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per shoeing," our purpose is served by drawing attention to the acknowledged causes of the disease under consideration; but as we proceed to detail the course of treatment, suitable remarks on the adopting of an iron defence will be given.

Fissure in the hoof never unites or closes.—When a breach is once made in the secreting part at the coronet, it continues towards the bottom as the hoof grows, and no disposition to form sound hoof at the top takes place without interference. On the contrary, the effect of motion as well as shoeing, as ordinarily practised, is to promote the widening of the breach and to prevent the desirable shoeing of it by the formation of material within.

Horses that are very lame from fissure will require rest, probably also fomentations and a little cooling medicine; and while such measures are being carried out, the best adjunct in treatment is a loose box, the floor of which is covered 3 or 4 inches thick with sawdust or tan. Whether this should be again covered by a layer of straw or chaff, the owner may decide; the object to be attained is that of providing such means that will conform to the shape of the under part of the hoof, and thus produce, under the weight of the animal, equal pressure on every part. In this way the desired amount of comfort and freedom from pain will be afforded, and, at the same time, greater facilities will be added to the usual means of cure.

Several plans are adopted by veterinary practitioners for the cure of fissure. We give the following as the most useful. If the crack is recent, slight, or causing no pain or lameness, the animal may probably be kept at work and a cure effected. To do this the shoe should be properly fitted, and a strong piece of tarcord passed round the hoof at the top several times. This will prevent the liability to spring or tear open, and support the hoof very much. The rest of the treatment consists of rubbing over the coronet, immediately above the crack and the space of an inch upon each side—upwards the breadth of two fingers—a portion of ordinary blistering ointment about the size of a hickory nut. At the end of ten days the blister may be repeated, and if required, several times, until the hoof is caused to grow downwards in a sound and stronger condition.

With regard to the application of the shoe, it may be explained that the same condition between it and the hoof should be established, as that which is produced when the foot is planted on a yielding surface of tan or sawdust, and for this purpose a bar shoe is best, by which the frog may take a share of weight, that part beneath the crack being entirely relieved. The nails used should be thin and flat, and care must be exercised in choosing sound portions of hoof through which they are to be driven.

Added to this, subsequent shoeing should embrace the major principles advocated by Charlier, so far as the treatment of the hoof and the fitting of the iron armature is concerned, and by these means sand-crack, so called, will not only disappear, but the hoofs may be restored to a properly strong and sound condition. — *The Farmer.*

CHARCOAL FOR SICK HORSES.

Nearly all animals become sick from improper eating. In nine cases out of ten the digestion is wrong. Charcoal is the most efficient and rapid corrective. It will cure a majority of cases if properly administered. An example of its use:—The hired man came in with the intelligence that one of the finest cows was very sick, and a kind neighbor proposed the usual drugs and poisons. The owner being ill and unable to examine the cow, concluded the trouble came from some over-eating, and ordered a teacup of pulverized charcoal given in water. It was mixed, placed in a junk bottle, the head held upward, and the water with its charcoal poured downward. In five minutes an improvement was visible and in a few hours the animal was in the pasture quietly eating grass. Another instance of equal success occurred with a heifer which was badly bloated by eating green apples after a high wind. The bloating was so severe that the sides were almost as hard as a barrel. The old remedy—saleratus—was tried for the purpose of correcting the acidity, but the attempt to put it down always caused coughing, and did little good. Half a teacupful of powdered charcoal was next given. In six hours all the appearance of bloat had gone, and the heifer was well.

SCRATCHES.

Take white pine pitch rosin, beeswax, and honey, one oz. each, fresh lard $\frac{1}{2}$ lb., melt well together over a slow fire, stir till quite thick, so that the parts may not settle separate. This also makes good application for harness galls, cuts, and sores of all kinds, on horses and cattle.

THE USE OF ABSORBENTS IN STABLES.

J Wilson writes to the *Practical Farmer* condemning the use of absorbents in stables. We copy the substance of the article:—

I have never used sand as an absorbent in stables, though I have used a great variety of other substances for that purpose, but not by guess, neither as to the economy of the use of absorbents as bedding for animals, in ministering to their comfort and health, nor in augmenting the stock of fertilizing materials on the farm in their use; for I kept a careful account of the cost, also carefully observed the effect on animals, and I long since arrived at the conclusion that their use as absorbents in stables as bedding was a filthy, barbarous, and uneconomical practice.

With this conviction well established I set about with diligence and determination to so construct the floors of the stables that the liquid excrement would be removed from the stables by drainage, as effectually and as rapidly as possible. In this, I am happy to say, I succeeded, so that I am now able to keep both horses and cattle in the stables without the use of bedding or absorbents of any kind; and the animals are more cleanly, more healthy, more comfortable than they would be with any amount of any kind of absorbing bedding. A clean, dry, plank floor, without any bedding, is infinitely more comfortable than a bed of straw or any other material saturated with urine. The purity of the air of a stable in which no absorbents or bedding are used, is a delightful contrast with that of one under the old system.

The animal heat of the bodies of animals in contact with bedding charged with liquid excrement, eliminates the putrid gases with such rapidity that a close stable is soon filled with it and the air in it is rendered utterly unfit for respiration. Not one of all those having in use any improved system of stable drainage, could be induced to use absorbents to retain the urine in the bedding.

The great economy in dispensing with the use of bedding, the great purity of the air of the stable, and the dry and comfortable condition of the animals, compared with the old system, only needs to be practically tested to effectually remove the prejudice in favour of the use of absorbent bedding, which universal custom has become so firmly rooted in the minds of all who plod on in the practical affairs of life, without thinking.

The practice of those who use bedding or absorbents in stables, is usually to cast the straw, or other materials thus used, out into an open yard, where the heap is exposed to the leeching effects of rain, by which a large portion of the liquid excrement is lost.

By my improved stable arrangement the urine of both cattle and horses pass directly, through openings provided for it in the floor, into cemented gutters, from whence it is conducted through glazed terra cotta pipes to a urine cistern or tank, from which it may be taken and all be utilized; either by applying it to the land in the liquid form, or by using it to saturate substances to be composted, of which the solid excrement from the stables is generally the most valuable. When the urine of animals is thus used, the compost heap should always be under cover otherwise the liquid portion, the most valuable, is liable to be dissipated.

AMATEUR HORSE-BREEDING

The subject of horse breeding is at the present time absorbing much interest, not alone from people of agricultural pursuits as a matter of business, but largely from the wealthier class engaged in mercantile and professional employments, many of whom also indulge their fancy in amateur farming. The study is so fascinating that its votaries frequently become absorbed in it to that extent, that they are accused of being possessed of a mania, and in truth the term is oft-times well applied.

The incentive of this intense devotion to the subject with some is, the profit which responds so bountifully to the most successful endeavors; with others, it is glory of the achievement; and with still certain others, the quiet congratulation of watching the results of well-considered selections and carefully-directed crosses, in verifying or disproving acquired theories. There are all grades of minds engaged in manipulating it, and corresponding results variously follow; but so much is the element of chance or fortune interwoven with an unquestionable degree of science, in solving the breeding problems which present themselves to each individual breeder, that frequently the more careful student is outdone by a mere haphazard adventurer. No breeder of intelligence in these days pretend that the production of trotters or race-horses is a mere matter of chance. All experience goes to prove the contrary. On the other hand, when certain well-known conditions have been complied with in the choice of breeding animals, and the care of the stud, there is beyond that an unexplained

variation in results, that for want of better according is ascribed to chance, and this variation acts so important a part in the general experience of breeding as to throw just sufficient uncertainty into the scale as to lend a charm and excitement to the occupation.

In common experience it is safe to say, that of the colts annually bred for trotting and racing purposes by amateurs, not one in twenty ever return a profit to his breeder if retained until maturity; and yet from year to year the number bred is constantly on the increase, and likely so to continue for years to come. The general result of this constant strife for pre-eminence is to greatly improve the standard of blood and value of the common stock of the country, a matter of vast importance as a question bearing upon political economy; and therefore, while the labor of the amateur horse-breeder is but a "labor of love" in a majority of cases, so far as personal profit is concerned, it is not in a broader sense altogether a fruitless one.

While we speak thus discouragingly of the useful financial results of breeding as pursued by the average amateur, we are not blind to the fact that individuals among them arrive at very different and more satisfactory results. This, too, appears to us to be in some measure the legitimate fruits of well-laid plans, carefully conceived and carried out. The subject taken in all its bearings, is too extensive for full discussion here, inasmuch as the usual mode of barely stating theories, without citing facts and instances in abundance to sustain them, is a ground that has already been too thoroughly tramped over by enthusiastic writers for us to think of adding a few merely theoretical footprints to the common store. What the thoughtful breeders of the present day require more than anything else for their enlightenment is a full and concise statement of the results of past experience in coupling, rearing, breaking and handling. — *Spirit of the Times.*

MANAGEMENT OF A REFRACTORY HORSE.

A beautiful and high-spirited horse would never allow a shoe to be put on his foot or allow any person to handle his feet. In an attempt to shoe such a horse recently he resisted all efforts, kicked aside everything but the anvil, and came near killing himself against that, and finally was brought back to the stable unshod. The defect was just on the eve of consigning him to the plow, where he might work barefoot, when an officer in our service, lately returned from Mexico, took a cord about the size of a common belcord, like a bit, and tied it tightly on the animal's head, passing its left ear under the string, not painfully tight, but tight enough to keep the ear down and the cord in its place. This done he patted the horse gently on the side of the head and commanded him to follow; and instantly the horse obeyed, perfectly subdued, and as gentle and obedient as a well trained dog, suffering his feet to be lifted with impunity, acting in all respects like an old stager. The gentleman who thus furnished this exceedingly simple means of subduing a very dangerous propensity intimated that it is practiced in Mexico and South America in the management of wild horses. — *N. Y. Commercial Advertiser.*

CARE OF HORSES.

All horses must not be fed in the same proportion, without regard to their ages, their constitution or their work—the impropriety of such a practice is self-evident. Yet it is constantly done, and is the basis of disease of every kind.

Never use bad hay on account of its cheapness, because there is no proper nourishment in it.

Damaged corn is exceedingly injurious, because it brings on inflammation of the bowels and skin diseases.

Chaff is better for old horses than hay, because they can chew and digest it better. Hay or grass alone will not support a horse under hard work, because there is not sufficient nutritive body in either.

When a horse is worked hard his food should be chiefly oats—if not worked hard his food should be chiefly hay, because oats supply more nourishment and flesh-making material than any other food—hay not so much.

Mix chaff with corn or beans, and do not give the latter alone, because it makes the horse chew his food more and digest it better.

For a saddle or coach horse half a peck of sound oats and eighteen pounds of good hay are sufficient. If the hay is not good add a

quarter of a peck more oats. A horse which works harder may have rather more of each; one that works less should have less.

Rack feeding is wasteful. The better plan is to feed with chopped hay from a manger, because the food is not then thrown about, and is more easily chewed and digested.

Sprinkle the hay with water that has salt dissolved in it, because it is pleasing to the animal's taste, and is more easily digested. A tablespoonful of salt in a bucket of water.

Oats should be bruised for an old horse, but not for a young one, because the former, through age and defective teeth, cannot chew them properly, the young horse can do so, and they are thus properly mixed with saliva and turned into wholesome nutriment.

CURE FOR SCRATCHES.

Editors *Western Rural*:—Will you give me a remedy for scratches through your columns. —Omaha, Neb.

T. E.

—One of the simplest remedies for what is called scratches, but which is really incipient grease, is gunpowder mixed with sufficient glycerine to form an ointment that will stick when rubbed in. This is for cracked heels, which may or may not run into grease.

A better remedy, however, when it can be obtained, is half a pint of animal glycerine; two drams of chloride of zinc, and one pint of a strong solution of oak bark. If the animal seems feverish, and out of condition, a drink composed of half an ounce of liquor arsenalis, one ounce tincture of muriate of iron, and half a pint of water, should be given every night for three or four days.

THE FOOT OF A HORSE.

The human hand has often been taken to illustrate Divine wisdom, and well so. But have you ever examined your horse's hoof? It is hardly less curious in its way. Its parts are somewhat complicated, yet their design is simple and obvious. The hoof is not, as it appears to the careless eye, a mere lump of insensible bone fastened to the leg by a joint. It is made up of a series of thin layers or leaves of horn, about 500 in number, and nicely fitted to each other, and forming a lining to the foot itself. Then there are as many more layers belonging to what is called the 'coffin bone,' and fitted into this. These are elastic. Take a quire of paper and insert the leaves one by one into those of another quire and you will get some idea of the arrangement of several layers. Now the weight of the horse rests on as many elastic springs as there are layers in his four feet—about 4,000—and all this is contrived, not only for the convenience of his own body, but for whatever burden may be laid on him. — *Rural Home.*

EFFECTS OF VEGETABLE PERFUMES ON HEALTH

An Italian professor has made some very agreeable medical researches, resulting in the discovery that vegetable perfumes exercise a positively healthy influence on the atmosphere, converting its oxygen into ozone, and thus increasing its oxydizing influence. The essences found to develop the largest quantity of ozone are those of cherry, laurel, cloves, lavender, mint, juniper, lemon, fennel, and bergamot; those that give it in small quantities are anise, nutmeg, and thyme. The flowers of the narcissus, hyacinth, mignonette, heliotrope, and lily of the valley, develop ozone in close vessels. Flowers destitute of perfume do not develop it, and those which have but slight perfume develop it only in small quantities. Reasoning from these facts the professor recommended the cultivation of flowers in marshy districts, and in all places infested with animal emanations, on account of the powerful oxydizing influence of ozone. The inhabitants of such regions should, he says surround their houses with beds of the most odorous flowers.

The traffic receipts on the G. T. Railway, for the week ending Jan. 11th, amounted to £40,600, against £27,600 in the corresponding week of the last year, showing an increase of £13,000.

In cleaning tea-trays, bread-pans, candlesticks and other articles made of Japan-ware, hot water should not be used, as it will produce fractures and cracks; lukewarm water is the best to use.