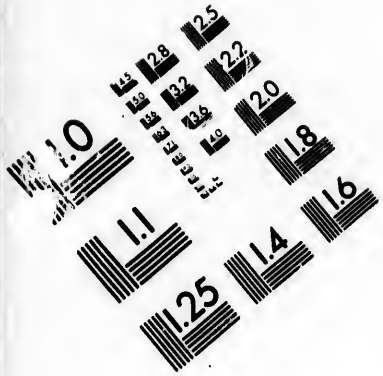

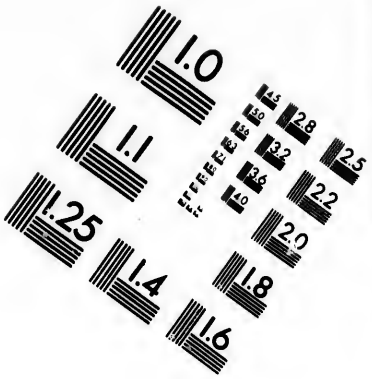

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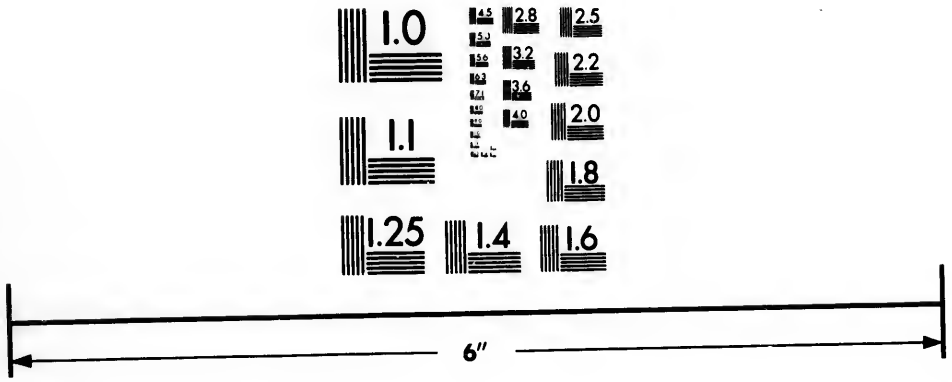

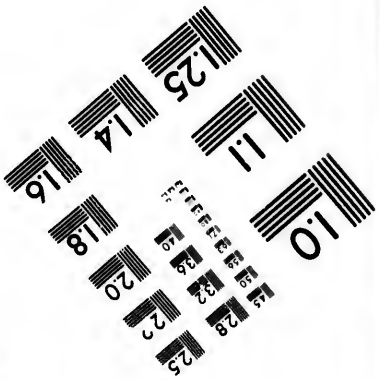

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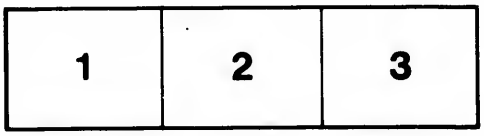

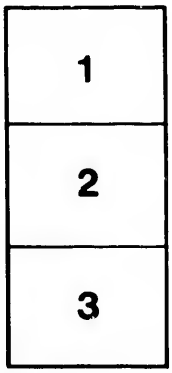

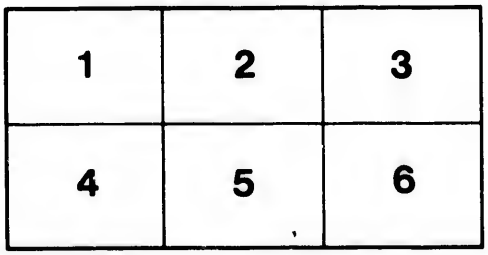

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THE

FARMER'S FRIEND;

CONTAINING

RAREY'S HORSE SECRET

WITH OTHER VALUABLE

RECEIPTS AND INFORMATION.

HAMILTON, C.W.:

PUBLISHED BY PORTER AND SCHNEIDER, JOHN STREET.

1858.

R. R. DONNELLEY, BOOK AND JOB PRINTER, WHITE'S STONE BLOCK, KING STREET, HAMILTON.

INTRODUCTION.

THE object of this little work is to place before the public, in a cheap form, "RAREY'S GREAT HORSE TAMING SECRET," with a number of valuable receipts for the cure of many diseases to which the horse is subjected, in order that every man owning a horse may understand more of that noble animal. It is often the case that this noble creature is shamefully abused, because his owner does not know how properly treat him. In all the brute creation none has yet been found so beneficial and so well adapted to the use of man, for fleetness and laborious purposes, as the horse; from the slow draught of the plough to the swiftness of the deer. For useful and handy purposes he has superseded all others, the ox and ass not excepted; also the camel, except in certain localities, the camel being capable of long endurance without water. The cause of this noble animal, the horse, being so long neglected was owing principally to the fact, that man had only a limited knowledge of his nature, with his supposed inability to control him. This fact alone is ample evidence of his entire superiority over all other animals.

PRACTICAL RESULTS.

MAN, in all his scientific experiments, from the discovery of the most distant planets of our system, by means of the great Herschel telescope, down to the successful communication from ocean to ocean with the velocity of thought, by the Telegraph, has but begun to develope the great field of mystery open before him. Knowledge is still onward, and keeps full pace with time; and as the railroad car outstrips all other land carriages, so does that noble animal, the horse, supersede all others in speed and usefulness.

Although the worth of the horse has been proven in this and other countries, there is still a far greater end to be accomplished in his domestication. As every Christian Church has its different mode of worship, so has each country its different mode of horsemanship. The ancient training of the horse was a mere sham, compared with that of the present day.

The benefit derived from the use of the horse at the present age, is far greater than

when guided by the semi-barbarians of former days. The mode of capturing the horse at that time was the lasso; after being secured and tamed as far as their capabilities reached, he was mounted, and at first led by a footman or servant till he became docile and manageable by his rider. Those in higher circles, or in other words, the more wealthy, sported a saddle made of the skins of the mountain goat, with stirrup leathers of raw hide, to which was attached a round ring made of wood, or a green withe made into a circular hoop. This would be a novel sight compared with the fine trappings of our noble steeds at the present day; and it is still more astonishing, that for ages such a protection for the foot was not known, with the exception of some kind of a moccasin or leather shoe, strapped to the foot.

The pride of some of those nations, and particularly the Arabs, in training their steeds that they might excel, is truly wonderful. I will digress and give you an instance of this emulation among the Arabs.

A Bedouin, named Jabal, possessed a mare of great celebrity. Hassad Pacha, the gov-

ernor of Damascus, wished to buy the animal, and repeatedly made the owner the most liberal offers, which Jabal steadily refused. The Pacha then had recourse to threats, but with no better success. At length, one Gafar, a Bedouin of another tribe, presented himself to the Pacha and asked what he would give the man who would make him master of Jabal's mare? "I will fill his horse's nosebag with gold," replied the Pacha. The result of this interview having gone abroad, Jabal became more watchful than ever, and always secured his mare at night with an iron chain, one end of which was fastened to her hind fetlock, whilst the other, after passing through the tent cloth, was attached to a picket under the felt that served him and his wife for a bed. But one midnight Gafar succeeded in loosing the chain. Just before starting with his prize, he caught up Jabal's lance and poking him with the butt end, cried out, "I am Gafar! I have robbed thee of thy noble mare, and will give you notice in time." This warning was in accordance with the customs of the Desert; for to rob a hostile tribe is considered an honorable exploit, and the man who accomplishes it

is desirous of all the glory that may flow from the deed. Poor Jabal when he heard these words rushed out of the tent and gave the alarm, he mounting his brother's mare, accompanied by some of his tribe, pursued the robber for four hours. The brother's mare was of the same stock as Jabal's, but was not equal to her, nevertheless, he outstripped those of all the other pursurers, and was even on the point of overtaking the robber, when Jabal shouted to him: "Pinch her right ear, and give her a touch of the heel." Gafar did so, and away went the mare like lightning, speedily rendering further pursuit hopeless. The pinch on the ear and the touch with the heel were the secret signs by which Jabal had been used to urge his mare to her utmost speed. Jabal's companions were amazed and indignant at his strange conduct. "O thou father of a jackass!" they cried, "thou hast helped the thief to rob thee of thy jewel." But he silenced their upbraidings by saying: "I would rather lose her than sully her reputation. Would you have me suffer it to be said among the tribes that another mare had proved fleeter than mine? I have at least one

comfort left me,that she never met her match."

Different countries have their different modes of horsemanship, but amongst all of them its first practice was carried on but in a rude and indifferent way, being hardly a stepping stone to the comfort and delight gained from the use the horse at the present day. The polished Greeks, as well as the ruder nations of Northern Africa, for a long while rode without saddle or bridle, guiding their horses with the voice or the hand; or with a light switch, with which they touched the animal on the side of the face to make him turn in the opposite direction. They urged him forward by a touch of the heel, and stopped him by catching him by the muzzle. Bridles and bits were introduced, but many centuries elapsed before anything that could be called a saddle was introduced. Instead of these, cloths, single or padded, and skins of wild beasts, often richly adorned, were placed beneath the rider, but always without stirrups; and it is given as an extraordinary fact, that the Romans, even in the times when luxury was carried to excess amongst them, never desired so simple an expedient for assisting

the horseman to mount: to lessen his fatigue, and aid him in sitting more securely on his seat.

With this short comment on the rise and progress of horsemanship, from its commencement up the present time, I will proceed to give the principles of a new theory of taming wild horses, which is the result of many experiments; and a thorough investigation and trial of different methods of horsemanship now in use.

THE THREE GRAND FEATURES

OF

RAREY'S DISCOVERY.

FOUNDED ON THE CHARACTER OF THAT NOBLE ANIMAL, THE HORSE.

1st.—That he will not offer resistance after he fully comprehends your object in approaching him.

2nd.—That he has but an imperfect knowledge of his strength, and can be tamed with ease by appealing to his intelligence without brute force.

3rd.—That there is no object so frightful but what you may approach him with, if he is thoroughly advised of your intention towards him.

To take these assertions in order: I will first give you some of the reasons why I think he is naturally obedient, and will not offer resistance to anythiag fully comprehended. The horse, though possessed of some faculties superior to man's, being deficient in reasoning powers, has no knowledge of right or wrong, of free will and independent government, and knows not any imposition practiced upon him, however unreasonable this imposition may be. Consequently he cannot come to any decision what he should or should not do, because he has not the reasoning faculties of man to argue the justice of the thing demanded of him. If he had, taking into consideration his superior strength, he would be useless to man as a servant. Give him *mind* in proportion to his strength, and he will demand us the green fields for his inheritance, where he will roam at leisure, denying the right of servitute at all. God has wisely formed his nature so that it can be operated upon by the knowledge of man according to the dictates of his will; and he might well be termed an unconscious, submissive servant. This truth we can see verified in every day experience by the abuse

practiced upon him. Any one who chooses to be cruel can mount the noble steed and run him till he drops with fatigue; or, as is often the case with the more spirited, falls dead beneath his rider. If he had the power to reason, would he not vault and pitch his rider, rather than suffer to be ridden to death? Or would he condescend to carry at all the vain imposter, who, with but equal intellect, was trying to impose on his equal rights and on an equally independent spirit. But, happily for us, he has no consciousness of imposition, no thought of disobedience, except by impulse caused by the violation of the laws of his nature. Consequently, when disobedient, it is the fault of man.

Then we can but come the conclusion, that if a horse is not taken in a way at variance with the laws of his nature, he will do anything that he fully comprehends, without making any offer of resistance.

2nd.—The fact of the horse being unconscious of the amount of his strength, can be proven to the satisfaction of any one. For instance, such remarks as these are common, and perhaps familiar to your recollection. One

person says to another: "If that wild horse there was conscious of the amount of his strength, his owner would have no business with him in that light vehicle; such light reins and harness, if he knew he could snap them asunder in a minute, he would be as free as the air we breathe;" and, "the thorse yonder, that is pawing and fretting to follow the company that is fast leaving him, if he knew his strength he would not remain long fastened to that hitching post so much against his will, by a strap that would no more resist his powerful weight and strength than a cotton thread would a strong man." Yet these facts, made common by every day occurrence, are not thought of as anything wonderful. Like the ignorant man who looks at the different changes of the moon, you look at these things without troubling your mind with the question, "Why are these things so?" What would be the condition of the world if all our minds lay dormant? If men did not think, reason and act, our undisturbed, slumbering intellects would not excel the imbecility of the brute: we would live in chaos, hardly aware of our existence. And yet with all our

activity of mind, we pass by unobserved that which would be wonderful if philosophised and reasoned upon, and with the same inconsistency wonder at that which a little consideration, reason and philosophy would make but a simple affair.

3rd.— He will allow any object, however frightful in appearance, to come around, over or on him, that does not inflict pain.

We know from a natural course of reasoning, that there never has been an effect without cause; and we infer from this that there can be no action in inanimate matter without there being first some cause to produce it. And from this self-evident fact we know there is some cause for every impulse or movement either in mind or matter; and that this law governs ever action or movement of the animal kingdom. Then, according to this theory, there must be some cause before fear can exist; and if fear exists from the effect of imagination, and not from the infliction of real pain, it can be removed by complying with those laws of nature by which he examines an object, and determines upon its innocence or harm. A log or stump may be, in the

imagination of the horse, some great beast about to pounce upon him; but after you take him up to it and let him stand by it a little while, and touch it with his nose, and go through his process of examination he will not care anything more about it. And the same principle and process will have the same effect with any other object, however frightful in appearance, in which there is no harm. Take a boy that has been frightened by a false face, or any other object that he should not comprehend at once, and let him take that face or object in his hands and examine it, and he will care nothing more about it. This is a demonstration of the same principle.

With this introduction to the principles of my theory, I shall next attempt to teach you how to put it into practice, and whatever instructions may follow, you can rely on as having proven practical by my own experiments. And knowing from experience just what obstacles I have met with in handling bad horses, I shall try and anticipate them for you, and assist you in surmounting them, by commencing with the first steps to be taken with the colt, and accompanying you through the whole task of breaking.

OW TO SUCCEED IN GETTING THE COLT FROM PASTURE.

Go to the pasture and walk around the whole herd quietly, and at such a distance as not to cause them to scare and run. Then approach them very slowly, and if they stick up their heads and seem to be frightened, hold on until they become quiet, so as not to make them run before you are close enough to drive them in the direction you want them to go. And when you begin to drive, do not flourish your arms or halloo, but gently follow them off, leaving the direction free for them that you wish them to take. Thus taking advantage of their ignorance, you will be able to get them in the pound as easily as the hunter drives the quails into his net. For if they have always run the pasture uncared for (as many horses do in prairie countries and on large plantations,) there is no reason why they should not be as wild as the sportman's birds, and require the same gentle treatment, if you want to get

them without trouble: for the horse, in his natural state, is as wild as any of the undomesticated animals, though more easily tamed than the most of them.

HOW TO STABLE A COLT WITHOUT TROUBLE.

The next step will be to get the horse into a stable or shed. This should be done as quietly as possible, so as not to excite any suspicion in the horse of any danger befalling him. The best way to do this, is to lead a gentle horse into the stable first and hitch him, then quietly walk around the colt and let him go in of his own accord. It is almost impossible to get men who have never practiced on this principle, to go slow and considerately enough about it. They do not know that in handling a wild horse, above all other things, is that good old adage true, that, "haste makes waste;" that is, waste of time, for the gain of trouble and perplexity.

One wrong move may frighten your horse, and make him think it necessary to escape at all hazards for the safety of his life, and thus make two hours work of a ten minutes job; and this would be all your own fault and entirely unnecessary; for he will not run unless you run after him, and that would not be good policy, unless you know you could out-run him, for you will have to let him stop of his own accord after all. But he will not try to break away unless you attempt to force him into measures. If he does not see the way at once, and is a little fretful about going in, do not undertake to drive him, but give him a little less room outside by gently closing in around him. Do not raise your arms, but let them hang at your side; for you might as well raise a club. The horse has never studied anatomy, and does not know but they will unhinge themselves and fly at him. If he attempts to turn back, encircle him again in the same quiet manner, and he will soon find that you are not going to hurt him; and then you can walk so close around him that he will go into the stable for more room, and to get farther from you. As soon as he is in, remove the quiet horse and shut the door. This will be

his first notion of cofinement—not knowing how to get into such a place nor how to get out of it. That he may take it as quiet as possible, see that the shed is entirely free from dogs, chickens, or anything that would annoy him; then give him a few ears of corn,and let him remain alone fifteeen minutes, until he has examined his apartment, and has become reconciled to his confinement.

TIME TO REFLECT.

And now while your horse is eating those few ears of corn, is the proper time to see that your halter is ready and all right, and to reflect upon the best mode of operations; for, in the horse breaking, it is highly important that you should be governed by some system. And you should know before you attempt to do anything, just what you are going to do, and how you are going to do it. And if you are experienced in the art of taming wild horses, you ought to tell in a few

minutes the length of time it would take you to halter the colt and learn him to lead.

THE KIND OF HALTER.

Never use a rope halter. The cords of the rope are hard and appear to aggravate and excite distrust rather than confidence, but by all means procure a leather halter, made of bridle leather, so it will feel soft and pliable to the touch, and to fit tolerably tight on the head so as not to feel uncomfortable. Faucher, Elwanger, Powell, and numerous others have had their mode of taming horses, but the true theory, we think has at last been discovered, and the great victory achieved for the domestication of the horse by the most simple process, and entirely void of danger to the life and limbs of the animal.

REMARKS ON THE HORSE.

But before we attempt to do anything more with the colt, I will give you some of the characteristics of his nature, that you may better understand his motions. Every one that has ever paid any attention to the horse, has noticed his natural inclination to smell of everything which to him looks new and frightful. This is their strange mode of examining everything. And, when they are frightened at anything, though they look at it sharply, they seem to have no confidence in the optical examination alone, but they must touch it with the nose before they are entirely satisfied; and as soon as this is done all is right.

EXPERIMENT WITH THE ROBE.

If you want to satisfy yourself of this characteristic of the horse, and learn something of

importance concerning the peculiarities of his nature, etc., turn him into the barn yard, or a large stable will do, and then gather up something you know will frighten him: a red blanket, buffalo robe, or something of that kind. Hold it up so that he can see it, he will stick up his head and snort. Then throw it down somewhere in the centre of the lot or barn, and walk off to one side. Watch his motions, and study his nature. If he is frightened at the object, he will not rest until he has touched it with his nose. You will see him begin to walk around the robe and snort, all the time getting closer, as if drawn by some magic spell, until finally he gets within reach of it. He will then very cautiously stretch out his neck as far as he can reach, merely touching it with his nose, as though he thought it was ready to fly at him. But after he has repeated these touches for a few times for the first, (though he has been looking at it all the time), he seems to have an idea what it is. But now he has found, by the sense of feeling, that it is nothing that will do him any harm, he is ready to play with it. And if you watch him closely, you will see him take hold of it with his teeth, and raise it up and pull at it. And, in a few minutes, you cannot see the

same wild look about his eyes, but he stands like a horse biting some familiar stump.

Yet the horse is never so well satisfied when he is about anything that has frightened him as when he is standing with his nose to it. And in nine cases out of ten you will see some of that same wild look about him again as he turns to walk from it. And you will, probably, see him look very suspiciously as he walks away, as though he thought it might come after him yet. And, in all probability, he will have to go back and make another examination before he is satisfied. But he will familiarize himself with it, and if he should run in that lot a few days, the robe that frightened him so much at first, will be no more to him than a familiar stump.

SUPPOSITIONS ON THE SENSE OF SMELLING.

We might very naturally suppose, from the fact of the horse applying his nose to everything new

to him, that he does so for the purpose of smelling these objects. But I believe that it is as much or more for the purpose of feeling, and that he makes use of his nose, or muzzle, (as it is sometimes called,) as we would of our hands; because it is the only organ he can touch or feel anything with, with much susceptibility.

I believe that he invariably makes use of his four senses,—seeing, hearing, smelling and feeling,—in all of his examinations; of which the sense of feeling, perhaps, is the most important. And I think that in the experiment with the robe, his gradual approach and final touch with his nose, was as much for the purpose of feeling as anything else; his sense of smell being so keen that it would not be necessary for him to touch his nose against anything, in order to get the proper scent; for, it is said, the horse can smell a man the distance of a mile. And if the scent of the robe was all that was necessary, he could get that several rods off. But we know from experience, that, if a horse sees and smells a robe a short distance from him, he is very much frightened (unless he is used to it) until he touches or feels

it with his nose; which is a positive proof that feeling is the controlling sense in this case.

PREVAILING OPINION OF HORSEMEN.

It is the prevailing opinion among horsemen generally, that the sense of smell is the governing sense of the horse. And Faucher, as well as others, have, with that view, got up receipts of strong-smelling oils, &c., to tame the horse, sometimes using the chestnut of his leg, which they dry, grind into powder, and blow into his nostrils. Sometimes using the Oil of Rhodium Organum, etc., that are noted for their strong smell. And sometimes they scent the hand with the sweat from under the arm, or blow their breath into his nostrils, etc. etc. All which, so far as the scent goes, have no effect whatever in gentling the horse, or conveying any idea to his mind; though the works that accompany these efforts—handling him, touching him about the nose and head, patting him, as they direct you should, after administering the articles, may have

a very great effect, which they mistake to be the effect of the ingredients used. And Faucher, in his work, entitled "the Arabian Art of Taming Horses," page 17, tell us how to accustom a horse to a robe by administering certain articles to the nose; and goes on to say that these articles must first be applied to the horse's nose, before you attempt to break him, in order to operate successfully.

Now, reader, can you or any one else give one single reason how scent can convey any idea to the horse's mind of what we want him to do? If not, then of course scents of any kind are of no account in taming the unbroken horse. For everything that we get him to do of his own accord, without force, must be accomplished by some means of conveying our ideas to his mind. I say to my horse "go-long!" and he goes, "ho!" and he stops, because those two words, of which he has learned the meaning by the tap of the whip and the pull of the rein that first accompanied them, convey the two ideas to his mind to go and stop.

Faucher, or no one else, can ever learn the horse a single thing by means of scent alone.

How long do you suppose a horse would have to stand and smell a bottle of oil before he would learn to bend his knee and make a bow at your bidding—"go yonder and bring my hat," or "come here and lie down!" Thus you see the absurdity of trying to break or tame the horse by means of receipts for articles to smell, or of medicine to give him, of any kind whatever.

The only science that has ever existed in the world, relative to breaking horses, that has been of any account, is that true method which takes them in their native state, and improves their intelligence.

POWEL'S SYSTEM OF APPROACHING THE COLT.

Before we go farther, I will give you Willis J. Powel's system of approaching a wild colt, as given by him, in a work published in Europe,

about the year 1814, on the "Art of Taming Wild Horses." He says—"a horse is gentled by my secret in from two to sixteen hours." The time I occupy commonly has been from four to six hours. He goes on to say: "Cause your horse to be put in a small yard, stable or room. If in a stable or room it ought to be large, in order to give him some exercise with the halter before you lead him out. If the horse belongs to that class which only appears to fear man, you must introduce yourself into the stable, room or yard where the horse is. He will naturally run from you and frequently turn his head from you; but you must walk about extremely slow and softly, so that he can see you whenever he turns his head towards you, which he never fails to do in a short time, in a quarter or half an hour. I never knew one to be much longer without turning towards me.

"At the very moment that he turns his head, hold out your left hand towards him, and stand perfectly still, keeping your eyes upon the horse, watching his motions, if he makes any. If the horse does not stir for ten or fifteen minutes, advance as slowly as possible, and without making the least noise, always holding out your left hand

without any other ingredient in it than what nature put there."

"He says, "I have made use of certain ingredients before people, such as the sweat under my arm, etc., to disguise the real secret, and many believe that the docility to which the horse arrived in so short a time, was owing to these ingredients; but you see from this explanation that they were of no use whatever. The implicit faith placed in these ingredients, though innocent of themselves, becomes 'faith without work.' And thus men remained always in doubt concerning this secret. If the horse makes the least motion when you advance towards him, stop and remain perfectly still until he is quiet. Remain a few moments in this condition, and then advance again in the same slow and almost imperceptible manner. Take notice, if the horse stirs, stop without changing your position. It is very uncommon for the horse to stir more than once after you begin to advance, yet there are some exceptions. He generally keeps his eye steadfast upon you, until you get near enough to touch him on the forehead. When you are thus near to him, raise slowly, and by degrees, your hand, and let it come in contact with the part just above the

nostrils, as lightly as possible. If the horse flinches, (as many will,) repeat with great rapidity these light strokes upon the forehead, going a little farther up towards his ears by degrees, and descending with the same rapidity, until he will let you handle his forehead all over. Now, let the strokes be repeated with more force over all his forehead, descending by lighter strokes to each side of his head, until you can handle that part with equal facility. Then touch in the same light manner, making your hands play around the lower part of the horse's ears, coming down now and then to his forehead, which may be looked upon as the helm that governs all the rest.

"Having succeeded in handling his ears, advance towards the neck with the same precaution, and in the same manner, observing always to augment the force of the strokes, whenever the horse will permit. Perform the same on both sides of the neck, until he lets you take it in your arms without flinching.

"Proceed in the same progressive manner to the sides, and then to the back of the horse. Every time the horse shows any nervousness, return immediately to the forehead as the true

standard, patting him with your hands, and from thence rapidly to where you had already arrived, always gaining ground a considerable distance farther on every time this happens. The head, ears, neck and body being thus gentled, proceed from the back to the root of the tail.

"This must be managed with dexterity, as a horse is never to be depended on that is skittish about the tail. Let your hand fall lightly and rapidly on that part next the body, a minute or two, and then you will begin to give it a slight pull upward every quarter of a minute. At the same time you continue this handling of him, augment the force of the strokes, as well as the raising of the tail, until you can raise it and handle it with the greatest ease, which commonly happens in a quarter of an hour in most horses; in others almost immediately, and in some much longer. It now remains to handle all his legs, from the tail come back again to the head, handle it well, as likewise the ears, breast, neck, etc., speaking now and then to the horse. Begin by degrees to descend to the legs, always ascending and descending, gaining ground every time you descend until you get to his feet.

"Talk to the horse in Latin, Greek, French, English, Spanish, or in any other language you please; but let him hear the sound of your voice, which at the beginning of the operation is not quite so necessary, but which I have always done in making him lift up his feet. 'Hold up your foot'—'Live la pied,'—'Alza el pie,'—'Aron ton poda,' etc., at the same time lift his foot with your hand. He soon becomes familiar with the sounds, and will hold up his foot at command. Then proceed to the hind feet and go on in the same manner, and in a short time the horse will let you lift them and even take them up in your arms.

"All this operation is no magnetism, no galvanism; it is merely taking away the fear the horse generally has of man, and familiarizing the animal with his master; as the horse doubtless experiences a certain pleasure from this handling he will soon become gentle under it, and show very marked attachment to his keeper.

REMARKS ON POWEL'S TREATMENT HOW TO GOVERN HORSES OF ANY KIND.

These instructions are very good, but not quite sufficient for horses of all kinds, and for haltering and leading the colt; but I have inserted it here because it gives some of the true philosophy of approaching the horse. He speaks only of the kind that fear man.

To those who understand the philosophy of horsemanship, these are the easiest trained, for when we have a horse that is wild and lively, we can train him to our will in a very short time; for they are generally quick to learn, always ready to obey. But there is another kind that are of a stubborn or vicious disposition, and although they are not wild, and do not require taming, in the sense it is generally understood, they are just as ignorant as a wild horse, if not more so, and need to be learned just as much; and in order to have them obey you quickly, it is very necessary that

they should be made to fear their masters; for, in order to obtain perfect obedience from any horse, we must first have him fear us, for our motto is *fear, love, and obey*; and we must have the fulfilment of the first two, before we can expect the latter, and it is by our philosophy of creating fear, love and confidence that we govern to our will every kind of horse whatever.

Then, in order to take horses as we find them, of all kinds, and to train them to our likings, we will always take with us when we go into the the stable to train a colt, a long switch-whip, (whalebone buggy whips are the best,) with a good silk cracker, so as to cut keen, and make a sharp report, which if handled with dexterity, and rightly applied, accompanied with a sharp, fierce word, will be sufficient to enliven the spirits of any horse. With this whip in your right hand, with the lash pointing backward, enter the stable alone. It is a great disadvantage, in training a horse to have any one in the stable with you; you should be entirely alone, so as to have nothing but yourself to attract his attention. If he is wild you will soon see him on the opposite side of the stable from you; and now is the time to use a

little judgment. I would not want, for myself, more than a half or three quarters of an hour to handle any colt, and have him running about in the stable after me; though I would advise a new beginner to take more time, and not be in too much of a hurry. If you have but one colt to gentle, and are not particular about the length of time you spend, and have not had any experience in handling colts, I would advise you to take Mr. Powel's method at first till you gentle him, which he says, takes from two to six hours. But as I want to accomplish the same, and what is much more, to learn the horse to lead in less than one hour, I shall give you a much quicker process of accomplishing the same end. Accordingly when you have entered the stable stand still, let the horse look a minute or two, and as soon as he is settled in one place, approach him slowly, with both arms stationary, your right hanging by your side, holding the whip as directed, and the left arm bent at the elbow, with your hand projecting. As you approach him, go not too much towards his head or croop, so as not to make him move either forward or backward, step a little to the right or left cautiously; this will keep him in one place. As you get near him, draw a little

to his shoulder, and stop a few seconds. If you are in his reach he will turn his head and smell of your hand, not that he has any preference for your hand, but because that is projecting, and is the nearest portion of your body to the horse. This all colts will do, and they will smell of your naked hand just as quick as they will of anything you can put in it, and with just as good effect, however much some men have preached the doctrine of taming horses by giving them the scent of articles from the hand. I have proved that to be a mistake. As soon as he touches his nose to your hand caress him as before directed, always using a light, soft hand, merely touching the horse, always rubbing the way the hair lies, so that your hand will pass along as smoothly as possible. As you stand by his side you may find it more convenient to rub his neck or the side of his head, which will answer the same purpose as rubbing the forehead. Favor every inclination of the horse to touch you with his nose. Always follow each touch or communication of this kind with the most tender and affectionate caresses, accompanied with a kind look, and a pleasant word of some sort such as: 'Ho! my little boy, ho! my little boy, pretty boy, nice lady!' or something

of the kind constantly repeating the same kind, steady tone of voice; and you will know, as well when fear, love or anger prevails, as you know your own feelings; two of which, *fear and anger*, a good horseman *should never feel.*

HOW TO PROCEED IF YOUR HORSE IS OF A STUBBORN DISPOSITION.

If your horse, instead of being wild, seems to be of a stubborn or *mulish* disposition; if he lay back his ears as you approach him, or turn his heels to kick you, he has not that regard or fear of man that he should have, to enable you to handle him quickly and easily; and it might be well to give him a few sharp cuts with the whip, about the legs, pretty close to the body. It will crack keen as it plies around the legs, and the crack of the whip will affect him as much as the stroke; besides one sharp cut about the legs will affect him more than two or three over the back, the skin on the inner part of his legs or about his flanks being thinner, and more tender than on his back. But do not whip him much, just enough

to scare him; it is not because we want to hurt the horse that we whip him, we only do it to scare that bad disposition out of him. But whatever you do, do quickly, sharply and with a good deal of fire, but always without anger. If you go to scare him at all, you must do it at once. Never go into a pitch battle with your horse, and whip him until he is mad, and will fight you; you had better not touch him at all, for you will establish instead of fear and regard feelings of resentment, hatred and ill will. It will do him no good, but injury, to strike a blow, unless you can scare him; but if you succeed in scaring him, you can whip him without making him mad; for fear and anger never exist together in the horse, and as soon as one is visible, you will will find that the other has disappeared. As soon as you have frightened him so that he will stand up straight and pay some attention to you, approach him again and caress him a good deal more than you whipped him, then you will excite the controlling passion of his nature, love and fear, and then he will fear and love you too, and as soon as he learns what to do, will obey quickly.

HOW TO HALTER AND LEAD THE COLT.

As soon as you have gentled the colt a little, take the halter in your left hand and approach him as before, and on the same side that you have gentled him. If he is very timid about your appr[illegible]ing closely to him, you can get up to him quicker by making the whip a part of your arm, and reaching out very gently with the butt end of it; rubbing him lightly on the neck, all the time getting a little closer, shortening the whip by taking it up in your hand, until you finally get close enough to put your hands upon him. If he is inclined to hold his head from you, put the end of the halter strap around his neck, drop your whip, and draw very gently; he will let his neck give, and you can pull his head to you. Then take hold of that part of the halter which buckles over the top of the head, and pass the long side, or that part which goes into the buckle under the neck, grasping it on the opposite side with your right hand, letting the first strap loose —the latter will be sufficient to hold his head to

you. Lower the halter a little, just enough to get his nose into that part which goes around it, then raise it somewhat, and fasten the top buckle, and you will have it all right. The first time you halter a colt, you stand on the left side, pretty well back to his shoulder, only taking hold of that part of the halter that goes around his neck, then with your two hands about his neck, you can hold his head to you and raise the halter on it without making him dodge by putting your hands about his nose. You should have a long rope or strap ready, and as soon as you have the halter on, attach this to it, so that you can let him walk the length of your stable without letting go the strap or without making him pull on the halter; for if you only let him feel the weight of the hand on the halter, and give him more rope when he runs from you, he will never rear, pull or throw himself, yet you will be holding him all the time, and doing more towards gentling him than if you have the power to snub him right up, and hold him to one spot; because he does not know anything about his strength, and if you don't do anything to make him pull, he will never know that he can. In a few minutes you can begin to control him with the halter, then shorten the dis-

tance between yourself and the horse by taking up the strap in your hand.

As soon as he will allow you to hold him by a tolerably short strap, and step up to him without flying back, you can begin to give him some idea about leading. But to do this do not go before and attempt to pull him after you, but commence by pulling him very quietly to one side. He has nothing to brace either side of his neck, and will soon yield to a steady, gradual pull of the halter; and as soon as you have pulled him a step or two to one side, step to him and caress him, and then pull him again, repeating this operation until you can pull him around in every direction, and walk about the stable with him, which you can do in a few minutes, for he will soon think when you have made him step to the right or left a few times, that he is compelled to follow the pull of the halter, not knowing that he has the power to resist your pulling; besides you have handled him so gently, he is not afraid of you, and you always caress him when he comes up to you, and he likes that, and he would just as leave follow you as not. And after he has a few lessons of that kind, if you turn him out in a lot, he will come up to you

every opportunity he gets. You should lead him about in the stable some time before you take him out, opening the door, so that he can see out, leading him up to it and back again and past it. See that there is nothing on the outside to make him jump when you take him out, and as you go out with him, try to make him go very slowly, catching hold of the halter close to the jaw, with your left hand, while the right is resting upon the top of the neck, holding to his mane. After you are out with him a little while, you can lead him about as you please. Don't let any second person come up to him when you first take him out: a stranger taking hold of the halter would frighten and make him run. There should not be even any one standing near him to attract his attention or scare him. If you are alone, and manage him right, it will not require any more force to lead or hold him than it would to manage a broke horse.

HOW TO LEAD A COLT BY THE SIDE OF A BROKE HORSE.

If you want to lead your colt by the side of

another horse, as is often the case, I would advise you to take your horse into the stable, attach a second strap to the colt's halter, and lead your horse up along side of him. Then get on the broke horse and take one strap around his breast under the martingale, [if he has any on,] holding it in your left hand. This will prevent the colt from getting back too far; besides you will have more power to hold him, with the strap pulling against the horse's breast. The other strap take up in your right hand to prevent him from running ahead; then turn him about in the stable, and if the door is wide enough, ride out with him in that position; if not take the broke horse out first and stand his breast up against the door, then lead the colt to the same spot and take the straps as before directed, one on each side of his neck, and then let some one start the colt out, and as the colt comes out, turn your horse to the left, and you will have them all right. This is the best way to lead a colt; you can manage any kind of a colt in this way, without any trouble; for, if he tries to run ahead, or pull back, the two straps will bring the horses facing each other, so that you can very easily follow up his movements without doing much holding, and as soon as he

stops running backward you are right with him, and already to go ahead. After he gets stubborn and does not want to go, you can remove all his stubbornness by riding your horse against his neck, thus compelling him to turn to the right, and as soon as you have turned him about a few times, he will be willing to go along. The next thing after you are through leading him, will be to take him into a stable and hitch him in such a way as not to have him pull on the halter, and as they are often troublesome to get into a stable the first few times, I will give you some instructions about getting him in.

HOW TO LEAD A COLT INTO A STABLE AND HITCH HIM WITHOT HAVING HIM PULL ON THE HALTER.

You should lead the broke horse into the stable first and get the colt, if you can, to follow after him. If he refuses to go, step up to him, taking a little stick or switch in your right hand; then take hold of the halter close to his head with your left hand, at the same time

reaching over his back with your right arm so that you can tap him on the opposite side with your switch, bring him up facing the door, tap him lightly with your switch, reaching as far back with it as you can. This tapping, by being pretty far back, and on the opposite side will drive him ahead, and keep him close to you, then by giving him the right direction with your left hand you can walk into the stable with him. I have walked colts into the stable in this way, in less than a minute, after men had worked at them half an hour, trying to pull them in. If you cannot get him in at first this way, turn him about and walk him around in every direction, until you can get him to the door without pulling at him. Then let him stand a few minutes, keeping his head in the right direction with the halter, and he will go in, in less than ten minutes. Never attempt to pull the colt into the stable; that would make him think at once that it was a dangerous place, and if he was not afraid of it before, he would be then. Besides we don't want him to know anything about pulling on the halter. Colts are often hurt, and sometimes killed by trying to force them into the

stable; and those that attempt to do it that way, go into an up hill business, when a plain smooth road is before them.

If you want to hitch your colt, put him in a tolerably wide stall, which should not be too long, and should be connected by a bar or something of that kind to the partition behind it; so that after the colt is in, he cannot get far enough backward to take a straight backward pull on the halter; the partition behind preventing him from going back, and the halter in the centre checking him every time he turns to the right or left. In a state of this kind you can break every horse to stand hitched by a light strap, any where, without his ever knowing any thing about pulling. But if you have broke your horse to lead, and have learned him the use of the halter (which you should always do before you hitch him to anything) you can tie him in any kind of a stall and give him something to eat to keep him up to his place for a few minutes at first, and there is not one colt in fifty that will pull on his halter.

THE KIND OF BIT, AND HOW TO ACCUSTOM A HORSE TO IT.

You should use a large smooth, snaffle bit, so as not to hurt his mouth, with a bar at each side to prevent the bit from pulling through either way. This you should attach to the head-stall of your bridle and put it on your colt without any reins to it, and let him run loose in a large stable or shed, some time, until he becomes a little used to the bit, and will bear it without trying to get it out of his mouth. It would be well, if convenient, to repeat this several times, before you do anything more with the colt; as soon as he will bear the bit, attach a single rein to it, without any martingale. You should also have a halter on your colt, or a bridle made after the fashion of a halter with a strap to it, so that you can hold or lead him about without pulling on the bit much. He is now ready for the saddle.

HOW TO SADDLE A COLT.

Any one man who has this theory, can put a saddle on the wildest horse that ever grew, without any help, or without scaring him. The first thing will be to tie each stirrup strap into a loose knot and make them short, and prevent the stirrups from flying about and hitting him. Then double up the skirts and take the saddle under your right arm, so as not to frighten him with it as you approach. When you get to him rub him gently a few times with your hand, then raise your saddle very slowly until he can see it, and smell, and feel it with his nose. Then let the skirts loose, and rub it very gently against his neck the way the hair lays, letting him hear the rattle of the skirts as he feels them against him; each time a little farther backward, and finally slip it over his shoulders on to his back. Shake it a little with your hand, and in less than five minutes you can rattle it about over his back as you please, and pull it off and throw it on again, without his paying much attention to it.

As soon as you have accustomed him to the saddle, fasten the girth. Be careful how you do this. It often frightens a colt when he feels the girth binding him and making the saddle fit tight to his back. You should bring up the girth very gently, and not draw it too tight at first, just enough to hold the saddle on. Move him a little, and then girth it as tight as you choose, and he will not mind it.

You should see that the pad of your saddle is all right before you put it on, and that there is nothing to make it hurt him or feel unpleasant to his back. It should not have any loose straps on the back part of it, to flap about and scare him. After you have saddled him in this way, take a switch in your right hand to tap him up with, and walk about in the stable a few times with your right arm over the saddle, taking hold of the reins on each side of his neck, with your right and left hands. Thus marching him about in the stable until you learn him the use of the bridle, and can turn him about in any direction, and stop him by a gentle pull of the rein.

You should always be alone, and have your

colt in some tight stable or shed, the first time you ride him; the loft should be high so that you can sit on his back without endangering your head. You can learn him more in two hours time in a stable of this kind, than you could in two weeks in the common way of breaking colts, out in an open place. If you follow my course of treatment, you need not run any risk, or have any trouble in riding the worst kind of a horse. You take him a step at a time, until you get up a mutual confidence and trust between yourself and horse. First learn him to lead and stand hitched, next acquaint him with the saddle, the use of the bit, and then all that remains, is to get on without scaring him, and you can ride him as well as any horse.

HOW TO MOUNT A COLT.

First gentle him well on both sides; about the saddle, and all over, until he will stand still without holding, and is not afraid to see you anywhere about him.

As soon as you have him thus gentled, get a small block about one foot or eighteen inches in height, and set it down by the side of him, about where you want to stand to mount him; step up on this, raising yourself very gently; horses notice every change of position very closely, and if you were to step up suddenly on the block it would be very apt to scare him; but, by raising yourself gradually on it, he will see you without being frightened, in a position very near the same as when you are on his back.

As soon as he will bear this without alarm, untie the stirrup strap next to you, and put your left foot into the stirrup, and stand square over it, holding your knee against the horse, and your toe out, so as to touch him under the fore shoulder with the toe of your boot. Place your right hand in front of the saddle, and on the opposite side of you. Taking hold of a portion of the mane and reins as they hang loosely over his neck with your left hand, then gradually bear your weight on the stirrup, and on your right hand, until the horse feels your whole weight on the stirrup; repeat this

several times, each time raising yourself a little higher from the block, until he will allow you to raise your leg over his croop, and place yourself in the saddle.

There are three great advantages in having a block to mount from. First, a sudden change of position is very apt to frighten a young horse that has never been handled; he will allow you to walk to him, and stand by his side, without scaring at you, because you have gentled him to that position, but if you were to get down on your hands and knees and crawl towards him, he will be very much frightened, and upon the same principle, he would frighten at your new position if you had the power to hold yourself over his back without touching him. Then the first great advantage of the block is to gradually gentle him to that new position in which he will see you when you ride him.

Secondly, by the process of leaning your weight in the stirrups, and on your hand, you can gradually accustom him to your weight, so as not to frighten him by having him feel it all at once. And in the third place, the

block elevates you so that you will not have to make a spring in order to get on the horse's back, but from it you can gradually raise yourself into the saddle. When you take these precautions there is no horse so wild, but what you can mount him without making him jump. I have tried it on the worst horse that could be found, and I have never failed in any case. When mounting, your horse should always stand without being held. A horse is never well broke when he has to be held with a tight rein while mounting; and a colt is never so safe to mount him, as when you see that assurance of confidence, and absence of fear, which causes him to stand without holding.

HOW TO RIDE THE COLT.

When you want him to start do not touch him on the side with your heel or do anything to frighten him or make him jump. But speak to him kindly, and if he does not start, pull him a little to the left until he starts, then let him walk off slowly with the

reins loose. Walk him around the stable a few times until he gets used to the bit, and you can turn him about in any direction and stop him as you please. It will be well to get off a good many times, until he gets perfectly used to it before you take him out of the stable.

After you have trained him in this way, which should not take more than one or two hours, you can ride him anywhere you choose without ever having him jump or make an effort to throw you.

When you first take him out of the stable be very gentle with him, as he will feel a little more at liberty to jump or run, and be a little easier frightened than he was while in the stable. But after handling him so much in the stable he will be pretty well broke, and you will be able to manage him without trouble or danger.

When you first mount him take a little shorter hold on the left rein, so if anything frightens him you can prevent him from jumping by pulling his head around to you. This

operation of pulling a horse's head around against his side, will prevent any horse from jumping ahead, rearing up or running away. If he is stubborn and will not go, you can make him move by pulling his head around to one side, when whipping would have no effect. And turning him around a few times will make him dizzy, and then by letting him have his head straight and giving him a little touch with the whip he will go along without any trouble.

Never use martingales on a colt when you first ride him; every movement of the head should go right to the bit in the direction in which it is applied to the reins without a martingale to change the direction of the force applied. You can guide the colt much better without them, and learn him the use of the bit in much less time. Besides martingales would prevent you from pulling his head around if he should try to jump.

After your colt has been rode until he is gentle and well accustomed to the bit, you will find it an advantage if he holds his head too

high, or his nose too far out, to put martingales on him.

You should be careful not to ride your colt so at first as to heat, worry or tire him. Get off as soon as you see he is a little fatigued; gentle him and let him rest, this will make him kind to you and prevent him from being stubborn or mad.

THE PROPER WAY TO BIT A COLT.

Farmers often put bitting harness on a colt the first thing they do to him, buckling up the bitting as tight as they can draw it, to make him carry his head high, and then turn him out in a lot to run half a day at a time. This is one of the worst punishments they can inflict on the colt, and very injurious to a young horse that has been used to running in the pasture with his head down. I have seen colts so injured in this way that they never get over it.

A horse should be well accustomed to the

bit before you put on the bitting harness, and when you first bit him you should only rein his head up to that point where he naturally holds it, let that be high or low; he will soon learn that he cannot lower his head, and that raising it a little will loosen the bit in his mouth. This will give him an idea of raising his head to loosen the bit, and then you can draw the bitting a little tighter every time you put it on, and he will still raise his head to loosen it; by this means you will gradually get his head and neck in the position you want him to carry it, and give him a nice and graceful carriage without hurting him, making him mad, or causing his mouth to get sore.

If you put the bitting on very tight the first time, he cannot raise his head enough to loosen it, but will bear on it all the time and paw, sweat, and throw himself. Many horses have been killed falling backward with the bitting on; their heads being drawn up, strike the ground with the whole weight of the body. Horses that have their heads drawn up tightly should not have the bitting on more than fifteen minutes at a time.

HOW TO DRIVE A HORSE THAT IS VERY WILD AND HAS ANY VICIOUS HABITS.

Take up one fore-foot and bend his knee till his hoof is bottom upwards, and nearly touching his body, then slip a loop over his knee, and up until it comes above the pasture joint to keep it up, being careful to draw the loop together between the hoof and pasture joint, with a second strap of some kind to prevent the loop from slipping down and coming off. This will leave the horse standing on three legs; you can now handle him as you wish for it is utterly impossible for him to kick in this position. There is something in this operation of taking up one foot that conquers, and better than anything else that you can do to him. There is no process in the world equal to it to break a kicking horse, for several reasons: First, there is a principle of this kind in the horse, that by conquering one member, you conquer, to a great extent, the whole horse.

You have, perhaps seen men operate on this

principle by sewing a horse's ears together to prevent him from kicking. I once saw a plan in a newspaper to make a bad horse stand to be shod, which was to fasten down one ear. There was no reason given why you should do so; but I tried several times, and thought it had pretty good effect,—though I would not recommend its use, especially sticking his ears together. The only benefit arising from the process is, that by disarranging his ears we draw his attention to them, and he is not apt to resist the shoeing. By tying up one foot we operate on the same principle to a much better effect. When you first fasten up a horse's foot he will sometimes get very mad, and strike with his knee, and try every possible way to get it down; but he cannot do that and he will soon give up.

This will conquer him better than anything you can do, and without any possible danger of hurting himself or you either, for you can tie up his foot and sit down and look at him until he gives up. When you find he is conquered, go to him, let down his foot, rub his leg with your hand, caress him, and let him rest a few minutes; then put it up again. Repeat this a few times, always putting up the same foot, and he will soon learn

to travel on three legs so that you can drive him some distance. As soon as he gets a little used to this way of travelling, put on your harness and hitch him to a sulky. If he is the worst kicking horse that ever raised a foot you need not be afraid of his doing any damage while he has one foot up, for he cannot kick, neither can he run fast enough to do any harm. And if he is the wildest horse that ever had harness on, and has run away every time he has been harnessed, you can now hitch him to a sulky and drive him as you please. If he wants to run you can let him have the lines, and whip too, with perfect safety, for he can go but a slow gait on three legs, and will soon be tired and willing to stop, only hold him enough to guide him in the right direction, and he will soon be tired and willing to stop at the word. Thus you will effectually cure him at once of any further notion of running off. Kicking horses have always been the dread of everybody; you always hear men say, when they speak about a bad horse, "I don't care what he does so he don't kick." This new method is an effectual cure for the worst of all habits. There are plenty of ways by which you can hitch a kicking horse and force him to go, though he kicks all the time; but this don't

have any good effect towards breaking him, for we know that horses kick because they are afraid of what is behind them, and when they kick against it and it hurts them, they will only kick the harder, and this will hurt them still more, and make them remember the scrape much longer, and make it more difficult to persuade them to have any confidence in anything they are dragging behind them ever after.

By this new method you can hitch them to a rattling sulky, plow, waggon, or anything else in the worst shape. They may frighten at first, but cannot do anythir ʒ to hurt themselves, and will soon find that you do not intend to hurt them, and they will not care anything more about it. You can then let down the leg and drive along gently without further trouble. By this new process a bad kicking horse can be taught to go gentle in a few hours time.

ON BALKING.

Horses know nothing about balking, only as

they are brought into it by improper management; and when a horse balks in harness it is generally from some mismanagement, excitement, confusion, or from not knowing how to pull, but seldom from any unwillingness to perform all that he understands. High spirited, free-going horses are the most subject to balking, and only so because drivers do not properly understand how to manage this kind. A free horse in a team may be so anxious to go when he hears the word he will start with a jump, which will not move the load, but give him such a severe jerk upon the shoulder that he will fly back and stop the other horse; the teamster will continue driving without cessation, and by the time he has the slow horse started again, he will find that the free horse has made another jump, and again he flew back and now he has them both badly balked, and so confused that neither of them know what is the matter, or how to start the load. Next will come the slashing and cracking of the whip, and the halooing of the driver, till something is broken or he is through his course of treatment. But what a mistake the driver makes by whipping his horse for this act. Reason and common sense should teach him that the horse was willing and

anxious to go, but did not know how to start the load. And should he whip him for that? If so, he should whip him again for not knowing how to talk. A man that wants to act with any rationality or reason should not fly into a passion, but always think before he strikes. It takes a very steady pressure against the collar to move a load, and you cannot expect him to act with a steady and determined purpose while you are whipping him. There is hardly one horse in five hundred that will pull true from whipping; it is only adding fuel to the fire, and will make them more liable to balk another time. You always see horses that have been balked a few times, turn their heads and look back as soon as they are a little frustrated. This is because they have been whipped and are afraid of what is behind them. This is an invariable rule with balked horses, just as much as it is for them to look around at their sides when they have the bots; in either case they are deserving of the same sympathy and the same kind of rational treatment.

When your horse balks or is a little excited, or he wants to start quickly, or looks around and don't want to go, there is something wrong, and

he needs kind treatment immediately. Caress him kindly, and, if he don't understand at once what you want him to do, he will not be so much excited as to jump and break things, and do every thing wrong through fear. As long as you are calm, and can keep down excitement of the horse, there are ten chances to have him understand you, where there would not be one under harsh treatment, and then the little *flare up* would not carry with it any unfavorable recollections, and he would soon forget all about it, and learn to pull true. Almost every wrong act the horse commits is from mismanagement, fear or excitement; one harsh word will so excite a nervous horse as to increase his pulse ten beats in a minute.

When we remember that we are dealing with dumb brutes, and reflect how difficult it must be for them to understand our motions, signs and language, we should never get out of patience with them because they don't understand us, or wonder at their doing things wrong. With all our intellect, if we were placed in the horse's situation, it would be difficult for us to understand the driving of some foreigner, of foreign ways and foreign language. We should always recollect

that our ways and language are just as foreign and unknown to the horse as any language in the world is to us, and should try to practice what we could understand, were we the horse, endeavoring by some simple means to work on his understanding rather than on the different parts of his body. All balked horses can be started true and steady in a few minutes' time; they are willing to pull as soon as they know how, and I never yet found a balked horse that I could not teach him to start his load in fifteen, and often less than three minutes' time.

Almost any team when first balked, will start kindly if you let them stand five or ten minutes, as though there was nothing wrong, and then speak to them with a steady voice, and turn them a little to the right or left so as to get them both in motion before they feel the pinch of the load. But if you want to start a team that you are not driving yourself, that has been balked, fooled and whipped for some time, go to them and hang the lines on their hames, or fasten them to the wagon, so that they will be perfectly loose, make the driver and spectators (if there are any) stand off some distance to one side, so as not to attract the attention of the horses; unloose their check

reins, so that they can get their heads down if they choose; let them stand a few minutes in this condition, until you can see they are a little composed. While they are standing you should be about their heads gentling them; it will make them a little more kind, and the spectators will think you are doing something that they do not understand, and will not learn the secret. When you have them ready to start, stand before them, and as you seldom have but one balky horse in a team, get as near in front of him as you can, and if he is too fast for the other horse, let his nose come against your breast; this will keep him steady, for he will go slow rather than run on you; turn them gently to the right, with wagon; have it stand in a favorable position for starting out, letting them pull on the traces, as far as the tongue will let them go, stop them with a kind word, gentle them a little, and then turn them back to the left, by the same process. You will have them under your control by this time, and as you turn them again to the right, steady them in the collar, and you can take them where you please.

There is a quicker process that will generally start a balky horse, but not so sure. Stand him

a little ahead, so that his shoulder will be against the collar, and then take up one of his fore feet in your hand, and let the driver start them, and when the weight comes against his shoulders, he will try to stop; then let him have his foot and he will go right along. If you want to break a horse from balking that has long been in that habit, you ought to set apart a day for that purpurpose. Put him by the side of some steady horse, have check lines on them; tie up all the traces, and straps, so that there will be nothing to excite them; do not rein them in, but let them have their heads loose. Walk them about together for some time as slowly and lazily as possible; stop often and go up to the balky horse and gentle him, but keep him just as quiet as you can. He will soon learn to start off at the word, and stop whenever you tell him.

As soon as he performs right, hitch him to an empty waggon. It would be well to shorten the stay chain behind the steady horse, so that if it is necessary he can take the weight of the waggon the first time you start them. Do not drive but a few rods at first; watch your balky horse closely and if you see that he is getting excited, stop him

before he stops of his own accord, caress him a little, and then start again. As soon as they go well, drive them over a small hill a few times, and then over a large one, occasionally adding a little load. This process will make any horse true to pull.

TO BREAK A HORSE TO HARNESS.

Take him in a tight stable, as you did to ride him, take the harness and go through the same process that you did with the saddle until you get him familiar with them, so you can put them on his back, and rattle them about without his caring for them. As soon as he will bear this, put on the lines, caress him as you draw them over him, and drive him about in the stable until he will bear them over his hips. The lines are a great aggravation to some colts, and often frighten them as much as if you were to raise a whip over them. As soon as he is familiar with the harness and lines, take him out and put him by the side of a gentle

horse, and go through the same process that you did with the balking horse. Always use a bridle without blinds when you are breaking a horse to harness.

HOW TO HITCH A HORSE IN A SULKEY.

Lead him to and around it; let him look at it, touch it with his nose, and stand by it until he does not care for it; then pull the shafts a little to the left, and stand your horse in front of the off wheel. Let some one stand on the right side of the horse, and hold him by the bit, while you stand on the left side, facing the sulkey. This will keep him straight. Run your left hand back and let it rest on his hip, and lay hold of the shafts with your right, bringing them up very gently to the left hand, which still remains stationary. Do not let anything but your arm touch his back, and as soon as you have the shafts square over him, let the person on the opposite side take hold of one of them, and lower them very gently to the shaft bearers. Be very slow and deliberate about hitching; the

longer time you take the better as a general thing. When you have the shafts placed, shake them lightly, so that he will feel them against each side. As soon as he will bear them without scaring, fasten your traces, &c., and start him along slowly. Let one man lead the horse, to keep him gentle, while the other gradually works back with the lines till he can get behind and drive him. After you have driven him in this way for a short distance, you can get into the sulkey and all will go right. It is very important to have your horse go gently when you first hitch him. After you have walked him awhile there is not half so much danger of him scaring. Men do very wrong to jump up behind a horse and drive him, as soon as they have him hitched. There are too many things for him to comprehend all at once. The shafts, lines, harness, and rattling of the sulky, all tend to scare him, and he must be made familiar by degrees. If your horse is very wild, I would advise you to put up one foot the first time you drive him.

HOW TO MAKE A HORSE LIE DOWN.

Every thing we want to learn a horse, must be commenced in some way to give him an idea of what you want him to do, and then be repeated until he learns it perfectly. To make a horse lie down, bend his left fore leg, and slip a loop over it so that he cannot get it down. Then put a circingle around his body, and fasten one end of a long strap around the other fore leg, just above the hoof. Put the other end under the circingle, so as to keep the strap in the right direction; take a short hold of it with your right hand, stand on the left side of the horse, grasp the bit in your left hand, pull steadily on the strap with your right; bear against his shoulder till you cause him to move. As soon as he lifts his weight, your pulling will raise the other foot, and he will have to come to his knees. Keep the strap tight in your hand, so that he cannot straighten his leg if he raises up. Hold him in this position, and turn his head towards you; bear against his side with your shoulder, not hard, but with a steady, equal pressure, and in about ten

minutes he will lie down. As soon as he lies down he will be completely conquered, and you can handle him as you please. Take off the straps and straighten out his legs; rub him lightly about the face and neck with your hand the way the hair lays, handle all his feet, and after he has lain ten or twenty minutes, let him up again. After resting him a short time, make him lie down as before. Repeat the operation three or four times, which will be sufficient for one lesson. Give him two or three lessons a day, and when you have given him four lessons, he will lie down by taking hold of one foot. As soon as he is well broken to lie down in this way, tap him on the opposite leg with a stick when you take hold of his foot, and in a few days he will lie down from the motion of the stick.

HOW TO MAKE A HORSE FOLLOW YOU.

Turn him out into a large stable or shed, where there is no chance to get out, with a halter and bridle on. Go to him and gentle him a little, take hold of his halter and turn him towards you, at the

same time touching him lightly over the hips with a long whip. Lead him the length of the stable, rubbing him on the neck, saying in a steady tone of voice as you lead him, 'come along, my boy,' or use his own name instead of boy, if you choose. Every time you turn touch him slightly with the whip, to make him step up close to you, and then caress him with your hand. He will soon learn to hurry up to escape the whip and be caressed, and you can make him follow you around without taking hold of the halter. If he should stop and turn from you, give him a few sharp cuts about the hind legs, and he will soon turn his head towards you, when you must always caress him. A few lessons of this kind will make him run after you, when he sees the motion of the whip—in twenty or thirty minutes he will follow you about the stable. After you have given him two or three lessons in the stable, take him into a small lot and train him; and from thence you can take him into the road and make him follow you anywhere, and run after you.

HOW TO MAKE A HORSE STAND WITHOUT HOLDING HIM.

After you have well broken him to follow you, stand him in the centre of the stable—begin at his head to caress him, gradually work backwards. If he moves give him a cut with the whip and put him back to the same spot from which he started. If he stands, caress him as before, and continue gentling him in this way, until you can get round him without making him move. Keep walking around him, increasing your pace, and only touching him occasionally. Enlarge your circle as you walk around, and if he then moves give him another cut of the whip and put him back to his place. If he stands, go to him frequently and caress him, and then walk around him again. Do not keep him in one position too long at a time, but make him come to you occasionally and follow you around in the stable. Then stand him in another place, and proceed as before. You should not train him more than half an hour at a time.

POINTS OF A GOOD HORSE.

A writer in Emery's Journal of Agriculture makes some very sensible remarks on the prominent traits of a good horse, which may be of practical use to the inexperienced.

Of the different races of horses, it is unnecessary for me to speak in this article; all that I shall do will be to mention some of the points by which a good horse may be distinguished. They are, the nostril large and thin; the face slightly dished; the eye large and prominent, mild and clear; the brow full and smooth.

If a horse contracts the eyes in gazing at an object, be sure they are defective—and here let me say, that more horses have defective eyes than any other unsoundness to which they are subject; owing, in my opinion, to their being kept in dark unventilated stables.

But to resume: The forehead broad, and without extraordinary prominence, the ears thin,

moderately long, well pricked and full of intelligent motion.

The temperament of a horse may be told after a little practice, by observing the flexions of the ears; for instance, if a horse be inteiligent and docile, his ears will move with an easy graceful motion, attentive to what is going on about him; if, on the contrary, he be fractious and timid, they will be moved with a peculiar jerking motion, and so of other excellencies or failings. A horse with thick slouching ears is but a heavy, sullen brute. The neck should rise, arching to the head, light and fine, where it joins, swelling gradually down to where it enters the body, forming the withers thin and high; the breast deep, but rounding towards the legs, full and rather broad than narrow; the breast bone prominent; the shoulders oblique and broad at the base; the fore-arm long, swelling out very muscular near the body, both on the inner side as well as out; the girth deep; the barrel round and long; the back short; the loins rounded, muscular, and rising gradually from the point of the shoulder to between the hips; (this is what gives the Morgan horse the appearance of being hollow-backed,

although his back is as straight as that of any good horse;) the hips wide, with the ribs coming close up; the rump sloping, (not flat;) the tail not too long, but covered with fine, long hair, rather heavy, while the mane should be rather light. The quurters, i. e., from the hip to the end of the rump, long and rather wide; the thighs muscular and full, the ham-string enters it soon after leaving the hock. Note, the chief propelling power lies in the hind leg and its attendant parts, consequently it is essential that they should be particularly good, the hocks large, angular and bony; the legs flat and wide, with the cords firm, elastic and well developed; the pasturns fine and springy, not too straight, but oblique, corresponding with the shoulder; the hoofs of a dark color, tough, rather large, smooth and open, i. e., forming nearly a semi-circle from heel to heel, and concave in the sole.

A horse that answers to these points will have wind, bottom, speed, and nearly everything that goes to constitute the visible make-up of the most noble animal ever subjected by man.

A SMALL HORSE.

The arguments may be all in favor of great size, but the facts are all the other way. Large horses are more liable to stumble and to be lame than those of middle size. They are clumsy and cannot fill themselves so quick.

Overgrown animals of all descriptions are less useful in most kinds of business; and such questions, we suggest to the lovers of over-grown animals, as the following:—The largest of any class are an unnatural growth.

They have risen above the usual mark, and it costs more to keep them in that position than it would were they more on a level with their species.

"Follow nature" is a rule not to be forgotten by farmers. Large cows are not the best for milk. Large oxen are not the best for travelling. Large hogs are not the hogs that fatten best, and large hens are not best to lay eggs.

Extremes are to be avoided. We want well formed animals rather than such as have large bones.

Odd as it may seem to the theorist, short legged animals almost invariably prove to be better travellers than long. Short-legged soldiers are better on a march, and the officers say they endure hardships longer than those of longer limbs.

On choosing a horse, take care by all means that his hind legs are short. If they are long and split apart like a pair of dividers, never enquire the price from the horse-dealer.

Horses that are snug built are not always fast travellers. It is no easy matter to select a horse that is perfect in all points. Snug and tough horses are not fast on the road. The fastest trotters are always made for very hard service.

PROCESS OF TEETHING.

The posterior or lower jaw may be considered as forming the floor of the mouth. The body, or lower part of it, contains the under cutting teeth and the tushes, and at the sides are two flat pieces of bone containing the grinders. The joint which connects the lower to the upper jaw, unlike that in carniverous animals, is so constructed, that it not only admits of the simple motion of a hinge, but of a lateral or grinding motion, necessary to break down vegetable fibre, and fit it for the stomach.

The space beneath, between the jaw-bones, called the *channel*, is of considerable consequence. It may be a little too wide, and then the face will have a clumsy appearance: but if it is too narrow, the horse will never be able to bend his head freely and gracefully; he will be always pulling or boring upon the hand, nor can he possibly be well reined in.

The jaws contain the teeth, which are the mill-stones employed in comminuting the food. The mouth of the horse at five years old contains forty teeth, viz: six nippers or cutting-teeth in front, a tush on each side, and six molars, or grinding-teeth, above and below. The gums are singularly compact, that it may not be wounded by the hard or sharp particles of the food, and almost devoid of feeling, for the same purpose.

Seven or eight months before the foal is born, the germs or beginnings of the teeth are visible in the cavities of the jaws. At the time of birth, the first and second grinders have appeared, large compared with the size of the jaw, and seemingly filling it. In the course of seven or eight days the two central nippers are seen. They likewise appear to be large, and to fill the front of the mouth; although they will afterwards be found to be small, compared with the permanent teeth that follow. In the course of the first month the third grinder appears above and below, and, not long after, and generally before six weeks have expired, another incisor above and below will be seen on each side of the two first, which have now considerably grown, but not attained their perfect height.

At two months, the central nippers will have reached their natural level, and between the second and third month the second pair will have overtaken them. They will then begin to wear away a little, and the outer edge, which was at first somewhat raised and sharp, is brought to a level with the inner one, and so the mouth continues until some time between the sixth and ninth month, when another nipper begins to appear on each side of the two first, making six above and below, and completing the colt's mouth; after which the only observable difference, until between the second and third year, is in the wear of these teeth.

The teeth are covered with a polished and exceedingly hard substance, called the enamel. It spreads over that portion of the teeth which appears above the gum, and not only so, but as they are to be so much employed in nipping the grass, and gathering up the animal's food, and in such employment even this hard substance must be gradually worn away, a portion of it, as it passes over the upper surface of the teeth, is bent inward, and is sunk into the body of the teeth, and forms a little pit in them. The inside and bottom

of this pit being blackened by the food, constitutes the mark of the teeth, by the gradual disappearance of which, in consequence of the wearing down of the edge, we are enabled, for several years, to judge of the age of the animal.

The colt's nipping teeth are rounded in front, somewhat hollow towards the mouth, and present at first a cutting suaface, with the other edge rising in a slanting direction above the inner edge. This, however, soon begins to wear down until both surfaces are level, and the *mark*, which was originally long and narrow, becomes shorter, and wider, and fainter. At six months the four nippers are beginning to wear to a level. The four middle teeth are almost level, and the corner ones becoming so. The mark in the two middle teeth is wide and faint; in the two next teeth it is darker, and longer, and narrower; and in the corner teeth it is darkest, and longest, and narrowest.

The back teeth, or grinders, will not guide us far in ascertaining the age of the animal, for we cannot easily inspect them; but there are some interesting particulars connected with them. The foal is born with two grinders in each jaw, above and below; or they appear within three or four

days after the birth. Before the expiration of a month they are succeeded by a third, more backward. The crowns of the grinders are entirely covered with enamel on the top and sides, but attrition soon wears it away from the top, and there remains a compound surface of alternate layers of crusted petraser, enamel, and ivory, which are employed in grinding down the hardest portion of the food. Nature has, therefore, made an additional provision for their strength and endurance.

At the completion of the first year, a fourth grinder usually comes up, and the yearling has then, or soon afterwards, six nippers and four grinders, above and below, in each jaw, which, with the alteration in the appearance of the nippers, that we have just described, will enable us to calculate nearly the age of the foal, subject to some variations arising from the period of weaning and the nature of the food.

At the age of one year and a-half, the mark in the central nippers will be much shorter and fainter; that in the other two pairs will have undergone an evident change, and all the nippers will be flat.

About this period a fifth grinder will appear, and now, likewise, will commence another process. The first teeth are adapted to the size and wants of the young animal. They are sufficiently large to occupy and fill the colt's jaws; but when these bones have expanded with the increasing growth of the animal, the teeth are separated too far from each other to be useful, and another and a larger set is required. The second teeth then begin to push up from below, and the fangs of the first are absorbed, until the former approach the surface of the gum, when they drop out. Where the temporary teeth do not rise immediately under the milk teeth but by their sides, the latter, being pressed sideway, are absorbed throughout their whole length. They grow narrow, are pushed out of place, and cause inconvenience to the gums, and sometimes the cheek. They are then called *wolf's-teeth*, and they should be extracted.*

* Note by Mr. Spooner.—Although irregularities of the teeth sometimes occur, as mentioned in the text, yet the wolves'-teeth are generally two very small supplementary teeth, appearing in front of the molar teeth; and, though supposed to have an injurious effect on the eyes, we have rarely, if ever, found that they produce

The teeth which first appeared are first renewed, and therefore the front or first grinder is changed at the age of two years.

During the period between the falling out of the central milk nippers, and the coming up of the permanent ones, the colt, having a broken mouth, may find some difficulty in grazing. If he should fall away considerably, he should be fed with mashes and corn or cut feed.

At three years old, the central teeth are larger than the others, with two grooves in the outer convex surface, and the mark is long, narrow, deep and black. Not having yet attained their full growth, they are rather lower than the others. The mark in the two next nippers is nearly worn out, and it is wearing away in the corner nippers. Is it possible to give this mouth to an early two-years-old? The ages of all horses used to be reckoned from

any injurious effect, either on the eyes or the mouth, and, consequently, it is useless to interfere with them. When, however, the teeth grow irregularly, the permanent ones appearing by the side of the temporary, the latter should be removed.

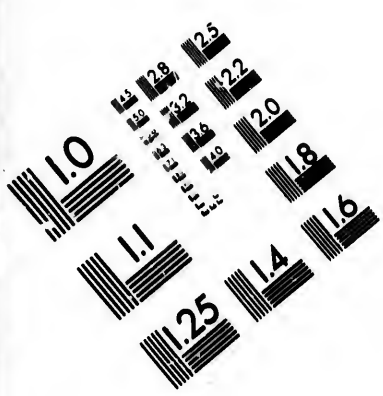
May, but some are foaled even so early as January, and, being actually four months over the two years, if they have been well nursed and fed, and are strong and large, they may, with the inexperiencced, have an additional year put upon them, the central nippers are punched or drawn out, and the others appear three or four months earlier than they otherwise would. In the natural process they could only rise by long pressing upon, and causing the absorption of, the first set. But opposition from the first set being removed, it is easy to imagine that their progress will be more rapid. Three or four months will be gained in the appearance of the teeth, and these three or four months may enable the breeder to term him a late colt of a preceding year. To him, however, who is accustomed to horses, the general form of the animal—the little development of the fore-hand—the continuance of the mark on the next pair of nippers—its more evident existence in the corner ones—some enlargement or irregularity about the gums, from the violence used in forcing out the teeth—the small growth of the first and fifth grinders, and the non-appearance of

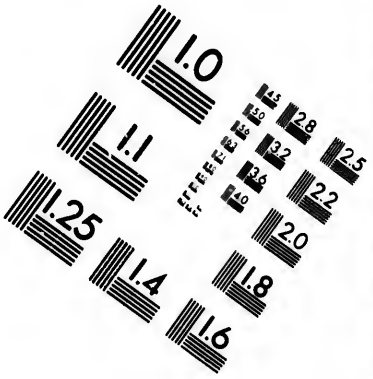
the sixth grinder, which, if it is not through the gum at three years old, is swelling under it, and preparing to get through—any or all these circumstances, carefully attended to, will be a sufficient security against deception.

A horse at three years old ought to have the central permanent nippers growing, the other two pairs wasting, six grinders in each jaw, above and below, the first and fifth level with the others, and the sixth protruding. The sharp edge of the new incisors will be very evident when compared with the neighboring teeth.

As the permanent nippers wear and continue to grow, a narrower portion of the cone-shaped tooth is exposed to the attrition, and they look as if they had been compressed, but it is not so. The mark, of course, gradually disappears as the pit is worn away.

At three years and a-half, or between that and four, the next pair of nippers will be changed, and the mouth at that time cannot be mistaken. The central nippers will have attained nearly their full growth. A vacuity





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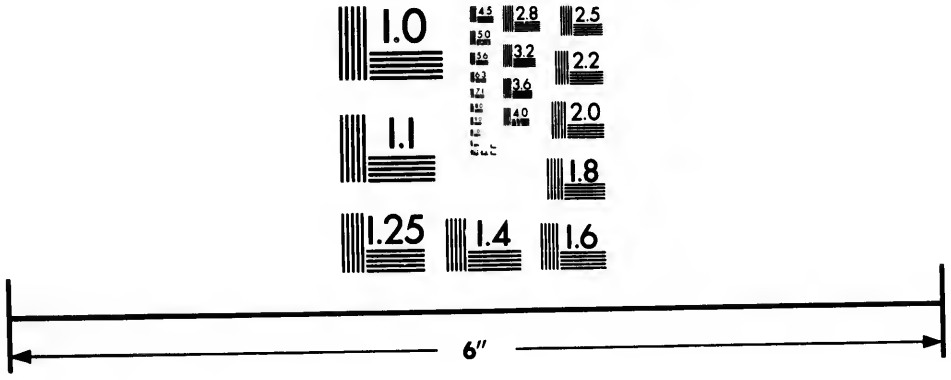

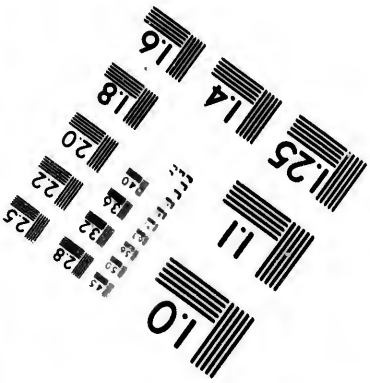

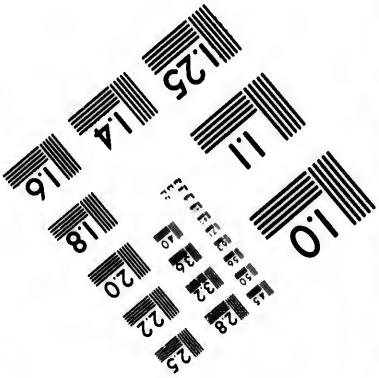

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will be left where the second stood, or they will begin to peep above the gum, and the corner ones will be diminished in breadth, worn down and the mark becoming small and faint. At this period, likewise, the second pair of grinders will be shed. Previously to this may be the attempt of the dealer to give to his three-year-old an additional year, but the fraud will be detected by an examination similar to that which has been already described.

At four years, the central nippers will be fully developed; the sharp edge somewhat worn off, and the mark shorter, wider and fainter. The next pair will be up, but they will be small, with the mark deep and extending quite across them. The corner nippers will be larger than the inside ones, yet smaller than they were, and flat, and the mark nearly effaced. The sixth grinder will have risen to a level with the others, and the tushes will begin to appear

Now, more than at any other time, will the dealer be anxious to put an additional year upon the animal, for the difference between a

four-years-old colt, and a five-years-old horse, in strength, utility, and value, is very great; but the want of wear in the other nippers, the small size of the corner ones, the little growth of the tush, the smallness of the second grinder, the low fore-hand, the legginess of the colt and the thickness and little depth of the mouth, will, to the man of common experience among horses, at once detect the cheat.

The tushes are four in number, two in each jaw, situated between the nippers and the grinders, much nearer to the former than the latter, and nearer in the lower jaw than in the upper, but this distance increasing in both jaws with the age. It is conical, protrudes about an inch from the gum, and is sharp-pointed and curved. Mares have the rudiments of them, and they usually appear externally in old age.

The appearance of the tush in the horse may vary from four years to four years and six months. It can only be accelerated a few weeks by cutting the gum over it.

At four years and a half, or between that

and five, the last important change takes place in the mouth of the horse. The corner nippers are shed, and the permanent ones begin to appear. The central nippers are considerably worn, and the next pair are beginning to show marks of usage. The tush has now protruded, and is generally a full half inch in height; externally it has a rounded prominence, with a groove on either side, and it is evidently hollowed within. The readers need not to be told that after the rising of the corner nipper, the animal changes its name— the colt becomes a horse, and the filly a mare.

At five years the horse's mouth is almost perfect. The corner nippers are quite up, with the long deep mark irregular on the inside and the other nippers bearing evident tokens of increasing wearing. The tush is much grown—the grooves have almost or entirely disappeared, and the outer surface is regularly convex. It is still as concave within, and with the edge nearly as sharp as it was six months before. The sixth molar is quite up, and the third molar is wanting. This last circumstance, if the general appear-

ance of the animal, and particularly his forehead, and the wearing of the centre nippers, and the growth and shape of the tushes, are likewise carefully attended to will prevent deception, if a late four-years-old is attempted to be substituted for a five. The nippers may be brought up a few months before their time, and the tushes a few weeks; but the grinder is with difficulty displaced. The three last grinders and the tushes are never shed.

At six years, the *mark* on the central nippers is worn out. There will still be a difference of color in the centre of the tooth. The cement filling up the hole, made by the dipping in of the enamel, will present a browner hue than the other part of the tooth, and it will be evidently surrounded by an edge of enamel, and there will even remain a little depression, in the centre, and also a depression round the case of enamel: but the deep hole in the centre of the teeth, with the blackened surface which it presents, and the elevated edge of enamel, will have disappeared. Persons not much accustomed to horses have been puzzled here. They expected to find a plain surface

of a uniform color, and knew not what conclusion to draw when there was both discoloration and irregularity.

In the next incisors the mark is shorter, broader and fainter; and in the corner of the teeth the edges of the enamel are more regular and the surface is evidently worn. The tush has attained its full growth, being nearly or quite an inch in length; convex outward, concave within; tending to a point, and the extremity somewhat curved. The third grinder is fairly up; and all the grinders are level.

The horse may now be said to have a perfect mouth. All the teeth are produced, fully grown, and have hitherto sustained no material injury. During these important changes of the teeth, the animal has suffered less than could be supposed possible. In children, the period of teething is fraught with danger. Dogs are subject to convulsions, and hundreds of them die, from the irritation caused by the cutting or shedding of their teeth; but the horse appears to feel little inconvenience. The gums and palate are occasionally some-

what hot and swollen; but the slightest scarification will remove this. The teeth of the horse are more necessary to him than those of the other animals are to them. The child may be fed, and the dog will bolt his food; but that of the horse must be well ground down, or the nutriment cannot be extracted from it.

At seven years, the mark, in the way in which we have described it, is worn out in the four central nippers, and fast wearing away in the corner teeth; the tush also is beginning to be altered. It is rounded at the point; rounded at the edges; still round without; and beginning to get round inside.

At eight years old, the tush is rounder in every way; the mark is gone from all the bottom nippers, and it may almost be said to be out of the mouth. There is nothing remaining in the bottom nippers that can afterwards clearly show the age of the horse, or justify the most experienced examiner in giving a positive opinion.

Dishonest dealers have been said to resort

to a method of prolonging the mark in the lower nippers. It is called *bishoping*, from the name of the scoundrel who invented it. The horse of eight or nine years old, is thrown, and with an engraver's tool a hole is dug in the now almost plain surface of the corner teeth, and in shape and depth resembling the mark in a seven-years-old horse. The hole is then burned with a heated iron, and a permanent black stain is left. The next pair of nippers are sometimes lightly touched. An ignorant man would be very easily imposed on by this trick; but the irregular appearance of the cavity—the diffusion of the black stain around the tushes, the sharpened edges and concave inner surface of which can never be given again—the marks on the upper nippers, together with the general conformation of the horse, can never deceive the careful examiner.

Horsemen, after the animal is eight years old, are accustomed to look to the nippers in the upper jaw, and some conclusion has been drawn from the appearances which they present. It cannot be doubted that the mark remains in them for

some years after it has been obliterated from the nippers in the lower jaw.

There are various opinions as to the intervals between the disappearance of the marks from the different cutting-teeth in the upper jaw. Some have averaged it at two years, and others at one. The author is inclined to adopt the latter opinion, and then the age will be thus determined: at nine years, the mark will be worn out from the middle nippers—from the next pair at ten, and from all the upper nippers at eleven. During these periods, the tush is likewise undergoing a manifest change—it is blunter, shorter, and rounder. In what degree this takes place in the different periods, long and most favorable opportunities for observation can alone enable the horseman to decide.

The alteration in the form of the tushes is frequently uncertain. It will sometimes be blunt at eight, and at others, remain pointed at eighteen.

After eleven, and until the horse is very old, the age may be guessed at, with some degree of confidence, from the shape of the upper surface or extremity of the nippers. At eight, they are all

oval, the length of the oval running across from tooth to tooth; but as the horse gets older, the teeth diminish in size—and this commencing in their width, and not their thickness. They become a little apart from each other, and their surfaces become round instead of oval. At nine, the centre nippers are evidently so; at ten, the others begin to have the oval shortened. At eleven, the second pair of nippers are quite rounded; and at thirteen, the corner ones have that appearance. At fourteen, the faces of the central nippers become somewhat triangular. At seventeen, they are all so. At nineteen, the angles begin to wear off, and the central teeth are again oval, but in a reversed direction, viz: from outward, inward; and at twenty-one, they all wear this form.

It would of course be folly to expect anything like certainty in an opinion of the exact age of an old horse, drawn from the above indications. Stabled horses have the marks sooner worn out than those that are at grass, and crib-biters still sooner. At nine or ten, the bars of the mouth become less prominent, and their regular diminution will designate increasing age. At eleven or twelve, the lower nippers change their orignal

upright direction, and project forward or horizontally, and become of a yellow color.

The general indications of old age, independent of the teeth, are deepening of the hollows over the eyes; gray hairs, and particularly over the eyes and about the muzzle; thinness and hanging down of the lips; sharpness of the withers; sinking of the back; lengthening of the quarters; and the disappearance of windgalls, spavins, and tumors of every kind.

Horses, kindly and not prematurely used, sometimes live to between thirty-five and forty years of age; and Mr. Percivall gives an account of a large horse that died in his sixty-second year.

THE HORSE.

The noblest conquest which was ever made by man is that of this spirited and haughty animal, which shares with him the fatigues of war and the glory of the combat. Equally intrepid as his master, the horse sees the danger, and braves it; inspired at the clash of arms, he loves it, he seeks it, and is animated with the same ardour. He feels pleasure also in the chase, in tournaments, in the course; he is all fire, but equally tractable as courageous; does not give way to his impetuosity, and knows how to check his inclinations; he not only submits to the arm which guides him, but even seems to consult the desires of his rider; and, always obedient to the impressions which he receives from him, presses on, moves gently, or stops, and only acts as his rider pleases. The horse is a creature which renounces his being, to exist only by the will of another, which he knows how to anticipate, and even express, and execute by the promptitude and exactness of his movements; he feels as much as we desire, does only what we wish, giving himself up without reserve, and refuses nothing, makes use of

all his strength, exerts himself beyond it, and even dies the better to obey us.

Such is the horse, whose natural qualities art has improved. His education commences with the loss of his liberty, and by constraint it is finished. The slavery or servitude of these creatures is universal, and so ancient that we rarely see them in their natural state: they are never wholly free from all their bands, not even at the time of rest; and if they are sometimes suffered to range at liberty in the fields, they always bear about them tokens of servitude, and frequently the cruel marks of servitude and of pain: the mouth is deformed by the wrinkles occasioned by the bit, the flanks scarred with wounds inflicted by the spur, the hoofs are pierced by nails, the attitude of the body constrained, from the subsisting impression of habitual shackles, from which they would be delivered in vain, as they would not be the more at liberty for it. Even those whose slavery is the most gentle, who are only fed and broken for luxury and magnificence, and whose golden chain serve less to decorate them, than to satisfy the vanity of their master, are still more dishonored by the elegance of their trappings, by the tresses of their manes, by the gold

and silk with which they are covered, than by the iron shoes on their feet.

Nature is more delightful than art; and, in an animated being, the freedom of its movements makes nature beautiful: observe the horses in Spanish America, which live wild; their gait, their running, or their leaping, seem neither constrained or regular. Proud of their independence, they fly the presence of man, and disdain his care; they seek and find for themselves proper nourishment; they wander about in liberty in immense meads, where they feed upon the fresh productions of an eternal spring: destitute of any fixed habitation, without any other shelter than a mild sky, they breathe a purer air than those which are confined in vaulted palaces. These wild horses are also much stronger, much swifter, and more nervous than the greater part of domestic horses; they have what nature has bestowed upon them, strength and nobleness; the others only what art can give—beauty and cunning.

The natural disposition of these animals is not ferocious; they are only high spirited and wild; and though superior in strength to the greatest part of animals, they yet never attack them; and if they are attacked by others, either disdain them or tram-

ple them under their feet. They go also in bodies, and unite themselves into troops, merely for the pleasure of being together, for they are not fearful of, but have an attachment to each other. As herbs and vegetables are sufficient for their nourishment, they have quite enough to satisfy their appetite; and as they have no relish for the flesh of animals, they never make war with them, nor with each other; they never quarrel about their food, they have no occasion to ravish the prey of another, the ordinary source of contentions and quarrels among carniverous animals. They live in peace because their appetite is simple and moderate; and as they have enough there is no room for envy.

As all parts of Europe are at present peopled, and almost equally inhabited, wild horses are no longer found there; and those which we see in America were originally European tame horses, which have multiplied in the vast deserts of that country. The astonishment and fear which the inhabitants of Mexico and Peru expressed at the sight of Horses and their riders, convinced the Spaniards that this animal was entirely unknown in these countries; they therefore carried thither a great number, as well for service and their particular utility as to propagate the breed. M. de la

Salle, in 1685, saw in the northern parts of America, near the bay of St. Louis, whole troops of these wild horses feeding in the pastures, which were so fierce that no one dared to approach them. The author of the History of the Adventurers of the Buccaneers, says that, in the island of St. Domingo, horses may sometimes be seen in troops of upward of five hundred, all running together, and that as soon as they see a man, they will all stop; that one of them will approach to a certain distance, snort, take flight, and then all the rest will follow him. To catch them, they make use of nooses made of ropes, which they spread and hang in places which they know they frequent; but if they are caught by the neck they strangle themselves, unless the hunter comes time enough to their assistance, who instantly secures them by the body and legs, and fastens them to trees, where they are left for two days without either food or drink. This experiment is sufficient to begin to make them tractable, and in time they become as much so as if they had never been wild; and even if by chance they ever regain their liberty they never become so again, but know their masters, and suffer them to catch them again without trouble.

The manners of these animals almost wholly depend on their education. From time immemorial it has been the custom to separate the colts from their mothers: mares are suffered to suckle them five, six, or seven months; for experience has taught us, that those colts which are suckled ten or eleven months, are not of equal value with those which are weaned sooner, though they are generally fuller of flesh. After six or seven months sucking, they are weaned, that they may take more solid nourishment than milk; bran is then given them twice a day, and a little hay, of which the quantity is increased in proportion as they advance in age, and they are kept in the stable as long as they seem to retain any desire to return to the mare; but when this desire ceases, they are suffered to go out in fine weather, and led to pasture; but care must be taken not to suffer them to go out to pasture fasting: they must have bran, and be made to drink, an hour before they are suffered to graze, and are never to be exposed to great cold or rain: in this manner they spend the first winter; in the May following, they are not only permitted to graze every day, but are suffered to lie in the fields all the summer, and even to the end of October, only observing not to let them eat the after-grass; for if they accustom themselves

much to it, they will grow disgusted with hay, which ought, however, to be their principal food during the second winter, together with bran mixed with barley, or oats wetted. They are managed in this manner, letting them graze in the daytime during the winter, and in the night also during the summer, till they are four years old, when they are taken from the pastures, and fed on hay. This change in his food requires some precaution; for the first eight days, the colt should have nothing but straw, and it is proper to administer some vermifuge drinks, as worms may have been generated from indigestion, and green food.

Great attention must be paid to weaning young colts, to put them into a proper stable, not too hot, for fear of making them too delicate and sensible to the impressions of the air. They should frequently have fresh litter, and be kept very clean, by rubbing them down with a wisp of straw. But they should not be tied up and curried till they are two years and a half or three years old: this currying gives them great pain, their skin being as yet too delicate to bear it, and they would fall away instead of growing fat from it; care must also be taken that the rack and manger are

not too high, the necessity of raising their heads too high in order to reach their food may possibly produce a habit of carry it in this fashion, which would give them an awkward appearance.

At the age of three years or three years and a half, the rider should begin to break them and make them tractable; they should at first have a light easy saddle, and ought to wear it two or three hours every day; and they should be accustomed to have a snaffle bit in their mouths, and to lift up their feet, on which they should sometimes receive rather smart strokes, and if designed for coach or draught horses, should wear harness and a bridle. At first a curb should not be used, they should be held by a caveson or leather strap, and be made to trot on even ground without a rider, and with only the saddle or harness on the body; and when the saddle horse turns easily, and willingly follows the person who holds the leather strap, the rough-rider should mount him and dismount again in the same place, without making him move, till he is four years old, because, before that age, the weight of a man overloads him, but at four years he should be made to walk or trot, a little way at a time,

with the rider on his back. When a coach horse is accustomed to the harness, he should be paired with a horse that is thoroughly broken, putting on him a bridle, with a strap passed through it, till he begins to be used to the draught; after this the coachman must teach him to back, having the assistance of a man before, who must push him gently back, and even give him some blows to make him do it; all this should be done before young horses have changed their food, for when once they are what is called corn-fed, that is, when they feed on grain and hay, as they are more vigorous, it is remarked also that they are less tractable, and more difficult to break.

The bit and the spur are two means made use of to bring them into order. The mouth does not appear formed by nature to receive any other impressions than that of taste and appetite; there is however so great a sensibility in the mouth of a horse, that, in preference to the eyes and ears, we address ourselves to it, to make him understand our pleasure; the smallest motion or pressure of the bit is sufficient to inform and determine the animal; and

this organ of sense has no other fault than its perfection. Its too great sensibility must be managed, for if it is abused, the mouth of the horse is spoiled, and rendered insensible to the impression of the bit; the senses of sight and hearing are not subject to such a change, and could not be dulled in this manner; but it has been found convenient to govern horses by these organs, and it is generally true, that signs given by the sense of feeling have more effect on animals in general than those conveyed to the eyes or ears; besides, the situation of horses with relation to those who mount or conduct them, makes their eyes almost useless for this purpose, because they see only straight forward, so that they could only perceive the signs made to them when they turned their heads round; and although they are frequently conducted and animated by the ear, yet in fact, if they are well broken, the smallest pressure of the thighs, or most trifling motion of the bit is sufficient to direct them; the spur is even useles, or at least it is only made use of to force them to violent motions; and as, through the folly of the rider, it often happens that in giving the spur he

checks the bridle, the horse, finding himself excited on one side, and kept in on the other, only prances and capers, without stirring out of his place.

By means of the bridle we teach horses to hold up their heads and place them in a proper manner, and the smallest sign or movement of the rider is sufficient to make the horse show all his different paces; the most natural, perhaps, is the trot, but ambling and galloping are more pleasant for the rider, and these are the two paces we particularly endeavor to improve.

Though walking is the slowest of all their paces, a horse should, notwithstanding, step quick, and neither take too long nor too short steps; his carriage should be easy; this ease depends much on the liberty of his shoulders, and is known by the manner in which he carries his head in walking; if he keeps it high and steady, he is generally vigorous, quick and free in his motions. When the motion of the shoulders is not free the leg does not rise enough, and the horse is apt to stumble, and strike his foot against the inequalities in the ground; and when the shoulders are still more confined in their action, and the motion of the legs

appears free, the horse is soon fatigued, stumbles, and becomes useless. A horse should raise his shoulders and his lower haunches in walking; he should also support his leg, and raise it high enough; but if he keeps it up too long or lets it fall too slowly, he loses all the advantage of his suppleness, becomes heavy, and fit for nothing but to match with another and for show.

It is not sufficient that his walk should be easy, his steps must also be equal and uniform both behind and before, for if his buttocks have a swinging motion whilst he keeps up his shoulders, the rider is much jolted, which is very uneasy to him. The same thing happens when a horse extends his hind leg too much, and rests it almost in the same place in which he rested his fore foot. Horses with short bodies are subject to this fault. Those which cross their legs or strike them against each other, are not sure footed; and those whose bodies are long are the most easy for the rider, because he is at a greater distance from the two centres of motion, the shoulders and the haunches, and is therefore less sensible of the motion and jolting.

The usual method of walking among quadrupeds, is to lift up at the same time one of the fore

and one of the hind legs ; whilst the right fore leg is in motion, the left hind leg follows and advances at the same time, and this step being made, the left fore leg,conjointly with the right hind leg in its turn, and so on. As their bodies are supported upon four points, which form a long square, the easiest manner of moving for them, is to change two of them at once on a diagonal line, in such a manner that the centre of gravity of the body of the animal may move but little, and rest always in the direction of the two points which are not in motion ; in the three natural paces of the horse, the walk, the trot and the gallop, this rule of motion is always observed, but with some difference. In the walk, there are four times in the movement ; if the right fore leg moves first, the left hind leg follows the moment after, then the left fore leg moves forward in turn, to be followed the instant after by the right hind leg ; thus the right fore foot rests on the ground first, the left hind foot next, then the left fore foot rests, and lastly the right hind foot, which makes a movement of four times. In the trot there are but two times in the movement; if the right fore leg goes off first, the left hind leg moves at the same time, and without any interval between the

motion of the one and the motion of the other; also the left fore leg moves at the same time with the right hind one.

In the gallop there are usually three times; but as in this movement there is a kind of leaping, the interior parts of the horse do not move of themselves, but are driven away by the strength of the haunches and the hinder parts: thus, of the two fore legs, the right ought to advance more forward than the left; the left ought beforehand to rest on the ground to serve as a point of rest for the sudden jerk which he takes: thus it is the left hind foot that makes the first time of the movement, and which rests on the ground first; then the right hind leg is lifted up conjointly with the left fore leg, and they rest on the ground together; at length, the right fore leg (which is raised an instant after the left fore leg and right hind one) rests on the ground last, which makes the third time: thus in this movement of the gallop there are three times and two intervals; and in the first of these intervals, when the movement is made with haste, there is an instant when the four legs are in the air at the same time, and when the four shoes of the horse may be seen at once. When the horse

has the haunches and the houghs supple, and moves them with quickness and agility, the movement of the gallop is more perfect, and the cadence is made in four times; he then rests the left hind foot, which shows the first time; then the right hind foot falls to the ground and shows the second time; the left fore foot falls a moment after, showing the third time; and at length the right fore foot, which rests last, shows the fourth time.

Horses usually gallop on the right foot, in the same manner as they carry the fore right leg, in walking and trotting; they also throw up dirt in galloping with the right fore leg, which is more advanced than the left; and also the right hind leg, which follows immediately the right fore one, is more advanced than the left hind leg, and that the whole time that the horse continues to gallop: whence it follows that the left leg, which supports all the weight, and which forces forward the others is more tired; for this reason it would be right to exercise horses in galloping alternately on the left foot as well as on the right; and they would consequently bear much longer this violent motion.

In walking, the legs of the horse are lifted up only a small height, and the feet almost touch the ground; in trotting they are raised higher, and the feet are entirely free from the ground; in galloping the legs are lifted up still higher, and the feet seem to rebound from the earth. The walk to be good should be quick, easy, light, and sure; the trot should be firm, quick, and equally sustained; the hind foot ought to follow well the fore foot; the horse in this pace should carry his head high, and his back straight; for, if the haunches rise and fall alternately at each trot he takes, if the crupper moves up and down, and the horse rocks himself, he trots ill through weakness; if he throws out wildly his fore legs, it is another fault: the four legs should tread in a line with the hind ones, which should always efface their tracks. When one of the hind legs is thrown forward, if the fore leg of the same side remain in its place too long, the motion becomes more uneasy and difficult from this resistance; and it is for this reason that the interval between the two times of the trot should be short; but, be it ever so short, this resistance is sufficient to make this pace more uneasy than walking and galloping, because in walking the motion is more easy, gentle,

and the resistance less; and in galloping there is scarcely any horizontal resistance, which is the only one inconvenient for the rider.

Walking, trotting, and galloping, are the most usual natural paces; but some horses have another natural pace called the amble, which is very different from the three others, and at the first glance of the eye appears contrary to the laws of mechanics, and extremely fatiguing to the animal, though the quickness of motion is not so great as in galloping, or trotting hard. In this pace the foot of the horse grazes the ground still more than in walking, and each step is much longer. But the most remarkable circumstance is, that the two legs on the same side sett off the same time to make a step, and afterward the two other legs move at the same time to make another, so that each side of the body alternately is without support, and there is no equilibrium maintained between the one and the other; it is therefore only from his almost grazing the earth, and the quick alternate motion, that he can support himself in this pace. There is in the amble, as well as the trot, but two times in the motion, and all the difference is, that in the trot the two legs which go together are opposite, in a diagonal line: instead of which, in the

amble, the two legs on the same side go together; this pace is very easy for the rider, as it has not the jolting of the trot, which is occasioned from the resistance the fore leg meets with when the hind leg rises; because, in the amble the fore leg rises at the same time with the hind leg on the same side, instead of which, in trotting the fore leg on the same side rests and assists the impulse during the whole time that the hind leg is in motion.

The Horse, of all animals, is that which, with great stature, has the most complete proportion and elegance in every part of his body; and compared with every other animal he appears superior in these respects. The great length of the jaws is the principal cause of the difference between the heads of quadrupeds and of the human species: it is, also, the most ignoble mark of all; yet, though the jaws of the Horse are very long, he has not, like the ass, an air of imbecilty, or of stupidity, like the ox. The regularity of the proportions of his head, on the contrary, gives him an air of sprightliness, which is well supplied by the beauty of his chest. The Horse seems desirous of raising himself above his state of a

quadruped, by holding up his head, and in this noble attitude he looks man in the face; his eyes are lively and large, his ears well made, and of a just proportion, without being short like those of the bull, or too long like those of the ass; his mane suits well his head, ornaments his neck, and gives him an air of strength and haughtiness; his long bushy tail covers and terminates advantageously the extremities of his body, far different from the short tails of the stag, the elephant, &c. and the naked tails of the ass, the camel, the rhinoceros, &c. The tail of the Horse is formed of long, thick hair, which seems to come from the rump, because the stump from which it grows is very short; he cannot raise his tail like the lion, but it suits him better hanging down, as he can move it sideways; it is very useful to him to drive away the flies which incommode him; for though his skin is very hard, and is everywhere furnished with a close, thick coat, it is, notwithstanding, extremely sensible.

The head of a well proportioned horse should be lean and small, without being too long; the ears at a moderate distance, small, straight, immovable, narrow, thin, and well placed on the top

of the head; the forehead narrow and a little convex; the hollows filled up; the eyelids thin; the eyes clear, lively, full of fire, rather large, and projecting from the head, the pupil large; the nether jaw thin; the nose a little acquiline, the nostrils large and open, the partition of the nose and the lips thin; the mouth of a moderate width; the withers raised and sloping; the shoulders thin, flat and not confined; the back equal, even and insensibly arched lengthways, and raised on each side of the spine, which should appear indented; the flanks full and short; the rump round and fleshy; the haunches well covered with hair; the stump of the tail thick and firm; the fore legs and thighs thick and fleshy, the knee round before, the houghs large and rounded, the sinew loose, the joint next the foot small, the fetlock not thickly covered with hair, the pastern large, and of a middling length, the coronet rather raised, the hoof, black, smooth, shining and high, the quarters round, the heels wide and moderately raised, the frog small and thin, and the sole thick and hollow.

But there are few horses in which this assemblage of perfection is to be found; the eyes

are subject to many complaints, which are sometimes difficult to be known. In a healthy eye we ought to see through the cornea two or three spots of the colour of soot, above the pupil: to see these spots the cornea must be clear, clean, and transparent; if it appears double, or of a bad colour, the eye is not good: a small, long, and straight pupil, encompassed with a white circle, is also a bad sign; and when it is of a bluish green colour, the eye is certainly bad and the sight dull.

It is very easy to judge of the natural and actual state of the animal by the motion of his ears; when he walks, he should project forward the points of his ears; a jaded horse carries his ears low; those which are spirited mischievous, alternately carry one of their ears forward and one backward; they all carry their ears on that side from which they hear any noise, and when any one strikes them on the back, or on the rump, they turn their ears back. Horses which have the eyes deep sunk in the head, or one smaller than the other, have usually a bad sight; those which have the mouth dry, are not of so healthy a

temperament as those which have the mouth moist, and make the bridle frothy. A saddle horse ought to have the shoulders flat, moveable, and not very fleshy; the draught horse, on the contrary, should have them flat, round, and brawny: if, notwithstanding, the shoulders of a saddle horse are too thin, and the bones show themselves through the skin, it is a defect which shows the shoulders are not free, and consequently the horse cannot bear fatigue. Another fault of a saddle horse is, to have the chest project too forward, and the fore legs drawn too much back, because he is apt to rest on the hand in galloping and even to stumble and fall: the length of the legs should be proportionable to the height of the horse: when the fore legs are too long he is not sure footed, if they are too short, he is too heavy in the hand: it is a remark that mares are more liable than horses to be short legged, and that horses in general have the legs thicker than mares or geldings.

One of the most important things to be known is the age of the horse: it is from the teeth that we obtain the most certain knowledge of their age; the horse has forty; twenty

four grinders, four eye-teeth, and twelve incisive teeth: mares have no eye-teeth, or if they have them they are very short: the grinders are not instrumental to the knowledge of their age, we form our judgment from the front and eye-teeth. The twelve front teeth begin to show themselves fifteen days atter the birth of the foal; these first teeth are round, short, not strong, and drop out at different times, in order to make room for others: at two years and a half the four front middle teeth drop out the first, two at top and two at bottom; a year after four others fall out, one on each side of those which are already replaced; at about four years and a half, four others drop out, always on the side of those which have been replaced, these four last milk teeth are replaced by four others, which do not grow near so fast as those which replaced the first eight; and these four last teeth which are called the wedges, and which replaces the four last milk teeth are those by which we know the age of a horse; these are easily known, since they are the third as well at top as at bottom, beginning to count from the middle to the

extremity of the jaw; these teeth are hollow and have a black mark in their concavity; at four years and a half, or five years old, they scarcely project beyond the gums, and the hollow is plainly seen; at six years and a half it begins to fill, the mark also begins to diminish and grow narrower, and so continues till seven years and a half or eight years, when the hollow is entirely filled up and the black mark effaced: after the animal has attained eight years, as these teeth do not give further information of the age, we generally judge by the eye teeth or tusks; these four teeth are placed at the side of those which I have just now been speaking of; the eye teeth, as well as the grinders, are not preceded by others which fall out, those of the inferior jaw usually come out first at three years and a half, and the two of the upper jaw at four years, and till they are six years old they are very sharp; at ten years old the upper ones appear already blunt, worn and long, because they are bare, the gum wearing away with age, and the more they are worn away the more aged the horse is; from ten till thirteen or fourteen years there is hardly any indica-

tion of the age, but then some hairs on the eyebrows begin to grow white; but this indication is equivocal, since it has been remarked that horses engendered from old stallions and old mares have the hair white on the eyebrows at ten years old. There are also horses whose teeth are so hard that they do not wear, and upon which the black mark subsists and is never effaced; and others which have the mark in the mouth as long as they live. We may also know, though with less precision, the age of a horse by the ridges of the palate, which are effaced in proportion to his age.

It has been remarked that studs situated in dry and light countries produce good tempered, swift and vigorous horses, with nervous legs and hard hoofs, while, on the other hand, those which are bred in damp places and in fat pasturage, have generally the head large and heavy, the legs thick, the hoofs soft and the feet flat. This difference arises from the climate and the food, which may be easily understood; but, what is more difficult to be comprehended, and what is more essential than anything that has been said, is, the necessity

of always crossing or mixing the breed, if we would prevent their degenerating.

Mares usually go with foal eleven months and some days; they will breed commonly to the age of fourteen or fifteen years, and the more vigorous longer than eighteen years.

The length of life of horses is like that of all species of animal, in proportion to the time of their growth. Man, who is above fourteen years in growing, lives six or seven times as long, that is to say, ninety or a hundred years. The horse, who attains his full growth in four years, lives six or seven times as long, that is to say, twenty-five or thirty years. There are so few examples to contradict this rule, that we should not even regard them as exceptions from which we may draw any precedents; and as robust horses are at their entire growth in less time than delicate ones, they also live less time, and at fifteen years of age are old.

The Arabian horses are the handsomest known in Europe, they are larger and plumper than those of Barbary, and equally well shaped, but as they are not often brought into this

country, riding-masters are not able to give an exact account of their perfections and defects.

The horses of Barbary are more common; they are frequently negligent in their paces, and must be often reminded: they are very swift and strong, very light, and very fit for hunting. These horses seem the most proper to breed from; it is only to be wished that they were of larger stature, as they seldom exceed four feet eight inches high.

The Turkish horses are not so well proportioned as those of Barbary: they will, however, travel a great way, and are long winded; this is not surprising, if we do but consider, that in warm countries, the bones of animals are harder than in cold climates; and it is for this reason, that they have more strength in the legs.

The Spanish horses hold the second rank after those of Barbary; those of a handsome breed are plump, well coated, and low of stature; they also use much motion in their carriage, and have great suppleness, spirit, and pride; their hair is usually black, or of a bay

chestnut colour, though there are some of all colours, and it is but seldom that they have white legs and noses. The Spaniards, who have an aversion to these marks, never breed from horses that have them, choosing only a star in the forehead.

The handsomest English horses have in conformation great resemblance to those of Arabia and Barbary, from which, in fact, they are bred; they are frequently five feet high, and above; they are of all colours, and have all kinds of marks; they are generally strong, vigorous, bold, capable of great fatigue, and excellent for hunting and coursing.

The Horses of Italy were formerly much handsomer than they are at present, because the breed for some time has been neglected, notwithstanding there are still some handsome Neapolitan horses, especially draught horses; but, in general, they have the head large, and the chest thick; they are also untractable. These defects, however, are compensated by their noble form, their stateliness, and the beauty of their motions.

The Danish horses are so handsome in their form, and so beautiful in their coats, that they are preferred to all others for putting into carriages; they are of all colours, and even of some singular ones, as pied; and horses spotted like tigers are found no where but in Denmark.

In Germany we meet with very handsome horses; but they are generally heavy and short breathed. The Hussars and Hungarians split their nostrils, with a view, they say, of giving them more breath, and also to hinder their neighing in battle. The Flemish horses are greatly inferior to those of Holland; they have almost all large heads, flat feet, and are subject to humours in the eyes; and these two last are essential defects in coach horses.

According to Marmol, the Arabian horses are descended from the wild horses in the deserts of Arabia, of which, in ancient times, large studs were formed, which have multiplied so much, that all Asia and Africa are full of them: they are so swift, that some will outstrip the very ostriches in their course. The Arabians of the desert, and the people of Lib-

ya, breed a great number of these Horses for hunting, but neither use them in travelling nor in their wars; they send them to pasture whilst there is grass for them; and when that fails they feed them only with dates and camel's milk, which make them nervous, nimble, and lean. They lay snares for the wild horses, and eat the flesh of the young ones, which they affirm is very delicate food. These wild horses are smaller than the tame ones, and are commonly ash-coloured, though there are also some white ones, and the mane and the hair of the tail is short and frizzled.

Let an Arabian be ever so poor, he has horses. They usually mount the mares, experience having taught them that they bear fatigue, hunger and thirst better than horses; they are also less vicious. They use them so much to be together, that they will remain so in great numbers, for days together, left to themselves, without doing the least harm to each other. The Turks, on the contrary, do not approve of mares; and the Arabians sell them the horses which they do not keep for stallions. They have long preserved, with

great care, the breed of their horses; they know their generations, alliances, and all their genealogy, and distinguish the breeds by different names. The lowest price for a mare of the first class, is from one hundred to two or three hundred pounds sterling. As the Arabians have only a tent for their house, this tent serves them also for a stable. The mare, colt, husband, wife and children, lie promiscously together; and the little children will lie on the body and neck of the mare and colt, without these animals incommoding or doing them the least injury. These mares are so accustomed to live in this familiarity, that they will suffer any kind of play. The Arabians treat them kindly, talk and reason with them, and take great care of them, and always let them walk, and never use the spur without necessity; whence, as soon as they feel their flanks tickled with the stirrup iron, they set out with incredible swiftness, and leap hedges and ditches with as much agility as so many does; and if their rider happens to fall, they are so well broken that they will stop short even in the most rapid gallop. All Arabian horses are of a middling size, very easy in their motion,

and rather thin than fat; they are dressed morning and evening regularly, with so much care that not the smallest spot is left in their skins; their legs are also washed, and their mane and tail are let grow long, and seldom combed, to avoid breaking the hairs. They have nothing given them to eat all day, and seldom are allowed to drink above two or three times. At sunset a bag is fastened round their heads in which is about half a bushel of very clean barley. These horses, therefore, eat only during the night; and the bag is not taken from them till next morning, when all is eaten up; and in the month of March, when the grass is tolerably high, they are turned out to pasture. As soon as the spring is past they are taken from pasture, and have neither grass nor oats, and straw but seldom, barley being their only food. The mane of the colts is cut as soon as they are a year or eighteen months old, in order that it may grow thick and long. They mount them at two years old, or two years and a half at farthest; till this age they neither put saddle nor bridle on them; and every day, from morning

till night, all the Arabian horses stand saddled at the door of the tent.

An affecting instance is on record of the attachment which the Arabians feel for their horses. A poor Arabian of the desert was possessed only of a mare, which the French consul at Said was desirous to purchase, that he might send her as a present to Louis XIV. The Arab hesitated long, but want drove him to consent, on condition of a large sum, which he himself named. The Arab, clothed in rags, brought his courser to the consul, dismounted, looked first at the tempting gold, and then steadfastly at his mare. But here his heart failed him. He heaved a deep sigh and fondly exclaimed, "To whom am I going to give thee up? to Europeans! who will tie thee close, who will beat thee, who will render thee miserable! Return with me my beauty! my jewel! and rejoice the hearts of my children." Then, springing on the back of the animal, he was out of sight in a moment.

The breed of these horses is dispersed in Barbary, among the Moors, and even among the negroes of the river Gambia and Senegal; the lords of the country have some which are of uncommon

beauty. Instead of barley or oats they give them maize reduced to flour, which they mix with milk, when they are inclined to fatten them; and in this hot climate they seldom let them drink.

The Tartars live with their horses nearly in the same manner as the Arabians do. When they are about seven or eight months old the young children mount them, and make them walk and gallop a little by degrees; they thus break them by degrees, and oblige them to undergo long fastings; but they never mount them for racing or hunting till they are six or seven years old, and then make them support incredible fatigue, such as travelling two or three days together without stopping, passing four or five days without any other food than a handful of grass every eight hours, and also inure them to go twenty-four hours without drinking. These horses, which appear, and which are in reality, so robust in their own country, become enfeebled, and are soon good for nothing, when transported to China or the Indies; but they succeed better in Persia and Turkey. In Lesser Tartary they have also a breed of small horses, which are in such estimation that they are not allowed to sell them to foreigners. These

horses have all the good and bad qualities of those of Great Tartary, which shows how much the same manners, and the same education, give the same disposition to these animals. There are also in Circassia, and in Mingrelia, many horses which are even handsomer than those of Tartary; there are also found some handsome horses in the Ukraine, Wallachia, Poland and Sweden; but we have no particular account of their qualities and defects.

When the horse is impassioned with love, desire, or appetite, he shows his teeth, and seems to laugh; he shows them also when he is angry, and would bite; he sometimes puts out his tongue to lick, but less frequently than the ox, who licks much more than the horse, and who notwithstanding, is less sensible to caresses.

The horse also remembers ill treatment much longer, and is sooner rebuffed than the ox; his natural spirit and courage are such, that when he finds more is expected from him than he is able to perform, he grows angry, and will not endeavour; instead of which, the ox, who is slow and idle, exerts himself, and is more easily tired. That they are capable of feeling resent-

ment is proved by a curious circumstance. A baronet, who was in possession of a hunter which seemed to be untirable, resolved to try if he could not completely fatigue him. After a long chase, he dined, mounted him again, and rode him furiously among the hills, till the animal was so exhausted that he reached the stable with infinite difficulty. More humane than his worthless master, the groom shed tears to see the state of the animal. Shortly afterward, on the baronet entering the stable, the horse furiously sprung at him, and he would have perished had he not been resoued by the groom.

The horse sleeps much less than man; for when he is in health, he does not rest more than two or three hours together; he then gets up to eat; and when he has been too much fatigued, he lies down a second time, after having eaten; but on the whole, he does not sleep more than three or four hours in the twenty-four. There are even some horses who never lie down, but sleep standing. It has been also remarked, that geldings sleep oftener and longer than horses.

The swiftness and strength of the horse are wonderful. Childers, the race horse, has been

known to pass over eighty-two feet and a half in a second. Others have trotted more than twenty-one miles in an hour. There have been mill horses, which, at one load, have carried thirteen measures, or nine hundred pounds weight, of corn.

Quadrupeds do not all drink in the same manner, though they are all equally obliged to seek with the head for the liquor, which they cannot get any other way, excepting the monkey, and some others that have hands, and consequently drink like men, when a vase or glass is given them which they can hold; for they carry it to their mouths, inclining the head, throwing down the liquor, and swallowing it by the simple motion of deglutition. Man usually drinks in the same manner, because it is the most convenient. Most quadrupeds also choose that mode which is most agreeable to them, and constantly follow it. The dog, whose mouth is very large, and the tongue long and thin, drinks lapping; that is, by licking the liquor, and forming with the tongue a kind of cup or scoop, which fills each time with a tolerable quantity of liquor; this mode he prefers to that of wetting the nose. The horse, on the contrary, whose mouth is small, and whose tongue is too short and thick to scoop it up, and who

always drinks with more avidity than he eats, dips the mouth and nose quickly and deeply into the water, which he swallows largely by the simple motion of deglutition; but this forces him to drink without fetching his breath; whilst the dog breathes at his ease while he is drinking. Horses therefore should be suffered to take several draughts, especially after running, when respiration is short and quick. They should not be suffered to drink the water too cold, because that, independently of the colic, which cold water frequently occasions, it sometimes happens also, from the necessity they are in of dipping the nose into the water, that they catch cold, which often lays the foundation of a disorder called the glanders, the most formidable of all to that species of animal; for it is known, that the seat of the glanders is in the pituitary membrane, and that it is consequently a real cold, which causes an inflamation in this membrane; and travellers who give us a detail of the maladies of horses in warm climates, as in Arabia, Persia, and Barbary, do not say that the glanders are so frequent there as in cold climates. It is from this that the conjecture arises, that this malady is occasioned by the coldness of the water, because these animals are obliged to dip and keep the nose and nostrils a considerable time under

water, which would be prevented by never giving it to them cold, and by always wiping the nostrils after they have drank. Asses, who fear the cold more than horses, and who resemble them more strongly in the interior structure, are notwithstanding, not so subject to the glanders; which may possibly happen from their drinking in a different manner from horses; for instead of dipping the mouth and nose deeply into the water, they scracely touch it with their lips.

I shall not speak of the other diseases of horses; it would extend this History too much to join to the history of an animal that of its disorders; nevertheless, I cannot leave the history of the horse, without regretting that the health of this useful animal should have been hitherto abandoned to the care, and too frequently absurd practice, of ignorant people. The branch of physic which the ancients called Veterinarian, is at present scarcely known but by name. Were some physician to direct his views this way, and make this study his principal object, he would soon find it answer his purpose, both with respect to reputation and profit. Instead of degrading himself, he would render his name illustrious; and this branch of physic would not be so conjec-

tural and difficult as the other. All causes being more simple in animals than in man, the diseases ought also to be less complicated, and consequently more easily to be guessed at, and treated with more success, without mentioning the entire liberty he would have of making experiments and finding out new remedies, and the ability of arriving without fear or reproach at a great extent of knowledge of this kind, from which, by analogy, might also be drawn inferences useful to the art of curing mankind. Among the brutal acts which are committed upon horses, may be reckoned absurd and inhuman practices of docking and nicking their tails, and applying the shoe red hot to the sole of tne foot.

FARRIERY.

CURE FOR FOUNDER.

As soon as you discover that the horse is foundered, take him to the nearest branch or stream of water, and tie him in it, standing in the water nearly to his belly, his head being so high that he cannot drink.

If the weather is warm, let him stand in the stream several hours, then take him out, rub his legs thoroughly to promote circulation, and again tie him in the water, if he is still lame. By repeating this process two or three times the horse will be effectually cured.

If the weather is cold when the horse foundered, that is, in winter, the horse must not be allowed to stand in the water more than about twenty minutes

at a time, when he should be taken out and his legs rubbed diligently till they become dry and warm, and the circulation of the blood made active, and this process must be repeated until the horse is cured, which will be generally within twenty four hours. This remedy will cost nothing, can do no possible harm, and will, in every instance, cure if the disease has not been of too long standing. Don't be afraid to try it.

TO CURE WOUNDS IN CATTLE.

When horses, cattle, or any of our domestic animals are wounded, the treatment may be very simple, and much the same as in the human race. It is extremely improper to follow a practice that is common in many parts of the country among farriers, cow doctors, and even shepherds—that of applying to the wound, or putting into the sore part, common salt, powder of blue vitriol, or tar, or cloths dipped in spirits, as brandy, rum, &c., or turpentine, or any other stimulant articles; for all such very much increase the pain, and by irritating the sore, may increase the inflammation even to the length of inducing mortification. Though the treatment may be varied according to

circumstances, yet, in most cases, it may be sufficient to take notice of the following particulars: It will be proper to wash away any foulness or dirt about the part, and to examine particularly its condition.

TO STOP THE BLEEDING.

Should any large blood vessel be cut and discharging copiously, it will be right to stop it, by some lint or sponge, with moderate compression, or bandaging at the same time, and not taking it off for two or three days. Should the pressure fail of effect, caustic applications such as the lunar caustic, or even the actual cautery, the point of a thick wire, sufficiently heated, may be tried; or, if a surgeon be at hand, the vessel may be taken up by the crooked needle, with waxed thread, and then tied.

ADHESIVE PLASTER AND SEWING.

Where there is no danger of excessive bleeding, and a mere division of the parts, or

a deep gash or cut, it will be right to adjust the parts, and keep them together by a strip of any common adhesive plaster; or, when this will not do by itself, the lips of the wound especially if it be a clean cut, may be closed by one or more stitches with a moderately coarse needle and thread, which in each stitch may be tied, and the ends left of a proper length, so that they can be afterwards removed when the parts adhere. It is advised to tie the threads, because sometimes the wounded part swells so much that is difficult to get them cut and drawn out without giving pain and doing some mischief.

BANDAGES.

If the part will allow a roller or bandage to be used, to keep the lips of it together, this may likewise be employed; for by supporting the sides of the wound, it would lessen any pain which the stitches occasion. With this treatment the wound heals often in a short time, or in a few days, rarely exceeding five or six, and sooner in the young and healthy than in the old and relaxed, and sooner in the

quiet and motionless than in the restless and active.

Should the wound be large, and inflammation, with the discharge of matter likely to take place, it may be proper, by gentle means, to bring the parts near to each other, and to retain them in their natural situation by means of a bandage. This should not be made too tight, but merely to support the part. In this way, and by avoiding stimulant applications, the wound will heal more readily than otherwise, and the chance of any blemish following will be diminished. Washes of spirits, brandy and the like, Friar's balsam, spirits of wine and camphor, turpentine or any other such irritating applications are highly improper and sometimes make a fresh, clean wound, that would readily heal almost of itself, inflame, or perhaps mortify, or become a bad sore.

SORES AND BRUISES.

Over the whole sore, or where the part is bruised, or where there is a tendency to suppuration, a poultice should be applied, and kept

on by suitable bandages. The poultice may be made of any kind of meal, fine bran, bruised linsed, or of mashed turnips, carrots &c. The following has been found useful as a common poultice: Fine bran 1 quart, pour on it a sufficient quantity of boiling water to make a thin paste; to this add of linseed powder enough to give it a proper consistence. The poultice may be kept on a week or ten days, or even longer, if necessary, changing it once or twice a day; and cleaning the wound, when the poultice is removed, by washing it by means of a soft rag or linen cloth, with water not more than blood warm, (some sponges are too rough for this purpose;) or, where the wound is deep, the water may be injected into it by a syringe, in order to clean it from the bottom.

OINTMENT.

In the course of a few days, when the wound, by care and proper management with the poultices, begins to put on a healthy appearance, and seems to be clean and of a reddish colour, not black or bloody, then there may

be applied an ointment made of tallow, linseed oil, bees' wax, and hogs' lard, in such proportion as to make it of a consistence somewhat firmer than butter. The ointment should be spread on some soft clean tow, and when applied to the sore, it ought never to be tied hard upon it, (which is done too frequently and very improperly,) but only fixed by a bandage of a proper length and breadth, (for a mere cord is often improper,) so close and so securely as to keep it from slipping off. This application may be changed once a day; or when nearly well, and discharged but little, once in two days.

GREEN OINTMENT FOR WOUNDS.

Put into a well glazed earthen vessel, 2 ounces of bees-wax; melted over a clear fire, and add 2 ounces of resin; when that is melted, put in half a pound of hogs' lard; to this put 4 ounces of turpentine; keep stirring all the time with a clean stick or wooden spatula. When all is well mixed stir in 1 ounce of finely powdered verdigris. Be careful it does not boil over; strain it through a coarse cloth, and preserve it in a gallipot. Thi

ointment is very good for old and recent wounds, whether in flesh or hoof; also galled backs, cracked heels, mallenders, sallenders, bites, broken knees, &c., &c.

TREATMENT, ACCORDING TO APPEARANCE OF THE PART.

When the wounded part begins to discharge a whitish, thick matter, and is observed to fill up, the general treatment and dressings to the sore now mentioned, should be continued; and in the course of the cure, the animal, when free of fever, may be allowed better provision, and may take gentle exercise. If the animal be feeble, from the loss of blood originally, or from the long continuance of a feverish state, produced by the inflammation attending the wound, or from weakness arising from confinement, or connected with its constitution naturally; and if the wound appear to be in a stationary state, very pale and flabby on its edges, with a thin discharge, then better food may be given to it; and if still no change should be observed, along with the better food, the wound may be treated somewhat different from what has been already advised. The ointment may be

made more stimulant, by adding it to some more resin and less bees-wax, or what would be more stimulant still, some common turpentine; for it is only in very rare cases that oil of turpentine can be requisite. The effects of an alteration in the mode of treatment should be particularly remarked, and stimulants should be laid aside, continued or increased, according as may be judged proper. Before changing the dressings applied to the wound or before rendering them more stimulant and active by using heating applications, the effect of closer bandaging may be tried; for sometimes by keeping the parts a little more firmly together, the cure is promoted.

FOOD AND REGIMEN.

In case of severe wounds, attention should be paid to the condition of the animal in other respects. There being always when such happen, a tendency to violent inflammation and fever, that may end fatally; means should be employed to moderate both. The apartment should be cool and airy, and so quiet that the animal should not be disturbed; the drink should not be warm but rather cold, and given freely, though not in too

large quantites at a time; the food should be sparingly given, and of a poorer quality than usual, and should be rather succulent and laxative, than dry or apt to produce costiveness; bleeding may be employed either generally from a vein, or in some cases, when it can be done, by cupping from the hurt part, as in the case of a bruise (though this last will seldom be requisite or found convenient,) and it may be done more than once or twice, as may seem proper; luxative medicines also ought to be given and repeated, as there may be occasion.

ABSCESS.

These are swellings containing matter, that make their appearance in different parts of the body. The remedies are, first, to bleed, then to wash the swollen part with a quart of vinegar, in which are dissolved two ounces of sal ammoniac, and half an ounce of sugar of lead. If the swelling does not abate in two or three days, apply the suppurating poultice. When the tumor becomes soft and points, open it with a lancet, and let out the matter. Then dress it with basilicon ointment.

AMBURY OR WART.

Tie a strong silk, or two or three horse-hairs, round the neck of the wart, tightening it gradually till it falls away. Then dip a piece of tow in alum water and bind it on the spot for a whole day. Heal the sore with the green ointment.

THE STAGGERS.

Bleed the animal copiously, (the disease is a true apoplexy,) 2½ quarts at once; then give him half a pint of linseed oil, the same of castor oil, 40 grains of calomel, 60 do. of jalap, and two ounces of tincture of aloes. Give him twice a day warm bran mashes.

FOR LOSS OF APPETITE.

Take a quart of blood from the neck, and give him a purging ball made as follows: Aloes, 1 oz. jalap, 1 drachm, rhubarb, 1 do. made into a ball with castor oil and half a drachm of ginger.

INFLAMED BLADDER.

Make the animal drink largely of flaxseed tea, barley or rice water, or any mucilaginous liquid, and inject a portion of the same frequently. Bleeding, and a dose of castor oil are never to be omitted. After the oil has operated, give the following ball every sixth hour: Powdered nitre, half an once, camphor, 2 drachms, liquorice powder, 3 drachms, honey sufficient to form the ball. Should these means not relieve the animal, omit the ball, and give 1 drachm of opium twice a day.

BLOOD SPAVIN.

Clip off the hair from the swelling, and rub all round outside of the swelling with a piece of hard brown soap, then apply to the swelling a blister made of the following

BLISTERING OINTMENT.

Hogs' lard, half an ounce, bees' wax, 3 drachms, sublimate, in fine powder, half a drachm, Spanish flies, 2 drachms. Mix them all well, and spread it on white leather, and apply it to the spavin.

BONE SPAVIN.

This may be treated like the former; but in both cases, do not apply the blister only when the sign is in the legs, after which apply green ointment twice a day until the sore is healed.

BOTS.

Three kinds of worms infest the bowels of horses, called by the English farriers bots, truncheons, and maw-worms. The bot infests the great gut near the anus; it is a small worm with a large head, amd may be frequently observed in the dung.

The truncheon is short and thick, with a blackish head, and is found in the maw, where, if suffered to remain, it sometimes pierces through, and thus is many a fine horse destroyed.

The maw worm is of a pale red color, resembling an earth worm, from two to three inches long, occupying also the maw.

SYMPTOMS OF WORMS IN HORSES.

Stamping forcibly on the ground with either of his fore feet, and frequently striking at his belly

with his hind ones. Belly projecting and hard, looking frequently behind him and groaning as if in great pain.

REMEDIES FOR WORMS.

Keep the horse from all kinds of food for one day; at night give him a small quantity of warm bran mash, made as usual, and directly after, a ball made of 1 scruple of calomel, 1 do. of turpeth mineral, and as much crumb of bread and honey as will form the mass. Next evening give him a pint of castor, and half a pint of linseed oil. The animal is then to be fed as usual for two or three days, and the same plan again to be employed.

INFLAMMATION OF THE BOWELS.

This not very common (but when it does occur dangerous) disorder is of two kinds. The first or peritoneal inflammation begins with an appearance of dullness and uneasiness in the animal; appetite diminished or totally gone; constant pawing with the fore feet, frequently trying to kick the belly; he lies down, rises suddenly, looks round to his flanks—countenance strongly

expressive of pain; urine small, high colored, and voided with great pain; pulse quick and small; legs and ears cold; profuse sweats, mortification and death.

The second species of the disorder is when the inflammation attacks the internal coat of the intestines, and is generally accompanied by a violent purging and some fever—the symptoms of the latter, however, are much less violent, nor does the animal appear to be in so much pain.

TREATMENT.

In the first or peritoneal inflammation, the only dependence is on early and large bleedings. In addition to this rub the whole belly well with the mustard embrocation, clothe the animal warmly (with fresh sheep skins if posble, insert several rowels about the chest and belly,) putting into them the blistering ointment. As the horse is generally costive, give him a pint of castor oil, and inject clysters of warm flaxseed tea, give him warm water or thin gruel or flaxseed tea to drink, rub his legs with the hands well, and see that he has

plenty of clean fresh litter. If in six hours the disease is not relieved, bleed him again, and should costiveness continue repeat the oil and clysters. If, after giving all these remedies a faithful and continued trial, the pain should continue, recourse may be had to the anodyne clyster.

In the second species of this disorder, bleeding need not be resorted to unless the febrile symptoms run high. Clothe the horse warmly, use the mustard embrocation freely, and omit the oil. Give him frequently by means of a bottle (if he will not drink it,) quantities of very thin gruel or flaxseed tea. If in spite of this the disease continues, use the anodyne clyster; if that fail the astringent draught. The pain occasioned by physicking, is to be relieved by large clysters of thin gruel or flaxseed, which produce copious evacuations and relief.

BROKEN WIND.

This is an incurable disease; all that can be done is to relieve the animal for a time so as to enable him to perform a day's work. To do this make the following

PASTE BALL FOR BROKEN-WINDED HORSES.

Assafœtida two ounces, elecampane two ounces, flowers of colt's foot, two ounces, powdered squills two drachms, linseed powder, one ounce, honey as much as will make the mass. Divide it in four balls, and give one morning and evening. Much benefit may result from bleeding in this disorder at an early period of the complaint. His food should be carrots or turnips. The hay, oats, or whatever is given, should be in small quantities at a time, and always be sprinkled with clean, soft water.

BROKEN KNEES.

Apply a poultice of bread and milk or bread and warm water to reduce the inflammation, then dress the wound with basilicon.

BURNS OR SCALDS.

If slight, apply cold lead water; if extensive, a liniment made of equal parts of linseed oil and lime water. If there is much fever bleed.

CANKER.

Cut away freely all the diseased parts, and if necessary draw the frog, then apply the

LINIMENT FOR CANKER.

Warm 6 ounces of tar, mix with it, drop by drop 1 ounce by measure of oil of vitriol, then add 1 ounce of oil of turpentine. Bind this firmly on the part, destroying all the diseased protruberances with lunar caustic. When the wound looks healthy, dress it with the green ointment.

CAPPED HOCKS.

If the swelling proceeds from a bruise or a blow, bathe it three or four times a day in salt and vinegar made warm. If it proceed from a natural cause, apply the suppurating poultice, and when matter is formed let it out, then use the green ointment.

COLD.

Take a quart of blood from the neck, then give warm mashes with a scruple of nitre in

them. Purge with castor and linseed oil, and keep the stable warm.

CONVULSIONS.

SYMPTOMS.—The horse raises his head higher than usual and pricks up his ears—neck stiff and immovable, skin tight. He stands in a straddling posture, pant and breathes with difficulty.

CURE.—Bleed him if his strength will permit it. and his pulse is high, eye red, &c., otherwise not. If you observe bots, or any other kind of worms, pursue the treatment recommended for them.

COUGH.

Take a quart of blood from the neck, and give the following

BALL FOR COUGH.

Half an ounce of Venice soap, half an ounce of nitre, ten grains of tartar emetic, and ten grains of opium. Make these into a ball with

honey, and give one every other night. Keep the horse warm and remedy costiveness by castor oil.

CORNS.

Let the farrier cut them out with a sharp knife. Should they show a disposition to grow again, touch them with oil of vitriol or caustic and dress them with green ointment. Be careful in shoeing not to let the shoe press on the corn.

CURB.

Cauterize the curb in a line down its middle and then apply the blistering ointment.

CRACKED HEELS.

Poultice the parts with carrots or turnips boiled soft, three or four times, then anoint them with yellow basilicon mixed with a little green ointment.

THE GRIPES.

As soon as the disease is observed, give the draught below, and a clyster composed of 8 ounces common salt in six quarts of water gruel or warm water. If there is great pain with quick pulse, take away three quarts of blood. The belly should be well rubbed with the mustard or other stimulating embrocation. If no relief is obtained in two hours repeat the draught and embrocation, and should even this fail give him a pint of castor oil with one and a half ounces of laudanum. If castor oil cannot be had, a pint and a quarter of linseed oil may be used.

DRAUGHT FOR GRIPES.

Balsam copavia 1 ounce, oil of juniper 1 drachm, spirit of nitrous ether half an ounce, mint water 1 pint. Mix for one dose.

DIABETES.

This disorder, which consists in an involuntary discharge of the urine, which is pale and

thin, frequently proves fatal. To cure it, take a quart of blood from the neck and give the following

BALL FOR DIABETES.

Peruvian bark four drachms, ginger one drachm, if costive after it, give a pint of castor oil. Repeat if necessary.

EYES.

Inflammation of the eyes is often cured by scarifying with a lancet the inside of the upper and lower brow, and the distented vessels of the eye itself. It is to be remembered that in treating an inflammation of this important organ, we should proceed precisely as if treating a human being laboring under the same complaint, and keep the animal on short allowance, prevent costiveness, keep the stable cool and dark.

Soreness or weakness of the eyes is cured by bleeding from the neck and using the following

EYE-WATER.

To one quart of water put three drachms of the sugar of lead and two drachs of white vitriol. When dissolved let it settle and pour off the clear liquor for use. A drop may be put into each eye three times a day with a feather.

FILM OR CATARACT.

There is no remedy for this but an experienced farrier. There are a variety of washes, &c. recommended by various authors, but they are useless.

FARCY.

This disease commences in small hard knots, which soon become soft and ulcerous, generally situated on the veins and extending upwards. It is a contagious disorder, and not unfrequently ends in the glanders.

CURE FOR FARCY.

Open the ulcers and touch the inside of the edges slightly with powdered verdigris, by

means of a camel's hair pencil. At the same time give the following ball: white arsenic eight grains, and corrosive sublimate six grains powdered and mixed with flour or bread or any other vegetable that will form a ball with molasses. Keep the animal warm, mix chopped carrots with his mashes. Intermit one day and give a similar ball—if it purge add 10 grains of opium to it. Attend constantly to the ulcers; wash them with warm soap-suds, and keep the animal by himself—if the disease gains the nostrils and head, and becomes glanders, shoot him at once. There is no remedy.

GREASE.

Wash the part well with soap suds twice a day, and if the swelling is great apply a poultice to it, when the sores are cleansed touch them with a rag or feather dipped in the vulnery water.

FOUNDERED FEET.

This is known by the contraction of the hoof, which will appear considerably smaller than

the sound one. The horse just touches the ground with the toe of the foundered foot on account of pain, and stands in such a tottering way that you may shove him over with your hand.

CURE.—Take off the shoe, bleed freely from the thigh vein, and purge two or three times. Keep the hair close trimmed and the parts clean.

HOOF-BOUND.

Cut down several lines from the coronal down to the toe all round the hoof and fill the cuts with tallow and soap mixed. Take off the shoes and (if you can spare him) turn the animal into a wet meadow, where his feet will be kept moist. Never remove the sole nor burn the lines down, as this increases the evil.

LAMPAS.

This consists in a swelling of the first bar of the upper palate. It is cured by rubbing the swelling two or three times a day with

half an ounce of alum and the same quantity of double refined sugar mixed with a little honey.

LAXITY.

Never attempt to stop the discharge too suddenly or too soon; this common but erroneous practice has killed many fine horses. To begin the cure, give him the following

MILD PURGING BALL.

Rhubarb in powder 1 ounce, magnesia half an ounce, calomel 1 scruple, oil of aniseed 1 drachm, make up a ball with honey and liquorice powder. Next day give the horse 1 fluid ounce of liquid laudanum, with 20 grains of tartar emetic in a pint of water. On the third day repeat the purge, then the drench, until the animal is well.

INFLAMMATION OF THE LUNGS.

Bleed the animal copiously as soon as the complaint is perceived, and repeat it in six

hours if the fever, quicknesss of breathing, &c. do not abate. Blister his sides, rowel the chest, and give the following ball, which is to be taken morning and evening until the staling is considerably increased, one a day will then be sufficient. Grass or bran mashes should be the food.

THE BALL.—Powdered nitre 6 drachms, camphor 1 drachm, as much syrup and linseed meal as will form the ball.

MALLENDERS.

Wash the cracks well with warm soap-suds and a sponge, and then with the vulnerary water twice every day, wipe the parts dry and apply the green ointment.

MANGE.

Wash with soap-suds and vulnerary water, and purge with castor oil. Feed the horse well and work him moderately.

MOLTEN GREASE.

Bleed and purge moderately, feed regularly on a diminished allowance.

POLL EVIL.

Bring the swelling to a head as any other tumour by the supperating poultice, which is made as follows:

SUPPURATING POULTICE.

Take four handsful of bran and three middling sized turnips, boil them till soft, beat them well together; then boil them again in milk to a thick poultice, adding to it 2 ounces of linseed and half a pound of hogs' lard.

QUITTOR.

Make an opening for the matter to descend from all the neighbouring sinuses. Keep the parts well cleaned with warm soap-suds, then inject the vulnerary water into the sinuses. If there is a core touch it with caustic, when this is discharged dress with the green ointment.

RING BONE.

If recent, blister the part, if an old affection, recourse must be had to firing.

SAND-CRACK.

Remove the shoe and ascertain carefully the extent of the injury; if the crack is superficial, fill it with the composition below, and keep the foot cool and moist. If the crack has extended to the sensible parts, and you can see any fungus flesh, with a small drawing knife remove the edges of the cracked horn that press upon it. Touch the fungus with caustic, dip a roll of tow or linen in tar and bind it firmly over it. The whole foot is to be kept in a bran poultice for a few days or until the lameness is removed. A shoe may then be put on so as not to press on the diseased part. The pledget of tow may now be removed, the crack filled with the composition and the animal turned into some soft meadow.

COMPOSITION FOR SAND-CRACK.

Beeswax four ounces, yellow resin two ounces, common turpentine one ounce, tallow or suet half an ounce. To be melted together.

SIT-FASTS

Are horny substances on the back under the saddle. Take hold of them with a pair of

pincers and cut them out radically: leave no part behind or they will grow again. Dress the wound with the green ointment.

SALLENDERS

Require the same treatment, as mallenders, which see.

STRAINS.

In whatever part of the body this accident occurs, the treatment should be perfect rest, moderate bleeding and purging till the inflammation is reduced, when any stimulating embrocation may be used.

STRANGURY.

Take away a quart of blood and throw up a laxative clyster; then give one ounce of saltpetre and one fluid ounce of sweet spirits of nitre in a pint of water.

STRANGLES.

This is known by a swelling between the jaw-bone and the root of the tongue. If a

large tumour appear under the jaw apply the supperating poultice. When it is ripe open it, squeeze out the matter and re-apply a warm poultice. In a few days it will run off. Give warm bran mashes and gentle exercise.

THRUSH.

Remove the shoe and pare off all the ragged parts so as to expose the diseased parts; after cleaning the frog nicely apply a solution of blue vitriol and shortly after pour some melted tar ointment into the cleft of the frog and cover its whole surface with tow soaked in the same, and on the tow a flat piece of wood about the width of a frog, one of its ends passing under the toe of the shoe, the other extending to the back part of the frog and bound by cross pieces of wood, the ends of which are placed under the shoe. Repeat the dressing every day.

VIVES.

This is a disease most common to young horses, and consists in a long swelling of the

parotid gland, beginning at the roots of the ears and descending downwards. If it is painful and inflamed, apply the poultice—if it supperates open the lump, let out the matter and dress with the green ointment. If it is hard and indolent apply strong mercurial ointment to disperse it and bleed moderately.

WIND GALLS.

These swellings appear on each side of the back sinew, above the fetlock. It is dangerous to puncture them as is sometimes done, as it may produce an incurable lameness. Tight bandages and moistening the parts frequently with a strong solution of sal ammoniac in vinegar may do some good.

WOUNDS.

All the rules laid down in this book for the treatment of wounds in the human subject, apply strictly to horses. As in simple cuts, however, sticking plaster cannot be used, the edges of the wound should be neatly stitched together. Much can be done also by the

judicious application of bandages. Farriers, generally, are in the habit of pursuing such absurd, cruel, and fatal practices in these cases, either by cutting off a part that appears to be partly torn from its connection, or by using stimulating applications, that it becomes necessary to repeat again, that all the rules laid down for the treatment of wounds in this work as applicable to man are equally applicable to the noble animal of which we are speaking. Read over these rules. Substitute the word "horse" for "patient," and you will be at no loss how to proceed.

BLEEDING IN GENERAL.

Bleeding is often the most useful and efficacious means of curing diseases in horses, &c. In inflammatory affections, it is generally the first remedy resorted to, and its immedate salutary effects are often surprising.

When it is necessary to lessen the whole quantity of blood in the system, open the jugular or neck vein. If the inflammation is local, bleed where it can be conveniently done, either from the part

affected, or in its vicinity, as by opening the plate vein, superficial vein of the thigh, or temporal arteries.

In fevers of all kinds, and when inflammation attacks any important organ, as the brain, eyes, lungs, stomach, intestines, liver, kidneys, bladder, &c., bleeding is of the greatest use. It diminishes the quantity of blood in the body; and by this means prevents the bad consequences of inflammation. The quantity of blood to be taken varies according to the age, size, condition, and constitution of the horse, and urgency of the symptoms.

From a large strong horse, four or six quarts will generally be requisite, and this may be repeated in smaller quantities if symptoms demand it. The blood, in these diseases, must flow from a large orifice made in the vein. A horse should never be suffered to bleed upon the ground, but into a measure in order that the proper quantity may be taken. Young horses, also, while shedding their teeth, have sometimes much constitutional irritation, which bleeding relieves. But in these affections it is very rarely necessary to bleed to the same extent as in fevers, &c., two or three quarts generally suffice to be taken away.

FULLNESS OF BLOOD.

Moderate bleeding, as from two to three or four quarts, is also used to remove fullness of habit, or plethora, attended with slight inflammatory symptoms. In this case the eyes appear heavy, dull, red or inflamed, frequently closed as if asleep; the pulse small, and oppressed; the heat of the body somewhat increased; the legs swell; the hair also rubs off. Horses that are removed from grass to a warm stable, and full fed on hay and corn, and not sufficiently exercised, are very subject to one or more of these symptoms. Regulating the quantity of food given to him, proper exercise, and occasional laxatives, as the following powder, will be commonly found sufficient after the first bleeding, and operation of an aloetic purge. In slight affections of this kind, a brisk purge will often alone be sufficient.

LAXATIVE AND DIAPHORETIC POWDER.

Take of crocus of antimony, finely leviagated, nitre, cream of tartar, and flower of sulphur, of each 4 ounces.

Powder and mix them well together for use.

One table-spoonful of this mixture may be given every night and morning, in as much scalded bran, or a feed of corn moistened with water, that the powders may adhere thereto.

This powder will be found excellent for such horses as are kept on dry meat, whether they be in the stable, or travel on the road; also for stallions in the spring of the year, as they not only keep the body cool and open, but cause him to cast his coat, and make his skin appear as bright as silk.

PURGING.

In obstinate grease and swellings of the legs, accompanied with lameness of the joints, dry coughs, worms, diseases of the skin, farcy, apoplexy or staggers, affections of the liver, and several other diseases treated of in this book, murcurial purges are of the greatest service. They purge; destroy worms; generally increase the flow of urine; operate upon the skin, liver, and other viscera in a peculiar manner; cause a healthful action in these parts; and remove many chronic complaints incident to the horse. Great caution is necessary during their operation, lest the horse take cold. The

water given him must be warm, and when exercised he should be properly clothed.

Horses that are kept on dry meat, and are full fed with little or no exercise, require purging every six months, with two or three doses each time, allowing proper intervals between each; and those horses which run in stage-coaches, chaises (whose labor is often more than their natural strength is able to bear,) and such whose legs are inclined to swell—all require purgative medicines; the use of which would be the means of preventing many of the diseases that attack this useful animal.

TO PREPARE HORSES FOR PHYSIC.

After violent exercise, horses are liable to lose their appetite, and to have their stomach loaded with crudities, and indigested matter; the non-removal of which, by the use of proper physic, is the chief cause why so many die daily. Previously to administering a purge, the body should be prepared.

The proper method of preparing a horse for physic, is to give him two or three mashes of the scalded bran and oats, and warm water, for three

or four days together. This will soften the fæces, and promote the operation of the medicine. But if a strong purge be given to a horse of costive habit, without preparation, it will probably occasion a violent inflammation.

PURGATIVE BALLS FOR HORSES.

Take of Barbadoes aloes 7½ oz.; Castille soap, 1½ oz.; powder ginger, 1½ oz; oil of aniseed, 2 drachms; syrup, a sufficient quantity to make six balls, each of which is a dose.

DRINK TO CHECK OVER PURGING.

Take of prepared chalk, ginger, and aniseeds, in powder, each one ounce, essential oil of peppermint 15 drops, rectified spirits of wine, ½ an ounce.

Mix the whole in a pint and a half of warm linseed gruel, and give it.

TO CURE THE THRUSH IN HORSES FEET.

Simmer over the fire, till it turns brown, equal parts of honey, vinegar, and verdigris, and apply

it with a feather or brush occasionally to the feet. The horse at the same time should stand hard, and all soft dung and straw be removed.

TO PREVENT THE FEET OF HORSES BALLING WITH SNOW.

If the frog in the hoofs of horses and the fetlock be cleaned and well rubbed with soft soap, previously to their going out in snowy weather, it will effectually prevent their falling from what is termed balling the snow. A number of accidents might be prevented by this simple precaution.

ANOTHER.—Take of prepared chalk 2 ounces, aniseeds and carraway seeds, in powder, each 1 oz. opium ½ a drachm. Mix and give it in a pint of linseed gruel.

ASTRINGENT DRINK AFTER LOOSENESS.

If the looseness continue, after the above drink has been administered for two or three days, the following astringent drink will be given:

Take of pomegranite shell, in powder, and pre-

pared testaceous powder, each 1 oz., Dover's powder and ginger powdered each 2 drachms. Mix and give in a pint of warm gruel, and repeat twice a day.

COUGH DRINK.

Take of Barbadoes tar, anisated balsam of sulphur, each 1 oz. Incorporate them with the yolk of an egg, then add, nitre 1 oz., giner half an oz., tincture of opium 1 oz. Mix them together.

Let this drink be gradually mixed in a pint of warm ale or linseed tea, and give it in the morning, fasting; let the horse stand without meat for two hours after, then give him a mash of scalded bran and oats and warm water. Repeat every other morning, for three or four times.

FEVER BALL FOR HORSES.

Take of antimonial powder, tartarised antimony and camphor each one drachm: nitre and Castile soap, each 2 do.; Barbadoes aloes, 2 drachms. Mix and beat them into a ball with syrup of buckthorn.

Let this ball be given to the horse about two hours after bleeding; and in six hours after giving him the ball let him have the following

PURGATIVE DRINK.

Take of Epsom salts, 4 oz.; nitre, ½ an oz.; coarse sugar two table-spoonsful. Dissolve them in a quart of gruel; then add ten ounces of castor oil. Mix, and give it while new milk warm.

After the first ball is given, the aloes may be left out, and then the ball and drink may be given once a day (one in the morning, and the other in the evening,) until a proper passage be obtained.

POWERFUL MIXTURE FOR FEVERS.

If the fever still continue to increase, it will be proper to take a little more blood from him, and then to have recourse to the following fever powder.

Take of emetic tartar, 1 oz., calcined antimony, 2 oz.; calcined hartshorn, 1 oz. Mix, and grind them in a mortar to a fine powder; then put them

in a bottle for use; 2 drachms of these powders are a proper dose for a horse.

A dose of this powder, with one ounce of nitre, may be given twice or three times a day, in a pint of warm gruel, or be made into a ball with conserve of roses. If the fever be violent, and the horse in a raging state, ½ an ounce of tincture of opium may be added to each dose of powders.

DRINK FOR AN INFLAMMATORY FEVER.

Take of tartar emetic, 1 drachm; prepared kail, ½ oz.; camphor, 1 drachm, rubbed into powder, with a few drops of spirits of wine.

This drink is excellent for all kinds of inflammatory fevers; especially such as are attended with imminent danger. It may be given every four hours, or three times a day, in a pint of water gruel.

PURGING BALL FOR JAUNDICE.

Take of Barbadoes aloes, from 4 to 5 drachms; white antimonial powder, ½ and Castile soap, each

2 drachms; calomel, 1 drachm. Mix, and beat them into a ball with a sufficient quantity of syrup of buckthorn.

The horse should have a couple of mashes the day before this ball is given, by way of preparation, and the ball should be given fasting the morning following; let him fast for two hours after, then give him a mash of scalded bran and oats, with warm water, and treat him in the same manner as for other physic.

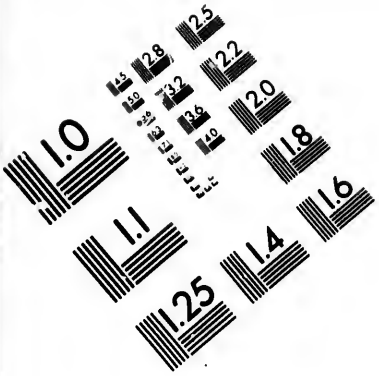
RESTORATIVE BALLS AFTER JAUNDICE.

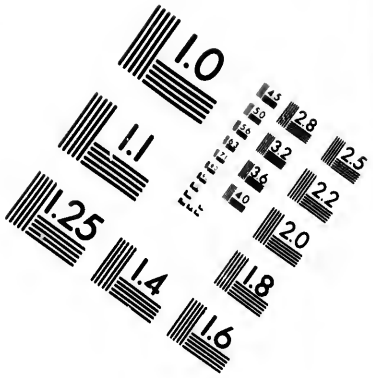
Take of gentian and caraway seeds, in powder, of each, eight ounces; powdered ginger, and precipitated sulphur of antimony, of each 6 drachms; Castile soap, 1½ oz.; and honey sufficient to form into 6 balls.

One of these balls should be given every other day for some time.

PECTORAL BALLS FOR BROKEN WIND.

Take of Barbadoes tar, Venice turpentine, and





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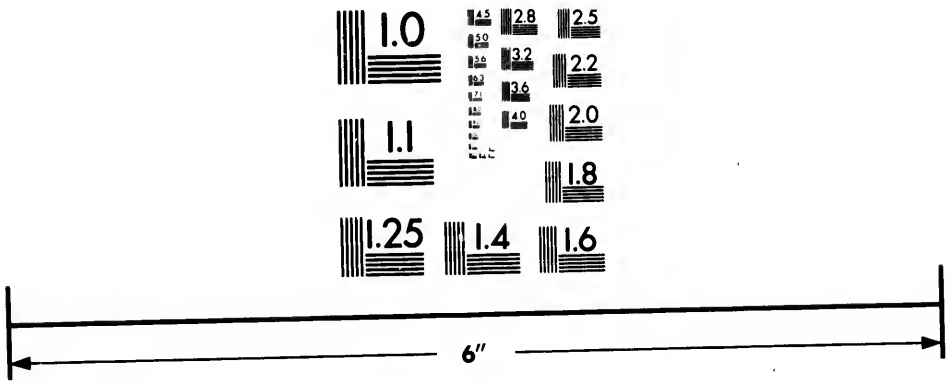

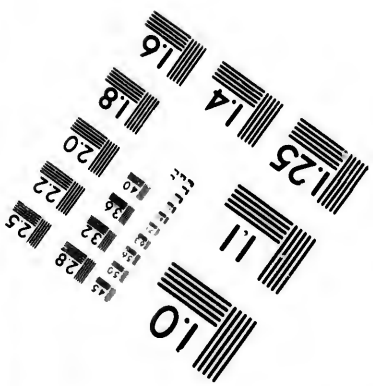

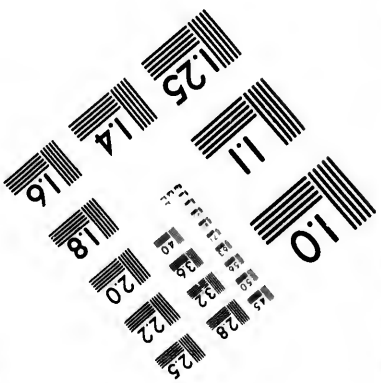

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Castile soap, each two ounces; squills, in powder, 1 ounce; calomel, 3 drachms. Beat them well together; then add, nitre, 2 oz.; aniseeds and caraway seeds, fresh powdered each one ounce. Beat them into a mass with honey and liquorice powder, and divide into ten balls.

ALTERATIVE BALLS FOR SURFEIT, MANGE, &c.

Take of precipitated sulphur of antimony, gentian root, and socotrine aloes, each one oz. in fine powder; nitre, 2 oz.; calomel, and cantharides, in powder, each 2 drachms. Mix, and make them into a mass for balls, with honey or treacle. Each ball to weigh one ounce and a half.

These balls will be found very useful in many diseases; such as surfeit, hidebound, mange, grease, or swelled legs, lameness of the joints, molten-grease, inflammation of the eyes, and, indeed, in all lingering and obstinate diseases. One ball may be given every other morning, for a fortnight or three weeks together.

ASTRINGENT BALL FOR PROFUSE STALEING.

Take of galls and alum, in fine powder, of each 2 drachms; Peruvian bark, ½ ounce. Make into a ball, with honey or treacle.

It will be proper to repeat this ball every morning, and if the disease is obstinate, every night and morning, and continue until the urine is diminished to about its natural quantity.

RESTORATIVE BALLS FOR PROFUSE STALEING.

Take of gentian root, in powder, half an ounce; ginger, powdered, 2 drachms; alum, 1 drachm; treacle sufficient to make into a ball.

MERCURIAL BALL FOR WORM.

Take of calomel and Castile soap, of each one drachm; worm-seed, in powder, half an ounce. Beat them into a ball with syrup of buckthorn.

This ball should be given at night, and the

following drink, or purging ball, the next morning.

DRINK FOR WORMS.

Take of Barbadoes Aloes, from 3 to 6 drachms (according to their size and strength), worm-seed and gentian, in powder, each ½ an oz.; caraway seeds, in powder, 1 oz. Mix, and give in a part, of strong decoction of wormwood, and repeat in about 4 or 5 days; but omit giving the mercurial ball after the first time.

PURGING BALL FOR WORMS.

Take of Barbadoes aloes, 8 drachms; ginger Castile soap, and oil of savin, each two drachms; syrup of buckthorn, sufficient to make them into a ball.

This purge is calculated for a strong horse; but it may be made weaker, by lessening the quantity of aloes to 6 or 7 drachms, which are, in general, sufficient after a mercurial ball. The horse should have mashes, warm water, and proper exercise.

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