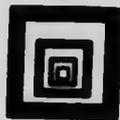


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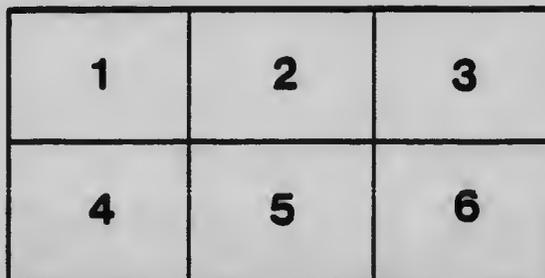
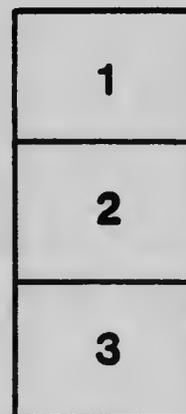
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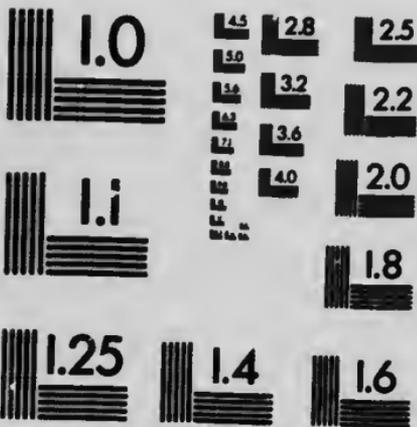
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BULLETIN No 31385

WHAT THE HORSE MUST BE

— BY —

JOSEPH PASQUET

PROFESSOR OF ANIMAL HUSBANDRY
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SAINTE-ANNE DE LA POCATIERE, P. Q.

TRANSLATED FROM THE FRENCH
BY

J. J. GAUTREAU, B. S.



GOOD TYPE OF PERCHERON HORSE

PUBLISHED BY ORDER OF
THE HONORABLE JOSEPH-EDOUARD CARON
MINISTER OF AGRICULTURE
PROVINCE OF QUEBEC

1917



DEMONSTRATION ON THE HORSE, BY THE AUTHOR AT L'ISLE-VERTE, P. Q.



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WHAT THE HORSE MUST BE

In my first bulletin (No 30) I have tried to show how, by the proper use of heredity, one could produce a desired animal and how by use one could improve it.

In the four following bulletins (31, 32, 33, 34) we shall see what the horse, the dairy cow, the sheep and the hog must be.

We will first study the horse, which Buffon considers as the "most noble conquest" of man.

I think it important before studying the exterior of the horse to say that pretty and good shall have an equal value in this lecture. The pretty horse is a good horse.

The beauty of the horse or of one of its parts is, according to the correct expression of Messers. Goubaux and Barrier, that which indicates a perfect adaptation either of an organ or a region to its function, either of the whole individual to its use.

The beauty of the work-horse is not like that of the race horse. The beauty of the former is, a conformation, which will make it strong; while the beauty of the latter is a conformation permitting it to make rapid headway.

I insist on this, because I know that many farmers would like a work-horse having the conformation of the race-horse, which is impossible.

The horse must be conformed in such a way that it can execute its aptitudes and attain the end for which it is destined.

To facilitate this study, we will successively take up the different regions of the head, barrel (body), fore and hind-limbs.

THE HEAD

The head is interesting to study and deserves an attentive examination, for it can give us pretty good information upon the constitution, character and energy of the animal.

At first sight we notice the length of the head, which should be $2\frac{1}{2}$ times shorter than the horse's height at the withers.

Next is volume or size: a large head on account of bone and muscle, is not very graceful or pleasant, and overloads the fore quarters; it can be tolerated on a work-horse but must be rejected on a race-horse. A "fatty" head the volume of which is caused by excessive fatness, indicates a sluggish and lymphatic animal; a "small clean" head well chiselled out, indicates an energetic animal, and by reducing the weight on the forelimbs, gives their movements more elegance and suppleness". The "clean head" must not be confused with "thin head", found on old horses, feeding poorly.

Shape.—The head must be well developed in its top-part, rather short than long. The straight profile is more desirable than the concave or dished out one given by a flat-nosed head, and more desirable than the convex profile given by the arched head.



fig. 1.—straight head



fig. 2.—flat-nosed



fig. 3.—arched head.

Besides being more graceful, the straight profile facilitates respiration, and gives to a certain extent, an idea of the general outline of the horse.

A straight back, a straight rump and limbs, correspond to a straight profile. An arched neck, back and loin, an angular top-line of the rump, limbs wide at the knees and hocks, feet that are toeing in, generally correspond to a convex profile of the head.

While to a concave profile of the head correspond a concave back, a double rump, limbs closed together at the kness and hocks, and toeing out feet.

As to direction, the head should make an angle of about 45 degrees with a horizontal. Such direction permits a good respiration, good sight and easy movements.

The "vertical or cowled" head is not disgraceful, but reduces the pace, and prevents seeing distant obstacles; moreover, it troubles respiration and allows the horse to take the bits to his teeth.

The horizontal head (or carried in the wind), is not better, as it prevents the horse from seeing nearby objects; the horse is generally hard in the mouth, because the bit rests against the first molar teeth.



fig. 4.—straight head and neck.



fig. 5.—Stag neck and horizontal head.



fig. 6.—bow neck and vertical head.

The head must also be well attached to the neck, with a small depression between the two, that the head may easily bend against the neck.

We will now review the different parts of the head.

The *fore-head* must be wide and well developed.

The *face* or bridge of nose between the forehead and nostrils, must be short, but wide to facilitate respiration.

The *end of the nose* situated between the nostrils, the upper lip and the bridge of the nose must be wide. If a round scar, indicating the use of a twitch, is seen, one can mistrust the character of the horse.

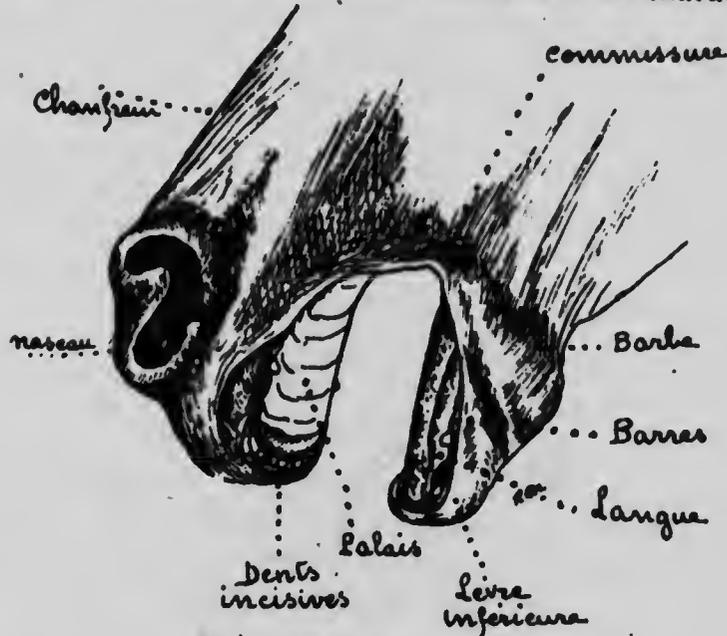


fig. 7.—Lower part of head

Dents incisives : incisor teeth,
Palais : roof of mouth,
Lèvre inférieure : lower lip,
Langue : tongue,
Commissure : chin groove

Barres : bars,
Barbe : beard,
Chanfrein : face,
Naseau : nostrill.
Chanfrein : Bridge of nose

The *nostrils* must be: wide opened to permit a free passage of air; movable and expansible, during work, but all this without exaggeration; the pituitary mucus (interior lining of nostrils) must be pink. The nostrils must not give off much liquid, and must give an odorless breath, without noise.

Horses whose nostrils remain dilated after the least exercise are generally shortwinded (heaves); those giving off white yellow or greenish liquids, those bearing ulceration on the pituitary membrane; those having a snoring respiration; those breathing out an air of fetid odor, are to be mistrusted. These symptoms can be of a serious nature.

In the mouth, until 8 years old, the teeth can give us pretty exact information on the age of the horse, the lower incisors being used.

The central "milk or temporary incisors" appear the 8th day.

The intermediate ones situated on each side of the central incisors, appear between the 30th and 40th day, or at about one month of age.

Between 6 and 10 months of age the "corner or last pair of temporary" incisors make their appearance, but reach their full height only at 1 year of age.

The teeth then wear in the same order.

The central incisors at 12 months.

The 2nd pair of incisors at 15 months.

The last or corner pair, at 20 months.

The permanent teeth appear in the same order.

The "central" permanent pair at 2 years or age, reaching their height at 3 years old.

The 2nd permanent pair at 3 years, reaching their height at 4.

The last pair of permanent incisors, appear at 4 years, reaching their height at 5 years of age. The horse has a full mouth, and the teeth now begin to wear.

The central pair of permanent incisors wear at 6 years of age.

The next pair are worn at 7.

And the corner pair are worn at 8.

The "tongue" must be whole, clean and well in the mouth, that there may be no loss of saliva.

The bars, or space between the incisors and the molar teeth, upon which bears the bit, should be clean, slightly, elevated and rounded.

The lips should be well closed together, not split up too far, so as to permit the proper placing of the bit.

The cavity under the lower jaw, should be clean, wide and neat. The jaw-bone should also be clean and neat. One should suspect in-

flamed ganglions of that region, which is often the indications of glanders, a dangerous and contagious disease.

Clean, neat cheeks are to be looked for.

The eyes give us indication as to the character and health, etc. Quick, kind and expressive eyes indicate a true, energetic horse. Eyes that are distant apart, of equal volume (size), slightly, convex, having black pupils, clean eye-lids, movable and nicely opened with nice pink interior membrane, with a few limpid tears, are desirable.

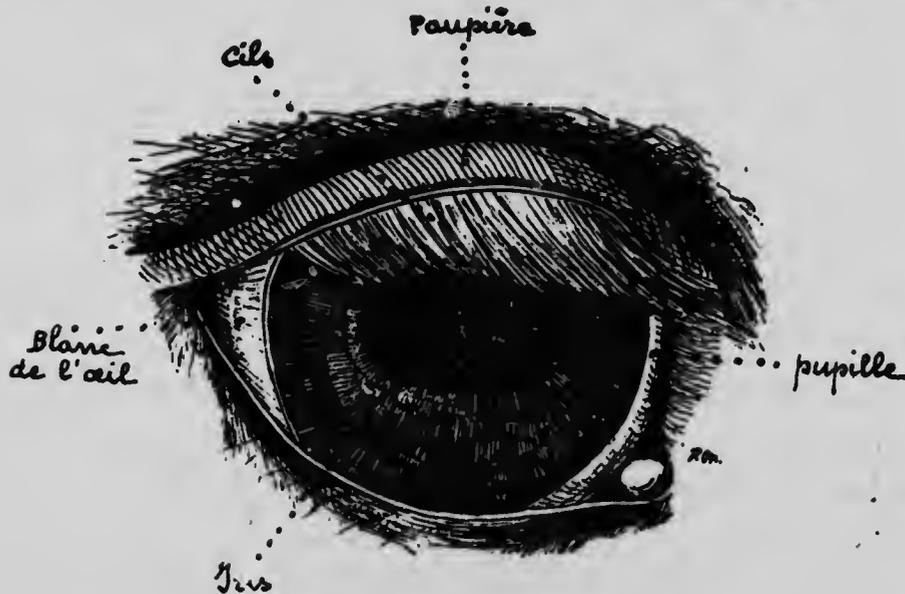


fig. 8.—Horse's eye.

Cils : eye-lash,
Paupière : eye-lid,
Pupille : pupil.
Blanc de l'œil : white of eye,
Iris-iris,

An important thing is to see that the pupil has no spots or scars, and that it has the faculty of contracting and distending. The eye is best examined when the horse is taken out of the stable; the pupil being dilated in the dim light, must contract as it receives more light. The cavity over the eye, when very pronounced, indicates old age.

The ears should be small, clean, distant apart, movable and pointed forward, when the horse is at work. A large falling ear indicates a sluggish horse; ears that are leaned back indicate a cross-horse.

The *neck* must be well attached to the body that is well blended with the withers, shoulder and chest. It should be rather long, es-

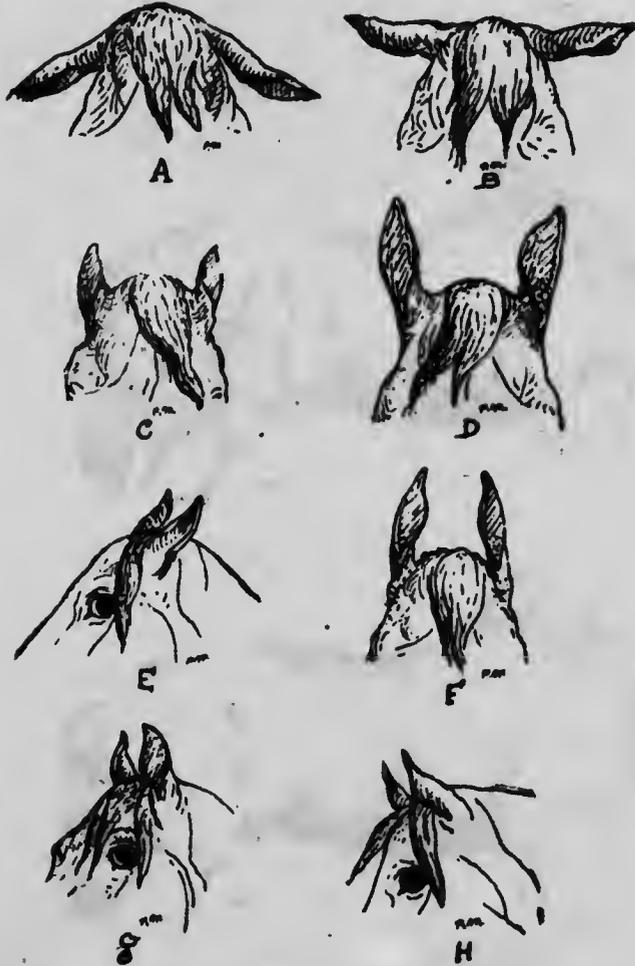


fig. 9.—ears of the horses.

- A.—pig-ears,
- B.—lop-eared,
- C.—short ears,
- D.—mule-ears,
- E.—leaned ears,
- F.—rabbit ears,
- G.—confidant ears,
- H.—ears showing fear or nervous ears.

pecially for the race-horse, as it facilitates movement, but it must be well muscled without being fat.

The direction is perfect when the neck forms a right angle with the head and an angle of 45° with a horizontal.

THE BODY OR BARREL

The withers must be high, long and clean, especially for a race horse. Its cleanliness is important. Bruised withers are difficult to cure.



fig. 10.—short back.

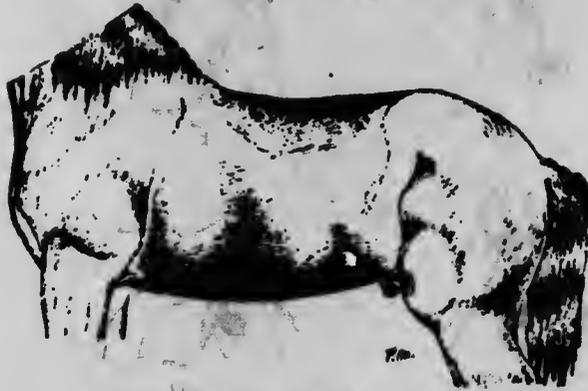


fig. 11.—long back.



No. 12.—rounded back.



fig. 13.—low-back.

The back is use hold up or haul the load, and to transmit the impulsion of the hind-limbs to the fore-limbs.

The back therefore, must be solid and elastic, and a straight medium long back is generally thus; a short, rounded back is generally stiff, and a low-back generally very supple but weak.

The loin which is the continuation of the back must be: well attached to the rump, well muscled, particularly wide and short. It is an important part of the top-line, a part which tires, for which reason a good strong conformation of that region is looked for.

A poorly attached loin is not much appreciated.

The rump is never too long. Length is necessary for the race horse and is useful to the heavy draft horse. The Arabs who are



fig. 14.—horizontal rump.



fig. 15.—sloping rump.

skilled horsemen say: "the rump which is equal to the distance between the withers and rump is a perfection".



fig. 16.—unken rump.



fig. 17.—double rump.

Width is necessary for the draft horse. Without being narrow, it should not be too wide for the race horse. Too wide a rump would cause a rocking which is a drawback to forward movement, by using a part of the energy.

Direction. A horizontal rump gives a rapid motion, but soon wearies; an oblique rump is contrary to rapidness, but gives much strenght; strenght, resistance and speed coincide well in a sloping rump (giving an angle of 25 to 35° with a horizontal line).

The sloping rump is well for the road-and heavy-harness-horse; an oblique rump is convenient for a heavy draft horse.

The rump must be well muscled, and particularly for the draught horse. We, sometimes, find a double rump (deeply gutted), when the muscles are projecting up.

The tail must be the continuation of the top-line, attached as high as possible and carried high. The tail is a real dynamometer. The resistance produced when the tail is lifted, can give information as to the muscular strenght of the animal.

The hips or hook bones should be protruding, being fairly angular. Too much angularity is preferable to a lack of angularity. Very angular hips are homely, disgraceful but indicate much strenght. Very smooth hips on the contrary, indicate a lack of vigor and energy.

The flank corresponds to the loin, it should therefore be short.

Skilled horsemen like a flank that is only an inch or so in length. The deep cut-up flank is undesirable. A good flank is well filled in and blends imperceptibly with the abdomen (belly).

The abdomen must be proportioned to the rest of the body, and will continue the outline of the chest. A "cow-belly" that is falling low, is generally caused by too great a ration of poor roughage; a cup-up belly is also an indication of poor feeding and is more dangerous than the preceding.

The ribs limit the chest which contains the heart and lungs; in order to have plenty space for these organs to develop and work, the ribs must be long, convex or round, and have a good space between them.

Flat low ribs, a poor heart-girth are a bad defect.

THE FORE-LIMBS

The shoulders must always be long, especially for a race horse. They should also be well muscled. A very sloping shoulder is looked for in a speed horse. A straight shoulder (upright) is favorable for a work horse; the collar will rest in a good position and by the way the muscles are disposed, permits great strenght.

In trotting or working, horses, one should see if the shoulder has an easy movement. The arm which connects the shoulder with the fore-arm, should be half the length of the shoulder; were it longer, the limb would move close to the ground; were it shorter, the action would be too high. A strong arm permits speed, and a sloping arm gives strenght.

The fore-arm shall be in a vertical position. Being the upper part of a pillar, must have a strenghty position. The fore-arm

shall be long and well muscled. A long fore-arm permits a good extension (long reach).

The knee is a complex and delicate articulation. Therefore we should look for a knee of strong conformation, free from blemishes; a good knee shall be wide, thick, clean and neat and in a vertical position, without deviation either forward or backward nor bowed inward or outward.

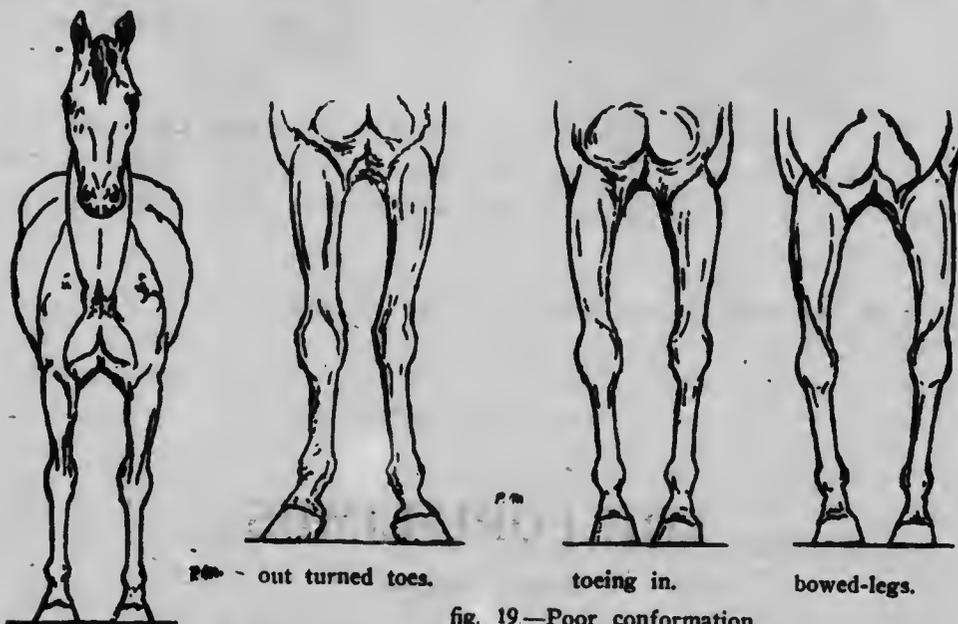


fig. 18.—front view
of fore-limbs
(good conformation)

fig. 19.—Poor conformation.

The cannon from a side-view shows two different distinct parts: the cannon which comprises the bone and the sinews composed of the tendons.

The sinews shall be wiry, large and set back. Their compactness indicates energy.

The ankle, like the knee, is an articulation which shall be thick and wide, clean, free from fleshiness, and sound.

The pastern, to be strong must be wide and thick, clean and neat. The length of pastern corresponds with its direction. The long-

jointed pastern is equally high-jointed, and the low-jointed one is also short jointed.

Obliquity and length of pastern should be medium, that the weight may be equally supported by the bone and tendons.

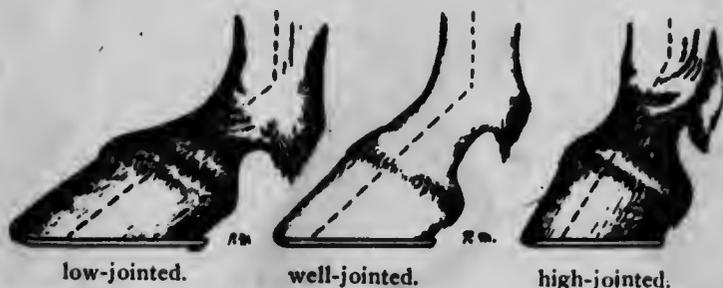


fig. 20.—Pasterns.

The tendons or sinews of the low-jointed ankle, support most of the weight and are soon blemished: action is soft and elastic.

The contrary is true for the high-jointed horse, where the bones do all the supporting and are exposed to blemishes, action being short and hard.

It is estimated that the tendons and bones support an equal share of the weight, when the pastern forms with a horizontal, an angle of 55° to 60°.

The hoof-head should be wide, clean and not too salient.

The foot deserves particular attention; "no foot, no horse". This universal saying is well true. It is impossible to make a complete study of the foot in this brief lecture, but I will be satisfied with indicating the beauties of the foot.

The foot must be:

1.—Of size proportioned to that of the body; too large a foot is heavy and awkward. Too small a foot is exposed to contracted heels and lameness.

2.—Of good conformation. From a front view, it must be wider at the bottom than at the top but the outside must be more sloping than the inside of the hoof.



fig. 21.—face of foot.

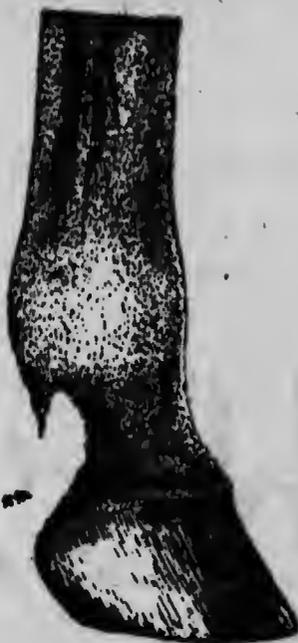


fig. 22.—foot in profile.



fig. 23.—back of foot.

*Bord inférieur
de la paroi*

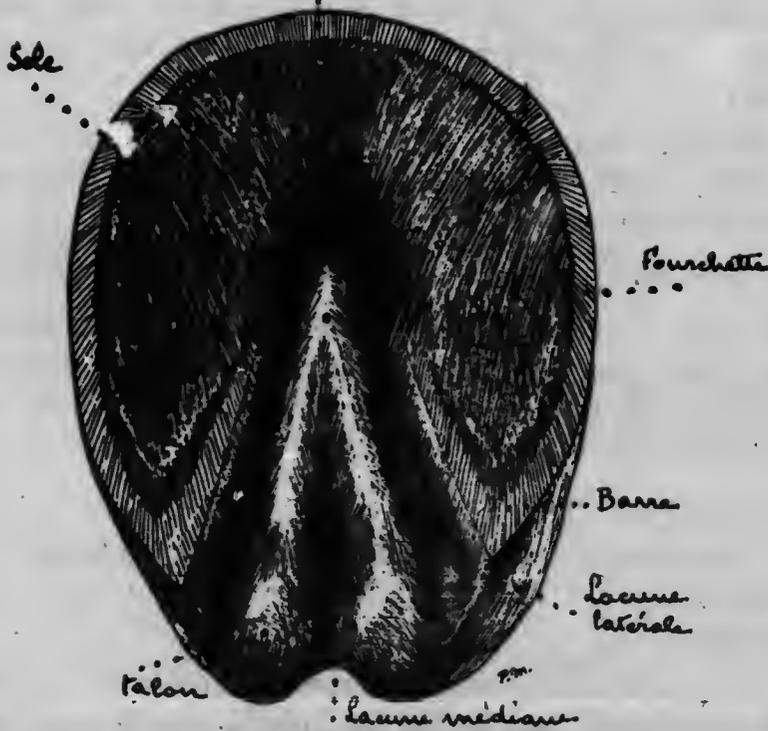


fig. 24.—Bottom of the foot.

Sole : sole.
 Talon : heel.
 Lacune médiane : mediana lacuna.
 Lacune latérale : lateral lacuna.
 Barre bar.
 Fourchette : frog.
 bord. inférieure de la paroi : lower part of wall.

The straight line of the toe should make with the ground an angle of about 50°. The heel-line must be almost parallel with the toe-line and be at least half its length. From behind the heels must be wide and of uniform size. The sole must be concave and thick. The frog well developed and well cut out. Flat feet, the high or low-heeled feet, contracted heels narrow-heels are malformations which much decrease the value of horses.

3.—Well set. The feet that are toeing-in or out, are a poor support for the horse's limbs.

4.—The horn of the hoof will be rather black, not too soft nor dry.

HIND LIMBS

The hind limbs must be more perfect, more solid and more free from blemish, than the fore ones. This is comprehensible. The hind limbs support the weight of the body as well as the fore-limbs and have a surplus work, the impulsion of the whole mechanism.

The thigh as well as the fore-arm, shall be long and well muscled. The desired direction of the thigh is one forming with a horizontal line, an angle of 80°, for the race horses, a more oblique thigh being preferred for the work horse. The leg will be long and well muscled.

A very important part of the horse still remains to be studied, because of the concentration of impulsion:

The hock, which is still a more complex articulation than is the knee, must be more resistant and stronger.

Stallions and brood-mares which have the following conformation of hock, shall be chosen :



fig. 25.—Normal hock.

a) wide, width at the upper part of the hock, indicates strenght, and width of the lower part, indicates firmness. Width of top and bottom must be combined. Width at bottom is useless if alone.



fig. 26.—bog spavin



fig. 27.—spavin.



fig. 28.—curby hock



fig. 29.—curb.

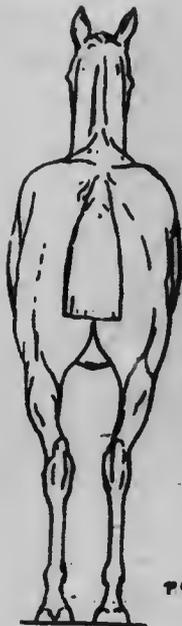
And the small bottom hock is particularly apt to blemish, if the top is strong.

b) The hock must be wide.

c) *Clean cut.* This is important for the exterior appearance of the hock must furnish a true analysis of the interior. The hock will be covered by a clean skin showing the angularity of the part.

d) The hock will be without blemishes which are always serious on this part and decrease the value of the horse.

e) *Well set.* A vertical line drawn from the point of the buttocks, should fall upon the centre of the hock, cannon, pastern and foot. If the hock is placed much under the body, the limb tires and is exposed to blemishes. If it be placed away from the line, the back is liable to be concave and prevents extension forward of the limb.



P.M.

fig. 30.—rear view of well set legs.

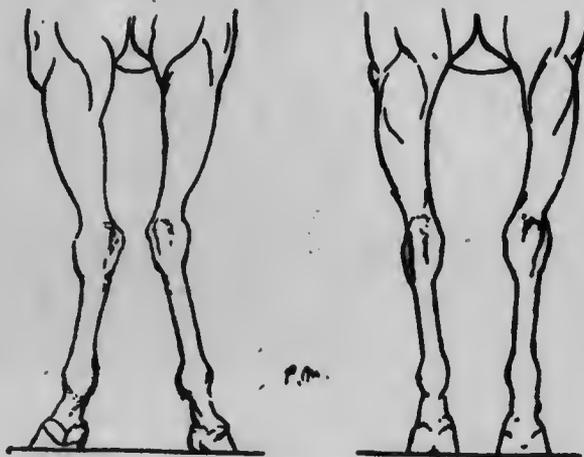


fig. 31.—poorly set-legs.

f) *Good direction.* If the hock is set as aforesaid, the horse will have complete control of his limbs and action will be straight and true.

No doubt, I have indicated too briefly what the different parts of the horse should be.

But a horse of the conformation indicated in this lecture, would be built either for speed, either for strenght. Shall it be strong? Shall it be a fast speedy horse? This will depend upon the texture of its tissues, and of its energy, which is not necessarily nervousness. "One can ascertain the texture of tissues, by the fineness of skin, its suppleness, by the cleanliness and neatness of the angularities" (Cobert); but one can still be easily mistaken. Work alone can ascertain the resistance and texture of tissus. As well as it will ascertain the energy of the animal.

An hour of work, starting heavy loads, will give more advice as to the energy, activity, and trueness to work than would the minutest examination.

The offspring shall be what their parents have been. Therefore select sires and dams that are not only sound and of a good conformation; but that are resistant, actif without being nervous, having proof as to their capacity for speed or strenght.

