, which must be carefully filtrated before it be used. If the solution does not happen readily, a small quantity of water may be added to the mixture. The patient must begin with small doses of the lees, as thirty or forty drops, and increase by degrees, as far as the stomach will bear it.

OF INVOLUNTARY DISCHARGES OF BLOOD.

INVOLUNTARY discharges of blood are so far from being always dangerous, that they prove often salutary. When such discharges are critical, which is frequently the case in fevers, they ought not to be stopped. Nor indeed is it proper at any time to stop them, unless they be so great as to endanger the patient's life. Most people, afraid of the smallest discharge of blood from any part of the body, fly immediately to the use of styptic and astringent medicines, by which means an inflammation of the brain, or some other fatal disease, is occasioned, which, had the discharge been allowed to go on, might have been prevented. Periodical discharges of blood, from whatever part of the body they proceed, must not be stopped. They are always the efforts of nature to relieve herself; and fatal diseases have often been the consequences of obstructing them. It may indeed sometimes be necessary to check the violence of such discharges; but even this requires the greatest caution. In the early period of life, bleeding at the nose is

very common. Those who are farther advanced in years are more liable to *hæmoptœ*, or discharge of blood from the lungs. After the middle period of life, hæmorrhoidal fluxes are most common; and, in the decline of life, discharges of blood from the urinary passages. Bleeding at the nose, to persons who abound with blood, is very salutary. It often cures a vertigo, the head-ach, a phrenzy, and even an epilepsy. In fevers, where there is a great determination of blood towards the head, it is of the utmost service. It is likewise beneficial in inflammations of the liver and spleen, and often in the gout and rheumatism. In all diseases where bleeding is necessary, a spontaneous discharge of blood from the nose is of much more service than the same quantity let with the lancet. Whenever bleeding at the nose relieves any bad symptom, and does not proceed so far as to endanger the patient's life, it ought not to be stopped. But, when it returns frequently, or continues till the pulse becomes low, the extremities begin to grow cold, the lips pale, or the patient complains of being sick and faint, it must immediately be stopped.

CURE.—Let the patient be set nearly upright, with his head reclining a little, and his legs immersed in water about the warmth of new milk. His hands ought likewise to be put in lukewarm water, and his garters may be tied a little tighter than usual. Ligatures may be applied to the arms, about the place where they are usually made for bleeding, and with nearly the same degree of tightness. These must be gradually slackened as the blood begins to stop, and removed entirely as soon as it gives over. Sometimes dry lint put up the nostrils will stop the bleeding. When this does not succeed, dossils of lint dipped in strong spirits of wine may be put up the nostrils; or, if that cannot be had, they may be dipped in brandy. If the genitals be immersed for some time in cold water, it will generally stop a bleeding at the nose. I have seldom known this fail.

OF THE BLEEDING AND BLIND PILES.

A DISCHARGE of blood from the hæmorrhoidal vessels is called the *bleeding piles*. When the vessels only swell, and discharge no blood, but are exceeding painful, the disease is called the *blind piles*. This discharge, however, is not always to be treated as a disease. It is even more salutary than bleeding at the nose, and often prevents or carries off diseases. It is peculiarly beneficial in the gout, rheumatism, asthma, and hypochondriacal complaints, and often proves critical in cholics and inflammatory fevers.

CURE.—In the management of the patient, regard must be had to his habit of body, his age, strength, and manner of living. A discharge, which might be excessive and prove hurtful to one, may be very moderate, and even salutary, to another. That only is to be esteemed dangerous which continues too long, and in such quantity as to waste the patient's strength, hurt the digestion, nutrition, and other functions necessary to life. The Peruvian bark is proper in this case, both as a strengthener and astringent. Half a dram of it may be taken in a glass of red wine, sharpened with a few drops of the elixir of vitriol, three or four times a-day. The bleeding piles are sometimes periodical, and return regularly once a-month, or once in three weeks. In this case they are always to be considered as a salutary discharge, and by no means to be stopped. In the *blind piles*, bleeding is generally of use. The diet must be light and thin, and the drink cool and diluting. It is likewise necessary that the body be kept gently open. When the piles are exceeding painful and swelled, but discharge nothing, the patient must sit over the steam of warm water. He may likewise apply a linen cloth dipped in warm spirits of wine to the part, or poultices made of bread and milk, or of leeks fried with butter. If these do not produce a discharge, and the piles appear large, leeches must be applied as near them as

possible, or, if they will fix upon the piles themselves, so much the better. When leeches will not fix, the piles may be opened with a lancet. The operation is very easy, and is attended with no danger. When the pain is very great, a liniment made of two ounces of emollient ointment, and half an ounce of liquid laudanum, beat up with the yolk of an egg, may be applied.

SPITTING OF BLOOD.

PERSONS of a slender make and a lax fibre, who have long necks and strait breasts, are most liable to this disease. It is most common in the spring, and generally attacks people before they arrive at the prime or middle period of life. It is a common observation, that those who have been subject to bleeding at the nose when young are afterwards most liable to this complaint. It is often occasioned by excessive drinking, running, wrestling, singing, or speaking aloud. Such as have weak lungs ought to avoid all violent exertions of that organ, as they value life. They should likewise guard against violent passions, excessive drinking, and every thing that occasions a rapid circulation of the blood. It is often the effect of a long and violent cough; in which case it is generally the forerunner of a consumption. Spitting of blood is not always to be considered as a primary disease. It is often only a symptom, and in some diseases not an unfavourable one. This is the case in pleurisies, peripneumonies, and sundry other fevers. In a dropsy, scurvy, or consumption, it is a bad symptom, and shows that the lungs are ulcerated.

CURE.—This, like the other involuntary discharges of blood, ought not to be suddenly stopped by astringent medicines. It may however proceed so far as to weaken the patient, and even endanger his life, in which case proper means must be used for restraining it. The body should be kept gently open by laxative diet, as roasted apples, stewed prunes, and

such like. If these should not have the desired effect, a tea-spoonful of the lenitive electuary may be taken twice or thrice a-day, as is found necessary. If the bleeding proves violent, ligatures may be applied to the extremities, as directed for a bleeding at the nose. If the patient be hot or feverish, bleeding and small doses of nitre will be of use; a scruple or half a dram of nitre may be taken in a cup of his ordinary drink twice or thrice a-day. If stronger astringents be necessary, fifteen or twenty drops of the acid elixir of vitriol may be given in a glass of water three or four times a-day.

VOMITING OF BLOOD.

THIS disease often proceeds from an obstruction of the menses in women, and sometimes from the stopping of the hæmorrhoidal flux in men. It may be occasioned by any thing that greatly stimulates or wounds the stomach, as strong vomits or purges, acrid poisons, sharp or hard substances taken into the stomach, &c. It is often the effect of obstructions in the liver, the spleen, or some of the other viscera. It may likewise proceed from external violence, as blows or bruises, or from any of the causes which produce inflammation. In hysteric women, vomiting of blood is very common, but by no means a dangerous symptom.

CURE.—A great part of the danger in this disease arises from the extravasated blood lodged in the bowels, and becoming putrid, by which means a dysentery or putrid fever may be occasioned. The best way of preventing this, is to keep the body gently open, by frequently exhibiting emollient clysters. After the discharge is over, as the patient is generally troubled with gripes, occasioned by the acrimony of the blood lodged in the intestines, gentle purges will be necessary.

OF BLOODY URINE.

THIS discharge is more or less dangerous, according to the

different circumstances which attend it. When pure blood is voided suddenly, without interruption and without pain, it proceeds from the kidneys; but if the blood be in small quantity, of a dark colour, and emitted with heat and pain about the bottom of the belly, it proceeds from the bladder. Bloody urine is always attended with some degree of danger; but it is peculiarly so when mixed with purulent matter, as this shows an ulcer somewhere in the urinary passages.

CURE.—When there is reason to suspect an ulcer in the kidneys or bladder, the patient's diet must be cool, and his drink of a soft, healing, balsamic, quality, as decoctions of marsh-mallow root with liquorice, solutions of gum-arabic, &c. Three ounces of marsh-mallow roots, and half an ounce of liquorice, may be boiled in two English quarts of water to one; two ounces of gum-arabic, and half an ounce of purified nitre, may be dissolved in the strained liquor, and a tea-cupful of it taken four or five times a-day. The early use of astringents in this disease has often bad consequences. When the flux is stopped too soon, the grumous blood, by being confined in the vessels, may produce inflammations, abscess, and ulcers. If however the case be urgent, or the patient seems to suffer from the loss of blood, gentle astringents may be necessary. In this case the patient may take three or four ounces of lime-water, with half an ounce of the tincture of Peruvian bark, three times a-day.

OF THE DYSENTERY, OR BLOODY FLUX.

THIS disease is known by the flux of the belly, attended with violent pain of the bowels, a constant inclination to go to stool, and generally more or less blood in the stools. It begins, like other fevers, with chillness, loss of strength, a quick pulse, great thirst, and an inclination to vomit. The stools are at first greasy or frothy, afterwards they are streaked with blood, and, at last, have frequently the appearance of

pure blood, mixed with small filaments, resembling bits of skin.

CURE.—Nothing is of more importance in this disease than cleanliness. It contributes greatly to the recovery of the patient, and no less to the safety of such as attend him. Every thing about the patient should be frequently changed. The excrements should never be suffered to continue in his chamber, but should be removed immediately, and buried under ground. A constant stream of fresh air should be admitted into the chamber; and it ought frequently to be sprinkled with vinegar, juice of lemon, or some other strong acid. At the beginning of this disease it is always necessary to cleanse the first passages; for this purpose a vomit of ipecacuanha must be given, and worked off with camomile tea. Strong vomits are seldom necessary here; a scruple, or at most half a dram, of ipecacuanha, is generally sufficient for an adult, and sometimes a very few grains will suffice. The day after the vomit, half a dram, or two scruples, of rhubarb, must be taken; or, what will answer the purpose rather better, an ounce or an ounce and a half of Epsom salts; this dose may be repeated every other day for two or three times. Afterwards small doses of ipecacuanha may be taken for some time; two or three grains of the powder may be mixed in a table-spoonful of the syrup of poppies, and taken three times a-day. These evacuations will often be sufficient to effect a cure. Should it happen otherwise, the following astringent medicines may be used: A clyster of starch or fat mutton broth, with thirty or forty drops of liquid laudanum in it, may be administered twice a-day; at the same time an ounce of gum-arabic, and half an ounce of gum-tragacanth, may be dissolved in an English pint of barley-water, over a slow fire, and a table-spoonful of it taken every hour. When dysenteries prevail, we would recommend a strict attention to cleanliness, a spare use of animal food, and the free use of sound ripe fruits and other vegetables. We would also advise such as are liable to them to take

either a vomit or a purge every spring or autumn, as a preventive.

OF THE JAUNDICE.

THE immediate cause of the jaundice is an obstruction of the bile. The patient at first complains of excessive weariness, and has great aversion to every kind of motion. His skin is dry, and he generally feels a kind of itching or pricking pain over the whole body. If the patient be young, and the disease complicated with no other malady, it is seldom dangerous; but in old people, where it continues long, returns frequently, or is complicated with the dropsy or hypochondriac symptoms, it generally proves fatal. The black jaundice is more dangerous than the yellow.

CURE.—The patient should take as much exercise as he can bear, either on horseback, or in a carriage; walking, running, and even jumping, are likewise proper, provided he can bear them without pain, and there be no symptoms of inflammation. Patients have been often cured of this disease by a long journey, after medicines had proved ineffectual. If the patient be young, of a full sanguine habit, and complains of pain in the right side about the region of the liver, bleeding will be necessary. After this a vomit must be administered, and, if the disease proves obstinate, it may be repeated once or twice. No medicines are more beneficial in the jaundice than vomits, especially where it is not attended with inflammation; half a dram of ipecacuanha in powder will be a sufficient dose for an adult; it may be worked off with weak camomile-tea, or lukewarm water. Fomenting the parts about the region of the stomach and liver, and rubbing them with a warm hand or flesh-brush, are likewise beneficial; but it is still more so for the patient to sit in a bath of warm water up to the breast. He ought to do this frequently, and should continue in it as long as his strength will permit. Numberless British herbs are

certain cures for this disease, as may be seen in the Herbal. I have known considerable benefit, in a very obstinate jaundice, from a decoction of hempseed: four ounces of the seed may be boiled in two English quarts of ale, and sweetened with coarse sugar; the dose half a pint every morning, and may be continued for eight or nine days. A very obstinate jaundice has been cured by swallowing raw eggs. Persons subject to the jaundice ought to take as much exercise as possible, and to avoid all heating and astringent aliments. If it attacks maidens after the age of puberty, marriage is a certain cure.

OF THE DROPSY.

THE dropsy is often owing to an hereditary disposition, and often to a jaundice badly cured; it may likewise proceed from drinking ardent spirits, or other strong liquors. It is true almost to a proverb, that great drinkers die of a dropsy. The want of exercise is also a very common cause of the dropsy; hence it is justly reckoned among the diseases of the sedentary. It often proceeds from excessive evacuations, as frequent and copious bleedings, strong purges often repeated, frequent salivations, &c. The sudden stoppage of customary or necessary, evacuations, as the menses, the hæmorrhoids, fluxes of the belly, and, in short, whatever obstructs the perspiration, or prevents the blood from being duly prepared, occasions a dropsy. It generally begins with a swelling of the feet and ancles towards night, which, for some time, disappears in the morning. In the evening the parts, if pressed with the finger, will pit. The swelling gradually ascends, and occupies the trunk of the body, the arms, and the head. Afterwards the breathing becomes difficult, the urine is in small quantity, and the thirst great; the body is bound, and the perspiration is greatly obstructed. To these succeed torpor, heaviness, a slow wasting fever, and a troublesome cough. This last is generally a fatal symptom, as it shows that the lungs are affected. When the disease comes suddenly on, and the pa-

tient is young and strong, there is reason to hope for a cure, especially if medicine be given early. But, if the patient be old, has led an irregular or a sedentary life, or if there be reason to suspect that the liver, lungs, or any of the viscera, are unsound, there is great ground to fear that the consequences will prove fatal.

CURE.—The patient must abstain, as much as possible, from all drink, especially weak and watery liquors, and must quench his thirst with mustard whey, or acids, as juice of lemons, oranges, sorrel, or such like. His aliment ought to be dry, of a stimulating and diuretic quality, as toasted bread, the flesh of birds, or other wild animals, roasted: pungent and aromatic vegetables, as garlic, mustard, onions, cresses, horse-radish, rocambole, shallot, &c. He may also eat sea-biscuit dipt in wine or a little brandy. This is not only nourishing, but tends to quench thirst. Some have been actually cured of a dropsy by a total abstinence from all liquids, and living entirely upon such things as are mentioned above. If the patient must have drink, the Spa water, or Rhenish wine, with diuretic medicines infused in it, are the best. Exercise is of the greatest importance in a dropsy. If the patient be able to walk, dig, or the like, he ought to continue these exercises as long as he can. If he is not able to walk or labour, he must ride on horseback, or in a carriage, and the more violent the motion so much the better, provided he can bear it. If the disease has come on suddenly, it may generally be removed by strong vomits, brisk purges, and such medicines as promote a discharge by sweat and urine. For an adult, half a dram of ipecacuanha in powder, and half an ounce of oxymel of squills, will be a proper vomit. This may be repeated as often as is found necessary, three or four days intervening between the doses. The patient must not drink much after taking the vomit, otherwise he destroys its effect. A cup or two of camomile-tea will be sufficient to work it off. Betwixt each vomit, on one of the intermediate days, the patient may take the following purge: Jalap in powder half a dram, cream of tartar two drachms, calomel six grains. These may be

made into a bolus with a little syrup of pale roses, and taken early in the morning. The less the patient drinks after it the better. If he be much griped, he may take now and then a cup of chicken-broth. The patient may likewise take every night at bed-time the following bolus; To four or five grains of camphor add one grain of opium, and as much syrup of orange-peel as is sufficient to make them into a bolus. This will generally promote a gentle sweat, which should be encouraged by drinking now and then a small cup of white-wine whey, with a tea-spoonful of the spirits of hartshorn in it. A tea-cupful of the following diuretic infusion may likewise be taken every four or five hours through the day: Take juniper berries, mustard-seed, and horse-radish, of each half an ounce, ashes of broom half a pound; infuse them in a quart of Rhenish wine or strong ale for a few days, and afterwards strain off the liquor. Such as cannot take this infusion, may use the decoction of seneka-root, which is both diuretic and sudorific. I have known an obstinate *anasarca* cured by an infusion of the ashes of broom in wine. The above course will often cure an incidental dropsy, if the constitution be good; but, when the disease proceeds from a bad habit, or an unsound state of the viscera, strong purges and vomits are not to be ventured upon. In this case, the safer course is to palliate the symptoms by the use of such medicines as promote the secretions, and to support the patient's strength by warm and nourishing cordials. The secretion of urine may be greatly promoted by nitre. Brookes says, he knew a young woman who was cured of a dropsy by taking a dram of nitre every morning in a draught of ale, after she had been given over as incurable; and a large spoonful of unbruised mustard-seed taken every night and morning, and drinking half a pint of the decoction of the tops of green broom after it, has performed cures when other powerful medicines have proved ineffectual. When the disease does not evidently and speedily give way to purgative and diuretic medicines, the water ought to be let off by tapping. This is a very simple and safe operation, and would often succeed if it were performed in due time; but,

if it be delayed till the humours are vitiated, or the bowels spoiled by long soaking in water, it can hardly be expected that any permanent relief will be procured. After the evacuation of the water, the patient is to be put on a course of strengthening medicines; as the Peruvian bark, the elixir of vitriol, warm aromatics, with a due proportion of rhubarb infused in wine, and such like.

OF THE GOUT.

THERE is no disease which shows the imperfection of medicine, or sets the advantages of temperance and exercise in a stronger light, than the gout. Excess and idleness are the true sources from whence it originally sprang, and all who would avoid it must be active and temperate. As there are no medicines yet known that will cure the gout, we shall confine our observations chiefly to regimen, both in and out of the fit. In the fit, if the patient be young and strong, his diet ought to be thin and cooling, and his drink of a diluting nature; but where the constitution is weak, and the patient has been accustomed to live high, this is not a proper time to retrench. In this case he must be kept nearly to his usual diet, and should take frequently a cup of strong negus, or a glass of generous wine. Wine-whey is a very proper drink in this case, as it promotes the perspiration without greatly heating the patient. It will answer this purpose better if a tea-spoonful of *sal volatile oleosnm*, or spirits of hartshorn, be put into a cup of it twice a-day. It will likewise be proper to give at bed-time a tea-spoonful of the volatile tincture of *guaiacum* in a large draught of warm wine-whey. This will greatly promote perspiration through the night. As the most safe and efficacious method of discharging the gouty matter is by perspiration, this ought to be kept up by all means, especially in the affected part. For this purpose the leg and foot should be wrapped in soft flannel, fur, or wool. The last is most readily obtained, and seems to answer the purpose better than any thing else. The people of Lancashire

look upon wool as a kind of specific in the gout. They wrap a great quantity of it about the leg and foot affected, and cover it with a skin of soft dressed leather. The wool which they use is generally greased, and carded or combed. They chuse the softest which can be had, and seldom or never remove it till the fit be entirely gone off. All external applications that repel the matter are to be avoided as death. They do not cure the disease, but remove it from a safer to a more dangerous part off the body, where it often proves fatal. Many things will shorten a fit of the gout, and some will drive it off altogether; but nothing has yet been found which will do this with safety to the patient. In pain we eagerly grasp at any thing that promises immediate ease, and even hazard life itself for a temporary relief. This is the true reason why so many infallible remedies have been proposed for the gout, and why such numbers have lost their lives by the use of them. It would be as imprudent to stop the small-pox from rising, and to drive it into the blood, as to attempt to repel the gouty matter after it has been thrown upon the extremities. The latter is as much an effort of nature to free herself from an offending cause as the former, and ought equally to be promoted. When the pain however is very great, and the patient is restless, thirty or forty drops of laudanum, more or less, according to the violence of the symptoms, may be taken at bed-time. This will ease the pain, procure rest, promote perspiration, and forward the crisis of the disease. Though it may be dangerous to stop a fit of the gout by medicine, yet if the constitution can be so changed by diet and exercise, as to lessen or totally to prevent its return, there certainly can be no danger in following such a course. It is well known that the whole habit may be so altered by a proper regimen, as nearly to eradicate this disease; and those only who have sufficient resolution to persist in such a course, have reason to expect a cure. The course which we would recommend for preventing the gout, is as follows; in the first place, universal temperance; in the next place, sufficient exercise. By this we do not mean sauntering about in an indolent manner; but labour, sweat

and toil. These only can render the humours wholesome, and keep them so. Going early to bed, and rising betimes, are also of great importance. When the gout attacks the head or lungs, every method must be taken to fix it in the feet. They must be frequently bathed in warm water, and acrid cataplasms applied to the soles. Blisters ought likewise to be applied to the ancles or calves of the legs. Bleeding in the feet or ancles is also necessary, and warm stomachic purges. The patient ought to keep in bed for the most part, if there be any signs of inflammation, and should be very careful not to catch cold. If it attacks the stomach with a sense of cold, the most warm cordials are necessary; as strong wine boiled up with cinnamon or other spices, cinnamon-water, peppermint-water, and even brandy or rum. The patient should keep his bed, and endeavour to promote a sweat by drinking warm liquors; and, if he should be troubled with nausea, or inclination to vomit, he may drink camomile tea, or any thing that will make him vomit freely. Those who never had the gout, but who, from their constitution or manner of living, have reason to expect it, ought likewise to be very circumspect with regard to its first approach. If the disease, by wrong conduct or improper medicines, be diverted from its proper course, the miserable patient has a chance to be ever after tormented with head-achs, coughs, pains of the stomach and intestines; and to fall, at last, a victim to its attack upon some of the more noble parts.

OF THE RHEUMATISM.

THE causes of a rheumatism are frequently the same as those of an inflammatory fever; viz. an obstructed perspiration, the immoderate use of strong liquors, and the like. Sudden changes of the weather, and all quick transitions from heat to cold, are very apt to occasion the rheumatism. The acute rheumatism commonly begins with weariness, shivering, a quick pulse, restlessness, thirst, and

other symptoms of fever. Afterwards the patient complains of flying pains, which are increased by the least motion. These at length fix in the joints, which are often affected with swelling and inflammation. If blood be let in this disease, it has generally the same appearance as in the pleurisy. In this kind of rheumatism the treatment of the patient is nearly the same as in an acute or inflammatory fever. If he be young and strong, bleeding is necessary, which may be repeated according to the exigencies of the case. The body ought likewise to be kept open by emollient clysters, or cool opening liquors; as decoctions of tamarinds, cream of tartar, whey, senna-tea, and the like. Warm bathing, after proper evacuations, has often an exceeding good effect. The patient may be either put into a bath of warm water, or have cloths wrung out of it applied to the part affected. Great care must be taken that he do not catch cold after bathing. The chronic rheumatism is seldom attended with any considerable degree of fever, and is generally confined to some particular part of the body, as the shoulders, the back, or the loins. There is seldom any inflammation or swelling in this case. Persons in the decline of life are most subject to the chronic rheumatism. In such patients it often proves extremely obstinate, and sometimes incurable. Though this disease may not seem to yield to medicines for some time, yet they ought to be persisted in. Persons who are subject to frequent returns of the rheumatism, will often find their account in using medicines, whether they be immediately affected with the disease or not. The chronic rheumatism is similar to the gout in this respect, that the most proper time for using medicines to extirpate it, is when the patient is most free from the disorder. There are several of our plants pointed out in the Herbal which may be used with great advantage in the rheumatism. One of the best is the white mustard; a table-spoonful of the seed of this plant may be taken twice or thrice a-day, in a glass of water or small wine. The water-trefoil is likewise of great use in this complaint; it may be infused in wine or ale,

or drunk in form of tea. The ground-ivy, camomile, and several other bitters, are also beneficial, and may be used in the same manner. No benefit is however to be expected from these, unless they be taken for a considerable time. Excellent medicines are often despised in this disease, because they do not perform an immediate cure; whereas nothing would be more certain than their effect, were they duly persisted in. Want of perseverance in the use of medicines is one reason why chronic diseases are so seldom cured. Cold bathing, especially in salt water, often cures the rheumatism. We would also recommend riding on horseback, and wearing flannel next the skin. Issues are likewise very proper, especially in chronic cases. If the pain affects the shoulders, an issue may be made in the arm; but, if it affects the loins, it should be put in the leg or thigh.

OF THE SCURVY.

THE scurvy is occasioned by cold moist air; by the long use of salted or smoke-dried provisions, or any kind of food that is hard of digestion, and affords little nourishment. It may also proceed from the suppression of customary evacuations, as the menses, the hæmorrhoidal flux, &c. It is sometimes owing to an hereditary taint, in which case a very small cause will excite the latent disorder. Grief, fear, and other depressing passions, have a great tendency both to excite and aggravate this disease. The same observation holds with regard to neglect of cleanliness, bad clothing, the want of proper exercise, confined air, unwholesome food, or any disease which greatly weakens the body or vitiates the humours.

CURE.—There is no way of curing this disease so effectually, as by pursuing a plan directly opposite to that which brings it on. It proceeds from a vitiated state of the humours, occasioned by errors in diet, air, or exercise; and this cannot be removed but by a proper attention to these important articles.

When the scurvy has been brought on by a long use of salted provisions, the proper medicine is a diet consisting chiefly of fresh vegetables; as oranges, apples, lemons, limes, tamarinds, water-cresses, scurvy-grass, brook-lime, &c. The use of these, with milk, pot-herbs, new bread, and fresh beer or cider, will seldom fail to remove a scurvy of this kind, if taken before it be too far advanced; but to have this effect, they must be persisted in for a considerable time. I have often seen very extraordinary effects in the land-scurvy from a milk diet. This preparation of nature is a mixture of animal and vegetable properties, which of all others is the most fit for restoring a decayed constitution, and removing that particular acrimony of the humours, which seems to constitute the very essence of the scurvy, and many other diseases. But people despise this wholesome and nourishing food, because it is cheap, and devour with greediness flesh and fermented liquors, while milk is only deemed fit for their hogs. The most proper drink in the scurvy is whey or butter-milk. When these cannot be had, sound cider, perry, or spruce beer, may be used. Wort has likewise been found to be a proper drink in the scurvy, and may be used at sea, as malt will keep during the longest voyage. A decoction of the tops of the spruce fir is likewise proper; it may be drunk in the quantity of an English pint twice a day. Tar-water may be used for the same purpose, or decoctions of any of the mild mucilaginous vegetables; sarsaparilla, marsh-mallow-roots, &c. Infusions of the bitter plants, as ground-ivy, the smaller centaury, marsh-trefoil, &c. are likewise beneficial. The peasants, in some parts of Britain, express the juice of the last mentioned plant, and drink it with good effect in those foul scorbutic eruptions with which they are often troubled in the spring season.

OF THE SCROPHULA, OR KING'S EVIL.

THIS disease proceeds often from an hereditary taint, from
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a scrophulous nurse, &c. Children who have the misfortune to be born of sickly parents, whose constitutions have been greatly injured by chronic diseases, are apt to be affected with the scrophula. It may likewise proceed from such diseases as weaken the habit or vitiate the humours, as the small-pox, measles, &c. At first small knots appear under the chin or behind the ears, which gradually increase in number and size, till they form one large hard tumour. This often continues for a long time without breaking, and, when it does break, it only discharges a thin watery humour. Other parts of the body are likewise liable to its attack, as the armpits, groins, feet, hand, eyes, breast, &c. The white swellings of the joints seem likewise to be of this kind. They are with difficulty brought to a suppuration, and, when opened, they only discharge a thin ichor. There is not a more general symptom of the scrophula than a swelling of the upper lip and nose.

CURE.—In this complaint medicine is but of little use. It has been found, that keeping the body gently open, for some time, with sea-water, has a good effect. Bathing in salt water, and drinking it in such quantities as to keep the body gently open, will cure a scrophula, when medicines have been tried in vain. When salt water cannot be obtained, the patient may be bathed in fresh water, and his body kept open by small quantities of salt and water, or some other mild purgative. Next to cold bathing, and drinking the salt water, we would recommend the Peruvian bark. The cold bath may be used in summer, and the bark in winter. To an adult half a dram of the bark in powder may be given, in a glass of red wine, four or five times a day. Hemlock may sometimes be used with advantage in the scrophula. Some lay it down as a general rule, that the sea water is most proper before there are any suppuration or symptoms of tabes; the Peruvian bark, when there are running sores, and a degree of hectic fever; and the hemlock in old inveterate cases, approaching to the schirrhous or cancerous state. Either the extract or the fresh juice of this plant

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may be used. The dose must be small at first, and increased gradually as far as the stomach is able to bear it.

OF THE ITCH.

The itch is seldom a dangerous disease, unless when it is rendered so by neglect or improper treatment. If it be suffered to continue too long, it may vitiate the whole mass of humours; and if it be suddenly thrown in, without proper evacuations, it may occasion fevers, inflammations of the viscera, or other internal disorders.

CURE.—The best medicine yet known for the itch is sulphur, which ought to be used both externally and internally. The parts most affected may be rubbed with an ointment made of the flour of sulphur, two ounces; crude sal ammoniac, finely powdered, two drams; hog's-lard, or butter, four ounces. If a scruple or half a dram of the essence of lemon be added, it will entirely take away the disagreeable smell. About the bulk of a nutmeg of this may be rubbed upon the extremities, at bed-time, twice or thrice a week. It is seldom necessary to rub the whole body; but, when it is, it ought not to be done all at once, but by turns, as it is dangerous to stop too many pores at the same time. Before the patient begins to use the ointment, he ought, if he be of a full habit, to bleed or take a purge or two. It will likewise be proper, during the use of it, to take every night and morning as much of the flour of brimstone and cream of tartar, in a little treacle or new milk, as will keep the body gently open. I never knew brimstone, when used as directed above, fail to cure the itch; and I have reason to believe, that, if duly persisted in, it never will fail: but, if it be only used once or twice, and cleanliness be neglected, it is no wonder if the disorder returns. The quantity of ointment mentioned above will generally be sufficient for the cure of one person; but, if any symptoms of the disease should appear again, the medicine may be repeated. It is both

more safe and efficacious when persisted in for a considerable time, than when a large quantity is applied at once. As most people dislike the smell of sulphur, they may use in its place the powder of white hellebore root made up into an ointment, in the same manner, which will seldom fail to cure the itch. People ought to be extremely cautious lest they take other eruptions for the itch; as the stoppage of these may be attended with fatal consequences. Many of the eruptive disorders to which children are liable have a near resemblance to this disease; and I have often known infants killed by being rubbed with greasy ointments, that made these eruptions strike suddenly in, which nature had thrown out to preserve the patient's life, or prevent some other malady.

OF THE ASTHMA.

THE asthma is a disease of the lungs, which seldom admits of a cure. Persons in the decline of life are most liable to it. It is distinguished into the moist and dry, or humoral and nervous. The former is attended with expectoration or spitting; but in the latter the patient seldom spits, unless sometimes a little tough phlegm by the mere force of coughing. An asthma is known by a quick laborious breathing, which is generally performed with a kind of wheezing noise. Sometimes the difficulty of breathing is so great, that the patient is obliged to keep in an erect posture, otherwise he is in danger of being suffocated. A fit or paroxysm of the asthma generally happens after a person has been exposed to cold easterly winds, or has been abroad in thick foggy weather, or has got wet, or continued long in a damp place under ground, &c.

CURE.—All windy food, and whatever is apt to swell in the stomach, is to be avoided. Strong liquors of all kinds, especially malt liquor, are hurtful. The patient should eat a very light supper, or rather none at all, and should never suffer himself to be long costive. His clothing should be warm,

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especially in the winter-season. As all disorders of the breast are much relieved by keeping the feet warm, and promoting the perspiration, a flannel shirt or waistcoat, and thick shoes, will be of singular service. But nothing is of so great importance in the asthma, as pure and moderately warm air. Many asthmatic persons, who cannot live in Britain, enjoy very good health in the south of France, Portugal, Spain, or Italy. Exercise is likewise of very great importance in the asthma, as it promotes the digestion, preparation of the blood, &c. The blood of asthmatic persons is seldom duly prepared, owing to the proper action of the lungs being impeded. For this reason such people ought daily to take as much exercise, either on foot, on horseback, or in a carriage, as they can bear. Almost all that can be done by medicine in this disease, is to relieve the patient when seized with a violent fit. Bleeding, unless extreme weakness or old age should forbid it, is highly proper. If there be a violent spasm about the breast or stomach, warm fomentations, or bladders filled with warm milk and water, may be applied to the part affected, and warm cataplasms to the soles of the feet. The patient must drink freely of diluting liquors, and may take a tea-spoonful of the tincture of castor and of saffron mixed together, in a cup of valerian tea, twice or thrice a day. Sometimes a vomit has a very good effect, and snatches the patient, as it were, from the jaws of death. This, however, will be more safe after other evacuations have been premised. A very strong infusion of roasted coffee is said to give ease in an asthmatic paroxysm. In the moist asthma, such things as promote expectoration or spitting ought to be used; as the syrup of squills, gum-ammoniac, and such like. A common spoonful of the syrup of oxymel of squills, mixed with an equal quantity of cinnamon-water, may be taken three or four times through the day; and four or five pills, made of equal parts of assafœtida and gum-ammoniac, at bed-time. Large doses of æther have been found very efficacious in removing a fit of the asthma. For the convulsive or

nervous asthma, antispasmodics and bracers are the most proper medicines. The patient may take a tea-spoonful of the paregoric elixir twice a day. The Peruvian bark is sometimes found to be of use in this case. It may be taken in substance, or infused in wine. In short, every thing that braces the nerves, or takes off spasm, may be of use in a nervous asthma. It is often relieved by the use of asses' milk; I have likewise known cow's milk drunk warm in the morning have a good effect in this case. In every species of asthma, setons and issues are of great service; they may either be put in the back or side, and should never be allowed to dry up. We shall here, once for all, observe, that not only in the asthma, but in most chronic diseases, issues are extremely proper. They are both a safe and an efficacious remedy; and, though they do not always cure the disease, yet they will often prolong the patient's life.

OF THE APOPLEXY.

THE immediate cause of an apoplexy is a compression of the brain, occasioned by an excess of blood, or a collection of watery humours. The former is called a *sanguine*, and the latter a *serous*, apoplexy. It may be occasioned by any thing that increases the circulation towards the brain, or prevents the return of the blood from the head; intense study, violent passions, suppression of urine, excess of venery, the sudden striking-in of any eruption, wounds or bruises on the head, long exposure to excessive cold, poisonous exhalations, &c.

CURE.—The usual forerunners of an apoplexy are giddiness, pain and swimming of the head, loss of memory, drowsiness, noise in the ears, the night-mare, a spontaneous flux of tears, and laborious respiration. When persons have reason to fear the approach of a fit, they should endeavour to prevent it by bleeding, a slender diet, and opening medicines. In the apoplexy, if the patient does not die suddenly, the countenance

appears florid, the face is swelled or puffed up, and the blood-vessels, especially about the neck and temples, are turgid; the pulse beats strong, the eyes are prominent and fixed, and the breathing is difficult, and performed with a snorting noise. The excrements and urine are often voided spontaneously, and the patient is sometimes seized with vomiting. In this stage, every method must be taken to lessen the force of the circulation towards the head. The garters should be tied pretty tight, by which means the motion of the blood from the lower extremities will be retarded. The patient should be bled freely in the neck or arm, and, if there be occasion, the operation may be repeated in two or three hours. A laxative clyster, with plenty of sweet oil, or fresh butter, and a spoonful or two of common salt in it, may be administered every two hours; and blistering plasters applied betwixt the shoulders and to the calves of the legs. As soon as the symptoms are a little abated, and the patient is able to swallow, he ought to drink freely of some diluting opening liquors, as a decoction of tamarinds and liquorice, cream-tartar whey, or common whey with cream of tartar dissolved in it. Or he may take any cooling purge, as Glauber's salts, manna dissolved in an infusion of senna, or the like. All spirits and other strong liquors are to be avoided. Even volatile salts held to the nose do mischief. Vomits, for the same reason, ought not to be given, nor any thing that may increase the motion of the blood toward the head. When apoplectic symptoms proceed from opium, or other narcotic substances taken into the stomach, vomits are necessary. The patient is generally relieved as soon as he has discharged the poison in this way.

OF THE HEART-BURN.

WHAT is commonly called the heart-burn is not a disease of that organ, but an uneasy sensation of heat or acrimony about the pit of the stomach, which is sometimes attended

with anxiety, nausea, and vomiting. When the heart-burn proceeds from debility of the stomach or indigestion, the patient ought to take a dose or two of rhubarb; afterwards he may use infusions of the Peruvian bark, or any other of the stomachic bitters, in wine or brandy. Exercise in the open air will likewise be of use, and every thing that promotes digestion. When bilious humours occasion the heart-burn, a tea-spoonful of the sweet spirit of nitre in a glass of water, or a cup of tea, will generally give ease. If it proceeds from the use of greasy aliments, a dram of brandy or rum may be taken. If acidity or sourness of the stomach occasions the heart-burn, absorbents are the proper medicines. In this case, an ounce of powdered chalk, half an ounce of fine sugar, and a quarter of an ounce of gum-arabic, may be mixed in an English quart of water, and a tea-cupful of it taken as is necessary. But the safest and best absorbent is magnesia alba. This not only acts as an absorbent, but likewise as a purgative; whereas chalk, and other absorbents of that kind, are apt to lie in the intestines, and occasion obstructions. If wind be the cause of this complaint, the most proper medicines are those called carminatives; as aniseeds, juniper-berries, ginger, canella alba, cardamom-seeds, &c. These may either be chewed, or infused in wine, brandy, or other spirits. I have frequently known the heart-burn cured, particularly in pregnant women, by chewing green tea.

OF NERVOUS DISEASES.

NERVOUS diseases not only affect the body, but the mind likewise suffers, and is often thereby rendered extremely weak and peevish. The low spirits, timorousness, melancholy, and fickleness of temper, which generally attend nervous disorders, induce many to believe, that they are entirely diseases of the mind; but this change of temper is rather a consequence, than the cause, of the disease. Every thing that tends to relax or

weaken the body disposes it to nervous diseases, as indolence, excessive venery, drinking too much tea, or other weak watery liquors, frequent bleeding, purging, vomiting, &c.

CURE.—Persons afflicted with nervous diseases ought never to fast long. Their food should be solid and nourishing, but of easy digestion. Fat meats, and high sauces, are hurtful. All excess should be carefully avoided. They ought never to eat more at a time than they can easily digest; but, if they feel themselves weak and faint between meals, they ought to eat a bit of bread and drink a glass of wine. Heavy suppers are to be avoided. Though wine in excess enfeebles the body and impairs the faculties of the mind, yet, taken in moderation, it strengthens the stomach, and promotes digestion. Exercise in nervous disorders is superior to all medicines. Even change of place, and the sight of new objects, by diverting the mind, have a great tendency to remove these complaints. For this reason a long journey, or a voyage, is of much more advantage than riding short journeys near home. Though nervous diseases are seldom radically cured, yet their symptoms may sometimes be alleviated, and the patient's life rendered at least more comfortable, by proper medicines. When digestion is bad, or the stomach relaxed and weak, the following infusion of Peruvian bark and other bitters may be used with advantage: Take of Peruvian bark an ounce, gentian-root, orange-peel, and coriander-seed, of each half an ounce; let these ingredients be all bruised in a mortar, and infused in a bottle of brandy or whiskey for the space of five or six days. A table-spoonful of the strained liquor may be taken in half a glass of water, an hour before breakfast, dinner, and supper. Few things tend more to strengthen the nervous system than cold bathing. This practice, if duly persisted in, will produce very extraordinary effects; but, when the liver or other viscera are obstructed or otherwise unsound, the cold bath is improper. It is therefore to be used with very great caution. The most proper seasons for it are summer and autumn. It will be sufficient, especially

for persons of a spare habit, to go into the cold bath three or four times a-week. If the patient be weakened by it, or feels chilly for a long time after coming out, it is improper. Opiates are generally extolled in these maladies; but, as they only palliate the symptoms, and generally afterwards increase the disease, we would advise people to be extremely sparing in the use of them, lest habit render them at last absolutely necessary. Whoever wishes for a thorough cure of this disease, should pay the strictest attention to diet, air, exercise, and amusement.

OF THE PALSY.

THE palsy is a loss or diminution of sense or motion, or of both, in one or more parts of the body. Of all the affections called nervous, this is the most suddenly fatal. The immediate cause of the palsy is any thing that prevents the regular exertion of the nervous power upon any particular muscle or part of the body. The occasional and predisposing causes are various, as drunkenness, wounds of the brain or spinal marrow, pressure upon the brain or nerves, very cold or damp air, the suppression of customary evacuations, sudden fear, want of exercise, or whatever greatly relaxes the system.

CURE.—In young persons of a full habit, the palsy must be treated in the same manner as the apoplexy. The patient must be bled, blistered, and have his body opened by sharp clysters or purgative medicines. But, in old age, or when the disease proceeds from relaxation or debility, which is generally the case, a quite contrary course must be pursued. The diet must be warm and invigorating seasoned with spicy and aromatic vegetables, as mustard, horse-radish, &c. The drink may be generous wine, mustard-whey, or brandy and water. Friction with the flesh-brush, or warm hand, is extremely proper, especially on the parts affected. Blisters may likewise be applied to the affected parts with advantage. One of the best ex-

ternal applications is electricity. The shocks should be received on the part affected; and they ought daily to be repeated for several weeks. Vomits are very beneficial in this kind of palsy, and ought frequently to be administered. The wild valerian-root is a very proper medicine in this case. It may either be taken in an infusion with sage-leaves, or half a dram of it in powder may be given in a glass of wine three times a-day. If the patient cannot use the valerian, he may take of *sal volatile oleosum*, compound spirit of lavender, and tincture of castor, each half an ounce; mix these together, and take forty or fifty drops in a glass of wine three or four times a-day. A table spoonful of mustard-seed taken frequently, is a very good medicine. The patient ought likewise to chew cinnamon-bark, ginger, or other warm spiceries. Exercise is of the utmost importance in the palsy; but the patient must beware of cold, damp, and moist air. He ought to wear flannel next his skin; and, if possible, should remove into a warmer climate.

OF THE EPILEPSY, OR FALLING SICKNESS.

THE epilepsy is a sudden deprivation of all the senses, wherein the patient falls suddenly down, and is affected with violent convulsive motions. It is sometimes hereditary. It may likewise proceed from frights of the mother when with child; from blows, bruises, or wounds, on the head; a collection of water, blood, or serous humours, in the brain; a polypus, tumours or concretions within the skull; excessive drinking, intense study, excess of venery, worms, teething, suppression of customary evacuations, too great emptiness or repletion; violent passions or affections of the mind, as fear, joy, &c.: hysteric affections, contagion received into the body, as the infection of the small-pox, measles, &c. In an epileptic fit, the patient generally makes an unusual noise; his thumbs are drawn in towards the palms of his hands, his eyes are dis-

torted, he starts and foams at the mouth, his extremities are bent or twisted various ways, he often discharges his seed, urine, and fæces, involuntarily, and is quite destitute of all sense and reason. After the fit is over, his senses gradually return, and he complains of a kind of stupor, weariness, and pain of his head; but has no remembrance of what happened to him during the fit.

CURE.—If the patient be of a sanguine temperament, and there be reason to fear an obstruction of the brain, bleeding and other evacuations will be necessary. When the disease is occasioned by the stoppage of customary evacuations, these, if possible, must be restored; if this cannot be done, others may be substituted in their place. Issues or setons, in this case, have often a very good effect. When there is reason to believe that the disease proceeds from worms, proper medicines must be used to kill, or carry off, these vermin. When the disease is from teething, the body should be kept open by emollient clysters, the feet frequently bathed in warm water, and, if the fits prove obstinate, a blister may be put betwixt the shoulders. The same method is to be followed, when epileptic fits precede the eruption of the small-pox, or measles, &c. The flowers of zinc have of late been highly extolled for the cure of the epilepsy. Though this medicine will not be found to answer the expectations which have been raised concerning it, yet in obstinate epileptic cases it deserves a trial. The dose is from one to three or four grains, which may be taken either in pills or a bolus, as the patient inclines. The best method is to begin with a single grain four or five times a-day, and gradually to increase the dose as far as the patient can bear it. Musk has sometimes been found to succeed in the epilepsy. Ten or twelve grains of it, with the same quantity of factitious cinnabar, may be made up into a bolus, and taken every night and morning. Sometimes the epilepsy has been cured by electricity. Convulsion-fits proceed from the same causes, and must be treated in the same manner as the epilepsy.

OF THE HICCUP.

THE hiccup is a spasmodic or convulsive affection of the stomach and midriff, arising from any cause that irritates their nervous fibres.

CURE.—When the hiccup proves very obstinate, recourse must be had to the most powerful aromatic and antispasmodic medicines. The principal of these is musk; fifteen or twenty grains of which may be made into a bolus, and repeated occasionally. Opiates are likewise of service; but they must be used with caution. A bit of sugar dipped in compound spirits of lavender, or the volatile aromatic tincture, may be taken frequently. External applications are sometimes also beneficial; as the stomach plaster, or a cataplasm of the Venice treacle, applied to the region of the stomach.

CRAMP OF THE STOMACH.

THIS disease often seizes people suddenly, is very dangerous, and requires immediate assistance. It is most incident to persons in the decline of life, especially the nervous, gouty, hysteric, and hypochondriac.

CURE.—Let the stomach be fomented with cloths dipped in warm water; or bladders filled with warm milk and water constantly applied to it. These often produce the most happy effects. In very violent and lasting pains of the stomach, some blood ought to be let, unless the weakness of the patient forbids it. When the pain or cramp proceeds from a suppression of the menses, bleeding is of use. If it be owing to the gout, recourse must be had to spirits, or some of the warm cordial waters. Blisters ought likewise, in this case, to be applied to the ancles. Violent cramps and pains of the stomach are often removed by covering it with a large plaster of Venice treacle.

OF THE NIGHT-MARE.

IN this disease, the patient, in time of sleep, imagines he feels an uncommon oppression or weight about the breast or stomach, which he can by no means shake off. He groans, and sometimes cries out, though oftener he attempts to speak, but in vain. Sometimes he imagines himself engaged with an enemy, and in danger of being killed, attempts to run away, but finds he cannot. Sometimes he fancies himself in a house that is on fire, or that he is in danger of being drowned in a river. He often thinks he is falling over a precipice, and the dread of being dashed to pieces suddenly awakes him. This disorder has been supposed to proceed from too much blood; from a stagnation of blood in the brain, lungs, &c. But it is rather a nervous affection, and arises chiefly from indigestion. Hence we find that persons of weak nerves, who lead a sedentary life, and live full, are most commonly afflicted with the night-mare. Nothing tends more to produce it than heavy suppers, especially when eaten late, or the patient goes to bed soon after.

CURE.—As persons afflicted with the night-mare generally moan or make some noise in the fit, they should be waked or spoken to by such as hear them, as the uneasiness generally goes off as soon as the patient is awake, or any one limb is moved; but there is oftentimes an universal lassitude of the whole body left behind, which remains for some space of time. Some say a dram of brandy taken at bed-time will prevent this disease. That, however, is a bad custom, and, in time, loses its effect. We would rather have the patient depend upon the use of food of easy digestion, cheerfulness, exercise through the day, and a light supper taken early, than to accustom himself to drams. A glass of peppermint water will often promote digestion as much as a glass of brandy, and is much safer. After a person of weak digestion, however, has eaten flatulent food, a dram may

be necessary, in this case we would recommend it as the most proper medicine.

OF FLATULENCIES OR WIND.

ALL nervous patients, without exception, are afflicted with wind or flatulencies in the stomach and bowels, which arise chiefly from the want of tone or vigour in these organs. Crude flatulent aliment, as green peas, beans, coleworts, cabbages, and such like, may increase this complaint; but strong and healthy people are seldom troubled with wind, unless they either overload their stomachs, or drink liquors that are in a fermenting state, and consequently full of elastic air. While therefore the matter of flatulence proceeds from our aliment, the cause which makes air separate from them in such quantity as to occasion complaints is almost always a fault of the bowels themselves, which are too weak either to prevent the production of elastic air, or to expel it after it is produced.

CURE.—To relieve this complaint, such medicines ought to be used as have a tendency to expel wind, and, by strengthening the alimentary canal, to prevent its being produced there. The list of medicines for expelling wind is very numerous; they often however disappoint the expectations of both the physician and his patient. The most celebrated among the class of carminatives are juniper-berries; the roots of ginger and zedoary; the seeds of anise, carraway, and coriander; gum-assa-fætida and opium; the warm waters, tinctures, and spirits, aromatic water, tincture of woodfoot, volatile aromatic spirit, æther, &c. For strengthening the stomach and bowels, and consequently for lessening the production of flatulence, the Peruvian bark, bitters, chalybeates, and exercise, are the best remedies.

OF HYSTERIC COMPLAINTS.

THESE belong to the numerous tribe of nervous diseases, which may be justly reckoned the reproach of medicine. Wo-

men of a delicate habit, whose stomach and intestines are relaxed, and whose nervous system is extremely sensible, are most subject to hysteric complaints. In such persons an hysteric fit, as it is called, may be brought on by an irritation of the nerves of the stomach or intestines, by wind, acrid humours, or the like. A sudden suppression of the menses often gives rise to hysteric fits. They may likewise be excited by violent passions.

CURE.—The radical cure of this disorder will be best attempted at a time when the patient is most free from the fits. It will be greatly promoted by a proper attention to regimen. A milk and vegetable diet, duly persisted in, will often perform a cure. If, however, the patient has been accustomed to a more generous diet, it will not be safe to leave it off all at once, but by degrees. The most proper drink is water with a small quantity of spirits. A cool dry air is the best. Cold bathing, and every thing that braces the nerves, and invigorates the system, is beneficial: but lying too long in bed, or whatever relaxes the body, is hurtful. It is of the greatest importance to have the mind kept constantly easy and cheerful, and, if possible, to have it always engaged in some agreeable and interesting pursuit. The proper medicines are those which strengthen the alimentary canal and the whole nervous system, as the preparations of iron, the Peruvian bark, and other bitters. Twenty drops of the elixir of vitriol, in a cup of the infusion of the bark, may be taken twice or thrice a-day. The chalybeate waters generally prove beneficial in this disorder. Hysteric women are often afflicted with cramps in various parts of the body, which are most apt to seize them in bed, or when asleep. The most efficacious medicines in this case are opium, blistering-plasters, and warm bathing or fomentations. When the cramp or spasm is very violent, opium is the remedy most to be depended on. Cramps are often prevented or cured by compression. Thus cramps in the legs are

prevented, and sometimes removed, by tight bandages; and, when convulsions arise from a flatulent distension of the intestines, or from spasms beginning in them, they may be often lessened or cured by making a pretty strong compression upon the abdomen by means of a broad belt. A roll of brimstone held in the hand is frequently used as a remedy for cramps: though this seems to owe its effects chiefly to imagination, yet, as it sometimes succeeds, it merits a trial. When spasms or convulsive motions arise from sharp humours in the stomach and intestines, no lasting relief can be procured till these are either corrected or expelled. The Peruvian bark has sometimes cured periodic convulsions after other medicines have failed.

OF HYPOCHONDRIAC COMPLAINTS.

THESE generally attack the indolent, the luxurious, the unfortunate, and the studious; and are daily increased by luxury and sedentary employments. Men of a melancholy temperament, whose minds are capable of great attention, and whose passions are not easily moved, are in the advanced periods of life, most liable to this disease. It is usually brought on by long and serious attention to abstruse subjects, grief, the suppression of customary evacuations, excess of venery, the repulsion of cutaneous eruptions, long-continued evacuations, obstructions in some of the viscera, as the liver, spleen, &c.

CURE.—Cheerfulness and serenity of mind are by all means to be cultivated. Exercise of every kind is useful. The cold bath is likewise beneficial; and, where it does not agree with the patient, friction with the flesh-brush or a coarse cloth may be tried. If the patient has it in his power, he ought to travel either by sea or land. A voyage, or a long journey, especially towards a warmer climate, will be of more service than any medicine. The general intentions of cure, in this disease, are to strengthen the alimentary canal, and to promote the secre-

tions. These intentions will be best answered by the different preparations of iron and the Peruvian bark, which, after proper evacuations, may be taken in the same manner as directed in the preceding disease.

OF A SCIRRHUS AND CANCER.

A SCIRRHUS is a hard indolent tumour seated in some of the glands, as the breast, the arm-pits, &c. If the tumour become large, unequal, of a livid, blackish, or leaden colour, and is attended with violent pain, it gets the name of an *occult cancer*. When the skin is broken, and a *sanies* or ichorous matter of an abominable foetid smell is discharged from the sore, it is called an *open* or *ulcerated cancer*. Persons after the age of forty-five, particularly women, and those who lead an indolent sedentary life, are most subject to this disease. A cancer is often owing to suppressed evacuations; hence it proves so frequently fatal to women of a gross habit, particularly old maids and widows, about the time when the menstrual flux ceases. It may also be occasioned by the long-continued use of food that is too hard of digestion, or of an acrid nature; by barrenness, celibacy, indolence, cold, blows, friction, pressure, or the like. Women often suffer from the last of these by means of their stays, which squeeze and compress their breasts so as to occasion great mischief. This disorder seems often very trifling at the beginning. A hard tumour about the size of a hazle-nut, or perhaps smaller, is generally the first symptom. This will often continue for a long time without seeming to increase, or giving the patient great uneasiness: but, if the constitution be hurt, or the tumour irritated by pressure, or improper treatment of any kind, it begins to extend itself towards the neighbouring parts, by pushing out a kind of roots or limbs. It then gets the name of *cancer*, from a fancied resemblance between these limbs and the claws of a cra. The colour of the skin begins to change, which is first

red, afterwards purple, then bluish, livid, and at last black. The patient complains of heat, with a burning, gnawing, shooting pain. The tumour is very hard, rough, and unequal, with a protuberance, or rising, in the middle; its size increases daily, and the neighbouring veins become thick, knotty, and of a blackish colour. The skin at length gives way, and a thin sharp ichor begins to flow, which corrodes the neighbouring parts till it forms a large unsightly ulcer. More occult cancers arise, and communicate with the neighbouring glands. The pain and stench become intolerable; the appetite fails; the strength is exhausted by a continual hectic fever; at last, a violent hæmorrhage, or discharge of blood, from some part of the body, with faintings, or convulsion-fits, generally put an end to the miserable patient's life.

CURE.—This is one of those diseases for which no certain remedy is yet known. Its progress however may sometimes be retarded, and some of its most disagreeable symptoms mitigated, by proper application. One misfortune attending the disease is, that the unhappy patient often conceals it too long. Were proper means used in due time, a cancer might often be cured; but, after the disorder has arrived at a certain height, it generally sets all medicine at defiance. When a scirrhus tumour is first discovered, the patient ought to observe a proper regimen, and to take twice or thrice a-week a dose of common purging mercurial pills. Some blood may also be let, the part affected may be gently rubbed twice a-day with a little of the mercurial ointment, and kept warm with fur or flannel. The food must be light, and an English pint of the decoction of sarsaparilla may be drunk daily. Should the tumour not yield to this treatment, but, on the contrary, become larger and harder, it will be proper to extirpate it either by the knife or caustic. Indeed, whenever this can be done with safety, the sooner it is done the better. It can answer no purpose to extirpate a cancer after the constitution is ruined, or the whole

mass of humours corrupted, by it. This however is the common way, which makes the operation so seldom succeed. Few people will submit to the extirpation till death stares them in the face; whereas, if it were done early, the patient's life would not be endangered by the operation, and it would generally prove a radical cure. The medicine most in repute for this disease is hemlock. Dr. Stork, physician at Vienna, has of late recommended the extract of this plant as very efficacious in cancers of every kind. The doctor says, he has given some hundred-weights of it without ever hurting any body, and often with manifest advantage. He advises the patient however to begin with very small doses, as two or three grains, and to increase the dose gradually till some good effect be perceived, and there to rest without further increase. From two or three grains at first, the doctor says he has increased the dose to two, three, and four, drams a-day, and finds that such doses may be continued for several weeks without any bad consequences. The doctor does not pretend to fix the time in which a cancer may be resolved by the use of hemlock, but says he has given it for above two years in large doses without any apparent benefit; nevertheless the patient has been cured by persisting in the use of it for half a year longer. This is at least encouragement to give it a fair trial. The powder of hemlock is by some preferred to the extract. They are both made of the fresh leaves, and may be used nearly in the same manner. Dr. Nicholson, of Berwick, says, he gradually increased the dose of the powder from a few grains to half a dram, and gave near four drams of it in the day with remarkably good effect. The hemlock may also be used externally either as a poultice or fomentation. The sore may likewise be kept clean by injecting daily a strong decoction of the tops and leaves into it. Few things contribute more to the healing of foul sordid ulcers of any kind than keeping them thoroughly clean. This ought never to be neglected. The best application for this purpose

seems to be the carrot-poultice. The root of the common carrot may be grated, and moistened with as much water as will bring it to the consistence of a poultice or cataplasm. This must be applied to the sore, and renewed twice a-day. It generally cleans the sore, eases the pain, and takes away the disagreeable smell, which are objects of no small importance in such a dreadful disorder. Wort, or an infusion of malt, has been recommended, not only as a proper drink, but as a powerful medicine, in this disease. It must be frequently made fresh, and the patient may take it at pleasure. Two, three, or even four, English pints of it may be drunk every day for a considerable time. No benefit can be expected from any medicine, in this disease, unless it be persisted in for a long time. It is of too obstinate a nature to be soon removed; and, when it admits of a cure at all, it must be brought about by inducing an almost total change of the habit, which must always be a work of time. Setons or issues in the neighbourhood of the cancer have sometimes good effects. When all other medicines fail, recourse must be had to opium, as a kind of solace. This will not indeed cure this disease, but it will ease the patient's agony, and render life more tolerable while it continues. To avoid this dreadful disorder, people ought to use wholesome food, to take sufficient exercise in the open air, and carefully to guard against all blows, bruises, and every kind of pressure upon the breasts or other glandular parts.

OF POISONS.

EVERY person ought, in some measure, to be acquainted with the nature and cure of poisons. They are generally taken unawares, and their effects are often so sudden and violent, as not to admit of delay, or allow time to procure the assistance of physicians. Happily indeed no great degree of medical knowledge is here necessary; the remedies for most poisons being generally at hand, or easily obtained, and nothing but

common prudence needful in the application of them. The cure of all poisons taken in the stomach, without exception, depends chiefly on discharging them as soon as possible. For this purpose the patient should drink large quantities of new milk and sallad-oil till he vomits; or he may drink warm water mixed with oil. Fat broths are likewise proper, provided they can be got ready in time. Where no oil is to be had, fresh butter may be melted, and mixed with the milk or water. These things are to be drunk as long as the inclination to vomit continues. Some have drunk eight or ten quarts before the vomiting ceased; and it is never safe to leave off drinking while one particle of the poison remains in the stomach. These oily or fat substances not only provoke vomiting, but likewise blunt the acrimony of mineral poison, and prevent its wounding the bowels, but, if they should not make the person vomit, half a dram or two scruples of the powder of ipecacuanha must be given, or a few spoonfuls of the oxymel or vinegar of squills may be mixed with the water which he drinks. Vomiting may likewise be excited by tickling the inside of the throat with a feather. Should those methods however fail, half a dram of white vitriol, or five or six grains of emetic tartar, must be administered. If tormenting pains are felt in the lower belly, and there is reason to fear that the poison has got down to the intestines, clysters of milk and oil must be very frequently thrown up; and the patient must drink emollient decoctions of barley, oatmeal, marsh-mallows, and such like. He must likewise take an infusion of senna and manna, a solution of Glauber's salts, or some other purgative. After the poison has been evacuated, the patient ought, for some time, to live upon such things as are of a healing and cooling quality; to abstain from flesh, and all strong liquors, and to live upon milk, broth, gruel, light puddings, and other spoon-meats of easy digestion. His drink should be barley-water, linseed-tea, or infusions of any of the mild mucilaginous vegetables. Though vegetable poi-

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sons, when allowed to remain in the stomach, often prove fatal; yet the danger is generally over as soon as they are discharged. Not being of such a caustic or corrosive nature, they are less apt to wound or inflame the bowels than mineral substances; no time, however, ought to be lost in having them discharged. For the bites of poisonous animals, a great variety of certain and immediate cures are pointed out in the Herbal. For the bite of a viper, however, the wound should be well sucked, and afterwards rubbed with warm salad-oil. A poultice of bread and milk, softened with salad-oil, should likewise be applied to the wound: and the patient ought to drink freely of vinegar-whey, or water.gruel with vinegar in it, to make him sweat. Vinegar is one of the best drinks which can be used in any kind of poison, and ought to be taken very liberally. If the patient be sick, he may take a vomit. This course will be sufficient to cure the bite of any of the poisonous animals of this country. It is the happiness of this island to have very few poisonous animals, and those which we have are by no means of the most violent kind. We cannot however make the same observation with regard to poisonous vegetables: these abound every where, and prove often fatal to the ignorant and unwary. This indeed is chiefly owing to carelessness. Children ought early to be cautioned against eating any kind of fruit, roots, or berries, which they do not know; and all poisonous plants to which they can have access, ought, as far as possible, to be destroyed. This would not be so difficult a task as some people imagine, were this Herbal kept in all families, and their children made to read lessons from it, as an easy occasional task. This, I think, will appear an indispensable duty in parents, when we reflect, that seldom a year passes but we have accounts of several persons poisoned by eating hemlock-roots instead of parsnips, or some kind of fungus which they had gathered for mushrooms. These examples ought to put people upon their guard with respect to the for-

mer, and put the latter entirely out of use. We might here mention many other plants and animals of a poisonous nature which are found in foreign countries ; but, as our observations are chiefly intended for this island, we shall pass this over. It may not, however, be amiss to observe, for the behoof of such of our countrymen as go to America, that an effectual remedy is now said to be found for the bite of a rattlesnake.—The prescription is as follows ; Take of the roots of plantain and horehound, in summer, roots and branches together, a sufficient quantity ; bruise them in a mortar, and squeeze out the juice ; of which give, as soon as possible, one large spoonful ; if the patient be swelled you must force it down his throat. This generally will cure ; but, if he finds no relief in an hour after, you may give another spoonful, which seldom fails.—If the roots are dried, they must be moistened with a little water. To the wound may be applied a leaf of good tobacco moistened with rum. We give this upon the faith of Dr. Brookes, who says it was the invention of a negro ; for the discovery of which he had his freedom purchased, and an hundred pounds per annum settled upon him during life, by the General Assembly of Carolina.

OF INFLAMMATION AND ABSCESSSES.

FROM whatever cause an inflammation proceeds, it must terminate either by dispersion, suppuration, or gangrene. Though it is impossible to foretel with certainty in which of these ways any particular inflammation will terminate, yet a probable conjecture may be formed with regard to the event, from a knowledge of the patient's age and constitution. Inflammations happening in a slight degree upon colds, and without any previous indisposition, will most probably be dispersed ; those which follow close upon a fever, or happen to persons of a gross habit of body, will generally suppurate ; and those which attack very old people, or persons of a dropsical habit, will have a strong tendency to gangrene.

CURE.—If the inflammation be slight, and the constitution sound, the dispersion ought always to be attempted. This will be best promoted by a slender diluting diet, plentiful bleeding, and repeated purges. The part itself must be fomented, and, if the skin be very tense, it may be embrocated with a mixture of three fourths of sweet oil, and one fourth of vinegar; and afterwards covered with a piece of wax plaster. If, notwithstanding these applications, the symptomatic fever increases, and the tumour becomes larger, with violent pain and pulsation, it will be proper to promote the suppuration. The best application for this purpose is a soft poultice, which may be renewed twice a-day. If the suppuration proceeds but slowly, a raw onion cut small or bruised may be spread upon the poultice. When the abscess is ripe or fit for opening, which may easily be known from the thinness of the skin in the most prominent part of it, a fluctuation of matter which may be felt under the finger, and, generally speaking, an abatement of the pain, it may be opened either with a lancet or by means of a caustic. The last way in which an inflammation terminates is in a gangrene or mortification, the approach of which may be known by the following symptoms: The inflammation loses its redness, and becomes duskish or livid; the tension of the skin goes off, and it feels flabby; little bladders filled with ichor of different colours spread all over it; the tumour subsides, and from a duskish complexion becomes black; a quick low pulse, with cold clammy sweats, are the immediate forerunners of death. When these symptoms first appear, the part ought to be dressed with London treacle, or a cataplasm made of lixivium and bran; should the symptoms become worse, that part must be scarified, and afterwards dressed with basilicon softened with oil of turpentine. All the dressings must be applied warm. With regard to internal medicines, the patient must be supported with generous cordials, and the Peruvian bark exhibited in as large doses as the stomach will bear it. If the mortified parts should

separate, the wound will become a common ulcer, and must be treated accordingly. This article includes the treatment of all those diseases, which, in different parts of the country, go by the name of biles, imposthumes, whitloes, &c. They are all abscesses in consequence of a previous inflammation, which, if possible, ought to be discussed, but, when this cannot be done, the suppuration should be promoted, and the matter discharged by an incision, if necessary; afterwards the sore may be dressed with yellow basilicon, or some other digestive ointment.

OF WOUNDS.

NO part of medicine has been more mistaken than the treatment or cure of wounds. It is however a fact, that no external application whatever, contributes towards the cure of a wound, any other way than by keeping the parts soft, clean, and defending them from the external air, which may be as effectually done by dry lint as by the most pompous applications, while it is exempt from many of the bad consequences attending them. The same observation holds with respect to internal applications. These only promote the cure of wounds as far as they tend to prevent a fever, or to remove any cause that might obstruct or impede the operations of nature. It is nature alone that cures wounds; all that art can do is to remove obstacles, and to put the parts in such a condition as is the most favourable to nature's efforts.

CURE.—The first thing to be done, when a person has received a wound, is to examine whether any foreign body be lodged in it, as wood, stone, iron, lead, glass, dirt, bits of cloth, or the like. These, if possible, ought to be extracted, and the wound cleaned, before any dressings be applied. When that cannot be effected with safety, on account of the patient's weakness, or loss of blood, they must be suffered to remain in the wound, and afterwards extracted when he is more able to bear it. When a wound penetrates into any of the cavities of the

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body, as the breast, the bowels, &c. or where any considerable blood-vessel is cut, a skilful surgeon ought immediately to be called, otherwise the patient may lose his life. But sometimes the discharge of blood is so great, that, if it be not stopped, the patient may die, even before a surgeon, though at no great distance, can arrive. In this case, something must be done by those who are present. If the wound be in any of the limbs, the bleeding may generally be stopped by applying a tight ligature or bandage round the member a little above the wound. In parts where this bandage cannot be applied, various other methods may be tried to stop the bleeding, as the application of styptics, astringents, &c. Cloths dipped in a solution of blue vitriol in water, or the styptic water of the dispensatories, may be applied to the wound. When these cannot be obtained, strong spirits of wine may be used. Some recommended the agaric of oak as preferable to any of the other styptics; and indeed it deserves considerable encomiums. It is easily obtained, and ought to be kept in every family, in case of accidents. A piece of it must be laid upon the wound, and covered with a good deal of lint, above which a bandage may be applied so tight as to keep it firmly on. Though spirits, tinctures, and hot balsams, may be used, in order to stop the bleeding when it is excessive, they are improper at other times. They do not promote but retard the cure, and often change a simple wound into an ulcer. People imagine, because hot balsams congeal the blood, and seem as it were to solder up the wound, that they therefore heal it; but this is only a deception. They may indeed stop the flowing blood, by searing the mouths of the vessels; but, by rendering the parts callous, they obstruct the cure. When a wound is greatly inflamed, the most proper application is a poultice of bread and milk, softened with a little sweet oil or fresh butter. This must be applied instead of a plaster, and should be changed twice a-day. If the wound be

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large, and there is reason to fear an inflammation, the patient should be kept on a very low diet. He must abstain from flesh, strong liquors, and every thing that is of a heating nature. If he be of a full habit, and has lost but little blood from the wound. he must be bled; and, if the symptoms be urgent, the operation may be repeated. But, when the patient has been greatly weakened by loss of blood from the wound, it will be dangerous to bleed him, even though a fever should ensue. Nature should never be too far exhausted: it is always more safe to allow her to struggle with the disease in her own way, than to sink the patient's strength by excessive evacuations.

OF BURNS.

IN slight burns which do not break the skin, it is customary to hold the part near the fire for a competent time, to rub it with salt, or to lay a compress upon it dipped in spirits of wine or brandy. But, when the burn has penetrated so deep as to blister or break the skin, it must be dressed with some of the liniments for burns, or with the emollient and gently-drying ointment, commonly called Turner's cerate. This may be mixed with an equal quantity of fresh olive oil, and spread upon a soft rag, and applied to the part affected. When this ointment cannot be had, an egg may be beat up with about an equal quantity of the sweetest salad oil. This will serve very well till a proper ointment can be prepared. When the burning is very deep, after the first two or three days, it should be dressed with equal parts of yellow basilicon and Turner's cerate mixed together. When the burn is violent, or has occasioned a high degree of inflammation, and there is reason to fear a gangrene or mortification, the same means must be used to prevent it as are recommended in other violent inflammations. The patient in this case must live low, and drink freely of weak diluting liquors. He must likewise be bled, and have his body kept open. But, if the burnt part should become livid or black,

with other symptoms of mortification, it will be necessary to bathe them frequently with warm camphorated spirits of wine, tincture of myrrh, or other antiseptics, mixed with a decoction of the bark. In this case the bark must likewise be taken internally, and the patient's diet must be more generous.

OF BRUISES.

IN slight bruises it will be sufficient to bathe the part with warm vinegar, to which a little brandy or rum may occasionally be added, and to keep cloths wet with this mixture constantly applied to it. This is more proper than rubbing it with brandy, spirits of wine, or other ardent spirits, which are commonly used in such cases. In some parts of the country, the peasants apply to a recent bruise a cataplasm of fresh cowdung. I have often seen this cataplasm applied to violent contusions occasioned by blows, falls, bruises, and such like; and never knew it fail to have a good effect. When a bruise is very violent, the patient ought immediately to be bled, and put upon a proper regimen. His food should be light and cool, and his drink weak and of an opening nature; as whey sweetened with honey, decoctions of tamarinds, barley, cream-tartar whey, and such like. The bruised part must be bathed with vinegar and water as directed above; and a poultice, made by boiling of crumb of bread, elder-flowers, and camomile-flowers, in equal quantities of vinegar and water, applied to it. This poultice is peculiarly proper when a wound is joined to the bruise. It may be renewed two or three times a-day. As the structure of the vessels is totally destroyed by a violent bruise, there often ensues a great loss of substance, which produces an ulcerous sore, very difficult to cure. If the bone be affected, the sore will not heal before an exfoliation takes place; that is, before the diseased part of the bone separates, and comes out through the wound. This is often a very slow operation, and may even require several years to be completed.

Hence it happens, that these sores are frequently mistaken for the king's evil, and treated as such, though, in fact, they proceed solely from the injury which the solid parts received from the blow. Patients in this situation are pestered with different advice. Every one who sees them proposes a new remedy, till the sore is so much irritated with various and opposite applications, that it is often at length rendered absolutely incurable. The best method of managing such sores is, to take care that the patient's constitution does not suffer by confinement or improper medicine, and to apply nothing to them but some simple ointment spread upon soft lint, over which a poultice of bread and milk, with boiled camomile flowers, or the like, may be put, to nourish the part, and keep it soft and warm. Nature, thus assisted, will generally in time operate a cure, by throwing off the diseased parts of the bone; after which the sore soon heals.

OF ULCERS.

ULCERS may be the consequence of wounds, bruises, or imposthumes, improperly treated; they may likewise proceed from an ill state of the humours, or what may be called a bad habit of body. In the latter case, they ought not to be hastily dried up, otherwise it may prove fatal to the patient. Ulcers happen most commonly in the decline of life; and persons who neglect exercise, and live grossly, are most liable to them. They might often be prevented by retrenching some part of the solid food, or by opening artificial drains, as issues, setons, or the like. It requires considerable skill to be able to judge whether or not an ulcer ought to be dried up. In general, all ulcers which proceed from a bad habit of body should be suffered to continue open, at least till the constitution has been so far changed by proper regimen, or the use of medicine, that they seem disposed to heal of their own accord. Ulcers which are the effect of malignant fevers, or other acute diseases, may gen-

erally be healed with safety after the health has been restored for some time. The cure ought not, however, to be attempted too soon, nor at any time without the use of purging medicines and a proper regimen. When wounds or bruises have, by wrong treatment, degenerated into ulcers, if the constitution be good, they may generally be healed with safety. When ulcers either accompany chronical diseases, or come in their stead, they must be cautiously healed. If an ulcer conduces to the patient's health, from whatever cause it proceeds, it ought not to be healed; but if, on the contrary, it wastes the strength, and consumes the patient by a slow fever, it should be healed as soon as possible. We would earnestly recommend a strict attention to these particulars, to all who have the misfortune to labour under this disorder, particularly persons in the decline of life; as we have frequently known people throw away their lives by the want of it, while they were extolling and generously rewarding those whom they ought to have looked upon as their executioners. The most proper regimen for promoting the cure of ulcers is to avoid all spices, salted and highseasoned food, all strong liquors, and to lessen the usual quantity of flesh meat. The body ought to be kept gently open by a diet consisting chiefly of cooling laxative vegetables, and by drinking buttermilk, whey sweetened with honey, or the like. A fistulous ulcer can seldom be cured without an operation. It must either be laid open so as to have its callous parts destroyed by some corrosive application, or they must be entirely cut away with the knife: but, as this operation requires the hand of an expert surgeon, there is no occasion to describe it. Ulcers about the anus are most apt to become fistulous, and are very difficult to cure. Some, indeed, pretend to have found Ward's fistula-paste very successful in this complaint. It is not a dangerous medicine, and, being easily procured, it may deserve a trial; but, as these ulcers generally proceed from an ill habit of body, they will seldom yeild to any thing except a long course of regimen,

assisted by medicines, which are calculated to correct that particular habit, and to induce an almost total change in the constitution.

OF DISLOCATIONS.

WHEN a bone is moved out of its place or articulation, so as to impede its proper functions, it is said to be luxated or dislocated. As this often happens to persons in situations where no medical assistance can be obtained, by which means limbs, and even lives, are frequently lost, we shall endeavour to point out the method of reducing the most common luxations, and those which require immediate assistance. Any person of common sense and resolution, who is present when a dislocation happens, may often be of more service to the patient than the most expert surgeon can after the swelling and inflammation have come on. When these are present, it is difficult to know the state of the joint, and dangerous to attempt a reduction; and, by waiting till they are gone off, the muscles become so relaxed, and the cavity filled up, that the bone can never afterwards be retained in its place. A recent dislocation may generally be reduced by extention alone, which must always be greater or less according to the strength of the muscles which move the joint, the age, robustness, and other circumstances, of the patient. When the bone has been out of its place for any considerable time and a swelling or inflammation has come on, it will be necessary to bleed the patient, and, after fomenting the part, to apply soft poultices with vinegar to it for some time before the reduction is attempted. All that is necessary after the reduction, is to apply cloths dipped in vinegar or camphorated spirits of wine to the part, and to keep it perfectly easy. Many bad consequences proceed from the neglect of this rule. A dislocation seldom happens without the tendons and ligaments of the joint being stretched, and sometimes torn. When these are kept easy till they recover their

strength and tone, all goes on very well; but, if the injury be increased by too frequent an exertion of the parts, no wonder if they be found weak and diseased ever after.

DISLOCATION OF THE JAW.—The usual method of reducing a dislocated jaw, is to set the patient upon a low stool, so as an assistant may hold the head firm by pressing it against his breast. The operator is then to thrust his two thumbs, being first wrapped up with linen cloths that they may not slip, as far back into the patient's mouth as he can, while his fingers are applied to the jaw externally. After he has got firm hold of the jaw, he is to press it strongly downwards and backwards, by which means the elaps'd heads of the jaw may be easily pushed into their former cavities. The peasants, in some parts of the country, have a peculiar way of performing this operation. One of them puts a handkerchief under the patient's chin, then, turning his back to that of the patient, pulls him up by the chin so as to suspend him from the ground. This method often succeeds; but we think it a dangerous one, and therefore recommend the former.

DISLOCATION OF THE NECK.—The neck may be dislocated by falls, violent blows, or the like. In this case, if the patient receives no assistance, he soon dies, which makes people imagine the neck was broken; it is, however, for the most part, only partially dislocated, and may be reduced by almost any person who has resolution enough to attempt it. A complete dislocation of the neck is instantaneous death. When the neck is dislocated, the patient is immediately deprived of all sense and motion; his neck swells, his countenance appears bloated, his chin lies upon his breast, and his face is generally turned towards one side. To reduce this dislocation, the unhappy person should immediately be laid upon his back on the ground, and the operator must place himself behind him so as to be able to lay hold of his head with both his hands, while he makes a resistance by placing his knees against the patient's shoulders.

In this posture he must pull the head with considerable force, gently twisting it at the same time if the face be turned on one side, till he perceives that the joint is replaced, which may be known from the noise which the bones generally make when going in, the patient's beginning to breathe, and the head continuing in its natural posture. After the neck is reduced, the patient ought to be bled, and should be suffered to rest for some days, till the parts recover their proper tone.

DISLOCATION OF THE SHOULDER.—The humerus or upper bone of the arm may be dislocated in various directions: it happens however most frequently downwards, but very seldom directly upwards. From the nature of its articulation, as well as from its exposure to external injuries, this bone is the most subject to dislocation of any in the body. A dislocation of the humerus may be known by a depression or cavity on the top of the shoulder, and an inability to move the arm. When the dislocation is downward or forward, the arm is elongated, and a ball or lump is perceived under the armpit; but, when it is backward, there appears a protuberance behind the shoulder, and the arm is thrown forwards towards the breast. The usual method of reducing dislocations of the shoulder is to seat the patient on a low stool, and to cause an assistant to hold his body so that it may not give way to the extension, while another lays hold of the arm a little above the elbow, and gradually extends it. The operator then puts a napkin under the patient's arm, and causes it to be tied behind his own neck; by this, while a sufficient extension is made, he lifts up the head of the bone, and with his hands directs it into the proper place. There are various machines invented for facilitating this operation, but the hand of an expert surgeon is always more safe. In young and delicate patients, it is a very easy matter to reduce the shoulder by extending the arm with one hand, thrusting in the head of the bone with the other. In making the extension, the arm ought always to be a little bent.

DISLOCATION OF THE ELBOW.—The bones of the forearm may be dislocated in any direction. When this is the case, a protuberance may be observed on that side of the arm towards which the bone is pushed, from which, and the patient's inability to bend his arm, a dislocation of this joint may easily be known. Two assistants are generally necessary for reducing a dislocation of the elbow; one of them must lay hold of the arm above, and the other below, the joint, and make a pretty strong extension, while the operator returns the bones into their proper place. Afterwards the arm must be bent and suspended for some time with a sling about the neck. Luxations of the wrist and fingers are to be reduced in the same manner as those of the elbow, viz. by making an extension in different directions, and thrusting the head of the bone into its place.

DISLOCATION OF THE THIGH.—When the thigh-bone is dislocated forward and downward, the knee and foot are turned out, and the leg is longer than the other; but, when it is displaced backward, it is usually pushed upward at the same time, by which means the limb is shortened, and the foot is turned inwards. When the thigh-bone is displaced forward and downward, the patient, in order to have it reduced, must be laid upon his back, and made fast by bandages, or held by assistants, while by others an extension is made by means of slings fixed about the bottom of the thigh a little above the knee. While the extension is made, the operator must push the head of the bone outward, till it gets into the socket. If the dislocation be outwards, the patient must be laid upon his face, and, during the extension, the head of the bone must be pushed inward. Dislocations of the knees, ankles, and toes, are reduced much in the same manner as those of the upper extremities, viz. by making an extension in opposite directions, while the operator replaces the bones. In many cases, however, the extension alone is sufficient, and the bone will slip

into its place merely by pulling the limb with sufficient force. It is not hereby meant, that force alone is sufficient for the reduction of dislocations.

OF BROKEN BONES, &c.

THERE is, in most country villages, some person who pretends to the art of reducing fractures. Though, in general, such persons are very ignorant, yet some of them are very successful; which evidently proves, that a small degree of learning, with a sufficient share of common sense and a mechanical head, will enable a man to be useful in this way. We would, however, advise people never to employ such operators, when an expert and skilful surgeon can be had; but, when that is impracticable, they must be employed: we shall therefore recommend the following hints to their consideration: When a large bone is broken, the patient's diet ought, in all respects, to be the same as in an inflammatory fever. He should likewise be kept quiet and cool, and his body open by emollient clysters, or, if these cannot be conveniently administered, by food that is of an opening quality; as stewed prunes, apples boiled in milk, boiled spinage, and the like. It ought however to be here remarked, that persons who have been accustomed to live high are not all of a sudden to be reduced to a very low diet. This might have fatal effects. There is often a necessity for indulging even bad habits, in some measure, where the nature of the disease might require a different treatment. It will generally be necessary to bleed the patient immediately after a fracture, especially if he be young, of a full habit, or has, at the same time, received any bruise or contusion. This operation should not only be performed soon after the accident happens, but, if the patient be very feverish, it may be repeated next day. When several of the ribs are broken, bleeding is peculiarly necessary. If any of the large bones which support the body are broken, the patient must keep his bed for

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several weeks. It is by no means necessary, however, that he should lie all that time, as is customary, upon his back. This situation sinks the spirits, galls and frets the patient's skin, and renders him very uneasy. After the second week he may be gently raised up, and may sit several hours, supported by a bed-chair, or the like, which will greatly relieve him. Great care, however, must be taken, in raising him up, and laying him down, that he make no exertions himself, otherwise the action of the muscles may pull the bone out of its place. It has been customary, when a bone was broken, to keep the limb for five or six weeks continually upon the stretch. But this is a bad posture. It is both uneasy to the patient and unfavourable to the cure. The best situation is to keep the limb a little bent. This is the posture into which every animal puts its limbs when it goes to rest, and in which fewest muscles are upon the stretch. It is easily effected, by either laying the patient upon his side, or making the bed so as to favour this position of the limb. All that art can do towards the cure of a broken bone, is to lay it perfectly straight, and to keep it quite easy. All tight bandages do hurt. They had much better be wanting altogether. A great many of the bad consequences which succeed to fractured bones are owing to the hospital-practice of tight bandages. The best method of retention is by two or more splints made of leather or pasteboard. These, if moistened before they be applied, soon assume the shape of the included member, and are sufficient, with the assistance of a very slight bandage, for all the purposes of retention. The splints should always be as long as the limb, with holes cut for the ankles when the fracture is in the leg. In fractures of the ribs, where a bandage cannot be properly used, an adhesive plaster may be applied over the part. The patient, in this case, ought to keep himself quite easy, avoiding every thing that may occasion sneezing, laughing, coughing, or the like. He ought to keep his body in a straight posture,

and should take care that his stomach be constantly distended, by taking frequently some light food, and drinking freely of weak watery liquors. The most proper external application for a fracture is *oxycrate*, or a mixture of vinegar and water. The bandages should be wet with this at every dressing.

OF STRAINS.

STRAINS are often attended with worse consequences than broken bones. The reason is obvious; they are generally neglected. When a bone is broken, the patient is obliged to keep the member easy, because he cannot make use of it; but, when a joint is only strained, the person, finding he can still make a shift to move it, is sorry to lose his time for so trifling an ailment. In this way he deceives himself, and converts into an incurable malady what might have been removed by only keeping the part easy for a few days. Country people generally immerse a strained limb in cold water. This is very proper, provided it be done immediately, and not kept in too long. But the custom of keeping the part immersed in cold water for a long time, is certainly dangerous. It relaxes instead of bracing the part, and is more likely to produce a disease than remove one. Wrapping a garter, or some other bandage, pretty tight about the strained part, is likewise of use. It helps to restore the proper tone of the vessels, and prevents the action of the parts from increasing the disease. It should not however be applied too tight. Bleeding near the affected part will frequently have a very good effect: but what we would recommend above all is ease. It is more to be depended on than any medicine, and seldom fails to remove the complaint.

OF RUPTURES.

CHILDREN and very old people are most liable to this disease. In the former it is generally occasioned by excessive

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crying, coughing, vomiting, or the like. In the latter, it is commonly the effect of blows or violent exertions of the strength, as leaping, carrying great weights, &c. In both, a relaxed habit, indolence, and an oily or very moist diet, dispose the body to this disease. A rupture sometimes proves fatal before it is discovered. Whenever sickness, vomiting and obstinate costiveness, give reason to suspect an obstruction of the bowels, all those places where ruptures usually happen ought carefully to be examined. The protrusion of a very small part of the gut will occasion all these symptoms; and, if not returned in due time, will prove mortal. On the first appearance of a rupture in an infant, it ought to be laid upon its back, with its head very low. While in this posture, if the gut does not return of itself, it may easily be put up by gentle pressure. After it is returned, a piece of sticking plaster may be applied over the part, and a proper truss or bandage must be constantly worn for a considerable time. The method of making and applying these rupture-bandages for children is pretty well known. The child must, as far as possible, be kept from crying, and from all violent motion, till the rupture is quite healed. In adults, when the gut has been forced down with great violence, or happens, from any cause, to be inflamed, there is often great difficulty in returning it. The patient should be bled; after which, he must be laid upon his back, with his head very low, and his breech raised high with pillows. In this situation flannel cloths wrung out of a decoction of mallows and camomile-flowers, or, if these are not at hand, of warm water, must be applied for a considerable time. A clyster made of this decoction, with a large spoonful of butter and a little salt may be afterwards thrown up. If these should not prove successful, recourse must be had to pressure. If the tumour be very hard, considerable force will be necessary; but it is not force alone which succeeds here. The operator, at the same time that he makes a pressure with the palms of his hands, must with his

fingers artfully conduct the gut in by the same aperture through which it came out. The manner of doing this can be much easier conceived than described. Should these endeavours prove ineffectual, clysters of the smoke of tobacco may be tried. These have been often known to succeed where every other method failed. An adult, after the gut has been returned, must wear a steel bandage. It is needless to describe this, as it may always be had ready-made from the artists. Such bandages are generally irksome to the wearer for some time, but by custom they become quite easy. No person, who has had a rupture after he arrived at man's estate, should ever be without one of these bandages. Persons who have a rupture ought carefully to avoid all violent exercise, carrying great weights, leaping, running, and the like. They should likewise avoid windy aliment and strong liquors; and should carefully guard against catching cold.

OF RECOVERING DROWNED PERSONS.

THE length of time during which a person may remain immersed in water, without being drowned, is very unequal, in different individuals; and depends as much on the temperature of the water as on the particular constitution of the subject: in general, however, there is less prospect of recovery, after having continued fifteen minutes in a watery grave. In such cases, death ensues from impeded respiration, and the consequent ceasing of the circulation of the blood, by which the body loses its heat, and, with that, the activity of the vital principle. The water produces all the changes which take place in drowning, only indirectly, by excluding the atmospheric air from the lungs, as they admit but a very inconsiderable quantity of fluid to pass into them, during immersion. Hence we shall find, in the progress of this inquiry, that inflation of the lungs is one of the principal means of restoring life.

Before we describe the various methods and instruments that

have been successfully adopted, for recovering drowned persons; it will be useful to advert to those circumstances which deserve to be duly weighed, previously to any active measures being taken on such unfortunate occasions: 1. The season and weather; 2. Length of time the person has continued under water; 3. The state of his mind when the accident happened: whether he was intoxicated, frightened, &c.; 4. Constitution of the body, and whether he was in a state of perspiration; 5. The height from which he fell, and whether his head plunged foremost; 6. Depth of the water; whether it was cold or warm, sea, or river water, and how he was dressed. Lastly, 7. The manner in which he was taken out, whether by the legs, and without receiving any injury, or by instruments; and whether he was rolled about in a tub, or what other methods were pursued for his restoration.

Symptoms of Apparent Death by Drowning.] Coldness; paleness of the whole body; the lips of a livid hue; the mouth either open or firmly closed; the tongue blue, swelled and protruded; the eye-lids closed, the eyes turned, and their pupils dilated; the face swelled and blue; the lower belly hard and inflated. The first signs of returning animation are, convulsive starting of the muscles of the face, or feet; motion of the eye-lids; a spasmodic shivering of the body.

Treatment.] 1. After having been carefully taken out of the water by the arms, so as to prevent the least injury to the head and breast, the body ought to be carried to the nearest house (if possible, in a bier,) with the head somewhat raised; or, in fine warm weather, the resuscitative process may with more advantage be performed in the open air, especially in sun-shine.

2. When the subject is deposited, the upper part of the body should be supported half-sitting, with the head inclining towards the right side.

3. The clothes are to be taken off without delay, but with the greatest precaution; as violent shaking of the body might

extinguish the latent spark of life.

4. The mouth and nose must be cleansed from the mucus and froth, by means of a feather dipped in oil.

5. The whole body should now be gently wiped and dried with warm flannel cloths, then covered with blankets, feather-beds, hay, straw, &c. In cold or moist weather, the patient is to be laid on a mattress or bed, at a proper distance from the fire, or in a room moderately heated; but in the warm days of summer, a simple couch is sufficient.

6. If the patient be very young, or a child, it may be placed in bed between two persons, to promote natural warmth.

7. In situations where the bath cannot be conveniently procured, bladders filled with lukewarm water should be applied to different parts of the body, particularly to the pit of the stomach; or a warming-pan wrapped in flannel gently moved along the spine; or aromatic fomentations frequently and cautiously repeated.

8. As the breathing of many persons in an apartment would render the air mephitic, and thus retard, or even prevent the restoration of life, not more than five or six assistants should be suffered to remain in the room where the body is deposited.

Stimulants generally employed: 1. Moderate friction with soft, warm flannel, at the beginning, and gradually increased by means of brushes dipped in oil, till pulsations of the heart are perceptible.

2. Inflation of the lungs, which may be more conveniently effected by blowing into one of the nostrils, than by introducing air into the mouth. For the former purpose, it is necessary to be provided with a wooden pipe, fitted at one extremity for filling the nostril, and at the other for being blown into by a healthy person's mouth; or for receiving the muzzle of a pair of common bellows, by which the operation may be longer continued. At first, however, it will always be more proper to introduce the warm breath from the lungs of a living person, than

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to commence with cold atmospheric air. During this operation, the other nostril and the mouth should be closed by an assistant, while a third person gently presses the chest with his hands, as soon as the lungs are observed to be inflated.

3. Stimulating clysters, consisting of warm water and common salt; or a strong solution of tartar emetic; or decoctions of aromatic herbs: or six ounces of brandy, should be speedily administered.—We do not consider injections of the smoke of tobacco, or even clysters of that narcotic plant, in all instances safe or proper.

4. Let the body be gently rubbed with common salt, or with flannels dipped in spirits; the pit of the stomach fomented with hot brandy; the temples stimulated with spirit of hartshorn; and the nostrils occasionally tickled with a feather.

5. Persons of a very robust frame, and whose skin after being dried, assumes a rigid and contracted surface, may be put into the sub-tepid bath, of about 65 deg., which must be gradually raised to 75 or 80 deg., of FAHRENHEIT'S scale, according to circumstances; or the body carried to a brewhouse, and covered with warm grains for three or four hours: but these expedients generally require medical assistance.

6. Violent shaking and agitation of the body by the legs and arms, though strongly recommended, and supposed to have often forwarded the recovery of children and boys, appears to us a doubtful remedy, which can be practised only in certain cases.

7. Sprinkling the naked body of a drowned person with cold water; submitting it to the operation of a shower-bath, or the sudden shocks of the electric fluid; as well as whipping it with nettles, administering emetics, and blood-letting,—are desperate expedients, which should be resorted to only after the more lenient means have been unsuccessfully employed.

It is, however, a vulgar and dangerous error, to suppose that persons apparently dead by immersion under water, are irrecoverable, because life does not soon re-appear: hence we serious-

ly entreat those who are thus employed in the service of humanity, to persevere for three or four hours at least, in the application of the most appropriate remedies above described; for there are many instances recorded, of patients who recovered, after they had been relinquished by all their medical and other assistants.

Treatment on the return of life: As soon as the first symptoms of that happy change become discernible, additional care must be taken to cherish the vital action, by the most soothing means. All violent proceedings should, therefore, be immediately abandoned, no farther stimulants applied, nor even the ears of the patient be annoyed by loud speaking, shouting, &c. At that important crisis, moderate friction only is requisite. And, if the reviving person happen to be in the bath, he may either remain there, provided his sensations be easy and agreeable, or be removed to a comfortable bed, after being expeditiously dried with warm flannels: fomentations of aromatic plants may then be applied to the pit of the stomach; bladders filled with warm water, placed to the left side; the soles of the feet rubbed with salt; the mouth cleared of froth and mucus, and a little white wine, or a solution of salt in water, dropped on the tongue. But all strong stimulants, such as powerful electric shocks, strong odours of volatile salts, &c. are at this period particularly injurious. Lastly, the patient, after resuscitation, ought to be for a short interval resigned to the efforts of Nature, and left in a composed and quiescent state: as soon as he is able to swallow, without compulsion or persuasion, warm wine, or tea, with a few drops of vinegar, instead of milk, or gruel, warm beer, and the like, should be given in small doses frequently repeated.

Having stated the leading particulars to be attended to, in the practical treatment of persons who are on the eve of suffering from aquatic suffocation, we shall accompany them with a few directions, addressed to those humane assistants who often

fall victims for want of due precaution in the execution of their benevolent design.

As many fatal accidents happen to individuals who wish to rescue others in danger of being drowned, especially when the former are unskilful in the useful art of swimming, which ought to be learnt at an early period of life, we think it our duty to remind the reader of the two excellent contrivances, the AIR-JACKET, and BAMBOE HABIT.

The Airjacket is a dress made of leather, in which are contained several bags or bladders, composed of the same materials, and communicating with each other. These are filled with air blown through a leather tube, having a brass stop-cock, accurately ground at its extremity. In order to confine this elastic fluid, the jacket must previously be wetted; and thus the person is supported in the water without any effort, by the aid of these bladders placed near the breast.

The Bamboe Habit is an invention of the Chinese, by the use of which a person unskilled in the art of swimming may easily keep himself above water. The Chinese merchants, when going on a voyage, always provide themselves with this simple apparatus, to save their lives, in cases of danger from shipwreck. It is constructed by placing four bamboes horizontally, two before and two behind the body of each person, so that they project about twenty-eight inches: these are crossed on each side by two others, and the whole properly secured, leaving an intermediate space for the body. When thus formed, the person in danger slips it over his head, and ties it securely to the waist: by which simple means he cannot possibly sink.

In lieu of Bamboes, four pieces of light wood of a sufficient strength, with pieces of cork secured along the whole length of each piece, forms a machine calculated to enable any one to venture into water, however deep, with safety.

Its figure is here subjoined.

Every family dwelling on the banks of lakes or rivers, or near ponds, ought to be always provided with two or three such useful articles, to serve in cases of emergency; as it will generally be too late to procure them on the spur of the occasion.

Instruments for recovering the Drowned.

1. A forked instrument with blunt points, for making a superficial search after the drowned body, and sounding the particular situation in which it lies.

2. In winter, in cases of immersion by breaking of the ice, a useful instrument is a ladder, to one end of which is attached a long handle, by which it admits of being pushed over the aperture by a person standing on a firm part of the ice, while another places himself on it over the aperture, and is thus enabled to search for the body, by an instrument called an *Extractor*.

3. The *Extractor* is a linked pair of tongs, which on immersing it into water, open by its own weight, as well as by the sliding down of an iron ring. It may again be closed by pulling a double cord which is fastened to the same ring and thus shifted upwards. Thus the instrument descends with open arms to embrace the body, and by pulling the cords it seizes firm hold of it and is drawn up.

4. A bier of wicker work, in the form of a slanting, oblong basket, for conveying the body of the drowned, in a posture

somewhat raised. This simple contrivance has the advantage, that the water may easily run off, while the patient is carried: and, as many unfortunate persons are materially injured by rough treatment, before they arrive at a house of reception, so that their recovery is thus often frustrated, we recommend the universal adoption of this useful implement.

Lastly, we cannot conclude this subject, without affording the reader a view of the different articles belonging to a complete chest of instruments, and other materials, employed in the various processes for recovering suspended animation from drowning, viz :

A small bottle of rectified spirit of wine.

Ditto, white wine vinegar.

Ditto, sweet oil.

Ditto, white French brandy

Ditto, volatile sal ammoniac.

Ditto, vitriolic æther.

Ditto, mustard-seed.

A machine for injecting the smoke of tobacco.

A leather tube, together with a pair of bellows, for inflating the lungs.

Another tube of leather, for introducing medicines into the stomach.

A small syringe for clearing the throat of mucus.

Three woollen covers, or blankets.

Four brushes, and six woollen cloths, for performing friction.

Several emetics.

Two lancets for blood-letting.

One pound of tobacco.

A roller and cushion, to be used in venesection.

Two quills, a sponge, and some lint.

A pocket-knife.

An apparatus for striking fire.

Camomile and elder-flowers.

Common salt—and a printed copy of rules and directions for treating the drowned.

OF CONVULSION FITS.

CONVULSION fits often constitute the last scene of acute or chronic disorders. When this is the case, there can remain but small hopes of the patient's recovery after expiring in a fit. But, when a person, who appears to be in perfect health, is suddenly seized with a convulsion fit, and seems to expire, some attempts ought always to be made to restore him to life. Infants are most liable to convulsions, and are often carried off very suddenly by one or more fits about the time of teething. There are many well-authenticated accounts of infants having been restored to life, after they had to all appearance expired in convulsions; but we shall only relate the following instance mentioned by Dr. Johnson in his pamphlet on the practicability of recovering persons visibly dead: In the parish of St. Clement's at Colchester, a child of six months old, lying upon its mother's lap, having had the breast, was siezed with a strong convulsion fit, which lasted so long, and ended with so total a privation of motion of the body, lungs, and pulse, that it was deemed absolutely dead. It was accordingly stripped, laid out, the passing bell ordered to be tolled, and a coffin to be made; but a neighbouring gentlewoman who used to admire the child, hearing of its sudden death, hastened to the house, and, upon examining the child, found it not cold, its joints limber, and fancied that a glass she held to its mouth and nose was a little damped with the breath: upon which she took the child in her lap, sat down before the fire, rubbed it, and kept it in gentle agitation. In a quarter of an hour she felt the heart begin to beat faintly; she then put a little of the mother's milk into its mouth, continued to rub its palms and soles, found the child begin to move, and the milk was swallowed; and in another quarter of an hour she had the satisfaction of restoring to its disconsolate mother

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the babe quite recovered, eager to lay hold of the breast, and able to suck again. The child throve, had no more fits, is growing up, and at present alive. There are many other things which might be done, in case the above should not succeed; as rubbing the body with strong spirits, covering it with warm ashes or salt, blowing air into the lungs, throwing up warm stimulating clysters, or the smoke of tobacco, into the intestines, and such like. When children are dead-born, or expire soon after the birth, the same means ought to be used for their recovery as if they had expired in circumstances similar to those just mentioned. These directions may likewise be extended to adults, attention being always paid to the age and other circumstances of the patient. The means used with so much efficacy in recovering drowned persons are, with equal success, applicable to a number of cases where the powers of life seem in reality to be only suspended, and to remain capable of renewing all their functions, on being put into motion again. It is shocking to reflect, that for want of this consideration many persons have been committed to the grave, in whom the principles of life might have been revived. The cases wherein such endeavours are most likely to be attended with success, are all those called sudden deaths from an invisible cause, as apoplexies, hysterics, faintings, and many other disorders wherein persons in a moment sink down and expire. The various casualties, in which they may be tried, are, suffocations from the sulphureous damps of mines, coalpits, &c. the unwholesome air of long-unopened wells or caverns; the noxious vapours arising from fermenting liquors; the steams of burning charcoal; sulphureous mineral acids; arsenical effluvia, &c. The various accidents of drowning, strangling, and apparent deaths, by blows, falls, hunger, cold, &c. likewise furnish opportunities of trying such endeavours. Those perhaps who to appearance are killed by lightning, or by any violent agitation of the passions, as fear, joy, surprise, and such-like,

might also be frequently recovered by the use of proper means, as blowing strongly into their lungs, &c.

OF COLD BATHING.

IMMERSION in cold water is a custom which lays claim to the most remote antiquity: indeed it must have been coeval with man himself. The necessity of water for the purpose of cleanliness, and the pleasure arising from its application to the body in hot countries, must very early have recommended it to the human species. Even the example of other animals was sufficient to give the hint to man. By instinct many of them are led to apply cold water in this manner, and some, when deprived of its use, have been known to languish, and even to die. But whether the practice of cold bathing arose from necessity, reasoning, or imitation, is an enquiry of no importance; our business is to point out the advantages which may be derived from it, and to guard people against an improper use of it. The cold bath recommends itself in a variety of cases; and is peculiarly beneficial to the inhabitants of populous cities, who indulge in idleness, and lead sedentary lives. In persons of this description the action of the solids is always too weak, which induces a languid circulation, a crude indigested mass of humours, and obstructions in the capillary vessels and glandular system. Cold water, from its gravity, as well as its tonic power, is well calculated either to obviate or remove these symptoms. It accelerates the motion of the blood, promotes the different secretions, and gives permanent vigour to the solids. But all these important purposes will be more essentially answered by the application of salt water. This ought not only to be preferred on account of its superior gravity, but likewise for its greater power of stimulating the skin, which promotes the perspiration, and prevents the patient from catching cold. It is necessary, however, to observe, that cold bathing is more likely to prevent, than to remove,

obstructions of the glandular or lymphatic system. Indeed, when these have arrived at a certain pitch, they are not to be removed by any means. In this case the cold bath will only aggravate the symptoms, and hurry the unhappy patient into an untimely grave. It is therefore of the utmost importance, previous to the patient's entering upon the use of the cold bath, to determine whether or not he labours under any obstinate obstructions of the lungs or other viscera; and, where this is the case, cold bathing ought strictly to be prohibited. In what is called a plethoric state, or too great a fulness of the body, it is likewise dangerous to use the cold bath, without due preparation. In this case there is great danger of bursting a blood vessel, or occasioning an inflammation of the brain, or some of the viscera. This precaution is the more necessary to citizens, as most of them live full, and are of a gross habit. Yet what is very remarkable, these people resort in crowds every season to the sea-side, and plunge into the water without the least consideration. No doubt they often escape with impunity; but does this give a sanction to the practice? Persons of this description ought by no means to bathe, unless the body has been previously prepared by suitable evacuations. Another class of patients, who stand peculiarly in need of the bracing qualities of cold water, is the nervous. This includes a great number of the male, and almost all the female, inhabitants of great cities. Yet even those persons ought to be cautious in using the cold bath. Nervous people have often weak bowels, and may, as well as others, be subject to congestions and obstructions of the viscera; and in this case they will not be able to bear the effects of the cold water. For them, therefore, and indeed for all delicate people, the best plan would be to accustom themselves to it by the most pleasing and gentle degrees. They ought to begin with the temperate bath, and gradually use it cooler, till at length the coldest proves quite agreeable. Nature revolts against all great transitions;

and those who do violence to her dictates have often cause to repent of their temerity. To young people, and particularly to children, cold bathing is of the last importance. Their lax fibres render its tonic powers peculiarly proper. It promotes their growth, increases their strength, and prevents a variety of diseases incident to childhood. The most proper time of the day for using the cold bath is no doubt the morning, or at least before dinner; and the best mode, that of quick immersion. As cold bathing has a constant tendency to propel the blood and other humours towards the head, it ought to be a rule always to wet that part as soon as possible. By due attention to this circumstance, there is reason to believe, that violent head-achs, and other complaints, which frequently proceed from cold bathing, might be often prevented. The cold bath, when too long continued in, not only occasions an excessive flux of humours towards the head, but chills the blood, cramps the muscles, relaxes the nerves, and wholly defeats the intention of bathing. Hence, by not adverting to this circumstance, expert swimmers are often injured, and sometimes even lose their lives. All the beneficial purposes of cold bathing are answered by one single immersion; and the patient ought to be rubbed dry the moment he comes out of the water, and should continue to take exercise for some time after. When cold bathing occasions chillness, loss of appetite, listlessness, pain of the breast or bowels, a prostration of strength, or violent head-aches, it ought to be discontinued.

OF DRINKING THE MINERAL WATERS.

THE waters most in use for medical purposes in Britain, are those impregnated with salts, sulphur, iron, and mephitic air, either separately or variously combined. The errors which so often defeat the intention of drinking the purgative mineral waters, and which so frequently prove injurious to the patient, proceed from the manner of using them, the quantity taken,

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the regimen pursued, or using them in cases where they are not proper. Drinking the water in too great quantity, not only injures the bowels and occasions indigestion, but generally defeats the intention for which it is taken. The diseases, for the cure of which mineral waters are chiefly celebrated, are mostly of the chronic kind; and it is well known that such diseases can only be cured by the slow operation of alteratives, or such medicines as act by inducing a gradual change in the habit. This requires length of time, and never can be effected by medicines which run off by stool, and operate chiefly on the first passages. Those who wish for the cure of any obstinate malady from the mineral waters, ought to take them in such a manner as hardly to produce any effect whatever on the bowels. With this view a half-pint glass may be drunk at bedtime, and the same quantity an hour before breakfast, dinner, and supper. The dose, however, must vary according to circumstances. Even the quantity mentioned above will purge some persons, while others will drink twice as much without being in the least moved by it. Its operation on the bowels is the only standard for using the water as an alterative. No more ought to be taken than barely to move the body; nor is it always necessary to carry it this length, provided the water goes off by the other emunctories, and does not occasion a chillness, or flatulency in the stomach or bowels. When the water is intended to purge, the quantity mentioned above may be all taken before breakfast. To promote the operation of mineral waters, and to carry them through the system, exercise is indispensably necessary. This may be taken in any manner that is most agreeable to the patient, but he ought never to carry it to excess. As a purgative, these waters are chiefly recommended in diseases of the first passages, accompanied with, or proceeding from, inactivity of the stomach and bowels, acidity, indigestion, vitiated bile, worms, putrid sores, the piles, and jaundice. In most cases of this kind, they are

the best medicines that can be administered. But, when used with this view, it is sufficient to take them twice, or at most three times a week, so as to move the body three or four times; and it will be proper to continue this course for some weeks. But the operation of the more active mineral waters is not confined to the bowels. They often promote the discharge of urine, and not unfrequently increase the perspiration. This shows that they are capable of penetrating into every part of the body, and of stimulating the whole system. Hence arises their efficacy in removing the most obstinate of all disorders, obstructions of the glandular and lymphatic system. Under this class is comprehended the scrophula or king's evil, indolent tumours, obstructions of the liver, spleen, kidneys, and mesenteric glands. When these great purposes are to be effected, the waters must be used in the gradual manner mentioned above, and persisted in for a length of time. It will be proper, however, now and then to discontinue their use for a few days. The next great class of diseases, where mineral waters are found to be beneficial, are those of the skin, as the itch, scab, tetters, ring-worms, scaly eruptions, leprosies, blotches, foul ulcers, &c. Though these may seem superficial, yet they are often the most obstinate which the physician has to encounter, and not unfrequently set his skill at defiance; but they will sometimes yield to the application of mineral waters for a sufficient length of time; and in most cases of this kind these waters deserve a trial.

THE GREEN-SICKNESS.

GREEN-SICKNESS, or *Chlorosis*, a disorder which frequently attacks females after the age of puberty. It is attended with a depraved appetite, and a desire to eat substances that are not food, such as chalk, ashes, salt, &c.; the skin is pale and discoloured; the face sallow or greenish, but sometimes of a livid hue; there is a deficiency of blood in the veins;

with a soft swelling of the whole body, especially the legs during the night; debility; palpitation; and suppression of catamenia.

Causes.—A sedentary life; scanty, or indigestible food; obstructions of the bowels; and frequently inordinate passions.

Cure.—Although the experience of all ages has attested, that the most certain relief in this female complaint is a change from a single to a connubial state, yet as this expedient is not always convenient, the following plan should be steadily pursued: A nourishing diet, with an allowance of generous wine, in small quantities; abstinence from acids, spirituous liquors, and whatever may suddenly heat or cool the body; moderate daily exercise, especially on horseback; or, if that cannot be procured, general friction of the whole frame with warm flannel every morning and evening; sleeping on mattresses, instead of soft feather-beds; early rising, and chearful company. Besides these general regulations, it will be useful to keep the bowels continually open, by taking small doses of vitriolated tartar, a scruple or half a dram, to be repeated four or six times when necessary in one day; to bathe the lower extremities frequently in warm water, and to wear worsted stockings in preference to silk or cotton; to apply the steam of hot water with due precaution; and lastly, to resort to the tepid bath every other day, or as often as is compatible with the strength of the patient.—If, nevertheless, these gentle means prove unsuccessful, the more powerful remedies, such as chalybeates, bitters, mercurials, &c. must be prescribed by the profession.—In some of the most tedious and inveterate cases of chlorosis, almost immediate relief was obtained by inhaling dephlogisticated air, or oxygen gas, which, however, should be administered only by persons sufficiently acquainted with the nature of that powerful agent.

CULPEPPER'S DISPENSATORY,

FOR
FAMILY USE;

CONTAINING

A choice SELECTION of invaluable PRESCRIPTIONS for almost all DISEASES incident to the HUMAN BODY.

AROMATIC OR SPICE WATER.

TAKE of white canella, half a pound; fresh outward peel of lemons, four ounces; lesser cardamum seeds, two ounces; French brandy, two gallons. Let them steep together for four days; and then distil off two gallons.

This is a warm serviceable cordial; for it gratefully invigorates the animal spirits, stimulates the nerves, and thus dissolves cold viscid humours, and expels flatulencies. It is an excellent stomachic, helps digestion, and stops vomiting; and as a carminative is used in the rougher cathartics. Half a wine-glass of it is a dose in windy and painful complaints of the stomach and bowels, and to be repeated occasionally.

PLAGUE AND FEVER WATER.

Take roots of master-wort, a pound and a half; angelica seeds, half a pound; elder flowers, leaves of scordium, of each four ounces; French brandy, three gallons. Steep them together for the space of four days; and then draw off, by distillation, two gallons and a half.

The ingredients are well chosen for the purposes intended; it being designed as a high cordial in very low and languid cases, and to raise the spirits in the plague and malignant fevers with depressions. If a fifth part of distilled vinegar be added, it is then termed *aqua epidemia acida*, which is a very powerful sudorific, and resister of putrefaction in all pestilential and other putrid fevers.

EYE-WATER.

Take white vitriol, half a pound; water, four pints. Boil them until the vitriol is dissolved, and then filter the liquor for use.

This is calculated to cool and repel those sharp rheums and inflammations which sometimes fall upon the eyes, where the vessels, being weak and thin, are often unable to resist duly the impulse of the blood, unless they are constricted and strengthened by some such collyrium. It is likewise good to clear them of beginning films and specks. If it should prove too sharp for tender eyes, it may be diluted with a little spring or rose water.

ANODYNE BALSAM.

Take of saponaceous balsam, or opodeldoc, a pound and a half; of liquid laudanum, half a pound. Mix them for use.

This is certainly an extremely penetrating and resolvent anodyne, both for internal and external use; being a most excellent medicine for procuring ease in the extremities of pain, and in nervous and nephritic cholics. It cleanses all the viscera and glandular parts; therefore good in the jaundice and such distempers of the urinary passages as proceed from the obstruction of gravel or slimy humours. Inwardly it may be given from 20 to 40 drops. And outwardly, applied to the pained part, does mighty service, a rag being dipped in it, and retained thereon.

ALEXETERIAL BOLUS.

Take of Virginian snake-root, fifteen grains; of castor, ten grains; of camphor, three grains; syrup of sugar, enough to mix and make them into a bolus.

This is a powerful alexipharmic, and is given in most kinds of fevers, especially the worst and more malignant sort, attended with convulsions and deliria. It is hardly ever omitted, when the pulse and spirits begin to flag in the progress of a putrid fever, small-pox, measles, milliary fever, &c. It is good in nervous and paralytic cases, which proceed from too much humidity; as also in the febricula, whether hysterical or hypochondriacal. If plentifully prescribed, it requires to be well diluted with small liquors; and, thus managed, it seldom fails of raising a diaphoræsis, and bringing the distemper to a crisis.

DIAPHORETIC BOLUS.

Take of compound powder of contrayerva, and of crude salt of ammoniac, each one scruple; syrup of sugar, as much as is sufficient to make a bolus.

This penetrates into the most intimate parts. and is a noble aperient, sudorific, antiseptic, and diuretic. Hence it becomes proper, in cases where perspiration is to be augmented; and in fevers, in which the disorder is to be eliminated by the cuticular discharges. It is prescribed, with a draught of the plague-water, to remove cachectic and anasarcaous swellings.

BOLUS OF JALAP WITH MERCURY.

Take of choice jalap, one scruple; calomel, from five to ten grains; syrup of sugar, a sufficient quantity. Mix them together into a bolus.

This is a proper bolus in most cases where a brisk purgative, preceded by a clyster, is necessary, either to make a revulsion after bleeding in inflammatory swellings and obstructions of the parts contained in the head, neck, or thorax; or to make an evacuation of the intestines and adjacent viscera of the abdomen. Thus may a bilious fever be carried off, when it has lingered, and there is little probability of its ending critically by any other way: as a diaphoretic and hydrogogue, it is of use in dropsies, defluxions of the head, eyes, and ears; as also in humoral coughs, and many obstinate chronical distempers. It destroys worms, cures a violent gonorrhœa and fluor albus. It is also good to cleanse the bowels from their redundant viscid mucus, that often clogs or shuts up the chylopoietic system, so as to hinder the entrance and proper effects of other medicines. In intermitting fevers it is a specific.

A PECTORAL BOLUS.

Take of spermaceti, fifteen grains; of gum ammoniacum, ten grains; of the volatile salt of hartshorn, seven grains. Mix, and make them into a bolus.

This is an excellent balsamic in many distempers of the breast; and gently deterges and heals. In coughs, pleurisies, and inward imposthumations, where the mucus of the bowels has been abraded by acrimony, and choler; as also in diarrhœas and dysenteries, this is a very good healer. In ulcerations of the kidneys and bloody urine, it is likewise a very suitable medicine; and, by softening and relaxing the fibres, it contributes frequently to the expulsion of gravel. It may be taken once or twice a-day, with some proper emulsion, draught, or julep, according to the indications.

THE RHUBARB BOLUS WITH CALOMEL.

Take of the best purgative rhubarb, twenty five grains; of calomel, five grains. Mix, and make them into a bolus, with as much syrup of sugar as will suffice.

This is an admirable medicine in most cases where purging is necessary, to cleanse the first passages of any thing that hinders the successful operation of other alterative medicines. See the virtues of the Jalap Bolus, which this nearly answers, but is more astringent, hepatic, stomachic, and a purger of the urine and sabulous concretions.

EMOLLIENT CATAPLASM.

Take of the crumb of bread, eight ounces; white soap, one ounce; fresh cow's-milk, a sufficient quantity. Boil them a little, and spread for use.

This is anodyne, penetrating, and resolvent; therefore applied to the soles of the feet in fevers, to the joints when afflicted with the gout, and causes sometimes the exudation of a great quantity of serous matter; and to white swellings.

SUPPURATING CATAPLASM.

This is made by adding to the foregoing cataplasm, of raw onions bruised, one ounce and a half; basilicon ointment, one ounce.

This is good to draw and suppurate all kinds of tumours; and to ripen, break, and cleanse, imposthumations.

APERIENT ALE.

Take of old mustard-seed, ten ounces; long birthwort-root, six ounces; tops of lesser centaury, two ounces; savin, one ounce; new small ale, ten gallons.

This cleanses the womb, excites the menstrual discharges, and forwards delivery. It is serviceable in hysterical disorders, and good to loosen and discuss viscidities; and, therefore, excellent in all paralytic cases, and the decays and defluxions attending old age.

CEPHALIC ALE.

Take of wild valerian-root, two ounces; whole mustard-seed, six ounces; Virginian snake-root, two ounces; rosemary, or sage, three ounces; new small ale, ten gallons.

This is good against epilepsies, apoplexies, palsies, and all diseases of that kind, and vertigoes from uterine obstructions; it is also of use in almost all nervous complaints; especially such as arise from too great moisture and cold.

STRENGTHENING CONFECTION.

Take of bole-ammoniac prepared, three ounces; tormentil roots, nutmegs, olibanum, of each two ounces; opium, one dram and a half; syrup of dry roses, thrice the weight of the powders. Mix them according to art.

This alexipharmic, anodyne, and astringent, vulnerary, is recommended in immoderate evacuations of the abdomen. A dram or two of it, at a dose, along with the chalk julep, will give an effectual check to the disorder. It is successfully prescribed for diarrhœas in the measles, small-pox, or fevers; as also for relaxations, hæmorrhages, and hurts in the time of pregnancy; and likewise for the *fluor albus*, and seminal weakness.

ANTIHECTIC DECOCTION.

Take of the roots of comfrey, eringo, each half an ounce: conserve of roses, two ounces; water, three pints. Boil these ingredients together, till there remains a quart of liquor after straining; to which add of sweet spirit of vitriol, forty drops.

This is grateful and strengthening; it restrains the saline particles of the blood, and hinders it from rushing too impetuously through the lungs; therefore it takes place in newly-begun consumptions, hectic fevers, night sweats, &c. where the colliquation of the humours causes a wasting of the muscular parts.

COMMON DECOCTION.

Take of mallow leaves, camomile flowers, each one ounce: water, two quarts. Boil till one quart of the liquor is wasted: then strain out the remaining decoction for use.

This is emollient and carminative, therefore accounted a good anodyne, and excellent against gripes, nephritic pains, stranguries, and heat of urine; as also for cramps, and such-like spasms. It is likewise used in lotions and clysters.

THE DIURETIC DECOCTION.

Take of the roots of parsley, or those of fennel, one ounce; seeds of wild carrot, three drams; pellitory of the wall, half an ounce; raisins of the sun, two ounces; water, three pints. Boil them together, till there remains a quart of liquor after straining; to which add, of nitre, one dram.

This absterges much slime and viscid adhesions from the stomach and bowels; cleanses the viscera, particularly the kidneys; keeps the juices cool and fluid; and greatly assists their discharge by urine, especially in uterine and hysteric cases.

VULNERARY DECOCTION.

Take of the herb ground ivy, leaves of plantain, each half an ounce; water, three pints. Boil them till there remains a quart of liquor after straining; to which add, of white sugar, half an ounce.

This is cooling, abstersive, and vulnerary; and prescribed as an astringent in distempers of the lungs, chiefly for such consumptions as proceed from sharp thin humours, weaknesses, and spitting of blood.

ANTIDYSENTERIC ELECTUARY.

Take of the strengthening confection, one ounce; balsam of

Lucatellus, (dissolved in the yolk of an egg,) half an ounce. Mix them together.

This is an excellent internal vulnerary in an obstinate bloody flux, to prevent abortion, &c., and very aptly formed for corresponding with such purposes. The confection has its share in accomplishing a cure, partly from its astringency, partly from its opiate quality, by rendering the vessels insensible of the pungency of the morbid particles; while the virtues of the balsam agglutinate, heal, and stop up, the mouths of the vessels, and sheath the acrimonious humours which abrade the parts.

BALSAMIC ELECTUARY.

Take of conserve of roses, two ounces; balsam of Lucatellus, (dissolved in the yolk of an egg,) one ounce. Mix, and make them into an electuary.

This is a noble medicine, easy to take, and ought to be repeated on the urgency of such coughs as give suspicion of tubercles, ulcerations, and decays of the lungs. It dissolves tough phlegm in the bronchia, cures catarrhs and coughs from tickling defluxions; it repairs and heals inward exulcerations and bloody discharges, especially of the kidneys, bladder, and uterus. In seminal weaknesses, old gleet in both sexes, there can be nothing better contrived. The quantity of a nutmeg may be taken two or three times in a day, with a draught of the antihectic decoction.

CEPHALIC ELECTUARY.

Take of wild valerian-root, mistletoe of the oak, each one ounce; syrup of sugar, a sufficient quantity. Mix them into an electuary.

This is calculated for disorders of the head, and is in great esteem for epilepsies and inveterate head-achs. It is frequently prescribed in apoplexies, vertigoes, and convulsions, from uterine obstructions.

ELECTUARY AGAINST THE PILES.

Take of lenitive electuary, two ounces; sulphur vivum, half an ounce. Make thereof an electuary.

The quantity of a nutmeg is to be taken of this every morning and night; it will keep the belly moderately lax, and greatly ease the piles.

LENITIVE ELECTUARY.

Take three ounces of polypody-roots, and three quarts of wa-

ter. Boil till two quarts are wasted; adding, towards the end of the coction, two ounces of sena, and half an ounce of coriander seeds. Strain out the liquor, add to it four pounds of white sugar, and boil to the consistence of a thick syrup; with which mix a pound of the pulp of French prunes: half a pound of the pulp of cassia, and the same quantity of tamarinds. Make the whole into an electuary.

This cools and purges very gently, and is convenient enough to add in clysters. Internally, it is more proper to prevent costiveness than to be exhibited as a regular cathartic. It is also intended to cleanse the liver and other viscera.

STRENGTHENING ELECTUARY OF BARK.

Take of Peruvian bark one ounce and a half; colcothar of vitriol, three drams; syrup of sugar, a sufficient quantity. Make them into an electuary.

In robust constitutions this is prescribed for stubborn agues; and also for fluxes and hæmorrhages. It promotes discharges by urine, destroys worms, brings them away, and strengthens the fibres; but in thin hectic habits it is not so proper. The colcothar here prevents the bark from going off by stool, which it is sometimes apt to do; and opium likewise will have the same effect.

ELECTUARY AGAINST FLUXES.

Take of the strengthening confection, two ounces; extract of logwood, one ounce; syrup of dry roses, a sufficient quantity. Make them into an electuary.

This is an astringent, and good to fortify the stomach and bowels when weakened by a diarrhœa; and is much esteemed of late for its virtues in curing a dysentery.

WARM PLASTER.

Take of gum plaster, one ounce; blistering-plaster, two drams. Melt them together over a gentle fire.

The chief intention of this is to raise blisters, and to create a stimulus in a languor or stupor of the nervous system; to dissolve a viscosity or siziness of the juices, and hinder their tendency to a coagulation; or to cause a derivation and discharge of some morbid humour, and prevent its returning into the blood; therefore it is esteemed useful in some inflammatory fevers, dropsies, and certain stages of the crystalline or watery small pox; especially if the pustules subside, and the extremely viscid matter of the disease can neither be brought to suppurate, nor be carried off by diuretics. It remarkably affects the kidneys and bladder, and provokes urine, not by an easy natural ejection.

ment, but rather by an erytismus from its acrid salts that cause a strangury, which should be guarded against by broths and emulsions. It is good against a mortification, and reckoned an efficacious cleanser and scourer of the urinary passages and uterus, when obstructed with slough and viscidities. But its use requires the highest caution and prudence; hence it is not every one who must think himself qualified to meddle, without distinction, with remedies, which are sure to do good or hurt according as they are administered.

COMMON PLASTER.

Take of litharge prepared, three pounds; oil of olives, six pounds. Boil them up to a due consistence.

This is to supply the place of the diachylon plaster of former dispensatories; and is esteemed more emollient, muturant, and resolvent. It will also incarnate and cicatrize.

DEFENSIVE PLASTER.

Take of litharge prepared, two pounds; oil of olives, four pounds. Boil them almost to the consistence of a plaster, in which qualify six ounces of yellow wax, and four ounces of olibanum. Then add six ounces of bole ammoniac prepared, two ounces of dragon's blood in powder, and four ounces of Venice turpentine.

This is employed to consolidate fractures, to strengthen luxations and weaknesses of the loins and joints; and is also serviceable for ruptures and chilblains.

BLISTERING PLASTER.

Take of Burgundy pitch, twenty ounces; Venice turpentine, cantharides in powder, each six ounces.

This is a powerful epispastic, and is applied either to the head, between the shoulders, or to the soles of the feet. See its use in the Warm Plaster. But when applications are made to the feet, with an intent to stimulate strongly, excite pain therein, and relieve the head, cataplasms composed of equal parts of scraped horse-radish and powdered mustard-seed, moistened with old yeast, will answer the design expeditiously, strongly, and effectually.

MERCURIAL PLASTER.

Gum plaster is substituted here for diachylon.

This admirably warms, softens, and discusses, all indurations and hardened tumours, be they chalky, scrophulous, or venereal.

STOMACH PLASTER.

Take of yellow wax, eight ounces; tacamahaca in powder, palm oil, each four ounces. Melt them together, and add of cloves in powder, two ounces; expressed oil of mace, one ounce and a half. Mix, and make them into a plaster, which is to be moistened, when fresh spread, with some drops of distilled oil of mint.

This is intended as a warm carminative, and cordial, application to the stomach, and exerts very considerable effects when such things are wanted; therefore it is useful in flatulencies, gripes, and all complaints arising from indigestion; and a cold weak stomach cannot well fail finding relief from its use.

COMMON EMULSION.

Take of sweet almonds, one ounce; water, one quart. Make them into an emulsion; to which add of white sugar, two drams. If three darms of gum arabic be previously boiled in the water, the preparation is call'd Arabic Emulsion.

Either of these is singularly useful in many emergencies; particularly in acute distempers, and the gravel. In heat of urine and stranguaries, either from acrimonious humours or the salts of epispastics, they give immediate ease; and ought to be drunk while fresh, half a pint at a time, and pretty often. There are other sorts of emulsions, which are calculated for diuretics, coolers, and pectorals.

ANODYNE CLYSTER.

Take of the infusion of linseed, six ounces; liquid laudanum forty drops. Mix them together.

This is excellent to assuage pains in lyenteries, and inflammations of the uterus and bladder, by reason of a proximity and consent of parts.

ANTICHOLIC CLYSTER.

Take of the common decoction, half a pint; tinctura sacra, one ounce; common salt, one dram; linseed oil, two ounces. Mix them together.

This falls in with the view of unloading the bowels of their costive contents, and consequently procures an immediate relief on many occasions, chiefly in flatulencies, gripes, and bilious cholics. The addition of the salt, by a mild gentle stimulus, insures its effects. It likewise destroys worms, particularly the ascarides, if assisted with a few grains of calomel by the mouth.

THE PURGING CLYSTER.

Take of the common decoction, half a pint; white soap, one ounce; syrup of buckthorn, an ounce and a half. Mix them according to art.

This is penetrating, detersive, and capable of dissolving indurations and grumous viscidities of the intestinal tube, especially in the jaundice, and by ridding the bowels of their concremented contents may prevent an inflammation. It is useful in disorders of the head, and may cause a revulsion in the feculent vomitings.

EXPRESSION OF MILLEPEDES.

Take of live millepedes, (commonly called wood-lice,) three ounces; simple fennel-water, one pint; compound horse-radish water, half a pint. Bruise the millepedes, gradually adding to them the distilled waters; and afterwards press out the liquor.

This is an excellent diuretic, sweetener and cleanser of the blood, and a most efficacious medicine in all chronic cases, that are to be relieved by promoting the urinary discharges, as are many inveterate ulcers, strumas, and scrophulous disorders, and such as frequently are the forerunners of scorbutic dropsies, from a retention of such humours as obstruct the viscera, and fill the whole habit with water and viscidities. Hence it is of singular efficacy in the stone, jaundice, nephritic pains, dysuria, cholic, and asthma.

AROMATIC FOMENTATION.

Take of cloves, mace, each one dram; red wine, one pint. Boil them a little, and then strain out the liquor.

This, applied warm to the abdomen, will be found of admirable service in cholics, and for relaxed weak stomachs that are subject to distention from flatulency. It may be used to the head with success in any disorders from too much moisture and pituitous defluxions.

STRENGTHENING FOMENTATION.

Take of oak-bark, one ounce; pomegranate-peel, half an ounce; forge-water three pints. Boil them till there remains a quart of the strained liquor; to which add of rock-alum, two drams.

This is proper for hæmorrhages, whether uterine, hæmorrhoidal, or from any other part. It is also good to foment sprains, fractures, or paralytic limbs; and will help to check immoderate vomitings.

THE COMMON GARGLE.

Take of water, six ounces; nitre, one dram; honey of roses, one ounce. Mix them together. To this gargarism are sometimes added, of sweet spirit of vitriol, fifteen drops.

This is proper to cleanse and scour the mouth and throat from slough, and the phlegmatic matter which stuffs and tume-fies the glands. It is also good to cool and deterge the mouth when sore, parched, and dry with a fever.

EMOLLIENT GARGLE.

Take of marsh-mallow roots, two ounces; figs, in number four; water, three pints. Boil till there remains one quart of liquor, which strain out for use.

This is excellent to assuage pain and inflammation in the throat or mouth, to mature any ulcer therein, and to mollify the blistered tongue and fauces in a salivation. The learned and accurate Sir John Pringle observes, that in the inflammatory quinsy, or strangulation of the fauces, little benefit arises from the common gargles; that such as are of an acid nature do more harm than good, by contracting the emunctories of the saliva and mucus, and thickening those humours; that a decoction of figs in milk and water has a contrary effect, espeecially if some sal-ammoniac be added; by which the saliva is made thinner, and the glands brought to secrete more freely; a circumstance always conducive to the cure.

SALINE DRAUGHT.

Take salt of wormwood, one scruple; lemon-juice, half an ounce; white sugar, one dram. Mix them together.

This is an effectual remedy to stop vomitings, and is of singular use in fevers, especially those of the intermittent kind, when the bark often fails. It causes gentle breathing sweats, and may be repeated every five or six hours occasionally.

ANTISCORBUTIC INFUSION.

Take of water-trefoil, two ounces; oranges, half an ounce; boiling water, two quarts. Let them stand in infusion for a night in a close vessel; afterwards strain the liquor, and then add to it of compound horse-radish water, half a pint.

This is effectual against scrophulas, the king's evil, and all obstinate scorbutic diseases. In the rheumatic, dropsical, and cachectic, habits, it will be of good service. It likewise gives due warmth to the nerves, which in paralytic cases they are

destitute of. It may be drunk at discretion, and the use of it continued according to the exigency of the disorder.

INFUSION OF LINSEED.

Take of linseed, two spoonfuls; liquorice-root sliced, half an ounce; boiling water, three pints. Let them stand to infuse by the fire for some hours, and then strain off the liquor.

If an ounce of the leaves of colt's-foot be added to these ingredients, it will then be the pectoral infusion. Both these are emollient mucilaginous liquors, and may be taken with advantage as ordinary drink in difficulty of making water; and in coughs and other complaints of the breast.

BALSAMIC INJECTION.

Take of balsam copaiba, half an ounce; the yolk of one egg. Work them well together, and gradually add of time-water, six ounces; honey of roses, two ounces. Mix the whole well together.

This is excellent for the consolidation of wounds, and to cleanse and heal ulcerations, gleet, and seminal weaknesses, if used two or three times a-day; and for corroborating the nervous parts, which have been relaxed by the disease.

THE MERCURIAL INJECTION.

Take of quicksilver, balsam copaiba, each half an ounce. Beat and work them together, till the quicksilver is extinguished; then put to the mass the yolk of an egg. Mix the whole very well together, gradually adding of rose-water, half a pint.

This is calculated for gonorrhœas, and venereal ulcers in the urethra, vagina, and uterus; the quicksilver destroys the virulency, while the balsam heals and sheathes the excoriated parts from the acrimony of the urine.

THE CORDIAL JULEP.

Take of alexeterial water, four ounces; aromatic water, two ounces; saline aromatic spirit, tincture of saffron, each two drams; white sugar, half an ounce. Mix, and make them into a julep.

This is a high cordial, and will bring on an effectual moisture; consequently remove all weariness, heat, and tension, of the parts; therefore it is of great service in the depressed state of fevers, fatigue from excesses, and lowness of spirits.

A few spoonfuls, drunk every three or four hours, will, by its enlivening quality, communicate an agreeable sensation. It is likewise very aptly prescribed with powder and boluses.

DIAPHORETIC JULEP.

Take of alexeterial water, four ounces; spirit of mindereus, two ounces; volatile salt of hartshorn, ten grains; syrup of meconium, one ounce. Mix them together.

In slow malignant fevers, with cold clammy sweats, pale visage, a low intermitting pulse, and where great restlessness prevails, this julep will be singularly beneficial. A tea-cupful may be given and repeated every four or five hours, till some crisis appears, and the distemper abates.

DIURETIC JULEP.

Take of spirit of mindereuse, four ounces; compound horse-radish water, two ounces; syrup of marsh-mallows, three ounces. Mix, and make a julep; to which may be added occasionally, of spirit of amber, one dram.

This is strongly diuretic; hence a good remedy against a suppression of urine from any cause, the gravel, and nephritic pains. It will also promote and assist an urinary crisis; and may be repeated as the urgency of the symptoms indicates.

THE FETID JULEP.

Take of rue-water, six ounces; assafœtida, one dram and a half. Dissolve the assafœtida in the water, and add to the solution, of antihysteric water, two ounces; distilled oil of hartshorn, twenty drops, received upon ten drams of white sugar. Mix the whole well together.

This is ordered in hysteric affections, and a defective state of the menses, and sometimes in hypochondriacal cases. A tea-cupful may be taken three or four times a-day.

THE SALINE JULEP.

Take of mint-water, syrup of lemons, each two ounces; salt of wormwood, one dram. Make them into a julep.

This is an admirable remedy in vomitings and hiccups. It has a mild and innocent virtue, though powerfully attenuating and resolving, diuretic, and sudorific: hence it is excellent in rheumatisms, fevers, and all disorders from a siziness of the blood. Two or three spoonfuls are given every five or six hours.

THE ANODYNE LINIMENT.

Take of nerve-ointment, three ounces; balsam of turpentine, one ounce. Mix them together.

This is a warm invigorating topic, and may be used with good effect, to excite the nerves to action when too languid. It is applied to paralytic and numbed limbs, to restore a due sense and feeling; and, by its penetrating quality, it is of good use in a sciatica and the gout.

PECTORAL LOHOCH.

Take of spermaceti, white soap, each two drams; whites of eggs, a sufficient quantity. Mix them thoroughly together, and then add of fresh drawn linseed-oil, one ounce and a half; syrup of marsh mallows, three ounces. Mix the whole well together.

This contains very great emollient and balsamic virtues; and by the inciting and detergent property of the soap, becomes a powerful deobstruent in infarctions of the breast; hence it is recommended in a difficulty of respiration, either from a dry husky cough, or a tough thick phlegm; and likewise in imposthumations and tubercles of the lungs.

ALOETIC PILLS.

Take succotrine aloes, white soap, of each equal parts; thin noney, as much as is sufficient. Make them into a mass.

The soap here is added purely to promote the dissolution of the aloes in the stomach; for pills made up of raisins, and substances not easily dissoluble, frequently pass through the body entire; hence by the purgative quality of the aloes, and detergent property of the soap, the glairs and viscidities of the intestines are dissolved and carried off; therefore the pills are stomachic, antefebriile, and excellent in nephritic and cholic pains. —Moreover, the aloes, being hepatic, forward the discharge of the bile, whilst, by the concomitancy of the soap, it breaks the obstructions of the liver, blends and assimilates the humours. Hence it appears how advantageous and essential it is to adapt and combine medicines judiciously.

PURGING ECPHRATIC PILLS.

Take succotrine aloes, extract of black hellebore, scammony, of each two ounces; vitriolated tartar, three drams; distilled oil of juniper, a dram and an half; syrup of buckthorn, as much as is sufficient to make the whole into a mass.

These are an excellent hydragogue, particularly in cachectic and scorbutic habits abounding with dropsical humours. Three

or four of these may be taken once a-day, or every other day, and continued according to the exigency of the complaint.

MERCURIAL PILL.

Take of purified quicksilver and honey, each half an ounce. Rub them together in a mortar, till the globules of mercury are perfectly extinguished; then add of Castile soap, two drams; powdered liquorice, or crumb of bread, a sufficient quantity to give the mass a proper consistence for pills.

When stronger mercurial pills are wanted, the quantity of quicksilver may be doubled. The dose of these pills is different, according to the intention with which they are given. As an alterant, two or three may be taken daily. To raise a salivation, four or five will be necessary. Equal parts of the above pill, and powdered rhubarb made into a mass, with a sufficient of simple syrup, will make a mercurial purging pill.

MERCURIAL SUBLIMATE PILL.

Dissolve fifteen grains of the corrosive sublimate of mercury in two drams of the saturated solution of crude sal ammoniac, and make it into a paste, in a glass mortar, with a sufficient quantity of the crumb of bread. This mass must be formed into one hundred and twenty pills.

This pill, which is the most agreeable form of exhibiting the sublimate, has been found efficacious, not only in curing the venereal disease, but also in killing and expelling worms, after other powerful medicines had failed. For the venereal disease, four of these pills may be taken twice a-day, as an alterant three, and for worms two.

PACIFIC PILLS.

Take of galbanum, myrrh, white soap, of each two ounces; opium, one ounce; syrup of sugar, as much as is sufficient to make the whole into a mass fit for pills.

These are admirable in assuaging hypochondriacal and hysteric complaints, nephritic and uterine pains, caused either from obstructions, or ulcers in the kidneys or uterus.

THE PECTORAL PILLS.

Take of gum ammoniacum, an ounce and an half; myrrh, one ounce; balsam of sulphur terebinthinated, one dram; syrup of marsh-mallows, as much as will make the whole into a mass.

These are healing and balsamic in a hæmoptthisis, infarctions, and ulcers of the lungs.

STOMACHIC PILLS.

Take of succotrine aloes, an ounce and a half; gum ammoniac, myrrh, each half an ounce; vitriolated tartar, two drams; distilled oil of mint, half a dram; syrup of sugar, a sufficient quantity. Mix according to art.

These, by their cathartic, bitter, attenuating, and aromatic, qualities, incide and purge away sloughy humours, which foul the coats of the stomach; also warm and fortify the fibres, whereby the gastric juice and digestion are promoted. They are most convenient in an advanced age, and full cachectic habits, which abound with cold viscid humours. They may be taken five or six at a dose.

THE BALSAMIC POTION.

Take of balsam capaiba, three drams; distilled oil of juniper, thirty drops; the white of an egg. Work them well together, and mix in, of fennel-water, compound horse-radish water, each three ounces; syrup of marsh-mallows, two ounces.

This is vulnerary and diuretic; hence chiefly of use in wounds, ulcers, and weaknesses, of the kidneys and uterus.

LITHONTRIPTIC POTION.

Take of white soap (the outward part being pared off), one ounce; warm lime-water, one quart. Stir them together till the soap is perfectly dissolved.

This, by its penetrating and alkaline virtues, is intended for the gravel and stone, which it dissolves and prevents by assimilating the humours, and by absorbing those acidities which form calculous concretions.

COMPOUND SPIRIT OF LAVENDER.

Take flowers of lavender, fresh gathered, a pound and a half; fresh flowers of rosemary, half a pound; fresh outward part of lemon-peel, three ounces; rectified spirit of wine, a gallon and a half. Distil in balneo mariæ to dryness. In the distilled spirit steep for two days, of cloves, cubebs, and shavings of red saunders, each two ounces; then strain out the spirit for use.

POWDER FOR EPILEPTIC AND CONVULSION FITS.

Take flowers of zinc, musk, and factitious cinnabar, of each equal parts; mix them together in a glass or marble mortar. The dose is from three grains to ten and upwards, mixed in a little treacle or honey, every night and morning.

The use of this powder, with dipping children in a tub of

spring water every morning, has very often relieved them, when every other remedy has proved abortive.

PURGING POWDERS FOR WORMS.

Take of scammony, calomel, and the best Turkey rhubarb, in powder, of each equal parts; double-refined sugar, the weight of the whole; rub it all very well together in a marble mortar, and keep for use.

The dose for children is from ten grains to twenty-five, once or twice every week. This is preferable to any quack-medicine whatever.

A UNIVERSAL POWDER FOR CHILDREN'S DISORDERS.

Take of white magnesia, six drams; cinnabar of antimony, two scruples; mix them into a fine powder for use.

This powder will not only prevent the numerous disorders children are liable to, but will also remove many, and all that arise from acidities in the stomach.—This is preferable to all other remedies yet known, for children in cutting their teeth, sickness at their stomachs, &c. &c. The dose is from ten grains to half a dram, more or less twice a-day.

POWDER TO PROMOTE DELIVERY.

Take borax in fine powder, castor, cinnamon, and myrrh, of each three drams; saffron and savin, of each one dram and a half; mix them, and make a powder for use.

A dram of this powder facilitates the birth, and promotes the lochia and menses.

THE FAMOUS SYMPATHETIC POWDER.

Take of green vitriol, eight ounces; of gum tragacanth reduced to an impalpable powder, one ounce: mix these together, and let a small quantity of the powder be sprinkled on the wound, and it immediately stops the bleeding. The vitriol must be calcined to whiteness in the sun, before it be mixed with the gum.

The above powder is used by the miners at Gosselaer in Germany, in all their wounds; and, I believe, was never known to fail. This powder, Mons. Lemery and Sir Kenelm Digby tell us, has also the following wonderful property, that, if it be spread on a cloth dipped in the blood of a wound so as to incorporate with the blood, the wound would be cured, though the patient were miles off, and never saw the medicine. From this remarkable sympathetic property it derived its name.

POWDER FOR A SORE THROAT.

Take one ounce and a half of purified sal ammoniac, and half an ounce of purified nitre, mix them very well together in a mortar for use.

About six or eight grains of this powder is to be frequently held in the mouth, and to be gently swallowed down the throat. This very often answers better than gargles. If necessary, lose a little blood and take a brisk purge before you use the powder.

FOR VOMITINGS, BILIOUS DISORDERS, &c.

Take mint-water, syrup of lemons, of each four ounces; salt of wormwood, two drams. Mix them well together for use.

In vomitings, hiccups, rheumatisms, fevers, and all disorders from a siziness in the blood, no preparation can be more innocent nor more efficacious. Two or three table spoonfuls are to be taken every four or five hours.

DECOCTION FOR CATARRHS, COLDS, &c.

Take of compound testaceous powder, one ounce; gum arabic in powder, half an ounce; water, two quarts; boil it till one pint of the water is wasted: then add to the turbid decoction, of aromatic water, one ounce and a half; white sugar, half an ounce, and mix the whole well together for use.

This composition will be found immediately useful in destroying sharp corrosive matter in the stomach, and absorbing all acidities in the first passages. Half a pint of it in fevers, colds, or the like disorders, may be taken three or four times every day, blood-warm.

SWEATING DRAUGHT, FOR RECENT COLDS.

Take of the spirit mindereus, four ounces; syrup of poppies, and simple cinnamon-water, of each one ounce; volatile salt of hartshorn, half a scruple. Mix them together for two draughts, and take one of them when going into bed, and the remainder the second evening after.

In rheumatisms, pains in the head, and other parts, the above sweating draught will be found to answer every intent.

FOR AN INVETERATE COLD OR COUGH.

Take a large tea-cupful of linseed, two-pennyworth of stick-liqnorice, and a quarter of a pound of sun-raisins.—Put these into two quarts of soft water, and let it simmer over a slow

fire till it is reduced to one; then add to it a quarter of a pound of brown sugar-candy pounded, a table spoonful of old rum, and a table spoonful of the best white wine vinegar or lemon-juice. The rum and vinegar are best to be added only to that quantity you are going immediately to take; for, if it be put into the whole, it is apt, in a little time, to grow flat. Drink half a pint at going to bed, and take a little when the cough is troublesome.

This receipt generally cures the worst of colds in two or three days, and if taken in time may be said to be almost an infallible remedy. It is a most sovereign and balsamic cordial for the lungs, without the opening qualities which endanger fresh colds by going out. It has been known to cure colds that have been almost settled in consumptions, in less than three weeks.

FOR A PUTRID SORE THROAT.

Take of the best Peruvian bark, in gross powder, one ounce and a half; Virginian snake-root, three drams: boil them together in three quarts of water to one quart; then strain the liquor, and add two drams of elixir of vitriol; take a large tea-cup full of it every third hour. To every dose you may add a small quantity of brandy if you chuse it.

The steam of the following ingredients received into the throat through a funnel every hour will do a deal of service.

Take vinegar, one pint; honey, half a pound; myrrh, in powder, half an ounce; boil them well together, and it is fit for use.

Blisters applied to the throat, and behind the ears, are equally as beneficial in this disease, in case the pulse and spirits are very low. If a vomiting continues, *Take four table-spoonfuls of lemon-juice, and put to it one dram of salt of tartar; white sugar, half an ounce; mint-water, three ounces: mix them very well together.* The dose is a table-spoonful every hour.—This is the famous saline julep so much approved of by the faculty, as an antidote against vomiting and sickness of the stomach. After the disorder is subdued, the patient should take a few purges of rhubarb, senna, or the like. But, on the contrary, whilst the putrid ulcers remain in the throat, and a violent looseness should come on, it must be checked, by taking two tea-spoonfuls of diascordium two or three times a-day.

ALE FOR THE INWARD PILES.

Take half an ounce of black pitch, and boil it in a pint of

good ale till it comes to half a pint, then drink it off blood-warm.

This, though a simple remedy, has proved very effectual in many stubborn cases, where other things of much greater expence have proved abortive.

ALE FOR THE JAUNDICE.

Take one quart of ale, and add to it two ounces of hemp-seed, and half an ounce of turmeric, in powder: boil them over the fire about a quarter of an hour, then strain it for use.

This may be sweetened with coarse sugar. Half a pint of it at a dose; to be taken every morning.

VOMITING DRAUGHT.

Take of ipecacuanha, in fine powder, twenty-five grains; alexeterial water, half an ounce; compound spirit of lavender, half a dram; syrup of orange-peel, one dram; mix them for use.

DRAUGHT FOR THE DROPSY.

Take of peppermint water, one ounce; simple cinnamon-water, half an ounce; spirituous cinnamon-water, two drams; thebaic tincture, forty drops; lye of tartar, half a dram; syrup of marsh-mallows, one dram: mix them together for a draught.

This is the medicine which cured a person labouring under an ascites and tympany at the same time, where the pain was very severe, attended with great thirst, and thick high-coloured urine rendered in small quantities. The strong purges increased the distemper. Soap, lixivials, salts, balsam of gilead, nitre, and the like, all proved abortive. This draught brought unexpected relief, by procuring rest, and causing a copious discharge of water. By repeating the medicine for some time, every eight hours, and then only twice a day, and afterwards using corroborants, or medicines that produce strength of body, &c. the cure was perfectly completed.

FOR CONSUMPTIONS.

Take leaves of comfrey the greater, Solomon's seal, and pimpernel, each four handfuls; liquorice-root, two ounces; infuse them cold for twelve days in two gallons of lime-water, and take off the clear liquor for use.

This is very easily made, and is much better than if it were to be distilled. It is of excellent use in such consumptions as proceed from a sharp thin blood; especially in those who have been injured by a certain bad disease, or have any hereditary

remains of scrophulous or leprous humours. It must be druek for about forty days together, to the quantity of a quart or two every day, if the stomach can bear so much. It will also be of the utmost service to wash foul ulcers with.

DECOCTION FOR INWARD DECAY.

Take ground ivy, scabious, and colt's-foot, each two handfuls; hyssop, one handful; elecampane-root, one ounce; liquorice, four ounces; agrimony, four handfuls: boil them together in nine quarts of barley-water till they come to about a gallon, then strain it for use.

This pectoral can be depended on in coughs and consumptions of the lungs.

FOR THE ASTHMA, AND SHORTNESS OF BREATH.

Take of the milk of gum ammoniac, six ounces; syrup of squills, four ounces and a half: mix them together.

This promotes expectoration in a very great degree, and relieves those who are short-breathed; it is also justly esteemed for its serviceable properties in asthmatic cases, by rarefying and thinning viscid cohesions in the pulmonary vessels. A spoonful is to be taken four or five times every day, and in particular every morning.

INJECTIONS FOR ULCERS IN THE VAGINA AND WOMB.

Take quicksilver, balsam capivæ, of each half an ounce: beat and work them together, till the quicksilver is extinguished; then put to the mass, the yolk of an egg: mix them very well together, gradually adding half a pint of rose-water.

As well as for injections in ulcers in the vagina occasioned from the corrosiveness of a long continuance of the whites, it is equally as efficacious for a gonorrhœa, particularly if any ulcers be in the urethra. This simple preparation sheathes the excoriated parts from the acrimony of the urine.

ESSENCE FOR THE HEAD-ACH.

Take of French brandy, or rectified spirits of wine, one quart; put it into a strong bottle; and add one ounce of camphor cut small; a quarter of an ounce of essence of lemon; and two ounces of the strongest volatile spirit of sal ammoniac. Stop the bottle quite close, and shake it three or four times a day for a week.

The method of using it is to rub the hand with a little of it, and hold it hard upon the part affected until it is dry; if the pain is not quite relieved, repeat it till it is.

COMPOUND TINCTURE OF SENNA, COMMONLY CALLED DAFFY'S ELIXIR.

Take of the best senna, two ounces; jalap, coriander seeds, and cream of tartar, of each one ounce; coarse sugar, three quarters of a pound; brandy, three pints: let them stand for ten or twelve days: then strain off what is fine for use.

This is an agreeable purge, and nothing can be more useful than to keep it ready-made for family use.

GODFREY'S CORDIAL.

Take seven gallons of water, raspings of sassafras, and anise-seeds, of each four pounds; powder of carraway-seeds, eight ounces; opium, six ounces; coarse sugar, fifteen pounds: boil them together, till one half of the liquor be evaporated, then strain it through a coarse bag or cloth, and add three gallons of spirit of wine rectified.

STOUGHTON'S BITTERS.

Take gentian-root, two ounces; dried orange-peel, two ounces and an half; cochineal, in powder, half a dram; proof spirit, or brandy, two pounds: let them stand ten or twelve days, and decant off what is clear for use.

FRIAR'S BALSAM, COMMONLY CALLED TURLINGTON'S BALSAM, OF LIFE.

The true and best method of making it: Take gum Benjamin, twelve ounces; gum florax, eight ounces; balsam of Tolu (or Peru), four ounces; succotrine aloes, two ounces; rectified spirit of wine, five quarts and a pint: let them stand to digest twelve or fourteen days, then decant for use.

PILLS FOR GIDDINESS, PALSY, HEAD-ACH, &c.

Take native cinnabar, levigated, two drams; castor, and salt of amber, of each one dram; oil of marjoram, fifteen drops; balsam of Peru, one dram; syrup of piony, a sufficient quantity to make the mass; and form nine pills out of every dram of it. The dose is three of them to be taken three times a day.

PASTE FOR THE FISTULA, PILES, &c.

Take a pound of elecampane-root, three pounds of fennel

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seeds, and one pound of black pepper; let these be made into a very fine powder, separately; take two pounds of honey, and the same quantity of sugar, in powder; melt the honey and sugar together over a gentle fire, scumming them continually, till they become as bright as amber: when they are cool, mix and knead them into your powders in the form of a paste.

The dose is the size of a nutmeg, morning, noon, and night. This has been found a specific for the fistula, piles, &c.

FOR THE WHOOPING COUGH, BY THE ROYAL COLLEGE OF PHYSICIANS.

Take flower of Benjamin, and strained opium, of each two drams; camphor, two scruples; essential oil of anise-seed, half a dram; rectified spirit of wine, one quart: digest, and strain off the elixir.

This is originally from Le Mort, and was published by Quincy, with four ounces of liquorice, and four of honey, which the college have omitted. It is anodyne and diaphoretic, and greatly contributes to allay tickling coughs, to open the breast, to give freedom of breathing, to cure an asthma, but particularly the WHOOPING-COUGH IN CHILDREN. The dose for children is from five drops to twenty; and, to grown persons, from twenty to an hundred, at night and morning, in Malaga wine.

DR. SMITH'S PRESCRIPTION FOR THE WHOOPING COUGH.

Take of the musk julep, six ounces; paregoric elixir, half an ounce; volatile tincture of valerian, one dram: mix them, and take two spoonfuls three or four times every day.

Take milk of gum ammoniac, and small cinnamon-water, of each two ounces; tincture of castor, two drams; syrup of balsam, half a dram: mix them, and administer one spoonful presently after.

Towards the decline of the disease, a decoction of the bark, in full doses, may be prescribed to advantage.

END OF THE DISPENSATORY.

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