

laminitis, but years ago before the cause was known horsemen, from the peculiar unwilling action of the beast and from its almost inability to proceed, thought there was some similarity between this action and the action of a ship when sinking or foundering and so termed it founder. It is important for us to know the cause in order that we may avoid it, for we all know that prevention is better than cure.

Whenever an organ is used an extra supply of blood is rushed to it to enable it to do its work. This is really congestion, but we limit the name congestion to those cases where the blood stops in that organ after the work is completed. If it goes away slowly, all may be well after 24 or 48 hours, but often it will not go away, and then we have this followed by inflammation, *i.e.*, laminitis or founder.

From the above, then, it is evident that running or trotting may produce this disease, as they will if the animal is out of condition. This is the chief cause of founder in light horses. After a rest the horse should be exercised steadily and regularly. A country-bred horse going into the city, and unused to the concussion between its feet and the hard pavements, requires much care for a time. Increase in weight of a rider upon a running horse or toe weights in a trotting horse may also produce the disease, if suddenly applied and speed demanded at the same time.

The next great cause is exhaustion, for naturally the body is weakened then and if the weakened feet, already exhausted, are required to do further work in supporting the animal they may not be able to control the congestion of blood in them, and inflammation will result. If a horse, therefore, lies down after a journey it would be folly to make him stand.

Drinking cold water when hot may produce founder. The cold water rapidly chills the internal organs and the blood vessels are, of course, contracted. The result is that the blood is driven in greater quantities to the extremities and skin. This may do no harm perhaps where perspiration can take place, but it is not possible in the feet. The result again is congestion, followed by inflammation. If water, after a journey, is absolutely necessary, give it in small quantities and with the chill taken off. This will do good and cannot possibly do harm.

There is still one other cause, and, though it may appear peculiar to an unprofessional horseman, there is no doubt about its accuracy. There appears to be some close connection, a kind of sympathetic feeling or action, between the feet and feed, or better, between the laminae and the digestive organs, and to a smaller extent between them and any of the internal organs, and what will affect these organs, may cause founder. Barley and wheat, given as food, are often followed by laminitis. It is wise to be careful about making any sudden change in the feed. Very strong physic, such as croton oil, or giving a second dose before the first has acted, may also produce it. I have known the same effect to follow a difficulty over the delivery of a foal. Sometimes, too, an animal affected with pneumonia, bronchitis or inflammation of the bowels, may suddenly develop laminitis, perhaps through weakness or, as just stated, from the sympathy which exists between these internal organs and the feet.

I need say little about the symptoms, as they are unfortunately only too well known to most horsemen. The first thing noticed is, of course, the lameness. If we feel the feet they appear to be hot. (One foot only may be affected; it is then easy to make the comparison.) If we tap them the horse flinches. If the artery of the fetlock, or better, that which runs down the cannon bone, be felt it will be firmer, more prominent than usual and will distinctly throb. Naturally, as more concussion comes on the fore feet than on the hind ones, laminitis is oftener found in front, but if not caused by concussion it may appear in any feet.

The horse will endeavor to relieve the painful member by making the other limbs carry most of the weight. If one foot is affected that one will be extended, and will be repeatedly raised from the ground. If both fore feet are affected, the hind feet will be brought forward, nearer the middle of the body, which will be arched. This is done to take the weight off the fore feet. If the horse be made to move (I say "made" because he will not voluntarily move on account of the pain) he will show great pain, but this wears off in a few steps. If an attempt is made to back him he will readily move his hind limbs, and appear

to lean back until he rests upon the heels of his fore feet, but he is apparently afraid of moving these feet. Here he gives us the point we want to notice. He uses his heels more than usual, both in standing and in walking.

There are many other symptoms, *e.g.*, the pulse is quicker and stronger, the temperature raised to between 102 and 105; he breathes quicker and almost pants, and his nostrils are widely opened and more highly colored than usual; his face has a peculiar appearance as though suffering in pain; his eyes are set and staring, and his body often covered with sweat; he will have great thirst but may have no appetite.

Now for treatment. Remember this, the treatment must be energetic and there must be no hesitation. If the disease is caused by intestinal trouble a dose of physic should be given at once but not a physic ball. Linseed oil is good. Personally I use hypodermic injection of arecoline. If the bowels can be got to move freely and quickly, the attack may be aborted and nothing farther required. But as we are not always sure of these I generally prescribe the following:

Tincture of aconite, 3 drams; fluid extract of belladonna, 1/2 ounce; fluid extract of colchicum, 1 1/2 ounces; nitrate of potash, 4 ounces. Dissolve and mix all the ingredients in 24 ounces of water, and give 4 tablespoonsful in 6 ounces of water every 2 hours.

Remove the shoes at once, and if they require it trim the feet. Apply hot water for a time then suddenly change to cold. At night put on poultices, and during the day time let him stand on something cold and wet—wet clay or sawdust. The more cold applied to his feet and fetlocks the better. If he lie down do not try to make him get up, but apply the cold water while down.

Tempt him to lie down by giving him a good bed. I have known some to throw the horse down, and when he feels the great ease from this position he will generally want urging to get up. Blanket him warmly. If he should lie down see that no bed sores form. In some cases it is advisable to blister the coronet. This will never do harm.

When convalescent shoe him with a rocky motion shoe. If this is not understood, shoe him so that there is no pressure at the toe.

If there is any hesitation over the treatment the result may be serious. At the best then we can only hope for the disease to take the chronic form. In this case he will always be sore or tender, or have "fever" in his feet, and travel with a short gait. He will be liable to develop another acute attack whenever put to work.

But we may not get off so lightly as this. The coffin bone inside the hoof may become diseased, and the horse consequently incurably lame and useless. The sensitive structures inside the hoof may become separated and the hoof fall off, or they may become partially separated and allow the coffin bone to change its position, which results in dropped sole at the best. I have seen the bone pierce through the sole. The hoof may become affected and we have that crumbling condition known as pumiced sole. There are many other evils which follow neglect, but the above is sufficient to show its seriousness.

### How France Encourages Horse Breeding

The French government distributed last year 21,000,000 francs, or approximately \$4,200,000, as prizes at horse shows and otherwise in fostering the horse industry. The encouragement given horse breeders in France takes the form of cash, and other prizes offered for stallions and breeding stock at shows and bounties to the owners of approved stallions standing for service at moderate fees. In addition to this the government maintains 3,500 well bred stallions of its own, which last year were bred to 150,934 mares. The approved stallions on which bounty was paid served 92,482 mares, making a total of 243,416 mares bred in France in one season under government supervision. France is more advanced than any nation in Europe in encouragement extended to horse breeders. The object of the government's care is to ensure an adequate supply of horses at all times for military purposes. The payment of prizes and bounties, however, is not confined to breeds adapted for cavalry use. The draft breeds share in the government system of bounties, and are bred very largely under government supervision.

## STOCK

### Our Scottish Letter

Cheese shows and Shorthorn sales have kept us pretty busy during this weary month of October, but farmers who had the misfortune to have their crops out in the fields had an anxious time. The month has been one of the wettest on record. Rain fell with the force of a deluge, and farmers whose crops were still in the fields had a sore time. The harvest of 1909 will long be remembered, and if it was not everywhere as desperate as that of 1879, it was in some districts almost equal to that record year of misery. The last week of October witnessed an improvement, and much grain that seemed almost lost has been saved in a kind of a way. We had very hard frosts during the nights, and it was well on in the forenoon before anything could be "led" but in the end of the day the four or five hours of bright sunshine were found to have wrought a great change, and with plenty of workers, much grain can be saved in that time. After a week of hard, cold, frosty weather, there is again a break, and today, Nov. 1st, we have conditions about as miserable as may be. Potato-lifting proceeds apace, and the dry, hard weather of this week has been conducive to rapid progress here also.

#### CHANGE IN CHEESE TASTE

Cheese shows at Frome in Somerset, London and Chester, have revealed a hopeless divergence in the public taste for cheese. The hard, dry, good-keeping cheese which was in favor in Scotland, is no longer the leading article. The kind wanted is soft and meaty, something that fills the stomach and gives one the impression that he has had a big feed. An English and a Scotch Cheddar judge spent a day at the London show endeavoring to come to a decision, and in the end had to give it up, and call upon other two—a Scotch and an Englishman—to place the lots for them. This they did, and the English cheddars won. The demand is for a soft, "meaty" cheese, one that melts away in your mouth. One of the judges at the Kilmarnock show told us that the first prize Dunlop white cheese, if made after the Cheddar shape, was what he wanted. If such is to be the type of cheese wanted, there must be a big change in the method of making Cheddars. The problem seems to be how to preserve the "meaty" character of the cheese without producing too much acidity. The dairy school and the itinerant instructors have been challenged by the merchants to alter their methods, and so far at least, the net result is in favor of Canadian cheese. In spite of its long ocean travel and equally difficult land transit, the wonder is to find Canadian cheese competing so keenly with what is produced at home. Cheshire cheese which is little better than ill-digested curd, is in great demand. It is shown bound in cloths, and must entail heavy expense in marketing. It commands a very high price in spite of the immature state in which it is put before the public.

#### SHORTHORN INTERESTS BRISK

Shorthorns have had a wonderful innings this month. Great sales have taken place in the north of Scotland, and symptoms of depression are not to be discerned in the ranks of the patrons of the red white and roan. In Cumberland Mr. Barnes, a tenant farmer, got 665 gs. for the two-year-old bull, Good Friday, the buyer being Mr. Miller, La Belen, Berkinhead, the well known buyer for the Argentine. At Haugh, in Perthshire, the herd built up by the late Alexander Robertson, was dispersed, 80 head of all ages, and both sexes, made the fine average of £61 14s. 3d. Figures like 280, 270, 180, 150, 100, 210 and 185 guineas, mainly for cows and young cattle, with very few bulls, indicate how lively the bidding was. Mr. Robertson was a fine judge of Shorthorns; he had a capital eye for the type wanted, and the dispersion sale was attended by Shorthorn patrons from far and near.

Perhaps the price of £25 1s 1d. realized for 44 at a mixed sale held in Perth in the afternoon of the same day, was a better index to the actual value of commercial Shorthorns. In the following we made a day of it; at the Duthie-Marr sale of calves, held at Tillycairn near to Oldmeldrum, 24 bull calves, bred by Mr. Duthie, made an average of £251 1s. 7d. each. Seven bull calves, bred by John Marr, of the famous