

went on, "what would ye dae gin ye had the chance tae start in at twenty-one again?"

"Weel Jennie, it's hard to say at this distance, says I, scratchin' my heid, "but I'm thinkin' it's likely I'd go at my job, whatever it was, in a way that wad bring me in vera little but hard knocks an' experience. I would na doot waste considerable time tryin' three or four different jobs an' then come back tae farmin' in the end. When some o' the stubbornness wis taken oot o' me an' I had settled doon to farmin' for guid, then na mair than likely I'd be careless aboot my health. I'd wark oot in all kinds o' weather an' I'd eat ony auld thing that came handy, frae hot biscuits tae cold potatoes. I'd lose my sleep at nights sittin' up wi' the girls, an' gin there were ony ither habits, such as smokin' tobacco or drinkin' whiskey or onything that I kenned might dae me mair harm than guid, I'd likely tak' to them. It's little I'd think aboot trainin' my mind. Books an' I had parted company when I left the auld school-house. At twenty-one I'd mak' my livin' by my muscle, or die in the attempt. I wouldna' stop tae think how a thing should be done. I'd juist tear ahead an' dae it. I'd maybe get time tae think later on. Whatever was the quickest way would be the best way. If I wis twenty-one I'd ken it all, in an' maybe a wee bit mair. I would tak' advice frae naeboddy. Gin ither people had different ideas aboot religion or politics or business, sae muckle the worse for them.

"Anither thing I wad dae gin I were twenty-one wad be tae spend my money as fast I made it, an' maybe a little faster when I got the chance. I'd tak' oot no Life Insurance an' I'd pit no money in the bank. The rainy day wouldna' bother me. I'd tak' a chance on dyin' young or on havin' somebody remember me in their will.

"When it came tae sellin' onything off my farm in the way o' stock or grain, I'd ken sae muckle aboot the market at twenty-one years o' age that I'd always sell before the price had gone up or after it had come doon. An' I wad always try an' bring my coos an' horses through the winter on as little feed as possible, for I'd ken at twenty-one that a penny saved is a penny earned, an' if ony o' the stock died towards spring, I'd pit it doon tae lock-jaw or somethin' o' the kind. That is, at twenty-one I would. If it should accidentally happen that I should come intae ony money at twenty-one I'd either pit it intae mining-stocks or buy some city lots in some toon oot in the West. An' if I had ony left after that I'd buy an automobile an' rin it intae a telephone pole. There might be ither things that I'd dae gin I were twenty-one, an' they left me rinnin' loose lang enough, but that ought to be enough tae gie ye an idea, Jennie", says I, gettin' up an' lightin' the lantern tae gae oot tae the stable.

"Weel Uncle Sandy", said Jennie, "I dinna ken what to think aboot ye. It must be mair by guid luck than onything else that ye've got as far along as ye have. But there's one thing mair. The minister that wrote that piece in the magazine says that if he wis twenty-one he would get married. What's yer opinion aboot that?"

"Oh, that's all right for a meenister, I suppose. They're supposed to hae patience an' self-control an' a' that sort o' thing, but it might be different wi' a common man. For mysel', gin I wis twenty-one I ken what I'd dae. I'd rin around wi' the young lassies, pittin' in a guid time as lang as I could mak' it last. I wouldna' ken at that age that it wad end up by me havin' to marry some auld, homely girl like yer auntie."

Juist here the auld wumman hersel' cam' intae the room, an' as Jennie wis comin' for me wi' the broom-stick I didra' lose ony time startin' for the barn tae say guid-night to the bosses an' tae gie the horses their last feed o' aits for the day.

THE HORSE.

Diseases of the Feet—III.

Sand Crack—Quarter Crack.

A sand crack, or a quarter crack, consists of a fissure of greater or less extent and depth, commencing at the coronet and extending downwards. It may extend to the inferior margin of the wall, or only part of the way down, and may extend right through the horny wall to the sensitive structures, or only partly through. When appearing in the front of the foot it is called a sand crack, and when in the quarters it is called a quarter crack. The inner quarter of the hoof being normally the weaker is the usual seat, the outer seldom being affected. The condition is very seldom met with in the hind feet. Some claim that the condition may appear suddenly, but while this is possible, it seldom occurs. The process of the trouble is usually slow. Prior to its appearance, the horn is either imperfectly secreted, on account of a partially non-secretive condition of a part of the coronary band, or there is a dry, brittle condition of the hoof. Horn is built up of tubes matted together. These tubes are similar to hair, are practically hair, in a modified form, and are formed or secreted by the same kind of cells. The horn of the wall of the hoof consists of horn tubes, and agglutinating inter-tubular substance, which are secreted by the coronary band, which is a modification of true skin, and is lodged in a groove on the superior border of the wall. It is naturally tough, but breaks up into fibres when it grows beyond its natural length. In order that healthy horn may be secreted, it is essential that the coronary band, as well as the sensitive wall, be in a healthy condition, as there should be a continuous growth of horn from above downwards, and an equal wear from below, in order to prevent the hoof becoming too large. When horses

are shod the shoeing-smith rasps or pares away the inferior border of the wall, but in unshod horses the natural wear will, under ordinary conditions, be equal to the growth, hence the foot remains the natural size. When from accident or disease, or congenital weakness, the coronary band, or a portion of it, becomes partially inactive, the horn immediately under the diseased or weakened portion is imperfectly secreted, is weak, becomes dry and brittle, and sand crack or quarter crack is liable to appear. Some horses are congenitally weak in these parts, and are very liable to these cracks; and, when a cure has apparently been effected, they (the cracks) are liable to reappear, or rather, fresh cracks appear. A sand or quarter crack commences at the upper margin of the wall, is usually small at first, but gradually extends downwards and inwards and when it has penetrated through the horny substance, lameness appears. Inflammation is set up in both the sensitive laminae and the skin above the fissure. It is very painful, and the lips of the crack gape as the tissues swell. When the patient moves it will be noticed that the wound opens when weight is put upon the foot, and closes when the foot is lifted from the ground. When the crack has reached the sensitive parts, its borders grasp some of them causing great pain, and usually slight bleeding. Sand and dirt become insinuated into the crack, increase the irritation and set up suppurative action.

Treatment.—The insensitive parts of the foot have neither nerve nor blood supply, hence a crack will not unite and the only method of cure is to grow a hoof without the crack. So long as the opening and closing of the wound is allowed to continue, the crack will be

the two meet so that they can be connected by means of a small bolt. A hole is cut in the hoof about an inch from each side of the crack and a section of the clasp inserted into each. The clasps should not quite meet in the centre, and should be bolted together and as they become loose they can be tightened by turning the bolt with a screw-driver. Another method is to shoe the horse and have an iron band extend from the shoe, at each heel upwards and forwards, almost meeting at the crack and joined by a bolt, the same as the clasps. When the crack is in the quarter the hoof is not thick enough for clasps or clamps. In this case it is better to shoe with a well-fitting bar shoe, giving good frog pressure, first rasping the wall of the quarter well down, so that it will not press upon the shoe, thus relieving the affected quarter from pressure, which prevents movement of the crack. Growth of horn should be encouraged by repeatedly blistering the coronet, in order to produce a healthy foot as soon as possible. The means of preventing spreading of the crack must be continued until a perfect new horn has been grown, which will be ten months or longer. In the meantime the shoe should be re-set about every four weeks, and, if necessary, the horse may be worked. W.H.P.

LIVE STOCK.

Don't Have Crippled Pigs This Winter.

The old adage that an ounce of prevention is worth a pound of cure is very conservative as applied to crippling or rheumatism in pigs. In this regard it can truthfully be said that an ounce of prevention is worth a whole ton of cure, for once a hog develops the malady to a pronounced stage one has a very unsatisfactory and discouraging patient to treat. Now that winter, with a changed condition of things, is approaching, it is getting plenty late enough to make such preparations as will offer the greatest insurance against rheumatism in the swine herd. The causes of crippling are many, and when several of them may be found combined in improper housing methods and unwise feeding, the owner may expect the disease to appear in his herd at almost any time. These contributing causes may be divided into two categories, namely, too much of one thing and too little of another. Elaborating still further, we may say that crippling is induced by too much moisture in the pen and too much of heavy feeds, while on the other hand similar results may be expected from too little ventilation, too little exercise and insufficient mineral matter to allow the body organs to function properly. Other conditions should be guarded against but when the matters previously mentioned are corrected a fair degree of immunity may be expected.

Briefly, the raiser of swine should have regard to several important items. In the first place, the walls, ceiling, and roof of the piggery should not be dripping with moisture. Insulated walls and sufficient ventilation will prevent this. A loft filled with straw makes a good absorbent when the ceiling is open enough to permit an upward current of air through the straw. One can recognize at once that cold, damp, clammy atmosphere in a piggery where ventilation is lacking. A dry atmosphere of steady temperature is desirable, and this can only be obtained by providing ample ventilation. The hog cabin will accommodate four or five sows very comfortably; the air within is dry, the temperature remains fairly constant, and when well bedded these cabins usually house healthy, thrifty swine. Dry, well-bedded sleeping quarters will counteract a good many deterrents to health.

In the second place, it is natural for swine to exercise and they should be obliged to do so in winter as well as summer. The breeding stock, particularly, should be kept at work.

Then, in regard to rations, avoid feeding heavily on one kind of feed alone, especially corn or barley. A mixture of several grains is usually good so long as it contains a fair proportion of oats and not too much corn, except in the case of finishing hogs. Equal parts corn or barley, shorts and oats, make a suitable and safe mixture. Avoid over-fatness in the breeding stock and guard against constipation. In case trouble threatens, leave out the corn or barley, substituting bran. Feed at all times plenty of roots, such as sugar beets, mangels, or boiled turnips. Construct a rack where the swine may have access to it, and in it put clover or alfalfa hay. It is surprising how much of this roughage they will consume. Lastly, provide mineral matter by making up a mixture of wood ashes, sulphur, charcoal, bone meal, and salt, and leave it within reach of the swine.

A few of the more important items in swine management have been enumerated here and lengthy enough, we believe, to indicate what the best preventive measures are. However, in case crippling should occur, make the patient as comfortable as possible and withhold all feed for twelve hours. Then give a purgative of three to four ounces Epsom salts and follow up with six grains nux vomica, three times daily. Feed on milk, shorts, and raw roots, with very little grain, and force the patient to exercise as much as possible. These doses are for pigs from three and one-half to four months old; the doses for larger and smaller pigs should be regulated according to the size of the animal.



Such a Head is Sufficient Guarantee.

perpetuated, as it will be caused in the new horn as it is formed, hence some means must be taken to prevent this action. If the sensitive parts have not been reached and no lameness is present, this should be done at once, but if the sensitive parts are involved, the inflammation must first be allayed. The horse must be given rest, and the edges of the crack pared to the very bottom to relieve pressure. All sand, dirt, clotted blood, etc., should be removed. A fungous growth sometimes follows; this should be removed by the use of a knife or caustics. It is the result of inflammatory action, depends upon it, and will disappear upon its subsidence. Poultices of warm linseed meal should be applied for a few days to allay the inflammation. A transverse fissure should be cut at the top of the crack, just below the hair, in order that the new horn may grow without perpetuation of the crack. Then means must be taken to prevent the opening and closing of the crack when the horse moves. Many devices are used for this purpose. When it is a sand crack, clasps may be used; the horn here is sufficiently deep to allow of this. Sometimes a horse-shoe nail is driven enclosing a portion of horn on each side of the crack, and then tightly clenched. This answers fairly well for a time, but as the hoof is forced downwards by the growth of new horn above, it shrinks to some extent and the clinch then becomes loose. A better plan is to make a clasp in two sections each of which is turned upwards and a hole punched in it where