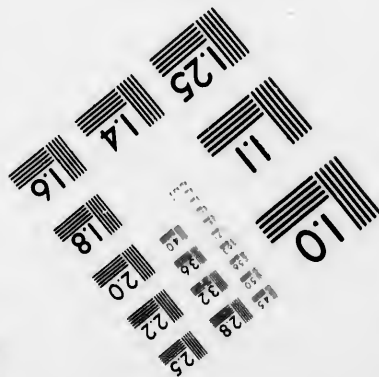
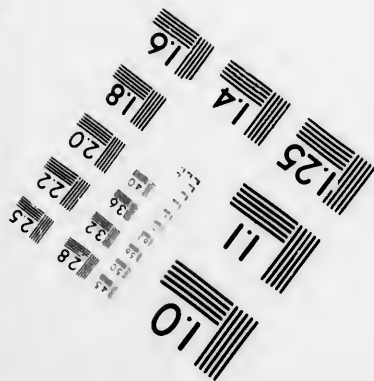
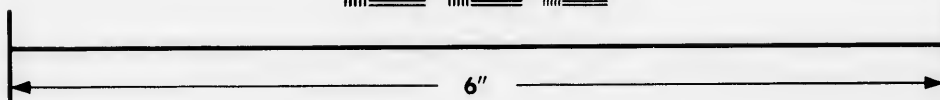
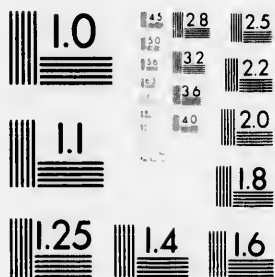


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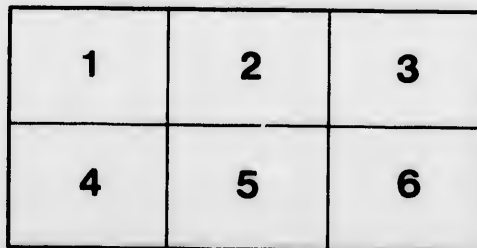
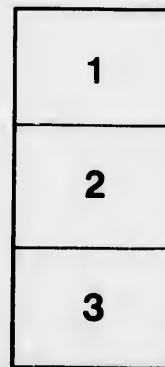
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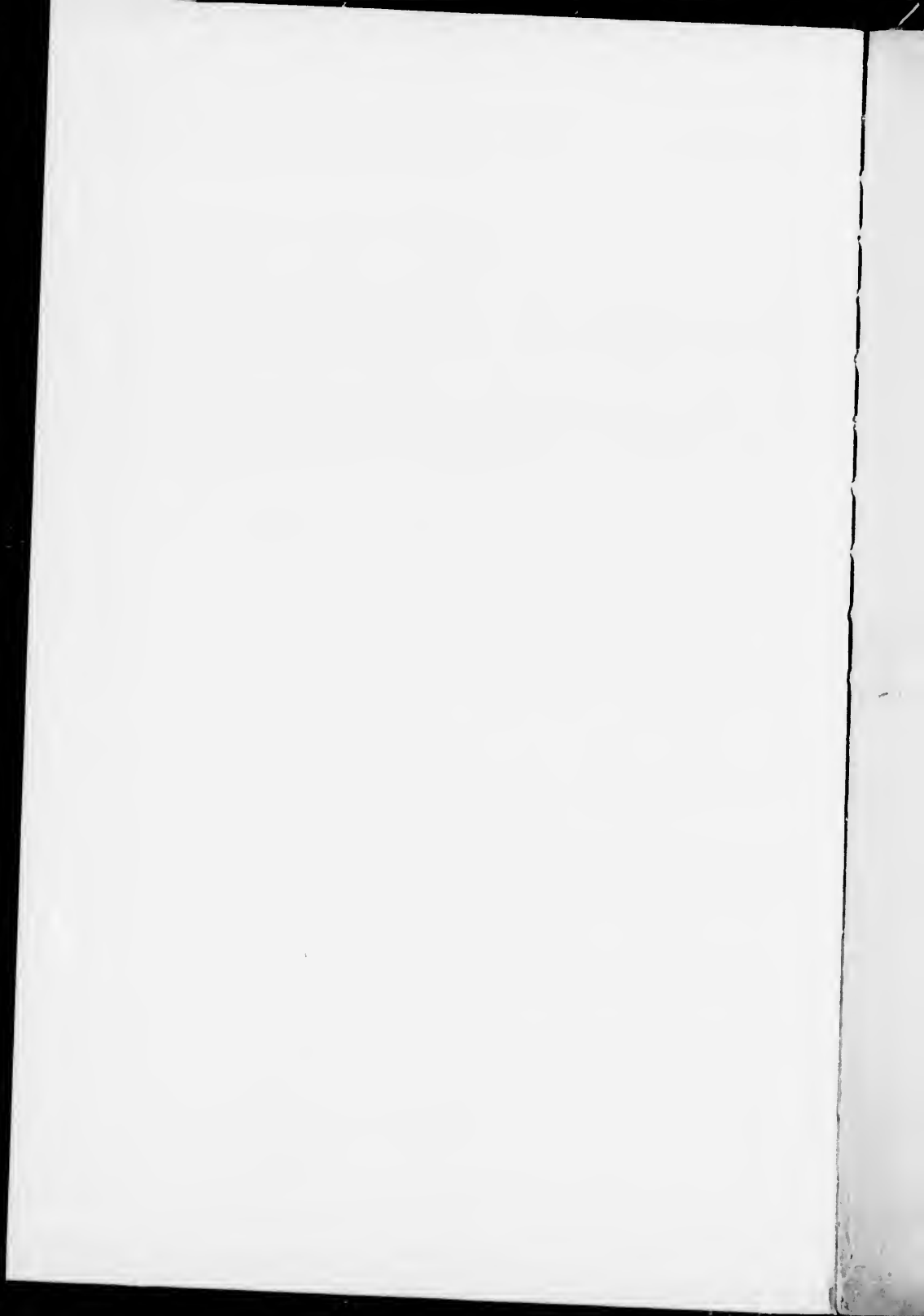
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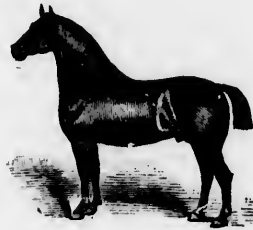
—ON THE—

BREEDING OF HORSES

AND OTHER

DOMESTICATED ANIMALS

IN CANADA



Principally Crosses of Thoroughbreds and Large Mares

2nd Edition, Revised and Enlarged.

—BY—

H. QUETTON ST. GEORGE

OAKRIDGES, CANADA.

TORONTO:
WILLIAMSON & Co., 5 KING STREET WEST

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ON THE BREEDING OF

Stylish and Useful Horses

IN CANADA.

Canada, and at present principally Ontario, may be considered as a great field for breeding horses as well as cattle and sheep. We have been successful in producing valuable and useful draught horses, which the Americans are constantly buying from us. But the stylish ride and drive horse has been left almost entirely to chance; the Thoroughbred, his best foundation, has not been patronised but by a few whose object was the turf. Our young men ride very little but like to sit behind a good mover, and in consequence trotting stallions have been very much in request. Unfortunately they have been so far, with very few exceptions, third or fourth class animals, and the mares being, as a rule, a very inferior lot, the result has been a lot of mongrels, without size or style, and very seldom any speed.

To breed a fine, stylish, useful ride and drive horse is not so simple as it might appear, and requires a good deal of experience and judgment in the selection of both sire and dam. In consequence, it is a scarce article, the demand being far in excess of the supply; when of the right sort, it is sure to command a high price.

Having for a number of years been very much interested in the breeding of blood horses, I will take the liberty of giving here the result of some observations, hoping they may prove interesting, and perhaps useful, to horsemen and breeders.

THOROUGHBRED CROSSES WITH LARGE MARES.

To the Editor of The Canadian Breeder:

DEAR SIR,—I have read with much pleasure and interest, in your issue of April 24th, a letter of Mr. Douglas about the breeding of carriage horses of good size and style by a Thoroughbred sire and Clyde mare. I fully agree

with him and have long entertained the same idea. A good many years ago I was very much interested in a book on Intermarriage by Walker, in which he lays down some principles which, by my own observations, I found, if not absolutely correct, at least well worth attention, the same ideas having been suggested to me first by the appearance of the mules in Spain, where great numbers are to be seen all over the country. I will further give a detailed account of my observations. According to Walker's theory, the organs of both parents are not blended in the offspring, but communicated in distinct series, and the only modifications which the organs communicated by either parent undergo are chiefly, if not altogether, such as are necessary to harmony of action with those communicated by the other parent, and such as are produced by difference of sex. One parent gives the locomotive system and posterior part of the head, including the cerebral organ of will; the other parent gives the vital or nutritive system and organs of sense, the anterior part of the head. Having from my own observations, first of mules, and afterwards of other animals, whose parents were known to me, come to the conclusion that there was a great deal of truth in those principles, I thought I would try to breed large and stylish carriage horses by a Thoroughbred stallion and big mares. It is true, as Walker says, that either parent may give either series of organs, but in the great majority of cases the locomotive system is derived from the sire and the vital or nutritive from the dam, and this I attribute to the following reasons: In the male, the sexual desire being generally stronger, he is more likely to impart the organs of will attached to the locomotive system, and this is still more likely to be the case when the male is a Thoroughbred, who from his long established pedigree is more likely to be prepotent than animals of a breed more recently established or mixed. To obtain the results I am looking for, it is desirable that the sire should give the locomotive and the dam the nutritive system. The sire will in that case give the general appearance and symmetry, a stylish one, the bone, the muscle, and the organs of will or staying powers. As the sire of the foetus is generally governed by the mother, the big mare will have a large foal, for which, with her more gentle disposition and good milking qualities, she will be a better nurse; therefore it is desirable that the mare should give the vital or nutritive system. The idea of a Thoroughbred sire and large mares to breed from has long been a favorite of mine. I tried it with Charon and Ruric, but did not always succeed to my entire satisfaction, although I raised some very fine animals. The fact is the mares were mostly of mixed breeds, often old and blemished. Besides, my time being very much taken up in those days by other occupations and a great deal of travelling abroad, I could not give it the attention it necessarily required for success. I have now come to the conclusion that both parents should be of a breed well-defined, so as to have fixed points to trans-

mit. As for the Thoroughbred, his long line of ancestors is a sufficient guarantee, and I believe a well-selected Clyde mare is the best. Though not so long established as the Thoroughbred, the breed is fixed by many generations. The mares ought to be young and sound. As you see, I fully agree with Mr. Douglas, whose letter I read with great interest, and I shall be happy to further communicate to you such observations as I may think useful on this important and interesting subject.

To the Editor of The Breeder :

DEAR SIR,—In my last letter I promised to write again on that most interesting subject, "Breeding Large Mares to Thoroughbred Stallions." It has attracted a great deal of attention lately, because as we see in every direction the demand for large and at the same time stylish carriage horses is greatly in excess of the supply, and as there is not at present any distinct breed of that kind, we must get it by judicious crossing. Mr. Douglas and myself have apparently come to the same conclusions about it independent of one another.

Crossing is not in itself objectionable, for as a rule the offspring is healthier and stronger than when both parents belong to the same variety, and the sad results of breeding in-and-in too long are well known. Once in and once out is a better rule. I stated that from a careful study of some scientific men who have written on the same subject, and from my own observations on horses and other animals, I recognised a great deal of truth in Walker's theory of intermarriage, when he says that the organs of both parents are not blended but communicated in distinct series, the only modifications which the organs so communicated undergo being chiefly and altogether such as are necessary to harmony of action and such as are produced by the difference of sex, one parent giving the locomotive and the other the vital or nutritive system. I stated that from my own observations I believed that in most cases the locomotive system was derived from the parent who, for some reason or another, was the most prepotent, and that the oldest and best established breeds were more prepotent than those of more recent date or mixed blood. A remarkable illustration of this rule we find in the breeding of cattle, the offspring of a thoroughbred Shorthorn bull and a common cow is in most instances very like a thoroughbred in appearance; but if the half-bred or three-quarters bred heifers are put to a thoroughbred bull the result is not so good, and in many cases very common looking. This I attribute to the fact that the thoroughbred bull, being a great deal more prepotent than the common cow, breeds after himself, whereas in subsequent crosses the cows, having through the infusion of thoroughbred blood acquired more prepotency, are apt, owing to the well-known law of atavism, to throw back to some remote ancestor of common

blood. By continued crossings with the thoroughbred bull, the amount of pure blood so overpowers on the common that the animals may be considered to all intents and purposes as thoroughbred. Seven crosses of thoroughbred used to be, I believe, the rule in our old register, but in the new Dominion Book both sire and dam must trace to imported thoroughbred English cattle. The change has been hard on some breeders, but on the whole, although I suffered from it myself, I consider it a wise one.

The same rules apply to other animals; I have myself observed it in sheep. The first cross of a thoroughbred Shropshire ram and white-faced ewes is generally very good, but after that uncertain. A curious case happened in France a few years ago, when Southdown rams were imported from England to improve the small sheep of the mountains of Auvergne; the result was a miserable failure, the lambs retained all the characteristics of the mountain sheep without any apparent improvement derived from the Southdown. It was a great disappointment, which no one could understand. To me the case appears clear enough. The mountain sheep is a breed which has been kept by itself for centuries without any admixture of foreign blood and therefore very prepotent; the fact of their being on their own ground, with the climate and food they had been so long accustomed to, being an important factor in the case, whereas the imported Southdowns must have been somewhat upset by the change, losing thereby some of their natural prepotency. I only remember what happened when those enterprising gentlemen for the first time imported rams from England, and do not know whether they gave it up in disgust or whether they persevered. If they did, I have no doubt that in a few generations the Southdown blood would have overpowered the native, and a breed of almost pure Southdowns would have taken the place of the old mountain breed, a sorry looking animal.

This rule which, I think, I will prove by illustrations is subject to occasional exceptions, due probably to the respective state of health and condition of the animals at the time of pairing, and perhaps also to age and other causes yet unknown. In accordance with those principles, as I look upon the Thoroughbred as the best variety in our possession, and I expect him from his long pedigree to be the most prepotent, I select him for a sire. For the dam I like a Clyde, on account of their beautiful proportions, and because the breed, if not so long established as the Thoroughbred, is now a fixed and well-defined one. I look to her for the nutritive or vital system. She is larger, and the female parent generally governs the size of the fetus. She is more quiet and a better nurse; and as the organs of either parent must undergo a modification sufficient to harmony of action, her more lofty action ought to correct to a certain extent the low daisy-cutting motion of the Thoroughbred. It may not be out of place here to state what may appear a contradiction. The gait or mode of

locomotion ought to be derived mostly from the parent who gives the locomotive system, and still from long and careful observation I am satisfied that it is mostly derived from the mother more than the sire, and for this reason in the breeding of trotters I would rely on the mother more than on the sire. A trotting mare put to a Thoroughbred stallion often produces a good trotter with the appearance of a Thoroughbred. Such was Clear Grit, son of Lapidist, Flora Temple, out of a Kentucky blood horse, was out of a clever fast trotting mare. Pocahontas was by Cadmus, a Thoroughbred. Her dam was a fine natural trotter. I could name good many more celebrated trotters bred in the same way. I have often been told that in pairing the Thoroughbred with the Clyde mare I would get colts with hairy legs, but of this I was not afraid, for the simple reason that when the Thoroughbred gives the locomotive system, it means the frame, the bone, and the hair is a sort of bone. I have not been disappointed in my provisions. Of a good many colts I have bred in that way, without pretending to say that they have the soft silky hair of the Thoroughbred, their coat is not rough and their legs not at all hairy. Such a cross, when successful, is a very valuable one. For the high, heavy carriages of the noble or wealthy families of London and other places, a horse big and stylish at the same time is required and not easy to find, the demand being greatly in excess of the supply. A choice pair will readily command from three to five thousand dollars and sometimes more. In the event of the colt not being quite stylish enough to command such high prices, he will still be a very useful and valuable one; powerful enough for any farm work, he will earn his living on the farm one or two years till he is disposed of to reach his ultimate destination. Even if not good enough for a tip-top price, his activity derived from his sire and great size derived from his dam will make him a very desirable acquisition for many purposes.

In my last letter, recommending a cross of the Thoroughbred and large mares, I said that crossing was not objectionable in itself, the offspring being generally healthy and strong. I also said that I expected, as a rule, to get the locomotive system from the sire by using a male of the oldest and best established breed as the most prepotent, and I promised to support these notions by some illustrations. The first I will notice is the mule, as the most striking. I said before it was the mule in Spain which first suggested to me the idea that the organs of both parents were transmitted to their offspring in distinct series rather than blended. The mule is the offspring of a horse (*equus caballus*) and an ass (*equus asinus*). Naturalists look upon them as one species descended from some remote ancestor, but they have so long diverged that they must now be classed as distinct species, not merely a variety of the same, and this is proved by the fact that although they couple freely together the produce is no longer a mongrel, but a hybrid sterile. In

support of my theory that the oldest and best established breed is the most prepotent, I will say that the ass has been for centuries a fixed breed without varieties at least in Europe, for in Asia and Africa there are, I believe, varieties totally distinct, whereas in Europe the horse has been allowed to run into endless varieties, from the small Shetland pony to the Clyde and Flemish giant. In pairing the ass with the horse it was ascertained that the ass was the most prepotent, and the object of such a cross being an increase of size and strength, in Spain and other Mediterranean countries, where the mule is so generally used, the practice is invariably to use the jack for a stallion and for a dam a good size mare. The result is an animal who in general appearance resembles the ass a great deal more than the horse—neck short and stiff, ears long, skin and hair rough, generally black, mane and tail very thin and short, hoofs apparently contracted but hard and free from disease. In temper the mule is almost identical with the ass, patient but obstinate, thriving on food on which a horse would starve. At the same time, from the large mare it attains a much larger size than the ass.

In sheep I find some invaluable crosses, which may now be called established varieties. By the Southdown and larger ewes of other breeds, the Southdown sire being of a long, well-defined breed, and therefore the most prepotent, communicates the locomotive system, which carries with it the skin and finer wool. I have such grades of Shropshire rams and Cotswold ewes whose fleeces sell for the same price as the pure Shropshires, that is, three or four cents more per pound than the Cotswold or Leicester. Most valuable crosses from ewes larger than himself have thus been produced, and are now classed as distinct varieties, the Shropshires, the Oxfords, the Hampshires.

SWINE.

I find the same rules apply to pigs. There are now with us two varieties which I have had good opportunities for studying, i. e. pure and crossed. The Berkshire, so long a favorite, whose vital system is remarkably good, always a good feeder and healthy, and the Large Improved Yorkshire White, which differs in many respects from the Berkshire—he is larger, his sides are longer but not so round, his ham- are better and his shoulders lighter, and on that account his carcass is preferred by butchers and packers, but I do not think he is as good a doer as the Berkshire. I have heard it said that his skin was more tender and blistered in a hot sun. I have not noticed it amongst those I have, running all summer in an orchard where they have no protection but the shade of the apple trees; they do not appear to be any more affected by the sun than the Berkshires. I find a cross of the two breeds a most invaluable one. I have some myself and have seen them on other farms. The shape of the Yorkshire is the one most acceptable to butchers and pack-

ers. This means the locomotive system, which, according to my theory, is derived from the sire. Therefore we must use the Yorkshire boar. The Berkshire has, I believe, a better vital system, and for this we must have a Berkshire sow. The result will be more size, better sides and hams, and as the skin and hair, themselves a sort of bone, follow the locomotive system, the cross will be white; but as there must be some modification necessary to harmony of action in a cross, the body will be somewhat more round, for the pure Berkshire is almost as round as a sausage. Such would be the result according to my theory, which in this case turns out to be most perfectly correct. The cross of a Yorkshire boar and a Berkshire sow is, in my estimation, a better animal than the thoroughbred of either variety.

THE HUMAN RACE.

In support of my theory it will, I think, be the most striking example I can produce, and one which most of my readers will better understand and of which they will be better able to judge for themselves. After saying so much about horses, cattle, sheep, and pigs, it may appear somewhat irrelevant and uncourteous to introduce man as the last specimen in our menagerie. Our excuse must be that the most interesting or important part of a letter is very often the post scriptum. Alas for man, if he has a soul and mental powers far above all the others, he is also an animal. "He is developed from an ovule which differs in no respect from the ova of other animals; the embryo itself at a very early period can hardly be distinguished from that of other members of the vertebrate kingdom."—*Darwin*.

"It is quite in the latter stages of development that the young human being presents marked differences from the young ape, while the latter departs as much from the dog in its development as the man does. Startling as this last assertion may appear to be, it is demonstrably true."—*Professor Huxley*.

The embryo of a man, an ape, or a dog, can scarcely be distinguished in its early stages. Leaving discussions about the immortal soul and human face divine to theologians, we will confine ourselves to the animal part of man. We have already said so much about organs being communicated in distinct series rather than blended that it would be useless to repeat it. We said that the locomotive system was generally derived from the sire and the vital or nutritive from the dam. Many people who have not been much interested in animals could scarcely be expected to detect it, but in the human form, so much more familiar, they can easily see it. In man, as in other animals, the sire is in most cases the most prepotent, giving the locomotive system, while the mother gives the vital or nutritive. But this rule is occasionally reversed. It may be noticed that when a child viewed in front resembles one parent, viewed in profile he resembles the other. This I have often seen noticed by people

who knew nothing of the cause. With the vital system goes the anterior part of the head, which contains the observing faculties on which cleverness depends. A child viewed in front resembles the parent from whom he takes the vital system. With the locomotive system go the backhead, the cerebel, organ of will, the lower part of the nose, the lips, the external ear, and general appearance of the body. But as some modifications are necessary to harmony of action between the two distinct series of organs, a general and sometimes rather vague resemblance to both parents will be noticed, and this will increase as the child gets older. The powers of will with the locomotive system being in most cases derived from the father, and the powers of observation with the vital system from the mother, I will say that the child who stands the best chances of being intelligent is the offspring of a clever mother and a father whose powers of will are strong. Do not let us confound the force of will with obstinacy. Obstinate men, partizans, are always weak and narrow-minded. A child who might have inherited good observant faculties from one parent stands a poor chance of being very intelligent if the other parent has not a strong will to impart, for the will is necessary to stimulate the observant faculties. We will find those rules exemplified by tracing the parentage of great and prominent men. In my travels in England and the continent I have studied with great attention the portraits of great men, past and present, who have left their mark in science or diplomacy, and whenever I got a chance the portraits of their parents, and also collected a good deal of information from the conversation of intelligent men who sometimes had had opportunities of seeing and conversing with eminent men. I find that few great men have had sons whose intellectual powers were as great as their own. I find that great men are in most cases the sons of a woman whose intellectual faculties were above the average. I could give a great many instances, but will confine myself to three, high enough to be an object of interest to every reader.

Our most gracious majesty Queen Victoria, everybody knows that, high as she stands as a lady and a Christian, her intellectual faculties are above the average. Her mother, the Duchess of Kent, whom she resembles so much in the forehead, was also a woman of more than ordinary intelligence. The same could not be said of her father, the Duke of Kent, whom she resembles in the lower part of the face, nose, and lips, principally.

WASHINGTON.

A truly great and good man, I never could find out anything about his father or see any likeness of his. I take it for granted he could not have been a prominent man, but whoever has seen a portrait of Washington's mother must have noticed in the features force and intelligence clearly defined.

NAPOLEON.

His father was a petty attorney of Ajaccio who left no mark, but his mother was a woman of very superior intelligence. Everybody will admit that Napoleon as a statesman and a soldier was a man of a most transcendent genius. Walker says that his head contained more brains than that of any European king, and more intellectual power than all of them. Beyond that, I cannot have a word of praise for him. The tyrant who, with no object in view but his own personal aggrandisement, could shed oceans of blood and cause so much misery to Europe, if not the world, was unquestionably a bad man. The fact is that great statesmen are generally the most unscrupulous of men, mostly unbelievers; religion has no restraints for them. Conscious of the vast superiority of their intellectual powers, they look down on the rest of mankind as inferior beings, a herd of cattle for them to prey upon. They see no more sin in deceiving the *profanum vulgus* for their own ends than the most pious mother would in the little story she invents for the better management of baby. If statesmen are so often unscrupulous, I will say, in justice to prominent scientific and military men, that they often combine a great deal of honesty with great mental powers. But we are now rising in the clouds of political economy, high above our heads; let us pause, or the rocket will soon come down a stick.

In crosses of human varieties, of which the coupling of a white man with a black woman has been the most conspicuous, principally in the Southern States, West Indies, and Coast of Africa, it has been noticed that the propensity of the father in giving the locomotive system has been almost invariable, the black woman giving the vital system, which accounts for the universally low standard of intelligence of the half-breed or mulatto, since we have seen that the vital or nutritive system carries along with it the observant faculties.

Reasoning by analogy, could we not get, by judicious crossing of Thoroughbred stallions and larger mares, a variety such as we know is now in great demand, a carriage horse large and stylish, looking for quality and symmetry to the sire, and for size and good constitution to the dam? Should the first cross of a Thoroughbred and Clyde be too heavy and not stylish enough, the Thoroughbred stallion might be used again, and the second cross would probably answer our purpose and establish a class of stylish, large carriage horses. Such was my idea at first, but experience has demonstrated that the first cross was the best, the second very uncertain, the third and fourth cross better, but then the size is reduced and the animals are almost identical with the Thoroughbred. The Cleveland Bay, once so celebrated, was, I believe, created on those principles, but the original type has unfortunately been lost through too great an admixture of Thoroughbred blood. Still there has

appeared of late years a very good variety called Cleveland Bay which probably is due to the mating of stallions and mares, both crosses of a Thoroughbred and a big mare. The Orloff breed of trotters in Russia was the result of a cross very like the one I advocate. Smetanka, a thoroughbred Arab, and a Danish mare produced Polkan. Polkan, out of a large Danish mare, produced Bars, who combined the blood, muscle, power of endurance, and temper of Smetanka, with the size of the Danish mare. Here evidently the prepotency of the Thoroughbred, owing to his long pedigree, had given the locomotive system, the organs of will and symmetry, and the mare had given the size and somewhat modified the action. Prince Orloff's object was not the carriage horse but the trotter, and he subsequently introduced a great deal of Thoroughbred blood in this stock and succeeded in establishing a remarkably good breed of trotting-horses, but yet not to be compared to the best American trotters. Perhaps the superior intelligence of breeders and trainers in America might account for the difference. The Russian trotting-horse is therefore an offspring of the Arab and English Thoroughbred stallions, the big mares being the fertile soil where the good seed was sown. It may not be out of place here to notice a few other varieties obtained, as far as we can ascertain, from the same source, and this is not confined to England, where the Cleveland Bay, the Yorkshire Coach horse, and the Hackney are the most prominent, but extends to the continent of Europe, principally France and Germany, who now boast of their splendid carriage horses, and also to America, where undoubtedly the trotter is largely indebted to the importation of English Thoroughbreds. I read somewhere that the landing of Messenger had been worth millions of dollars to the United States.

The Cleveland Bays and Yorkshire Coach horses are also breeds produced by crosses of Thoroughbreds and large mares, but now established and coupled amongst themselves, with an occasional fresh introduction of Thoroughbred blood by the male. They are both very fine breeds, larger than the French, but perhaps not quite so stylish, which probably is due to the fact that the French are still often introducing Arab blood.

HACKNEYS.

The English Hackney has lately attracted a good deal of attention, and I am glad to see them imported into Canada. It is a most useful and at the same time stylish horse, and some are very good movers, trotting quite fast enough for the road if not for the track. There is now in England a tendency to increase their size. I am almost afraid that in doing so some of their good points may be lost, and there will only be so many more Coach horses introduced to compete with the Yorkshire, the Cleveland, and the French. The Hackney originated, I believe, in a cross of the Thoroughbred with the Nor-

folk mares, generally good movers. Considering how nice they are for the saddle and light carriage, would it not be better to keep them as they are, trying only to improve by always selecting the best stallions and mares to breed from? I have often admired in England what I would call a cobby Hackney, in my estimation the best specimen of the ride and drive horse that any man can wish to have.

GERMAN COACH.

Lately a new breed has been imported into the States from Germany. I cannot say anything about them, having had no opportunities of seeing them; but from notices and engravings in American sporting and agricultural papers, I think they must be very fine horses. The improvement no doubt is due to the English Thoroughbred, for the old German Coach horse was a very clumsy and vulgar animal, but large and therefore fit to supply good mothers. I am told that they are now very much admired for their lofty action. My recollection of them is that they had a very lofty action but did not throw their feet forward, and therefore there was very little progress made. In that they were inferior to the Anglo-Norman, who has a lofty action, but combined with speed. In fact, their lofty action was very like the spasmodic jerking of a horse afflicted with the peculiar disease called string-halt, but I am told by competent judges that their action is now greatly improved. The Germans are intelligent, observant, and energetic. They have, I have no doubt, worked assiduously to correct the defect I have alluded to, and have succeeded in producing a very good Coach horse. I have had no opportunities of judging for myself of late, not having crossed the Atlantic for many years; but as they are now being imported into America, I trust I will before long come across some of them.

FRENCH COACH HORSES OR NORMANS, CALLED IN FRANCE, ANGLO-NORMANS.

In France a very good breed of horses is now well-established. Many of them have been imported into the United States, where they are very well liked and command high prices. I was told by a very competent judge that at the last exhibition in New York, 1890, some remarkably good specimens came under his inspection. The first-prize winner in that class, first prize also in Coach horses of any country, Intrepid, is, he tells me, as fine a model of a horse as any one could wish to see. I have heard them described as an enlarged Hackney, and I think a greater compliment could not be paid to them. The fact is they have the symmetry and style of the Hackney with more size; and as the French have always been very fond of trotting, the trotting action has always been with them in breeding the principal consideration, combined

with size and style, and most of those horses are very good movers. I am glad to see that a company in Montreal, called the Haras National, is now introducing them into Canada. If they will import some of the right sort, it will undoubtedly be a success for themselves and an undoubted benefit to us. This breed has, I might say, been created by crossing the English Thoroughbred with the large mares of Normandy and Brittany; but after one or two crosses the stallions and mares so produced have been coupled together, and at last a good and well-defined breed has been established. It has taken a good many generations to accomplish it. I remember some thirty or forty years ago the horses who came out of Normandy were greatly inferior to those I have seen of late years. This great improvement in the breed is mainly due to the Government, who maintains in different parts of the country what is there called Haras, that is, station or depot, where a certain number of stallions are kept for service, mostly English Thoroughbreds, Arabs, Normans, and Percherons. What we call here Normans or French Coach horse is called in France Anglo-Normans, thus acknowledging that the breed is the result of a cross of English and Norman blood. The choice of the stallion for a mare is generally left to the manager and vet. of the establishment, as well as the number of mares that each stallion is allowed to serve. Some of the best mares in the country are allowed by the Government prizes from \$40 to \$200 annually when in foal to a Government or licensed stallion. Besides their own stallions, the Government allows to stallions kept by private individuals and approved by the directors of the Haras an annual subsidy ranging from \$20 to \$600, to prevent their being sold and taken away from the country. There are two classes of stallions only allowed to collect for service of mares. The best is called (*approavis*) approved, the other simply authorised. The best colts are invariably bought by the Government at a very liberal price to supply their Haras with stallions. These are wise laws; they keep the best mares and the best horses in the country to breed. I have seen it suggested by sporting and agricultural papers that our Government ought to establish a similar system of Haras. How far it might be advisable for our Government to become the proprietor of stallions is somewhat doubtful, but some regulations by which the travelling of runts and unsound stallions would be prevented and the use of the better class encouraged, by prizes given annually to the best stallions and brood mares, would certainly be a great benefit to the country. Instead of that we see our best horses and mares taken across the line and our townships overrun by scrubs who take anything they can get for service, and as for brood mares they are mostly those who were not good enough to sell. The laws and regulations of the French Haras are, I think, admirable; the only wonder is they should have survived through the numberless changes of government which have succeeded one another in France for the last one hundred

years or so. It is simply one of those mysteries which, as Lord Dundreary would say, "no fellow can understand." How would they work with us? Some other Governments in Europe, principally Russia and Germany, have organized a system of Haras and encouragement to breeders very similar to the French, and I believe also with great success.

TROTTING-HORSES IN AMERICA.

We have now given a brief sketch of some breeds all indebted to the English Thoroughbred for the great improvements effected of late years in their style and usefulness. But there is another also largely indebted to the Thoroughbred for the immense strides it has made both in speed and appearance, the trotting-horse, that wonder of wonders, the pride of the American, the result of his ingenuity. The light buggy has always been more popular than the saddle on this continent; therefore trotting, the natural pace in harness, is the favorite. Bred at first at haphazard, a get by chance, as it were, he was an ungainly animal, with drooping quarters and many other ugly points. Thanks to the judicious introduction of a great deal of Thoroughbred blood, he is now a very different animal. The great points of the Thoroughbred, besides his stylish appearance and iron frame, are his staying powers, due to his courage and determined will. All that he has imparted to the trotting-horse of the present day. Trotting is not the natural pace of the Thoroughbred, but every now and then one may be found with good knee action and a disposition to trot when properly encouraged. This has been done by intelligent breeders and now we see the result, a great increase in speed; and instead of the vulgar trotting-horse of old times, who happened by chance to trot, we have a splendid breed, which is now getting more clearly defined every day, so that you can breed with almost the certainty of getting a fast horse. We cannot expect every one to trot in two-ten, any more than we can expect every Thoroughbred to be fit to win a Derby or a St. Leger; but as in England a great number of Thoroughbreds which could not win a great race are still splendid animals in the hunting field or in the parks, so in America we find a lot of magnificent animals who can trot about as fast as the best did in olden times, but not fast enough for the track in our day, driven by gentlemen principally in New York, Chicago, and other places. Gentlemen who can afford the long prices they are sure to command are proud to sit behind them, and justly so. There is no doubt that in America the trotting-horse is the most profitable to breed when properly understood. The best mare to the best horse, keeping always in view the great combination—the holy trinity—size, style, and speed. Radway advertised his goods with three R.R.R., Radway's Ready Relief. I would say to breeders, three S.S.S., size, style, speed. Breeding even with the best material we may expect to be sometimes disap-

pointed, principally in speed, but a stallion and a mare both large and stylish will almost to a certainty produce a colt large and stylish also, and if speed should by some inexplicable chance be missed, the big stylish horse will still fetch a remunerative price, and if he has speed along with it he is almost invaluable. In the breeding of trotters, therefore, perhaps more or at least as much as in the breeding of anything else, I would say, do not grudge a few dollars more for a good stallion; bear in mind that those few dollars more may represent a few hundred more in the value of the colt.

We see that the Thoroughbred is evidently the foundation of all the good varieties in our possession. On the turf, where we find him pure, he has no rival. Even his ancestor, the Arab, cannot compete with him any more in speed. When we trace the origin of the hunter, the park horse, the Coach horse, the Hackney, the trotting-horse, whether in England or France, Germany or America, we always find the Thoroughbred at the bottom of it. Those countries have now succeeded in creating new breeds, well established, and who can propagate themselves. In America, as yet, it has only been done with the trotting-horse, but there is no reason why we should not do it also with the Coach horse and Hackneys. So far we have found it more convenient to import ready-made, but we could manufacture, even without the help of a National Policy. So far we have imported a good many stallions, but scarcely any mares. We might import more mares and have the breed ready cut and dry; very true, but it would require a large outlay of capital. We have an immense number of brood mares in Canada, and our best plan is to turn them to the best account possible. The question is, how far is it advisable to use the Thoroughbred as a sire? The Thoroughbred will improve anything. I will say to those who have capital and can afford to wait, by all means breed from a Thoroughbred sire. For the turf or for the ride and drive you must have mares properly selected, and for such mares you are likely to have to pay a long price when you can find them. Then your colts must be properly cared for, about four years. I am not including the Thoroughbred colt raised for the turf; that one will often fetch a good price at two years old if not as a yearling. During those four years your half-bred colt will require a great deal of handling before you can dispose of him, and unless you get a good price you will find yourself money out of pocket. As for the common farmer who has only been accustomed to handle the good-natured, sluggish draught horse, I cannot conscientiously recommend him to breed from the Thoroughbred. He has not, generally speaking, the skill to select in the big mares the few who, mated with a Thoroughbred, will produce a good Coach horse. Such a mare must not be too heavy; she must be rangy and stand well in front, with good, sloping shoulders. Behind, she must have a straight back and hocks well let down. She must have a good knee action. From such a

mare and a good sire, Thoroughbred, with plenty of bone, a good Coach horse may be expected. But how many do we see with immense wide chest, which unfortunately are almost always coupled with low withers and straight shoulders. The heart and lungs must have room for a good constitution, but that room should be found in depth as well as in width, else the animal is like a toad dragging its chest and belly on the ground. Such a mare could not cross well with the Thoroughbred: they are too wide apart: and although we look to the sire for shape and symmetry, we must bear in mind that in a cross principally there are modifications necessary to harmony of action between the two series of organs which are to come from the parents. Temper has also to be taken into consideration. The blood horse, kindly treated, is gentle and tractable, but he is high-spirited and easily offended when roughly handled. He is clever because he is observant; his mental faculties are always fresh and active. On the road he notices everything, he sees and hears everything. In a crowd, with sights and noises he has not been accustomed to, he holds up his head, he pricks his ears, but he does not make a fool of himself. If he has been properly handled, if instead of being afraid of his master he has confidence in him, speak to him in gentle and encouraging tones and he will face anything, for besides being intelligent he has the courage of a lion. How different the cold-blooded and sluggish horse who travels seeing nothing but a few yards of road in front of him. If anything unusual should catch his eye, if he hears anything he does not understand, he shies, and often neither voice nor rein will save you from the ditch. Very few farmers know how to handle a well-bred spirited horse. They mate him with a sluggish one and he frets and pulls all the load, in consequence of which he often comes to grief and gets blemished and unfit to sell, or perhaps he gets offended and discouraged, and becomes baulky and vicious. Let the farmer who is not by inclination a true horseman stick to the draught horse, who requires no breaking, who takes things easy and seldom hurts himself, for he pulls more by his weight than by his muscle. Such a horse will earn his living on the farm for one or two years, and if of the right sort will fetch a remunerative price at the age of four or five. Many farmers who like to have a lighter team for the buggy or light spring wagon might breed from the Cleveland. He is strong, active, a good walker in the plough or wagon. Coming back empty from the market, he can trot and make better time than the heavy draught, who, if made to trot principally on macadamised roads will, by his enormous weight, pound his legs and feet all to pieces. A pair of Clevelands on a farm will do pretty much all the work, and if good looking and sound will, at the proper age, fetch a remunerative price as carriage horses for town. We have spoken of handling, but there is another most important question: feeding. Farmers are apt to let their colts run on very indifferent pastures, often side roads in summer and

the straw yard in winter. A common horse will in that way be raised, but not developed as he might have been with better care. The Thoroughbred horse has been made what he is by more liberal feeding. The Arab from whom we imported progenitors will tell you so (if we did not know that it was the Almighty who made the horse, we would say it was barley that did it). In England the same system has been very judiciously followed, oats and bran being substituted for barley. The result is that the Thoroughbred has a more compact bone, better muscle, and weighs more in proportion to size than any other horse. He has also more vitality, he lives longer, he often recovers from fatigue, occasional starvation or illness, where another would sink. Is the farmer prepared to treat him better than his other colts? If not, let me tell him that in his hands the blood horse will degenerate; he will be stunted and his good points will ultimately be lost. A common horse will fill his paunch with coarse grass in summer and straw in winter, and still live and even after a fashion thrive. The blood horse requires better pasture and more concentrated food. A little oats and bran will go a long way with him in winter. I have said that the Arab knows it is corn who made his good steed; he is intelligent, and as the horse he rides is all in all to him, his subsistence, his very life depending on the swiftness and endurance of the horse he rides, he has studied him as no one else has. He will tell you, "Let me see your horse walk and I will tell you how he gallops," and in that he is right, for a good walker is always a good horse. It has been generally believed that the Arab attached more importance to the dam than to the sire. This is a popular error easily accounted for. It is quite true that he prefers keeping a mare, but for two reasons: A mare who breeds valuable colts, which does not prevent him from using her the greater part of the time, is to him a fortune. Being a robber by profession, he goes out on his predatory excursions mostly by night, when his mare carries him swiftly and silently, whereas a stallion would proclaim his presence by loud neighings. For these two reasons the Arab of the desert prefers a mare. As for breeding, he goes rather too far when he says of the mare, "What can you get out of a bag but what you put into it?" Still we may be sure that for breeding as well as for riding he likes a good mare, and he takes her enormous distances to a good stallion, passing by inferior ones whose services might be had with less trouble and expense. Like the Arab, I attach more importance to the sire, expecting from him bone, muscle, and symmetry. The mare I like young, sound, and of a good constitution, as I look to her for the vital system. As for color, I think I can say it is oftener derived from the sire, but there are queer stories about its being often governed by impressions made on the eyes and mind of the dam at the time of impregnation, and with some animals it is rather uncertain. It is sometimes said that a good horse cannot be of a bad color, and this is a matter of some importance to breeders. We all know that buyers are very particular about it, preferring dark

colors to light. In his instructions to buyers for the army, Colonel Ravenhill says, "Reject a horse of a color light of its kind." This buying of horses for the English army is likely to be a matter of some importance to Canada. I have read with great interest the instructions to buyers, and will take the liberty of giving here some extracts, having selected those which I think will be most useful to breeders; but I would recommend every one who can procure it to read it in full.

It will be noticed that during his visit to Canada in 1886, the Colonel travelled 14,755 miles, examined 7,467 horses, and finally only purchased 83.

"7. The prices of the whole of those were very reasonable and moderate. It was no question of money in the majority of cases which prevented our purchasing in larger numbers. We found that the great proportion of horses met with of the size and sort suitable for British military purposes were unsound or blemished, from the farmers overworking their stock when too young, thus breaking down the young ones before they have developed into horses."

Note this, young farmers. Many of you I have seen driving your colts barely two years old, not merely for breaking them in and exercise, but pretty much as if they were old livery hacks.

"9. A malformation in the Canadian horses which might advantageously be brought to the notice of the Canadian breeder is, that their quarters are short and very drooping, a serious defect in a military horse. Indeed, we had to reject as unsuitable a considerable proportion on that account. It has resulted from the too excessive use of the American trotter for stud purposes, this defect being very apparent in that horse. This is an additional reason for the more continuous introduction of the English Thoroughbred, or such horses which are very straight in their backs and quarters, with tails set on high."

The importation into England alone is over 17,000 annually, all from foreign sources, so that this trade is worthy of consideration. Of those 17,000 horses I am sure Canada could supply the greater part if farmers would only breed the right kind. There is very little more to be said about breeding. The draught horse is undoubtedly the one a farmer can breed with the best chances of profit, if he will only bear in mind that as the bull is said to be half the herd, so is the sire for all other animals. There can be no worse economy than grudging a few dollars or a little more trouble to procure the services of a good stallion, or the purchase of a bull, a ram, or a boar. The best is always the cheapest. As for the dam, if she is roomy, young, of good vital powers, or, in plain English, a good constitution and tolerably good shape, mated with a good sire, the result may be expected to be satisfactory. As for breeding from old, unsound, or prematurely worn-out mares, I would say, if you have no other you had better not breed at all. What it will cost you to raise a poor colt will buy a much better one, and this, I believe, is the most valuable piece of advice I can give in taking leave of you.

