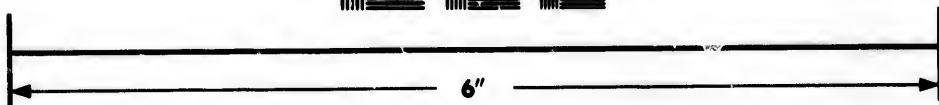
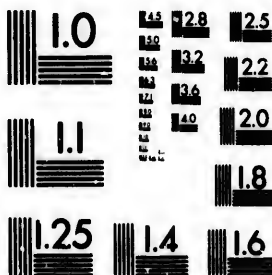


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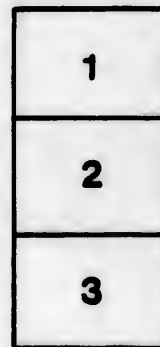
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V.H. 183
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THE HORSE:

A TREATISE ON THE
EDUCATION AND MANAGEMENT OF HORSES,

TO WHICH IS ADDED

THEIR DISEASES AND REMEDIES.

ALSO,

A Treatise on the Management of
Cattle and Dogs, &c.,

BY

PROF. E. R. GRAVES

AND

H. PRUDDEN.

TORONTO:

T. HILL & SON, CAXTON PRESS, COR. KING AND NELSON STS.

1868.

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Entered according to Act of the Parliament of Canada, in the year One
Thousand Eight Hundred and Sixty-eight, by Edward Rufus Graves,
and Henry Prudden, in the Office of the Minister of Agriculture.

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PREFACE.

The authors of this work, entitled **THE GREAT SECRET OF HORSE EDUCATION**, having had a long experience in handling some of the most vicious horses in the country, and having met with entire success, would offer their work to all lovers of this most noble animal, the Horse. We bring this system before the public, in printed form, so that all who favor us with their patronage may be benefitted thereby.

In treating upon this theory, we are well aware of the disadvantages under which we labor; and perfectly conscious of the prejudices which we are apt to excite in men who, having managed horses for a considerable extent of time, and having a way of their own with which they are usually satisfied, are likely to say humbug to any idea which to them is new and strange. There also exists in the minds of many intelligent persons an opposition to all professionals endeavoring to improve the horse. This opposition arises from the many failures among that class, and the consequent damage done to animals handled by such men. We do not expect to obliterate these prejudices, but have courage to hope from past experience that if we are given a careful hearing, and our theory put fully into practice, we can improve the opinions of the people beyond all doubt on the subject of Horse Education. We are about to introduce to you one of the most easy, practical, and improved systems of horse-training ever known. It is our desire to make this a reliable and valuable book of reference. It will be found not only to correct many of the errors generally entertained in regard to the successful

management of horses, but to give a full explanation of the principles of our present improved system.

Our treatment of diseases is taken from some of the best Veterinary Surgeons in the country, and are accounted reliable.

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INTRODUCTION.

Our object in presenting this little work to the public, is to alleviate as far as possible the sufferings of that noble, and much-abused animal, the horse. And, also, to teach man, who is his natural master, the best, easiest, and most practical way of making him a kind, willing, obedient servant to do his bidding. God made man in his own image, and to him was given the control over the beasts of the field, the fowls of the air, and the fish of the sea; and, in order that man may successfully exercise that control over the animal creation, God has endowed him with a superior order of intellect. It cannot be denied that animals possess understanding,—instinct, we call it; but it is an instinct capable of education and government.

All have heard of, or seen wonderful feats performed by animals, birds and serpents; and even swine, that are supposed to possess the smallest degree of intellect, have been educated and made to perform wonderful feats of intelligence. But man has a higher order of understanding, which the animal creation does not possess. Man reasons from cause to effect, and it is to mind and not to matter that he looks to explain his reasoning; for his mind is capable of expansion to an almost unlimited extent, while animals reason but from experience. No animal, trained to wonderful and seemingly impossible feats, has the power to impart his knowledge to another creature. Each, for himself, must be taught by man, or learn by experience, if at all. A horse's sense is good common sense. Many a man knows less, in proportion to his intellect, than a horse, and, in the same proportion, a horse is much easier taught.

There is in horses, as in man, much difference, some being more intelligent than others. A horse is not naturally suspicious, but, while young, is timid, and soon learns that teeth and heels are his only weapons, and flight his greatest security. His boldness and "the glory of his nostril" comes when he "rejoiceth in his strength"; with his age comes the knowledge of his power, and if he has never been mastered, never made to yield to any will but his own, if he is to be made useful to man, the struggle must come sooner or later, and the will of the man, or that of the horse, must triumph. Let a horse once learn that he can gain an advantage over man by the use of his heels, and he soon learns from experience that he can break the slender shafts and free himself from the buggy, and he will become a kicker and a runaway; another rears and falls back or sideways; so with biting and all other bad habits of a horse. The horse is possessed of superior strength, and man of superior mind. Hence it is evident that our power over him is not physical power only, as of brute over brute, but of mind over matter, or of a superior over an inferior order of intellect. Should we attempt to measure our strength with that of a horse, he would be the victor in every case. It is therefore evident that we are dependent for our mastery over the horse, upon our skill and ability to use our superior understanding in such a way as to overcome his strength. In other words, we must out-general him in order to bring him under our control, and make him do our bidding. And in order to do this successfully, we must understand something of his nature and the laws by which he is governed.

REMARKS

On the Nature and Disposition of the Horse.

We believe that the horse is governed by his animal instincts and nature, and that he has no rational conception of mind or thought; yet we contend that he can be educated more easily than any other animal known to civilization, if taken in conformity with the laws of his nature. We will now give you the three fundamental principles of our theory, those principles being founded in the leading characteristics of the animal:

1. That he is so constituted by nature that he will not offer resistance to any demand made of him which he fully comprehends, if made consistent with the laws of his nature.

2. That he has no consciousness of his strength beyond his experience, and can be handled according to our will, without force.

3. That we can, in compliance with the laws of his nature—by which he examines all things—take any object, however frightful, around or on him, that does not inflict pain, without causing him to fear.

We take these assertions in order: First, then, we will tell you why we think the horse is naturally obedient. The horse, though possessed of sensitiveness to a greater degree than man, is deficient in reasoning power—has no knowledge of right or wrong, or will of his own independent of government, and knows of no imposition practiced upon him, however unreasonable those impositions may be, consequently he can come to no conclusion what he should or

should not do—because he has not the reasoning powers of man to argue the justice of the thing demanded of him. If he had taken into consideration his superior strength, he would be useless to man as a servant. Give him knowledge in proportion to his strength, and he will demand of us the green fields as his inheritance, where he will roam at will, denying the right of servitude to all; but God has wisely formed his nature so that it can be acted upon by the knowledge of man, according to the dictates of his will, and he might well be termed the unconscious and submissive servant. Then we can but come to the conclusion that if the horse is not taken at variance with the laws of his nature, that he will do any thing that he comprehends without making an offer of resistance.

Second, The fact of the horse being unconscious of the amount of his strength, can be proven to the satisfaction of any one who will take the trouble to observe him for a day.

Third, That he will allow any object, however frightful, to come around or over him, that does not inflict pain.

Fear always arises either from the effect of imagination or from the infliction of pain, frequently from both causes combined. For example, let a horse become frightened at the cars, the noise of a wagon, or sound of a drum; if, in his struggles to free himself, his heels come in contact with the cross-piece or whiffletrees, he associates that hurt with the first cause of fear; and whenever, afterward, his heels come in contact with the whiffletrees, he remembers the former fright and is equally alarmed. But let him once, according to the laws of his nature, be convinced of the harmlessness of the object, and he ever afterward will regard it with the utmost unconcern. All experience proves this. The worst horses in the country have been cured of fear of robes, blankets, umbrellas, newspapers, &c., &c. We have never known it to fail, that as soon as the horse was con-

vinced of the harmlessness of any place or object, he ceased entirely to regard it with fear.

The horse in his natural state, roamed over the broad fields uncontrolled and untamed, and there would have been no need of subduing him by force had there been no law of his nature violated. Man, being possessed of intellectual resources, can devise and invent means by which he can overcome the superior strength of the horse and subdue him. Here lies the secret of our system of managing and subduing wild and vicious horses. To do this we must, in the first place, impress upon the mind of the horse most thoroughly an undoubted sense of our superiority and strength, and to do this too in such a way as not to arouse his resistance. In the second place, to so disconcert and control him under all circumstances, as to impress upon his mind most forcibly, the utter impossibility of any successful resistance to our power or strength; in fact, to beat him upon his own ground with the apparent ease and certainty of positive ability, without resorting to harsh means or inflicting pain. In the third place, by uniform acts of kindness, win the confidence of the horse, and teach him that you are his best friend, and in a short time he will learn to associate with your presence, a feeling of protection and security.

Here we would call attention to one of the first principles of our system of education; it is, caress the horse kindly for doing right. If you wish to encourage a boy and tell him he has done right, you pat him on the head, and say: "good boy." So with an animal.

Patting and caressing kindly, conveys to them the idea that you are pleased with them, that they have done right, and there is no animal more sensitive to this kind caressing than the horse; he always understands it to mean "that's right," that you are pleased with him. As an illustration of the truth of this statement: we once had a horse, nine

years of age, brought to us to be taught to back. Several men that were acquainted with him said it could not be done. They came to see the fun, they said. They had seen four men work at him an hour at a time, and, with their united strength, could not make him back at all; they had a very severe bit in his mouth, which had cut it very badly. We worked at him a short time, and got him to take just one step back with one foot. We then caressed him kindly, and, on taking hold of the reins again, he stepped back four steps. We then caressed him again, and he got the idea of what was wanted, and he would back all over the ring, and would back readily whenever we wished him to. We saw the owner a few days after, who said he was all right, that he would back all day if he kept saying "back." The fact was, the horse had never before understood what was wanted of him.

The horse's confidence and rebellion being usually the result of long experience in successful resistance, his subjugation must be made convincing by repeated proofs of being over-matched, and that resistance is useless. For since his willfulness and rebellion are based upon the limited reasoning of his experience, he must be thoroughly convinced by experience that unconditional submission is the only alternative, and this you cannot prove to the understanding of the horse without repeating your lessons until he submits unconditionally. His submission should be encouraged and rewarded by kindness and caressing; that master is supreme in his control, and submission to his commands becomes a pleasure, who has the power to enforce his will, but who exercises it with the sweetening encouragement of love.

While force is necessary, and you have the means of making your horse almost a plaything in your hands, let the silken cord of love be the cement that fixes and secures his submission to your will. It is admitted that a good-natured,

clever man, can teach a horse almost anything, and it has become a proverb that kindness will lead an elephant by a hair. So the horse should be treated with kindness and consideration. His spirit should be curbed and directed—but not subdued. Man has the right of control, restraint, correction, and even destruction of life, but he must bear the consequences of those violations of the laws of his nature to which he is thereby subjected. Show your horse exactly what you want him to do, and endeavor to use the patience and reason in teaching and controlling him, you would at least believe necessary for yourself to understand if placed in like circumstances. Ignorant of the language and intentions of a teacher, who even preserved his patience and refrained from abuse, what progress would you make as a pupil, gifted as you are with all your intelligence? If possible, enable and elevate your feelings by relieving your responsibility to yourself, to community, and to the noble animal committed to your charge. Make your horse a friend by kindness and good treatment. Be a kind master, and not a tyrant, and make your horse a willing and obedient servant.

There are a few simple, common sense rules, which, if followed, will commend themselves to the horse as well as to the driver.

First. Always feel kindly towards your horse, no matter what he does to you; and never, under any circumstances, show temper or get excited. Remember the horse knows instinctively just how you feel.

Second. Never go near a horse if you are afraid of him. He will know it and take advantage of it before you acknowledge it yourself. We once knew a man who brought home a kicking horse. His man took care of him at night and in the morning, the horse showing no disposition to kick. But the first time he attempted to go near him after learning the horse was vicious, he kicked at him.

The man was not conscious of showing signs of fear, but the horse felt it.

Third. Never undertake anything with the horse that you do not know you can carry out.

Fourth. Don't be in a hurry. Teach the horse what you want of him, as a child learns his alphabet, one letter at a time; and be sure that he knows each simple thing, before you attempt to teach him another, repeating the lessons often.

Fifth. Reward each effort to do as you wish, whether he means it, or does it accidentally. Punish for doing wrong, but reward for doing right.

Sixth. Be sure that it is *your* will, and not his, that conquers in every case.

Seventh. Never, under any circumstances, deceive your horse; and never say *whoa!* unless you want him to stop. Have a separate and distinct word for every command, and let him understand what it means, and nothing else. How many times we have heard men say *whoa! back! haw!* when the *haw!* was all they wanted.

Horsemanship has reached its present stage of perfection by a gradual process of experiments and discoveries. In all man's inventions and discoveries, he has invariably commenced with some simple principle, and gradually developed it from one degree of perfection to another.

The first hint of the power of electricity was Franklin's bringing it down on the string of his kite. Now it might be said that man has entire control of the subtle element—making it the instrument of transmitting thought from one extremity of the globe to the other with a rapidity that surpasses time. And the great propelling power that forces the wheels of the steam-car over vast continents, and plows the ocean and rivers with thousands of steamers, was first discovered escaping from a teakettle. And so the powers of the horse, second only to the power of steam, has become

known to man only as observation and investigation revealed them.

We teach the theory that the horse is a teachable creature, and that his mind can be educated, and when fully and properly taught, it is as durable as life—except the principles taught are forced from his mind by systematic management—and we believe the horse is much easier taught than man. We claim for our system a superiority over all others, for this reason: that all other general systems that have been introduced have been both laborious and dangerous to man and beast, while our system is both safe and easy—from the fact of its being a natural one. We further contend and believe that our system of training the horse is the most perfect now known, and challenge the world to confute the principles on which it is based.

The system of horse training, as practiced by J. S. Rarey, was the best system known at that time. But there were very few men that had the courage, the muscular strength, and the ability to conquer a vicious horse on the Rarey plan.

But the new system which we teach, and which was discovered and brought to perfection after years of careful study of the nature and disposition of the horse, and which is now practiced and taught by us, is both safe, easy, and practical. By it a horse becomes a mere play-thing in our hands.

The resistance of the horse is exactly in proportion to the confidence he has in his own power or ability to resist control, and anything which reduces that confidence, reduces his disposition to resist. Loss of food or drink, bleeding, physicing, severe pain or violent exercise, all have a tendency to prevent resistance, just in proportion as they reduce vitality, and destroy his confidence in himself. It is on this principle that the Indians of our western plains, and the South Americans, break their wild horses.

They first catch them with a lasso, and then ride them with whip and spur, until, from exhaustion, they become gentle and submissive. Disabling the horse by strapping up one or both fore legs, is a more direct method of accomplishing this end, and has long been regarded as a great secret in the art of controlling horses. So long ago as 1762, an account was given in Bartlet's Gentleman's Farrier, of this method, which was then described as Dr. Bracken's. In 1825 an account was given in Bell's Life, published in London, of the wonderful powers exhibited by a man named Bull, over horses, which was also described as being accomplished by this method. The fame of the once noted Whisperer Sullivan, who flourished about sixty years ago in Ireland, was unquestionably based upon the practice of this means of subjection.

A man named Offut, claims to have practiced this method of subjection in this country as long ago as 1825, and to have sold the secret to Mr. Rarey. Mr. O. H. P. Fancher, who is well known in the New England States, claims to have practiced this method for many years, and advertises having given Mr. Rarey his practical instructions in the use of the art. But Mr. Rarey established the precedence of his claims to the public attention, and identified his name with this theory of management, by his exhibitions of power over a number of bad horses in England in 1858.

And also in this country, about the same time, Mr. Rarey deserves great credit for bringing his theory before the public, and reducing it to a practical system.

Mr. Rarey's plan of subduing the horse was, first, to strap up the left fore leg, then to put a strap on the right fore leg, between the foot and fetlock, bringing it up over the surcingle, and holding it in one hand. Then, by pressing against the horse until he attempted to take a step, he would pull his foot from under him, bringing him on his

knees. The horse would then come up and down on his knees, until, becoming exhausted, he would lie down.

Rarey says he will generally lie down in ten minutes, but we have seen horses that would not lie down in half an hour, if at all.

The Rarey plan of controlling a vicious or a runaway horse was by means of foot straps, which were brought back to the buggy, and held in the hand with the reins; then, if the horse should become unmanageable, his feet could be pulled from under him, bringing him on his knees. Many a horse has had his knees injured, if not entirely ruined, in this way.

By our new system we are enabled to subdue a horse and bring him under control at once, and effectually, without giving him time to get excited or to offer much resistance. We can lay him down ten times in a minute, if we can get him up fast enough. We have seen it done sixteen times in a minute, by the watch, and it is not necessary to go within twenty feet of him to do it, so that the operator is at a safe distance.

To illustrate the principle. A few years ago wrestling was a favorite sport with young men, and often with older ones. Suppose a man succeeds in throwing his opponent; if it has been difficult to accomplish and taken some time, the other will feel ready to try again as soon as he is rested. But if the victor should be able to throw him ten times in a minute, and apparently without much effort, he will be ready to yield, perceiving, at once, the other's superior strength.

So it is with the horse. Although he resist a little at first, he is soon convinced of his utter inability to help himself in the least, and yields.

Another very essential point, and wherein we claim lies our greatest success, and the superiority of this system over all others, is the manner in which we reach the intellect of

the horse, and teach him what we want him to do. We always caress him when he does right, but *never* when doing wrong, and he soon learns that a caress means that we are satisfied that he has done right. We see the truth of this demonstrated every day.

Even when he does right from accident, we caress him, so that he understands, at once, what is wanted of him, and is ready to do it again.

We contend that a horse is always ready and willing to do whatever is required of him, if he fully comprehends what is wanted, and has not learned by experience that he can gain an advantage by resistance.

The Wild Colt.

As the training of the horse must be based upon the observance of those principles of his nature requiring the exercise of his reason in everything forced upon his attention, and of conveying to his understanding most clearly what is required of him, it is advisable to commence our lessons on the management of horses by explaining how to proceed with the wild colt: First, prepare your barn, or such place as you design for your training room. Everything tending to annoy or excite your colt—hens, hogs, or dogs, must be driven out. Endeavor to be all alone with your horse. Do not suffer the curious—who will be anxious to judge of your ability, as they would term it,—to crowd in. Guard against such a nuisance, if possible, and as such persons are usually slow to take a hint, be decisive in your wishes, observing that it is a positive condition of your instructions. Your object next is to get your colt into his place, which you must do as quietly and gently as possible. You can accomplish this best by leading in and hitching in his view another horse. The colt will, generally, soon walk in of his own accord, but if he should not, do not be in a hurry to drive him in. Walk quietly around him, and

gradually give him less room by closing in upon him. Be slow and careful, and he will not run or become frightened. Give him time to examine and look around, and in a short time he will walk in. When in, remove the old horse as quickly as possible. There are two ways of haltering, either of which will answer. We will give both ways, and the scholar may adopt the one best suited to the case. The first is to approach and familiarize yourself to the colt until he will let you approach readily and handle him as you please, when the halter may easily be put on. The *other* is to get the halter on before you have succeeded in gentling him much. In ordinary cases, the first one will be the most practicable, but if the colt is extremely wild and nervous, the latter is preferred: because a much quicker method, and does not excite.

First Method for Ordinary Cases.

As soon as he appears quiet and reconciled to the restraint of the enclosure, go cautiously and slowly towards him, making no demonstration at all, but talking gently, or singing, as you please. He does not understand your language, and you talk or sing the sooner to reconcile him to your presence and attract his attention. If he begins to walk away from you, stop, but continue your talking or singing, and appear as careless as you can about his presence, until he becomes quiet again. Then start again and leisurely approach him as before, and so repeat as circumstances require until you are close enough to touch his withers, or permit him to smell of your hand, should he seem so disposed. Remember you must be patient and gentle in all your actions. Now touch him on the withers, gently, and gradually win his confidence so that you can handle and rub his neck and finally the head. Do not try to hold him or impose the least restraint; that would cause him to become excited and afraid of you. Fondle the colt in this way until

he becomes reconciled to your presence, and will suffer you to scratch or handle him as you please. Now step back and take your halter quietly. The halter should be of leather. Rope halters are objectionable, for young horses in particular; they are so hard that they hurt the head whenever the colt pulls. Being hurt, the colt will instinctively try to get his head out of the halter, and the more it pulls the more it will hurt, because the tighter and harder it will pinch—which will frighten him the more—and he will try to free himself at all hazards, until he pulls himself down or possibly breaks the halter. In that case, his experience would have been a bad one, for you would have taught him to be a halter-puller.

You should take the halter in the left hand, having unbuckled it, and approach the colt slowly; don't be in a hurry; give him time to smell and examine every part in his own way. While he is examining the halter, caress and rub him, and it will further your efforts greatly to give the colt something he likes—such as apples, oats, corn, or anything he likes that you can get hold of handily. Then take hold of the long strap which goes over the head, with your right hand, and carry it under his neck, while you reach the left hand over the neck and grasp the end of this long strap; then lower the halter just enough to get his nose into the nose-piece, and then raise it up to its proper place and buckle. This is the best method to halter a colt, if he is not extremely wild; but if your subject is wild and nervous, the following method is much the best.

Second Method.

First provide yourself with a light pole, about ten or twelve feet long; cut a notch in one end with your pocket-knife, and about seven inches from this end drive a nail in, the head bent a little towards the end having no notch. Next you want a good half-inch sea-grass rope, about

twenty or twenty-five feet long, with a slip-noose in one end and a knot in the rope about twenty inches from the end with the noose, so that it will not draw so tight as to choke the colt down, but will allow the noose to draw tight enough to shut off his wind to that extent as to prevent him from making a very obstinate resistance. Now get a short breast-strap, or a long haim-strap will do. This put into your pocket convenient to the right hand, for future use. Now approach the colt slowly and carefully, as before described, remembering that visitors must be excluded. If you are alone you can work faster and better than it is possible with company. When you succeed in approaching to within four or five feet of the withers, retreat slowly, as before, and take your stick, previously prepared, holding the notched end from you, and swinging it very gently a little to the right and left in a horizontal position. This is a new object of fear to the colt, and will be regarded with a good deal of suspicion. However, a little patience will soon enable you to get so near the colt that you can hold your stick gently over the back and withers. Then gradually lower it, moving gently as before till the hair of the main is gently touched. As this is borne, let it drop a little lower until it rests upon the main. Now commence scratching the mane with a stick, gently but firmly. This will please the colt and cause him to stand still. While scratching with your stick in this way, slide your right hand slowly and cautiously along its surface until you get to the mane, when you scratch with the hand in place of the stick. All this is proving to the colt that you will not hurt him—in fact, you please, and hence he submits quietly. Now step back to where your rope is, and take the noose and place it on your stick, letting it rest in the notch and on the nail, with the main part of the noose hanging below the stick, and large enough so as to be slipped over the head easily, while you keep the other end of the rope in

the hand with the stick. Your halter or noose now hangs upon your stick so spread that you can put it over the colt's head without touching a hair. Your halter arranged, holding it before you, swinging upon the stick, you approach the colt in the same cautious manner as before until you bring it to the nose. This being a new object of fear to the colt, he will smell of it cautiously. While he is smelling it, you are gradually raising it over his head—so gently, he does not feel or care about it, until you get it well back of the ears, then turn your stick and your noose will drop on his neck. If he does not start, take up the slack in your rope gently, at the same time approach his withers cautiously, and rub him gently if he will allow it. If he should endeavor to run away, keep hold of your rope. If he tries very hard to get away, he soon finds himself out of wind, caused by the pressure of the rope about the neck, consequently he will offer but a feeble resistance, and will very soon allow you to come up to him just as you please. Now you should use him gently. As soon as he will allow you to approach, loosen the noose from his neck, and by kind words and caresses, let him know you do not wish to hurt him. Keep on gentling him till he will allow you to rub his neck, head and ears. Encourage him by feeding from your hand something that he likes. When he submits so far as to let you handle his head and neck, take the other end of the rope and tie a round hard knot in the end and another knot about twenty or twenty-five inches from the end. This knot should be left slack. Now take the end of the cord in the left hand, and carry it under the neck to the opposite side, while you reach over with the right hand and take it and bring it over the top of the neck again. Now put the knot in the end of the cord through the other and secure by drawing it up as tight as possible. This is commonly called a cow knot. Now make a loop by drawing a double of the slack rope under the rope around the neck.

Make the loop long enough to slip into the colt's mouth, which can be done easily by gently insisting on his confidence. A green colt is not bad about taking anything in its mouth, if you use judgment and do not frighten them. Slip this loop well up above the bridle teeth, and place the lip well over the jaw under the rope. Now draw up on your loop, and take the noose you first had about the neck, off entirely. Now take hold of the end of the cord. You will find you have a means of power in your hands that makes the strongest horse almost a plaything. And this we call the Spanish halter, and its value in managing and training colts cannot be over-estimated, when used with judgment and handled with adroitness and skill. It should never be used so harshly as to excite extreme pain, and yet with a touch that causes a fear of resistance. You now have your Spanish halter, and can control the colt almost at will. If he should endeavor to run away from you, give him a quick, sharp jerk; at the same time say ho! and repeat as often as he may make the attempt to get away. When he stops, go up to him and caress and gentle him about the head and neck. When he gives up to the rope enough so that he does not try to get away, then proceed to learn him to lead. With your rope in hand, step back to his side, opposite his hips, and say "come here, sir," at the same time giving him a sharp pull on the halter. He will swing round towards you, and if he only takes one step in the right direction, let him know that was what you wanted. To make him understand that he has done right, go up to his head, speak kindly to him, call him a good boy, at the same time petting and caressing with the hand. Then walk round on the opposite side and repeat. Encourage him for every step taken in the right direction by caressing and kind words, and in a very short time he will come to you at the word, and follow you around like a dog. If the colt is willful and stubborn, handle him with the

Spanish halter until he will stand quietly, then take your strap, previously provided, in the right hand, holding by the buckle. Now commence raising gently the fore leg next to you. If he resists your efforts, reprove him with the halter, and keep on caressing and rubbing the leg till you can take the foot in your hand; then slip the strap around below the fetlock, putting the end through the keep on the inside of the buckle, draw it up tight so it will not slip up, then pass the strap around the arm, from the inside of the leg, and bring over to the outside and buckle. By putting him on three legs, he can offer but little resistance when pulled by the head sideways, and, as he does not reason, will come round as readily with his legs free as he will on three. Now step back on a line with the hips, holding the halter firmly, and say, "come here, sir." He, of course, does not obey, so you pull on the halter, and he is obliged to swing round to you. Now step to the other side and repeat; bring him around by the halter each time, until when he hears the words, "come here," he will obey readily. As soon as the colt submits to this step, remove the strap from off the leg and rub the part gently where the strap has been. Now step back and sideways, as before, and say, "come here, sir." If he does not come readily, give him a sharp pull with the rope, which shows him you can handle him as well on four legs as you can on three. Now if he moves a little to obey, caress him, and so continue until he will follow you readily.

How to Handle the Feet.

After submitting sufficiently to lead well, caress and rub him on the withers, as at first, and, as soon as he will bear, work down the shoulder and leg; then lift lightly on the foot; if it is submitted, rub it quickly and smoothly a few seconds, then put it down and take it again, and so continue until you can handle the foot as you please. The main

point for you to consider is, that you are to make the colt understand you will not hurt him, and to do this you must be gentle. Now place your hand on the withers and run it back over the side and hips softly and quickly; handle every part thoroughly as you work along towards the leg, and as the colt will bear, work the hands around the leg until you reach the foot. If there is no resistance, lift it up a little—just a little—and if there is no resistance, after letting it down, rub and gentle a little more; repeat, each time lifting it up a little higher, until you can take it up and handle it just as you please. Should he, however, resist and jerk his foot away from you, you must resort to means to make him understand that resistance is out of the question. In tampering with the colt, you should have your Spanish halter on, as before described. Now take the long rope that you hold in your hand, put it around over the front teeth of the upper jaw and under the upper lip—carry it round over the top of the head, bringing the end down through the halter loop on the under jaw. Now take the end of the rope in your left hand, and proceed as before to handle his legs and feet. If he stands quietly, use him gently; but if he should resist, correct with your rope—by which you can inflict so severe a punishment that he will submit unconditionally in a very short time, and allow you to handle his legs just as you choose. Persevere until you can hold the foot in your hand, moving it gently in the same way, then let it down and rub the leg until he gets over the fear inspired by the use of the cord under the lip. If more thorough treatment is necessary, see “Management of Horses bad to Shoe.”

To Make a Colt Follow Under the Whip.

After he comes round to you readily by pulling a little on the halter, and follows freely, take your whip in the right hand, pull upon the halter a little, saying, “come here, sir,”

at the same time tap lightly with the whip over the hips. He will yield to you mainly because you have taught him to yield to a slight pull upon the head, and to come to you at this signal, and because he wishes to get away from the touch of the whip behind. As soon as he comes to you, caress him and feed him something that he likes from your hand. Repeat this until he comes to you as readily by tapping with the whip as he did at first to the halter. Now, instead of hitting with the whip, commence by snapping it behind him. If he comes, caress and encourage him as before, and so repeat at each time, increasing the distance from him, until he will follow or come to you readily by cracking the whip. We give this method because it is simple, and, in our judgment, practicable to most any one, and will bring the desired result in a short time—indeed, so well as to make your horse follow you around the streets without halter or bridle.

To Teach the Colt to Back.

Put on the Spanish halter; stand directly in front of your horse, having hold of the cord about twenty inches from the head with your left hand, resting your right on the cord six or seven inches from the head, you now say "back, sir." Your horse does not know anything about what you want, of course, and does not obey. Immediately after saying back, press down and back with your right hand sharply on the cord, which will set the head back with a jerk. Do not expect your colt to go back without a struggle of resistance. Repeat this four or five minutes, being careful not to get excited. As a rule the colt will not go back with one lesson, probably not with the second, but will be sure to do so at the third lesson. The more intelligent and spirited the colt, the sooner he will submit, and the more ready his obedience. The duller and slower your subject

the more patient and persevering must be your efforts. It is now time to commence biting your colt.

Biting the Colt.

Some people seem to have strange notions. It would seem as if the style and position of the head depended entirely upon the attention given to biting. The object of biting, it should be borne in mind, is to teach the horse to obey the rein, and, at the same time, habituate the horse to give the head and neck as high an elevation as the form and temper of the animal will bear. But while it is admitted that careful attention to biting will improve the style and bearing of the horse, it should not be forgotten that the position in which the horse carries his head in harness will depend almost entirely upon his form and temper. No art can give the horse with a low, perpendicular shoulder and short neck, a fine style of carrying his head and neck—even if he possesses good courage and spirit. The practice of straining the head and neck into an unnatural position, and keeping it so for hours, as is practiced generally in biting, is very cruel, besides being often a cause of injury. When the head is strained up into an unnatural position, and kept there for a long time, the colt will learn to relieve the pain and weariness he feels, by resting the entire weight of his head upon the bit, and which teaches him to lug upon the bit, and causes the mouth to become insensible to pressure. We will now explain what we regard as an improved method of biting, which teaches the horse exactly what you require and does not injure the mouth in the least, and by which you can bit a horse well in about one hour: by limiting your lessons to five minutes and repeating until the head is rendered freely and readily to the purpose of the rein, seldom requiring more than six or eight lessons of five minutes each.

How to Make a Biting Bridle.

Take your Spanish halter, made exactly as before described with the exception of the loop that goes round the neck; that should be made large enough to fit over the neck rather tightly where the collar is worn. Now bring your cord through the mouth from the off side and bring back on the near side through the loop around the neck; now pull on this cord, and the head will be drawn back to the breast. You are now prepared to bit. Simply pull upon the cord a little, which will draw the head back slightly; after holding for a short time, render loose; then draw a little tighter, and so repeat for four or five minutes; then stop biting, and repeat at some future time.

The great secret, not only in biting, but of training the young horse in any manner, is in not confusing or exciting him to resistance by training too long. When your colt yields readily to the bit, you can check the head to suit. Making the check rein rather tight causes the head to be carried high, while the delicacy given the mouth will prevent the nose being thrown forward. This method of biting may be regarded with little favor by those not understanding its effects, but all we have further to say on the subject is, give it a fair trial. Teach your colt to be perfectly submissive to your handling, in every manner; to lead well; back freely at the word. You are now ready for the next step in his training, which is, usually, driving in harness.

Training to Harness.

Put on your harness carefully, which should be made to fit well, and great care should be used in having it safe and strong in every respect. Do not be tempted to drive your colt in an old rotten harness, or to hitch to an old rotten, rattling wagon, as such are liable to give way at any time. Many of the accidents causing horses to become subject to

bad habits, are the results of such imprudence. Let every step be made sure. Work safe, and you are sure to bring about a good result. With your harness on, allow him to stand in his stall until he becomes somewhat used to the presence and pressure of the different parts, and will allow you to rattle them about without his caring for them. Now lead him around for a short time, and as soon as he appears quiet, check him up loosely, and take down the reins and drive him around in the yard. When he becomes familiar with the harness, check and reins, and will stop and start at the word, and drive around to the right or left, you can drive him about the streets with safety; though in making this step, you had better have your Spanish halter on for safety. You should then drive to sulky. We prefer a sulky at first. Let your colt see and examine every part of the sulky until he cares nothing about it, then draw it up behind him, rattling and running it back and forth a few times, then attach the harness. Before starting him, back him up against the cross-bar of the shafts. If he should act frightened, speak to him calmly but firmly, at the same time holding your reins firmly, so as to prevent him from swinging round if he should try. Then go to him and rub and caress him until he gets over his excitement. Then run the sulky up against his haunches, at the same time soothing him by gentle words, until you can shove the sulky against him just as you please, and he not care anything about it. Now you can get into your seat and drive him around wherever you choose without danger. Let him go slow at first, until he becomes familiarized with the objects that are new to him along the road, as he is not so liable to become frightened while going slow as when driven fast.

Driving.

When your horse drives well before a sulky, then you may hitch him to a light wagon, or by the side of another

horse; and if you are breaking him for a farm or for hauling heavy loads, you can gradually increase his load until he will draw to the extent of his ability without comprehending that he has the power to do otherwise. After your horse is sufficiently broke to the harness, you can either allow him to carry his head as nature may dictate, or by the proper use of the check-rein, bring his head and neck into such position of style as his form and temper will bear, or your fancy dictate. In teaching your young horse to drive well, do not be in a hurry to see how fast he can trot. Although your colt may be old enough to learn how to move well, and perhaps drive as gently as an older horse, he is not old enough to perform the work of an older horse fully matured. Require but little at first, gradually increasing as he develops in strength and hardens in his gait. Care should be taken to keep each pace clear and distinct from each other. While walking he should be made to walk, and not allowed to trot. While trotting, as in walking, care should be taken that he keeps steadily at his pace, and not allowed to slack into a walk. When occasionally pushed to his extreme speed in the trot, he should be kept up to it only for a few minutes at a time, gradually requiring more as he becomes practiced and capable of endurance; and whenever he has done well he should be permitted to walk a short time and encouraged by a kind word. Under no circumstances should what is termed "his bottom" be tried and overdone. The reins while driving should be kept snug, and when pushing him to the top of his speed, keep him well in hand, that he may learn to bear well on the bit, as it is by means of the reins, mainly, that the horse when going at a high rate of speed is kept steady in his place. But while you should teach your horse to drive well to the pressure of the bit, be careful not to give him the habit of pulling too hard; for then he becomes not only unpleasant, but difficult to manage. The art of driv-

ing well cannot be taught by any written instructions. Practice and ingenuity in this respect can alone make a skillful horseman. Always strive to encourage, not drive your horse—and be careful not to whip only for merited reproof. The too frequent use of the whip will cause the horse to plunge ahead every time he sees any unusual movement of it, or at any mishap that may occur.

Great care should be taken not to drive the colt too much at first, and, at no time, to the extent of exhaustion. Be careful never to break his courage. There is usually too much anxiety to try a colt's speed and bottom. He is pushed, overdone, and spoiled, perhaps, before he knows how to trot, or is grown to his full strength.

How to Break the Colt in One Lesson.

We frequently break colts in one lesson, so that, with careful driving at first, they will remain kind and gentle; and we think it altogether the best way, when we can have the conveniences for doing it. We first put the colt through a regular course of handling, as described in "*Subduing the Horse*," page 31, until he freely submits, then caress kindly, thus letting him know that you are not going to hurt him, but that all you require is submission. Now put the harness on him, and use a common single joint or snaffle bit, tie the tugs tightly to the breeching, and have a rope or strap tied into the turret rings, so as to form a loop or ring about two or three feet long, pass the reins through these loops. Now, when you wish to turn the colt to the right or left, step to one side, so as to bring the rein the length of the loop from him. It then acts half-way between a lead and a drive. Now drive him carefully round the ring, and when you pull on the left rein, say haw! and on the right, say gee! being careful to stop and caress frequently. He soon becomes accustomed to the bit, and is easily managed. Now put the reins in the turrets, and

hitch the horse before the cart without quarter straps, as described in "*Breaking Ring*," page , and drive him first one way and then another until he becomes accustomed to the thills, harness, &c., being careful to speak kindly, and caress frequently. Now push the cart against his heels, until he does not care for it; which will be as soon as he finds that it is not going to hurt him. We would not attempt to teach him to back at this time, but leave that for another lesson. Let the colt rest for half an hour, and then drive him in the street, either single or double, or he may be driven immediately. Be very careful not to drive too far. Never break his courage by over-taxing his strength.

Horse Taming Ring.

We have an amphitheatre, built for breaking horses, with a board wall eight feet high and sixty feet in diameter, and covered with a canvas tent. In the center is the horse taming ring, about thirty-five or forty feet in diameter, made by setting posts and running ropes around. This ring is filled with saw-dust, or tan-bark, from eight inches to one foot in depth.

The necessary fixtures are, first—A breaking cart, with very strong thills,—so strong that it is impossible for a horse to break them, try as hard as he may. Second—A good, strong, common buggy harness. Third—A throwing harness, made as follows: Have a strong surcingle made, about four inches wide, and six feet, six inches long. It should be made double, and stitched together like a tug, and should have a strong buckle at one end. About four feet two inches from the buckle end have a ring attached for a back strap and crupper, like those on a common harness. Have a ring put into the surcingle about one foot from the buckle. This ring should be just right, so that when the surcingle is buckled upon the horse, on the left side, the

ring will come directly opposite the left fore leg. Also have a ring put into the surcingle about a foot from the back strap, on the right side; now have a strap attached to the back strap near the crupper, and running to the ring on the right side of the surcingle. Fourth—A foot strap, made like a common hame strap, except it is to be longer and stronger every way. Such a horse taming ring may be erected in any barn, shed or other unoccupied building; or in a yard with a high board fence to exclude intruders. But it is better to be under cover, and should have a strong high post in the center of the ring.

Subduing the Horse.

To subdue and conquer the horse, and let him know that you are his master, you want to put him through a regular course of handling that will convince him of your ability to manage him just as you please, while at the same time you demonstrate to his understanding that he cannot help himself, and must submit unconditionally to your control. In the first place, then, give him a turn with the Spanish halter—making him stop at the word whoa! and come to you at the word. When he submits to that, proceed still further in convincing him of your power and mastery by throwing him down. To do this, put on the throwing harness, as described in "Horse Taming Ring." Strap up the left fore leg by passing the strap around the fetlock, put the end through the loop, strap to the ring in surcingle. Now draw the end of your cord or Spanish halter through the ring on the right side, bringing it over to the near side of the animal; now take the halter out of the mouth, thus leaving a plain loop around the horse's neck; then take hold of your cord with the left hand and straighten it out. Now you have a plain double from the neck of the horse around to the ring on the right side; you put this into the horse's mouth, and draw up the end of the cord with the right

hand. Now you have him completely in your power; you can handle him as easily as a boy could a top. Now step back by his side with the cord grasped firmly in your hand, say "lie down, sir," at the same time pulling steadily on the rope. His foot being fastened up he is easily thrown off his balance. He will gradually settle down on the knee of the near leg, when a quick pull will bring him over on his side. Now you have him down, use him gently; rub his head and neck; talk to him kindly, thus letting him know that your object is not to hurt him—that all you require is submission, and that you possess the ability to enforce that. After letting him lie for awhile, make him get upon three legs, let him stand a moment, then put him down again. While down, handle his feet and legs as you please, and so continue until he will lie still and submit to you in everything you wish. Then take the strap off his leg and let him get up; caress and rub his leg where the strap has been.

We would call particular attention to this method of throwing a horse. It is the easiest and most expeditious way now known, and is accomplished without any danger to either the operator or the animal. Whatever may be the bad habit of your horse, it is a very good plan to give him a regular course of training, and by throwing a horse down, and handling him just as you please while down, demonstrates to the understanding of the animal that it is worse than useless to try to resist control. It is the best way we have ever found to handle nervous horses, that would not allow their legs handled. After handling gently while down, they find they are not hurt, and get over their fear, and will allow you to do with them as you like, anywhere.

Kicking in Harness.

Kicking may justly be regarded as a bad habit, because of the danger incident to the use of such horses. It is well

to remember that this habit is in most cases the result of carelessness or mismanagement. Proper attention is not given to the fitting of the harness; the straps dangle about the flanks of the colt, unacquainted with their nature, which frightens and causes him to kick. Or, what is more common, an old harness is used and breaks at some unlucky moment, which frightens the colt, and he kicks as a means of self-defense, when his feet and legs coming in contact with the whiffletree or cross-piece, causes him greater fright and he becomes reckless, springs ahead in a frantic endeavor to free himself from his tormentor, until he tears himself loose, or is stopped after being worried out with fright and exertion. Learning fear and resistance in this way, he becomes alarmed at the least indication of its repetition. This fear must be broken by familiarizing the horse with the causes of his fear, at a time when he is powerless to resist, and when he finds there is no danger of harm, he will cease resistance. In the majority of cases this habit is broken by our means of control, as described in "Subduing the Horse," page 31. When the Horse gives up, and will allow you to handle his legs and feet as you please, and will submit to you in everything that you wish, then put the harness on him, and use a blind bridle with a double joint or W bit, eight inches long, with the bars five and a half and two and a half inches long. With this kind of a bit on your horse, you want to drive him around your yard, occasionally saying whoa, at the same time setting him back upon his haunches with the bit. In a very short time he will stop when you say whoa, without any pull on the rein; then go up to him and caress him about the head and neck; then take your whip and switch him around the hind legs and flanks, lightly, and, if he shows a disposition to kick or run, say whoa sharply, at the same time correct with the bit. In your first lessons, use the bit with severity—thus demonstrating to the horse your determination

and ability to enforce obedience, under any and all circumstances of resistance. When you can drive him around with a whip at a trot, and stop him at the word without using the rein, go to him again and pat and rub him to encourage him in well-doing. Then attach a long cord to your reins, and start him away from you at a trot, letting him go as far as the length of your cord will permit without pulling on the bit, when you will say whoa. If he stops, go up and caress him, and keep on in that way until he will stop and start at the word, no matter how far away he is, so long as he can hear your voice. After you have him so well in hand that he obeys readily and willingly, take the reins in your hand and learn him to back, encouraging him by kindness when he does right, and correcting with the bit when he shows the least intimation to be rebellious and stubborn. When he will back at the word, back him against your buggy wheels, keeping an eye on his movements, and if he shows fear and a disposition to get away from it, do not force him against it at first, but drive him around and up to it, letting him smell and examine it until he becomes satisfied it is not going to hurt him; then back him up to it again—right back against it—and if he is disposed to kick, say whoa! sharply, at the same time giving him a short, quick jerk with the rein. By this treatment he finds that you still have the same power in your hands that has already controlled him so completely and easily, therefore he submits unconditionally. You can now proceed to hitch him up; watch him closely, and if anything should excite him momentarily, and he should manifest a desire to repeat his old habit, say whoa, and if he does not obey instantly, set him back with the bit in a manner that shall leave no doubt of your ability to control him at will. If handled in this way for a few times, he becomes convinced of the uselessness of resistance, and careful management for two or three weeks will radically break the

worst horse of this kind we ever saw. People have often expressed wonder at our success in managing kicking and runaway horses. The simple laws of nature are to such unworthy of reflection, except the submission of the animal, the control is looked upon as the result of a peculiar gift. But we do control them perfectly and thoroughly by the word whoa. In breaking to the word, we use means that compel obedience. If your horse minds the word quickly and stops at your bidding, he is not going to do you or himself any damage by kicking; for if you stop him whenever the old habit is brought to mind, and let him stand until the excitement is over, he will have no incentive for kicking, and in a short time will forget the habit altogether.

Kicking Straps.

There are several kinds of kicking straps in use, but we consider them of little importance, as the treatment described in "Kicking in Harness" seldom fails to break up the habit entirely, if carried out with firmness and perseverance. The manner of putting on the kicking straps is as follows: First—Buckle a strong strap, with a ring slipped on it, around each hind foot, just below the fetlock joint. Now put on the Spanish halter, (or perhaps a rope a little longer and stronger would be better,) but instead of putting it around the neck, make a small loop in the end, just large enough to go over the lower jaw, then pass it over the neck and through the loop at the jaw, bringing it back between the fore legs and over the girth, and tie to the strap on one of the hind legs. Now tie a similar cord into the loop at the jaw, bring back in the same way and tie to the strap on the other hind leg. Your horse is now in position; if he kicks, it is against his jaw, thus punishing himself. There may be danger of a bad kicker injuring his jaw in this way. To prevent that, and perhaps it would be better in any case, put on a strong, common rope halter,

run it back and tie to the straps on the hind legs as before. Another style of kicking strap, preferable to the first, is this: Take your Spanish halter, double it and place the center of the cord on the top of the head, bring it down on each side and through the mouth above the bits, then bring it upon the opposite side, and through the gags of the bridle, then back through the turrets on the saddle. Have a ring fastened to the back strap near the crupper, pass both ends of the cord through it, bring down on each side and tie to the shafts, or it may be brought back and tied to the whiffletree. Now if your horse kicks, he jerks his head upward. This disconcerts him; he cannot well raise head and feet at the same time. If preferred, a leather strap, made like a check-rein, may be buckled to the bridle, brought through the bit rings and gags, then back to the shafts as above.

The Runaway Horse.

Handle with the Spanish halter, and by throwing the same as the kicking horse in harness, unless the habit is caused by fear of some object, such as an umbrella, buffalo robe, or anything else that might frighten him and cause him to run away: if that should be the case, when you have him down, take the frightful object—whatever it may be—around him, throw it on to him, at the same time rub and caress him; let him know it is nothing that will hurt him; then let him up, put it on or over him, rub him with it, and in that way familiarize him with it until he cares nothing about it. Then train him in harness with the W bit on until he will mind the word whoa. Make him run, and if he does not stop at the word, stop him by the bit so suddenly as to disconcert him and destroy his confidence completely.

Although we have given a powerful means of coercion, and of impressing the horse of his inability to resist the

power of man, still practical and thorough as those means are, they are of but little account if not used with prudence and judgment. Men are too apt to depend upon main strength and stupid harshness for success in the management of horses. And with equal stupidity the basis of control we have here given may be made in the hands of some, a power to be abused with reckless disregard of consequences. Be Firm, Persevering, and Prudent in the exercise of your power when it is necessary to impress your subject with a sense of mastery; but be Gentle, Attractive, and Affectionate when he is obedient and submissive. Train your horse thoroughly with the Spanish halter each time before hitching up. We find by experience that horses subject to bad habits are ungovernable in the mouth. If we govern the mouth well, we have, in almost every instance, a good control of the horse; and it is an important requisite, under all circumstances, in the control of horses in harness. Then control while driving until thorough and certain obedience is insured to the word. Strive to tell your horse exactly what you want him to do, and do not confuse him by attaching different meanings to the same word. It is quite common to say whoa! when it is intended to go slower, or to attract the attention of the horse when standing, to let him know of your presence. Now if anything should happen, and you wished him to stop suddenly, he would not be likely to mind without a pull at the bit; and why should he, as long as he has been learned in that haphazard way that whoa meant anything and nothing at the same time? Such training confuses the horse so much that, though he is naturally obedient and tractable, he will become careless and obstinate. Have a distinct word for every command, and make him understand that every command must be obeyed. Speak in a natural tone of voice to your horse, under all circumstances. Nothing confuses a horse more than screaming at him to have him hear. He is as acute in the sense of

hearing as man, and so sensitive, if nervous, as to have his pulse increased from six to ten beats a minute by one harsh word. Have your horse understand that things likely to frighten are harmless, and be sure not to whip for being frightened. If your horse is frightened at anything approaching, let him stand until it passes; but hold the reins snug and firmly, or he may swing round and upset you. If cars are passing, and are regarded with fear, let your horse face them, but hold him immovable with the reins. Always, under such circumstances, talk encouragingly to him, remembering the slower you move him the more power you have over him. There is but little danger of a horse kicking after being stopped or while moving slowly, and so with the runaway. He will seldom make a second attempt at the time he has been foiled in his purpose and stopped. A horse frightened becomes reckless, consequently never raise an umbrella suddenly or unexpectedly behind a horse afraid of such things. First raise it at his head and gradually carry it back, and then, to make sure if you have not a bit that will control your horse easily, put on a Spanish halter and carry it back in the wagon or buggy. Fear and anger is something that a good horseman should never exhibit in his countenance or voice, as the horse is a close observer and soon learns to take advantage of such indications to become careless, or excited by anger, and may become aggressive or unmanageable. Let your lessons be thorough, but not very long. Be gentle and patient with the colt, but make the willful, stubborn horse feel the full extent of your power. Make the old reprobate know that the only alternative is unconditional submission to your will; though if he should become too much heated and excited, it is prudent to stop, and repeat the lesson at some future time; but repeat until there is thorough and unconditional submission. After a horse submits, let your treatment be characterized by gentleness and good nature.

Balky Horses.

This habit is more perplexing to endure than any other the horseman has to overcome. The balky horse is usually high spirited, free in temperament, quick to comprehend, and sensitive to causes of excitement. Kindness and patience would at first have won him to a forgetfulness of the habit, but as an open and confirmed rebel, defying the powers of man to enforce submission, requires more than the patience incident to human nature to overcome. The balky horse is simply willful, and in breaking up the habit the object should be to convince him clearly, without resort to abuse or harshness, of your ability to enforce submission. We would here suggest that "an ounce of preventative is worth a pound of cure" in this and all other bad habits to which the horse is subject. Bad management is alone the cause of horses learning to balk. When the young horse balks in harness, it is not from any unwillingness to go, but from some confusion or excitement arising from mismanagement. He is willing and anxious to go, perhaps, but too fast or too high spirited to make the steady push against the collar, necessary to move the load. Because he will not pull under such circumstances, he receives the curses and lash of the driver, which not only make him mad, but discourage him, and he refuses to go. If your horse becomes confused and refuses to go ahead, do not, by any means, get mad and resort to the use of the whip the first thing; for in such a case, ninety-nine times in a hundred, the use of the whip will only strengthen the tendency to resistance into open rebellion, which is just what you do not want. As a general rule, a little patience and a few encouraging words will cause your horse to move on. But if your horse shows a decided tendency to resistance, get out and examine the harness carefully. Sometimes the collar is too large and hurts the shoulders, or perhaps the load is heavy, and you have forced your horse to draw until completely exhausted,

and simply needs time to breathe before renewing the exertion. Consider circumstances. Your horse cannot talk and tell you the cause of the difficulty. Go to his head and talk to him gently, and rub him a little. After rubbing the head and neck, (for a horse of this kind must be flattered and coaxed, as you would find it necessary to do with a stubborn child,) all he needs is a little time, and the fit will exhaust itself, and you will have no bad impression making a starting point for the habit. Gently move the horse's head to the right and left, to show him that he can move the load. After moving once or twice in this way, he will generally start and move on. After your subject moves well and safely, gradually teach him to draw steadily, by first loading lightly and increasing as the horse will bear, until the habit becomes fixed and he will work cheerfully.

But for an old bad balker, that has the habit confined by long and successful resistance, it will be necessary to give him a more thorough and decided treatment. This is one of the most difficult habits to overcome, and the most trying to the patience. There is nothing that makes one ache to use the whip vigorously more than dealing with a balky horse. But all horsemen agree that whipping does more harm than good. The following is a very good way of managing a horse of this disposition: Tie the hair of his tail together in a hard knot, then take the halter-strap in your left hand, holding the tail in the right—pass the halter strap through the hair above the knot and draw up as short as the horse will allow without running round, tying quickly. This will bring the horse in the shape of a half circle, his head fast to his tail by the halter strap. Your object is to break up his confidence in himself most thoroughly, and this is the most harmless yet most powerful of all means known to disconcert a horse on a practical basis. No horse can long bear up against the depressing influence of whirling, in connection with the proper use of the Spanish halter.

The nearer the head is tied to the tail the better, for the quicker and shorter the horse will turn, and the better the effect. Should he not run round very freely, touch him behind with a whip, which will cause him to move sharply. Simply keep him moving until he falls down by becoming dizzy, which he will do in from one to two minutes. After lying a short time, untie the halter, when he will get up rather shaken in confidence; but one lesson is not sufficient if a bad case. Tie the head to the tail in an opposite direction, and "put him through" until he falls or is unable to move. By this time a "plucky" horse may become so warm by his exertion and struggles that he is not in condition to handle to advantage. If not too warm, however, put on your Spanish halter and give him a few sharp turns, to show him that you can handle him as well by the head as you can by whirling. When he follows and submits in this way freely, put him in his stall, caressing and talking to him gently, so as to let him understand obedience is all you require, and that you are his friend. The great secret of subduing the horse is to handle him in such a manner as to impress him most powerfully with your supremacy without causing pain or excitement. This you can accomplish best by making your lessons short, and repeating after the horse has time to reflect. A man does not like to match himself against an adversary who has handled him roughly and with apparent ease, of superior strength and ability, after his mind becomes cool and the ascendancy of reason prevails; and so with the horse. If possible, do not continue his training while excited, and you will be surprised to find how soon he will yield submission.

The most balky mule we ever knew was broken in this way by twice whirling. He worked true as an ox ever afterward. Another way of managing a horse of this kind is to put him through a regular course of handling, as described in "Subduing the Horse," page 31. We have

known very bad balkers cured entirely of the habit in this way. Sometimes changing a horse, and working him on the other side will have the desired effect.

But the plan that we have found most effectual in breaking up this habit is, to change the word and say whish! If your horse balks, take him by the bits and pull a little to one side, and at the same time kick him lightly on the fore leg and say, whish! He will generally start a little; then stop and caress him. After standing a moment do the same again, only letting him take one or two steps, when you say whoa! Stop and caress, and never let him stop himself. He soon learns that you do not mean to hurt him, but all that is wanted is to go ahead. Whenever he shows a disposition to balk, don't let him stop of his own accord, but say whoa! and, after standing a minute, say whish! and he will generally start without any trouble. Do not let him know that he can stop of his own accord, but whenever you see an inclination to stop say whoa! Don't jerk on the bit. Always drive a balky horse with a slack rein. Most balkers are made so by an injudicious use of the whip before they understand what is wanted of them. Never whip a balky horse in the harness. If you whip him at all, take him in the stable, and don't take a whip—he has had too much of that already—but take a short piece of clapboard, slap him over the haunches, and say whish! at every blow. This does not hurt, but it frightens him. He soon gets so that he jumps at the word, and, when you have him in the harness, if you say whish! he is ready to “skedaddle.” We have never found a balky horse that we could not make work after a few lessons of this treatment.

If your horse balks double, a very good way to start him is to take a strong half inch rope, about fifteen or twenty feet long, place the center of it under the tail in the place of the crupper, give it a twist, or tie a single knot in it to keep it in place, then bring it forward through the inside

terret ring and over to the hame of the other horse. Have the rope just long enough to be a little slack when he keeps up his end. If he falls back or refuses to go, the other horse has him by the tail in such a way that he will be very apt to come to time. We would repeat, never whip a balky horse; it only makes a bad matter worse, and does no good except to gratify your own feelings.

Necessity of Familiarizing to Objects of Fear.

As we are taught, there are no effects without causes, and as the horse becomes fearless and confident so far as he understands there is no cause for fear, we should remove the cause of mischief as much as possible, by complying with those laws of his nature by which he examines an object, or determines upon its innocence or harm, and this is the more necessary in his early training, since first impressions are strong in the horse, and once learning suspicion, perseveres tenaciously to apprehension of danger when once excited. Whatever the horse understands to be harmless, he does not fear; consequently great attention should be given to making him examine and smell of such as would be likely to frighten him in after life. A horse will never become satisfied in regard to an object that startles or frightens him by looking at it, but if you will let him approach it slowly and examine it in his own way by smelling it and touching it with his nose, he will very soon become satisfied it is not going to injure him, and he will care no more about it, and will never after frighten at it, however frightful it may be in appearance.

Objects of Fear.

In driving, be careful about using the whip too freely. If a stone, or a stump, or anything of the kind, should be regarded with fear, do not whip and drive the horse by. Let him stand a short time and look at the object until he

seems careless about it, then push a little closer, as he will bear, and so repeat—at the same time talking to him encouragingly, until you can drive him up to the object. Be very sure to have your colt comprehend fully that such objects are harmless, as opportunity offers in this way, and he will soon become so fearless and confident as to be regardless of such things ; but if you whip him for becoming frightened at such things, he will associate the punishment with the object of his fright, and be more frightened the next time he sees it. The horse being unable to reason only from his experience, you should convince him by careful examination that the object is harmless. For example, if the sight or smell of a robe at a few feet distant should frighten him, put on your Spanish halter and take him alone into your training yard or barn, lead him gently to the robe, let him smell of it if he will, then take it in your hand, hold it gently to his nose, then rub it against his neck, side, and over his back, and so repeat for a short time, and he will become so regardless of it, that after being familiarized to it in this way—you can throw it over his back, or tie it to his tail, without causing him the least fear.

To familiarize a colt to a drum, the same principle is to be observed. Let him touch it with his nose, then rub it against his neck and side, then place it on his back, now tap it gently with the fingers, gradually increasing as he will bear it, and in a short time you you play upon it quite smartly—even while resting on his back, and he will care nothing about it. The same with the umbrella. Let him touch it with his nose first, while closed, then rub it over his head, neck and body, then commence at the head again, open the umbrella a little right under his nose, and thus accustom him to it until you can hold it, fully spread, over his head, and over and about him in any manner, and in a short time he will not mind it. Teach him that a newspaper, though it is white and rustles, is harmless, by rub-

bing him with it, throwing it upon him like a blanket, dragging it about on the ground, and riding him about with it in the hand.

To accustom your horse to the cars, lead him to the depot and have him see them at rest and examine them carefully, even to smelling and touching with his nose. Then allow him to see them move, as you have an opportunity. When you undertake to familiarize a colt or a horse to anything that frightens him, be sure and repeat your lesson until he cares nothing about the object. If you do not, the experiment will be of little advantage to your horse; in fact, it may render him worse.

To Train a Horse to Stand when Getting into a Carriage.

There are many horses that are very gentle after starting, but will not stand for you to get into the carriage. Such will sometimes rear up and start very suddenly, or, if stopped, become obstinate and stubborn, and refuse to go when required. This habit is usually brought about by the mismanagement of thoughtless or ignorant drivers, in being hasty and harsh to a horse naturally ambitious but sensitive and impulsive. The naturally intelligent and tractable colt is taken from the field and harnessed up without attention or regard to consequences. If he goes off gently, he is regarded as mild and gentle; but if he is restless, and does not go when required to, he is whipped, kicked and abused. The colt does not know what he is whipped for, and the result is he becomes stubborn and mad. If he goes, it is with a reckless, rearing plunge, or he settles back and refuses to move. Such a horse learns either good or bad habits very readily, and is either very good and obedient—if well managed—or willful and stubborn to the last degree—if to the contrary. The first step in the management of such a horse, if a bad one, is to show him that his willfulness must

yield to superior power. This you can best do by managing him as follows :

Put him through a regular course of handling, as described in "Subduing a Horse," page 31. Get a whoa! on him, as described in "Kicking in Harness," page . By this time your horse is thoroughly convinced of your ability to handle him under all circumstances. Now put on the harness and hitch to the carriage. This should be done inside the barn, if possible, with the doors closed. Have on the Spanish halter. Ascertain in the first place if he is afraid of the carriage. Back him against it, and bring him up to it, letting him examine it on all sides. Let him eat oats out of a measure set in the carriage. If it is a top buggy, raise and lower the top until he does not care for it. If he shows signs of fear, punish him by a slight jerk on the Spanish halter. When he submits, caress him. Now hitch to the buggy, and if he attempts to start, set him back with the Spanish halter, and say whoa! He has probably learned by this time that whoa! means stand still. Work in this way until he will stand quiet and allow you to get in and out of the buggy, handle the reins, &c. Then lead him out of the barn, pat and rub him on the head and neck, oblige him to stand, for he will not run over you. Then walk ahead slowly, stopping occasionally to caress and encourage him. In a short time you will find your horse will stand quietly for you to get into the buggy. For a few times after hitching, do not attempt to get into the buggy immediately before starting. Walk ahead, ask him to follow a short distance, and if he shows a desire to crowd on to you too fast, set him back with the Spanish halter. We have broken very bad horses of this stamp in four or five lessons by the halter alone; but the above method is more thorough. Always move your horse slow for some distance after hitching, and be very careful about using the whip at such times.

Kicking and Pawing in Stall.

This habit is easily broken up. First, put on a good strong surcingle, with two rings slipped on to it, coming under the belly. Then take a short strap with a ring attached, and buckle around each foot below the fetlock. To these short straps on the forward feet, attach another strap, which bring up and pass through the rings on the surcingle and back to the rings on the straps on the hind legs. With this attachment on each side, the moment the horse kicks he pulls his forward feet from under and throws himself upon his knees, which he will be very careful not to do but a few times. Let your horse stand in his stall in this way until there is no disposition to renew the habit. Or, if your horse backs out of his stall and kicks at the back of the stable, swing a plank (about 2x8, pine, is heavy enough,) by ropes from the top of the stall; let it hang about on a line with the horse's hams. It should hang about twenty inches or two feet behind the horse when he stands in his proper place in the stall. When the horse backs up to kick, his haunches come in contact with the plank, and he will kick, and when he kicks, the plank swings back and up, but when the hind parts of the horse comes down, the plank swings back to its place and slaps him on the haunches. He will be very likely to kick again, but with the same result, and he is disconcerted and beaten on his own ground, and will be careful how he backs out of his stall to kick in future; in fact it punishes him so severely every time he attempts it that he is very careful how he throws up his hind parts anywhere afterwards. We have broke the worst stable-kicker we ever saw in one day with the plank, arranged as described above.

If your horse kicks with one foot, take a piece of a trace chain, about one foot or eighteen inches long, run a hame strap through the end link, and buckle it around his foot, leaving the other loose. When he attempts to kick he will

whip himself with the chain, and soon stop it. If a horse paws in the stable, do, the same with the fore feet. If he kicks with both hind feet, put chains on both. Sometimes after you have fed the horse his oats, as you pass out of the stall, he will kick at you with one or both feet. To cure this habit put on the Spanish halter, bring the end back between the fore legs and fasten to the hind foot with a strap, as described above. Now if he attempts to kick he only kicks against his jaw, and soon stops.

Kicking while Grooming.

Such a horse is always nervous, excitable, and frequently very thin-skinned, and the currycomb hurts him, making him kick. If you have a very bad horse with this habit confirmed, it may be necessary to put him through a course of handling, as described in "Subduing the Horse," page 31. Then put on the Spanish halter, and, holding it in your hand, take the currycomb and begin at the neck, gradually working back carefully towards the places where he is tender. If he resists, or shows any signs of kicking, jerk upon the cord and say whoa! If he submits, caress him, and show him that you are not going to hurt him if he only stands still. Rub very lightly, and never use a sharp currycomb on such a horse. Some horses will not submit to the currycomb at all, unless it is an old one with the teeth nearly worn off. Use a brush mostly on a horse of this kind. If the horse is not very bad, you can break it up with the Spanish halter alone.

Halter Pulling.

A horse of this kind can never be trusted. If you leave him for a few minutes you are not sure of finding him at all on your return. There have been various ways adopted to cure horses of this bad habit. One says run the halter strap through the hole in the manger and tie to a rope, which is

passed through a pulley overhead, with a weight attached to the other end; when the horse pulls, instead of breaking the halter as he expects, he only raises the weight. Another way is to pass the rope through the hole in the manger, or through the post if in the street, bring back and tie to his hind foot. Then if the horse pulls, he is only pulling his foot under him, and soon gives it up. But the best way that we ever found to break up this habit is to take a strong half-inch rope, about twenty feet long, double it so that one end will be about six or seven feet longer than the other. Now pass it under the tail in place of the crupper, cross it over the back, bring down on each side and tie on the breast with a square knot, or some other knot that will not slip. You have now one end of the rope six or seven feet long. Put on your halter, take out the halter strap and put in some old rotten strap or rope, that you are sure he can break. Have it strong enough to require some effort to break it. Bring the end of the cord through the halter ring and tie to the post. Then tie the old halter strap so as to be about a foot shorter than the cord. It wants to be just right, so that when he breaks the strap he will come back a little before he draws on the cord. When all is ready throw something in his face and make him pull. As he comes back he breaks the strap and thinks he is loose; but finds himself brought up by the tail in a way he did not expect. We have never known a horse to pull over two or three times in this way before giving up, and never pulling again. The worst halter puller we ever knew—so bad that he had to be tied with a log chain around his neck—was broken in this way in just three minutes by the watch. He was so thoroughly disconcerted and beaten that he was never known to try it again.

To Make a Fast and Slow Horse Work Together.

You may have a nervous and excitable horse which you

are obliged to work by the side of a slow one. Such a team is very uncomfortable to drive, and the whip has very little effect on the slow horse, while it excites the other, makes him fret, and sometimes he becomes almost unmanageable. A team of this kind should be kept in separate stables, entirely out of hearing of each other, or at least separated while you are training them. Now go to the nervous horse and commence grooming him, saying "whish"! in a soothing tone, and as you brush him off, keep saying wish! wish!! Then you hitch him up single, say or use the same word to steady him down, and he soon learns that wish! means steady! quiet! Now go to "Old Pete" and take a short piece of clapboard (this will not hurt but only frighten him,) slap him over the haunches, and say wish! in the same tone as above, or take a whip and every time you hit him say wish! until he learns that wish! means double quick. Then hitch him single and train for a while, and every time you hit him with the whip say wish! until he has thoroughly learned that unless he starts immediately after the word he will receive punishment. We will now proceed to put the two horses together. Whish! means to the nervous one, steady! quiet! while to "Old Pete" it means get out of this as fast as possible! Horses of this kind, after such a lesson, will drive comfortably together. It will, perhaps, be necessary to repeat this lesson for a number of times. At your option you may adopt any other word, such as steady! hey! &c.

Bad Biters.

Put on the Spanish halter, double loop, and chastise severely if he attempts to bite. A few severe lessons will cure him, unless an old stallion that is confirmed in the habit, which no amount of training will break it up. Castrate or sell him at once.

Cribbing.

There has been a difference of opinion about cribbing, some calling it a habit, and others a disease. And it has always been considered incurable. There are two kinds of cribbers,—one may be called wind suckers. They will lay the nose across the manger or fence, and by sucking in the air and swelling out the throat makes a disagreeable noise. To cure this, take a piece of an old leather strap, six or eight inches long, and drive some eight-ounce tacks in it, and fasten it on the top of the throat latch of the bridle with a piece of twine or waxed end, and buckle just tight enough so the tacks will not prick him when he holds the head in the natural position, but when he cribs and swells out the throat the tacks prick him and he stops at once.

The other kind, which takes hold of the manger with his teeth—the biting cribbers—may be cured as follows: Take a common sewing awl and make five or six incisions in the first bar of the roof of the horse's mouth to the depth of an inch and a half. The mouth will become inflamed and remain so for three or four days. While it is so inflamed the horse will not, or cannot, crib; and by the time the mouth is well he will have learned that he gets hurt every time he cribs, and will be careful how he tries it again. If an old, inveterate cribber, the lesson will have to be repeated once or twice; but this is necessary only in very bad cases.

Putting the Tongue out of the Mouth.

Have fitted a piece of thin sheet iron, about two inches wide and four and a half inches long, with the ends made rounding, and the whole filed nice and smooth. Drill two small holes about half an inch apart near each edge at the centre. Fasten it through these holes on top of the bit with a piece of small annealed wire. Shorten the cheek pieces of the bridle, so that the bit is drawn well up in the mouth. This piece of iron is now over the tongue, making

it impossible for the horse to get the tongue over the bit. Keep this on the bit for two or three weeks, when the horse will become habituated to carrying the tongue under the bit and keeping it in the mouth. If the tongue should be put out of the mouth, though kept under the bit, take a piece of thick leather about three inches wide and five or six long, drive four-ounce tacks through the lower edge and end, so that the ends will extend through about a quarter of an inch. Fasten this on the inside of the bit, with the end extending down, outside the mouth.

Now as the tongue is put out, it is pricked by the tack, and the horse will become afraid to put it out after a few trials. Any method by which the tongue can be kept from being put over the bit, or if put out under, of causing pain when put out, will break up the habit. Sometimes simply hitting the tongue at each time of putting it out, with the end of the whip, will do.

Catching in Pasture.

Put on Spanish halter and tie the same as the biting bridle. Tie a few hairs of the mane together, also a few tail hairs. Pass the long end of the halter through these to keep the cord on the horse's back. Leave the end forty or fifty feet long, dragging behind.

When you enter the pasture, catch hold of the trailing end and advance to the horse. He will start away from you. Say to him "Come here," at the same time jerking the halter. He will find himself fast and will come to you. Try this a few times and he will come to you the moment he hears you say "come here." Feed him when he comes to you.

To Prevent Horses Jumping.

The best way is to have good fences. There are several ways to keep horses from jumping in the pasture. One way

is to put on a surcingle and tie a strap to the forward foot on each side, and pass over the sircingle, and back to the hind feet. You will see if the horse attempts to jump he cannot throw out his forward feet, and cannot jump. Another way is to tie his ears together. No horse will jump unless he can put his ears forward. And still another. Have a good, firm strap halter made that will fit the horse nicely. Stitch a sheep skin, with the wool side in, to the brow-band ; also to the head-stall as far down as the eyes. The sheep skin should be long enough to come well down on the nose, say within six inches of the nostrils. With the halter so fixed, turn your horse out. He can see to eat and shun holes, stones, or any place that he would be likely to run into if he were blinded entirely. Before a horse attempts to jump over a fence, he puts his head over and looks to calculate upon the height, and see the place where he is going to alight on the other side. But to see over the fence at all, he has got to raise his head so as to look horizontally out over his nose, and he cannot see the ground near the fence ; he is thereby disconcerted, for he will not jump where he cannot see. We have seen several of the worst jumpers in the country radically broken in a few weeks' time by this simple means. By being repeatedly beaten at his efforts, he becomes afraid to try to jump.

Getting Cast in Stall.

Drive a staple into a beam, or the floor directly over the horse's head, as he stands in the stall, to which attach a strap or piece of small rope of sufficient length to extend to within fifteen inches of the floor. Before retiring for the night attach the other end of the cord or strap to the top of the halter, making it just long enough to allow the horse to put his nose to the floor. Being now unable to get the top of his head to the floor he is prevented from rolling.

To Add Style.

Put on the Spanish halter, step in front, holding the cord in the right hand, give a slight pull. The horse will usually throw the head up, as the effect of the restraint is back and upwards, but if the nose is given back toward the breast, reverse the pull by throwing the hand up. Repeat this until the head is thrown up promptly to the least pull, either on the cord or halter.

By making this lesson thorough, the horse can be so fixed in the habit of throwing the head up, by being pulled upon, that while driving, the head can be thrown up at will, by giving a short pull on the reins.

Throwing the head up gracefully, when pulled upon with reins or by the halter, is a part of the object of biting.

If the nose is thrown out, pull down and back steadily, but firmly. As the horse yields, give loose and caress, repeating until the mouth is given back promptly. In driving to harness, have the martingales a little short, using them so, until the mouth is submitted to restraint easily and naturally. Now gradually add more style, by pulling on the reins a little, and repeating as the head is lowered in the least, until it is not only brought up, but back, as required. If not successful in this, put on the bridle as before, and work up with it until successful, then gradually, while driving, bring the head up with the control of the reins.

Hints on the Bringing Up and Management of Horses.

First. Never allow your men or boys to leave up a couple of bars when you turn out your horse to pasture, for by so doing you will give them the first lessons in jumping. You want to avoid everything that will in any way give your horse the first lesson in forming a bad habit.

Second. Never allow yourself or any one else, in turning

your horses into pasture, to hit them with the halter, strike with a whip, or make any motion as if you wanted them to get out of your way. A few lessons of this kind will make your horse bad to catch in pasture, which is very annoying and a great trial to your patience. Always treat your horse as if you liked to have him close at your side, and he will love to be there.

Third. Always reward your horse for doing right. Never speak short or cross to him unless it is to force obedience. The more kindly and gently you act to your horses, the more they will like you, and the harder they will try to please and obey you.

Fourth. Never work or drive a horse until he loses his courage. If you do, you spoil him forever. For instance, a farmer had a span of very large fine colts. He had broken them to work well by the side of other horses, but had never tried to hitch either of them single. So one hot day in July, having worked them *double* all day in the harvest field until they were wet with sweat and their strength almost used up, said he: "While these colts are so tired, it will be a good time to break them to single harness." Although remonstrated with by his hired man, he insisted on hitching the largest and best one into a buggy, and drove him without rest, sixteen miles on a hot July night. When the colt came back he was so completely exhausted that he staggered from side to side, and could scarcely get into the barn. The farmer thought he had done wonders and broken his best colt to go in single harness. When the next morning came, he hitched him up again to the buggy, but the colt would not stir a step, and would never afterwards work in *single harness*, and was one of the worst balkers in the country. The other one, after a good night's rest, was hitched up by the hired man to a buggy, and after a short time worked as well single as double, and was a true and kind horse ever after. While the one that had his courage

all broken down was never good for anything. You cannot be too careful on this point if you want a true and faithful team.

Fifth. Always be careful in using the currycomb, and don't dig in as you would with a hoe among weeds. Your horses, many of them, have thin skins and are very ticklish, so that they will not bear the currycomb unless used very gently, and particularly about the legs. For such an animal, wash the legs with soft water and soap, and then rub dry with straw, and you will have no trouble, and your horse's limbs will get stronger every day.

Sixth. If you want your horse to last long, do not check him too high. Give him the free use of his head and neck. Just think how you would feel to work all day with a straight jacket laced up tight around you.

Seventh. A manger should never be higher than the knees. Many a fine horse has been knee sprung and become a cribber by feeding in a high manger.

Eighth. Never take a colt or a horse to a blacksmith to be shod until you have first handled his feet yourself and convinced him that he is not going to be hurt. Many a fine colt has become a confirmed kicker by mismanagement in the blacksmith's shop.

TEACHING TRICKS.

As many of my scholars may wish to know how to teach their horses tricks, I will explain how it may be done. Teaching a young horse a few tricks greatly serves to keep up an interest in him, and makes him appear intelligent, fearless, and affectionate. In teaching your horse to perform tricks, it is best to give him lessons of half or three-quarters of an hour each, daily.

To Come at the Crack of the Whip, or at the Word of Command.

As for halter breaking, catching in pasture, and the like.

To Make a Bow.

Take a pin in your right hand, between the thumb and forefinger, and stand before, but a little to the left of your horse. Then prick him on the breast very lightly, as if a fly biting, which, to relieve, he will bring down his head, which you will accept as yes, and for which you will reward him by caressing, and feeding him a little apple, a few kernels of corn, or oats. Then repeat, and so continue until he brings down the head the moment he sees the least motion of your hand towards his breast; or substitute some signal which he will understand readily.

To Say No.

Stand by your horse near the shoulder, holding the same pin in your hand, with which prick him lightly on the withers, and to relieve himself he will shake his head. You then caress him as before, and so repeating, until he will shake his head at the least indication of your touching him with the pin. You can train your horse so nicely in this way, in a short time, as to cause him to shake his head, or bow, by merely turning the hand a little, or moving it slightly towards him.

To Lie Down.

To teach a horse how to do this trick quickly, you must lay him down two or three times, or as often as you will find it necessary to make him understand your object. If an old horse, strap the near fore leg up to the arm, then take your little strap, previously used to tamper your colt with, and place over the back and strap around the off fore foot, below the fetlock. Then take the bridle rein firmly in your left hand, about eighteen inches from the head, and pull upon it a little towards you. The moment he steps, pull upon the strap over the body, which will bring the horse to his knees. Hold him quietly, at the same time talking to him

gently. When he springs, pull sharply with the left hand, and the same instant pull down with the right, which will swing him around you, and prevent his rising high enough to injure his knees by the momentum of the body coming down. By being gentle, the horse will usually lie down in a short time. When down, treat your horse with the greatest attention and kindness. After holding him down, ten or fifteen minutes, permit him to get up. Repeat this lesson until he will come down readily. Then use only the strap over the back, which have on the near foot, and bring him on his knees gently, when he will soon lie down. When he will come on his knees readily by taking up the foot in this way, take up the foot with the hand, asking him to lie down. He will soon come down. When he will come down on his knees readily by taking up the foot with the hand, simply stoop as if intending to take it up, saying, "lie down, sir." Then make him come down by a motion of the hand, and finally by telling him to lie down. If a colt, use but the single strap over the body at first, which will cause him to come on his knees. In teaching a horse to lie down, be gentle, caress and reward him for lying down, and your horse comprehending what you want, and finding himself paid for compliance, will soon be as anxious to get down for the reward, as you are to have him.

To Sit Up.

When your horse will lie down readily, you can then easily teach him to sit up like a dog. If young, and not very heavy and strong, you can easily prevent his getting up, without tying down. First, cause him to lie down, having on him a common bridle, with the reins over the neck; then step behind him, and place the right foot firmly upon the tail, the reins in your hands. Then say, "get up, sir." The horse, rising from a recumbent position, first upon his belly, throws out his forward feet, and raises himself upon

them, springs forward, and raises on his hind feet. Now, standing upon his tail firmly, and pulling back upon the reins when he attempts to spring forward and up, will prevent him doing so, and you hold him sitting up. Hold him firmly a few seconds, talking to him kindly, before permitting him to rise on his feet. Repeat a few times, when, instead of springing up, he will sit on his haunches a short time, which you are to accept as complying with your wishes. Always say, "sit up, sir," every time, and hold him in the position as long as he will bear, fondling him, and feeding him from the hand with something he likes, and your horse will learn to sit up for you as long as you please.

But if your horse is heavy, and strong, it will be necessary to resort to other means to hold him down at first. This you do by putting on his neck a common collar, and causing him to lie down. Then fasten a piece of rope, or a rein, to each hind foot, and bring forward through the collar, and draw up close, which will bring the hind feet well forward. Then step behind, as before, and when he attempts to rise on his hind feet, he finds it impossible to do so, because you hold them firmly with those straps. Repeat two or three times, when it will not be necessary to resort to such force.

To Teach a Horse to Kiss You.

Teach him first to take an apple out of your hand. Then gradually raise the hand nearer the mouth, at each repetition, until you require him to take it from your mouth, holding it with the hand, telling him at the same time to kiss you. He will soon learn to reach up his nose to your mouth, first to get his apple, but finally because commanded to do so. Simply repeat until your horse understands the trick thoroughly.

To Shake Hands.

Tie a short strap, or piece of cord, to the forward foot, below the fetlock. Stand directly before the horse, holding the end of this strap or cord in your hand, then say, "shake hands, sir," and, immediately after commanding him to do so, pull upon the strap, which will bring his foot forward, and which you are to accept as shaking hands, thanking him for it by caressing and feeding. And so repeat, until when you make the demand, he will bring the foot forward in anticipation of having it pulled up. This is a very easy trick to teach a horse. By a little practice, a horse may be easily trained to approach, make a bow, shake hands, and follow like a dog, lie down, sit up, and the like, which make him appear both polite and intelligent.

Never lose courage, or confidence in your ability because you may not bring about good results easily. To accomplish anything of importance, remember, requires no ordinary resolution and perseverance. There would be no credit or importance attached to mastering and managing bad horses, if not difficult, and apparently dangerous. No duty requires more firmness of purpose in the control of the passions, or more fidelity to the principles of firmness and truth, than that of horsemanship.

If you would really be a successful horseman, you must never seem to forget, by your conduct, that you are a man, and that your real superiority over the animal consists in the prudent exercise of your reasoning powers. Brute force is not your forte, and the instant that you give way to passion, your reason must yield to the control of blind instinct, and you at once abdicate your intellectual superiority over the animal. Try to prove, by the example of your action in the performance of the duty, that to be a good horseman requires higher qualifications of fitness than that of the huckstering dishonesty and depravity, so generally evinced in the conduct of those claiming the distinction.

General Hints.

Match horses with reference to size and motion particularly—to color if you can, and have the other requisites.

Always have inside lines on double team quite long, and back-strap short.

Never *check* a horse if you wish to have him last long, except while training.

Feed in *low* mangers—*water* and *oats* to be given *first*, *hay* afterward.

If worked, very little water to be given in the night.

Stop at the *top* of a hill, and let your horse get breath.

The shoe should fit the foot—not the foot fit the shoe.

Never cut the bars or frogs.

Wet the *hay* and *not* the oats for a coughing horse.

Never let a horse stand long facing a cold wind.

Feed light when changing feed.

When training in a building, have carriages, etc., removed.

Always approach a strange horse near the shoulder.

Use but a few words with a horse, but have them understood.

Be earnest and prompt, but not harsh.

Teach before whipping, and when whipping, do it to frighten, not to enrage.

Never jump from a wagon when your horse is running away. More lives and limbs are lost in that way than by remaining in the wagon.

Exercise sound judgment by purchasing a horse suited to the business required of him. Some horses are good saddle-horses, but might not make good cart-horses.

If a horse cribs, drive a few three-ounce tacks through the throat-latch of his halter, so that the points are inward toward the neck when the throat-latch is buckled moderately tight. As he attempts cribbing, the swell of the neck causes him to be pricked, which admonishes him to quit.

How to Tell a Horse's Age.

At two years old, colt sheds two centre nippers.

At three years old, colt sheds the adjoining teeth.

At four years old, colt sheds outer or corner teeth.

At five years old, bridle tooth is up, and six years, cups leave two centre teeth below.

At seven years old, cups leave adjoining teeth.

At eight years old, cups leave outer or corner teeth.

At nine years old, cups leave the two centre nippers above.

At ten years old, cups leave adjoining teeth.

At eleven years old, cups leave corner upper teeth.

At twelve years old or past, groove on inside of bridle tooth disappears in horses. Mares very seldom have them, and when they do they are no criterion to be guided by.

Jockey Tricks.

How to make a horse appear as if he was badly foundered.—Take a fine wire and fasten tight around ankle, between foot and postern, and smooth hair over it. In twenty minutes the horse will show lame. Do not leave it on over nine hours.

To make a horse lame.—Take a single hair from the tail, put through the eye of a needle, lift front fore leg and press the skin between outer and middle tendon or cord, shove the needle through, cut the hair off on each side, and let the foot down; horse will go lame in twenty minutes.

How to make a horse stand by his food and not take it.—Grease the front teeth, and the roof of the mouth, with common beef tallow, and he will not eat till you wash it out. This, in connection with the above, will consummate a perfect foundered.

How to stop a horse of the crib, or sucking wind.—Saw between the upper teeth to the gums.

How to put a young countenance on a horse.—Make a

small incision in the sunken place over the eye, insert the point of a goose quill, and blow it up; close the external wound with thread, and it is done.

To cover up the heaves.—Drench the horse with one-fourth pound of bird shot, and he will not heave until they pass through.

To make a horse appear as if he had the glanders.—Melt four ounces fresh butter, and pour it into his ear.

To distinguish between distemper and glanders.—The discharge from the nose in distemper will float in water; in glanders it sinks.

How to make a true pulling horse balk.—Take tincture cantharides one ounce, and corrosive sublimate one drachm; mix, and bathe his shoulders at night.

TRAINING CATTLE.

Breaking Steers.

First, get your steer into a room or small yard, so that he can not run from you; then approach him slowly; and if he runs, do not be in a hurry, but wait until he gets to the end of the room or yard; then approach again slowly, as before. A steer may run from you in this way several times; but do not try and stop him with your whip, or force him to think that he will be at all injured, until he will stand and suffer you to approach him. As soon as this is accomplished, gently tie a rope around his body near the shoulders, rather loosely. Then take another strap or rope, and gently fasten one end to the near fore-foot, then pass the other end over the rope or surcingle, beneath the body. This rope should be sufficiently long to allow him to run to the end of the yard without your moving; at the same time you holding the rope sufficiently firm to compel him to move on three legs. Then approach him again quietly, and so continue until he will allow you to approach and handle him as you please. Now take a short hold of the strap with your left hand, your whip in the right, which pass over his shoulders and quietly touch him on the off-side of the head, at the same time saying, "Haw!" and continue this until he moves his head a little toward you; then stop and caress him about the neck and head. Repeat this until he will haw around toward you at the word of command. If he attempts to run from you, pull upon the strap, saying, "Whoa!" and at the same time hitting lightly upon the head with the whip. As soon as he learns to stop at the word of command in this way, and comes toward you

readily, take off the strap and the rope around the body, and turn him out. Then take the mate and give him the same course of training, until you can accomplish a like result with him. Then turn him out. By this time the first steer will be cool and rested, ready to receive another lesson. Now drive him into the inclosure, and repeat his lesson with the whip. Then quietly touching him gently on the near side of the head, at the same time saying, "Gee!" until he will step around from you; then caress and repeat until he will gee or haw readily. Repeat the same lesson with his mate, which is all that you should try to do with them in half a day. Then take both together in the same room or yard, and repeat these lessons until they have a thorough understanding of what you mean. Then take one of them near the wall, standing by his side, hitting him with your whip gently over the head, at the same time saying, "Back!" until he will step back, for which caress. Repeat this until he will go back readily at the word. Give the other steer the same lesson. This course of training will make your steers quite obedient, and willing to haw, gee, or back, which will be all that you should require of them for one day's lesson. When convenient, repeat the lesson with both together. Then place the yoke upon them and let them go for an hour or two, or sufficiently long to become reconciled to the restraint of the yoke. Then repeat your lesson in the open yard until they fully understand what you require of them while yoked together.

If your steers have learned to run away from you, which is a common result of the ordinary method of training, put on the rope and strap to the foot. If hitched to a wagon or sled, let your man hold the foot-strap, which run back between the steers, and the moment they attempt to run away, he pulls up their feet, while you whip them over the head, which will stop them immediately, and in a short time break up the habit.

Kicking Cows.

It is natural for the cow to stand while being milked ; consequently the heifer knows nothing about kicking until hurt or frightened into it. The lesson in regard to heifers is therefore perfectly plain. Be careful and not hurt or frighten them. If by accident you should, and they kick, do not punish them for it. Kindness and gentle handling is the only remedy. If your cow kicks, let your reasoning for the cause, be based upon the principle that she never kicked until she was injured, and the remedy will at once suggest itself. No cow was ever broken of kicking by striking with the stool or other weapon. This practice only puts the cow on her guard, and as you come near her with the stool she uses nature's defense, and kicks. Handle her gently. If she walks off or kicks, pay no attention to it, using no loud words or blows. If her teats are sore, she is quite liable to do either ; and you must have patience until they are healed. In our experience, we have never found a confirmed kicker in a yard where kindness was a characteristic of the family who handled the dairy ; on the contrary, we have found plenty of them where quarreling, loud words, and general bad temper prevailed.

TRAINING DOGS.

The dog is the most domestic and intelligent of all animals. He is easy to teach, and, if properly used, is a faithful and willing servant of man; if abused and ill-treated he is quite apt to be disagreeable and a nuisance. The dog being so closely a companion of mankind, it becomes a duty to educate him in such a manner that he will reflect credit upon his master, and be an agreeable inmate of the household as well as a useful assistant. We have given much attention to this subject, it being one which cannot fail to interest those who give it thoughtful application. We have had two of the best trained dogs, probably, ever known in this country, and at the present writing have a greyhound which understands to obey thirty-two different words, and we always found a pleasure in teaching them. The rules whereby any one who will be patient, kind, and persevering, can educate dogs to be useful as well as to perform pleasing tricks, are easily understood. We give a few, sufficient to lead the operator to the practice of many more. There are of course as many different traits and dispositions of dogs, as there are different breeds, and judgment will be required in teaching the dog, to train him to that to which he is best adapted by nature. For instance, a Terrier will catch rats, while a Setter will scent birds, without training; the St. Bernard is a faithful watchman, and the Greyhound takes to running, from his birth. These *natural* traits it is necessary to have in mind in attempting to teach the dog, being careful in not urging upon him the performance of any duties or tricks which are manifestly not in his nature to do. In selecting dogs for any particular lesson, study his sub-

ject closely. As probably the most useful lesson to be taught, we commence with

Training the Shepherd to Drive.

Take a well-bred Shepherd dog, about six months old, reared in some secluded place, hearing no words with a meaning intended to be attached, except his name. He should know nothing of the ordinary words in use towards dogs, and not have been handled by boys or careless persons. Take him alone with you in a large room. The first thing to be done is to teach him to lead; placing a strap around his neck that can not hurt him, to which attach a cord six or eight feet in length; stand still and hold upon the cord, for a few minutes, until he ceases struggling to get away. It is best to give one lesson each day during the whole training. The first two lessons should be devoted to teaching him that he can not get away. Now commence teaching him to come to you by pulling upon the rope and saying, "*Here!*" using only the *one word*.

In the use of this as well as all other words used in teaching the dog, *one word* is all that is best to try and teach him for any *one act*, it being so difficult to make him understand if you attempt to teach him more. When he is once fixed in the habit of minding the word, you may then use such other words in connection therewith as are pleasant to the ear, as, for instance, "Come *here*, sir!" Without the word *here* he will not know what you mean, and the others, being meaningless to him, do not puzzle him. He will also be less liable to have too many masters, as the *one word* will not be likely to be used every time by a person unacquainted with your mode of training. Of course, if you prefer it, you may, in giving the lesson, substitute other words for those laid down; but we give those which are the readiest to the tongue.

As the dog comes up, whether voluntarily or not, say,

"*Do!*" and caress him. A lesson of an hour or two, working slowly and patiently, will be about right each time. Proceed with it until he will come to you from any portion of the room at the word "here." He will have learned by this time, probably, that the word "*do*" is for him to understand that you are through with him. When he perfectly realizes this, you may then prefix words, and say, "That will *do*," emphasizing upon the word *do* each time. You may also now say, "Come *here!*" remembering that the words *here* and *do* are the only ones he obeys. He can not connect words to form sentences, or be made to understand them when thus connected.

You now wish to teach him the words "*Go*" and "*Halt*." To do this, you will place yourself in a position of the room opposite to where the dog would naturally desire to go, (for instance, the door, or something which would attract him, such as food.) Say, "*Go!*" and by coaxing and urging him, start him along; as he gets part of the way, say, "*Halt!*" pull upon the string, stopping him, and say, "*Halt!*" again. Proceed with this until he has learned to obey both the words "go" and "halt." To teach these four words named will generally take three or four weeks. Now teach him to bark at the word "speak," by holding up something which he wants very much, for instance, food, when he is quite hungry. You may now let him loose and let him run about with you, (*previously* keeping him confined, but not in a narrow place,) being watchful that he does not stray off, nor be hurt or handled by others. He will soon become handy about the house. You having control of him through the words you have taught him, you can keep him in his place by word of command. For instance, if you wish him to go out of doors, show him the door and say, "*Go out!*" The word "go" will start him, and in a little while he will become familiar with the word "out." Let him have a fixed place to sleep, and teach him

its name. If you have a dog already trained to drive and go *behind*, take him out with him to drive in the cattle. He will thus learn that they will run from him. Say nothing to him while he is with the other dog, unless he attempts to go to the *head* of any of the cattle. This you must not allow. After two or three times take him out without the other dog, and allow him to run after the cattle, provided the cattle are used to being driven by dogs. It will not do to let him run where there is a chance of his being turned upon. If he runs them too fast, say, "*steady!*" He will not know what you mean, but as you use words with him only when they mean *something*, he will be apt to pay attention and go slower. If he does not, say "Halt!" then "Go!" steadying him by the word "Steady!" if possible. He will gradually learn its meaning by its repetition. If you have no other dog, you will let him go without, being more watchful of him that he does not go to the head of the cattle. Otherwise say nothing to him except "Go!" not letting him start until he gets the word. After a while you may proceed to practice upon the other words he knows. If he shows no disposition to bite at the heels, or pull at the tail, take a rope and tie a knot a short distance up, fringe out the end, and play with him with the rope, letting him catch hold of it, and cause him to bark at it by using the word "Speak." When he takes hold of the rope say, "*Up!*" and when you wish him to let go, "*Do!*" You may then, with a slow cow, call him up, and, taking hold of the tail, say "*Up,*" and "*Speak,*" to teach him to take hold of the tail and bark, when you say "Start 'em *up!*" and "*Speak* to them!" and to let go when you say, "That will *do!*" Now accustom him to the word "*Fetch*" for sheep, and "*Get*" for cattle, etc.; so that when you say, "*Go* and *get* the cattle!" he knows you mean cattle, instead of sheep or horses. You may now teach him to know the right from the left, and to obey your orders in that respect, by taking

him into a large room, and by the motion of your right hand try to have him go to the right from you, saying, "Go"—"Right!" If he does not do it, say, "Halt!" and repeat. When he does do it, say, "That will *do!*" Continue this until he will go to the right at the motion of your hand and the word "Right;" then with your left hand making motions, and the word "Left," you teach him the opposite. By these motions and an appeal to the intelligence of the dog by your countenance and eyes, you can start him for the fields in any direction you choose, and he soon learns to do your wants with very little telling. Following these rules will satisfy you that the dog can be taught indefinitely respecting all things which pertain to his peculiar nature.

The Watch-Dog.

For a good watch-dog select one of a breed adapted to the business. There is but little that you can teach such an one, as it is somewhat of a natural trait; and any other than a *natural* watch-dog, however much you may labor with him, will never be reliable. A barking dog, one that will be noisy on the approach of intruders, is the best; a dog that bites but does not bark is only fit to put in barns or other out-buildings nights, chaining him up day-times; and then he is dangerous, even to his keeper, as a sudden start will cause him to bite any one. To teach your dog, give him something to watch, saying, "Take care of it!" as you place him near the object. He will soon learn the word, and upon being directed to any particular thing, will faithfully guard it. While teaching him allow no one but yourself to approach him without setting him on. You may have a stranger approach him and tease him, you urging him to drive the person away, and as soon as he starts, let the person run, you calling the dog back. While young do not compel him to stay too long at one thing, and when you go up to him say, "That will *do!*" feeding him something.

After the manner spoken of in the previous illustration, whenever you wish the dog to bite or *go at* any person or thing, you will teach him words the *reverse* of what you mean, such as, "Be still," "Get out," "Lie down." You will see that a person not understanding the dog will not be very apt to get near him, as he would naturally make use of those words, and they would be setting him on, instead of quieting him. To call him yourself, use such convenient word as you choose, but not one naturally used by others. As this ingenious use of words is about the only new idea we can suggest to teach Watch Dogs, the master can exercise his own ingenuity to render it practical.

The Trick Dog.

Many amusing tricks may be taught which will exhibit in a wonderful degree the intelligence of the dog. As we have before said, much depends upon the breed. A dog of one peculiar breed may be taught a certain class of tricks, while that of another breed will be entirely different in his characteristics. A well-bred dog is hard to teach any tricks except those pertaining to his nature, while a mongrel cur is quite easy to teach any. Perhaps a Spaniel-poodle dog is the most tractable of any, though a black-and-tan is quite apt. We give a few examples, sufficient to form a groundwork for the intelligent operator to extend the list of tricks at his pleasure. We begin with a lesson

To Teach Him to Sit Up.

Set him up in a corner, and with a switch him lightly under the mouth, snapping your finger and saying, "*Sit up!*" As he comes down put him back and repeat until he will remain, which he will do in a few minutes; then say, "That will *do!*" and coax him down and caress him. When he has learned this sufficiently, set him up against a wall and try the same thing; this will require more patience,

as he can so easily get over to either side. When, however, he will do it, then take him out in the centre of the floor; this will take still longer; but if followed up kindly and perseveringly, he will learn to perform the trick at the word and the snapping of the finger.

To Teach Him to Sit Down.

Press your hand upon his back toward his hind-legs and say, "*Sit down!*" at the same time tapping with your foot upon the floor. If he attempts to lie down or draw his feet under him, scare him up, and teach him that "sit down" is what you are after, tapping him under the chin to keep his head well up. He will, after a few lessons, sit down at the word and a tapping of your foot on the floor.

To Stand Up.

Take some food in your hands and offer it to him, holding it well up, and say, "*Stand up!*" Repeat this until he will stand up quite readily, holding out your unoccupied hand for him to support his fore-feet on. Gradually take away your hand, each time that he comes up, saying, "Stand up!" Then take him by the forward feet and lift him up quite hard, and say, "Stand up!" You will soon get him so that when you lift him he will straighten up and show signs of standing; then make the effort to teach him to stand up at the word and the holding out of your hand. You may now combine this with the last two tricks, saying, "Sit up!" "Stand up!" "Sit down!" "That will do!" These are the first tricks he should be taught, as they are the foundation for others.

To Get Into a Chair.

This is very easily done, taking your own way to coax him into the chair, using the word "*Chair*" whenever you cause him to get into it. When he becomes familiar with

the word, accompanied with a motion of the hand toward a chair, you may use other words in connection therewith, as, "Go and get up into the *chair*." After he will do this handy, you may then teach him to put his paws upon the back of the chair, by asking him to "Put them *up*," or saying, "*Up*," assisting him at first. When he will do it readily, you may teach him to put his head down upon his paws, by placing it there, and repeating the word "Down," of course caressing him each time that he complies. To have him hold his head up, tap him under the mouth and say, "*Up*," remembering to say, "That will *do*," when you are through with the trick. You may now teach him to jump over the chair by playfully coaxing him to do so, saying, "Jump!"

To Make Him Go Lame.

Tap him with a little rod upon the hind-foot, saying, "*Lame*," teaching him to stand and hold it up whenever you say "lame." Now coax him along, and if he puts it down, hit him quite smartly on the foot, making him keep it up until he will go lame at the word and a motion of the rod. Now, whenever you send him into the chair, as before, as he goes to jump down, stop him, teaching him to wait for the word "*Do*." As he comes down with his fore-feet on the floor say, "*Steady*," and teach him to stop with his hind-legs up in the chair. He is now ready

To Run on His Forward Legs.

To teach him this, take hold of his hind-legs, lift them up and walk him around in a circle, and place them in a chair, saying, "*Round*." Do this every time you perform the trick of having him get into the chair. After a while take him by the tail and lift him up, and, switching his hind-legs lightly, walk him around in the same manner, saying, "*Round*," as before. With patience and perseverance he

will learn to lift up his hind-legs at the motion of the whip, and at the words, "*Go around,*" perform a circle, walking on his forward feet, and place his hind-feet in the chair; of course the height of the chair must be adapted to the length of the dog's legs.

To Sit on a Stool.

It is now very easy to teach him to "*sit down*" on a low stool. You may then teach him to "Take a seat" on the stool by leading him around by his forward feet, and setting him on the stool with his forward feet held up, saying, "Seat!" You then have him taught to go on all-fours and *sit down* on the stool, and to go on his hind-feet and *take a seat*, with his forward feet up.

To Teach Him to Find Things.

Take something with which he is accustomed to play, and after getting him enlivened with play, call him up to you and blindfold him, and throw the article a short distance from you. If the dog has good scent, tell him you have "*lost*;" then remove the blindfold and he will search and find it. Repeat this, throwing it farther each time, until you can throw your knife or any thing which you have held in your hand, at a distance, you looking in the direction, and saying, "I have *lost* my knife." He will search until he finds and brings it to you. If the dog has not good scent, teach him to look *down* at the word "*find*," and up at the word "*up*," doing as before.

We have now given a sufficient number of examples to set forth the important rules which govern the teaching of dogs. By an observance of these you may teach your dog to climb ladders, fetch things to you, carry baskets, roll over, lie down, shut doors, and an almost innumerable number of tricks. To teach the dog, however, you must have perfect control over your temper, never whip severely, and never get out of patience.

SHOEING.

The object in shoeing horses is to prevent the hoofs from being broken or otherwise injured, as would naturally result from driving over our hard roads unprotected in this manner. It has often been remarked, and truly so, that "No foot, no horse," which literally means, a horse without sound feet is of but little value. The feet are the bases upon which the whole superstruction rests, a beautiful and complicated piece of mechanism, and, like all complicated machinery, easily deranged; hence the necessity of preserving it in a healthy state, to accomplish which, shoeing has been instituted, which, when properly done, has the desired effect. The shoe has two very important offices to perform: 1st, to preserve the hoof in its natural shape; 2d, to protect it from injury. In order to properly understand the principles of shoeing, it is necessary that we should understand the structure of the horse's foot, and with this view we will briefly consider its anatomical relations. The hoof, or horny case, is the first object claiming our attention, which, for convenience of description, has been divided thus: the crust or wall, the sole, and the bars. The crust or wall is that part which covers the anterior or front part of the foot, attached above to the skin at the termination of the hairs. This upper margin is termed the coronet. The crust or wall, internally, is made up of numerous horny *laminae*, which are very soft and elastic in their character. The sole is the ground surface of the hoof, anterior to the bars and frog. The bars are reflected processes of the wall passing obliquely across the bottom of the foot on either side of the frog, giving support to the heels. The internal

surfaces are covered in part by horny *laminæ* or plates, but are less numerous in proportion to the surface covered than are those of the crust or wall. The wall is divided into the toe, the quarter, and the heel. The toe is the front part of the hoof, the quarters are the central parts of the wall on either side, and the heels are the posterior portions of the crust or wall, being the thinner and weaker parts. This horny case in its natural condition is quite elastic, thus preserving the whole animal frame from concussion. The frog is a triangular, elastic cushion situated between the bars, and filling up the entire triangular space between the quarters and heels, completing the ground surface of the foot. The internal surface of the frog is very irregular, presenting three elevations and two depressions. The central ridge or division extends from before backward and upward. The two depressions between these ridges receive the soft cushion or ligamentous frog. The foot internally comprises the coffin, navicular, and lower part of the *coronary* or small *postern* bones, also *ligaments*, *cartilages*, the *sensitive laminae*, *sole*, and *frog*. The *coronet* or small *postern* bone is nearly square, presenting four surfaces, the upper, for articulating with the large *postern*, having an elevation in its centre, forming with the large postern a kind of hinge-joint. By this arrangement strength is added to the parts. The lower surface is concave in the centre, which uniting with the *coffin* and *navicular* bones, forms another hinge-joint of still greater strength. The coffin-bone is semi-lunar in form—the front surface is convex, the ground and posterior surfaces are concave. The projections behind on either side are called the *alæ* or wings, to which are attached the lateral cartilages, which extend upward and backward, and are readily discovered by placing the fingers above the hoof at the quarters. The navicular bone completes the bones of the foot, situated posteriorly between the coffin and coronary bones, forming what is commonly known as the

coffin or navicular joint. It is semi-oval in form, presenting four surfaces, the upper articulating with the coronary, the anterior with the coffin-bone; the lower, over which the *perforans* tendon or back sinew plays, has a much broader surface than either of the others. Posterior and under these bones, we have the *ligamentous frog*; between this frog and the sole we have the sensitive frog; covering the anterior surface of the coffin-bone we find a very delicate structure, known as the sensitive laminæ, which is very vascular and largely supplied with minute nerves. This laminated structure corresponds to that of the hoof, and when adjusted, fills up the entire circle of the hoof. I deem it unnecessary to go into a more minute description of the parts, as it would be uninteresting to the general reader. To those who feel interested in the subject of shoeing, great benefit will be derived by a careful perusal of these remarks.

It has been proven by long experience, that the sensitive parts within the hoof do not suffer so long as the bearing of the animal is confined to the crust or wall, but when removed from that bearing they soon become diseased; hence if the sole of the foot bear against the shoe in any considerable degree, the fleshy or inner sole becomes bruised between the shoe and the horny sole below and the coffin-bone above—the horse soon becomes lame in consequence. It is obvious, therefore, that the crust or wall being the natural bearing of the horse's foot, it should be carefully protected, and confine the bearing of the shoe to that part of the foot. A shoe of the breadth of the crust would defend the foot sufficiently as long as it would last; but in consequence of its rapid wear, such a shoe would only be applicable for racing, or temporary purposes. To give all the support the crust can receive, and at the same time to make the shoe sufficiently strong to wear a reasonable time, the upper surface of the shoe should be divided into two parts. The first or outer margin should be perfectly level, and of the width of

the crust; the second, the inner margin, beveled inward so as to avoid pressure upon the sole, leaving the heels of the shoe perfectly level from the last nail-hole backward. It must be borne in mind that no one form of shoe is applicable to all forms and conditions of the feet. The above shoe is intended only for the healthy foot—as it deviates from that standard, so must the form and bearing of the shoe be altered to meet the altered conditions as they occur in the horse's foot. To more clearly illustrate this subject is only to refer to the injuries of shoeing as ordinarily practiced. Examine, if you please, the ordinary shoe used on all occasions, and upon all forms and conditions of the feet; place a level across the heels, and you find the shoe at the quarters presents a concave surface, being beveled from without inward; hence the foot rests in a concavity. When such a shoe is nailed to the foot, it presents a lateral resistance to the natural expansion of the foot, it being impossible for the heels to expand up these inclined planes; hence the tendency to force them inward, so that they gradually become contracted. This is a natural result, and follows, sooner or later, every case where shoes have been thus contracted. On the other hand, shoes properly made and fitted have never been known to cause contraction. If we observe the foot in the early stages of contraction, we find this horny case gradually becoming less; it no longer accommodates itself to the soft structure within its limits; the result is, concussion is greater, and the elasticity very much less; in consequence of which the parts become bruised, fever ensues, which still further facilitates contraction of the hoof by absorbing its moisture, and we soon discover lameness in consequence of corns making their appearance. The first effect of contraction is to bruise the sensitive portion of the hoof. Particularly is this the case at that part of the foot formed by the crust and bars, causing a contused bruise which is called a corn. This occurs on the inside quarter.

The crust and bar forming a triangular space causes a two-fold pressure upon the sensitive parts within, acting like a vice; and as the space becomes diminished the contusion becomes greater, the hoof becomes more hard and brittle, with a strong tendency to crack on very slight concussion. On removing a portion of the horn at the part of the foot indicated, we find a red spot, sometimes slightly, at other times of a brownish or bluish-red appearance. The feet in the latter stage are in such a condition as to require prompt attention, or we may have a sinus forming through the quarter, producing a disease known as quitter, often terminating in permanent lameness, and frequently in deformity. Few men believe corns to be of so serious a nature; hence their readiness to attribute these effects to other causes. When they investigate, as I have done, they will find their error. Ossification, navicular-joint disease, founder, and a variety of other diseases, are frequently due to contraction of the feet. Another evil in shoeing, which is calculated to do much mischief, is the fitting of the shoe to the foot while red hot. This has been a source of complaint throughout all Europe. In this country there is little thought of it, to such an extent does the practice prevail. The application of the shoe in this condition, if performed by a careless workman, frequently is the cause of much mischief, and under the most favorable circumstances, performed with all possible care, causes an unhealthy secretion of horn for a long time after, rendering the animal less sure-footed, and often causes lameness to follow its application. The shoe should in all cases be fitted to the foot, and not the foot to the shoe. This of course would be attended with more labor; hence the unwillingness of smiths to do it. Better would it be for the owner to pay double the price for shoeing his horse than to have injury done by the application of the red-hot shoe. In almost all European countries, within the last few years, the smith has been much

benefited by the rapid advances made toward perfecting this important branch of labor, mainly through the efforts of our professors in the various veterinary colleges pointing out, as they have done, the evils of this shoe and the benefits of that one.

The varieties worthy of mention are as follows: Prof. Coleman's frog-bar shoe, James Turner's unilateral shoe, Mr. Friend's frog-pressure shoe, and Mr. Percival's sandal. Many other varieties have been introduced from time to time, requiring no special remark in a work like this. Prof. Coleman's frog-bar shoe consists of a circular piece of iron, flat on the upper side, about half an inch thick, broader back than front, so as to afford protection and limited pressure upon the frog, the under surface being nearly flat; the shoe is secured by four nails on either side. This shoe, in some cases, answers a very good purpose in protecting tender feet from concussion.

James Turner's unilateral shoe differs only in its application from the shoe described for healthy feet. It is nailed to the foot, free on the inside, having six nails on the outside and two on the inside toe, with a level bearing for the crust and heels. Mr. Friend's shoe is designed for the communication of frog pressure. It differs from Mr. Coleman's by having the frog-bar separated from the shoe and suspended by a leathern sole—the object of which is also for tender and sore-footed horses.

Mr. Percival's sandal, as originally made, consisted of a shoe and several web bandages, with buckles attached, by which means it was secured to the feet. For many years it was applied in this manner, and supposed to be as perfect in itself as man was capable of making it. More recently, however, Mr. Percival conceiving an idea of its application by means of India-rubber bands, commenced a series of experiments, which resulted in the adoption of an endless India-rubber band. This was an improvement at once

simple and much to be desired, rendering its application more firm, and less liable to become deranged. This sandal is not intended for general purposes, but only to supply the place of a lost shoe on the road, it being readily applied, and affording equal protection to the foot.

Mr. Goodwin, of London, invented a shoe which has been much extolléd. This shoe is concave on the ground surface—supposed to have a greater effect in getting a firm foothold—the upper surface being flat, except at the heels, which are slightly beveled outward, to facilitate the expansive tendency of the feet. This principle, as far as the bearing surface is concerned, I believe to be the best plan yet discovered for expanding contracted feet, having witnessed the beneficial effects of its application in a large number of cases always with advantage. Great care must be taken that the bevel is little more than a level bearing, as it would do much mischief if beveled sufficiently to force the heels.

Preparing the Foot.

The subject of paring has not escaped the fatality which seems to have attended every matter connected with the foot. The most opposite and contradictory opinions have been expressed regarding it. Where such extremes exist, a line drawn between the two is usually the most correct. We will therefore assume that position. In a state of nature (and we must take her as our guide) the growth of the hoof is about equal to its wear. When the shoe is upon it this wear is prevented. Our object, then, in paring the foot is to make the removal of the hoof equal to the growth of the foot. Where this principle is not observed, we see the effects of not paring in some horses whose shoes are allowed to remain on the feet for some months without being removed—the crust becomes unusually long, the sole thick, the animal tripping at every step. These cases prove the neces-

sity of proper paring as a substitute for the natural wear of the hoof when unshod. In preparing the foot for the shoe, care should be taken to remove all the old stubs, the crust should be lowered from the toe to the heel with the rasp, and the sole should then be carefully pared with the drawing-knife. The bars and the frog require to be trimmed out, removing only ragged or loose portions, or such parts as may conceal dirt or other matter producing unhealthy action.

Application of the Shoe.

In applying the shoe to the foot it should not be set back half or three quarters of an inch from the toe—the projecting parts of the wall cut away as is usually the custom. The shoe should be carried fully to the outer margin of the wall. Thus we preserve the wall entire, giving its full bearing surface for the shoe, preserving the wall uninjured. By removing any portion of the crust it is weakened in exact proportion as it is cut away, reducing the space for driving the nails, and increasing the danger of pricking; or, what is as bad, driving the nails too close, to say nothing of the change from the natural form of the foot. It is these abuses which compel us to regard shoeing the great evil of his domestication. The nails should be properly pointed, and not driven too high up—care should be taken to have them as regular as possible. Three nails on the inside and four on the outside are usually all that are required for any purpose. Clips, if used at all, should be small, otherwise they are the frequent cause of an obscure lameness, which is very difficult to manage. The mischief is done by the horn in its downward growth meeting with the resistance which the clip offers, hence the horn is turned inward upon the inside toe, causing pressure upon the sensitive laminae and coffin-bone, causing inflammation, and, from pressure, the bone is absorbed at the toe, while the soft tissues under-

go other permanent alterations of structure, alike destructive of the animal's usefulness.

Interfering.

Our first object is to ascertain, if possible, the cause of interfering, and the part which strikes, whether the shoe or the foot. Many horses strike from weakness, or long continued exertion. Particularly is this the case in young animals. Others cut from faulty conformation of the limbs—the toes turning in or out too much is a frequent cause. By applying chalk to the foot which cuts, we readily discover the precise part of the foot which does the injury. Having satisfied ourselves of this, we must for once deviate from our rule in shoeing, by making the shoe straight on its edge at the part indicated, cutting down the crust level with it. By this means the feet frequently work clear. Where this does not succeed, the shoe should be widened in the web at the point where the foot strikes, but not thickened, as is too often done; the natural bearing of the foot must be preserved. Should this, too, fail, there is no resort but a strip of India-rubber, placed between the shoe and the foot, projecting at least a quarter of an inch beyond the shoe. This being soft and elastic, it will not bruise the part struck by the shoe or foot, giving it time to heal, and cause the animal to work clear in traveling. Either one of these plans is successful, is properly applied, in a majority of cases; yet all are unsuccessful in a few cases of natural deformity, or faulty conformation in the limbs.

Overreaching.

Many persons regard overreaching as an indication of a bad horse, yet we are compelled to recognize it as a fault in some of the best. It frequently occurs with young horses, on a moderate gait, and disappears altogether on increasing the speed of the animal. It arises from too great

activity of the hind legs, the fore ones not being able to get out of the way in time. This habit is often brought on by too heavy shoeing in front, and too light shoeing behind. By reversing this principle I have found it to answer an excellent purpose. Where this habit is allowed to go unchecked, the heels often become bruised, and in some instances the shoes are torn off from the front feet, causing much mischief to arise in consequence. This habit, too, like interfering, occurs in young horses after severe driving, from becoming leg-weary, a circumstance which should be carefully avoided, as habits are easily formed, but often most difficult to get rid of. The preservation of the horse's feet depends very much upon careful and skillful application of the shoe, independently of its being constructed on correct principles. Many horses with very bad feet are enabled to go sound for many years by careful shoeing, while a bungling hand would render the same animal unfit for service in a single shoeing. It requires considerable tact to fit a shoe properly on a bad or weak foot, so as to protect it from injury.

Stopping the Feet.

The hoofs of horses standing upon plank floors soon become excessively dry and hard, unless artificial means are resorted to to prevent it; and if shod in this state, it is almost impossible for the smith to pare them. The opponents of stopping, and there are a few, offer as an objection that it sometimes tends to produce thrush. This I do not pretend to deny where such stopping as cow-dung is resorted to, but it does not occur when linseed-meal is used for that purpose. This certainly is the best and cleanest application, and can be used several times by softening with a little water. To keep the soles moist and healthy, the feet should be stopped every night in the summer, and every third night in winter. If the crust is brittle, as is fre-

quently the case, it is a good plan to apply a mixture of tar, lard, and turpentine, equal parts, to the hoof.

Shoing Horses for Corns.

Care must be taken that the corn be well cut out, and a little butter of antimony or muriatic acid applied to the part affected. The hoof from the corn backward must be cut away so that no part of the heel strikes the shoe, avoiding pressure, and relieving the part from unnecessary concussion. A horse thus shod, no matter how bad his corns may be, will travel sound, and with perfect ease, that otherwise shod would be decidedly lame.

Shoing for Quarter Crack.

To remedy this evil requires care and judgment. A horse should be shod upon the same principle precisely as for corns—a bar-shoe, often recommended, is unnecessary. Properly shod, there will be but little trouble in growing out a sound hoof. The least pressure upon the heel of the shoe will be sufficient to prevent the hoof from growing down, and thus defeat any efforts which may be made toward remedying the injury. So soon as three-eighths or half an inch of new horn has grown down, the roof should be burned with a red-hot iron just above the crack, at right angles with it, which will prevent its breaking up anew. A little tar or hoof ointment should be kept upon the part, which will protect it from dirt, and assist in hastening the growth of the new horn, usually requiring from six to nine months for the crack to grow out.

DISEASES OF THE HORSE.

Inflammation,

From *Inflammo*, to burn, is one of the most common forms of disease presented to the Veterinary Surgeon, and regarding which many erroneous opinions have prevailed, in consequence of which much injury and often serious consequences have resulted. Sound medical practice must be based upon sound medical principles. A correct understanding of the term inflammation will assist us very materially in understanding the pathology of diseases in their most complicated forms. A few years since, every form of disease occurring in our domestic animals was regarded and treated as some form of inflammation; purging and bleeding were the order of the day. How different the practice of the present time!

The manner in which inflammation has been written upon has made it a subject perfectly bewildering to the general reader, and from its being associated with every thing in actual practice, no idea of a very definite kind with regard to it will for a long time occur to his mind. With a view to overcome this difficulty, we will give the most simple definition of the term inflammation. It is, "an unnatural or perverted action of and in the capillary blood-vessels of a part; attended with redness, throbbing, swelling, pain, heat and disorder of function, with change in both its fluid and solid constituents, as well as with more or less general disturbance of the system." The extent to which structures in a state of inflammation will swell, varies considerably, depending upon the vital and physical characters of the tissues involved. Muscular tissue becomes very

much swollen, while, on the other hand, horny and cartilaginous tissues swell but little, in consequence of their low state of vitality. It must be remembered that it requires an assemblage of the above conditions to constitute inflammation. Swelling, pain, heat, or redness alone do not constitute that condition, as either may occur from causes independent of any inflammatory action whatever.

We now feel prepared to proceed with our remarks upon the various diseases with which the horse is afflicted, with a better understanding regarding the interest of our readers, than we would have done had we passed this subject by unnoticed.

Capillaries.—The blood is the pabulum from whence is elaborated the entire organism, as well as the source from whence are derived all the various secretions and excretions of the system; but in order that these purposes may be accomplished, it is necessary for the fluid in question to be circulated through, or its materials brought in contact with, every tissue requiring fresh nutrition, as well as through the various secretory and excretory organs. To effectually accomplish this, we find a class of structures set apart and admirably adapted in every way to fulfill the purposes required. The first of these is the heart itself; next come the large blood conduits, the arteries, which spring from the former, as the tree springs from the earth; while the arteries, again, terminate in a series of vessels of wonderful minuteness, just as the boughs of a tree terminate in the twigs. These minute vessels are denominated capillaries. These capillaries ramify, and are placed in the most intimate relation with every tissue throughout the body within whose substance reproduction and decay are in perpetual operation, as well as with those organs whose duty it is to furnish or separate the secretions and excretions already referred to. Each tissue selects from the common pabulum

—the blood—thus sent to it, the peculiar principle it requires to support its own life and integrity.

The usual terminations of inflammation are resolution, mortification, suppuration, ulceration, hemorrhage, effusion, hepatization, and ossification. By *resolution* is meant the state of the tissues after their recovery from the effects of inflammation.

Mortification is loss of vitality or death of the tissues involved.

Suppuration—A collection of purulent matter, which receives the name of abscess.

Ulceration—A purulent solution of continuity of the soft parts arising from loss of substance.

Hemorrhage occurs as a direct or indirect consequence of inflammation, from ulceration penetrating through the coats of an artery.

Effusion—An exudation of serum, watery accumulations, as in dropsy.

Hepatization—Conversion of a texture into a substance like liver.

Ossification—Formation of bone—change of soft structures into bony ones.

The account we give is necessarily brief; but we trust it is sufficient to furnish the reader with a clear conception of the matter in hand, and in turn enable him to clearly comprehend that which is to follow.

Diseases of the Mouth—Lampass.

All young animals, during the period of dentition, have a fullness or swelling of the gums and bars, or root of the mouth. In many colts it occasions but little or no inconvenience, while in others the pain is so great as to interfere with their feeding. When this condition exists, do not resort to the barbarous practice of burning with a red-hot iron, but act humanely. Lance the bars with your pocket-

knife, if you have nothing better, as your family physician would lance the gums of your child under similar circumstances, and in a few days the animal will feed as usual.

Bags, or Washers.

These are soft, puffy swellings of the lining membrane of the mouth, caused by the bit bruising the parts in reining. If inconvenient to the animal, they may be removed by cutting off a portion of the swollen parts with a pair of scissors or a knife, after which apply a little alum-water, or equal parts of tincture of myrrh and water, to the wound two or three times a day.

Sore Mouth.

This occurs from the same causes, and is situated usually at the angles of the mouth. Equal parts of tincture of myrrh, tincture of aloes, and water is the best application we can make.

Uneven Teeth.

The molar teeth of the horse very frequently become sharp and irregular, interfering with mastication to such an extent as to cause the digestive organs to become impaired, giving rise to an unhealthy condition of the system. At times the insides of the cheeks become lacerated by their sharp edges, causing them to become tumid and sore. These cases can only be remedied by the use of the horse-rasp, an instrument made for the purpose.

Wolf-Teeth.

These are two small teeth which make their appearance immediately in front of the upper molar teeth, in all colts at some period from the first to the fifth year. It is supposed by very many horsemen that they exert an evil influence over the eyes of the horse. My experience does not prove

the fact, and I cannot reconcile my mind to believe that they, natural teeth, should be placed in the mouths of all colts, if they were injurious to the eyes or any other organs of the body. If you want them removed, the best plan is to extract them with a pair of dentist's forceps. In knocking them out, the roots are frequently left behind, and of course your object is not accomplished.

Caries of the Teeth.

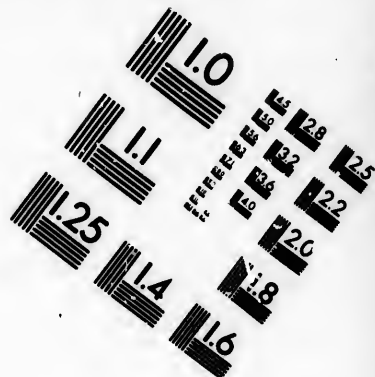
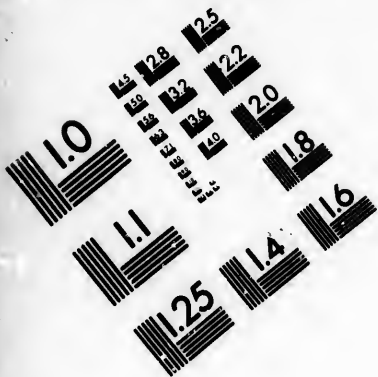
Caries, or decay of the teeth of horses, is a disease of frequent occurrence. The silence of veterinary writers upon the subject has caused it to be overlooked by those having the care of that useful animal, and the symptoms in consequence have been confounded with those of other diseases.

Symptoms.—Occasionally we have a fetid breath, fetid discharge from one nostril, a wheezing in the head, food improperly masticated, passing away undigested, quidding, drowsing, hide-bound, staring coat, tucked-up belly, tossing the head, stopping short on the road, shaking his head and starting on again, and at times becoming almost unmanageable. These symptoms do not all occur in the same animal; one appearing drowsy, requiring the whip to urge him on, while another, at times, is wild and frantic with pain, taking the bit, and becoming troublesome to manage, occasionally running away. Some of those symptoms occur in other diseases; but we should not overlook the teeth in our examination when any of the above symptoms appear. The only remedy is the extraction of the diseased teeth.

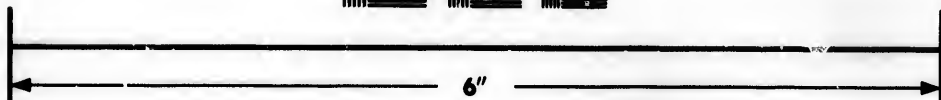
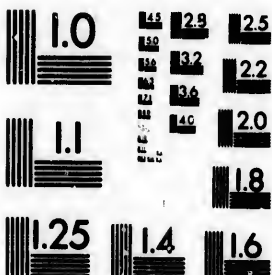
Distemper.

All catarrhal affections are classed under one general head, namely, distemper, by horse-owners generally; a common cold, sore throat, influenza, bronchitis, and several others are regarded as distempers. We will endeavor to make the distinction in such a manner that each form of





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disease may be readily discovered, and the proper remedies applied. Distemper, as we should understand it, is the mildest form of catarrhal affections. A common cold, for instance, is an inflammation of the lining membrane of the nose, causing a secretion of mucus, which is more or less abundantly discharged from the nostrils; in severe cases the inflammation extends down the *trachea*, or windpipe, to the bronchial tubes, and sometimes to the lungs, producing diseases which are classed under different heads, and often requiring different treatment.

Sore Throat.

This is usually one of the first indications of catarrh, and when confined to that portion of the throat at the angle of the jaws, it is termed laryngitis. The symptoms of this disease are well marked: the head is stiff, and if the throat is rubbed or pressed upon, excites coughing; the animal manifests difficulty in swallowing, and frequently considerable saliva collects in the mouth.

Treatment.—Apply strong mustard made into a paste with vinegar, to the throat, and rub it well in; or linseed oil two parts, with spirits of hartshorn one part, will answer a good purpose. Give upon the tongue half a tea-spoonful of powdered saltpetre twice a day.

Strangles.

This is a more severe form of laryngitis, involving the glands of the throat, causing very great swelling, which often threatens suffocation; the respiration becomes disturbed, the breathing laborious, and can be heard at a considerable distance; the animal sweats from his convulsive efforts to breathe, and, if not relieved, dies a violent death. Here the aid of the qualified veterinary surgeon is absolutely required, as there are few persons competent to perform the operation of tracheotomy, that is, opening the windpipe

to admit air into the lungs: this, early performed, frequently saves the animal's life.

Treatment.—Poultice the throat well with flax-seed meal, steam the nostrils two or three times a day; and as soon as the swelling under the jaws becomes soft, it should be lanced. When relief is once obtained, the further treatment of these cases is the same as for ordinary sore throat.

Influenza.

Spring and fall are the seasons most productive of epidemic catarrh. One year it assumes a mild form, the next, perhaps, a most malignant one. Influenza is known to horse-men under the common name of pink-eye distemper.

Symptoms.—These vary very considerably in different animals. The usual or leading symptoms are: Slight watery or thin mucus discharges from the nose, eyelids presenting a reddish or orange-red appearance, matter collects in the corners of the eyes, pulse feeble, great debility, as shown by the quick, feeble action of the heart—a symptom rarely absent—membrane of nose much reddened, sore throat and cough: occasionally the feet become fevered as in founder, causing much stiffness, which may be easily mistaken for that disease.

Treatment.—This being a typhoid disease, requires a sustaining treatment, or our success will be very doubtful. In the early stage of the disease, give, the first two days, ten drops of tincture of aconite, or bryona, in a little water, every six hours; after which give in a pail of water, to drink once a day, one ounce of spirits of nitre, or two drachms of extract of belladonna; and give in the feed, three times a day, one of the following powders: Gentian root, saltpetre, and anise-seed, of each one oz.—sulphate of quinine, one drachm; mix and divide into eight powders; or, powdered cinchona and powdered quassia, of each 2 oz.; powdered anise-seed, 1 ounce; mix and divide into four powders. The

throat should be bathed in mustard and vinegar, or with linseed oil 3 oz., spirits of hartshorn 1 oz., mixed together. No hay or corn should be given, but scalded oats and wheat bran, with linseed tea or oatmeal gruel, should constitute the diet; a few carrots would be very good, and above all, good nursing is very desirable.

Bronchitis.

This is an inflammation of the bronchial tubes, as its name implies, the air-tubes of the lungs. It is usually preceded by a shivering fit, the mouth is hot and full of saliva, the throat is sore, and if pressed upon excites a painful cough, discharge from the nose, appetite lost, pulse quick, and respiration labored; eye-lids and nostrils reddened; on applying the ear to the side, a gurgling sound is heard.

Treatment.—Give the following ball in the early stage of the disease: Nitrate of potassa, pulverized digitalis, and tartrate of antimony, of each half a drachm, molasses sufficient to make the ball. If the fever is not broken in twelve hours, repeat the ball. As soon as the desired object is obtained, give one of the following powders twice a day, in a sloppy mash: Nitrate of potassa one and a half ounces, nitrate of soda six ounces, divide into six powders; or give the following: Extract of belladonna 1 drachm, spirits of nitre 1 oz., solution of acetate of ammonia 4 oz., in half a pint of water, as a drench. The throat and sides should be blistered; the ordinary fly blister made thin with turpentine is very good, or mustard mixed with equal parts of water and spirits of hartshorn. Either of the above, when used, should be well rubbed in with the hand.

Nasal Gleet.

This is a chronic discharge, from one or both nostrils, of a whitish muco-purulent matter, the result usually of neglected catarrh. The general health of the animal does not seem

to suffer; he looks well, feeds well, and works well; yet we have this discharge, which is caused by weakness in the secretory vessels of the lining membrane of the nose. The successful treatment in all cases where this disorder has existed, has been on the tonic principle; bleeding and purging are positively injurious. Give one of the following powders night and morning: Sesquichloride of iron 2 oz., powdered cinnamon 1 oz., mix and divide into four powders; or carbonate of iron, pulverized gentian, and pulverized quassia, of each 1 oz., divide into 4 powders; or nuxvomica pulverized, $\frac{1}{2}$ oz., linseed meal, 2 oz., divide into 8 powders. Another good preparation is muriate of barytes, $\frac{1}{2}$ oz., linseed meal, 1 oz., divide into 8 powders.

Pneumonia.

This disease is known to horsemen as lung fever. It is either inflammatory or congestive, arising from various causes—as high feeding, badly-ventilated stables, violent exercise, or sudden changes from heat to cold. In the congestive stage there is no pulse to be found, and on applying the ear to the side, no sound is heard; cold sweats bedew the body, the respiration is labored, eyes wild in their expression, legs cold, the animal appears dull and stupid, and with difficulty made to move; he does not lie down. In these cases medicines are not required; in fact, they often do more injury than good; the free and speedy use of the lancet is our only hope, and a pure air is of the greatest importance; a pail of cold water should be placed before the animal, but no food should be given until the animal is relieved; and then only mashes of wheat bran. Under this treatment he will speedily recover, or inflammation of the lungs will be established. The pulse now becomes quick, the mouth hot, legs cold, head hanging in or under the manger, appetite lost; on applying the ear to the side, a crepitating or crackling sound is heard; respiration quick;

the treatment here must be prompt and energetic; blisters to the sides, such as previously spoken of, must be used, and give internally two ounces of spirits of nitre in a half-pint of water; follow this in two hours with ten drops of tincture of aconite in water, to be given every six hours until relief is obtained; or give instead one of the following powders: Tartrate of antimony, pulverized digitalis, of each one drachm; nitrate of potassa, one ounce; mix and divide into eight powders; give one every four hours upon the tongue. Injections of soap and water are very useful in these cases. The legs should be hand-rubbed, and stimulated with mustard or cayenne pepper, and then wrapped in woolen bandages; a pure atmosphere and good nursing are very necessary.

Pleurisy.

This is an inflammation of the lining membrane of the chest and covering of the lungs. The symptoms are: Uneasiness, pawing, looking at the sides, pulse quick, pain on pressure over the ribs, body hot, lying down but rising quickly. The same treatment as in inflammation of the lungs is called for; but under no circumstances should bleeding be resorted to. These cases are very apt to terminate in hydrothorax, or

Dropsy of the Chest.

Symptoms.—Breathing short and quick, legs straddling, pulse small and quick; breast, belly, and sheath swell, and leave the mark of the finger when pressed upon; the animal stands until he dies. The treatment of this disease, as a general thing, is not very satisfactory. The iodide of potassa, in half-drachm doses, three times a day, has proved the most useful medicine in such cases, in connection with setons in the breast and sides.

Broken Wind, or Heaves.

This disease is well known to horsemen; so we will content ourselves merely by giving the most successful remedies, which, for the most part, are only palliative. Divide half an ounce of pulverized digitalis in twenty parts, and give one part night and morning in the feed until gone; this will usually allay all signs of the disease in two weeks. Or, take asafetida, two drachms; camphor, one drachm; mix and give every other night for a week.

Inflammation of the Bowels.

This disease may appear suddenly, or it may be slow in coming on. The symptoms resemble those of colic, with which disease it is often confounded. The pulse is our certain guide in determining the character of the disease: when that is full and natural, or nearly so, there is no inflammation; if full, strong, and quick, there is inflammation; other symptoms corresponding, there is no difficulty in determining the case. In colic, the symptoms of pain are intermittent; in inflammation of the bowels, there are no intermissions. Other symptoms which are present in both diseases are pawing, kicking the belly, rolling and tumbling about, sweating, haggard expression of countenance, looking at his sides, etc.; in colic, the legs usually are warm; in inflammation of the bowels, they are cold.

Treatment.—Bleed freely from the neck-vein, and give ten drops tincture of aconite every three hours; apply blankets saturated with hot water to the entire body, and keep it up for two hours; then remove the wet ones and replace them with dry ones, well secured with a body-girth. Injections of tobacco-smoke are very useful in these cases; when not convenient, soap and water will answer the purpose. No food of any kind should be given for at least forty-eight hours.

Diarrhea.

The cause of this disease is exposure to cold, over-exercition, change of water, over-doses of cathartic medicine, etc.

Treatment.—Give one of the following powders every six hours until the bowels are checked: Powdered opium, one drachm; powdered catechu, two drachms; prepared chalk, one ounce; mix and divide into four powders.

Colic.

This disease—known also as gripes, cramp, and fret—is either spasmodic or flatulent. Spasmodic colic is a spasmodic contraction of the muscular coats of the intestines, causing griping pains, etc., (see inflammation of bowels.) Flatulent colic is an accumulation of gas in the stomach and intestines, generated by fermentation in the stomach, causing swelling of the abdomen, and sometimes rupture of the stomach.

Treatment.—For spasmodic colic, give one ounce tincture opium and one ounce sulphuric ether in half a pint of water; this should be repeated in half an hour if relief is not obtained. Or, give the following: Tincture of opium, one ounce; aromatic spirits of ammonia, half an ounce; extract of belladonna, one drachm; water, one pint; mix. In flatulent colic give chlorate of potash, one half ounce; sulphuric ether, one-half ounce; tincture of aloes, three ounces; water, one pint; mix and drench.

Worms.

Thousands of animals die annually from the ravages of these pests, without the true cause being suspected; especially is this the case in the young of the mare, cow, sheep, and pig. Many varieties of these parasites belong to our domestic animals which have not been mentioned by veterinary writers; they are found in every tissue of the body, even to the blood. The symptoms of worms have been but

very imperfectly described by writers upon the subject. In an experience of many years, I have observed the following symptoms, but not all in the same animal. Each variety of worm has its characteristic symptoms, namely: In bots, we rarely have loss of condition, but, when the bots become troublesome, colicky pains, gasping, quickened respiration, staring or haggard expression of the eye, with a strong tendency to inflammation of the bowels will be observed. Bots are rarely troublesome except when passing away in their regular manner, which occurs from May to August in each year. In most other varieties of worms the symptoms are debility, feebleness, sluggish movements, emaciation, staring coat, hide-bound, and skin covered with scurvy blotches, rigidity of loins, small and feeble but slightly accelerated pulse, respiration slow, tucked-up belly, a peculiar, pallid appearance of the lining of the lips, (a certain indication,) irregular, capricious, but persistent appetite, badly digested feces, agitation of heart and tail; and where the fundament worms exist, a whitish or yellowish-white substance will be found about the fundament, indicated also by rubbing the tail.

The treatment for worms has been attended with much uncertainty heretofore, and is, to the present day, with practitioners generally. Those on which most dependence has been placed are: Calomel, one half drachm; tartrate of antimony, one half drachm; linseed-meal, one half ounce; mix and give at night. Or, iron filings, two drachms; common salt, one half ounce; powdered savin, one drachm; linseed meal, one half ounce; mix, give every night for a week. Or, asafœtida, two drachms; calomel, one and a half drachms; savin, one and a half drachms; oil male fern, thirty drops; linseed-meal, two drachms; mix with molasses and give at night. Or, calomel, one drachm; powdered wormwood, one ounce; honey sufficient to make the ball; give at night. Follow either of the above with the follow-

ing ball: Barbadoes aloes, one ounce; pulverized gentian, two drachms; pulverized ginger, one drachm; water sufficient to make the ball. Another remedy highly recommended is the following: Barbadoes aloes, six drachms; male fern, four ounces; spirits turpentine, two ounces; mix and divide into six balls; give one three times a day.

Retention of Urine.

This is known by frequent but unsuccessful efforts to stale. In some animals it arises from a dislike to spatter their legs in voiding the water; hence a horse will frequently retain it in the bladder until the litter is shaken up under him, when he will at once relieve himself. When the result of spasm of the neck of the bladder, an instrument is used called a catheter, made expressly for the purpose; this is passed up the urinary passage to the bladder, when the water will flow freely and give instant relief.

Profuse Staling.

The causes of this disease are, the improper use of diuretic medicines, as saltpetre, rosin, etc. Unwholesome food will sometimes produce it. Treatment: Give one of the following balls every night—powdered opium, $\frac{1}{2}$ oz., powdered kino, 1 oz., prepared chalk, 1 oz.; mix with molasses and make six balls.

Stones in the Bladder.

These may exist a long time in the bladder before any symptoms arise indicating their presence. The first symptoms of stone are, frequent efforts to urinate, voiding small quantities usually of a thick whitish color; as the stones increase in size, the symptoms become more aggravated, colicky pains are indicated, rendering it difficult to distinguish the difference; the animal paws, kicks at his belly, lies down, rolls, and gets up quickly. In some cases these

obstructions are dissolved by the administration of muriatic acid, 2 dr., in a pail of water once a day. Where this fails, an operation for the removal of the stone is the only remedy. This is not a dangerous operation, comparatively, in the hands of a skillful surgeon.

Quitter.

This is a formation of pus between the hoof and the soft structures within; a sore at the coronet or upper part of the foot, which at first is a hard smooth tumor, soon becoming soft, and breaks, discharging quantities of pus. Treatment: Poultice the foot for several days with flax-seed meal. As soon as the hoof becomes soft, cut away all loose portions, but no more, and inject with a syringe either of the following once a day: Chloride of zinc, 2 dr., dissolved in 1 pint of water; or sulphate of zinc, 1½ dr., dissolved in one pint of water; or nitrate of silver, 2 dr., in a pint of water; or glycerine may be used with advantage. Before using the wash have the foot well cleaned with castile soap and water.

Thrush.

This is a disease of the frog, causing a discharge of matter from its cleft or division, occasionally causing lameness. The treatment is simple and effective: Wash the feet well with soap and water; and sprinkle a small quantity of pulverized sulphate of copper in the cleft, and secure it by pressing a little raw cotton down upon it in such a manner as to keep out the dirt. In two or three days repeat, if necessary. It rarely requires a second dressing.

Canker.

This is a more aggravated form of thrush, often proving very troublesome to manage. It is a continuation of the thrush between the horny frog and the internal structures

of the foot, causing separation between them. Treatment: Cut away all the horn which has been separated from the soft structures of the foot, and apply the following ointment: Take equal parts of pine tar and lard, melt over a slow fire, and add sulphuric acid very slowly until ebullition ceases; or use collodion, $\frac{1}{2}$ oz., castor oil, 1 oz., mix and apply to the parts. The foot must be protected from dirt by a bandage or a leathern boot.

Scratches.

This disease is well known to all horsemen. Treatment: Wash the parts well with castile soap and water, and when dry apply once a day the collodion and castor oil recommended in canker; or use a saturated solution of the bichloride of mercury once a week, but not oftener, or mischief may arise in consequence of a too free use.

Grease Heels.

This is a white, offensive, greasy discharge from the heels of the horse; the skin becomes hot, tender, and swollen; the acrid character of the discharge often causes large portions of the skin to slough away, leaving an ugly sore behind. Treatment: Open the bowels with the following ball: Barbadoes aloes, 1 oz., pulverized gentian root, 2 dr., pulv. ginger, 1 dr., water sufficient to make the ball; wash the parts well and poultice for two or three days with the following: Flax-seed meal mixed with a solution of 2 dr. sulphate of zinc to a pint of water, after which keep clean and bathe frequently with glycerine; or the solution of zinc, or a solution of the chloride of lime may be used; or the bichloride of mercury may be used in inveterate cases with good results, provided it be not repeated oftener than once a week.

Water-Farcy.

Anasarca, as it is technically called, is of two kinds; one occurring in young animals from inflammatory action, the other in old horses from general debility. It is known by swelling of the legs, belly, sheath, and other parts. In young animals, there is heat, and pain on pressure on the swollen parts; in old horses there is no pain on pressure, but the marks of the fingers are left behind. Treatment: Give one of the following powders night and morning in the feed; sulphate of iron, 2 oz., nitrate of potassa, 1 oz., pulverized gentian, 1 oz., pulverized ginger, 6 drs., anise-seed, ground, $\frac{1}{2}$ oz., mix and divide into 8 powders; or, sulphate of copper, nitrate of potassa, and pulverized gentian, of each 1 oz.; pulverized ginger, $\frac{1}{2}$ oz., anise-seed, ground, 6 drs.; mix and divide into 8 powders. Hand-rubbing and moderate exercise every day are very important, with a pure atmosphere in your stable.

Founder.

This disease occurs generally in the horse with hard, brittle, or contracted hoofs, in consequence of their inability to yield to the weight of the animal. In this condition they wait for the exciting or immediate cause to develop the disease. These causes are a hard drive upon a hard road, watering when warm, particularly when pump or spring water is used, standing in a draught of air, etc. Symptoms: Fore-feet thrown forward resting upon the heels, weight of the body thrown back upon the hind-legs, front-feet hot and tender, pulse full and quick, respiration accelerated; the animal in very severe cases seeks relief by lying down. Treatment: If the animal is in full condition, bleed freely from the feet, and give the following: Barbadoes aloes, 6 dr., croton oil, 6 drops, pulverized ginger, 1 dr., pulverized gentian, 2 dr., mix with water in form of a ball; foment the feet well with hot water, and then poultice with flax-seed

meal for several days; give in the water every six hours extract of belladonna, 1 dr. Under this treatment the worst cases usually recover in one week's time if taken in hand early.

Pomiced Feet.

This disease is known to horsemen as falling of the sole, and is the result of neglected founder. Careful shoeing, so as to protect the sole, is all that can be done in these cases.

Navicular-Joint Lameness.

Coffin-joint lameness, as it is commonly called, is one of very common occurrence, and the symptoms often so obscure as to mislead the ordinary observer. This disease generally is preceded, for months before lameness is observed, by pointing; that is, by advancing one foot whenever the animal is at rest. The degree of lameness varies considerably in different animals. In one case it is seen in the first half-mile's travel only; in others it continues for a mile or two, and then disappears; in some it continues during a journey; but as the animal gets warmed up, it is not so severe as on the start. In some cases it disappears for weeks together, and then shows itself again, gradually increasing in intensity until it becomes a permanent lameness. In the early stages of the disease there is no heat to be discovered about the foot, no swelling, no pain on pressing the heels; the animal picks up the foot nicely, but drops it tenderly, striking the toe first; the shoe, therefore, is worn considerably at the toe and very little at the heels. Should a horse be slightly lame in both feet, the symptoms are still more obscure and difficult to diagnose. The action of the horse now becomes changed; he no longer bends his knees with the same freedom as before; he steps short, the heels scarcely touching the ground, which is a good indication of the disease.

Treatment.—In recent cases, the application of a proper blister is usually successful; the common fly blister, thinned with spirits of turpentine, answers a very good purpose; or the following, which must be used with great caution to prevent its leaving a blemish behind: Powdered cantharides 2 drachms, oil of turpentine 2 drachms, powdered euphorbium 1 drachm, oil of origanum 1 drachm, hog's lard 2 ounces. Mix all together. This should not be repeated after the blister acts. In cases of long standing, a seton put through the frog will often be of great service in restoring the animal to usefulness.

Ossification of the Lateral Cartilages.

These cartilages are two gristly projections or wings attached to the coffin-bone at the heels, and may readily be felt above the hoof. From contraction, corns, and other causes, these elastic bodies often become changed from gristle to bone in consequence of inflammation, leaving the horse with thick heels and a short, tender tread in traveling. The treatment in these cases is only palliative in its confirmed state; the same treatment as for navicular-joint lameness is proper.

Shoulder Strain.

This arises from slipping, severe blows, falling in the shafts, etc. The symptoms are all well marked. The animal, instead of raising the foot, drags the toe on the ground in walking; on making a lever of the leg, by bringing it forward, the animal manifests much pain; these usually are positive symptoms.

Treatment.—Bleed freely from the Plantar vein running down upon the inside of the front-legs. Foment the shoulders well with hot water if the case is a recent one. If of long standing, a seton will be more effective. The following liniment will be a useful application: Sweet oil 1 pint,

spirits of hartshorn 3 oz., spirits of turpentine 2 oz.; mix all together; shake well before using. Or, alcohol 1 pint, spirits of camphor, tincture of myrrh, castile soap, of each 1 oz.; mix all together; or oil of turpentine 1 oz., tincture of opium 1 oz., soap liniment 1 oz., tincture of capsicum 1 dr.; mix all together.

Capped Hock.

This is a bruise of the cap or point of the hock-joint, forming a serious abscess.

Treatment.—Apply the blister recommended in coffin-joint lameness. Tincture of iodine or iodine ointment is sometimes useful.

Bone Spavin.

This is one of the most common causes of lameness in the hind-legs. Spavin arises from strains, sprains, or blows upon the hock-joint, causing an inflammatory condition of the cartilaginous cushions which cover the uniting surfaces of each bone or of the ligaments that surround the joint and bind the bones together; sometimes both are involved. This inflammatory condition of the joint may be considered the exciting cause of spavin, and, if not speedily removed, spavin soon follows; the synovial fluid, commonly called joint oil, is soon absorbed, the cartilages of the joint are turned to bone, which unite one with the other, forming one solid mass, destroying the mobility of the parts involved, and constituting what is technically called ankylosis of the hock-joint. This union of the bones is not always general, there being in many cases but two, three, or four of the bones involved. When these changes are confined to the cartilages, there is no external enlargement; on the contrary, when the ligaments surrounding the joint are involved, we have in all cases external enlargement. When the hock receives an injury, the course of treatment usually pursued

by horsemen is very pernicious. The application of a blister to an inflamed surface must do injury by increasing the inflammation they wish to abate, and in many cases actually producing a spavin where it otherwise would not exist. I do not deny that blisters are necessary and useful in such cases, if properly applied; but the idea of rubbing blisters on an inflamed surface, to reduce it, is like throwing shavings on burning coals to extinguish them. The educated physician, in applying a blister, does it so as to draw the inflammation from the part affected to a part where it will do no injury; otherwise, it had better not be applied at all. When the disease has advanced so far as to produce alteration of structure in the part, the application of blisters is proper, not for the purpose of curing the disease, but with a view of removing the lameness, by increasing the inflammation, thereby causing a more speedy union of the diseased bones, which, when perfect, causes the animal to travel sound. The seton I have found the most successful in long-standing cases. In the early stages, that is, before any alteration of structure takes place, the application of cold water to the parts will often abate the inflammation, or a blister applied above or below the hock will have the desired effect. Cooling embrocations, such as vinegar and water, are also good. When there is external enlargement, active blisters should be applied over the part. Liquid blister: powdered croton seeds $\frac{1}{2}$ oz., powdered cantharides 1 oz., oil of turpentine 1 pt., olive oil 1 pt.; mix all together and shake well before using.

Ring-Bone.

This is a disease precisely like spavin, location only giving it a different name. The same alterations in structure take place, the same terminations follow, and the same treatment is called for. Ring-bone, unlike spavin, rarely occurs without enlargement. I have never known of but one case of the kind.

Splint.

This is a bony deposit situated between the cannon and splint-bones, well known to all horsemen, rarely causing lameness, except when it is situated so as to interfere with the action of the knee-joint, or at the lower extremity of the splint-bone. Few horses attain the age of eight years without having them; they disappear in time by spreading over a greater surface of bone, becoming flat upon the surface, giving rise to the opinion often indulged in by horsemen that old horses never have splint. Splint is a disease of the same character as spavin, and requires the same treatment.

Curb.

This is an enlargement at the back part of the hock, about four inches below the cap, arising from strains, bruises, breaking down of the hock, etc.

Treatment.—In recent cases the part should be bathed with tincture of iodine once a day; or use the iodine ointment. Take a little blood from the saphena vein on the inside of the hind leg, above the hock. Should this not succeed, blisters must be resorted to; the same applications as are used for spavins are applicable here.

Blood or Bog-Spavin.

This is but one disease, a bursal enlargement or an increase in the secretion of the joint-oil causing distension of the capsular ligament which surrounds the joint, causing puffy swellings on the front and inside of the joint, rarely causing lameness. Thoroughpin is the same disease on a more extensive scale, causing the enlargement to extend through the joint from one side to the other. The only successful treatment which I have found, with a few exceptions, is cold-water compresses, placed upon the joint in such a manner as to press upon the swollen parts, and retain them there

for six or eight weeks, by means of a leathern socket made to fit the joint; the compresses to be changed every day; old muslin or woollen cloth is the best material to use.

Palpitation of the Heart.

This disease is known to horse-men as the thumps, in consequence of the violent action of the heart, causing a jerking or shaking of the entire animal frame, observable at a distance of several yards. This disease of sometimes preceded by an obscure lameness, generally occurring in the off fore-leg, which in medical language is termed sympathetic.

Treatment.—The worst cases yield in two hours to the following simple treatment: Divide 1 dr. of digitalis into five powders, and give one every fifteen minutes on the tongue.

Inflammation of the Brain.

Mad staggers, as this disease is called, arises from various causes. Blows over the head will produce it, over-feeding, a tight collar, powerful stimulants, etc. Symptoms: The animal at first is dull, and moves with apparent reluctance; the membranes dividing the eyelids and nose are much reddened, pulse full and quick, appetite lost, a vacant stare about the eyes, ending in delirium or madness. Everything around the animal is destroyed or injured; he continues his ravings until exhausted.

Treatment.—Open the jugular vein as quickly as possible, this should be done before the mad stage comes on or it is too late to be of much service. Open the bowels freely; give the following: Barbadoes aloes 1 oz., croton oil 10 drops, ginger 1 dr., gentian 1 dr., mix with molasses or honey. Give tobacco-smoke injections if convenient, or soap and water will answer the purpose; give on the tongue every two hours 10 drops tincture of aconite, until 8 doses

have been given, and then stop the aconite; give cold water to drink and apply cold-water bandages to the head, or bags of ice would be better; give no food for 12 hours after relief is obtained.

Stomach Stagers.

This disease occurs in horses that are great feeders; in consequence the stomach becomes enormously distended, causing pressure upon the lungs and heart, interfering with the action of both, and causing a determination of blood to the head, producing stupor, with a tendency to pitch forward, resting the head against a tree or any object which may be in his way; the head often becomes bruised and cut by coming in contact with hard and rough objects; the bowels are constipated, the pulse full and slow, respiration disturbed, etc.

Treatment.—Give the purging ball recommended in inflammation of the brain, and bleed freely from the jugular vein, give no food for 48 hours; this is all the treatment the animal requires. As soon as the bowels are opened, the animal is relieved. Care should be used after recovery not to allow the animal too much provender, and keep the bowels in good order as a preventative of subsequent attacks.

Poll-Evil.

This disease is said to arise from blows upon the head behind the ears, in going in or out of stables with low doors, pulling upon the halter, etc. Such injuries in animals whose blood is in bad condition, will cause poll-evil; but it cannot live in a healthy system. The author's experience convinces him that the disease oftener arises from hereditary causes than from any other, having met with, on several occasions, two and three unbroken colts, from the same mare, affected with this disease; proving beyond a doubt, the ready transmission of the disease from parent to off-

spring. Treatment: The blood must be thoroughly purified before a cure can be effected. Give the following powder: Pulverized sulphur one lb., black antimony in powder one-half pound.; mix together; dose, one table-spoonful morning and night, in the feed. No corn or corn-meal should be given. Open the bowels with aloes or linseed oil. Lay the tumor open with a knife, and inject into the opening a solution of sulphate of zinc 2 drs., to 1 pint of water, or the tincture of iodine is very good; sulphuric acid is used in some cases, but it is a dangerous remedy.

Fistula of the Withers.

This disease is situated on the withers, or the raised line of the back, over the shoulders, and is precisely the same disease as poll-evil, location only giving it a different name. It is more common than poll-evil as ten to one, arising from the same causes, and requiring the same treatment; it yields, however, more readily than the former disease.

Glanders.

This loathsome disease has defied medical treatment in all ages of the world. It is one of the most treacherous diseases known to man, being highly contagious, and communicated readily from horse to horse, and from horse to man by means of inoculation. Hence the best treatment is a leaden ball through the brain.

Symptoms.—A discharge of matter from one or both nostrils, enlargement of one or both glands under the jaw; when one nostril only is affected the gland on the same side is almost invariably enlarged, the membrane lining the nose is pale or leaden in color, with ulcerations upon it. The discharge usually sticks to the nostrils like glue, and is sometimes white, but oftener grayish in color. These latter symptoms appear in other diseases of a catarrhal character from an acrid discharge from the nose. Gland-

ders fully developed is not easily confounded with other diseases, as the discharge becomes more glutinous and adheres to the edges of the nostrils more firmly, with increased tenderness of the swellings under the jaw, which now adheres closely to the jaw-bone; the discharge is somewhat streaked with blood, and of an offensive smell; there is a slight tumefaction of the under eyelid, a swelling or elevation of the bones of the nose or forehead, loss of appetite, debility, sometimes cough, swelling of the legs and sheath, and sometimes lameness without any apparent cause, chancres or ulcerations within the nostrils. When these symptoms appear, the disease soon proceeds to a fatal termination. Since the commencement of the rebellion many experiments have been made with a view to discovering a cure for the disease, and with some prospect of success. The sulphate of soda, in ounce doses, three times a day, has been attended with partial success, and many cases are claimed through the agency of this simple remedy.

Farcy.

This disease I regard as an incipient stage of glanders, or as a type of the same fatal malady, and is, to a certain extent, curable. There are two distinct varieties or stages of farcy; one, which is called button farcy, is altogether superficial, being confined to the lymphatic vessels of the skin, and readily yields to medical treatment; the other variety makes its appearance in the extremities, generally upon the inside of the hind legs, which become completely engorged, presenting a very uneven or lumpy appearance, excessively tender and painful to the touch. Small abscesses are formed, which at first discharge healthy pus, but soon ulcerate and discharge a thin, sanious matter. These abscesses first make their appearance on the inside of the hind-legs, and then on the fore ones in like manner; the neck and lips come next in turn, and they may appear in

all parts of the body, when glanders will begin to manifest itself.

Treatment.—Give one ounce of the sulphate of soda three times a day; or corrosive sublimate, in ten-grain doses, twice a day; or nux vomica, in $\frac{1}{2}$ dr. doses, twice a day. Sulphate of copper, in 2 dr. doses, has been used with decided advantage. The tumors should be opened, and caustic silver or red-hot iron applied to each.

Mange.

This is a disease of the skin identical with itch in the human family. The hair comes off in spots which gradually blend together, causing scabby patches; the skin thickens and puckers along the neck.

Treatment.—Take the horse in the sun and scrub him thoroughly all over with castile soap and water, then wash him well from head to tail with gas-water, in which put 2 drs. white hellebore to the gallon. He must now be put in another stall distant from the one in which he has been standing: thus treated, it rarely requires more than one washing to effect a permanent cure. The harness should be thoroughly scrubbed and put away for six or eight weeks. These precautions are necessary to success in this otherwise troublesome disease.

Surfeit.

This is a scurfy eruption all over the body, arising from an impure condition of the blood, causing plethora in one animal, and general debility, etc., in another. The legs swell, the hair is rough and staring, the membrane lining in the nose presents a bluish cast.

Give the following: Barbadoes aloes 1 oz., nitrate of potassa 2 drs., gentian 1 dr.; make into a ball with water; follow this with the following powder: Nitrate of potash 2 oz., pulverized sulphur 6 oz., black antimony 2 oz.; mix and divide into 16 powders, give one morning and night.

Hide-Bound.

Any derangement of the system has a tendency to produce this condition of the skin. Medicines of an alterative character are here indicated; the most successful are: Sulphur pulverized 8 oz., nitrate of potassa pulverized 3 oz., black antimony pulverized 2 oz., sulphate of iron 4 oz.; mix all together and give one table-spoonful twice a day. Or, Barbadoes aloes 2 oz., nitre 1 oz., gentian 1 oz.; mix and divide into 16 powders, one to be given night and morning.

Locked-Jaw.

This is one of the most troublesome and uncertain diseases with which the veterinary surgeon has to combat; it is technically called tetanus. It arises generally from nail-wounds in the feet, sharp, metallic substances taken into and wounding the stomach, or stones in the stomach or intestines; bots are said occasionally to be the cause of locked-jaw, etc., etc. The first symptoms of the disease are observed about the ninth or tenth day after the injury is done, which are a straggling or stiffness of the hind-legs, to which succeeds, in a few days, the following: On elevating the head, a spasmodic motion of the membrane in the inner corner of the eye will be observed, showing little more than the white of the eye, the muscles of the jaws become rigid, the tongue is swollen, and the mouth filled with saliva, the ears are erect, the nose poked out, the nostrils expand, the respiration becomes disturbed, and finally the jaws become firmly set, and the bowels are constipated.

Treatment.—That which I have found most successful is the early administration of the following: Tincture of aconite, two drachms; tincture of belladonna, two drachms; water, one-half ounce; mix and give forty drops every four hours on the tongue. Keep a ball of aloes in the mouth for several days; there is no fear of giving too much; I have frequently given half a pound in the course of a few days

with good results. Hydrocyanic acid, twenty drops in a little water, and put upon the tongue every four hours, is an excellent remedy. Forient the jaws with bags of hops steeped in hot water, and bathe the line of the back from the pole to the croup with mustard and vinegar; be careful not to allow the animal to be unnecessarily excited by noises and bustle about him, but go about him very quietly; keep a pail of bran-slop before him all the time. If the foot has been injured, poultice with flax-seed meal and keep the wound open until healthy action has been established.

Rheumatism.

This is a common disease in some localities, as it is in the human family; the animal appears stiff and sore, the lameness shifting from one limb to another, the joints sometimes become swollen and painful to the touch, the animal appearing better or worse, according to the season of the year and the condition of the atmosphere.

Treatment.—Open the bowels with the following: Calomel, one drachm; barbadoes aloes, four drachms; alcohol, two drachms; linseed-meal, two drachms; molasses enough to make into a ball; follow this with pine tar, one half ounce, made into a ball with flaxseed meal; give one every morning. Poultice the feet with flax-seed meal, four parts, ground mustard, one part, for several days; and bathe the affected limbs with the following liniment: Oil of turpentine, tincture of opium, soap-liniment, of each one ounce; tincture of capsicum, one drachm; mix all together; shake well before using.

Cramp.

This disease baffles the judgment of the most experienced horsemen, often creating unnecessary alarm from the peculiar manner in which the animal is handled.

Symptoms.—The horse appears well in body and limb

until efforts are made to move him; he then appears to have lost all power of motion in one of his legs, usually the hind ones; it is firmly planted on the ground, and the most powerful man fails to move it. On compelling the animal to move, the leg drags behind as though it were dislocated. Upon striking him with the whip he frequently will take two or three natural steps, and the leg drags as before.

Treatment.—Hand-rubbing is very necessary, and use the following liniment upon the affected part: Alcohol, one pint; tincture of camphor, one half pint; tincture of opium, four ounces; mix all together.

Warts.

When the warts have necks, all that is necessary for their removal is a piece of silk tied tightly around them as closely to the roots as possible; in a few days they will slough away: or if they are larger at their base, pass a needle armed with a double thread through the wart as near the root as possible, and tie each way, so as to cut off the circulation of the blood, and it will soon die and come away; or paint it over with the permanganate of potash once a day for a week; or use the caustic potash in the same manner; either of these remedies usually answer the purpose.

Saddle-Galls.

These are two well known to horsemen to require any special remarks regarding their cause, etc.

Treatment.—Bathe the parts two or three times a day with equal parts of tincture of myrrh and tincture of aloes. Or, collodion, one ounce; castor oil, two ounces; mixed together; or, glycerine is a very good remedy.

Diseases of the Eye—Amaurosis, or Gutta Serena,
Commonly called glass eye. In this disease the eyes have a peculiar glassy appearance, with an enlarged or expanded

pupil. The eyes are clear and show no indications of disease to the ordinary observer, yet the animal is partially or wholly blind. The cause is paralysis of the optic nerve, the best means of detecting which is to expose the eye to different degrees of light, which, when disease exists, makes no impression on the pupil whatever; while in a sound eye the pupil contracts when exposed to a strong light, and expands when removed to a weaker light, or when removed to a dark place. An animal affected with amaurosis will run against any object in his way, and present all other symptoms of a horse blind from any other cause.

Treatment.—Give a strong purge; follow this twice a day with half-drachm doses of nux vomica, mixed in the feed; apply a fly-blisters back of the eye, and give bran mashes for a few days. No corn should be used until the sight is restored.

Inflammation of the Haw,

As it is commonly called, also known as the Hooks. This a swelling from inflammation of the membrane in the inner corner of the eye, called the membrana nictitans; its office or function is to cleanse the eye of dirt or other substances getting into it.

Treatment.—This is simple and effective: Open the bowels with the aloes ball recommended in rheumatism, and apply the following wash: Tincture of opium, one ounce; rain water, one pint; mix together and bathe the eye three or four times a day. Do not be persuaded to cut out this membrane of the eye, as its removal does injury by impairing its function.

Simple Ophthalmia.

This disease arises from some external injury, as a blow upon the eye, or from a foreign body getting into it, caus-

ing inflammation to ensue; the eye becomes swollen, very sensitive, and watery.

Treatment.—Open the vein under the eye and let it bleed until it stops of itself. Open the bowels, and use the following wash: Tincture of opium, six drachms; tincture of aconite, two drachms; rain-water, one pint; mix all together, and bathe the eye three times a day: or, use belladonna, one ounce; rain-water, one pint; mix and bathe the same.

Specific Ophthalmia.

This is called by horse-men moon-blindness from its periodical appearance; supposed by some persons to be governed by the moon. The eyes in this disease become watery, and a white film covers the entire ball of the eye. When this disease once appears, we may look for its termination in blindness. The eyes may be cleared up a few times, but eventually the animal goes blind.

Treatment.—Open the bowels freely with the aloes ball, and give internally one of the following powders in the feed, night and morning: Colchicum root pulverized, one ounce; linseed meal, two ounces; mix and divide into twenty powders. Bathe the eye with the following: Belladonna, one ounce; rain-water, one pint: or, nitrate of silver, eight grains; distilled water, four ounces; mix: or, sulphate of zinc, one half drachm; diacetate of lead, one drachm; water, one and a half pints: or, take a piece of sulphate of copper, (blue-stone,) shave it thin and smooth, and pass it carefully between the eyelid and the eyeball twice a day until the eye is cleared up.

Cataract.

This disease is usually the result of termination of specific ophthalmia, causing an opacity or breaking up of the cry-

stalline lens, situated directly behind the pupil, presenting a white and cloudy appearance in the centre of the eye, and causing partial or total blindness. Little can be done by way of treatment in this disease as it occurs in the horse.

RECAPITULATION OF REMEDIES.

Lampass.—Lancing.

Bags or Washers.—Cutting, and apply alum-water or tincture myrrh and water, equal parts.

Sore Mouth.—Tinctures myrrh, aloes, and water, equal parts.

Uneven Teeth.—Filing.

Wolf-Teeth.—Extracting with dentist's forceps.

Caries or Diseased Teeth should be extracted.

Sore-Throat.—Mustard paste with vinegar, or linseed oil two parts, ammonia one part, applied outwardly. Powdered saltpetre, half tea-spoonful on tongue twice a day.

Strangles.—Flax-seed poultice, steam nostrils, and lancing. Veterinary surgeon if possible.

Influenza.—Tincture of aconite or bryona, ten drops in water every six hours for two days, then spirits nitre 1 oz., extract belladonna 2 dr., in a pail of water once a day. A powder of gentian root, saltpetre and anise-seed, each 1 oz., sulphate of quinine 1 dr.; mix and divide into eight powders; give three times a day in feed; or powdered cinchona and powdered quassia each 2 oz., powdered anise-seed 1 oz.; mix and divide into four powders, and give three times a day in feed. Bathe throat in mustard and vinegar, or with linseed oil 3 oz. and ammonia 1 oz., mixed.

Bronchitis.—A ball of nitrate of potassa, pulverized digitalis, and tartrate of antimony, each $\frac{1}{2}$ dr., molasses sufficient to make the ball; once in twelve hours till fever is

broken; then nitrate of potassa $1\frac{1}{2}$ oz., nitrate of soda 6 oz.; mix and divide into six powders; twice a day in mash; or extract belladonna 1 dr., spirits nitre 1 oz., solution of acetate of ammonia 4 oz., in half pint of water as a drench. Blister throat and sides with fly-blisters and turpentine; or mustard, ammonia, and water. Rub in with the hand.

Nasal Glect.—Give night and morning one of the following powders: Sesquichloride of iron 2 oz., powdered cinnamon 1 oz., mix and divide into 4 powders; or carbonate of iron, pulverized gentian, and pulverized quassia, of each 1 oz., divide into four powders; or nux vomica pulverized, $\frac{1}{2}$ oz., linseed meal 2 oz., divide into 8 powders. Another good preparation is muriate of barytes $\frac{1}{2}$ oz., linseed meal 1 oz., divide into 8 powders.

Broken Wind or Heaves.—Divide half an ounce of pulverized digitalis in 20 parts, and give one part night and morning in the feed, until gone; or take asafœdita 2 drs., camphor 1 dr., mix and give every other night for a week.

Inflammation of the Bowels.—Bleed from neck, give 10 drops tincture aconite every three hours, apply hot wet blankets, inject tobacco-smoke or soap and water. No food for forty-eight hours.

Diarrhea.—Give every six hours until checked, powdered opium 1 dr., powdered catechu 2 drs., prepared chalk 1 oz., mix and divide into 4 powders.

Colic, Spasmodic.—Give 1 oz. tincture opium and 1 oz. sulphuric ether in half a pint of water; repeat in half an hour if relief is not obtained. Or, give the following: Tincture of opium 1 oz., aromatic spirits of ammonia $\frac{1}{2}$ oz., extract of belladonna 1 dr., water 1 pint, mix. In flatulent colic, give chlorate of potash $\frac{1}{2}$ oz., sulphuric ether one-half oz., tincture of aloes 3 oz., water 1 pint, mix and drench.

Worms.—Calomel one-half dr., tartrate of antimony one-half dr., linseed meal $\frac{1}{2}$ oz., mix and give at night; or iron

filings 2 drs., common salt $\frac{1}{2}$ oz., powdered savin 1 dr., linseed meal $\frac{1}{2}$ oz., mix, give every night for a week; or asafetida 2 drs., calomel $1\frac{1}{2}$ drs., savin $1\frac{1}{2}$ drs., oil male fern 30 drops, linseed meal 2 drs., mix with molasses and give at night; or calomel 1 dr., powdered wormwood 1 oz., honey sufficient to make the ball; give at night. Follow either of the above with the following ball: Barbadoes aloes 1 oz., pulverized gentian 2 drs., pulverized ginger 1 dr., water sufficient to make the ball. Another remedy: Barbadoes aloes 6 drs., male fern 4 oza., spirits turpentine 2 oz., mix and divide into 6 balls; give one three times a day.

Retention of Urine.—Give a ball every night of powdered opium $\frac{1}{2}$ oz., powdered kino 1 oz., prepared chalk 1 oz., mixed with molasses and made into six balls.

Stone in Bladder.—Muriatic acid 2 drs., in a pail of water once a day.

Quitter.—Flax-seed meal poultice till soft, then cut away. Inject once a day: Chloride of zinc 2 drs., dissolved in 1 pint of water; or sulphate of zinc $1\frac{1}{2}$ drs., dissolved in 1 pint of water; or nitrate of silver 2 drs., in a pint of water; or glycerine may be used with advantage. Before using the wash, have the foot well cleaned with castile soap and water.

Thrush.—Wash the feet well with soap and water, and sprinkle a small quantity of pulverized sulphate of copper in the cleft, and secure it by pressing a little raw cotton.

Ganker.—Take equal parts of pine tar and lard, add sulphuric acid while melting, apply to foot; or use collodion $\frac{1}{2}$ oz., castor oil 1 oz., mix and apply to the parts.

Scratches.—Wash parts in soap and water, and apply once a day: Collodion $\frac{1}{2}$ oz., castor oil 1 oz.; or apply once a week saturated solution bichloride of mercury.

Grease Heels.—Give a ball of Barbadoes aloes 1 oz., pulverized gentian root 2 drs., pulverized ginger 1 dr., water

sufficient to make the ball; wash the parts well and poultice for two or three days with the following: Flax-seed meal mixed with a solution of 2 drs. sulphate zinc to a pail of water; bathe frequently with glycerine, or a solution of zinc, or a solution of chloride of lime.

Water Farcy.—Give one of the following powders night and morning in the feed: Sulphate of iron 2 ozs., nitrate of potassa 1 oz., pulverized gentian 1 oz., pulverized ginger 6 drs., anise-seed, ground, $\frac{1}{2}$ oz., mix and divide into 8 powders; or sulphate of copper, nitrate of potassa, and pulverized gentian, of each 1 oz., pulverized ginger $\frac{1}{2}$ oz., anise-seed, ground, 6 drs., mix and divide into 8 powders. Rub hard and exercise moderately.

Founder.—If the animal is in full condition, bleed freely from the feet, and give the following: Barbadoes aloes 6 drs., croton oil 6 drops, pulverized ginger 1 dr., pulverized gentian 2 drs., mix with water in form of ball; foment the feet well with hot water, and then poultice with flax-seed meal for several days; give in the water every 6 hours extract of belladonna 1 dr.

Shoulder Strain.—Bleed freely from the Plantar vein running down upon the inside of the front legs. Foment the shoulders well with hot water if the case is a recent one. If of long standing, a seton will be more effective. The following liniment will be a useful application: Sweet oil 1 pint, spirits of hartshorn 3 ozs., spirits of turpentine 2 ozs.; mix all together; shake well before using; or alcohol 1 pint, spirits of camphor, tincture of myrrh, castile soap, of each 1 oz.; mix all together; or oil of turpentine 1 oz., tincture of opium 1 oz., soap liniment 1 oz., tincture of capsicum 1 dr.; mix all together.

Capped Hock.—Blister; tincture of iodine, or iodine ointment is useful.

Bone Spavin.—When there is external enlargement,

active blisters should be applied over the parts. Liquid blister: Powdered croton seeds $\frac{1}{2}$ oz., powdered cantharides 1 oz., oil of turpentine 1 pt., olive oil 1 pint.; mix all together, and shake well before using.

Curb.—In recent cases the part should be bathed with tincture of iodine once a day; or use iodine ointment. Take a little blood from the saphena vein on the inside of the hind-leg, above the hock. Should this not succeed, blisters must be resorted to.

Blood or Bog Spavin.—Use cold-water compresses, placed upon the joint for six or eight weeks, by means of a leathern socket made to fit. Old woolen or muslin cloth is best.

Palpitation of the Heart.—The worst cases yield in two hours to the following simple treatment: Divide 1 drachm of digitalis into 5 powders, and give one every fifteen minutes on the tongue.

Inflammation of the Brain.—Open the jugular vein as quickly as possible. It should be done before the mad stage comes on, or it is too late to be of much service. Open the bowels freely; give the following: Barbadoes aloes 1 oz., croton oil 10 drops, ginger 1 dr., gentian 1 dr.; mix with molasses or honey. Give tobacco-smoke injections if convenient, or soap and water will answer the purpose; give on the tongue every two hours 10 drops tincture of aconite, until 8 doses have been given, and then stop the aconite; give cold water to drink and apply cold-water bandages to the head, or bags of ice would be better; give no food for twelve hours after relief is obtained.

Stomach Stagers.—Give the purging ball recommended in inflammation of the brain, and bleed freely from the jugular vein; give no food for forty-eight hours; this is all the treatment the animal requires.

Poll-Evil.—Give the following powder: Pulverized sul-

phur 1 lb., black antimony in powder $\frac{1}{2}$ lb.; mix together; dose, one table-spoonful morning and night in the feed. No corn or corn-meal should be given. Open the bowels with aloes or linsced oil. Lay the tumor open with a knife, and inject into the opening a solution of sulphate of zinc 2 drs., to 1 pint of water, or the tincture of iodine is very good; sulphuric acid is used in some cases, but it is a dangerous remedy.

Glanders.—Sulphate of soda in 1 oz. doses three times a day has been attended with partial success; but powder and ball, applied through the medium of a rifle, is the only *sure* cure we know of.

Farcy.—Give 1 ounce of the sulphate of soda three times a day; or corrosive sublimate, in ten-grain doses, twice a day; or nux vomica, in $\frac{1}{2}$ dr. doses, twice a day. Sulphate of copper, in 2 dr. doses, has been used with decided advantage. The tumors should be opened, and caustic silver or a red-hot iron applied to each.

Mange.—Take the horse in the sun and scrub him thoroughly all over with castile soap and water, then wash him well from head to tail with gas-water, in which put 2 drs. white hellebore to the gallon. Put him in a different stable and use a clean harness.

Surfeit.—Give the following: Barbadoes aloes 1 oz., nitrate of potassa 2 drs., gentian 1 dr.; make into a ball with water; follow this with the following powder: Nitrate of potash 2 oz., pulverized sulphur 6 ozs., black antimony 2 ozs.; mix and divide into 16 powders, give one morning and night.

Hide-Boand.—Take sulphur, pulverized, 8 oz., nitrate of potassa, pulverized, 3 oz., black antimony, pulverized, 2 oz., sulphate of iron 4 oz.; mix together; give one table-spoonful twice a day. Or, Barbadoes aloes 2 oz., nitre 1 oz., gentian 1 oz.; mix and divide into 16 powders, to be given night and morning.

Rheumatism.—Open the bowels with the following : Calomel, one drachm ; barbadoes aloes, four drachms ; alcohol, two drachms ; linseed-meal, two drachms ; molasses enough to make into a ball ; follow this with pine tar, one half ounce, made into a ball with flax-seed meal ; give one every morning. Poultice the feet with flax-seed meal, four parts, ground mustard, one part, for several days ; and bathe the affected limbs with the following liniment : Oil of turpentine, tincture of opium, soap-liniment, of each one ounce ; tincture of capsicum, one drachm ; mix all together ; shake well before using.

Cramp.—Hand-rubbing is very necessary, and use the following liniment upon the affected part : Alcohol, one pint ; tincture of camphor, one half pint ; tincture of opium, four ounces ; mix all together.

Sadde-Galls.—Bathe the parts two or three times a day with equal parts of tincture of myrrh and tincture of aloes. Or, collodion, one ounce ; castor oil, two ounces ; mixed ; or, glycerine.

Amaurosis.—Give a strong purge ; follow this twice a day with half-drachm doses of nux vomica, mixed in the feed ; apply a fly-blister back of the eye. Give no corn until sight is restored.

The Hocks.—Open the bowels with the aloes ball recommended in rheumatism, and apply the following wash : Tincture of opium, one ounce ; rain water, one pint ; mix together and bathe the eye three or four times a day. Do not be persuaded to cut out this membrane of the eye, as its removal does injury by impairing its function.

Simple Ophthalmia.—Open the vein under the eye and let it bleed until it stops of itself. Open the bowels, and use the following wash : Tincture of opium, six drachms ; tincture of aconite, two drachms ; rain-water, one pint ; mix all together, and bathe the eye three times a day : or, use

belladonna, one ounce; rain-water, one pint; mix and bathe the same.

SPECIFIC OPHTHALMIA.—Give in the feed night and morning: Colchicum root, pulverized, one ounce; linseed meal, two ounces; mix and divide into twenty powders. Bathe the eye with the following: Belladonna, one ounce; rain-water, one pint: or, nitrate of silver, eight grains; distilled water, four ounces, mix; or, sulphate of zine, one half drachm; diacetate of lead, one drachm; water, one and a half pints; or, take a piece of sulphate of copper, (blue-stone,) shave it thin and smooth, and pass it carefully between the eyelid and the eyeball twice a day until the eye is cleared up.

THE OLD ENGLISH
MYSTERIOUS HOSRE FARRIER.

DR. TIDBALL,

Offers his valuable work ON THE HORSE to the citizens of this country—all comprised in this one copy of 88 recipes. The old Doctor has had forty years' practice in the different diseases of the horse, and his success has induced him to offer the result of his experience to the public.

RECIPES.

No. 1. FISTULA AND POLL EVIL BEFORE BREAKING.—Rowel from the bottom to the top of the swelling with tape, wet the rowel with tincture cantharides every third day. Move the rowels every morning, washing them clean with soap and water. Leave them in until the swelling has gone down, then draw out and the cure is performed. Bleed one gallon when the operation is performed.

No. 2. AFTER BREAKING.—Rowel from the top of the pipe down through the pipe, then bleed, and annoint the rowels with Blue Ointment every day until it runs a bloody matter. This is never known to fail.

No. 3. BLUE OINTMENT.—Take half an ounce of verdi-gris, one ounce of blue vitriol, four ounces of ointment of rosin, one ounce spirits of turpentine, grind all fine, mix well with one pound lard, and it is fit for use. Common rosin will do, if the ointment is not convenient.

No. 4. THE HOOKS, OR WEAK EYES—Rowel in the jaw, or under the eyes, then bleed. Apply the eye lotion every third day, with a feather. Move the rowels every

morning. Leave them in for fifteen or twenty days; feed on corn.

No. 5. EYE LOTION.—Take one pint of linseed oil, add two ounces of gum camphor, one ounce of ether. Shake it well, and it is fit for use. This cures all weak eyes that are curable.

No. 6. SPAVIN AND RINGWORM OINTMENT.—Take two ounces cantharides, one ounce gum ophorboum, two ounces turpentine, one ounce tincture of iodine, and three drachms corrosive sublimate. Grind all fine, and mix with two pounds of lard.

No. 7. HOOF BOUND.—Have horse shod with shoes narrow at the heel. Have them made with calks one inch long, flaring out from bottom to the top. Use the Hoof Ointment every third day.

No. 8. HOOF OINTMENT.—Take half a pound of lard, and four ounces rosin. Heat them over a slow fire until melted, take the pot off the fire, add one ounce of pulverized verdigris, stir well to prevent it running over. When partly cool, add two ounces turpentine. Apply it from the hair down one inch. Work the horse all the time.

No. 9. BIG LEG.—Apply the Liquid Blister every third hour until it blisters. In three hours grease the leg with linseed oil. In six days wash it clean with soap and water. Repeat every six days until the swelling goes down. If there should be any callous left, apply the Spavin Ointment.

No. 10. LIQUID BLISTER.—Take half pint linseed oil, one pint spirits turpentine, and four ounces aqua ammonia; shake well, and it is fit for use. Apply every third hour until it blisters.

No. 11. HOOF EVIL OR THRUSH.—Physic and bleed, then poultice the foot with boiled turnips. Renew every twenty-four hours, for three times, then apply the Blue

Ointment every third day, merely anointing the sore parts. Wash clean before applying. Keep the horse out of the mud and wet. This will never fail to cure in four or five weeks.

No. 12. **FOUNDER.**—Bleed in the neck until the horse staggers or falls down. Turn up his feet, and fill them with boiling lard. Give him a physic-ball, and foment his legs with hot water every five or six hours. Give him a mash of scalded bran. This will cure in twenty-four hours.

No. 13. **LUNG FEVER.**—Symptoms: The horse is taken suddenly ill, either after being taken from the stable, or on returning to it. He gives evidence of pain by looking around at his side. He never offers to lie down; his nostrils are distended; he breathes hard; his chest is sore, or over his lungs; he cannot bear you to press your hand hard on his chest; very dry, but cannot drink.

CURE.—Bleed three gallons. Take one ounce of lavender, two ounces spirits nitre, half pint water; drench him. Repeat every four hours until better. Blanket him as warm as possible. Then apply the liquid blister all over the chest opposite the lungs, every third hour until it blisters. If he is not better in six hours, repeat the bleeding, and inject with the following clyster: half-gallon warm water, half-pint linseed oil, and a small handful salt. Never physic, or he will die.

No. 14. **BUTTON FARCY.**—Symptoms; swelled legs, and running sores on the legs.

CURE.—Bleed largely, then physic; then give the following balls or pills, in forty-eight hours after the physic has operated. Take two ounces gentian, and four ounces ginger; make this in a paste with honey or molasses. Divide it into ten parts, add to each part ten grains arsenic. Roll it in paper, and give one, morning and evening, until it physios, or makes him slobber, then omit, and give him

one ounce of laudanum. Feed on green or light food. Wash the sores clean, and apply the blue ointment every other day. If there should be any swelling left in the legs, apply the General Liniment every day or twc.

No. 15. WATER FARCY.—Symptoms: The horse is dull and loses his appetite, and swells along the body or chest, and between the fore legs.

CURE.—Rowel in the breast and along each side of chest as far as the swelling goes. Leave the rowels in until the swelling goes down. Give a spoonful of cleansing powders morning and night.

No. 16. NASAL GLEET, or running at the nose, or to dry up distemper.—Take half a pound of alum, half pound of rosin, half a pound of blue vitriol, four ounces of ginger, and enough fenugreek to scent; grind all fine. Give the horse a spoonful, two or three times a day. This will cure all discharges or distempers, if not glanders.

No. 17. CHRONIC COUGH.—Take powdered squills one ounce, ginger two ounces, cream tartar one ounce, mix well, and give a spoonful each morning and evening, in wet bran. This is good after hard riding or driving. It cures all coughs and colds, and will prevent the lungs from swelling.

No. 18. CLEANSING POWDERS.—Take of ginger two ounces, four ounces fenugreek, one ounce black antimony, and two ounces rhubarb. Grind all fine, mix it well, and it is fit for use. Give a large spoonful, morning and night. This is the best condition powder ever used. It gives a good appetite and fine coat, and life to the animal.

No. 19. FITS.—Symptoms: The horse commences jerking his head, and falls down; in a short time he will get up, and is apparently well.

CURE.—Give two ounces of the tincture of asafœtida every morning for ten days. Tie the gum on his bit, and make him wear it for six or eight days. He will never have a fit after the first dose.

No. 20. **JAUNDICE YELLOW WATER.**--Symptoms: The hair in the mane and tail gets loose, the white of his eye turns yellow, and the bars of his mouth; he refuses to eat, and limps in his right fore leg generally.

CURE.--Physic, but never bleed; then every morning give him one drachm of calomel in one ounce of spirits of camphor, for eight or ten days, also give him a dose of the Clearsing Powders every night. This is a sure cure.

No. 21. **NICKING BALSAM.**--Take a half pound of fresh butter, add to this one ounce oil origanum, and half an ounce tincture of iodine. Mix well, and it is fit for use. This is used on the tail after nicking, and on bruises, saddle galls, corks, and all kinds of sprains and rheumatism.

No. 22. **THUMPS, or Palpitation of the heart.**--Symptoms: The horse is almost exhausted, breathing is very hard. The difference between thumps and lung fever is the distress of the heart, which you may hear flutter at a distance of twenty feet.

CURE.--Bleed largely, and it will suddenly stop. Dissolve one drachm of nitre and a large spoonful of salt in half a pint of water. Drench three times every six hours. Do not work the horse for a week.

No. 23. **SHOULDER JAM, OR SWEENEY.**--Rowel from the top of the shoulder blade down, as affected. Put in a few drops tincture cantharides every third day. Move the rowels every day, keeping them clean with soap and water. Keep them in from twenty to thirty days, and the cure is performed.

No. 24. **STOPPAGE OF THE URINE.**--Symptoms: Frequent attempts to urinate, looking round at his sides, lying down, rolling and stretching.

CURE.--Take half a pound hops, three drachms oil of camphor, grind, and mix. Mix this into three pills. Give one every day, with a drench made of a small teaspoonful

of saltpetre and two ounces of water. This generally cures.

No. 25. **PHYSIC BALL.**—Take two ounces aloes, one ounce turpentine, and an ounce of flour. Make into a paste with a few drops of water, wrap in a paper, and give with a bailing iron.

No. 26. **To REMOVE WARTS.**—Cut them out by the roots, and if they bleed much, dissolve one grain of nitrate of silver in two ounces of water; bathe, and it will stop immediately. Then apply the Blue Ointment every day until it heals.

No. 27. **INFLAMMATION OF THE KIDNEYS.**—Symptoms: The horse is weak across the back, and passes urine very often, which is very highly colored.

CURE.—Bleed one gallon, then blister across the kidneys, and give the following powder: Two ounces rosin, one ounce of hellebore, one ounce gentian. Mix, and apply the General Liniment.

No. 28. **STIFLE SPRAINS.**—If it has never been out of place, bleed two gallons, then physic, and bathe with hot water every twenty-four hours, and apply the General Liniment. Will cure all cases in ten or twenty days. Never put on the stifle shoe.

No. 29. **LOSS OF APPETITE.**—Bleed half a gallon, then give a few doses of Cleansing Powders. If he lacks life, then give him a few drops of the Restorative Liquid.

No. 30. **RESTORATIVE LIQUID.**—This will give life to all that is not dead. Take oil of cloves one ounce, oil of anise one ounce, tincture cantharides one ounce, tincture asa-fetida two ounces, oil rosemary one ounce; shake well, and it is fit for use; give ten or fifteen drops in a bucket of water.

No. 31. **HOOF LIQUID.**—This is for contracted feet or

bruises in the soles of the feet, or after joint sprains: Take four ounces oil of spike, four ounces spirits of turpentine, and one-half pint linseed oil; shake well, and apply over the crust of the foot every day. This will remove fever and soreness of the foot, and hoof bound, but the ointment is best.

No. 32. GENERAL LINIMENT.—Take half a pint linseed oil, half a pint of turpentine, four ounces oil of origanum; shake well, and it is fit for use. This is for all sprains and a General Liniment. It is used in the different diseases spoken of.

No. 33. SORE MOUTH OR TONGUE.—First take his grain from him; then take half an ounce of alum, two drachms of sugar of lead, one pint vinegar, and a half gallon of water, open the mouth and swab it out with this, every morning and night. This will cure in all cases in five or six days.

No. 34. MANGE.—Symptoms: The hair will rub off, and the skin break out in scabs.

CURE.—Physic and bleed, for this is humor in the blood, then make the following ointment, and grease well every day wherever he is affected, for three or four days, and let him stand in the sun. For killing lice, take half pound of sulphur, two ounces spirits tuapentine, and mix well with three pounds of lard; do not let him get wet, give a few doses of the Cleansing Powder.

No. 35. TO STOP BLOOD.—If you can get hold of the artery or vein, tie it up. If not, take the following: Ten grains of nitrate of silver and four ounces of water, apply to the wound, and it will stop immediately. Apply this to warts, after cutting them out.

No. 36. CHEST FOUNDERS.—Symptoms: Not unlike lung fever. The horse is stiff, but has no fever in his feet, very sore in the chest, inclines to stand very wide with his fore legs.

CURE.—Bleed, physic, and rowel in the breast, then commence bathing his breast and chest with hot water every six hours, and blanket him. This will cure, if not of too long standing.

No. 37.—MELANDERS is a disease of the feet and pasterns. It commences after the greasy heels. Symptoms: The hair stands out.

CURE.—Apply the Spavin Ointment every six days, for two or three times. It will run the callous off. Then apply the Blue Ointment until well.

No. 38. SOAP LINIMENT, for sprains and swellings. Take one-half gallon of alcohol, one pint soft soap, four ounces spirits camphor, and four ounces spirits turpentine, stir over a slow fire. This is cheap and good when you cannot get the General Liniment.

No. 39. OPEDELDOC.—Take one half-gallon alcohol, two ounces gum camphor, and one-half an ounce of rosemary. Heat this by setting a jar or pot on the stove. Take pure castile soap, shave it thin, and put in as long as the liquid will eat it. This is sure.

No. 40. NERVE AND BONE OINTMENT.—To one quart clarified neats-foot oil, add two ounces oil turpentine, four ounces oil origanum, and one pint alcohol; shake it, clean with red sanders, and strain it.

No. 41. LOCK JAW.—Bleed largely, and apply chloroform to the nose until the jaws fly open, put a gag into the mouth, and give two ounces tinct. asafetida every 6 hours, and a dose of physic. This will cure, if there is any cure.

No. 42. HEAVE POWDERS TO TRADE ON.—Half a pound of Spanish brown, and half a pound of ginger; give a teaspoonful three times a day.

No. 43. GRAVEL IN THE FOOT,—If it is of long standing, poultice the foot with boiled turnips, or any other

drawing poultice, until it draws, then dress with Blue Ointment a few times. If there is much fever, apply the Hoof Liquid for a few times.

No. 44. IN NICKING, if much swelling follows, bleed, and use the Nicking Balsam every other day on the root of the tail. Never apply water to the tail. Let it stay up four weeks; let the blood dry, and rub it off, then dock and put in the pulleys five or six days.

No. 45.—CURE FOR COLIC.—Take two ounces sweet oil, two ounces laudanum, one pint warm water, and drench. It never fails while there is life.

No. 46. BIG HEAD.—One ounce oil origanum, two ounces sweet oil, two ounces aqua ammonia, two ounces tincture cantharides, two ounces spirits turpentine, and one ounce oil rosemary. Give one spoonful saltpetre every third day; rub the mixture in twice a day.

No. 47. BOTS.—As much red precipitate as will lie on a ten cent piece; mix with dough, and make into a pill. If one does not relieve, repeat in an hour.

No. 48. GRAVEL.—Steep half a pound of hops in a quart of hot water, give it as hot as the horse can stand it.

No. 49. TO REMOVE THE SCUM FROM THE EYE IN TWENTY-FOUR HOURS.—Take five cents worth of pulverized lunar caustic, and mix well with one ounce of lard, and it is fit for use.

No. 50. WEAK EYES.—One spoonful of honey, two spoonfuls fresh butter, one spoonful black pepper, and the yolk of an egg. Stew it for fifteen minutes over a slow fire, and strain through a woolen cloth. Apply in and above the eye.

No. 51. WOUNDS.—One quart of alcohol, one ounce cayenne pepper, one pint spirits turpentine. Shake well, and it is fit for use.

No. 52. SCRATCHES.—Two ounces castile soap, two ounces rosin, one ounce lard, two ounces copperas, and white of an egg; stew it for fifteen minutes, and it is fit for use. Bind it on the part for 24 hours, then wash it well, and the cure is performed.

No. 53. SWEATING LINIMENT.—Take the yolks of six dozen eggs, and one pint of salt; beat them together until it forms a paste; rub the affected part well with the paste, leaving it from four to six hours; wash it off with strong salt and water, as hot as you can put it on. Then blanket it well for ten hours. It cures all sprains.

No. 54. DOPE TO TRADE ON.—One ounce of black anti-mony, mixed with an ounce of cantharides. A small spoonful twice a day will fatten a horse in ten days to trade on.

No. 55. TO REMOVE CALLOUSNESS BY ABSORPTION in a shorter time than by liniment. One ounce of alcohol, and one ounce of pulverized sal ammonia; bathe the leg every two hours; bind the leg with straw bands from the hoof to the top of the callous, fill a sponge with the liquid, and place it on for twenty-four hours; for spavin, add to this liquid half an ounce of cantharides.

No. 56. FISTULA AFTER BREAKING.—Take lye from the small black hickory and the roots of the prickly ash, burnt together; boil down to potash; put a small portion into the hole, and let it remain four or five days; remove it, and put in about twenty drops of aqua fortis.

No. 57. SALVE TO HEAL WOUNDS.—Take a piece of poke root about the size of an egg, and two Indian turnips ground fine, and stew one minute with a pound of lard. Put it on every third day.

No. 58. FISTULA OR POLL EVIL before breaking or matter is formed. Two ounces oil of turpentine, two ounces venice turpentine, two ounces golden tincture, one ounce oil

origanum, and half a pint alcohol; mix well, and apply every 24 hours for three times.

No. 59. HEAVES.—Take one quart sweet milk, add one tablespoonful oil of vitriol; take four quarts of mash feed, wet the same with one half the prescription; next day, give the balance. In one week repeat the prescription; so on for six weeks.

No. 60. FOR CURBS.—Take benoide of mercury three drachms, lard two ounces, mix it well; clip the hair close, just the size of the enlargement, rub the ointment on with the finger. In three or four days the matter which oozes from the enlargement will form a thick scab; soften with fresh lard and pick it off; rub dry with the hand, and apply as above. Five or six applications will remove any curb. For splints, apply in the same manner.

No. 61. MUD FEVER AND CRACKED HEELS.—Take equal parts lard, gunpowder, and glass; pulverize the glass and powder as fine as flour, and make into an ointment; wash the diseased parts with castile soap and soft water; rub dry, and apply the ointment once a day till cured.

No. 62. INFALLIBLE CURE FOR RINGBONE AND SPAVIN.

Liquid Ammonia.....	1 oz., 9th.
Red Precipitate.....	1 oz., 8th.
White Pine Turpentine.....	1 oz., 3rd.
Spanish Flies.....	1 oz., 7th.
Origanum Oil.....	1 oz., 6th.
Iodine.....	2 drachms, 5th.
Corrosive Sulphimate.....	2 drachms, 4th.
Strong Mercurial Ointment.....	3½ oz., 1st.
Lard 3½ oz., honey ¼ lb., gum forbilum.....	1 oz., 2nd.

The reader asks why this recipe is written in such a form. It is prepared just as written: 9th is first placed in the mortar; 8th is next, and well mixed with 9th; 3d is then thoroughly mixed with 8th and 9th. Thus each article is applied separately; and thoroughly mixed. 7th is the next, and so on until your ointment is finished. This is the best

spavin and ringbone ointment known. Clip the hair, and apply the same as for curbs; remove the scale with lard, and wash with castile soap and soft water. Rub dry, and apply again.

No. 63. **PHYSIC BALL FOR HORSES.**—Cape aloes from six to ten drachms, castile soap one drachm, spirits of wine one drachm, syrup to form the ball. If mercurial physic be wanted, add from one-half a drachm to one drachm of calomel. Previous to physicing a horse, and during its operation, he should be fed on bran mashes, allowed plenty of chilled water, and have exercise. Physic is always useful; it is necessary to be administered in almost every disease. It improves digestion, and gives strength to the lacteals by cleansing the intestines, and unloading the liver, and, if the animal is properly fed, will improve his strength and condition in a remarkable degree. Physic, except in urgent cases, should be given in the morning, and on an empty stomach; and if required to be repeated, a week should intervene between each dose. Before giving a horse a ball, see that it is not too hard or too large. Cattle medicine is always given as a drench.

No. 64. **PHYSIC FOR CATTLE.**—Cape aloes, four drachms to one ounce. Epsom salts, four to six ounces, powdered ginger three drachms. Mix, and give in a quart of gruel. For calves, one-third of this will be a dose.

No. 65. **TONIC FOR HORSES AND CATTLE.**—Sulphate of copper one ounce to twelve drachms, white sugar one-half ounce. Mix, and divide into eight powders, and give one or two daily in the animal's food.

No. 66. **CORDIAL FOR HORSES AND CATTLE.**—Powdered opium one drachm, ginger powdered two drachms, allspice powdered three drachms, caraway seeds powdered four drachms. Make into a ball with molasses, or give as a drench in gruel. *For Gripes and Hove in Cattle*, add to

the above a teacupful of spirits of oil; and repeat every two hours until the animal is found to be relieved.

No. 67. DIURETIC BALL.—Hard soap and common turpentine each four drachms, oil of juniper twenty drops, powdered rosin to form the ball. *For Dropsy, Water Furcy, Broken Wind, or Febrile Diseases*, add to the above allspice and ginger, of each two drachms. Make four balls, and give one morning and evening.

No. 68. DIURETIC POWDERS.—Powdered rosin and nitre each four ounces; mix, and divide into twelve parts. Give one daily.

No. 69. ALTERATIVE OR CONDITION POWDERS.—Rosin and nitre, each two ounces, levigated antimony one ounce. Mix for eight or ten doses, and give one at night and morning. When this is to be given to cattle, add glauber salts one pound.

No. 70. FEVER BALL.—Cape aloes two ounces, nitre four ounces, molasses to form a mass. Divide into twelve balls, and give one, morning and evening, till the bowels are relaxed, then give No. 68 or 72.

No. 71. SEDATIVE AND WORM BALL.—Powdered white hellebore one-half drachm, linseed powdered one-half ounce. If necessary, make into a ball with molasses. This ball is specific for weed, in horses and cattle.

No. 72. ANODYNE BALL.—Opium one drachm, camphor two drachms, ginger powder one and a half drachms; molasses to form a ball. Give night and morning after the bowels are opened, in tetanus or lock-jaw. With the addition of powdered catechu two drachms; this forms an excellent cure for diarrhea or purging.

No. 73. CORDIAL ASTRINGENT DRENCH FOR DIARRHEA, PURGING AND SCOURING.—Tincture of opium one-half oz., allspice two and a half drachms, powdered caraways one-

half ounce; catechu powders two drachms, strong ale or gruel one pint. Give every morning till the purging ceases. This will make four doses.

No. 74. BLISTER OINTMENT.—Hog's lard four ounces, oil of turpentine and spanish flies, each one ounce; mix. This ointment is strong enough for every purpose.

No. 75. POWDER OF ANGLEBERRIES.—After cutting them off, when they exist in clusters, sprinkle them daily with equal parts of muriate of ammonia and powdered savin.

No. 76. FEVER POWDER FOR HORSES.—Nitro from one half ounce to one ounce, camphor and tartar emetic each from one to two drachms, powder and mix. To be used after the bowels have been opened.

No. 77. ASTRINGENT BALL FOR HORSES.—Opium from one half to one drachm, ginger one and one half drachms, prepared chalk three drachms, flour two drachms. Powder and make it into a ball with molasses.

No. 78. STOMACHIC PURGATIVE BALL, FOR THIN, ILL-CONDITIONED HORSES.—Aloes one and one half ounces, rhubarb two drachms, calomel one drachm, ginger one and one half drachms, oil caraway ten drops, castile soap two drachms; molasses sufficient to make it into a ball.

No. 79. FOR FERMENTING SWOLLEN OR STOCKED LEGS.—Procure one pound of smartweed, place the same in an eight gallon kettle—add four gallons of soft water, place over a slow fire and boil down to two gallons, strain the solution into another iron or tin vessel—get one pound of alum, place in a mortar and pulverize fine; sift the alum into the liquid, again place over the fire, and stir until well dissolved. Now wind the limb tight with a hay rope, pour one pint of the solution in at the top of the bandage when blood warm. Repeat every hour for forty-eight hours. This is

the best fermentation used. It will remove all inflammation and swelling in two days. If there is a cut or wound after fermenting, apply Blue Ointment No. 3 until healed. In case of strain or bruise, apply the General Liniment.

No. 80. FOR DISTEMPER.—Oil of origanum one ounce, oil cedar one ounce, tincture cantharides one ounce, olive oil four ounces. Shake well and bathe the throat and glands morning and evening for six days; rub in well with the hand; he will throw out freely, and the cure is performed.

No. 81. TO REMOVE SPLENT.—Croton oil half an ounce, quick silver one drachm, clip the hair close, the size of the enlargement. Shake the bottle well or it will not mix, (the quicksilver being so much heavier than the oil,) immediately after the bottle is well shaken, take two or three drops on the ends of your fingers and rub on the point of the enlargement. Be careful of getting it on the other parts of the leg, for you must remember it is one of the most powerful blisters known. In six or eight days after applying it to the enlargement, wash off with castile soap and warm water; do not pick the bunch off; let it loosen and work off gradually. After it comes out, apply the Blue Ointment once a day until healed.

No. 82. FOR WORMS IN HORSES.—Take ten grains of arsenic, place in a short ounce vial with mouth-piece large, take on the point of your pocket knife about as much as would lay on half of a three cent piece, and mix in two quarts of dampened shorts; in two or three days repeat the same, and so on, for ten or twelve days. This recipe will effectually destroy all worms in horses.

No. 83. THE BEST SPAVIN PREPARATION KNOWN.—Spirits turpentine half ounce, oil origanum half ounce, citric acid half ounce, oil wormwood half ounce, spanish fly to thicken, clip the hair, scarify, and apply about the thickness

of a piece of note paper, let it remain without touching until it stops running, then carefully wash with soft water and soap. Let the horse remain idle for four weeks.

No. 84. FOR THE EYE.—Calomel three scruples, olive oil one ounce, belladonna three scruples; bathe with an eye brush or feather once a day until cured.

No. 85. FOR WINDGALLS AND SOFT PUFFS.—Oil origanum four ounces, oil hemlock one ounce, oil lavender one ounce, oil wormwood two ounces, oil spike one ounce, sweet oil eight ounces; apply to parts affected morning and evening, and rub well with the hand.

No. 86. FOR THRUSH.—Poultice the foot with turnip poultice for twelve hours, wash clean with warm water, then with a stiff feather apply iodine forte around the frog once a day, for three or four days, after which apply spirits of salts two or three times. In one week the cure is performed.

No. 87. HOOF ROT.—Get a strong solution of white oak bark, then add equal parts of tobacco and gunpowder, let it stand until you get the strength, bathe the foot night and morning for ten days; then apply the Hoof Ointment to grow them out.

No. 88. HEAVE REMEDY.—Balsam of fir and balsam of copaiva, equal portions, add calomel and magnesia, equal parts, to thicken, make into rolls the size of yolk to an egg. Give twice a day, morning and evening.

HOW TO CLEAN AND OIL HARNESS.—First, take the harness apart, having each strap and piece by itself; then wash it with warm soap suds. When cleaned, black every part with the following dye: One oz. extract of Logwood, 12 grs. bi-chromate of Potash, both pounded fine—when, put into two quarts of boiling rain water, and stir until all is dissolved. When cool it may be used. You can bottle and

keep for future use, if you wish. It may be applied with a shoe brush, or anything else convenient. When the dye has struck in, you may oil each part with Neatsfoot Oil, applied with a paint brush, or anything convenient. For second oiling, use one-third Castor Oil, and two-third's Neatsfoot Oil, mixed. A few hours after, wipe clean with a woolen cloth, which gives the harness a glossy appearance.

This preparation does not injure the leather or stitching, makes it soft and pliable, and obviates the necessity of oiling as often as is necessary by the ordinary method.

TO PREVENT HORSES BEING TEASED BY FLIES.--Take two or three large handfuls of Walnut Leaves, upon which pour two or three quarts of cold water; let it infuse one night, and pour the whole next morning into a kettle, and let it boil for a quarter of an hour; when cold it will be fit for use. No more is required than to moisten a sponge, and before the horse goes out of the stable, let those parts which are most irritated be smeared over with the liquor, viz: between and upon the ears, the neck, the flank, &c. Butternut leaves will answer the same purpose.

RULES AND REGULATIONS
FOR THE GOVERNMENT OF
TROTTING AND RACING
OVER THE
UNION COURSE, LONG ISLAND.

The following are the Rules and Regulations for the government of all Trotting and Pacing Matches to come off on the Union Course, Long Island :

RULE 1. NATURE OF RULES.—All matches or sweepstakes which shall come off over this Course will be governed by these Rules, unless the contrary is mutually agreed upon by the parties making such match or stake.

2. POWER OF POSTPONEMENT.—In case of unfavorable weather, or other unavoidable causes, all purses, matches, or sweepstakes announced to come off, to which the proprietors contribute, they shall have the power to postpone to a future day, upon giving notice of the same.

3. QUALIFICATION OF HORSES STARTING.—Horses trained in the same stable, or owned in part by the same person within three days, shall not start for a purse; and horses so entered shall forfeit their entrance. A horse starting alone shall receive but one half of the purse. Horses deemed by the Judges not fair trotting horses shall be ruled off previous to, or distanced at the termination of the heat.

4. ENTRIES.—All entries shall be made under a seal, inclosing the entrance-money, (ten per cent on the purse,) and addressed to the proprietor, at such time and place as may have been previously designated by advertisement.

5. **WEIGHT TO BE CARRIED.**—Every trotting horse starting for match, purse, or stake, shall carry one hundred and forty-five pounds; if in harness, the weight of the sulky and harness not to be considered. Pacing horses liable to the same rule.

6. **DISTANCES.**—A distance for mile heats, best three in five, shall be one hundred yards; for one mile heats, eighty yards; and for every additional mile, an additional eighty yards.

7. **TIME BETWEEN HEATS.**—The time between heats shall be, for one mile, twenty minutes; for every additional mile an additional five minutes.

8. **POWER OF JUDGES.**—There shall be chosen, by the proprietor of the Course, or Stewards, three Judges to preside over a race for purses, and by them an additional Judge shall be appointed for the distance stand; they may, also, during or previous to a race, appoint Inspectors at any part of the Course, whose reports, and theirs alone, shall be received of any foul riding or driving.

9. **DIFFERENCE OF OPINION BETWEEN JUDGES.**—Should a difference of opinion exist between the Judges in the starting stand on any question, a majority shall govern.

10. **JUDGES' DUTIES.**—The Judges shall order the horses saddled or harnessed five minutes previous to the time appointed for starting; any rider or driver causing undue detention after being called up, by making false starts or otherwise, the Judges may give the word to start without reference to the situation of the horse so offending, unless convinced such delay is unavoidable on the part of the rider or driver, in which case not more than thirty minutes shall be consumed in attempting to start; and at the expiration of that time, the horse or horses ready to start shall receive the word.

11. **STARTING HORSES.**—The pole shall be drawn for by

the Judges ; the horse winning a heat shall, for the succeeding heats, be entitled to a choice of the track ; on coming out on the last stretch, each horse shall retain the track first selected ; any horse deviating shall be distanced.

12. **RIDERS OR DRIVERS.**—Riders or drivers shall not be permitted to start unless dressed in jockey style.

13. **WEIGHTS OF RIDERS AND DRIVERS.**—Riders and drivers shall weigh in the presence of one or more of the Judges previous to starting ; and after a heat, are to come up to the starting stand, and not dismount until so ordered by the Judges ; any rider or driver disobeying shall, on weighing, be precluded from the benefit of the weight of his saddle and whip, and if not full weight, shall be distanced.

14. **PENALTY FOR FOUL RIDING OR DRIVING.**—A rider or driver committing any act which the Judges may deem foul riding or driving shall be distanced.

15. **HORSES BREAKING.**—Should any horse break from his trot or pace, it shall be the duty of the rider or driver to pull his horse to a trot or pace immediately, and in case of the rider or driver refusing to do so, the penalty shall be that the next best horse shall have the heat ; if the rider or driver should comply with the above, and he should gain by such break, twice the distance so gained shall be taken away on the coming out ; a horse breaking on the score shall not lose the heat by so doing.

16. **THE WINNING HORSE.**—A horse must win two heats to be entitled to the purse, unless he distance all other horses in one heat. A distanced horse in a dead heat shall not start again.

17. **RELATIVE TO HEATS.**—A horse not winning one heat in three shall not start for a fourth heat, unless such horse shall have made a dead heat. When a dead heat is

made between two horses, that if either had won the heat the race would have been decided, they two only shall start again; in races best three in five, a horse shall win one heat in five to be allowed to start for the sixth heat, unless such horse shall have made a dead heat; such horses as are prevented from starting by this rule shall be considered drawn, and not distanced.

18. ON HEATS AND DISTANCES.—If two horses each win a heat, and neither are distanced in the race, the one coming out ahead on the last heat to be considered the best. The same rule to be applied to horses neither winning a heat and neither distanced. If one horse wins a heat, he is better than one that does not, providing he does not get distanced in the race; then the other, if not distanced, shall be best. A horse that wins a heat and is distanced is better than one not winning a heat and being distanced in the same heat. A horse distanced in the second heat is better than one distanced in the first heat.

19. HORSES DRAWN.—Horses drawn before the conclusion of a race shall be considered distanced.

20. OUTSIDE BETS.—In all matches made play or pay, outside bets not to be considered play or pay, unless so understood by the parties.

21. OF PLAY OR PAY MATCHES.—All moneys bet on play or pay matches by outside betters, are not considered play or pay.

22. BETTING.—ABSENT BETTERS.—A confirmed bet can not be let off without mutual consent. If either party be absent at the time of trotting, and the money be not staked, the party present may declare the bet void in the presence of the Judges, unless some party will stake the money betted for the absentee.

23. COMPROMISED MATCHES.—All bets made by outside betters on compromised matches are considered drawn.

24. **BETTERS OF ODDS, ETC.**—The person who bets the odds has a right to choose the horse or the field. When he has chosen his horse, the field is what starts against him; but there is no field unless one starts with him. If odds are bet without naming the horses before the trot is over, it must be determined as the odds were at time of making it. Bets made in trotting are not determined till the purse is won, if the heat is not specified at the time of betting.

25. **HORSES EXCLUDED FROM STARTING OR DISTANCED.**—All bets made on horses precluded from starting, (by Rule 19,) being distanced in the race, or on such horses against each other, shall be drawn.

26. **IN CASES OF DISPUTE AND IMPROPER CONDUCT.**—In all cases of dispute not provided for by the Rules, the Judges for the day will decide finally. In case of a trot or match being proved to their satisfaction to have been made or conducted improperly or dishonestly on the part of the principals, they shall have the power to declare all bets void.

27. **SIZE OF WHIPS TO BE USED.**—No rider or driver shall be allowed any other than a reasonable length of whip, namely, for saddle horses, two feet ten inches; sulky, four feet eight inches; wagon, five feet ten inches.

28. **IN CASE OF ACCIDENTS.**—In case of accidents, but five minutes shall be allowed over the time specified in Rule No. 10, unless the Judges think more time necessary.

29. **JUDGES' STAND.**—No person shall be allowed in the Judges' stands but the Judges, reporters, and members, at the time of trotting.

30. **IN CASE OF DEATH.**—All engagements are void upon the decease of either party before being determined.

The Turf and the Trotting Horse in America.

Nearly all the great trotting horses of America have come of one blood,—that of Messenger, an English horse, imported into New York in 1788.

The lineage of this horse can be traced directly back to the Darley Arabian, who was the sire of Flying Childers; and to the Cade mare, who was a granddaughter of the Godolphin Arabian. He was, therefore, of the best English thorough-bred racing stock.

All accounts concur in representing Messenger as a horse of superb form and extraordinary power and spirit. A groom who saw him taken off the ship which brought him to this country was accustomed to relate that, "the three other horses that accompanied him on a long voyage had become so reduced and weak that they had to be helped and supported down the gang-plank; but when it came Messenger's turn to land, he, with a loud neigh, charged down, with a negro on each side holding him back, and dashed off up the street on a stiff trot, carrying the negroes along, in spite of all their efforts to bring him to a standstill."

He was a handsome gray, fifteen and three-quarter hands high,—[a hand is four inches,]—with "a large bony head, rather short, straight neck, with windpipe and nostrils nearly twice as large as ordinary; low withers, shoulders somewhat upright, but deep and strong; powerful loin and quarters; hocks and knees unusually large, and below them limbs of medium size, but flat and clean, and, whether at rest or in motion, always in a perfect position.

These records indicate that he had more of the form of the trotter than the thorough-bred horse in general. This

form, along with the extraordinary vitality and endurance of his race, he gave to his progeny; which being persistently used and trained to trot, became still more marked in these characteristic particulars. The first generation of his descendants were fine road horses, many of them fast, and all endowed with extraordinary courage and endurance. The second and third generations possessed in still greater perfection the form and action of the trotting horse, of which the fourth generation has furnished the most perfect specimens.

The progress in speed has been gradual, as will be seen by the following table:—

ONE MILE.

				m. s.
1818.	Boston Blue,	Boston,	harness,	3 0
1824.	Albany Pony,	Long Island,	saddle,	2 40
1831.	Edwin Forrest,	" "	" "	2 31½
1839.	Dutchman,	" "	" "	2 28
1847.	Highland Maid,	Beacon Course,	" "	2 27
1849.	Lady Suffolk,	Long Island,	harness,	2 26
1858.	Ethan Allen,	Cambridge,	saddle,	2 28
1859.	Flora Temple,	Long Island,	wagon,	2 19½
1859.	Flora Temple,	Kalamazoo,	harness,	2 25
1863.	Peciless,	Long Island,	wagon,	2 25
1865.	Dexter,	" "	" "	2 23½
1865.	Dexter,	" "	saddle,	2 18 1-6
1866.	Dexter,	Buffalo,	" "	2 18
1867.	Dexter,	Long Island,	harness,	2 17½

TWO MILES.

1831.	Top Gallant,	Philadelphia,	saddle,	5 19½
1847.	Lady Suffolk,	Long Island,	" "	5 3
1852.	Tacony,	" "	" "	5 2
1858.	Lady Franklin,	" "	wagon,	5 11
1859.	Flora Temple,	" "	harness,	4 50½
1865.	Dexter,	" "	wagon,	4 50½
1867.	Dexter,	" "	harness,	4 51

THREE MILES.

1827.	Screwdriver,	Philadelphia,	saddle,	8 2
1839.	Dutchman,	Beacon Course,	" "	7 32½
1839.	Dutchman,	" "	harness,	7 41
1841.	Lady Suffolk,	Philadelphia,	saddle,	7 40½
1853.	Pet,	Long Island,	wagon,	8 1
1861.	Stonewall Jackson,	" "	harness,	7 39

ONE MILE BY TEAMS.

1856.	Lantern and Whalebone, both trotting,	2 12
1861.	Ethan Allen and runner; lug mate,	2 19½
1867.	Bruno and Brunette, both trotting,	2 25½
1867.	Ethan Allen and runner; lug mate,	2 15

TWO MILES BY TEAMS.

1862.	Lady Suffolk and Rifle,	5 19
1862.	Lady Palmer and Flatbush Maid, both trotting,	5 15½

Trotting horses have increased in value even more rapidly than in numbers or speed. Since 1830 that increase has been about one hundred per cent. every ten years. The amount paid by Mr. McDonald, of Baltimore, for Flora Temble in 1858, \$8,000, represents the value of the best trotting horse bred in the country up to that date. In 1862 Mr. Sprague of Rhode Island paid \$11,000 for California Damsel. Mr. Bonner paid \$13,000 for The Auburn Horse in 1864; \$25,000 for Young Pocahontas in 1866; and \$33,000 for Dexter in 1867. The great stock horse of Orange County, Hambletonian, was valued in 1866 at \$100,000. It is now no usual thing for fast trotting horses and fine stock horses of the best trotting blood, to sell for amounts varying from ten to twenty thousand dollars.

The events which have transpired in the country during the past six years, affecting all values, have had an effect in bringing about the change in the value of horses; but a great deal must also be credited to the legitimate rise caused by increased demand. The increase in the demand becomes apparent when the source from which it now chiefly emanates is considered. The highest prices paid for trotting horses are paid by those who have no intention of placing them upon the turf. They are bought for pleasure-driving. The taste for this pastime has already deprived the turf of its greatest ornaments, and it absorbs nearly all the promising young trotting horses as soon as they make their appearance. The market thus created by a taste which makes nearly every man a driver and every road a course is infinitely more extensive than that which existed when the only field for the display and enjoyment of speed was the regularly appointed race-courses. The race-course in America is, in fact, gradually becoming merely an exercising ground for developing and training horses previous to their passage into the hands of gentlemen who keep them solely for their own amusement.

To prevent a Horse from Breaking while Trotting.

Have some strong hock straps made, to buckle above and below the hock, joined in the centre with a ring, one for each hock. Now put on a rope halter, and bring the stale down between the fore legs, and attach a large ring to it, just back of the girth. Or instead of the ring, have a cringle attached such as the sailors use, for a rope to pass through. Now take a strong half-inch rope, tie one end into the ring in one hock strap, pass it through the ring in the halter stale, and back to the ring of the other hock strap. Tie it just right, not too tight, but so that the horse can travel easily; and as the horse trots, the rope will pass backwards and forwards through the ring of the halter at the girth. But just the instant he breaks his trot, and throws out both legs together, he jerks upon his nose and disconcerts him, and causes the horse to again strike a trot. After two or three lessons, he is afraid to break; and the more he is pushed or excited, the faster he will trot; and will not dare to gallop, for fear of again being jerked heavily at the nose by the halter. The rope passing from the hind legs through the ring, must be long enough to give the horse all the room he wants for fast trotting, or the rope will heat and break.

