HARTMAN STOCK FARM

1905

HORSE DEPARTMENT

THE UNIVERSITY
OF ILLINOIS
LIBRARY

636

H25C

REMOTE STORAGE

EDMUND J. JONES

1904 COPYRIGHT-1903
BY
S. B. HARTMAN.
DESIGNED, COMPILED
AND EDITED
BY
JAMES A. LAWRENCE.

PHOTOS BY
INNIS & KIEFER.
COLS. OHIO.

ENGRAVINGS BY
THE TERRY ENGRAVING CO.
COLS. OHIO.

PUBLISHED BY
THE SPRINGFIELD PUB CO.
SPRINGFIELD OHIO.

SPECIAL SKETCHES AND COVER DESIGNED BY
GEO. FORD MORRIS, CHICAGO, ILL.

The Hartman Stock Farm Registry Record Company

INCORPORATED UNDER THE LAWS OF THE STATE OF OHIO

A GENERAL STUD BOOK

FOR HORSES, CATTLE,
HOGS AND SHEEP

S. B. HARTMAN, M. D., PRESIDENT
F. W. SCHUMACHER, VICE-PRESIDENT
F. S. MILLER, TREASURER
J. A. LAWRENCE, MANAGER
L. E. HUME, SECRETARY

—THIS STUD BOOK—

WILL BE IN OPERATION FOR REGISTRATION OF ABOVE CLASSES OF
DOMESTIC ANIMALS AFTER MARCH FIRST, NINETEEN
HUNDRED AND FIVE.

For further particulars and registration rates, address

LEWIS E. HUME, Secretary, Columbus, Ohio, Station C, Box 9cc

S. B. HARTMAN, M. D., PROPRIETOR

HARTMAN STOCK FARM

IMPORTERS *and* BREEDERS
of PERCHERON DRAFT *and*
GERMAN COACH HORSES
COLUMBUS, OHIO

STAFF

FRANK S. MILLER, MANAGER

Agricultural
Horticultural, Cattle,
and Swine Departments

JAMES A. LAWRENCE, MANAGER

Horse Sale,
Breeding, Conditioning
and Advertising Departments

H. B. HARK, MANAGER

Poultry Department

L. J. WAY, D. V. M. VETERINARIAN

LEWIS ED. HUME, CASHIER

WALTER PAYNE, ACCOUNTANT

JOHN POTTS, CONDITIONER

FRED STRICKLAND, }
J. E. BOGAN, } STENOGRAPHERS

CONTENTS

	PAGE
Introduction	5
The Company Plan—The Best Means of Distributing Stallions	6
List of Prizes Won by Hartman Stock Farm	12
The Barb, or The Horse of the Sahara	13
Anatomical Study of the Horse	37
A Study of the Mouth of the Horse	57
Description and Illustrations of the Hartman Stock Farm	99
Description and Illustrations of the Hartman Stock Farm Poultry Plant	113
Origin of the Percheron	118
A Tribute to the Percheron Horse	120
Imported Percheron Stallions	123
Home Bred Percheron Stallions	130
Illustrations of Percheron Stallions	131
Illustrations of Percheron Mares	161
Imported Percheron Mares	163
Home Bred Percheron Mares	170
Home Bred Percheron Yearlings	172
Home Bred Percheron Weanlings	173
The German Coach Horse	174
Champion Warner (995), German Coach Stallion	179
Imported German Coach Stallions	180
Illustrations of German Coach Stallions	182
Imported German Coach Mares	189

SINCE the publication of our last catalogue, the Hartman Stock Farm has enjoyed an almost phenomenal success in the sale of stallions of both the Percheron draft and German coach breeds, for which we desire to extend our thanks to the horse breeding public, and to further assure them that the Hartman Stock Farm aspires to arrive at a point in the breeding and sale departments of their institution, where true greatness can be attained by giving the American horse interests a quality of blood and individuality in horse flesh, coupled with a high class business service of such a character and quality as to entitle this institution to the confidence and patronage of Great America in future years, based on deserving merit. Notwithstanding the present great magnitude and completeness of this plant, it will require several years to mature the further plans for improvements conceived by its owner and founder, before his ideal of a model and up-to-date general stock farm is fully realized. Every conceivable facility is being employed within the reach of capital and thrift to furnish through these great channels the quintessence of quality. Our European buyers are invariably instructed to buy individuality and high breeding regardless of cost, as nothing is too good for America, and there is today only room at the top. Vast capital, endless toil and unselfish pains will all fall far short of its purpose unless the Hartman Stock Farm shall attain that height in public usefulness which it is destined to reach among America's greatest and most prized public institutions—that which is worthy of confidence and deserving of public patronage.

We submit the following pages of history, suggestions and illustrations for whatever they may be worth as a guide to a better understanding of the past, as viewed through a lens that neither magnifies nor diminishes, but portrays objects of interest as they are. Should this little book add one single atom to the general good of American horse interests, then it will have served the purpose for which it was intended.

THE COMPANY PLAN

The Best Means of Distributing Stallions

MUCH has been said for, and especially against, the proposition of the company system as a means by which communities are enabled to purchase stallions. I desire to look at this proposition as it is from not only a business standpoint, but also from the standpoint of a proposition whereby communities are enabled to procure breeding stallions of the draft and coach breeds which they would not be able to procure in any other way. It is not every individual who is financially in a position to buy a two, three or four thousand dollar horse, no matter how much the community in which he lives might be in need of breeding horses. The proposition of procuring stallions with which to build up the breeding stock of a community, of such a character as to attract first class buyers and commercial demand, is easily solved and is made possible through this plan by which a number of first class and public spirited citizens of a community can club together and form a purchasing company and select the individual and breed such as their breeders demand. Where this is properly done, and where responsible concerns are patronized in the purchase of the stallions, there is no reason why such a company should not invariably be made a financial success, providing the gentlemen who are its organizers work as a unit in the furtherance of the financial and business end of their organization. Failure and lack of general success is more often due to misunderstandings, quarrels, etc., among

the stockholders themselves, than from any other one cause, providing their purchase of a horse was properly conducted with, as above stated, a concern which is capable of furnishing not only the requisite quality of individuality, but also blood and breeding, coupled with an ironclad bill of sale guarantee contract which absolutely guarantees what it pretends to.

The Hartman Stock Farm have been diligently at work on the proposition of life insurance on horses sold by this concern for more than two years, and we can now confidently state that we have arrived at a point at last where we believe the subject of life insurance that actually assures has been accomplished by us.

We have been unusually solicitous on this point in our desires to furnish a life insurance rider for a moderate consideration which will actually protect the purchasers against total loss by death of the stallions which they buy, from any cause whatsoever. There were a great many important points to be considered in the proper construction of our plan, which we again state we believe has been in all respects mastered by the Hartman Stock Farm in such a way as to enable us to give the purchasers an insurance rider with their bills of sale which is first of all not only high class and secure from a financial standpoint, but also which will be cheaper to the stallion purchasers than they have heretofore heard of. We regard this feature of a bill of sale contract as one of the utmost importance, for nothing can be more disappointing to either a company or an individual than to lose a stallion which they have purchased before he has had time to remunerate his purchaser. We find, without going into any great detail in this matter, that the law of average, which is

the important factor at all times in the science of life insurance, is of such a nature in the mortuary table of stallions, that we are enabled to say to our patrons that we require an amount not exceeding half of the purchase price to be carried on the life of the stallion, in life insurance, which is placed by this concern in such a way that the Hartman Stock Farm becomes the applicant. Our rule in this connection is to place not to exceed one thousand dollars on the life of a stallion, regardless of what he sells for, and to carry the balance of the risk ourselves, which, according to the law of average and the table of mortality among stallions, leaves only a moderate sum in the case of each death to be charged as against the saving of the premium that is not paid for that portion of the loss which is not insured on the stallions which do or do not die within any twelve month period, hence it can be seen by any one, though not experienced in mortality tables or the laws of average, that it is not at all times necessary for a concern possessing or selling a large number of properties to insure them all for their full amount in order to be able to receive full recompense in case of loss; furthermore it can be seen in this connection, this point, that the number of stallions which we sell is so large as compared with the number of losses by death, that a death does not represent the total value of the animal lost. It is for these reasons that the Hartman Stock Farm only require a deposit of a small sum in addition to the purchase price in order to guarantee to deliver the purchaser another stallion of same breed and equal value, providing the animal so purchased shall die within a given length of time following the date of sale when insured. We are now dealing with horse affairs at a time which records the greatest demand for high class horse flesh that has ever been experienced in America. The European fountain supply of thoroughbred horses are sensible of the American situation and it is not possible today, to use the horse buyer's phrase, to steal horses, particularly of the Percheron draft or German coach breeds, which the American breeders are so anxious to possess. The

American importers of Percheron draft and German coach horses have a hard problem to meet in their foreign buying of these two breeds, as both are in such demand and the supply is so small as compared with the demand, that the buyer has no choice other than to buy regardless of cost, and the American importer, though he buy the highest priced specimens in stallions of these two popular breeds, does not receive a single scratch of the pen of guarantee that the horse he buys will ever arrive in America or that they will live and breed after they do arrive, and notwithstanding this fact the Hartman Stock Farm guarantees their stallions to produce more than a paying quantity of foals, and through the excellent arrangement of life insurance feature which we add to our guarantee, those who purchase of us are further guaranteed another stallion of equal value in case of death within a specified time for a very small deposit; hence our patrons can buy of us, knowing beyond the shadow of a doubt that the ironclad bill of sale contract delivered by the Hartman Stock Farm to their patrons eliminates every conceivable chance for loss in the horses which we sell them, as the guarantee furnished by the great Hartman Stock Farm stands far beyond question in its security.

Returning again directly to the original gist of our subject, it is always well for those who are ready to criticize the company plan for the distribution of breeding stallions to remember that this mode of purchasing a stallion is invariably a blessing to a community, and enables the various breeders, who are in a position to need the service of such a stallion in order to be in the horse breeding commerce, to procure the same by a small obligation which is due in years to come, in fact at a time so remote that the horse shall have earned an amount sufficient to meet the same by the time it is due and payable; and we would say further to the skeptic and complainer on this subject that we know of no one line of business in the world that is handled as between the seller and the buyer, with more absolute equity providing, as above stated, that the selling

concern is high class, responsible and ready to make good all promises. I will admit that a high handed fraud, as practiced by some unscrupulous persons, has done much to create a prejudice against the company system, which is not the fault of first class and reputable business institutions in horse selling, and neither is it in any degree an argument against the proposition when properly and honestly conducted by concerns whose guarantees represent sufficient backing to make them reliable, hence where this cause has been abused, it is no fault of the plan, and the Hartman Stock Farm stand ready to adopt any plan that is proven to be better and more fair for the public at large than this old, tried and successful plan. The state of Illinois is, in its entirety, an apt and even vivid illustration of the truth of this statement concerning the success of the company plan. It is almost impossible to go in any direction in that state in the farming and horse breeding communities without finding a stallion or two owned by a company, and Illinois is today, without any question, foremost among American horse breeding interests and has never been hurt in the stallion business. On the contrary, enormous sums of money roll into that state annually to the farmers for high class gelding drafters. Within the last few years, six and seven hundred dollars has not been an uncommon price for large fine Percheron geldings. The cause of this is, among other reasons, that the Illinois breeders invariably insist on buying the very best stallions to be had, regardless of price. No age in the past records opportunities in which there were as great possibilities for profit in horse breeding as at the present time, and yet notwithstanding this fact the farmers have been so lax in their draft horse breeding that shippers are compelled to buy and ship three year olds on account of great scarcity, and one only needs to be known as being identified with horse business in any degree to be repeatedly asked by well-to-do city gentlemen, "Where can I get a span of nice coach horses for my carriage?" And if you question him, you will find he has hunted far and near in his efforts to procure a large, handsome and desirable team for that purpose. Can you tell him where he can get a team today in America on the spur of the moment? If you know of such a team, it is the exception, hence there

is need of but little argument along this line. A high class draft gelding or coach horse at the age of three years will bring a sum sufficient to buy four or five fat three year old steers, and I am told invariably by men who have had long experience in breeding and feeding stock, that the cost of rearing and fattening a three year old steer is more than double that of preparing a colt for the market at the same age. America is, by all natural advantages, highly fitted for stock breeding and raising of the highest order, and while great advancement has been made with cattle, sheep, hogs, poultry, etc., yet she lags in high class horse breeding compared with her opportunities and demands, and as it is today, with the breeder lies the chance of great profits in the horse commerce of America, more than in any other branch of the business. The buyer, the shipper and the dealer in high class geldings and mares are working on smaller profits today than when horses were low in price, and in limited demand. The purpose of the Hartman Stock Farm from its very incipency is to further the American horse interests in every way possible, and we wish to assure the public that we will, to the best of our abilities, aim to fill that always open demand at the top and to render a business service that will merit the highest class commercial approval.

LIST OF PRIZES WON BY HARTMAN STOCK FARM

At Ohio State Agricultural and Industrial Exposition, Held in
Columbus, Ohio, Aug. 29, 30, 31 and Sept. 1 and 2, 1904.

GERMAN COACH HORSE CLASS

Second prize for best four year old.
Third prize for best four year old.
Prize for best stallion three years old and under four.
Second prize for best stallion three years old and under four.
Third prize for best stallion three years old and under four.
Prize for best stallion two years old and under three.
Second prize for best stallion two years old and under three.
Third prize for best stallion two years old and under three.
Prize for best stallion one year old and under two.
Prize for best mare four years old or over.
Prize for best mare three years old and under four.
Prize for best mare two years old and under three.
Second prize for best mare two years old and under three.
Prize for best filly one year old and under two.

PERCHERON DRAFT CLASS

Prize for best stallion four years old or over.
Second prize for best stallion four years old or over.
Second prize for stallion three years old and under four.
Third prize for stallion three years old and under four.
Prize for best stallion two years old and under three.
Second prize for best stallion two years old and under three.
Third prize for best stallion two years old and under three.
Prize for best stallion one year old and under two.
Prize for best mare four years old or over.
Second prize for best mare four years old or over.
Third prize for best mare four years old or over.
Prize for best mare three years old and under four.
Second prize for best mare three years old and under four.
Third prize for best mare three years old and under four.
First prize for best mare two years old and under three.
Second prize for the best mare two years old and under three.
Third prize for the best mare two years old and under three.
Second prize filly colt under one year.
First prize for best produce of mare.

THE BARB, or THE HORSE OF THE SAHARA

(Copyrighted by James A. Lawrence, 1905.)

THERE is likely no one subject in the world, concerning which there are more mistaken ideas and impressions, than that which is prevalent among horsemen in regard to what constitutes

a Barb or an Arab horse. The majority of so-called Arab horses, which have been imported into the United States and into the various parts of Europe today, as in the past, are not all the true Arab horse. They are either Barbs, the horse of the Sahara Desert, or Kadish (mongrels). The importance of the horses of the Sahara, which have been for ages bred and reared by the Berber tribes of the Sahara Desert, and which have played such an important figure in the blending of almost all of the best and most useful horses of

this day, is such as to make them a horse of great present interest, and about which so little is generally known that I take this opportunity, though limited in space, to portray a brief and accurate description and illustration by words, and will quote from the best known authority, the work of E. Daumas, General of Division Commanding at Bordeaux, with commentaries by the Emir Abd-el-Kader, as to what is meant by the

Barb horse, found throughout the Barbary States which are situated on the west and northern coasts of Africa, as follows: Morocco, with a coast frontage on the North Atlantic ocean, just opposite the invincible fort of Gibraltar, and at the entrance of the Mediterranean Sea; Algeria, the second of the four Barbary States, is situated east of Morocco, with a coast frontage on the Mediterranean Sea, and Tunis lies directly east of Algeria, also on the Mediterranean Sea; Tripoli, the fourth of the Barbary States, is situated just east and south of Tunis and is bound on the north by the Mediterranean Sea, and on the east by Egypt, and the Sahara Desert, in its great extent, lies south of these four states.

The name "Barb," as applied to this race of horses, has its derivation from "Berber," as is also the case with the name "Barbary." The present population of the Sahara consists almost exclusively of Arabs, Berbers and Negro tribes. The Berbers occupy the west central region almost exclusively and appear sporadically in the western, and stretch northward into Morocco and Algeria. The Negro tribes form a compact block in the east central region, northward and north-eastward from lake Tchad; and the Arabs are in possession of all the rest of the country. Politically, the Sahara belongs partly to Morocco (Tafilet, etc.), partly to Algeria and Tunis (and thus to France), and partly to the Turkish Empire (Tripolis, Egypt, etc.). France especially has been steadily pushing south with the purpose of forming a junction ultimately with her colony on the Senegal. My reason for mentioning these facts will

be brought out as we advance in this article, to show the important part that the Barb horse has in the past, and is today playing in the successful horse breeding which she (France) has attained in her district of Perche (the Percheron).

The Origin of the Berber Race of People

At this point it becomes almost necessary to consider briefly the origin and descent of the Berber race, in order to follow the lineage of the Berber's horse (the Barb). Many of the most learned and intelligent Berber sheiks confidently state that they owe their origin to a rich Arabic blood. El-Massoudi states that the Berber descended from the Beni-Ghassan, while other writers affirm that they came from the Beni-Lekhm and the Djourzam. Their native country was Palestine, from whence they were expelled by one of the kings of Persia. They then emigrated to Egypt, but, the sovereign of that country refusing them permission to settle there, they crossed the Nile and spread over the regions to the westward of the other side of the river. Maleck-Ben-el-Merahel says that the Berbers form a very numerous population, composed of Hymiar, Modher, Copts, Amalkas and Kanean, who became amalgamated in the province of Sham (Syria) and took the name of Berbers, which, according to this historian, with whom El-Massoudi, El-Souheili and El-Zabari also agree, was owing to their marching under Ifrikesh to the conquest of the African peninsula. Ibn-el-Kelbi asserts that opinions are divided as to the real name of the chief under whose guidance the Berbers emigrated from Syria toward the Maghreb. Some will have it that it was under the prophet David, others name Youssha-Ben Enoum, others again Ifrikesh, and yet others assert it was under the leadership of certain kings of the Zobor. El-Massoudi adds that they did not emigrate until after the death of Goliath,

and that they established themselves in the province of Barka and in the Maghreb, after having vanquished the Frendj (Franks). They then invaded Sicily, Sardinia, and the Balearic Isles and Spain.

The famous poet and dethroned king, Aamrou-el-Kais, remarked to Cæsar, emperor of Constantinople, in a long piece of versification, a part of which the following is an extract: "And I answer thee, if ever I am reinstated as king, we will ride a race where you shall see the horseman lean forward over his saddle to increase the speed of his courser." "A race across a space trampled down on all sides; where no higher marks are distinguishable, to direct the traveler, than the hump of an aged Nabathean camel, loaded with years and uttering plaintive moanings. We shall be borne, I tell thee, on a horse accustomed to nocturnal journeys; a steed of the Barbary race, with slender flanks like a wolf of Gada; a steed that rushes along on his rapid course and whose flanks are running with sweat." Aamrou-el-Kais was one of the ancient kings of Arabia who took infinite pains to procure Barbary horses, with which to combat his enemies. He was doubtful of success if obliged to trust himself to the qualities of Arab horses. "It is not possible in my opinion," says Emir Abd-el-Kader, "to give more invincible proof of the superiority of the Barb horse." The essential point here is the extract from the poet, Aamrou-el-Kais, on the subject of the remote proficiency of the Barbary horses.

As for the Berbers themselves, everything proves that they have been known from time immemorial, and that they came from the east to settle in the Maghreb, where we find them at the present day.

There is, without any question, a very close blood relation between the

Barb horse and the horse of the Arabic Desert, properly called the Arab.

The venerable Emir Abd-el-Kader, a Berber sheik, goes so far as to say that the Barb horse possesses traits, speed and endurance superior to many of the

eastern horses. However, this theory is not borne out entirely by history and experience. While, as we have indicated, there is a close affinity of blood between the Barb and the Arab, yet both of them possess qualities peculiarly different, and each one fills an important sphere in scientific and intelligent horse breeding pursuits, on which subject we will treat with more detail further along, and try as far as possible to illustrate, by reference to blood and blending, in which the Barb's potency and blood influence can easily be discerned by any modern horseman. But before we can arrive at a detailed study of the blood influence of the Barb, we believe it is important in this connection to consider for a further moment the people who have fostered and so successfully bred and preserved this wonderful and most useful race of horses.

The Life and Habits of the Berbers

To a pastoral and nomadic people, roaming over vast grazing grounds, and whose numbers bear no proportion to the extent of their territories, the horse is a necessity of life. With his horse the Berber trades and travels, looks after his numerous flocks, distinguishes himself in battle and at weddings, and at the festivals of his marabouts. He makes love, he makes war; space is nothing to him. Thus the Berbers of the Sahara still give themselves up with ardor to the rearing of horses. They know full well the value of the blood. They pay great attention to crossing the breed and try every means to improve the species. The state of anarchy in which they live in these latter times has naturally modified some of their habits, but it has effected no change in the condition of their existence, the breeding, perfecting and training of horses. The love of the horse has passed into the Berber blood from his ancestor, the Arab. That noble animal is the friend and comrade of the chief of the tent. He is one of the servants of the family. His habits, his requirements, are necessarily made an object of study. He is the burden of their songs; the favorite topic of their conversation. Day by day in gathering outside the douar, where age alone enjoys the privilege of speech, and which are marked by the decorous behavior of the listeners

seated in a circle on the sand or on the turf, the young men add to their practical knowledge the counsels and traditions of their seniors. Religion, war, the chase, love and horses, inexhaustible subjects of observation, make regular schools of these open air meetings in which warriors are formed, and develop their intelligence in collecting a mass of facts, precepts, proverbs, and sententious sayings, the application of which will only too frequently occur in the course of the perilous life they have to lead.

The best horses are chiefly to be found in the Sahara, where the number of bad horses is very small. In fact the tribes that inhabit it and those who border on it only employ their horses to make war and to contend in trials of swiftness. Accordingly they never use them for agricultural purposes or exercise them in any other way than in battle, at the chase, and in racing. On this account their horses are nearly all excellent. In the Tell (the farming and grain cultivating district of the Saharians) most of the Berbers apply their horses to the cultivation of land. They also make use of them to ride and for other purposes. No individual in the Sarhara cares to possess ten camels until he has a horse with which to defend them. The horse of pure origin bred in the Sahara is much preferable to the same blood bred and reared in the Tell for the reason that the horse of the Sahara is accustomed from the age of three or four years old to long journeys, hunger and thirst, which render him able to achieve whatever is required of him.

Names of Various Species and their Use

The types most esteemed in the western part of the Algerian Sahara are three in number: that of the Haymour, that of the Bou-Ghareb and that of Merizigue. Their offspring are dispersed among a great many tribes, such as the Hamyan, the Oulad-Sidi-Shikh, the Leghrouat-Kuesal, the Oulad-Yagoub, the Makena, the Aamour, the Oulad-Sidi-Nasseur and even the Narar. Every one, according to his fancy or according to his occupation, offers his mares to the descendants of one of the three types. The Haymour usually produces bay horses; Bou-Ghareb, white ones, and the Merizigue, those of a grey color. The Haymour are most sought after. They are of a beautiful shape, with splendid substance and exquisite forms, and yet very active. They are known to be the swiftest coursers of the Sahara and preserve their strength to a very advanced age. They bring the greatest amount of remuneration as an instrument of great utility in war, marauding and the hunting pursuit, to which they are constantly applied, and their owners belong to the richest and noblest families. Next comes the race of Bou-Ghareb, the produce of which are taller, and are also very patient of fatigue, but less fleet than the Haymour. Like the latter, however, they remain sound until of great age. Lastly come the Merizigue, who are shorter and have less bottom than the preceding, but are solid, clean limbed and sober. They are chiefly sought after by common horsemen who have long journeys to make and great hardships to undergo. The Haymour breed is superior to all others; nor has the imagination of the Arab failed to trace it to a marvelous source. The legend runs as follows: A chief owned a magnificent mare, which happened to receive a serious hurt in hunting the ostrich. It was feared that she would be lame for life. Her master thought he could see no improvement in her condition and was annoyed at the trouble of dragging her after him in all his removals from place to place, but was still unable to bring himself to put her to death, and therefore turned her out to graze at large. On returning from a long journey after a considerable lapse of time he remembered his mare and inquired what had become of her. She proved

to be in excellent health and on the point of foaling. He at once brought her in, took the greatest care of her and soon afterwards found himself possessed of a foal that was unrivaled throughout the desert. As no tribe had passed for a very long time near the place where he left the animal, the Arabs were willing to believe that she had been covered by a wild zebra stallion (Hamar-el-Ouahhch), and they gave to the foal the name of Haymour, which is that of the foal of the Onager. Whoever has seen the horses of that breed will not question for a moment the truth of the tale, for their resemblance to the zebra strikes every eye, relates General E. Daumas. In the central part of the Algerian Sahara, the Araba affect the offspring of Rakeby. This breed has both height and bottom, and is found among the Aghrazelias, the Oulad-Shayb, the Oulad Mokhtar and even among the Oulad Khrelif. For the most part they are grey or dark bay. They endure hunger and thirst with ease and without being knocked out, and will cover for several consecutive days distances of twenty-five to thirty leagues (seventy-five to ninety miles per day.) At the present day, the finest animals are in the family of the Seuffran. Rakeby, it seems, was formerly brought from Morocco by the ancestors of Sidi-Hamed-Oulad-Tedjini, the famous marabout of Aain-Mady. The Oulad-Nayl make use of the offspring of a celebrated stallion named El-Biod (the white), formerly the property of the Oulad-Si-Mahmed, one of their divisions. This stock is renowned for its sobriety and speed. In the Hodna and the Medjana, among the Oulad-Makrane and the Chiras, the most highly esteemed are the descendants of a well known stallion belonging to the Oulad-Mahdi. He was named Bey-el-Hissen, and was the property of the family of El-Amri-Ben-Meramer.

Endurance of the Barb

A good horse in the desert ought to accomplish for five or six days, one after the other, distances of twenty-five to thirty leagues (seventy-five to ninety miles). After a couple of days, if well fed, he will be quite fresh enough to repeat the feat, says General E. Daumas, after years of practical experience in the Sahara. "With a horse that, on arriving at a resting place shakes himself, paws the ground with his feet and neighs at the approach of barley, then pushing his head into the nosebag begins to munch eagerly three or four mouthfuls of the grain, there is no occasion to pull up in a journey," says Emir Abd-el-Kader. The distances to be traversed in the Sahara are not always of such great length, but at the same time it is not at all rare or unusual for horses to travel fifty to sixty leagues in four and twenty hours (one hundred and fifty to one hundred and eighty miles in twenty-four hours). With regard to the great distances accomplished by the horses of the Sahara Desert, instances may be quoted which may appear incredible, and the heroes of which are still alive, if witnesses were wanted to confirm the truth of the story. The following is an apt illustration of not only the great speed and endurance of a Barb horse, but also illustrates the hardships and disappointments of the nomadic tribes under the oppressive rule of the Turkish kingdom, which has harassed and oppressed in various manners the nomadic tribes for ages past. The following experience was related by the hero himself to Gen. E. Daumas, which we give in his own words:

"I had come into the Tell with my father and the people of my tribe to buy corn. It was in the time of the Pasha Ali. The Araba had had some terrible quarrels with the Turks, and as it was their interest for the moment to feign a complete submission in order to obtain an amnesty for the past they agreed to win over by presents of money, the Pasha's suite, and to send to himself not merely a common animal as was customary, but a courser of the highest distinction. It was a misfortune, but it was the will of Allah, and we were forced to resign ourselves. The choice fell upon a mare (Gray

Stone of the River) known throughout the Sahara, and the property of my father. He was informed that he must hold himself in readiness to set out with her on the morrow for Algiers. After the evening prayer my father, who had taken care not to make any remark, came to me and said: 'Ben-Zyan, art thou thyself to-day? Wilt thou leave thy father in a strait, or wilt thou make red his face?'

" 'I am nothing but your will, my lord,' I replied. 'Speak, and if your commands are not obeyed, it will be because I am vanquished by death.'

" 'Listen: These children of sin seek to take my mare in the hope of settling their affairs with the Sultan, my grey mare, I say, which has always brought good fortune to my tent, to my children, and the camels; my grey mare, that was foaled on the day that thy youngest brother was born. Speak! Wilt thou let them do this dishonor to my hoary beard? The joy and happiness of the family are in thy hands. Mordjana (such was the name of the mare) has eaten her barley. If thou art of a truth my son, go and sup, take thy arms, and then at earliest nightfall flee far away into the desert with the treasure dear to us all.'

"Without answering a word I kissed my father's hand, took my evening repast, and quitted Berouaguia, happy in being able to prove my filial affection, and laughing in my sleeve at the disappointment which awaited our sheiks on their awaking. I pushed forward for a long time, fearing to be pursued, but Mordjana continued to pull at her bridle and I had more trouble to quiet her than to urge her on. When two-thirds of the night had passed, and a desire to sleep was growing upon me, I dismounted and, seizing the reins, twisted them round my wrist. I placed my gun under my head and at last fell asleep, softly couched on one of those dwarf palms so common in our country. An hour afterwards I roused myself. All the leaves of the dwarf palm had been stripped off by Mordjana. We started afresh. The peep

of day found us at Souagui.

My mare had thrice

broken into a sweat,

and thrice dried

herself. I touched

her with the heel.

She watered at Sidi-

Bou-Zid in the Ouad-

Ettouyl, and that even-

ing I offered up the prayer at Leghrouat, after giving her a handful of straw to induce her to wait patiently for the enormous bag of barley that was coming to her. These are not journeys fit for your horses," said Si-ben-Zyan in conclusion, "for the horses of you Christians, who go from Algeria to Blidah, thirteen leagues, as far as from my nose to my ear, and then fancy you have done a good day's work."

This Arab, for his part, had done eighty leagues (two hundred and forty miles) in twenty-four hours; his mare had eaten nothing but leaves of the dwarf palm on which he had lain down and had only been watered once, about the middle of the journey, and yet he swore to me by the head of the Prophet that he could have slept on the following night at Gardaya, forty-five leagues (one hundred and thirty-five miles) in twelve hours more, had his life been in any danger. Si-ben-Zyan belongs to a family of marabouts of the Oulad Salahh, a section of the great tribe of the Araba. He comes frequently to Algiers and will tell this story to whoever will listen to him, confirming his narrative, if required, by authentic testimony.

The Arab of the Sahara sums up the perfections of a horse in the following manner: He must carry a full grown man, his arms, and a change of clothing, food for both his rider and himself, a flag, even on a windy day, and, if necessary, drag a dead body behind him,

keep up a good pace the whole day through without giving a thought to food or water, all of which amounts to, in exact weight, as follows:

	Kilograms	Hectograms	Decagrams
Horseman armed and in full uniform.....	82	..	..
Equipments and pistols.....	24	..	..
Bread for two days.....	1	5	..
Biscuit for three days.....	1	6	5
Coffee for five days.....	..	6	..
Sugar for five days.....	..	6	..
Bacon for five days.....	1	..	..
Rice for five days.....	..	3	..
Salt.....	..	..	8
Pressed hay for five days.....	25	..	..
Barley for five days.....	20	..	..
Three packets of cartridges.....	1	3	..
Four horse shoes.....	1	6	..
Total (350 lbs).....	159	6	3

One hundred and fifty-nine kilograms, or 19 more than the horse of a carabiner, and 26 more than the horse of a cuirassier in France. This weight of course decreases as the column proceeds on its march.*

Now, a horse that, in a country often rough and difficult, marches, gallops, ascends, descends, endures unparalleled privations and goes through a campaign with spirit, with such a weight on his back, is certainly worthy of all of the praise and notoriety he has for ages enjoyed.

In the opinion of the Berbers, a Barb horse lives from 20 to 25 years, and a Barb mare from 25 to 30. As to the service to be derived from this race of horses, a proverb exactly expresses their idea.

Sebaa el Khrouya, (seven years for my brother);

Sebaa Iya, (seven years for myself);

Sebaa li adouya, (seven years for my enemy).

*Delivered the 31st February, 1847, by Colonel Düringer, at the moment of departure of a column.

Among the thousands of old Bedouin sayings, the following are examples of their peculiar art in expressions :

“Horses for a quarrel,
Camels for the desert,
And oxen for poverty.”

“A jade for the Christian.”

“The paradise of earth is to be found on horseback,
Or on the bosom of a woman.”

“Evil spirits enter not into a tent where there is a thoroughbred horse.”

“The angels sympathise with only the three following pastimes of men—the exercise of war, the joys of connubial love, and the running of horses.”

“Every grain of barley given to a horse is inscribed by Allah in the register of good works.”

The tribes that inhabit the Sahara have always been better able than those of the Tell to withdraw from the caprice, oppression and spoliation of the various conquerors of Africa. It is therefore evidently among them that the Barb has had the best chance of preserving all the qualities of grace, speed, and sobriety that are universally regarded as its unusual characteristics.

Remarks by the Venerable Sheik Emir Abd-el-Kader

I have seen among the Annaza, a tribe extending from Bagdad to the confines of Syria, horses (Arabian) so absolutely priceless that it was impossible to buy them, or at least to pay in cash for them. These horses are usually disposed of to great personages or wealthy merchants, who pay a fabulous price for them in thirty to fifty bills, falling due at intervals of twelve months, or else they bind themselves to pay an annual sum forever to the vendor and his descendants.

He has the flanks of the gazelle, the legs of the female ostrich, and the straight back of the wild ass standing as a sentinel on a hillock.

In default of public notoriety, it is by actual trial, by the speed combined with bottom, that the Arabs form their judgment on horses and recognize the nobleness and purity of their extraction, but the form likewise reveals the higher qualities.

A thoroughbred horse is one that has three things long, three things short, three things broad and three things clean. The three things long are the ears, the neck and the forelegs. The three things short are the dock, the hind legs, and the back. The three things broad are the forehead, the chest and the croup. The three things clean are the skin, the eyes and the hoof.

Maxims of the Bedouin Cavalier

When thou hast purchased a horse, study him carefully, and give him barley more and more every day until thou hast ascertained the quantity demanded by his appetite. A good horseman ought to know the measure of barley suited to his horse, as exactly as the measure of powder suited to his gun.

Suffer neither dogs nor donkeys to lie down upon the straw or barley you intend to give your horse.

The Prophet has said: "Every grain of barley given to your horses shall secure you an indulgence in the other world."

Give barley to your horses; deprive yourself to give them still more; for Sidi-Hamed-ben-Youssouf has remarked: "Had I not seen the mare produce the foal, I should have said it was barley."

Do not water your horses more than once a day, at one or two in the afternoon; and give barley only in the evening, at sunset. It is a good practice in wartime, and besides, it is the way to make their flesh firm and hard.

To train a horse that is too fat for the fatigues of war, reduce him by exercise, but never by lowering his keep.

So long as your horse, when at work, sweats over his whole body, you may say that he is not in good wind. But you may count upon him as soon as he sweats only on the ears and chest.

Leave not thy horse near others that are eating barley, without he has some likewise, for otherwise he will fall ill.

Never water your horse after having given him barley. It would be the death of the animal.

After a rapid gallop, water him with the bridle on, and feed him with the saddle-girth on, and thou wilt not repent of it.

Be clean, and perform your ablutions before mounting your horse, and the Prophet will love you.

Whosoever is guilty of an impropriety on the back of his horse is not worthy to own him. Moreover he will suffer for it, for his horse will do himself injury.

Never fall asleep upon thy horse. The sleep of the rider wounds or wearies the animal.

A horseman should never urge his horse to full speed while going up or down hill, unless he is forced to do so. He ought on the contrary to hold him in.

When you put a horse to his speed, husband his strength for the time of need. He must be treated like a goat-skin waterbag, which if you open gradually, keeping the neck nearly closed, you will easily preserve the water. But if you open it hastily, the water will rush out all at once, and not a drop will remain to quench your thirst.

When you have a long journey to accomplish, relieve your horse by changing his pace, to enable him to recover his wind. Repeat this until he has sweated and dried three times, then shift his girth and afterwards do what you will with him. He will never fail you in a difficulty.

Never strike a thoroughbred (Barb or Arab). It humiliates him and his pride will revolt and urge him to resistance. It is quite sufficient to correct or animate him by word or gesture.

When after a long journey in the winter, through rain and cold, you at length regain your tent, cover your horse well, and give him parched barley and warmed milk, but do not let him have any water that day.

Suffer not your horse to have anything to drink or eat directly after a journey of unusual length or you will produce inflammation.

Barb Blood Influence in Blended Strains

The blood of the Barb, the horse of the Sahara, with the blood of the Arab, the horse of the Arabian Desert, Syria and Turkey in Asia, has played the principal part in almost all breeds of famous strains of the equestrian breeding art in advanced civilization of the old as well as the new world. He is the bone and sinew of the English thoroughbred running horse, of the Oldenburg, of the Orloff, the Hackney, the Percheron, the Clays, the Morgan and the American trotting horse. It is vain to produce argument, tradition and historical data, for on this immovable foundation, the famed courser of the Orient rests not only the credit and the glory of the horse fame of the past, but within its folds are couched and contained the only hope for the future fountain supply.

America is acquainted with the Barb, the horse of the Sahara. He is no stranger even in the new world. "Henry Clay" was almost a full-blood Barb. Through his sire's veins was contributed the Berber horse by imported "Grand Bashaw." His dam, the famous mare called "Surrey," was the daughter of full-blood Barbs that were imported from the Barbary States by France and taken into Canada by Dominican priests for the Dominican colonies of Canada, and it would be impossible for me to cite the reader to a better illustration of what a Barb is than to show a picture of old "Henry Clay." "Justin Morgan" was a Barb as was "Henry Clay," with the exception possibly of a little difference produced by a little greater infusion of the

Arab blood. "Imported Messenger" was built on a foundation of blood which partly rested on the horse of the Sahara, through Lord Osborn Godolphin's imported stallion called "Godolphin," who was used in Lord Godolphin's stables merely as a teaser

to his celebrated horse, "Hobgoblin," and whose fame was only an accidental discovery through the absence of "Hobgoblin" one day when a mare was presented for service. The owner chose the service of "Godolphin," the teaser, rather than make another trip to these barns, which was the beginning of the European fame for the Barb as a race horse. "Messenger" contained this same "Godolphin" blood in his veins, along with that of the "Darley Arabian" and the "Byrley Turk," both desert bred Arabs, and with this fountain of blood he was invincible in his potency to blood that was homogenous, which had found its way on to American soil prior to his importation, through various channels. Even the Percheron draft, with world renown, and without a peer for his specialty in rapid draft, owes his greatness, as does the speed horse, the trotter, the runner and the coach horse, to that same fountain. The Crusades of Charles Martell, which were waged against the infidels of the East, through conquerors procured thousands of richly bred Arabs and Barbs, which made it possible for Perche of France to rule the world in draft horse breeding fame. The possession which France holds in the Barbary States today is a further answer as to why she can supply the civilized world with better draft horses than her neighbors, for through this fortunate acquisition France has been enabled for years to maintain a stud of Barb horses and mares, from which fountain she is enabled to reimburse her Percheron.

Blood Influence of the Horse as Primitively Found

To the best of my belief, after extensive research, there were originally but two distinct breeds or classes of horses in the world, barring ponies; one a large and grossly formed horse resembling some of the draft breeds of today, which was, according to the best authorities, indigenous to the Flanders districts of low and swampy lands of the present Belgium; and the other the sleek, well formed, thin skinned and glossy coated class that were found in the East, designated usually as the courser. The Flanders horse has played an important part in the early history of European horse breeding, toward increasing size and bone, to a number of the present draft horse breeds. The trotting gait is invariably naturalized with the Flanders horse, but the quality of his feet, bone, coat and general form was, it is needless to say, very inferior to that of the eastern horse, the courser. It is plain to see at the present day the importance and truth of this assertion, through a comparison of the quality of the coarser types of some of the breeds of draft horses of today whose origin and lineage trace to that of the Flanders horse, with a breed which has emanated from the blood of the eastern courser, as does the Percheron. The difference is very apparent in many ways, among which are the important considerations of deep, hard, lasting and well-formed feet, high quality of bone, rapidity in movement, docility and sweetness of temper, texture of coat and high intelligence, all of which traits the Percheron can boast of with impunity, and for which qualities can be thanked the courser (Barb and Arab). And this is not all that can be gleaned from this important difference between the Percheron of eastern origin and the draft horses of Flanders origin, for it is plain to be seen in this connection, to those who have studied in any degree the subjects pertaining to blood influence in equestrian breeding science. How often have American farmers related to me without knowing the cause, that the Percheron horse mated with so much better results with the mixed breeds of American mares, which were derived largely from and by the blood of trotting, coach horse and various strains, which in turn emanated, in a majority of cases, from the eastern blood, the courser. The

cause for this difference in results, obtained in the Percheron crosses with the mixed bred American mares, in whose veins a majority of eastern blood courses, is due to the fact that there is a close affinity of blood between them and the Percheron, as both are of the same origin and fountain, and hence the Percheron blood is homogeneous to that of all of the trotting and coach bred stock of today, and it is for that reason that so often farmers accidentally breed a high class general purpose horse from a small draft mare (when bred to a Percheron stallion), which contains a considerable infusion of trotting blood, in their efforts to breed draft horses; a fortunate accident which could never occur if this same mare were bred to a draft stallion of the various other breeds, which contain in a great measure the blood of the Flanders horse. The cross through the Flanders channel of blood could not possibly produce in union with this small trotting-bred draft mare anything but a very cheap and undesirable chunk which would show a general lack of harmony in his conformation; for instance, a trotting horse bone with draft horse feet, a draft horse head and perchance with a trotting horse middle, etc. These are some of the reasons why the Percheron stallion is the highest priced draft horse of America, and the cause for his being eagerly sought after by the horse breeders of the civilized world today. Who can imagine a more irrational proposition in horse breeding practice than to cross a Belgian with a mare of some of the trotting strains, or a Belgian with a thoroughbred running mare, without first building an approach of several generations preparatory, and yet it is not infrequent to witness matings in the horse breeding of America that is almost as radical.

Size and Conformation of the Barb

Returning directly to the subject of the Barb or the horse of the Sahara for a moment, sufficient only to give a brief outline of the size and some of the very marked traits and conformation of this great horse, the Barb is usually from fourteen hands three inches to fifteen hands one inch in height and, as can be gleaned from the foregoing treatise, he possesses almost invariably a straight hind leg, drooping croup, a high wither and is not infrequently some-

what low in the back, which is partially due to the high carriage of the head. He is also to be recognized by the very high crest of the neck, and most strains of them possess a short and rather wide ear, a great breadth of forehead (between the eyes), a prominent eye of great brilliance, a large jawl, small and well chiseled muzzle and large nostril. It is a rarity to find one with a poor tail carriage. In general appearance, his form bespeaks great strength and substance, with feet of the most superb quality, so hard that it is almost impossible to cut them with an ordinary blacksmith's paring knife. It is not infrequent for a Barb horse to possess feet approaching the mule foot in shape. The infusion of the Barb blood into that of the Percheron in late years is very noticeable in the change which has taken place in the shape of the Pecheron foot. While the size of the Percheron's foot has been somewhat reduced, it is needless to say that it has not suffered in quality.

The Arab Horse of the Arabian Desert

I will mention by name, as briefly as possible, a portion of the strains of the Arab horse which have come down through the five lines of the original names or substitutes of a later date, corresponding with the five original Arabian mares, through one descendant, the "Keheilet Ajuz," from which emanated the ancestral tree of the Arabian horse, with some ninety-eight different branches. I refer now not to the Barb, the horse of the Sahara, but to the Arab, in order to merely draw, in a brief account, the dividing line between the horse of the Sahara and the Arab, which is the horse of Arabia, Turkey in Asia and the far East. The five famous mares above referred to, collectively called Al-Khamseh, form the five main branches of the genealogical tree, which emanate in a body from the Kahelian or Kuhl race, as given by Major R. D. Upton, author of "New Market and Arabia," Captain of the late Royal 9th Lancers of England, who died in 1881 and who was, without question, the best of modern authorities on the Arabian horse, his origin and descent, etc., which we submit in part as follows:

Keheilet Ajuz Strain

1. Keheilet Heige.	4. Keheilet Kroash.
2. Keheilet abu Soara.	5. Keheilet Shalua.
3. Keheilet al Esheir.	6. Keheilet al Denais.
7. Keheilet al Nowak.	

Keheilet Ajuz Strain—(Continued)

1. Keheilan Duhara.	16. Keheilan Jaizi.
2. Keheilan Dabian.	17. Keheilan al-Muson.
3. Keheilan al Ghazala.	18. Keheilan abu-junub.
4. Keheilan Shenin.	19. Keheilan Moyel.
5. Keheilan Anazah al Derwish.	20. Keheilan Abub.
6. Keheilan Ras al Fadawi.	21. Keheilan Jahari.
7. Keheilan Jehab al Fair.	22. Keheilan Mahed.
8. Keheilan Rodan.	23. Keheilan Haraka.
9. Keheilan Hunaer.	24. Keheilan Zuada.
10. Keheilan Mendil.	25. Keheilan Kinian.
11. Keheilan Hamad.	26. Keheilan al-Shaieh.
12. Keheilan Haloadj.	27. Keheilan Aurif.
13. Keheilan Tamri.	28. Keheilan Raowaha.
14. Keheilan Hadali.	29. Keheilan Maijce Hamad.
15. Keheilan Mowak Deber.	30. Keheilan Wadnan Harsan.

These I understood to be just simple strains from the Keheilet Ajuz branch, many of which I have actually ascertained to be so.

The Seklawi Fedran Family

Derived from Keheilet Ajuz	{	Seklawi-Jedran.
		Seklawi-Obeiri.
		Seklawi Al-Abd.

The Abayan Family

It is also believed to be derived from Keheilet Ajuz and perhaps from Seklawi-Jedran.

Abayan Sherakh.	Abayan Zahaine.
Abayan Libneh.	Abayan Fadaha.
Abayan Harreish.	Abayan Roajeih.
Abayan Obeidah.	

Also the following families, or secondary families, understood to be offshoots from Keheilet Ajuz and strictly of "Al-Khamseh."

Dahmanu ab Amr.	}	Also	{	Abu Arkat.
Dahman Shawan.				Abu Arkat Swerba.
Dahman Moadjil.				Abu Arkat al-Nadah.
Dahman Khomais.				

1. Keheilet Ajuz Strain—(Continued)

And it is believed also the following:

Rishon Sherabi.

Rishon Arjashi.

Also

Rabdan al-Shet.

Rabdan Mashejed.

Rabdan Zelihah.

Also

Twaissan al-Kami.

Twaissan Kyal.

Also

Milliah.

Milliah Sharbons.

Milliah Taboor.

2. Manakhi Family.

Manakhi Hedruj.

Manakhi Sladgi.

Manakhi ibu S'teyl.

Manakhi Sadlah.

3. Hadban Family or Strain, but certainly of "Al-Khamseh."

Hadban Euzehi.

Hadban al Fert.

Hadban Mushaileh.

Hadban Ghassil.

Hadban al-Zaile.

4. Jelfon or Jalfon Family.

Jalfon Stom al-Balad.

Jalfon Dahwah.

5.

Homdani Simri.

Homdani Jassel.

Two of the greatest breeds to be found at present in the Arabian races are the Managhi Hadruj, commonly called Minniki, and commonly called by the Arab "Unok" (long neck). Some of the very best of this strain are to be found in the great Arabic tribes of the Mogussah, which is one of the richest and most high class horse breeding tribes of the Arabian desert. A family, absolutely pure in the blood of this strain, has been carefully collected and cultivated for years past by Randolph Huntington of Oyster Bay, Long Island, N. Y. He has also experienced remarkable results in blending this blood with the inbred strains of the Clays. The Seglawi Jed-Ran is the other very popular and high class to which I refer, some of the very best of which is also included in Mr. Huntington's collection at Oyster Bay, Long Island, N. Y. I do not wish to be understood as having attempted anything like an exhaustive discussion of the Barb, or the horse of the Sahara, and much less do I, in this very limited space, pretend to even begin to do the subject of the Arab horse anything like justice.

The subject in this article is intended to be the horse of the Sahara (the Barb), and I mention the Arab horse merely, as above stated, to conclusively show the distinct line of division between these two great races of the eastern horse, as it would require many, many volumes to give anything like an exhaustive treatise on these two subjects, which are so little, as a rule, known by the public.

Blood Influence as a Specialty

Any one who through honest craving for knowledge and truth seeks a correct and truthful knowledge of blood influence, and the

complicated and yet most interesting facts pertaining to the science of equestrian breeding, will find by research and toil in this pursuit not only a complicated, but almost an endless subject for study, but he is certain to be rewarded by knowledge which will unfold facts which would seem to the uninitiated too remote and perplexing to attempt to fathom, but without which no one can begin to assume to possess knowledge sufficient to enable him to intelligently and successfully breed this inseparable servant of man.

In horse breeding, as in other scientific pursuits, there is a cause for every effect, and when properly understood, it is my belief that the avocation of horse breeding should never fail to be honorable, lucrative and a high calling of such universal importance as to justify any one in the greatest pride, to be able to claim a place among the highest class of this worthy cause and profession.

Sincerely
James A. Lawrence

Published by Permission of
JAMES. A. LAWRENCE.

Manager of the Horse Department of
HARTMAN STOCK FARM
COLUMBUS, OHIO.

WE submit the following horse anatomical study, believing that it will, through the better knowledge of the delicate and yet most durable construction of the horse, not only be of material aid to the public in the breeding, but also in the selection, as well as to insure a more kind and careful treatment of the horse. It can be plainly seen from the following sketches that the horse is, in all particulars, a wonderful animal, and the machinery of his powerful and lasting form, though of most delicate construction, is capable of long years of toil and rapid driving if handled as he should be with that ever kind and thoughtful tenderness which he is well worthy of. We submit the following as much for this reason, as for the scientific aid and instruction which it will impart, and in this exhaustive study of horse anatomy we feel greatly indebted to the proficient aid that has been rendered us in this matter by the very able faculty of the Ohio State University Veterinary Department of Columbus, Ohio, which stands today with but few peers in the world in their proficient and extensive facilities in the Veterinary Science, and which we most heartily commend to the young men who desire wisdom in this profession.

Figure 1

Side View of Living Horse

- x Wing of atlas.
- 2 Spine of scapula (shoulder blade).
- 6 Deltoid tuberosity of humerus.
- 4' External tuberosity of distal end of humerus.
- 16 External angle of ilium.
- 21' External tuberosity of tibia.

Fig. 74

Figure 74

Surface Markings of Horse—Side View

1	Middle line of nose.	41	Furrow between phalanges and flexor tendons.
2 and 2'	Boundary lines of the muscle elevator of upper lip.	42	Upper border of lateral cartilage of 3d phalanx.
3	Facial vein.	43	Line between flexor metacarpus internus and flexor pedis muscles.
4	Under boundary of elevator of upper lip.	44	Chestnut of fore limb.
5	Under boundary of dilator of nostril.	45	Great sub-cutaneous vein of fore limb.
6 and 6'	Body and horn of cartilage of nostril.	46	Lower border of latissimus dorsi muscle.
7	Stenos duct from parotid gland.	47 and 47'	Boundary lines of serratus magnus muscle, thoracic portion.
8	Furrow between molar teeth.	48	Contraction lines of external oblique abdominal muscle.
9 and 9'	Boundary line of depressor of under lip.	49	Superior border of posterior deep pectoral muscle.
10	Facial crest.	50	Spur vein.
11	Zygomatic process of temporal bone.	51	Ribs.
12	Orbital fossa.	52	Curved line marking aponeurotic portion of external oblique muscle.
13	Transverse facial vein.	53	Boundary line between external and internal oblique muscle.
13'	Vein to masseter muscle.	54	Furrow at ends of transverse process of lumbar vertebrae.
14	Branches of the 7th cranial nerve.	55	External angle of ilium.
15	Angle of inferior maxilla (lower jaw bone).	56	Lateral border of middle gluteus muscle.
16	Posterior border of parotid gland.	57 and 57'	Border and contraction line of tensor fasciae lata muscle.
17	Border of wing of atlas (1st cervical vertebra).	58, 58', 58'', 58'''	Borders and contraction line of biceps femoris muscle.
18	Jugular furrow.	59	Line between biceps femoris and semitendinosus muscle.
18'	Sub-maxillary vein.	60	External tuberosity of tibia.
19	Middle line of sterno-maxillaris muscle.	61, 61', 61''	Boundaries of gastrocnemius muscle and tendo-achilles.
20	Lower border of levator-humeri muscle.	63 and 64	Boundaries of extensor muscles.
20'	Division line in levator-humeri muscle.	63' and 64'	Tendons of extensor muscles.
20''	Upper border of levator-humeri muscle.	65, 65', 65''	External small metatarsal bone.
20'''	Furrow between levator-humeri and biceps muscle.	66	Line between flexor tendon and metatarsal bone.
21 and 21'	Contraction line of serratus magnus muscle, cervical portion.	67	Flexor tendon of the foot.
21'	Contraction line of splenius muscle.	68	Reinforcing ligaments to tendon of extensor pedis muscle.
22	Boundary between splenius and trachelomastoideus muscle.	69	Furrow between phalanges and flexor tendons.
23	Anterior border of trapezius muscle.	70	Upper border of lateral cartilage of 3d phalanx.
23'	Posterior border of trapezius muscle.	71	Furrow between tibia and extensor metacarpi muscle.
24	Lower border of rhomboideus muscle.	72 and 72'	Internal subcutaneous vein of rear limb (internal saphenic).
25	Anterior and 25' posterior border of anterior deep pectoral muscle.	73	Boundary between tibia and deep flexor of foot (perforans).
26 and 26'	Border of infraspinatus muscle.	74	Tendon of flexor accessories muscle.
26''	Tendon of infraspinatus muscle.	75'	Anterior border of tendon achilles and flexor pedis perforatus.
27	Spine of scapula (shoulder blade spine).	76	Posterior border of flexor pedis perforans.
28	Dorsal angle of scapula (shoulder blade).	77	Inner border of the tendon of extensor metacarpi-obliquus peroneus.
29	Contraction line of deltoid muscle.	78	Chestnut of posterior limb.
30	Division line between levator-humeri and anterior superficial pectoral muscle.	79	Tendon of extensor pedis.
31 and 31'	Boundaries of triceps-brachii muscle.		
32 and 33	Boundaries of extensor-metacarpi magnus muscle.		
33 and 34	Extensor pedis muscle boundary lines.		
34'	Tendon of extensor-pedis muscle.		
35'	Tendon of lateral extensor muscle.		
36	Anterior border of flexor-metacarpus externus muscle.		
37	Line between flexor tendon and metacarpal bones.		
38 and 38'	External small metacarpal or splint bone.		
39	Flexor tendon of the foot.		
40	Reinforcing ligaments to tendon of extensor pedis muscle.		

Figure 2

Superficial Layer of Muscles of the Horse—Side View

- x Wing of atlas.
2 Spine of the scapula.
4' External tuberosity of distal end of the humerus.
6 Deltoid tuberosity of the humerus.
8 Olecranon process of ulna.
16 External angle of the ilium.
20 Patella.
21' External tuberosity of the tibia.
18R 18th Rib.
a, a' Trapezius muscle.
c, c' Levator humeri muscle.
d Sterno maxillaris muscle.
e, e' Deltoid muscle.
f, f' Triceps brachii muscle.
g Anterior superficial pectoral muscle.
h Posterior deep pectoral muscle.
h' Anterior deep pectoral muscle.
i, i' Serratus magnus muscle.
k Latissimus dorsi muscle.
l External oblique abdominal muscle.
m, m' Serratus posticus muscle.
o Tensor fascia lata muscle.
o' Fascia lata.
o'' Gluteus maximus muscle.
p' Gluteal fascia.
q, q', q'' Biceps femoris muscle.
r Semi-tendinosus muscle.
s, t Short and long elevator of tail.
u Lateral muscle of tail.
v Panculus (skin muscle).
w Splenius muscle.
x Rhomboideus muscle.
y Longissimus capitis (trachelo mastoidus).

Fig. 67.

Fig. 68.

Figures 67 and 102

Deep Layer of Muscles of Horse—Side View

- m Serratus posticus muscle.
p Middle gluteus muscle.
r Semi-tendinosus muscle.
s and t Elevators of tail (short and long) muscles.
u Lateral tail muscle.
v' Biceps brachii muscle.
x Rhomboideus muscle.
y and y' Trachelo mastoideus muscle.
z Supra spinatus muscle.
z' Infra spinatus muscle.
1 Scapula (shoulder blade).
1' Cartilage of prolongation of scapula..
2 Scapular spine.
4 Humerus.
4" External lateral ligament of elbow joint.
5 External trochanter of humerus.
6 Deltoid tubercle of humerus.
7 Ulna.
8 Olecranon.
9 Radius.
16 External angle of ilium.
19 Trochanter major of femur.
20 Furrow at lower border of patella.
21 External tuberosity of tibia.
26 Articular process of cervical vertebrae.
27 Deprimeus aureus muscle.
28 and 28' Quadriceps femoris muscle.
28" External trochanter of femur.
29 Semi-membranosus muscle.
30 Gastrocnemus muscle.
31 Sacro-ischiatic ligament.
32 Sub-scapulo hyoideus muscle.
33 Complexus muscle.
34 Trachelo mastoideus muscle.
35 Spinalis and semi-spinalis collis and dorsi muscle.
36 Longissimus dorsi muscle.
37 Transversalis costarum muscle.
38 Teres externus muscle.
40 Intercostal muscle.
41 Internal oblique abdominal muscle.
42 Iliacus muscle.
43 Transversus abdominalis muscle.

Fig. 3.

Figure 3

Skeleton of the Horse—Side View

1H	First cervical vertebra (atlas).
7H	Seventh cervical vertebra.
1R	First dorsal vertebra.
6R	Sixth rib.
17R	Seventeenth dorsal vertebra.
18R	Eighteenth or last rib.
1L	First lumbar vertebra.
6L	Sixth or last lumbar vertebra.
K	Sacrum.
1S	First tail or coccygeal vertebra.
16S	Sixteenth coccygeal vertebra.
6K	Sixth rib cartilage.
x	Wing of atlas.
1	Scapula (shoulder blade).
1'	Cartilage of scapula.
2	Spine of scapula.
4	Humerus.
5	External trochanter of humerus.
4'	External tuberosity of distal end of humerus.
6	Deltoid tuberosity of humerus.
7	Ulna.
8	Olecranon process of ulna.
9	Radius.
10	Carpus.
11	Accessory carpal.
12	Metacarpus (shin bone).
13	Phalanges.
14	Sternum (breast bone).
14"	Xiphoid cartilage of sternum.
15	Os innominatum (pelvis).
16	External angle of ilium.
16'	Internal angle of ilium.
17	Tuberosity of ischium.
18	Femur.
19	Trochanter major.
20	Patella (knee cap).
21	Tibia.
21'	External tuberosity of tibia.
22	Tarsus (hock).
23	Fibula.
24	Tuberosity of calcaneum.
25	Metatarsus.
26	Phalanges.
27	Internal trochanter of femur.
28	External or third trochanter of femur.

Fig. 4.

Fig. 12.

Figure 4

Front View of Living Horse

- 6 Deltoid tuberosity of the humerus.
- 14' Apex of the sternum.

Figure 72

Surface Markings of Horse—Front View

- 1 Middle line of nose.
- 2 and 2' Boundary lines of the muscle elevator of upper lip.
- 3 Facial vein.
- 5 Under boundary of dilator of nostril.
- 6 and 6' Horn of cartilage of nostril.
- 6" Division line of the upper lip.
- 8 Furrow between molar teeth.
- 9 Boundary line of depressor of under lip.
- 10 Facial crest.
- 12 Orbital fossa.
- 19 Middle line of sterno-maxillaris muscle.
- 19' Boundary of sterno-maxillaris muscle.
- 19" Boundary of panniculus muscle.
- 20 Lower border of levator-humeri muscle.
- 25 Anterior border of anterior deep pectoral muscle.
- 25' Posterior border of anterior deep pectoral muscle.
- 26 and 26' Border of infra-spinatus muscle.
- 27 Spine of scapula (shoulder blade spine).
- 28 Dorsal angle of scapula.
- 30 Triangle formed by the panniculus, anterior superficial pectoral and levator humeri muscle.
- 30' Middle line of breast.
- 30" Division line between anterior and posterior superficial pectoral muscle.
- 31' Boundary of triceps-brachi muscle.
- 32 and 33 Boundaries of extensor metacarpi externus muscle.
- 33' Anterior border of flexor metacarpi externus muscle.
- 34" Tendon of extensor pedis muscle.
- 40 Reinforcing ligaments to tendon of extensor pedis muscle.
- 43' Line between radius and flexor metacarpi internus.
- 44 Chestnut of anterior limb.
- 45' Subcutaneous vein of anterior limb.

Figure 7

Posterior View of Horse

- 16 External angle of the ilium.
17 Tuberosity of ischium.
19 External trochanter of the femur.
21' External tuberosity of tibia.

Figure 73

Surface Markings of the Horse—View from Behind

- 58', 58", 58''' Borders and contraction line of biceps femoris muscle.
59, 59' Line between biceps femoris and semi-tendinosus muscle.
61, 61" Boundaries of gastrocnemius muscle and tendo-achilles.
63 Boundary of extensor muscles.
65, 65' External small metatarsal bone.
66 Line between flexor tendon and metatarsal bone.
74 Tendon of flexor accessories muscle.
78 Chestnut of posterior limb.
80 Line between semi-tendinosus and semi-membranosus muscles.
81 Small indistinct line between semi-membranosus and gracilis muscle.

Fig. 5.

Fig. 6.

Figure 5

Superficial Layer of Muscles of Horse—Front View

- 29 and 30 Sub-scapulo hyoideus muscle.
31 Jugular furrow.
a Trapezius muscle.
C, C' Levator humeri.
d Sterno-maxillaris muscle
f, f' Triceps brachii.
g Anterior superficial pectoral muscle.
g' Posterior superficial pectoral muscle.
h' Anterior deep pectoral muscle.
v Panniculus muscle.
z Antea-spinatus muscle.
2 Spine of scapula (shoulder blade).
5 External trochanter of distal end of humerus.
6 Deltoid tuberosity of humerus.
14' Apex of sternum.

Figure 6

Skeleton—Front View

- 1 Scapula (shoulder blade).
1' Cartilage of scapula.
2 Spine of scapula.
4 Humerus
4' External tuberosity of lower end of humerus.
5 External trochanter of distal end of humerus.
6 Deltoid tuberosity of humerus.
9 Radius.
10 Carpus (knee).
12 Metacarpus (shin bone).
13 Phalanges.
14 Sternum (breast bone).
14' Apex of sternum.
1R First rib.

Figure 8

Superficial Layer of Muscles—Posterior View

a	End of tendon of peroneus muscle.	q, q', q'' . .	Biceps femoris muscle.
d	Lateral extensor of digital muscle.	r	Semi-tendinosus muscle.
e	Flexor pedis perforans muscle.	s, t	Tail muscles.
e'	Flexor pedis perforans tendon.	v	Semi-membranosus muscle.
e''	Flexor accessorius muscle.	w	Gracilis muscle.
f	Gastrocnemius muscle.	16	External angle of ilium.
f'	Tendo-achilles.	25	Metatarsus.
g	Tendon of perforatus.	25', 25'' . .	External metatarsus (splint bone).
h	Middle interosseus muscle.	34	Anus.
o	Tensor fascia-lata muscle.	35	Vulva.
o''	External gluteus muscle.	17	Tuberosity of ischium.
p'	Gluteal fascia.	19	External trochanter of femur.

Figure 9

Skeleton—Posterior View

1S	Tail vertebra	22	Tarsus (hock).
16S	Sixteenth tail vertebra.	23	Fibula.
k	Sacrum.	24	Tuberosity of os calcis.
15	Os innominatum (pelvis).	25	Metatarsus (shin bone).
16	External angle of ilium.	25', 25'' . .	External metatarsus (splint bone).
16'	Internal angle of ilium.	27	Internal tuberosity of femur.
17	Tuberosity of ischium.	28	External tuberosity of femur.
18	Femur.	29	Superior sessamoids.
18'	External condyle of femur.	30	First phalanx (pastern bone).
19	External trochanter of the femur.	31	Second phalanx (os-coronae.)
20	Patella.	32	Third phalanx (os-pedis.)
21'	Tibia.	33	Navicular bone.
21''	External tuberosity of tibia.

We are indebted to the late Rush Shippen Huidekoper, *M. D., for the following able mouth study of the horse, which we have, by consent, published from his valuable work which is standard in all the colleges of the world today, "Age of the Domestic Animals." The editor of this catalogue was very solicitous to submit in this catalogue as nearly a perfect analysis of the horse's mouth as could be procured, and after some considerable study of the various works along this line, we were impressed with the following as being one of high class, and after some correspondence we were referred to W. Horace Hoskins, 3452 Ludlow St., Philadelphia, Pa., as the manager of the publications of the late Dr. R. S. Huidekoper, and were informed by Mr. Hoskins that we would be permitted to quote from the above able work on this subject, for whatever value this interesting study might prove to the horse public. We wish to thank Mr. W. Horace Hoskins for his kindness in this matter and to express our very highest gratitude in behalf of the author for his valuable contribution to this catalogue, and we trust that the following illustrations and exhaustive treatise on the interesting study of so valuable and important an animal as the horse will lend aid to our horse breeding patrons, toward a perfect understanding of the age of a horse. It is plain to be seen by those who will peruse the following pages of mouth study, that this represents a combination of discoveries from a great many important sources over a long period past and which possess, in addition to that of Rush S. Huidekoper, the wisdom and life study of Armand Goubaux and Gustave Barrier, both of Alfort, France.

*Veterinarian (Alfort, France); Professor of Sanitary Medicine and Veterinary Jurisprudence, American Veterinary College, New York; Lieutenant-Colonel and Surgeon-in-Chief National Guard of Pennsylvania; Fellow to The College of Physicians, Philadelphia; Honorary Fellow of the Royal College of Veterinary Surgeons, London; Late Dean of the Veterinary Department, University of Pennsylvania, etc.

Leveling, Progressive Use, and Falling Out of the Incisors of First Dentition

About One Year.—The corner teeth have protruded from the gums, but the inferior ones are not yet in contact with the superior teeth. The inferior pinchers, if not leveled, are at least very much used on both their borders. The incisive arch commences to be a little depressed in the center. The superior pinchers and intermediate teeth just commence to wear at their posterior borders. (Figs. 53, 54, 55.)

About Sixteen Months.—The superior corner teeth meet the inferior and commence to wear at their anterior border; the necks are clear of the gums. Often at this time the inferior pinchers are leveled, but the intermediate teeth are rarely more than slightly worn. The incisive arch is flattened in front. (Figs. 56, 57, 58.)

About Twenty Months.—The inferior corner teeth are nearly leveled; the superior ones are less so. The inferior pinchers stand out from the gums, and the intermediate teeth are often leveled. The incisive arch becomes less convex. (Figs. 59, 60, 61.)

About Two Years.—The inferior dental arch is completely leveled at the pinchers and intermediate teeth, and the superior arch is nearly so. The superior pinchers stand out from the gums, and behind them is found a moderately sensitive swelling, due to the permanent teeth, which are pressing on the gum of the palatine arch. The intermediate teeth are free from the gums above and below. The incisive arch has widened from side to side and the pinchers and intermediate teeth form almost a straight line. (Figs. 62, 63, 64.)

Girad thought that the pinchers were leveled at ten months, the intermediate at one year, and the corner teeth at fifteen to twenty-four months, but this is too definite; the leveling of the temporary incisors is somewhat irregular, and is considerably modified by the depth of the cups, the amount of cement which they contain, and the character of the food upon which the

animal is fed. Experience will teach the observer to place much value on the condition of the corner teeth, the amount of wear of the superior incisors, and upon the color, which gradually becomes darker. At the end of this period the pinchers become broken, loose, and ready to fall from their sockets; they are less solidly fixed in the jaw and may be broken off, or are pushed out naturally by the permanent teeth which replace them.

During this period, especially during the second year, the variations in the amount of wear of the teeth in different animals may be very marked; but, by a careful comparison of the use which each pair of teeth pinchers, intermediate, and corners have undergone, and with close observation of the development and size of the bones, taking into consideration the intermaxillary bones, and the width and thickness of the body and branches of the maxilla, a very close differentiation of a month or two may be made. Especial note must be made of the amount of gum which still covers the crown of the teeth, or their freedom from the gums, the discoloration on their surface, the polishing off the small striations, and the evidence of the protrusion of the permanent teeth under the gums behind the deciduous teeth.

FIG. 53.

FIG. 54

FIG. 55.

One Year (Figs. 53, 54, 55).—All of the deciduous incisors can be seen from in front; the pinchers and intermediate teeth are entirely free from the gums. In profile the superior corner teeth are not yet in contact with the inferior teeth. The tables show a decided use on the posterior borders of the intermediate teeth, which, however, is subject to variation, according to the height of the posterior border in different colts. There is generally seen at this time in the anterior border a yellow line, elongated transversely, which represents the elementary dental star. The corner teeth are still virgin. Comparison must be made between the wear of the pincher teeth and that of the borders of the intermediate teeth, and according to the amount of use which the latter have had the animal can be judged as “rising” or “off” the age indicated by the other marks.

FIG. 56.

FIG. 57.

FIG. 58.

Sixteen Months (Figs. 56, 57, 58).—All of the teeth are in contact. The superior corner teeth are in opposition with the inferior, and have commenced to be leveled in both jaws; the enamel of the cups and the peripheral enamel are separated; the crown of the tooth is entirely free from the gum. Often at this period the inferior pinchers are leveled, and sometimes the inferior intermediate teeth are also leveled. In the upper jaw the tables of all teeth are entirely formed, the incisive arches lose their convexity.

FIG. 59.

FIG. 60.

FIG. 61.

Twenty Months (Figs. 59, 60, 61).—This mouth comes from a thoroughbred colt, which was grain-fed from birth. It represents more use than should be at this age. The inferior corner teeth are leveled on their anterior border; the superior corners are somewhat worn, but not even comparatively to the degree of use of the pinchers and intermediates. The inferior pinchers are completely worn, and the inferior intermediate teeth are leveled; the incisive arch has become less convex, but not wide enough for a two-year-old; a bit of the gum still remains around the roots.

FIG. 62.

FIG. 63.

FIG. 64.

Two Years (Figs. 62, 63, 64).—This mouth comes from a common-bred colt which had no grain feed. It was two years and twenty-six days old. From in front the pinchers and intermediate teeth are seen free from the gums, indicating that they are pressed on by the permanent teeth. In profile, the corner teeth are free to their necks. The tables are well worn, and the dental stars show. The cups of the superior intermediate teeth are free from the peripheral enamel. The incisive arch is widened transversely.

Copyrighted by
SAML B. HARTMAN
May 14, 1903.

THE CELEBRATED PERCHERON SIRE, BISSIGUE (19002).
Purchased by the Hartman Stock Farm of Mr. August Todeau, of France. Died July 3, 1903,
Aboard Steamer Minnehaha en route to his new home.

Photographed in France by
Mr. Harry M. Hershey,
of Columbus, Ohio, for
Hartman Stock Farm.

Eruption of the Permanent or Adult Teeth

This period commences at the age of two or two and a half years, and finishes at five years.

About Two and a Half Years.—Successive falling out of the temporary pincher teeth; swelling of the gums and appearance of the anterior borders of the permanent pinchers. Ordinarily these teeth appear in the superior jaw first, and the piercing of the gums is completely effected in about six weeks to two months.

Rising Three Years.—As the colt is approaching the age of three years, we find in the superior jaw the permanent pinchers wholly out of the gums and almost reaching the level of the temporary intermediate teeth. In the inferior jaw, the borders and sometimes a greater extent of the free extremities of the teeth have appeared through the gums, though the teeth are still virgin; the intermediate temporary teeth are free from the gums at their neck, and very much worn. The corner teeth are worn so that they touch each other by their external borders. (Figs. 65, 66, 67.)

Three Years.—At three years of age all of the permanent pinchers are out of the gums and have reached the level of the temporary teeth. The permanent pinchers are wider transversely, square and darker in color than the temporary teeth, and show little gutters on their anterior face. They differ distinctly from the others, which are smaller, more convex, have a constriction in the neighborhood of the gums, are whiter, and not marked with gutters.

The time of the year and the race of the animal must be taken into consideration in determining the completion of three years. The better breeds of horses attain that age in mid-winter, while those of more common races do not attain it until the months of March, April or May.

Three Years Off.—When the colt is several months from three years of age the permanent teeth are well used on their borders and in contact with each other, but the dental cups are not yet complete circles, as the enamel

which forms them is still connected with the peripheral enamel toward the borders of the teeth. The intermediate teeth are very much worn, protrude from the gums, and are sometimes broken and ready to fall out. The tables of the corner teeth have become very much larger and almost cover the external borders of the teeth. (Figs. 68, 69, 70.)

Rising Four Years.—Eruption of the permanent intermediate teeth and progressive falling out of the temporary intermediate teeth mark this period. The permanent intermediate teeth appear, but have not yet reached the level of the tables of the corner teeth, and are not yet worn. The central enamel in the pincher teeth surrounds the dental cup, which is flattened from in front to behind, and is almost distinct. The corner teeth commence to be free at their necks, from the gums. (Figs. 71, 72, 73.)

Four Years.—Each jaw shows four permanent teeth, with their tables on the same level; the intermediate teeth are worn both on their anterior and posterior borders, but the dental cups are not entirely separate from the outside peripheral enamel. Often the inferior pincher teeth are leveled, especially in well bred horses. The temporary corner teeth stand out from the gums and are completely worn. (Figs. 74, 75, 76.)

Four Years Off.—Loosing and successive falling out of the temporary corner teeth, which are worn to stumps, scarcely fastened in their alveolar cavities. Sometimes one or more of the corner teeth have fallen out, and we find the inferior borders of the permanent corner teeth appearing first, more frequently in the upper jaw. The pinchers and intermediate teeth are well worn. At this period we frequently find anomalies in the eruption of the teeth. It is not rare to see the intermediate and corner teeth appear at the same time; so that an animal which is only four or four and a half years of age may have the teeth which ordinarily indicate five years. (Figs. 77, 78, 79.)

Rising Five Years.—The four temporary corner teeth have fallen out and are replaced by the adult teeth. These last have not yet reached the level of the intermediate teeth and are not yet worn. The pinchers are leveled; their central enamel, elongated from side to side, is found farther

and farther away from the anterior border of the dental table. The tables of the intermediate teeth are distinctly formed. (Figs. 80, 81, 82.)

Five Years.—The mouth is complete; the incisive arch is semicircular and regular in shape; all of the permanent teeth have reached the same level. The anterior borders of the corner teeth are completely worn. The posterior are not yet worn. (Figs. 83, 84, 85.)

Five Years Off.—The above characteristics are more distinct. The age has been more marked by the continual friction and amount of work to which the corner teeth have been subjected. In the superior incisive arch, the posterior borders of the corner teeth rarely commence to be worn. The profile of the incisors shows a regular one-half circle, convex from above to below.

During this period, besides the causes already referred to which produce hasty or tardy eruption of the permanent teeth, other influences may act. Traeger, veterinarian at Doehlen, noticed that gestation in the young mare delayed the eruption of the permanent teeth; he also observed that continuous pregnancies diminished the wearing of the teeth. During this period the tusks may make their appearance, or they may be delayed until after all of the incisors are in place. In case of doubt, a further examination should be made as to the condition of the molars. By reference to the table of the eruption of these teeth it will be seen that the first permanent molar appears between the thirtieth and thirty-second months, the second at about three years, and the third at four to five years. The same rule as given for the second period applies here also, and a close comparison should be made of the comparative wearing of the pincher, intermediate, and corner teeth, as the first or second pair may be advanced in use and not correspond to the freshness of the delayed later teeth.

FIG. 65.

FIG. 66.

FIG. 67.

Rising Three Years (Figs. 65, 66, 67).—From in front, in the upper jaw, the two permanent pincher teeth are seen not yet opposite to the level of the intermediate deciduous teeth; below, the adult pinchers are just coming through the gum, showing a small portion of their anterior face. In profile, the intermediate teeth are very much worn, and the constriction on their neck is pushed out beyond their gums; the corner teeth are much shortened; the dental table shows slight wear of the superior pinchers, which has been produced by the eruption of these teeth before the inferior temporary pinchers had fallen out, and, consequently, they have worn against the latter. The intermediate teeth are completely leveled; the corner teeth are much used.

FIG. 68.

FIG. 69.

FIG. 70.

Three Years Off (Figs. 68, 69, 70).—From in front the four permanent pincher teeth are seen, much larger and stronger than the neighboring teeth. The anterior borders of the superior pinchers are oblique, and their external borders are not yet in contact with the corresponding part of the inferior teeth. In profile, the intermediate teeth are seen much used; the corner teeth are short, and show the constriction at their neck. The tables are worn off level. Between the corner and the intermediate teeth on the left is seen the protrusion of gum made by the permanent intermediate tooth which is shortly to appear. The dental tables of the inferior intermediate teeth are very much worn, the superior teeth somewhat less so. The inferior corner teeth are entirely leveled. In this mouth the tables of the inferior pincher teeth are most worn, as these teeth came out before the superior ones did.

FIG. 71.

FIG. 72.

FIG. 73.

Rising Four Years (Figs. 71, 72, 73).—From in front are seen the eight adult incisors; the pinchers in contact with the opposite ones, and intermediate teeth not yet out to the level of the pinchers. In profile, this is also seen in this mouth. The corner teeth are very much worn; the tables of the pinchers are considerably worn, making almost a complete separation of the central, or cup, enamel from the peripheral enamel. This advanced wear of the pincher teeth is not in direct harmony with the amount of use of the corner teeth.

FIG. 74.

FIG. 75.

FIG 76

Four Years (Figs. 74, 75, 76).—From in front the four superior permanent teeth are seen in contact with the inferior teeth. The jaw has attained such a width that the corner teeth are almost hidden. In profile, the latter are seen to be very small. The superior ones have commenced to be pushed out from the jaw. In the lower jaw are seen the tush teeth. The tables of the intermediate teeth are much worn, especially in the upper jaw, in which the eruption took place first. The central enamel is only separated in the superior left-hand teeth; the inferior corner teeth are almost leveled, the superior ones completely so. The latter are being pushed out, and show their roots.

FIG. 77.

FIG. 78.

FIG. 79.

Four Years Off (Figs. 77, 78, 79).—In front the intermediate permanent teeth are seen in contact with each other; the inferior and superior left-hand permanent corner teeth have appeared. In profile, it is seen that these teeth have not been completely pushed through the gums. The tush teeth have appeared. The right-hand superior milktooth is ready to fall out; nothing remains but its roots. The inferior tooth on the same side is leveled, but still firmly imbedded in the jaw. The superior intermediate teeth, which preceded the eruption of the inferior teeth, show considerable wear. The cups have formed in the pincher teeth.

FIG. 80.

FIG 81.

FIG. 82.

Rising Five Years (Figs. 80, 81, 82).—The four corner temporary teeth have been replaced by the permanent teeth, but these are not on a level with the intermediate and are entirely virgin. The tables of the other teeth show a more decided use than those in the last figures. Above, the cups are formed in both the pincher and intermediate teeth; the cups are nearly formed in the inferior intermediate teeth.

FIG. 83

FIG. 84.

FIG. 85.

Five Years (Figs. 83, 84, 85).—The mouth is entirely made; all of the permanent teeth have reached the same level in both jaws. The jaws are convex in both directions; the tush teeth have completed their eruption. The corner teeth have commenced to wear on their anterior border; the pincher teeth are leveled, but the cups are still elongated from side to side and are very narrow; they commence to approach to the posterior border of the teeth. This form of cup indicates that in these teeth the cups are very shallow. The incisive arches form a regular half-circle.

Leveling of the Permanent Incisors

During this period the signs furnished by the dental apparatus become more difficult to recognize, and the determination of the exact age is less precise than at an earlier period. The points to be examined from six years are, first, the wearing of the corner teeth, the form of the transverse diameters of the teeth, the position of the central enamel on the surface of the table, and the general outline of the incisive arch.

At six years, after the complete leveling of the teeth, the tables of the pinchers commence to become oval in shape. The posterior border of the corner teeth has become worn and the cup is completely separated from the peripheral enamel. The cement disappears from the anterior face of the pinchers, so that they become whiter in color. Very frequently at this age the notch commences to show on the outer border of the superior corner teeth.

At seven years, all of the teeth are denuded of cement on their outer faces and are much whiter in color. The inferior corner tooth, which is narrower from in front to behind than the superior, wears only the anterior portion of the latter and makes distinct, in profile, the notch which we have just seen often commences at six. The pincher teeth become narrower from side to side, and the oval of the posterior border shows a projection backward; the intermediate teeth become oval, and in both the cups become decidedly narrower and are found nearer the posterior border of the teeth. In profile, the incidence of the jaws has altered from the convex arch to six years and tends to assume the form of an ogive.

At eight years, the incisors commence to turn from a white to a yellowish white. The arches are narrower from side to side, the obliquity of the teeth is greater, and, as the inferior corner teeth now commence to wear by their posterior borders, their tables become elongated and correspond to the tables of the superior corner teeth in size, so that the notches of the latter become less marked. The interspaces between the teeth become more marked and

the gum commences to retract from the crowns, giving a square, cut-off appearance. The tables become more convex on their posterior borders, and the cups, which continually approach the posterior borders of the teeth, in the pincher teeth become convex behind. In front of them half way to the anterior border of the teeth, a transversely elongated dark-yellow line appears. This is the dental star, brought into view by the uncovering of the calcified dental pulp. If the structure and formation of the incisive teeth are remembered, the exact value of the dental star will be better appreciated. In the virgin tooth the upper extremity is hollowed by the cup and the dental pulp occupies the space between the anterior face of the cup and the anterior face of the tooth itself. But we have seen that the cup, pointing downward, also inclines toward the posterior border of the tooth. At eight years the cup is at the division of the posterior and middle thirds of the table of the tooth, and the dental pulp is found on the line between the middle and anterior thirds. The transverse extent of the dental star is much less in the intermediate and corner teeth than it is in the pincher teeth.

FIG. 86.

FIG. 87.

FIG. 88.

Six Years (Figs. 86, 87, 88).—In front, the teeth appear much as they were at five years of age. In profile, we see in this animal a more tardy eruption of the tush teeth, which are not yet quite free from the gums, and are, therefore, of little value as regards the age. The tables furnish a most accurate guide; the posterior border of both the inferior and superior corner teeth are worn; the pincher teeth are leveled and their tables tend to an oval form. It is seen, however, that the inferior cups are thicker at their anterior borders, due to a small portion of the surface enamel still remaining. The cups are narrower from side to side than at five years, and somewhat closer to the posterior border of the table; the same appears on the intermediate teeth. It will be noticed that the cups of the superior corner teeth have fissures on their posterior borders, which is of frequent occurrence and does not interfere with judging the amount of work which they have performed.

FIG. 89.

FIG. 90.

FIG. 91.

Seven Years (Figs. 89, 90, 91).—There is nothing special to be seen in front except that the teeth are whiter, due to the disappearance of the cement, which has been worn from the surface of the enamel. In profile it is seen that the table of the inferior corner tooth is narrower than that of the superior from the front to behind, so that a notch is formed on the posterior corner of the latter. The incident of the tooth is less perpendicular than at six years. The cups of the tables of the intermediate teeth are wider from in front to behind and narrower from side to side. In the corner teeth the wearing surface is larger and the cups are smaller. The pincher teeth are oval and the intermediate teeth commence to become so. In this mouth, again, the superior corner teeth are fissured on their posterior borders.

FIG. 92

FIG. 93

FIG. 94.

Eight Years (Figs. 92, 93, 94).—The direction of the incisors is decidedly changed; the inferior and superior arches are opposed obliquely; seen from in front, the teeth project at the line of apposition. In the profile this is more apparent, and the arch assumes more the form of an ogive. The incisive arches are still regular, but decidedly smaller than the earlier ages. All of the inferior tables are leveled; the pincher and intermediate teeth are oval, the corner teeth begin to become so. The cups commence to assume an angular form behind, and are narrow. The dental star has appeared in the pinchers and commences to show in the intermediate teeth, between the anterior border of the table and the corresponding part of the cup.

Wearing Away of the Crowns

After this time, which is commonly known as "past mark of mouth," commencing at nine years and extending to old age, the regularity of the wearing of the teeth and the certainty of the signs of age furnished by them become more variable. The uncertainty increases greatly after fifteen years, and a year or two later the estimation of age from the teeth can only be a conjecture, based upon experience and subject to error of one, two or even several years, which becomes greater the older the animal is.

The changes of this period are: The successive alteration in shape of the tables of the teeth; the position of the cups in the incisors of both jaws; the form and location of the dental stars in the tables; the obliquity or degree of incidence in the incisive arches; the convergence of the crowns and the narrowness of the jaw holding the roots; the thickness of the enamel on the anterior and posterior faces of the teeth; the appearance of the cement around the roots; and the shape of the bones of the face and jaw.

At nine years the pinchers are round; their cups are triangular and their dental stars are more distinct, but narrower. The intermediate teeth commence to become round and the corners oval; the superior pinchers are often leveled; the notches on the superior corners often disappear.

At ten years, the tables of the pinchers are decidedly round; the cups are very small and distinctly triangular. The intermediate teeth assume the shape of the pinchers the previous year. The dental star is nearly in the middle of the table.

At eleven years, the corner teeth are rounded. The cups are only small spots, near the posterior borders of the tables; the dental stars are in the middle of the tables. The inferior corners are as large at the gums as at their free extremities, and notches reappear on the superior corner teeth.

At twelve years, all of the teeth are round; only a trace of the cups remains in the inferior ones. The superior corners are leveled. Both incisive arches are much narrower and the tongue shows over their borders.

The inferior border of the jaw bone becomes sharp, and a flattening of the sides of the face, over the roots of the superior molars, is seen. The incidence of the incisive arches increases, especially if the teeth are unusually long.

At thirteen years, the signs of twelve years are more marked. The notch on the superior corner teeth is greater. The cups usually disappear from the inferior incisors at this age, and the superior pinchers become round.

At fourteen years, the pinchers become triangular; the incisive arch is depressed in front and becomes decidedly narrower.

At fifteen years, the intermediate teeth commence to become triangular. The dental star is round in all the lower teeth and is dark and distinct. The cups of the upper teeth are smaller in size.

At sixteen years, the intermediate teeth are triangular.

At seventeen years, all of the lower teeth are triangular, and the dental stars are small and round. The cups of the upper corner teeth have disappeared and those of the others are round.

After nineteen, the cups have usually all disappeared, the teeth approach a line parallel to the bones of the jaw, which is especially marked in the lower jaw, and the arches are flattened from side to side. The lower teeth may be worn almost to the gums, and deposits of cement around their roots may develop to supply a wearing surface.

FIG. 95.

FIG. 96.

FIG. 97.

Nine Years (Figs. 95, 96, 97).—There is no special change to be seen from in front or in profile, although ordinarily the teeth are more obliquely formed and less fresh-looking than at eight years of age. The notch on the superior corner has generally disappeared; the tables, however, at this age are characteristic; the pinchers are rounded and their cups have assumed a triangular form; the dental star is narrower and more distinct, and is nearly in the center of the table; the intermediate teeth commence to become round, and the corner teeth are oval; the superior pincher teeth are sometimes leveled; the inferior incisive arch is narrower and depressed in the center.

ON THE WAY TO THE HARTMAN STOCK FARM.

HE following pages of descriptive matter and reproductions from photographs illustrate only in part the improvements and facilities of the Hartman Stock Farm, in addition to which sixteen horse barns will be erected during the year of 1905. An extensive and up-to-date swine house and slaughter house have been erected since the publication of this catalogue. An additional swine house will be added to the present extensive facilities. Twelve dwellings are now also in course of construction for the accommodation of permanent employees of the farm, besides an endless amount of other improvements which are mapped out for completion during the ensuing two years. The plans are now complete for the most modern and up-to-date combination Jersey dairy barn, with silos and every conceivable modern accomplishment. Notwithstanding our present great horse barn facilities, we are still greatly crowded. The extensive poultry plant which is now in successful operation is but partly completed.

Time alone is necessary to make the Hartman Stock Farm the most model and up-to-date general stock farm in the world, representing a total acreage of about three thousand, lying in one solid body, on both sides of the old Chillicothe pike (south extension of High Street, Columbus, Ohio), a total distance of about four miles north to south, with a west frontage on the Scioto River the entire length of the farm.

THE HARTMAN STOCK FARM CITY SALE BARN.
COR. 3d AND HIGH STS., COLUMBUS, OHIO. (SEE FOLLOWING PAGE.)

HARTMAN STOCK FARM CITY SALE BARN

The accompanying half-tone cut, from a photograph by Innis & Kiefer, is a true representation of Hartman Stock Farm City Sale Barn, situated corner Third and Rich streets, Columbus, Ohio, designed by and erected under the direction of Mr. Franklin J. McClain of Columbus, Ohio. It is built of a light drab pressed brick, with stone trimming.

Its total dimensions are one hundred and eighty-eight feet long by one hundred and thirty-seven feet wide, covering as can be seen almost one acre; the stall capacity is one hundred and eight single and five spacious hospital box stalls, one with water proof cement bottom for hot or cold bath and four with earth bottoms. The wagon room is one hundred and twelve feet long by seventy and one-half feet wide, without any center pillars or obstruction. The second floor has a hay storage capacity of ten hundred tons, and the granaries, on the same floor, a capacity of four thousand bushels, besides a storage room seventy and one-half feet wide by one hundred and thirty-seven feet long. The floor of the single stalls and corridors are paved with brick, the floor of the wagon room is of asphalt.

Hay chutes and grain conductors are conveniently arranged for feed distribution.

Electricity is used as a power for the elevation of feed to second floor.

A steam generating boiler is used for feed cooking and the hot water supply of the barn.

The Mott Hardware Co's. feed boxes are used for grain feeding.

The lever tying system is used in such a manner as to enable the night watchman to free one hundred and eight horses with twelve shifts of the levers in case of fire.

This barn is regarded as among the finest and most scientific structures of its kind in the world; the ventilation is especially a masterpiece of perfection, and from a sanitary standpoint would be hard to improve.

The mastering of the problem of preventing feed from contamination by any rising foul air is among the many important accomplishments of this model and up-to-date barn, two exact duplicates of which are now completed in frame, on the Hartman Stock Farm.

THE MOST IMPORTANT GROUP OF HARTMAN STOCK FARM BUILDINGS,
WHICH ARE VARIOUSLY DISTRIBUTED ALONG THE MAIN THOROUGHFARE A TOTAL DISTANCE OF ABOUT FOUR MILES.

SPLENDOR IN ITS CLASS OF ARCHITECTURE OF A CENTURY PAST.

FARM HOUSE AND RESIDENCE OF MR. F. S. MILLER,
MANAGER OF AGRICULTURAL, HORTICULTURAL, CATTLE AND SWINE
DEPARTMENTS

BARN NO. 5 FOR REGISTERED PERCHERON MARES USED IN AGRICULTURAL WORK.
A DUPLICATE OF CITY SALE BARN. SEE DESCRIPTION ON PAGE 101.

BARN NO. 4 IN USE FOR FERTILIZING AND TEAMING DEPARTMENTS.
SAME MODEL AS BARN NO. 5 AND CITY SALE BARN. SEE PAGE NO. 101.

FARM HOUSE AND RESIDENCE OF FOREMAN S. L. JACOBS
TEAMING DEPARTMENT, IN AN UNFINISHED STATE.

NO. 7. GENERAL FARM STORE,
HARNESS SHOP, ETC.

NO. 6. GRAIN ELEVATOR AND MILL.
CAPACITY 60,000 BUSHELS.
THE FIRST FLOOR OF THE BUILDING IS EQUIPPED
FOR GRINDING GRAIN FOR FARM USE AS FEED.

NO. 5. CORN ELEVATOR. CAPACITY 32,000 BUSHELS.

BARN NO. 1.

LENGTH 96 FEET BY 48 FEET WIDE WITH 20 BOX STALLS OR 40 SINGLE STALLS. HAY MOW CAPACITY 500 TONS.

BARN NO. 2.

LENGTH 96 FEET BY 48 FEET WIDE WITH 20 BOX STALLS OR 40 SINGLE STALLS. HAY MOW CAPACITY 500 TONS.

A FOREMAN'S RESIDENCE

RESIDENCE OF MR. H. B. HARK,
MANAGER OF THE POULTRY PLANT.

BARN NO. 3. LENGTH 140 FEET; WIDTH 60 FEET; HAY MOW
CAPACITY 800 TONS; 20 BOX AND 40 SINGLE STALLS.

RESIDENCE OF JOHN POTTS,
SUPT. CONDITIONING DEPT.

Nos. 6, 7, 8, 9, and 10. Colt Barns 40 Feet by 40 Feet With 8 Box Stalls and Each Box Stall is Connected With a Two Acre Pasture Lot.

A FOREMAN'S RESIDENCE.

A FOREMAN'S RESIDENCE.

COLT BARN NO. 13. CAPACITY 40 HEAD.

COLT BARN NO. 12. CAPACITY 40 HEAD.

AGRICULTURAL, BLACKSMITH AND WAGON AND IMPLEMENT REPAIR SHOP.

COLT BARN NO. 11. CAPACITY 40 HEAD.

A FOREMAN'S RESIDENCE.

A FOREMAN'S RESIDENCE.

**POULTRY
DEPARTMENT
HARTMAN STOCK FARM**

COLUMBUS, O.

THE HARTMAN STOCK FARM POULTRY PLANT, under the direction of Mr. H. B. Hark, is devoted to the extensive breeding of the White Pekin Duck and high class Barred Plymouth Rock and the Buff, White and Partridge Wyandotte chickens.

The policy of the poultry plant will be to meet the demands of the fancy and commercial trade. Single Comb White Leghorns will be used for egg production.

Owing to the newness of this department, it will not be possible to supply eggs or stock to breeders in any quantities before the fall of 1905. It will be the aim of this department to supply only the very highest class birds of our various specialties.

For any further particulars,
address,

H. B. HARK,
Station C, Box 5 CC,
Columbus, Ohio.

DOUBLE DUCK BROODER HOUSE.
Constant Brooding Capacity 5,000 Ducklings. Total Annual Capacity 20,000. Dimensions, 270 Feet Long by 35 Feet Wide.

CHICKEN BROODER HOUSE.
225 Feet Long by 18 Feet Wide. Constant Brooding Capacity 3,200 Chickens. Annual Capacity 12,000. With a Total Incubator Capacity in Cellar of 13,000 at Each Hatch.

PEKIN DUCK HOUSES.

Consisting of First and Second Buildings 150 Feet Long Each by 20 Feet Wide, Used for Breeding Ducks, Third Building 400 Feet Long by 20 Wide, Used for Fattening Spring Ducklings. Capacity for Breeding Ducks 800 Head.
Capacity of Fattening Building 3,000 at a time.

PACKING HOUSE, FOOD MIXING, POWER STATION, PICKING, DRESSING, FEED COOKING AND STORAGE.
Dimensions, 70 Feet Long by 45 Feet Wide With Elevator Connecting First, Second and Third Floors.

DOUBLE BREEDING HOUSE.

FOR THOROUGHBRED BARRED PLYMOUTH ROCKS, BUFF, WHITE, AND PARTRIDGE WYANDOTTES. DIMENSIONS 160 FEET LONG BY 30 FEET WIDE.

DR. HARTMAN'S FARM RESIDENCE.

ORIGIN OF THE PERCHERON

From Mr. Walters' translation of Du Hays.)

“**W**HAT now is the origin of the Percheron?

Some attribute to him an Arabian ancestry; others, less explicit and without positively assigning to him so noble an origin, hold him to be strongly impregnated with Arabian blood. M. Eugene Perrault, one of the most extensive and skilful dealers in fancy horses in all Europe, has frequently remarked to me that of all the various races of horses none were so interesting to him as the admirable Percheron, and that, judging from his appearance and qualities, he was satisfied he was a genuine Arab, modified in form by the climate and the rude services to which he had for ages been subject.

It is well known that after the defeat of the famous Saracen chief Abderame by Charles Martel, on the plains of Vouille, the magnificent cavalry of the foe fell into the hands of the victors. Since more than 300,000 infidels were killed on that day and the horses which they rode were, like themselves, from the East, upon a division of the spoil a large number of these were assigned to the men of La Perche, of Orleanais and Normandy (who composed the bulk of the French forces), and they must necessarily have left in their progeny indelible traces of their blood.

La Perche, like all Christian countries, furnished, as is well known, her contingent of fighting men to the Crusades, and the chronicles cite several Counts of Bellesmer, Mortague and Nogent, barons and gentlemen of that province, who, with many of their vassals, made pilgrimages to the Holy Land.

The Abbe Faet, in a letter addressed to the Congress of Mortague, July 16, 1843, and in his great work upon La Perche, cites in this connection a lord of Montdoubleau, Geffroy IV, and Rotrou, Count of La Perche, as

having brought back from Palestine several stallions, which were put to mares, and the progeny most carefully preserved.

Mr. Du Hays comments on Jean-Le-Blanc, the great (from Mr. Walters' translation) and prepotent factor in the Percheron horse breeding, since early in the nineteenth century, as follows: "Although heavy, powerful, and, indeed, a shaft-horse, his gait and an indescribable something pervading his whole body recalled so thoroughly the idea of the Oriental family that one was disposed to take him for an enlarged Arabian.

"This fact, often related to us, excited our curiosity. We did not rest until, pressing inquiry upon inquiry, one after another, we ascertained that this family had been crossed with a stallion from the Pin stables, standing at the Chateau of Coesmes, near Bellevue. And what was this stallion? The Arabian 'Gallipoli!'"

A TRIBUTE TO THE PERCHERON HORSE

(By Charles Du Hays, from translation by Mr. Walters.)

ALMOST everything that has been written about the horse may be reduced pretty much to complaining that there does not exist a breed which unites, in an elevated degree, high moral to physical qualities; modestly seeking and teaching the means of obtaining such a breed.

It is reasonable that such statements should surprise us, here in the heart of France, where, for a long time, a race of horses has flourished which may be said to fill the requirements proposed in every way. The proof of this statement is easy; a hasty sketch of the principal characters of the breed suffices to furnish it.

To no ordinary strength, to vigor which does not degenerate and to a conformation which does not exclude elegance, it joins docility, mildness, patience, honesty, great kindness, excellent health, and a hardy, elastic temperament. Its movements are quick, spirited and light. It exhibits great endurance, both when hard worked and when forced to maintain for a long time any of its natural gaits, and it possesses the inestimable quality of moving fast with heavy loads. It is particularly valuable for its precocity and produces by its work, as a two-year-old, more than the cost of his feed and keep. Indeed, it loves and shows a real aptness for labor, which is the lot of all. It knows neither the whims of bad humor nor nervous excitement. It bears for man, the companion of its labors, an intimate confidence and expresses to him familiarity, the fruit of an education for many generations in the midst of his family. Women and children, from whose hands it is fed, can approach it without fear. In a word, if I may speak thus, it is an honorable race. It is exempt (a cause of everlasting jealousy among breeders of other races), always exempt from the hereditary bony

defects of the hock, and where it is raised, spavin, jardon, bone spavin, periodical inflammation and other dreaded infirmities are not known even by name.

This truly typical race would seem a myth did it not exist in our midst. But every day we see, every day we handle, this treasure, the munificent gift of Providence to this favored region, to cause agriculture, that “nursing mother,” to flourish, and with agriculture, peace and abundance. I need not name this breed; everyone from this incomplete sketch has recognized the fine race of steady and laborious horses, bred in the ancient province of Perche (so justly entitled “Perche of good horses”), plowing in long furrows the soil of Beauce, and thence spreading itself over all France, where its qualities render it without a rival for all the specialties of a rapid draft. Hence it is that all our provinces envy us the possession of the race, and even foreign countries seek after it with an eagerness amounting to a passion.

PERCHERON STALLION, CAMBOUR (53474).
WINNER 3RD PRIZE, THREE-YEAR-OLD CLASS AT OHIO STATE FAIR 1904.

percheron

IMPORTED PERCHERON STALLIONS

- Hoof, 172; "Biribi" (48789), Grey; Foaled, April 12, 1900; Imported, July 12, 1904; Sire, "Theudis," Dam, "Ragotte."
- Hoof, 160; "Troubadour" (48647), Brown; Foaled, March 27, 1900; Imported, July 12, 1903; Sire, "Besigue," Dam, "Pactole."
- Hoof, 165; "Cocardo" (47575), Black; Star; Foaled, 1900; Imported, 1903; Sire, "Morse," Dam, "Coquette."
- Hoof, 147; "Adalbert" (46559), Black; Foaled, April 20, 1900; Imported, July 12, 1903; Sire, "Bon Coeur," Dam, "Robine."
- Hoof, 183; "Marseau" (53316), Dark Grey; Foaled, March 27, 1901; Imported, July 12, 1903; Sire, "Batailleur," Dam, "Julia."
- Hoof, 143; "Tambour" (48880), Black; Foaled, March 16, 1900; Imported, July 12, 1903; Sire, "Theudis," Dam, "Eveillec."
- Hoof, 170; "Macadam" (52624), Black; Foaled, May 5, 1901; Imported, July 12, 1903; Sire, "Marino," Dam, "Musette."
- Hoof, 182; "Talbat" (46623), Black; Foaled, April 21, 1900; Imported, July 12, 1903; Sire, "Boule d'Or," Dam, "Brebis."
- Hoof, 39; "Duchesse" (48928), Black; Foaled, April 28, 1900; Imported, April 15, 1902; Sire, "Duchessay," Dam, "Melina."
- Hoof, 163; "Urgent" (47619), Grey; Foaled, April 26, 1900; Imported, July 12, 1903; Sire, "Castelar," Dam, "Morga."
- Hoof, 164; "Ernauton" (46592), Black; Foaled, April 4, 1900; Imported, July 12, 1903; Sire, "Jules," Dam, "Adele."
- Hoof, 2; "Ugolin" (46131), Black; Foaled, March 15, 1900; Imported, Nov. 25, 1902; Sire, "Othello," Dam, "Lisette."
- Hoof, 149; "Loustic" (48678), Black; Foaled, April 1, 1900; Imported, July 12, 1903; Sire, "Jules," Dam, "Coquette."

- Hoof, 167; "Anida" (48644), Black; Foaled, April 18, 1900; Imported, July 12, 1903; Sire, "Besigue," Dam, "Camelle."
- Hoof, 185; "Gospard" (51330), Black; Foaled, March 4, 1901; Imported, July 12, 1903; Sire, "Besigue," Dam, "Juvine."
- Hoof, 166; "Major" (48866), Black; Foaled, April 7, 1900; Imported, July 12, 1903; Sire, "Victoria," Dam, "Brillante."
- Hoof, 190; "Bibi" (53769), Black; Foaled, April 16, 1902; Imported, May 15, 1902; Sire, "Phaeton," Dam, "Sousette."
- Hoof, 96; "Miniac" (54885), Black; Foaled, March 29, 1902; Imported, Nov. 25, 1902; Sire, "Paladin," Dam, "Margotine."
- Hoof, 103; "Mouton" (53853), Black; Foaled, March 10, 1902; Imported, Nov. 25, 1902; Sire, "Confetti," Dam, "Brebis."
- Hoof, 98; "Rigodon" (54368), Black; Foaled, March 29, 1902; Imported, Nov. 25, 1902; Sire, "Bristol," Dam, "Bellette."
- Hoof, 181; "Magister" (45779), Black; Foaled, 1900; Imported, July 12, 1903; Sire, "Jules," Dam, "Cascade."
- Hoof, 180; "Bravo" (47370), Black; Foaled, 1900; Imported, July 12, 1903; Sire, "Electeur," Dam, "Mignonne."
- Hoof, 144; "Castor" (52193), Black; Foaled, 1901; Imported, July 12, 1903; Sire, "Bottailleur," Dam, "Margot."
- Hoof, 145; "Marteleur" (52223), Black; Foaled, 1901; Imported, July 12, 1903; Sire, "Belleau," Dam, "Mousseline."
- Hoof, 153; "Castore" (48668), Black; Foaled, 1900; Imported, July 12, 1903; Sire, "Olga," Dam, "Bascule."
- Hoof, 161; "Davos" (46192), Black; Foaled, 1900; Imported, July 12, 1903; Sire, "Passy," Dam, "Rustique."

- Hoof, 162; "Tulbury" (48960), Black; Foaled, 1900; Imported, July 12, 1903; Sire, "Volcan," Dam, "Daphne."
- Hoof, 173; "Marquis" (46787), Black; Foaled, 1900; Imported, July 12, 1903; Sire, "Hovigateur," Dam, "Biche."
- Hoof, 176; "Elysee" (44524), Black; Foaled, April 7, 1898; Imported, July 12, 1903; Sire, "Theudis," Dam, "Ragotte."
- Hoof, 14; "Caprice" (48648), Grey; Foaled, March 24, 1900; Imported, March 24, 1904; Sire, "Besigue," Dam, "Thalie."
- Hoof, 208; "Coco" (52279), Black; Foaled, March 1, 1901; Imported, March 24, 1904; Sire, "Besigue," Dam, "Calypso."
- Hoof, 213; "Bananier" (52179), Black; Foaled, March 24, 1901; Imported, March 24, 1904; Sire, "Frontiguan," Dam, "Rustique."
- Hoof, 202; "Coreador" (51303), Grey; Foaled, March 12, 1901; Imported, March 24, 1904; Sire, "Besigue," Dam, "Mirabelle."
- Hoof, 217; "Keror" (51602), Grey; Foaled, April 10, 1901; Imported, March 24, 1904; Sire, "Theudis," Dam, "Reveuse."
- Hoof, 225; "Eclatant" (51986), Black; Foaled, March 15, 1901; Imported, May 24, 1904; Sire, "Distingue," Dam, "L'Amie."
- Hoof, 203; "Pratricien" (54619), Black; Foaled, April 14, 1902; Imported, March 24, 1904; Sire, "Scipion," Dam, "Charmante."
- Hoof, 204; "Kermes" (56149), Black; Foaled, April 15, 1902; Imported, March 24, 1904; Sire, "Torpilleur," Dam, "Apalline."
- Hoof, 205; "Moteur" (54325), Black; Foaled, April 1, 1902; Imported, March 24, 1904; Sire, "Bojador," Dam, "Margot."
- Hoof, 206; "Civil" (57350), Black; Foaled, March 19, 1902; Imported, March 24, 1904; Sire, "Roc," Dam, "Lisette."
- Hoof, 207; "Leger" (48897), Black; Foaled, April 3, 1900; Imported, March 24, 1904; Sire, "Giron," Dam, "Fanta."
- Hoof, 220; "Bannier" (55699), Black; Foaled, March 17, 1902; Imported, May 24, 1904; Sire, "Paris," Dam, "Bleue."
- Hoof, 209; "Farceur" (52458), Black; Foaled, March 15, 1901; Imported, March 24, 1904; Sire, "Loustic," Dam, "Anisette."

- Hoof, 210; "Offenback" (52486), Black; Foaled, March 12, 1901; Imported, March 24, 1904; Sire, "Victoria," Dam, "Lisette."
- Hoof, 236; "Intendant" (46438), Black; Foaled, March 17, 1900; Imported, May 24, 1904; Sire, "Sylvio," Dam, "Minette."
- Hoof, 212; "Paulus" (57343), Black; Foaled, March 20, 1902; Imported, March 24, 1904; Sire, "Roland," Dam, "Alga."
- Hoof, 232; "Sophomore" (54626), Black; Foaled, May 4, 1902; Imported, May 24, 1904; Sire, "Oural," Dam, "Reverence."
- Hoof, 223; "Avenir" (54713), Grey; Foaled, May 10, 1902; Imported, May 24, 1904; Sire, "Rotion," Dam, "Beaute."
- Hoof, 216; "Marceau" (56148), Black; Foaled, March 30, 1902; Imported, March 24, 1904; Sire, "Phaeton," Dam, "Grisette."
- Hoof, 237; "Petrin" (55622), Black; Foaled, May 1, 1902; Imported, May 24, 1904; Sire, "Batailleur," Dam, "Rositta."
- Hoof, 211; "Vaillant" (57608), Black; Foaled, April 20, 1903; Imported, March 24, 1904; Sire, "Casino," Dam, "Biche."
- Hoof, 200; "Calculateur" (47532), Black; Foaled, March 17, 1900; Imported, March 24, 1904; Sire, "Theudis," Dam, "Cesarine."
- Hoof, 222; "Coquet" (51387), Grey; Foaled, May 10, 1901; Imported, May 24, 1904; Sire, "Distingue," Dam, "Muscade."
- Hoof, 201; "Cambour" (53474), Grey; Foaled, April 18, 1901; Imported, March 24, 1904; Sire, "Besigue," Dam, "Rose."
- Hoof, 233; "Malgache" (55477), Grey; Foaled, April 29, 1902; Imported, May 24, 1904; Sire, "Picador," Dam, "Fifine."
- Hoof, 226; "Heron" (51129), Black; Foaled, March 19, 1901; Imported, May 24, 1904; Sire, "Barabas," Dam, "Duchesse."
- Hoof, 227; "Parisien" (53034), Black; Foaled, April 28, 1901; Imported, May 24, 1904; Sire, "Gargantua," Dam, "Sulfide."

- Hoof, 229; "Fertois" (51881), Black; Foaled, Feb. 20, 1901; Imported, May 24, 1904; Sire, "Caton," Dam, "Almyre."
- Hoof, 215; "Edison" (55913), Black; Foaled, May 12, 1903; Imported, March 24, 1904; Sire, "Besigue," Dam, "Elisa."
- Hoof, 230; "Voltaire" (53928), Grey; Foaled, March 14, 1902; Imported, May 24, 1904; Sire, "Emoi," Dam, "Malice."
- Hoof, 231; "Parisien" (55434), Grey; Foaled, April 15, 1902; Imported, May 24, 1904; Sire, "Paris," Dam, "Cocotte."
- Hoof, 224; "Sergeant" (53444), Grey; Foaled, Jan. 26, 1901; Imported, May 24, 1904; Sire, "Sangrado," Dam, "Pauline."
- Hoof, 214; "Pawpaw" (54611), Black; Foaled, May 16, 1902; Imported, March 24, 1904; Sire, "Besigue," Dam, "Rose."
- Hoof, 228; "Urbain" (55021), Grey; Foaled, March 12, 1902; Imported, May 24, 1904; Sire, "Kif Kif," Dam, "Bichette."
- Hoof, 221; "Pilouface" (53689), Black; Foaled, March 28, 1902; Imported, May 24, 1904; Sire, "Paladin," Dam, "Recompense."
- Hoof, 198; "Surveillance" (44776), Grey; Foaled, March 10, 1899; Imported March 24, 1904; Sire, "Besigue," Dam, "Mouvette."
- Hoof, 269; "Calypso" (52370), Black; Foaled, May 18, 1901; Imported, August 2, 1904; Sire, "Armand," Dam, "Simoune."
- Hoof, 257; "Coquet" (57169), Grey; Foaled, May 15, 1902; Imported, August 2, 1904; Sire, "Sangrado," Dam, "Coquette."
- Hoof, 258; "Rivoli" (51062), Black; Foaled, March 18, 1901; Imported, August 2, 1904; Sire, "Villeneuve," Dam, "Rosette."
- Hoof, 259; "Major" (44807), Grey; Foaled, March 30, 1899; Imported, August 2, 1904; Sire, "Violoneux," Dam, "Pelotte."
- Hoof, 261; "Quidam" (53163), Grey; Foaled, May 10, 1901; Imported, August 2, 1904; Sire, "Massena," Dam, "Mouvette."
- Hoof, 262; "Mongolien" (53126), Grey; Foaled, March 15, 1901; Imported, August 2, 1904; Sire, "Beaudole," Dam, "Absinthe."
- Hoof, 263; "Marengo" (46742), Black; Foaled, May 18, 1900; Imported, August 2, 1904; Sire, "Vernon," Dam, "Rustique."

- Hoof, 264; "Troupier" (48497), Black; Foaled, April 20, 1900; Imported, August 2, 1904; Sire, "Sylvis," Dam, "Coquette."
- Hoof, 265; "Marceau" (46706), Grey; Foaled, May 16, 1900; Imported, August 2, 1904; Sire, "Intrepide," Dam, "Celine."
- Hoof, 266; "Wilson" (51423), Black; Foaled, April 30, 1901; Imported, August 2, 1904; Sire, "Amilcar," Dam, "Cecile."
- Hoof, 267; "Guindal" (54554), Grey; Foaled, March 13, 1902; Imported, August 2, 1904; Sire, "Azor," Dam, "Biche."
- Hoof, 268; "Duchesne" (52397), Black; Foaled, April 25, 1901; Imported, Aug. 2, 1904; Sire, "Duchesnay," Dam, "Badiane."
- Hoof, 256; "Canton" (46221), Black; Foaled, May 1, 1900; Imported, August 2, 1904; Sire, "Mongout," Dam, "Pelotte."
- Hoof, 270; "Linot" (56283), Black; Foaled, April 28, 1902; Imported, August 2, 1904; Sire, "Oringy," Dam, "Linotte."
- Hoof, 271; "Amiral" (56124), Black; Foaled, March 28, 1902; Imported, August 2, 1904; Sire, "Fedor," Dam, "Herminie."
- Hoof, 272; "Bouffard" (51396), Black; Foaled, April 14, 1901; Imported, August 2, 1904; Sire, "Sangrado," Dam, "Hugnonne."
- Hoof, 288; "Amulius" (52327), Black; Foaled, Feb. 21, 1901; Imported, Dec. 20, 1904; Sire, "Beaumont," Dam, "Margot."
- Hoof, 289; "Alcazar" (52644), Grey; Foaled, March 25, 1901; Imported, Dec. 20, 1904; Sire, "Blande," Dam, "Mauvette."
- Hoof, 290; "Radiguil" (54499), Grey; Foaled, April 28, 1902; Imported, Dec. 20, 1904; Sire, "Gaulois," Dam, "Freluchette."
- Hoof, 291; "Voltigeur" (52332), Grey; Foaled, May 12, 1901; Imported, Dec. 20, 1904; Sire, "Marescot," Dam, "Bibi."
- Hoof, 292; "Bistouri" (57341), Grey; Foaled, April 25, 1902; Imported, Dec. 20, 1904; Sire, "Coco," Dam, "Ragotte."
- Hoof, 293; "Crochet" (55144), Black; Foaled, March 30, 1902; Imported, Dec. 20, 1904; Sire, "Phaeton," Dam, "Dentelle."
- Hoof, 294; "Ruralis" (53876), Black; Foaled, April 25, 1902; Imported, Dec. 20, 1904; Sire, "Bojador," Dam, "Berthine."
- Hoof, 295; "Sejour" (56468), Grey; Foaled, April 24, 1902; Imported, Dec. 20, 1904; Sire, "Bamboula," Dam, "Elvise."
- Hoof, 296; "Solferino" (56370), Black; Foaled, May 24, 1902; Imported, Dec. 20, 1904; Sire, "Arthur," Dam, "Fauvette."

- Hoof, 297; "Mouton" (56808), Bay-brown; Foaled, April 2, 1902; Imported, Dec. 20, 1904; Sire, "Moka," Dam, "Lisette."
- Hoof, 298; "Cadix" (56778), Grey; Foaled, April 20, 1902; Imported, Dec. 20, 1904; Sire, "Moka," Dam, "Celina."
- Hoof, 299; "Galtas" (52661), Bay; Foaled, April 15, 1901; Imported, Dec. 20, 1904; Sire, "Duchesnay," Dam, "Charmante."
- Hoof, 300; "Manceau" (51590), Grey-black; Foaled, May 7, 1901; Imported, Dec. 20, 1904; Sire, "Besigue," Dam, "Lisette."
- Hoof, 301; "Monarque" (53329), Grey-black; Foaled April 10, 1901; Imported, Dec. 20, 1904; Sire, "Epatant," Dam, "Elster."
- Hoof, 302; "Noireau" (53258), Black; Foaled, March 21, 1901; Imported, Dec. 20, 1904; Sire, "Boule d'Or," Dam, "Verveine."
- Hoof, 303; "Gourmand" (48761), Black; Foaled, April 8, 1900; Imported, Dec. 20, 1904; Sire, "Bon Coeur," Dam, "Rosalie."
- Hoof, 304; "Canadien" (51046); Grey; Foaled, Feb. 28, 1901; Imported, Dec. 20, 1904; Sire, "Villeneuve," Dam, "Margot."
- Hoof, 305; "Capioc" (54674), Black; Foaled, April 3, 1902; Imported, Dec. 20, 1904; Sire, "Villeneuve," Dam, "Jeanette."
- Hoof, 306; "Lario" (56806), Grey; Foaled, May 3, 1902; Imported, Dec. 20, 1904; Sire, "Sidi," Dam, "Biche."

HOME BRED PERCHERON STALLIONS OF SALABLE AGE

Hoof, 30; "Elsies Jupiter Jr." (26804), Grey; Foaled, May 5, 1900; Sire, "Fils de Jupiter" (9992), Dam, "Elsie C" (17856).

Hoof, 114; "Fortin" (32625), Grey; Big star, one hind foot white; Foaled May 3, 1902; Sire, "Forfait" (28578), Dam, "Inez" (17381.)

Hoof, 115; "Tuto" (32620), Black; Star; Foaled, May 6, 1902; Sire, "Invincible" (38109), Dam, "Bessie" (18353).

Hoof, 112; "Browmine" (23623), Brown; Star; Foaled, April 2, 1902; Sire, "Abo" (43517), Dam, "Manette" (23639).

Hoof, 116; "Diamond" (32626), Black; Star; both hind feet white; Foaled, April 11, 1902; Sire, "Diplome" (45444), Dam, "Rose" (43859).

Photo from life by
Innis & Kiefer,
Columbus, Ohio.

PERCHERON STALLION, UGOLIN (46131).

Copyright 1904.
by
James B. Hartman

Photo from life by
Innis & Kiefer,
Columbus, Ohio.

PERCHERON STALLION, ELSIE'S JUPITER JR. (26804).

Copyright 1904
Samuel B. Hartman.

Photo from life by
Junis & Kiefer,
Columbus, Ohio.

PERCHERON STALLION, PARISIEN (53034).

PERCHERON STALLION, ANIDA (48644).

Photo from life by
Innis & Kiefer,
Columbus, Ohio.

*Copyright 1904
By
Anna B. Hartman*

Photo from life by
Jouis & Kiefer,
Columbus, Ohio.

PERCHERON STALLION, CAMBOUR (53471).
WINNER 3d IN THREE-YEAR-OLD CLASS OHIO STATE FAIR 1904.

*Copyright 1904
Amos B. Hartman*

Photo from life by
Imis & Kiefer,
Columbus, Ohio.

PERCHERON STALLION, MAJOR (48860).
WINNER 1st IN THREE-YEAR-OLD CLASS OHIO STATE FAIR 1903.
WINNER 1st IN FOUR-YEAR-OLD CLASS OHIO STATE FAIR 1904.

*Major
Photo by
Imis*

*Copyright 1904
by
Laurie B. Hartman*

Photo from life by
Innis & Kiefer,
Columbus, Ohio.

PERCHERON STALLION, CALCULATEUR (47532).
• WINNER SECOND PRIZE IN FOUR-YEAR-OLD CLASS OHIO STATE FAIR 1904.

*Copyrighted by
Samuel B. Hartman*

Photo from life by
Louis & Kiefer,
Columbus, Ohio.

PERCHERON STALLION, MONGOLLEN (88156).
WINNER SECOND IN THREE-YEAR-OLD CLASS OHIO STATE FAIR 1901.

Copyright 1904.
Amos B. Hartman.

Photo from life by
Harris & Kiefer,
Columbus, Ohio.

PERCHERON STALLION, TAMBOUR (48880).

Copyright 1904
Samuel B. Hartman

Photo from life by
Imis & Kiefer,
Columbus, Ohio.

PERCHERON STALLION, COQUET (51387).

PERCHERON STALLION, GOSTARD (51330).

Photo from life by
Innis & Kiefer,
Columbus, Ohio.

Copyright 1904
Samuel B Hartman.

Photo from life by
Jimmie & Kiefer,
Columbus, Ohio.

PERCHERON STALLION, SURVEILLE (4476).

Copyright 1904

by L. B. Hartman

Photo from life by
Imis & Kiefer,
Columbus, Ohio.

PERCHERON STALLION, COCO (52279).

PERCHERON STALLION, KEROR (51602).

Photo from life by
Imis & Kiefer,
Columbus, Ohio.

Copyright 1904
Daniel B. Hartman

Photo from life by
Janis & Kiefer,
Columbus, Ohio.

Percheron Stallion
Talbat

PERCHERON STALLION, TALBAT (46623).

Photo from life by
Imis & Kiefer,
Columbus, Ohio.

PERCHERON STALLION, BANNER (55699).

*Copyright 1904
by
James B. Hartman*

Photo from life by
Innis & Kiefer,
Columbus, Ohio.

*Photo by
James B. Hartman*

PERCHERON STALLION, URGENT (47619).

Photo from life by
Imis & Kiefer,
Columbus, Ohio.

PERCHERON STALLION, UGOLIN (46131).
AS A TWO-YEAR-OLD.

Photo from life by
Innis & Kiefer,
Columbus, Ohio.

CALCULATEUR,

COCO,

SURVILLE,

BIRBI,

MAJOR,

UGOLIN,

URGENT AND ANIDA.

EIGHT PRIZE WINNING PERCHERON STALLIONS.

*Copyright 1904
James B. Hartman.*

TWO-YEAR-OLD, WEIGHT 1,900 LBS.
PERCERON STALLION, KERMES (50140). LEAVING FOR HIS NEW AND PERMANENT HOME.

Photo from life by
Imis & Kiefer,
Columbus, Ohio.

Photo from life by
Innis & Kiefer,
Columbus, Ohio.

TWO-YEAR-OLD, WEIGHT 2,000 LBS.
PERCHERON STALLION, MOTEUR (54325).

*Copyright 1901
by
Samuel B. Hartman*

Photo from life by
Innis & Kiefer,
Columbus, Ohio.

*Chas. H. P.
Innis & Kiefer*

2-YEAR-OLD, WEIGHT 1,850 LBS.
PERCHERON STALLION CIVIL (57350), 2ND PRIZE WINNER 2-YEAR-OLD CLASS OHIO STATE FAIR 1904.

*Copyright 1904
Samuel B. Hartman.*

Photo from life by
Innis & Kiefer,
Columbus, Ohio.

2-YEAR-OLD, WEIGHT 1880 LBS.
PERCHERON STALLION MARGACHE (55477). WINNER 1ST PRIZE 2-YEAR-OLD CLASS OHIO STATE FAIR 1904.

Dr. J. H. H. H.

*Copyright 1904
by
Samuel B. Hartman*

Photo from life by
Innis & Kiefer,
Columbus, Ohio.

2 YEAR-OLD
PERCHERON STALLION, PARRIEN (65434).

*Copyright 1904
J. W. Hartman*

Photo from life by
Innis & Kiefer,
Columbus, Ohio.

*Photo by
J. W. Hartman*

2-YEAR-OLD.
PERCHERON STALLION, PETRIN (55622).

Photo from life by
Innis & Kiefer,
Columbus, Ohio.

Sept 10, 1904
James C. Hartman

Photo by
Innis

2-YEAR-OLD, WEIGHT 1,900 LBS.
PERCIBRON STALLION, KENNES (56149).

2-YEAR-OLD,
PERCHERON STALLION, LARO (56806).

Copyright 1904
Samuel B. Hartman

Photo from life by
Innis & Kiefer,
Columbus, Ohio.

*Copyright 1904
by
Samuel B. Hartman*

Photo from life by
Innis & Kiefer,
Columbus, Ohio.

1-YEAR-OLD, WEIGHT 1,720 LBS.
PERCHERON STALLION, EDISON (53913). WINNER 1ST PRIZE ONE-YEAR-OLD CLASS OHIO STATE FAIR 1904.

Edison 1/10/10

Copyright 1904
by
Samuel B. Hartman

Percheron Stallion
Vaillant

Photo from life by
Innis & Kiefer,
Columbus, Ohio.

1-YEAR-OLD.
PERCHERON STALLION, VAILLANT (57608). WINNER 2ND PRIZE OHIO STATE FAIR 1904.

*Copyright 1904
by
Samuel B. Hartman,*

Photo from life by
Janis & Kiefer,
Columbus, Ohio.

1-YEAR-OLD.
PRACHIRON STALLION, TORPILLEUR II 40481.

(Photo from life by
Jimm & Kiefer,
Columbus, Ohio.)

LINDA 12986.
ELIZA 21762.
A CREDITABLE HOME-BRED PAIR OF MARES.

Courtesy of
SAM'L B. HARTMAN.
May 14, 1903.

TERRY
GOLOS.

CH. VIGOREUSE.

CH. LINDA.

THREE FAVORITE PERCHERON MARES.

CH. ELIZA.

IMPORTED PERCHERON MARES

- Hoof, 68; "Chicane" (51188), 30290, Black; Strip and snip; Foaled, April 24, 1901; Imported, 1902; Sire, "Thenis" (43136), Dam, "Bichonne" (43902).
- Hoof, 60; "Cocotte" (49931), 31489, Black; Foaled, April 5, 1900; Imported, 1902; Sire, "Bilboquet" (42566), Dam, "Rosette" (49930).
- Hoof, 34; "Folichonne" (54111), 31518, Black; Star; Foaled, May 20, 1900; Imported, 1902; Sire, "Besigue" (19602), Dam, "Rosette" (47930).
- Hoof, 121; "Police" (52464), 31512, Grey; Strip; Foaled, March 28, 1901; Imported, 1902; Sire, "Ruyther" (43496), Dam, "Melie" (50004).
- Hoof, 56; "Alca" (50717), 30317, Grey; Strip, hind feet white; Foaled, May 27, 1898; Imported, 1902; Sire, "Besigue" (19602), Dam, "Pelotte" (22288).
- Hoof, 89; "Neigeuse" (46588), 31481, Black; Foaled, April 5, 1900; Imported, 1902; Sire, "Jules" (37987), Dam, "Vaillante" (42762).
- Hoof, 25; "Violette" (43819), 31504, Black; Small star; Foaled, March 17, 1898; Imported, 1902; Sire, "Desouis" (40794), Dam, "Turlurette" (43010).
- Hoof, 122; "Pepiti" (53235), 31514, Grey; Strip; Foaled, April 15, 1901; Imported, 1902; Sire, "Fernando" (34038), Dam, "Faribole" (47327).
- Hoof, 53; "Reveuse" (48071), 30285, Black; Star; Foaled, May 1, 1897; Imported, 1902; Sire, "Fabrice" (18683), Dam, "Lisette" (8665).
- Hoof, 80; "Portiere" (46474), 31495, Black; Star; Foaled, April 10, 1900; Imported, 1902; Sire, "Paulus" (43133), Dam, "Lola" (25999).
- Hoof, 137; "Brunette" (55173), 31470, Black; Foaled, May 4, 1902; Imported, 1902; Sire, "Sidi" (43654), Dam, "Louise" (50240).

PERCHERON MARE, CH. LINDA,
AND FOAL BY MAJOR

- Hoof, 45; "Rose" (43859), 30266, Dark grey; Foaled, May 10, 1896; Imported, 1902; Sire, "Besigue" (19602), Dam, "Rosette" (10060).
- Hoof, 131; "Sira" (53122), 31477, Black; Star; Foaled, March 20, 1901; Imported, 1902; Sire, "Canton" (43489), Dam, "Freluchette" (42161).
- Hoof, 40; "Bijou" (50088), 30287, Dapple grey; Spot in forehead, right front foot white; Foaled, April 9, 1897; Imported, 1902; Sire, "Jules" (37987), Dam, "Pelotte" (31773).
- Hoof, 123; "Roulette" (47681), 31461; Black; Prolonged star; Foaled, May 22, 1900; Imported, 1902; Sire, "Olga" (43283), Dam, "Negresse" (43763).
- Hoof, 119; "Bichette" (52294), 31483, Black; Small star; Foaled, April 15, 1901; Imported, 1902; Sire, "Reynolds" (44646), Dam, "Poule" (44814).
- Hoof, 62; "Villageoise" (46366), 30204, Black; Spot in forehead; Foaled, Feb. 15, 1900; Imported, 1902; Sire, "Sylvio" (43344), Dam, "Irene" (32346).
- Hoof, 129; "Ladie" (52053), 31516, Black; Star; Foaled, May 15, 1901; Imported, 1902; Sire, "Robespierre" (44589), Dam, "Chicanne" (47796).
- Hoof, 135; "Mandoline" (54846), 31468, Black grey; Foaled, May 13, 1902; Imported, 1902; Sire, "Camille" (44063), Dam, "Mabile" (36618).
- Hoof, 142; "Fauvette" (55175), 31467, Black; Star; Foaled, April 25, 1902; Imported, 1902; Sire, "Sidi" (43654), Dam, "Bleue" (23323).

- Hoof, 44; "Lanoire" (50733), 30301, Black, with a trace of white in face; Foaled, March 13, 1896; Imported, 1902; Sire, "Theudis" (40871), Dam, "Bijou" (17272).
- Hoof, 93; "Plaisante" (50459), 31510, Black; Strip; Foaled, April 25, 1900; Imported, 1902; Sire, "Paladin" (34847), Dam, "Bourbonnaise" (43699).
- Hoof, 47; "Resistante" (43907), 30297, Grey; Star; hind feet white; Foaled, June 2, 1897; Imported, 1902; Sire, "Fabrice" (18683), Dam, "Faisante" (15458).
- Hoof, 87; "Marquise" (49433), 31472, Black; Foaled, April 1, 1898; Imported, 1902; Sire, "Narcisse" (42440), Dam, "Lolotte" (34822).
- Hoof, 94; "Tenebreuse" (48069), 31510, Black; Strip, both hind feet white; Foaled, March 15, 1899; Imported, 1902; Sire, "Othello" (42829), Dam, "Pellotte" (23262).
- Hoof, 58; "Sultane" (43914), 30283, Dark grey; Foaled, March 27, 1896; Imported, 1902; Sire, "Fabrice" (18683), Dam, "Mana" (22815).
- Hoof, 83; "Broque" (54100), 31484, Black; Foaled, May 15, 1900; Imported, 1902; Sire, "Brock" (37442), Dam, "Cherie" (30976).
- Hoof, 97; "Ecuyere" (54853), 31499, Black; Foaled, May 15, 1902; Imported, 1902; Sire, "Spitzberg" (43833), Dam, "Nacette" (47165).
- Hoof, 117; "Huquette" (50461), 31519, Black grey; Foaled, March 30, 1900; Imported, 1902; Sire, "Paladin" (34847), Dam, "Pintante" (43930).
- Hoof, 63; "Toujours Prete" (45600), 30302, Dark grey; Crescent in face; Foaled, March 18, 1897; Imported, 1902; Sire, "Boule d'Or" (19129), Dam, "Aliza" (13614).
- Hoof, 70; "Uramus" (46341), 30291, Black; Large star; Foaled, April 30, 1900; Imported, 1902; Sire, "Ormeau" (42922), Dam, "Argine" (43176).
- Hoof, 55; "Manille" (50226), 30295, Grey; Strip; Foaled, April 16, 1896; Imported, 1902; Sire, "Besigue" (19602), Dam, "Julie" (37205).
- Hoof, 77; "Lina" (50458), 31513, Iron grey; Foaled, March 28, 1900; Imported, 1902; Sire, "Assuers" (40366), Dam, "Gravette" (37664).
- Hoof, 199; "Petronitte" (56805), 41201, Grey black; Large star; Foaled, May 15, 1902; Imported, 1904; Sire, "Besigue" (19602), Dam, "Lisette" (15947).
- Hoof, 287; "America" (61176), 41217, Black; Star; Foaled, Feb. 19, 1904; Imported, 1904; Sire, "Electeur" (46264), Dam, "Faisante" (46330).
- Hoof, 235; "Faisante" (46330), 41215, Black; Star; Foaled, April 20, 1900; Imported, 1904; Sire, "Bon Courage" (42729), Dam, "Luzon" (41984).
- Hoof, 169; "Muse" (52108), 41214; Black; Star; Foaled, April 15, 1901; Imported, 1904; Sire, "Pomard" (44564), Dam, "Rodogune" (40569).

- Hoof, 234; "Ermantrude" (51827), 41203, Grey; Large star; Foaled, March 10, 1901; Imported, 1904; Sire, "Dictateur" (44626), Dam, "Martha" (43811).
- Hoof, 125; "Grisette" (50738), 30304, Grey; Spot in forehead; Foaled, March 13, 1900; Imported, 1902; Sire, "Besigue" (19602), Dam, "Couronne" (29243).
- Hoof, 126; "Ulma" (46338), 30299, Black grey; Irregular stripe in face; Foaled, May 3, 1900; Imported, 1902; Sire, "Ormeau" (42992), Dam, "Gavotte" (45607).
- Hoof, 171; "Ugoline" (47628), Black; Foaled, May 10, 1900; Imported, 1903; Sire, "Castellar" (42638), Dam, "Babylone" (19878).
- Hoof, 168; "Valentine" (52800), Black; Foaled, March 5, 1901, Imported, 1903; Sire, "Fernando" (34038), Dam, "Cherie" (47728).
- Hoof, 158; "Coquette" (54255), Dapple grey; Foaled, March 15, 1897; Imported, 1903; Sire, "Diogene" (22663), Dam, "Catherine" (42368).
- Hoof, 157; "Reinette" (52900), Black; Foaled, March 28, 1901; Imported, 1903; Sire, "Canton" (43489), Dam, "Chatonnette" (8697).
- Hoof, 155; "Gondolle" (52072), Blue grey; Foaled, April 8, 1901; Imported, 1903; Sire, "Sansgene" (44700), Dam, "Binette" (47260).
- Hoof, 154; "Aldine" (54267), Black; Foaled, June 5, 1900; Imported, 1903; Sire, "Besigue" (19602), Dam, "Mouthe" (29524).
- Hoof, 152; "Sophie" (54257), Grey black; Foaled, Oct. 23, 1900; Imported, 1903; Sire, "Theudis" (40871), Dam, "Coquille" (30211).
- Hoof, 218; "Serieuse" (46354), Dark grey; Foaled, May 2, 1900; Imported, 1904; Sire, "Electeur" (43370), Dam, "Fanchette" (39409).
- Hoof, 219; "Mouvette" (50673), Black; Foaled, April 15, 1900; Imported, 1903; Sire, "Vernon" (42896), Dam, "Banderole" (25859).
- Hoof, 197; "Clochette" (47738), Grey black; Foaled April 15, 1899; Imported, 1904; Sire, "Nandis" (42645), Dam, "Bourbonnaite" (43699).
- Hoof, 156; "Odette" (54271), Black; Foaled, Dec. 27, 1900; Imported, 1903; Sire, "Besigue" (19602), Dam, "Biche" (21438).
- Hoof, 67; "Coquette" (43714), 30293, Black; Strip, hind feet white; Foaled, April 9, 1897; Imported, 1902; Sire, "Besigue" (19602), Dam, "Julie" (37205).
- Hoof, 51; "Roxelane" (43542), 30284, Black grey; Star; Foaled, May 15, 1897; Imported, 1902; Sire, "Fabrice" (18683), Dam, "Margot" (26797).

- Hoof, 66; "Fleche" (45175), 30267, Blue grey; Star; Foaled, May 1, 1899; Imported, 1902; Sire, "Violoneux" (37412), Dam, "Clemence" (37898).
- Hoof, 65; "Mouvette" (49408), 30289, Grey; Star; Foaled, May 8, 1896; Imported, 1902; Sire, "Rigolot" (38968), Dam, "Mouvette" (21533).
- Hoof, 69; "Castille" (49462), 30278, Grey; Star; Foaled, March 20, 1900; Imported, 1902; Sire, "Jules" (37987), Dam, "Catherine" (19938).
- Hoof, 86; "Victoria" (54083), 31464, Blue grey; Star and strip, little white on left hind foot; Foaled, April 15, 1900; Imported, 1902; Sire, "Besigue" (19602), Dam, "Margot" (24580).
- Hoof, 99; "Olga" (53898), 31474, Grey; Strip; Foaled, May 10, 1902; Imported, 1902; Sire, "Paladin" (34847), Dam, "Eleonore" (38304).
- Hoof, 59; "Limonade" (53133), 31511, Black grey; Foaled, March 28, 1901; Imported, 1902; Sire, "Robespierre" (44624), Dam, "Biche" (25400).
- Hoof, 106; "Bahine" (54845), 31496, Grey; Foaled, April 15, 1902; Imported, 1902; Sire, "Lerida 3rd" (42837), Dam, "Vernon" (42755).
- Hoof, 43; "Mirza" (50278), 30286, Black; Star; Foaled, March 1, 1896; Imported, 1902; Sire, "Numero" (18789), Dam, "Finette" (32629).
- Hoof, 49; "Gilberte" (43514), 30298, Black grey; Star; Foaled, April 8, 1897; Imported, 1902; Sire, "Gavarin" (41673), Dam, "Bichette" (27679).
- Hoof, 136; "Paquerette" (44924), 31463, Black; Prolonged star; Foaled, April 2, 1899; Imported, 1902; Sire, "Napolitain" (43046), Dam, "Fannie" (43295).
- Hoof, 124; "Guitare" (54847), 31478, Bay; Strip, left hind foot white; Foaled, May 10, 1902; Imported, 1902; Sire, "Camille" (44063), Dam, "Becasse" (38437).
- Hoof 61; "Pervenche" (46326), 30292, Blue grey; Small spot in forehead, trace of white, on left hind foot; Foaled, April 19, 1900; Imported, 1902; Sire, "Olga" (43283), Dam, "Melatte" (32359).
- Hoof, 91; "Violette" (45782), 31479, Blue grey; Foaled, April 10, 1899; Imported, 1902; Sire, "Jules" (37987), Dam, "Vaillante" (42762).
- Hoof, 104; "Meduline" (53915), 31485, Grey; Foaled, March 14, 1902; Imported, 1902; Sire, "Hardi" (43810), Dam, "Rosalba" (44143).

- Hoof, 105; "Violetta" (55174), 31469, Black; Star; Foaled, May 1, 1902; Imported, 1902; Sire, "Sidi" (43654), Dam, "Canette" (50242).
- Hoof, 46; "Christine" (52937), 31497, Grey; Star; Foaled, Feb. 10, 1901; Imported, 1902; Sire, "Phenix" (43135), Dam, "Gentille" (43242).
- Hoof, 101; "Reunion" (53693), 31500, Black; Strip; Foaled, April 1, 1902; Imported, 1902; Sire, "Paladin" (34847), Dam, "Pimpante" (43930).
- Hoof, 31; "Rocheuse" (45603), 31462, Grey; Star; Foaled, April 7, 1899; Imported, 1902; Sire, "Besigue" (19602), Dam, "Cordoba" (37372).
- Hoof, 50; "Vigoureuse" (45211), 30288, Grey; Star; Foaled, March 15, 1896; Imported, 1902; Sire, "Solide" (32055), Dam, "Vigoureuse" (9229).
- Hoof, 102; "Anisette" (53671), 31493, Black; Star; Foaled, Feb. 26, 1902; Imported, 1902; Sire, "Emoi" (43650), Dam, "Colomb" (38009).
- Hoof, 100; "Epuisette" (55169), 31487, Black; Star; Foaled, April 1, 1902; Imported, 1902; Sire, "Fertois" (42511), Dam, "Lisette" (49434).
- Hoof, 38; "Fauvette" (46664), 31515, Black; Star; Foaled, April 24, 1900; Imported, 1902; Sire, "Bob" (43212), Dam, "Manette" (40773).
- Hoof, 64; "Joyeuse" (47616), 31475, Bay; Foaled, March 25, 1900; Imported, 1902; Sire, "Phenix" (43135), Dam, "Victorieuse" (39556).
- Hoof, 95; "Coliberte" (54886), 31517, Grey; Foaled, March 20, 1902; Imported, 1902; Sire, "Paladin" (34847), Dam, "Juliette" (40004).
- Hoof, 88; "Tenebreuse" (54094), 31476, Bay; Foaled, May 30, 1899; Imported, 1902; Sire, "Lerida 3rd" (42847), Dam, "Biche" (30868).
- Hoof, 92; "Urbaine" (54102), 31492, Grey; Foaled, April 22, 1900; Imported, 1902; Sire, "Beaudoile" (34055), Dam, "Jo" (48058).
- Hoof, 84; "Negresse" (50797), 31490, Black; Foaled, March 21, 1900; Imported, 1902; Sire, "Boul d'Or" (19129), Dam, "Biche" (49876).
- Hoof, 120; "Vertebre" (53136), 31507, Grey; Foaled, March 28, 1901; Imported, 1902; Sire, "Robespierre" (44624), Dam, "Emeralda" (32496).
- Hoof, 48; "Bijou" (50084), 30279, Black grey; Star; Foaled, April 15, 1896; Imported, 1902; Sire, "Mevy" (19527), Dam, "Rustique" (28527).
- Hoof, 73; "Mirabelle" (54110), 31471, Black; Star; Foaled, March 27, 1896; Imported, 1902; Sire, "Besigue" (19602), Dam, "Biche" (25165).
- Hoof, 81; "Bichette" (54103), 31465, Grey; Foaled, April 15, 1900; Imported, 1902; Sire, "Vernon" (42896), Dam, "Biche" (49898).

- Hoof, 79; "Victoire" (48145), 31491, Black; Strip; Foaled, April 20, 1900; Imported, 1902; Sire, "Victoria" (42905), Dam, "Biche" (22008).
- Hoof, 82; "Frivole" (46589), 31480, Blue grey; Foaled, May 10, 1900; Imported, 1902; Sire, "Jules" (37987), Dam, "Cascade" (9362).
- Hoof, 78; "Gentille" (43242), 31498, Black; Star; Left hind foot white; Foaled, May 10, 1896; Imported, 1902; Sire, "Mouille" (35212), Dam, "Brillante" (7014).
- Hoof, 90; "Castille" (48203), 31502, Blue grey; Foaled, March 20, 1897; Imported, 1902; Sire, "Jules" (37987), Dam, "Savignac" (36034).
- Hoof, 54; "Jardinier" (44109), 30281, Black grey; Star; Foaled, Feb. 25, 1897; Imported, 1902; Sire, "Diogene" (22663), Dam, "Chrysantheme" (34632).
- Hoof, 118; "Nigritia" (46360), 31486, Black; Spot on forehead, left hind foot white; Foaled, April 15, 1900; Imported, 1902; Sire, "Sylvio" (43344), Dam, "Rosinette" (39380).
- Hoof, 360; "Arlette" 61271, Black; star, left hind foot white; Foaled, March 28, 1899; Imported, 1905; Sire, "Charlemagne" 40167, Dam, "Seduisante" 24236.
- Hoof, 361; "Bernadotte" 51164, Grey, star, Foaled, March 27, 1901; Imported, 1905; Sire, "Oreste" 30646, Dam, "La Biche" 49910.
- Hoof, 362; "Sirene" 51111, Grey; Star, strip; Foaled, May 26, 1901; Imported, 1905; Sire, "Vol au Vent" 44705, Dam "Visette" 43551.

HOME BRED PERCHERON MARES

- Hoof, 110; "Betha" 32627, Dark grey; Star; Foaled, June 2, 1902; Sire, "Abo" (43517), Dam, "Elizabeth" 20551.
- Hoof, 22; "Manoa" 20083, Dark brown; Star and strip; Foaled, May 10, 1895; Sire, "Introuvable" (24146), Dam, "Medeah" 4381.
- Hoof, 29; "Elizabeth" 20551, Grey; Star in face; Foaled April, 1894; Sire, "Catalan" (10308), Dam, "Calette" 5696.
- Hoof, 10; "Florintine" 14948, Grey; Star, both hind feet white; Foaled, April 6, 1890; Sire, "Brilliant" 755, Dam, "Fulida" (1435).
- Hoof, 111; "Silvitine" (32632), Black; Star; Foaled, May 23, 1902; Sire, "Abo" (43517), Dam, "Sylvia 2nd", (19457).
- Hoof, 32; "Ellen" 20067, Grey; Irregular strip; Foaled, April 28, 1896; Sire, "Gardien" (19660), Dam, "Electress" 11847.
- Hoof, 72; "Maud" 29123, Black; Star and strip, hind feet white; Foaled, July 6, 1901; Sire, "Sans Gene" (13652), Dam, "Madiline" 26887.
- Hoof, 7; "Lucille" 17379, Black; Foaled, April, 24, 1892; Sire, "Plein d'Avenir" (7361), Dam, "Louluo" (15971).
- Hoof, 18; "Endora" 20070, Black; Strip and snip; Foaled, April 16, 1894; Sire, "La Ferte" (452), Dam, "Electra" (1586).
- Hoof, 21; "Bellain" 20051, Black; Star, right hind foot white; Foaled, May 13, 1895; Sire, "Aiglon" (8187), Dam, "Bellora" (1415).
- Hoof, 3; "Hertha" 20522, Dapple grey; Large star; Foaled, April 30, 1892; Sire, "Brilliant" (775), Dam, "Pelotte" (1923).
- Hoof, 14; "Eliza" 21762, Grey; Foaled, May 6, 1894; Sire, "Fricandau" (8256), Dam, "Emilie" 13202.
- Hoof, 11; "Etoile" 16895, Grey; Foaled, Feb. 20, 1892; Sire, "Brilliant" (755), Dam, "Egalite" (7233).
- Hoof, 28; "Fantine" 14946, Black; Large star; Foaled, Jan. 26, 1890; Sire, "Fenelon" (38), Dam, "Viana" (1418).
- Hoof, 8; "Joy" 16897, Grey; Foaled, Feb. 20, 1892; Sire, "Aiglon" (8187), Dam, "Joyeuse" (2839).
- Hoof, 5; "Linda" 12986, Black; Star in forehead, both hind ankles white; Foaled, April 30, 1889; Sire, "Sansonnet" (1990), Dam, "Absala" (6718).

- Hoof, 12; "Bessie" 18353, Black; Small star; Foaled, April 3, 1893; Sire, "Francias" (20374), Dam, "Beatrice" 7554.
- Hoof, 107; "Maple Leaf" 32630, Black; Star; Foaled, March 23, 1902; Sire, "Forfait" (28578), Dam, "Lucille" 17379.
- Hoof, 24; "Parmile" 26165, Black; Strip; Foaled, June 16, 1899; Sire, "Involo" 16925, Dam, "Princess" by "Francais" 15747.
- Hoof, 16; "Kantette" 19890, Black; Star in forehead; Foaled, May 2, 1895; Sire, "Baccarat" (18639), Dam, "Kantara" 16412.
- Hoof, 15; "Lila" 20080, Black; Star and strip, snip, left hind foot white; Foaled, April 29, 1895; Sire, "Villers" (8081), Dam, "Linda" 12986.
- Hoof, 108; "Bellietine" 32620, Black; Foaled, March 2, 1902; Sire, "Abo" (43517), Dam, "Bellian" 20051.
- Hoof, 113; "Idene" 32628, Dark grey; Star; Foaled, May 3, 1902; Sire, "Forfait" (28578), Dam, "Idel" 18557.
- Hoof, 74; "Gipsey Girl" 14965, Black; strip in face; Foaled April 25, 1889; Sire, "Brilliant" (755), Dam, "Sarah" (7581).
- Hoof, 19; "Inez" 17381, Black; Star and snip; Foaled, May 12, 1892; Sire, "Plein d'Avenir" (7361), Dam, "Iown" 4872.
- Hoof, 20; "Esperance" 20072, Black; Foaled, March 29, 1895; Sire, "Introuvable" (24146), Dam, "Egalite" (7233).
- Hoof, 23; "Antonette" 25488, Brown; Star; Foaled, April 15, 1898; Sire, "Endormi" (37962), Dam, "Manoa" 20083.

HOME BRED PERCHERON YEARLINGS

- Hoof, 194; "Tarpin," Stud, Black; Star and strip, both hind feet white; Foaled, July 14, 1903; Sire, "Torpilleur," Dam, "Reveuse."
- Hoof, 276; "Flirt," Mare; Grey; Star, both front and left hind foot white; Foaled, June 3, 1903; Sire, "Torpilleur," Dam, "Fleche."
- Hoof, 277; "Joann," Mare; Bay; Star; Foaled, June 12, 1903; Sire, "Torpilleur," Dam, "Joyeuse."
- Hoof, 278; "Florizell," Stud; Light grey; Blaze; Foaled, June 11, 1903; Sire, "Torpilleur," Dam, "Florentine."
- Hoof, 279; "Mancura," Stud; Grey; Oblong star; Foaled, June 7, 1903; Sire, "Torpilleur," Dam, "Manille."
- Hoof, 280; "Izene," Stud; Black; Strip, both hind feet white; Foaled, June 4, 1903; Sire, "Torpilleur," Dam, "Inez."
- Hoof, 281; "Tarquin," Stud; Black; Star, strip and snip, left hind foot white; Foaled, May 2, 1903; Sire, "Torpilleur," Dam, "Minoa."
- Hoof, 282; "Equator," Stud; Grey; Strip, both hind feet white; Foaled, May 20, 1903; Sire, "Torpilleur," Dam, "Etoile."
- Hoof, 283; "Carmile," Stud; Grey; Star; Foaled, May 16, 1903; Sire, "Torpilleur," Dam, "Parmille."
- Hoof, 284; "Rochell," Stud; Grey; Star; Foaled, May 23, 1903; Sire, "Torpilleur," Dam, "Rocheuse."
- Hoof, 191; "Nero" 40476, Stud; Black; Star in forehead; Foaled, June 28, 1903; Sire, "Vzein" (48621), Dam, "Bessie" 18353.
- Hoof, 196; "Torpilleur 2nd" 40481, Stud; Dark grey; Strip in forehead; Foaled, April 16, 1903; Sire, "Torpilleur" (44320), Dam, "Bellain" 20051.
- Hoof, 195; "Delila" 40484, Mare; Black; White star in forehead; Foaled, April 20, 1903; Sire, "Torpilleur" (44320), Dam, "Alca" (50717.)
- Hoof, 192; "Thudy" 40480, Mare; Dark grey; Star, right hind foot white; Foaled, July 3, 1903; Sire, "Theudis" (40871), Dam, "Delight" 20007.
- Hoof, 190; "Ladora" 40483, Mare; Black; Snip; Foaled, June 20, 1903; Sire, "Torpilleur" (44320), Dam, "Endora" 20070.
- Hoof, 189; "Henriata" 40482, Mare; Black; Star in forehead; Foaled, May 5, 1903; Sire, "Diplome" (45444), Dam, "Mirabelle" (54110).
- Hoof, 188; "Cathline" 40478, Mare; Black; White star in forehead and snip; Foaled, April 27, 1903; Sire, "Diplome" (45444), Dam, "Antonette" 25488.
- Hoof, 193; "Susie" 40487, Mare; Black; Star in forehead; Foaled, July 20, 1903; Sire, "Torpilleur" (44320), Dam, "Mirza" (50278).

HOME BRED PERCHERON WEANLINGS

- Hoof, 307; "Barbarian," Stud; Black; Star, both hind feet white; Foaled, July 27, 1904; Sire, "Biribi," Dam, "Coquette."
- Hoof, 309; "Majority," Stud; Black; Star, snip, four white feet; Foaled, July 5, 1904; Sire, "Major," Dam, "Etoile."
- Hoof, 310; "Carnot 2nd," Stud; Black; Star, strip and snip; Foaled, April 10, 1904; Sire, "Carnot," Dam, "Lila."
- Hoof, 311; "Joyful," Mare; Dark grey; Star; Foaled, March 24, 1904; Sire, "Ugolin," Dam, "Joy."
- Hoof, 312; "Carnation," Mare; Bay; Oblong star and grey croup; Foaled, April 18, 1904; Sire, "Carnot," Dam, "Roxelane."
- Hoof, 313; "Resistance," Stud; Dark grey; Small star, large snip; Foaled, June 13, 1904; Sire, "Carnot," Dam, "Resistante."
- Hoof, 314; "Nina," Mare; Black; Strip and snip; Foaled, July 25, 1904; Sire, "Anida," Dam, "Neigieuse."
- Hoof, 315; "Majesty," Stud; Black; Foaled, July 11, 1904; Sire, "Major," Dam, "Parmille."
- Hoof, 316; "Duchesney," Stud; Dark grey; Oblong star; Foaled, June 23, 1904; Sire, "Duchesne," Dam, "Mouvette."
- Hoof, 317; "Myaline," Mare; Black; Star, left front and right hind foot white; Foaled, May 21, 1904; Sire, "Ugolin," Dam, "Mirabelle."
- Hoof, 318; "Lucy," Mare; Bay; Foaled, June 13, 1904; Sire, "Carnot," Dam, "Lucille."
- Hoof, 319; "Vigorous," Stud; Black; Star, Foaled, April 20, 1904; Sire, "Ugolin," Dam, "Vigoureuse."
- Hoof, 320; "Alcot," Mare; Dark grey; Star; Foaled, April 20, 1904; Sire, "Carnot," Dam, "Alca."
- Hoof, 321; "Duchess," Mare; Bay; Star; Foaled, March 30, 1904; Sire, "Duchesne," Dam, "Inez."
- Hoof, 322; "Mirazal," Mare; Bay; Oblong star and snip, left hind stocking white; Foaled, April 26, 1904; Sire, "Anida," Dam, "Mirza."
- Hoof, 323; "Elsie 2nd," Mare; Bay; Wide blaze, left hind stocking and right hind pastern white; Foaled, April 15, 1904; Sire, "Elsies Jupiter Jr.," Dam, "Antonette."
- Hoof, 324; "Cherry," Mare; Roan; Star and broad strip; Foaled, June 20, 1904; Sire, "Carnot," Dam, "Bijou."
- Hoof, 325; "Gilbert," Stud; Iron grey; Large oblong star, left hind foot white; Foaled, May 29, 1904; Sire, "Carnot," Dam, "Gilberte."
- Hoof, 326; "Duroc," (41218), Black; Foaled, April 24, 1904; Sire, "Ugolin" (46131), Dam, "Violette" (45782).

THE GERMAN COACH HORSE

In selecting a coach horse to fill the demands of the breeders in the various parts of America, we realize that, first of all, it would be of vital importance to select a breed of the coach classes that possesses a fixed blood line and thorough breeding in order to insure positive transmission of a fixed coach type.

Secondly, we are of the belief that a coach breed of horses for American breeding should possess plenty of size and bone, as too many of the standard bred mares are greatly deficient in not only size and bone, but are too often sadly lacking in finish and middle. We have, therefore, selected the German coach breeds to meet these wants, and feel confident that the deficiencies of the American trotters can be bountifully sup-

plied by the cross of the German coach stallions toward the acquisition of a large, finished, hardy and active commercial horse of the coach type. We will not expect, however, to increase trotting speed by this cross, but will, we think, enable the American breeders to utilize the vast number of trotting mares in this alliance of breeding, that are otherwise failures as trotters and are not a commercial commodity, and thus produce, without molest-

ing the trotting horse interests, that class of horse flesh which is today at every point in demand, and which has been neglected to an extent that America stands today without a coach type of horses.

In mule breeding, coach bred mares possess the much desired combination of size, finish, good coats and snap so necessary in the production of large, fine and wearing mules of the class commonly called Sugar Mules. In various districts where German coachers have been bred to American mares, it is plain to see that the results in breeding have reached the highest anticipations, which has not been the rule with some of the other European breeds of coach horses. In the German coach breeding districts of the German Empire, history shows that there has been a steady and fixed course of breeding for this particular class and type of horse for centuries. The European breeders of horses seem to follow a more fixed plan and purpose in their breeding than is the custom with American breeders. The origin of the German coach breeds is claimed to owe its best qualities and powers of transmission to the Arabic blood, which dates back to the Sixteenth Century, to which period all history points as the time when Europe began to attain her first great horse breeding success by the liberal importation of the very best Arabic blood. (See Encyclopedia Britannica on horses, also Wetherby's Stud Book History.) In the year 1533, and to this day, in Aurich City and other cities of Germany, frequent celebrated horse fairs are held, at which the finest stock of the German Empire is gathered, where their horses are shown and awarded according to quality, and highest merits, liberal prizes to encourage improvement in their breeding. Ferdinand I, the ruler, was so much impressed by the grandeur and the excellence of the German coach breed that he applied tests and found them most superior in strength, action and endurance for long distances, combined with great beauty and docility. As the nations were then almost constantly at war, he saw at once that these horses and their offspring would make the most wonderfully useful cavalry and artillery horses and add to the strength and beauty of their mighty armies. He accordingly established government

breeding stables where the choicest specimens were gathered, and he ruled that large sums of money should be expended annually in the maintenance, improvement and advancement of the breed. In after years many of Germany's decisive victories in battle were attributed to the wonderful courage, strength and endurance of these horses. Among the many German rulers who took pride and appropriated annually large sums toward the perfection of the German coach breed of horses may be mentioned Count Enno III, of Germany, who presented King James of England, in the year 1608, with four horses of such unusual beauty and quality which the English King received with great delight. In order to appreciate their great transmitting qualities, it is well to note from these few extracts of historical data, that Germany possessed these horses of unusual quality as early as the year 1608. The German coach horse is invariably solid color of black, brown, bay, chestnut, and sorrel. In size they range from sixteen to sixteen and three-quarter hands high and weigh usually from 1,350 to 1,550. They possess a deep, round and closely-ribbed middle and well-proportioned bodies, long, well-formed necks, high set on at shoulders, neat at throat, well-shaped and well-set-on ear, broad forehead, full eye, with a bright, intelligent countenance. In back and loin the German coach horse can claim with impunity to be second to none, smoothly coupled, tail well set, strong stifles, plump and well-balanced quarters, a long, wide, strong, clean hock, flat, clean and meatless leg, and capital feet. A most important feature about the German coach horses is their early maturity as a half-breed resulting from a German coach sire and American trotting mares. Such stock is ready for market at least a year earlier than our ordinary American bred horses. In Germany no horse is permitted to stand for service unless he has passed the rigid examination of the German government's committee of veterinary experts and has a certificate showing that he has all of the necessary qualifications to entitle him to be selected as a breeder under this most strict scrutiny of the government's experts. Registration in German coach history has

been religiously enforced since the Sixteenth Century as a means of protecting the purity of this breed. The German coach horse is today the all purpose horse of Germany and is employed in draft work of all kinds as well as to till the soil. He is also fit to parade and draw the commodious carriages with strength and style at a jaunty, cheerful road gait. The demand for this breed of horses has gradually increased from year to year, as a result of their merit, up to the present hour, and it is no uncommon thing to meet large numbers of buyers in the coach horse districts of Germany, from France, Italy, Switzerland, Belgium, England, Russia, and North and South America, which are taken to these various countries to improve breeding stock. The German coach horse has been regularly and thoroughly bred in one line for so many ages that he is enabled to become a predominant and most impressive sire wherever used to all kinds of mares, hence it is an easy matter to go into a community where a German coach stallion has been in stud and readily procure perfectly matched teams of a quality and size that always command large prices for carriage and coach service. The farmer who breeds this class of stock can rear and develop it without being compelled to incur any expense outside of feed and the ordinary care such as would be required in the rearing of the various draft breeds. At a recent grand auction sale of this type of horse, four hundred head were sold at from \$150.00 to \$900.00 each and teams at from \$300.00 to \$1,350.00. The large size, hardy constitution and early maturity of the German coach breed enables the breeders to use them at a very early age in farm work and thus receive a liberal remuneration for their keep during their development and growth, which is a business proposition and must necessarily be considered by those who are in horse breeding for profit.

There is no branch of the animal breeding industry of America that today offers one-half of the possibilities for money making that high class horse breeding offers, and at no time in the history of horse breeding in America have the prices paid for various classes of well-bred horses

equaled those of the present. In past horse breeding history it has almost invariably been necessary for breeders to keep their colts until five years old before they were considered marketable and in demand. At the present time almost as many three-year-olds are being shipped as any other age, and price today is no consideration if quality can be furnished. The Hartman Stock Farm will aim at all times to import only the very highest class of breeding and individuality that is obtainable and will offer to the public those which are, in our opinion, the best two breeds of horses for American breeding, on terms to companies that are second to none for fairness and liberality. The Percheron draft and German coach breeds will not only be found in our sale barns, but will also comprise the extensive breeding departments of our own plant.

Photo from life by
Innis & Kiefer,
Columbus, Ohio.

GERMAN COACH STALLION, CHAMPION WARNER (995).
WINNER GOLD MEDAL PARIS EXPOSITION.

IMPORTED GERMAN COACH STALLIONS

- Hoof, 238; "Hadrubal" 2519, Bay; Foaled, April 23, 1901; Imported, May 24, 1904; Sire, "Jubert," Dam, "Kerka."
- Hoof, 251; "Syndikus" 2529, Sorrel; Foaled, April 10, 1900; Imported, May 24, 1904; Sire, "Sudwall," Dam, "V Young Oress."
- Hoof, 250; "Reuke" 2537, Bay; Foaled, March 3, 1901; Imported, May 24, 1904; Sire, "Regent," Dam, "V Baron 2nd."
- Hoof, 249; "Kalif" 2517, Dark Brown; Foaled, May 11, 1901; Imported May 24, 1904; Sire, "Baron," Dam, "Kugel."
- Hoof, 246; "Goldonkel" 2515, Bay; Foaled, April 8, 1901; Imported, May 24, 1904; Sire, "Falk," Dam, "Goldlack 2nd."
- Hoof, 247; "Vigilent" 2523, Bay; Foaled, April 20, 1901; Imported, May 24, 1904; Sire, "Jupiter 3rd," Dam, "Vanille."
- Hoof, 248; "Lambert" 2527, 1130, Bay; Foaled, 1900; Imported, May 24, 1904; Sire, "Archilles 3d," Dam, "Gluckskind."
- Hoof, 245; "Atreus" 2525, Brown; Foaled, May 1, 1901; Imported, May 24, 1904; Sire, "Coco," Dam, "Alcine."
- Hoof, 244; "Flips" 2521, Bay; Foaled, May 5, 1902; Imported, May 24, 1904; Sire, "Asmar," Dam, "Freudigkeit."
- Hoof, 243; "Arnulf" 2531, Bay; Foaled, April 20, 1903; Imported, May 24, 1904; Sire, "Ottmar," Dam, "V Arminius."
- Hoof, 252; "Warner" (995), 2533, Brown; Foaled, 1895; Imported, July 2, 1904; Sire, "Hermaun," Dam, "V Driever."
- Hoof, 253; "Mongold" (1142), 2535, Sorrel; Foaled, 1900; Imported, July 2, 1904; Sire, "Martin," Dam, "Philene."
- Hoof, 254; "Wacker" 2513, Black; Foaled, March 28, 1902; Imported, July 2, 1904; Sire, "Wittelsbacher," Dam, "Waltvant."
- Hoof, 326; "Hikus," Dark bay; Foaled, 1901; Imported, Jan. 22, 1905; Sire, "Arnold," Dam, "Maguat."
- Hoof, 327; "Edelfalk," Dark brown; Foaled, Oct. 5, 1902; Imported, Jan. 22, 1905; Sire, "Wittelsbacher," Dam, "Erdengluck."
- Hoof, 328; "Daemon," Brown; Foaled, April 28, 1902; Imported, Jan. 22, 1905; Sire, "Captain," Dam, "Tortgen."
- Hoof, 329; "Geometer," Brown; Foaled, April 16, 1902; Imported, Jan. 22, 1905; Sire, "Ailrat," Dam, "Grandtschnur."

- Hoof, 330; "Erbherr," Black; Foaled, May 7, 1902; Imported, Jan. 22, 1905; Sire, "Immo," Dam, "Farnkraut."
- Hoof, 331; "Kindermann," Brown; Foaled, March 30, 1902; Imported, Jan. 22, 1905; Sire, "Kanitz," Dam, "Kurzweil."
- Hoof, 332; "Edo," Brown; Foaled, Nov., 1902; Imported, Jan. 22, 1905; Sire, "Enno 2nd," Dam, "Edzard."
- Hoof, 333; "Merkur," Black; Foaled, Jan., 1902; Imported, Jan. 22, 1905; Sire, "Adolf," Dam, "Donata."
- Hoof, 334; "Leonhard," Black; Foaled, June 5, 1902; Imported, Jan. 22, 1905; Sire, "Freischutz," Dam, "Lowenbraut."
- Hoof, 335; "Totila," Brown; Foaled, May 3, 1902; Imported, Jan. 22, 1905; Sire, "Wittelsbacher," Dam, "Stradella."
- Hoof, 336; "Wagner," Dark brown; Foaled, April 17, 1902; Imported, Jan. 22, 1905; Sire, "Warner," Dam, "Julius."
- Hoof, 337; "Gurko," Brown; Foaled, April 24, 1901; Imported, Jan. 22, 1905; Sire, "Gonner," Dam, "Goldlilie."
- Hoof, 338; "Godhard," Brown; Foaled, May 7, 1902; Imported, Jan. 22, 1905; Sire, "Gaudain," Dam, "Anglia."
- Hoof, 339; "Memmers," Brown; Foaled, May 2, 1902; Imported, Jan. 22, 1905; Sire, "Martin," Dam, "Pontius."
- Hoof, 340; "Servus," Black; Foaled, June 4, 1902; Imported, Jan. 22, 1905; Sire, "Sultan 2nd," Dam, "Weide."
- Hoof, 341; "Heidenbusch," Sorrel; Foaled, Jan. 9, 1902; Imported, Jan. 22, 1905; Sire, "Leibling," Dam, "Heiko 2nd."
- Hoof, 342; "Meno," Black; Foaled, July 12, 1902; Imported, Jan. 22, 1905; Sire, "Mentor," Dam, "Zung Ardo."
- Hoof, 343; "Foremose," Dark brown; Foaled, Nov., 1902; Imported, Jan. 22, 1905; Sire, "Focko," Dam, "Galle."

Photo from life by
Indis & Kiefer,
Columbus, Ohio.

GERMAN COACH STALLION, CHAMPION WARNER (965)
WINNER GOLD MEDAL, PARIS INTERNATIONAL EXPOSITION.

Photo from life by
Luntz & Kiefer,
Columbus, Ohio.

*Copyright 1914
Armed B. Hartman*

*Photographed
Grove & Kiefer*

GERMAN COACH STALLION, MONGGOLD (1142).
WINNER GOLD MEDAL EVERY TIME SHOWN IN GERMANY.

*Copyright 1904
Samuel B. Hartman*

GERMAN COACH STALLION, ATRUS 2525.
WINNER 1st PRIZE 3-YEAR-OLD CLASS OHIO STATE FAIR 1904

*Photo from life by
Imis & Kiefer
Columbus, Ohio.*

Photo from life by
Imis & Kiefer,
Columbus, Ohio.

*Copyright 1904
by
Samuel B. Hartman*

Photo from life by
Iunis & Kiefer,
Columbus, Ohio.

GERMAN COACH STALLION, ATREUS 2523.
SEE PRECEDING PAGE.

*Copy made 1904
Sawmills by B. Hartman*

*Photo by
Innis & Kiefer*

Photo from life by
Innis & Kiefer,
Columbus, Ohio.

3-YEAR-OLD. GERMAN COACH STALLION, ATREUS 2525.
SEE TWO PRECEDING ILLUSTRATIONS.

*Copyright 1904
by B. Hartman.*

Photo from life by
Imis & Kiefer,
Columbus, Ohio.

2-YEAR-OLD, GERMAN COACH STALLION, WACKER 2513.
WINNER 1st PRIZE 2-YEAR-Old CLASS OHIO STATE FAIR 1904.

*Photo by
Innis & Kiefer*

*Copyright 1914
Samuel B. Hartman.*

Photo from life by
Innis & Kiefer,
Columbus, Ohio.

2-YEAR-OLD. GERMAN COACH STALLION, WACKER 2513.

IMPORTED GERMAN COACH MARES

- Hoof, 241; "Wunschmaid" (2823), 368, Dark brown; Foaled, April 21, 1901; Imported, 1904; Sire, "Martin" (815), Dam, "Wittekind" (810).
- Hoof, 255; "Phillippine 2nd" (2839), 374, Sorrel; Foaled, 1901; Imported, 1904; Sire, "Regent" (1056), Dam, "Phillippa" (464).
- Hoof, 240; "Octavia" (82102), 376, Light brown; Star; Foaled, May 11, 1902; Imported, 1904; Sire, "Ottomar" (1057), Dam, "Herkules 3rd" (567).
- Hoof, 242; "Antine" (50102), 366, Dark brown; Foaled, May 19, 1902; Imported, 1904; Sire, "Baroda" (1073), Dam, "Bernhard" (803).
- Hoof, 239; "Aga" (76103), 370, Black; Foaled, 1903; Imported, 1904; Sire, "Ottomar" (1051), Dam, "Thoas" (802).

GERMAN COACH MARE, WUNSCHMAID (2823) AND FOAL BY CHAMPION WARNER.

UNIVERSITY OF ILLINOIS-URBANA

3 0112 069062187