quantities of grain during the first few days of seeding, following a long period of idleness and light rations. The horse should be practically on full feed when seeding begins, and so would not have the extra strain caused by increased effort on the digestive organs, accompanied with great exertion.

Lameness in Horses—XIX.

Side-Bone.

Side bones are frequently noticed in the fore feet of heavy horses. In rare cases they occur in the hind feet, but seldom, if ever, cause lameness when so situated. While the lighter breeds and classes of horses are not immune, they seldom suffer. Side bone consists of conversion into bone of a cartilage called a *lateral cartilage*. The posterior aspect of the *os pedis* (the bone of the foot) presents on each side a somewhat pronounced ridge of bone. They are called the wings of the *os pedis*. Each wing is surmounted by a somewhat irregular quadrangular-shaped cartilage with a somewhat semi-lunar-shaped superior border. These are firmly attached to the wings and are called the lateral cartilages. The lower portion of these cartilages are contained within the hoof, but the upper portion projects well above the hoof, is covered only by skin, and can readily be felt and its outline followed by pressure with the thumb or finger over each heel. They are quite elastic, yield readily to pressure, and resume their original position immediately when pressure is removed. Some claim that these cartilages assist in the expansion of the foot, but it is generally conceded that they have no action in this respect. No doubt they expand and spread outwards when weight is put upon the foot, in order to accommodate the expansion of the soft tissues that are situated between them, which is caused by the weight, and so soon as the foot is lifted from the ground they regain their former position. In their expansion they are simply passive agents being pressed out as described. They may, however, be considered as active agents in the contraction of the heel, as, when pressure is removed from their inner surface, they assume their natural position in virtue of their elasticity and the pressure they exercise upon the sensitive frog forces the heel into its original shape. Briefly, they may be said to be forced to expand when the foot is on the ground, and that they actively assist contraction when the weight, which forces the frog upwards and outwards, is removed from the foot. It must not be understood that the foot expands and contracts upon its inferior surface, but at the coronet and heels; not the horny foot, but the soft parts of the heel and coronets. To prevent undue expansion of these, the lateral cartilages are placed as elastic sides. The process of ossification is often a very slow one, often unaccompanied by inflammatory action, causing the animal no pain, hence not causing lameness. But lameness may appear at any time, where well-marked exciting cause be given, as hard or fast work on hard roads. Lameness no doubt is caused by the constricted space (caused by the inflexible sides) causing undue pressure upon the soft parts in their tendency to expand each time weight is put upon the foot. At the same time many horses with side bones never show lameness, although continuously subjected to the ordinary exciting causes, but on account of the danger of lameness, a horse with side bone should be considered unsound although he may never have shown lameness or tenderness.

The causes of the trouble may be said to be hereditary predisposition and shoeing with high calkins. It is generally admitted that the predisposition is hereditary, hence it may be considered unwise to breed an animal of either sex if he or she be affected. High heels prove a cause—first, because the shock received by the heels when the foot comes to the ground is transmitted directly to the cartilages; second, because the pressure upon the heels of the wall is unnatural and excessive, the frog is prevented from bearing its proper proportion; third, because they are pulled inwards and downwards by the sensitive frog being pressed downwards, while its horny covering being removed from the ground forms no column of support. Direct injuries are often blamed for causing side bone. This may be possible and as they usually exist in pairs, if the cartilage of one heel be normal and that of the other be ossified, and there be any symptom of previous injury, we may be justified in giving the horse the benefit of the doubt and decide that the trouble was accidental.

Opinions differ as to just when a horse should be condemned as having side bone. The process of thickening, hardening, and ossifying is gradual. Some claim that a horse should not be condemned until ossification is complete, and there may be reasonable grounds for the claim, as a horse really has not side bone until bone is really formed. At the same time we are of the opinion that a horse in which the symptoms plainly indicate that ossification has commenced should not pass as sound.

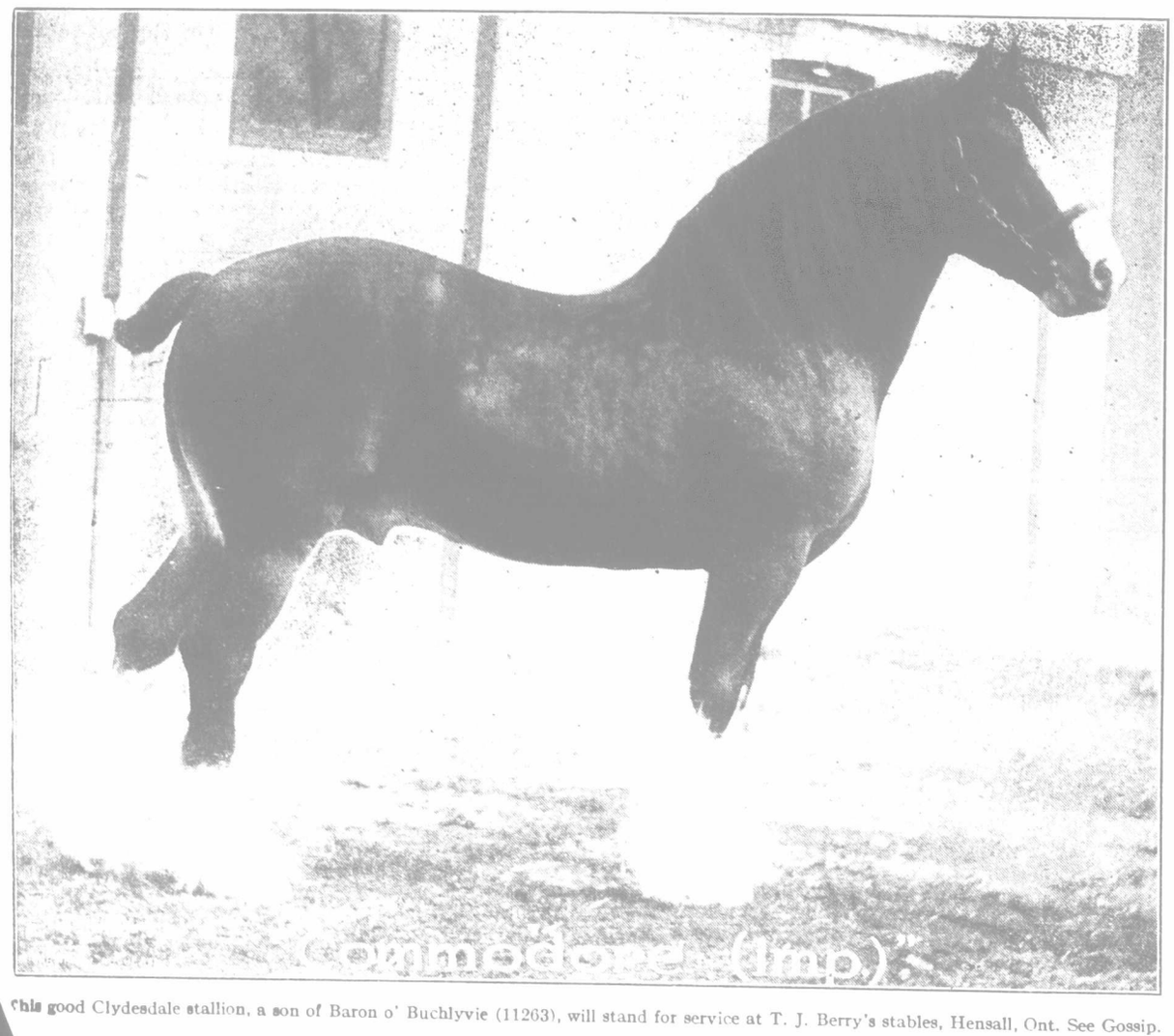
Symptoms.—In many cases the symptoms are solely local, in others there is more or less well-marked lameness, which is usually characterized by the toe of the foot being first brought to the ground; when both feet are involved, by a shortness of step and want of elasticity of action.

To detect the bony deposit, it is generally necessary to press upon the cartilages, which are naturally yielding and elastic, but when diseased they gradually lose this character, becoming hard, unyielding and enlarged. In clean-limbed horses the enlargement can usually be noticed, but in the hairy-limbed classes a manipulation is necessary to detect abnormality, and even in a clean-limbed fellow where any suspicion exists it is safer to handle. The disposition of bone may be uniform, involving the whole substance of the cartilage, or it may be in isolated spots, either at the junction of the cartilage to the bone anteriorly, or involving the posterior border first. In most cases the process is slow, the cartilages gradually becoming enlarged and hardened until ossification is completed, when they become entirely unyielding to pressure and more or less altered in outline.

Treatment.—It is doubtful if any treatment is beneficial. When the process of ossification has commenced it cannot be checked. The advisability of hastening the process by counter-irritation as blistering or firing is very doubtful. The removal of the deposits by an operation has been practiced without success. In cases where lameness is extreme, the operation of neurotomy by a veterinarian may be justified. This consists in removing the nerve supply to the part.

It is well to bear in mind that while the condition in many cases does not cause lameness, the horse's gait will lose that elasticity so essential to good action. In heavy horses this may not be of so much consequence, but in the lighter classes it is of great importance, not only as a question of soundness or unsoundness, but of the usefulness of the horse and safety of rider or driver.

WHIP.



This good Clydesdale stallion, a son of Baron o' Buchlyvie (11263), will stand for service at T. J. Berry's stables, Hensall, Ont. See Gossip.

LIVE STOCK.

A Few Truths About Pigs.

The following brief references to swine management were embodied in the annual report of a co-operative bacon factory in Britain, and were published in the Live Stock Journal.. Much information is summarized in a few brief sentences.

Save the best sows for breeders. Do not breed from young, immature sows. Keep a record of the performance of each sow.

Fatten the rattle-headed sow that lies on her pigs. Try another.

When pigs are low in price, it is the time to increase the number of breeders.

Small pigs grow rapidly in a cold rain—that is, rapidly smaller.

Avoid scours by keeping things clean about troughs and swill tubs.

Aim for a daily gain of one-and-a-half pounds per pig. If you do not work for it, you will probably not get it.

A wet pen will make a lame hog.

A pig does not merely eat to live.

Pigs consume 2 lbs. of water with every pound of corn—if they can get the water.

It sounds contradictory, but it is good advice to fatten the hogs lean.

Quickly grown hogs are by any odds the most profitable.

Fatten is a poor word. Grow is better.

The hog is a machine for converting golden corn into golden coin.

Put the hogs on the platform scales occasionally. You will learn something.

Profit comes not in how little we can keep the pig on, but in how much we can get him to eat of a balanced ration.

A larger increase of weight is obtained for the amount of food consumed in the early stages of fattening than in the later stages.

Feeding Market Toppers.

Maple Shade Farm, in Ontario County, has long been noted for its high class Shorthorn cattle. But pure-bred stock is not the only choice product this farm is capable of producing. On the farm, south of the main buildings, is a barn with stable accommodation for about twenty-five head of stock. This stable is usually used for winter feeding of cattle, and the past winter twenty-two grade Shorthorn steers have been fed. By the first week in April these steers were finished ready for the block. There was not a cull in the stable. The whole lot were uniform in size, similar in color and even in fleshing. Twenty-two low-set, deep, thick-bodied, evenly-fleshed steers are a pleasing sight to any lover of beef cattle.

The owner, W. A. Dryden, is a judge of beef cattle and can see in the stocker the appearance and quality of the finished animal. He knew last fall when selecting the steers, to fill his stable, from a lot of seventy-three, about what the animals would do with good feed and care. He has not been disappointed. Every animal purchased has turned out to be a good feeder. The transformation from the stocker to the finished stage has been brought about by feeding regularly plenty of the ordinary home-grown feed, together with good care and attention. During the winter the average gain was about 300 pounds, and the finished animals would weigh around 1,300 pounds each after about 150 days' stable feeding.

Successful feeding is made easy by having good stuff to work with. But choice stockers have failed to make satisfactory gains when in the care of some feeders. Not only does Mr. Dryden select good stock, but he keeps a good stockman to do the feeding, and this combination seldom fails to bring results. Silage forms the basis of the ration in this stable, and well-matured corn is preferred for ensiling. Silage and straw are mixed every day, and each animal gets about a bushel of this feed night and morning. At noon the steers are fed whole turnips and mixed hay. Salt is given twice a week. A half-bushel of turnips is fed each animal daily. Water is before the cattle, but they are turned out for exercise twice every week. When the steers are first stabled, their ration consists mainly of the succulent feeds and with only a little grain, but gradually the amount of grain is increased as the steers become accustomed to stable conditions. The limit is three-quarters of a gallon of equal parts of ground wheat and oats, fed twice daily. This ration has proved very satisfactory. The wheat that was fed had sprouted in the field, which rendered it unmarketable for milling purposes. Wheat is considered a valuable feed and gives good results, when mixed with oats, for fattening cattle. While the silage may give sufficient succulence to the ration, it is believed that the feeders make more rapid gains when turnips are fed, and it is easier to keep the stock in healthy condition. Both silage and roots are valued highly. During the time the cattle were in the stable, each consumed probably 300 bushels of