

to the Lily Family, and is a close relative of the Solomon's Seal.

Insects which claim our attention at this time of year, whether we will or no, are the Black Flies. These insects breed in rapidly-running streams, the larvae being attached to objects in the water and breathing by means of gills. Consequently they are more numerous in localities where such streams abound.

THE HORSE.

Lameness in Horses—XXIV.

Scratches, or Cracked Heels.

Scratches or cracked heels is a skin disease, hence it may be claimed that it is not properly classed as "lameness." At the same time the condition, in most all cases, causes lameness, hence we may be excused for discussing it in this class.

It consists in an inflammation of the skin. It is characterized by redness, (noticeable only in horses with white heels), heat, swelling, and irritation. It is technically called Erythema, and is liable to affect any portion of the limbs. When that portion between the hoof and the fetlock joint is involved, it is called *scratches* or *cracked heels* when the limb is affected to a greater or less height above the fetlock, it is called *mud fever*, when the anterior surface of the hock is the seat it is called *sallenders*; and when the posterior surface of the knee is involved, it is called *mallenders*.

Causes.—Horses with fatty or beefy legs are predisposed to the trouble, but it is liable to occur in horses of any and all degrees of quality of bone. It may be due to systemic or constitutional disturbance, induced by overfeeding and want of exercise, or by the reverse, i. e., a depleted state of the system, caused by debilitating diseases, or want of proper nourishment. In either of these conditions, slight exciting causes will usually be followed by the trouble. It is caused by heat and cold operating alternately upon the skin; standing in wet, dirty and ill-ventilated stables; friction; pressure; dirt and wet. Probably one of the most frequent causes is the too common habit of washing horses' legs, especially with warm water. During certain seasons of the year, when the weather may be warm during a portion of the day and then turn cold, it is not uncommon for horses to reach the stable in the evening with mud or snow and water frozen to the hair upon their legs. The teamster, thinking the horses would be uncomfortable if allowed to stand in this condition, takes warm water and washes the legs and leaves the horses standing in their stalls. During the washing process the hair and skin have become wet with the warm water, then the air, always colder than the water that has been used, now striking the parts causes a more or less violent reaction, which interferes with the circulation. When this has occurred repeatedly, we should not be surprised if scratches or mud fever appears. The practice of washing mud or frozen matter off with either warm or cold water cannot be too strongly condemned, unless the teamster attends to but one leg at a time and does it thoroughly, that is, after washing a limb he should rub it with cloths or wisps of straw or sawdust, until it is thoroughly dry, then attend to another leg, etc. This, of course, takes a long time, especially with hairy-legged horses, and few teamsters have either the time or inclination in the evening after doing a day's work. The above practice will make the horse comfortable and prevent reaction, at the same time the horse suffers little or no discomfort by standing with mud or snow, frozen or not, upon his legs. The accumulation is upon the hair, and it is seldom that the skin is wet. Unless the teamster is satisfied to rub until dry, he certainly should not wash. Allow the horse to stand until the mud dries, or the ice melts by the heat of the legs and of the stable, when it will drop off or can readily be rubbed or brushed off. Supposing the brushing does not take place until the next morning, it is usually much better for the horse than washing as it is usually done; hence, on general principles we say, "Do not wash your horses' legs, especially in cold weather."

Another fertile cause of the disease is clipping the legs in cold weather. When the legs are to be clipped, it should be done in the fall, at all events not later than the middle of November. They may be clipped again during the winter, if necessary, as

they have gradually become accustomed to the cold, but it will be noticed when the clipping is not done until later in the season, as is often the case, especially when the horse changes ownership, and the new owner, in order to improve the apparent quality of bone, with a view probably of selling again, clips his legs, that in the course of a couple of weeks he has cracked heels, and often mud fever in all limbs. In cases of this kind the reaction is too great, the cold has such an effect upon the clipped legs, that have previously been protected by hair, that the circulation becomes partially arrested; then, when in the stable it regains its normal condition, only to be again checked when the horse is taken out, etc., etc., and this usually results as stated. The way to prevent skin disease of this nature in the legs is to keep the horse in a dry, comfortable place, feed in proportion to the amount of work done, and as far as possible avoid the direct operation of heat and cold, wet and dry, directly upon the skin.

Symptoms.—The first symptom is a redness of the skin, (noticeable only in animals with white heels), swelling, heat and tenderness. The swelling is usually the more noticeable and it usually disappears on exercise. After a while cracks extending across the heel will be noticeable, the horse will go lame for a few steps, and, if the weather be cold, it is probable the cracks will bleed a little. As the disease advances the symptoms become worse; the affected leg or legs swell more when he stands; the cracks exude pus, often of a fetid odor, and lameness becomes more marked. In chronic cases the swelling does not disappear on exercise, the horse goes lame mostly all the time, the parts assume a dirty, greasy appearance, and the odor is offensive.

Treatment.—If rational treatment be adopted in the early stages, it is usually successful in a reasonable time. The first thing to do is to remove the cause, if possible. Let the patient have a few days' rest;



Botha.

Clydesdale colt, first at Ayr show in Scotland.

give a purgative of 6 to 10 drams aloes, and 2 drams ginger, according to size; feed bran only, until purgation ceases, and even then feed very little grain until he is put to work again. Follow up with 3 drams of nitrate of potassium twice daily for a week or ten days. Local treatment consists in keeping the parts as clean as possible without washing. Many cases are aggravated by repeated washings with soap and water. This is another case in which we say "Do not wash." The local applications depend to a considerable extent upon the weather. This applies especially when the horse is to be worked or driven when suffering from the disease. Lotions, oils, or ointments are usually used. In warm, dusty weather, lotions are best, as they have an astringent, antiseptic action and do not gather dust or dirt, as oils or ointments do. In cold weather lotions often have such an astringent effect that they dry up and harden the skin, and then the cold still further contracts, and a case that has apparently done well will crack open again when the horse is in action, while oils or ointments have a more softening, and, at the same time, antiseptic effect, and tend to prevent cracking. Whichever is used, (sometimes they are used alternately or the lotion applied when the patient is in the stable, and the ointment just before he is taken out, in cold weather) should be freely used three or four times daily. A favorite lotion is made of one ounce each of sulphate of zinc and acetate of lead, half an ounce of carbolic acid, and one pint water. Probably the best ointment is the oxide of zinc ointment to which is added 20 drops carbolic acid to the ounce. An oil made of one part carbolic acid to 30 parts raw linseed, or sweet oil, gives good results.

When a case has become chronic, and what is generally called *proud flesh* is present, it must be removed

by applying a caustic, as butter of antimony applied with a feather once daily for two or three days, before the above treatment is adopted. When the parts become greasy, and dirty looking, or have a foul odor, they should be poulticed with warm linseed meal and a little powdered charcoal for about two days and nights, (a fresh poultice being applied about every 8 hours), before the general treatment is adopted. In cases that are largely constitutional, in addition to the constitutional treatment mentioned, it is well to give alteratives, as 1 to 1½ ounces of Fowler's solution of arsenic twice daily for a week.

WHIP.

Better Light Sires Needed.

From statements of men who have been buying horses for war purposes it is evident that Canada has not too large a supply of the right class of light horses. By this we do not mean that Canada is short of horses, but from the number of animals turned down by the buyers and the general trend of horse affairs, we are led to believe that our light-horse stock is of rather an inferior type. Much of it has been the result of the promiscuous crossing of undersized, hairy-legged mares with undersized, light horses of the roadster class in an effort to get a light horse a little bigger than the roadster and lighter than the cull mare used in these breeding operations. There seems to be need in Canada, if our light horse stock is to be maintained, of more good-sized, high-quality light stallions. We are not advising the wholesale use of light horses, because we believe that for the average farmer it is more profitable, in the end, that he breed drafters of good weight and quality rather than light horses. But most farmers have a light mare or two which they use for road work, and there should be plenty of the right class of light horses in this country to ensure a better class of light horses in the future. A few big, strong Thoroughbreds could be used to good advantage on many mares, and the Standard-bred horses used should have plenty of size as well as speed and quality. There is also a place for the right type of Hackney. And then the owners of mares should be careful in their breeding and not expect to get good light horses from cull mares, the result of a mixture of breeds. An effort should be put forth to improve the quality of the light-horse stock as well as of the heavy horses of Canada.

LIVE STOCK.

Gains in a Bunch of Hogs.

Editor "The Farmer's Advocate":

We frequently read of hogs making exceptionally rapid gains on certain feeds, fed in certain proportions. However, with the best of care and attention we are seldom able to make a hog gain over 1½ pounds per day. On March 20 we bought 11 thrifty hogs, averaging 102 pounds apiece. These were fed on equal parts barley and oat chop, and had about 80 pounds of skim-milk per day. They were only fed twice a day, but were given all they would clean up. On May 11 the seven largest were sold and they weighed 1,530 or 218 pounds apiece. The four remaining hogs were marketed a week later, and weighed about the same. The seven gained about two-and-a-quarter pounds a day, and the four smaller ones about two pounds per day. It took 4,200 pounds of chop and 4,500 pounds of skim-milk to make the 1,270 pounds gain, or a little over 3¼ pounds of grain and 3½ pounds of milk to make one pound gain. Without the skim-milk it would have taken considerably more grain. At present prices there is good money in feeding hogs that do well. This is the best gain we have had hogs make. After they reach 100 pounds it requires plenty of grain to make the weight.

FARMER'S SON.

Spring Tonics for Swine.

In spite of the fact that pigs and hogs do best when they have access to pure soil and grass, many farmers find it necessary to confine them each summer, often to the extent of keeping them on a cement floor. Such manner of rearing swine is not to be commended at all, but if there is no alternative as regards a run, the next best thing to do is to provide plenty of green feed and conditioners besides. Extensive raisers of hogs find it wise and profitable to feed plenty of tonics, such as sulphur, charcoal, etc.; even when the stock is on grass and a large range, how much more necessary is it then to "doctor up" pigs that can obtain only what is doled out to them in their troughs.

A mixture that is recommended by experiment stations in United States and Canada as well, is made up of wood charcoal, 1 pound; sulphur, 1 pound; common salt, 2 pounds; bread soda, 2 pounds; sodium hyposulphite, 2 pounds; sodium sulphate, 1 pound; black antimony, 1 pound. The ingredients of the tonic are pulverized and thoroughly mixed. The dose advised is a large tablespoonful once a day in the feed for each 200 pounds of live weight of hog. If the mixture causes too much laxativeness the sodium sulphate should be omitted. The cost of the mixture in former years was 4 cents per pound, but some of the