F.W.C.F. ESSAY

on

SEEDY TOE

SANDCRACK

FALSE QUARTER

by

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SEEDY TOE

Cause and Clinical features

Seedy toe is a mealy-powdery type of broken down horn, it is a fungus or an organism which thrives without oxygen. It can occur anywhere around the wall and can extend to the coronary border of the wall, just leaving a cavity between the outer wall and the white line.

Seedy toe seems to be triggered off by inflammation caused by a number of things such as grit working up the white line, the pressure of a clip, the scalding of the foot with a hot shoe, a pricked foot, a nail bind or even over-shoeing a foot with a shoe that is too narrow in width, and so not offering enough support and bearing, can result in concussion, concussion can also be caused by a road stud that gives direct pressure in one spot.

Seedy toe in itself does not cause lameness but a horse can become unsound if a foreign body enters the cavity and puts pressure on the sensitive structures. Soreness and bruising can also be present due to the fact that the laminae in the region of the cavity have not got the full support of the wall. If the cavity perhaps extends from heelquarter to heelquarter and the foot is not given enough support by the wall, the sole will then be the main weight bearer thus causing extensive bruising.

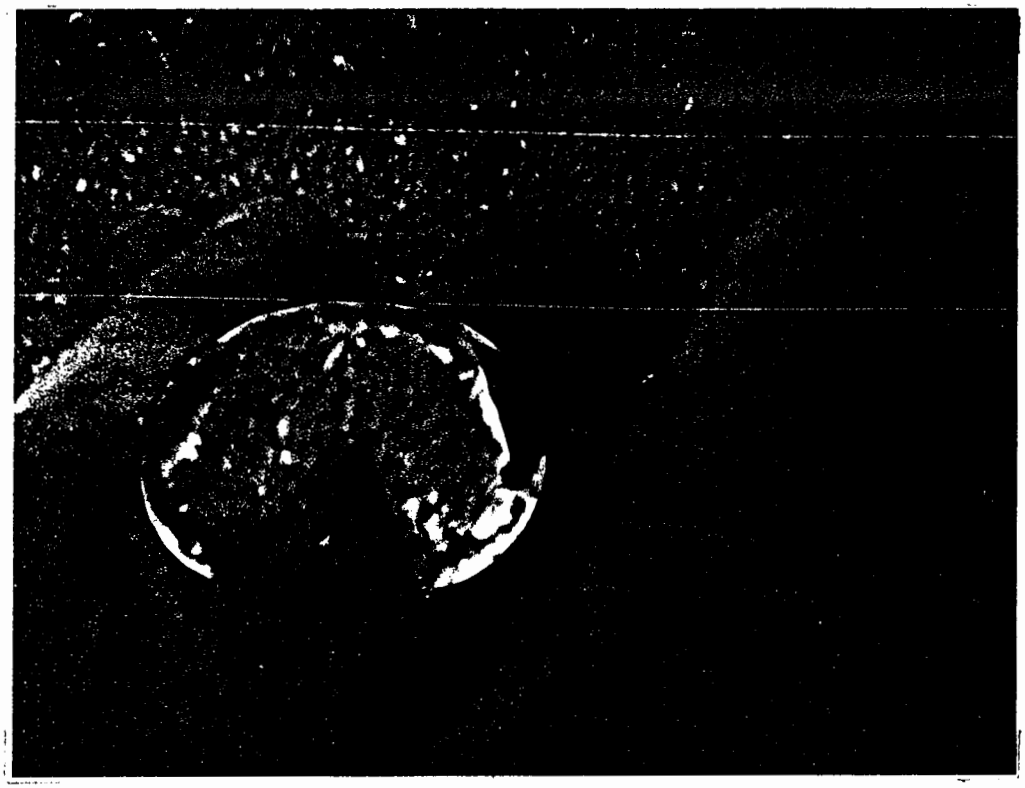
Treatment

To erradicate seedy toe the cavity must be cleared out with a searcher, making sure that no mealyhorn is left behind. There are different ideas on what to treat the condition with, some advocate using a peroxide solution to aerate the cavity, but I have had some success with a formalin solution which kills off any bacteria present. The cavity if left open will only collect grit or other debris, so must be lightly plugged with cotton wool and 'Stockholm Tar'. To plug the hole too firmly may put too much pressure on the sensitive structures.

Seedy toe can be cured without the use of shoes, but it can help to give protection and support. Whether shoes are used or not the feet should be trimmed so that they are balanced from toe to heel and from side to side, also the feet should not be allowed to sprawl. Leaving an even amount of wall around the bearing surface gives the horse something to stand on. If the feet are trimmed in this way then there will be no undue strain on any one particular part of the wall.

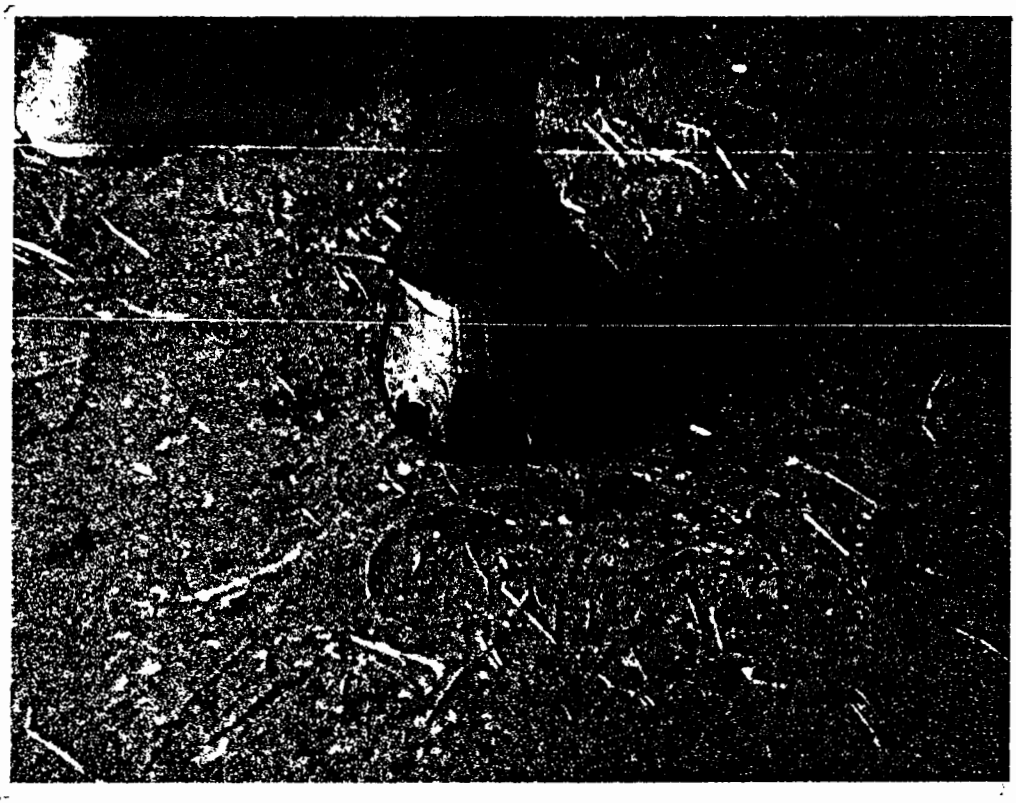
If the seedy toe has left a cavity too deep to scoop out all the mealyhorn, then the slightly more drastic measure of taking a section of wall off, is the answer, as this will expose it to the air. Care must be taken to gradually cut away the affected wall as it is very close to the sensitive structures and one has no wish to cause unnecessary suffering by drawing blood. Once all of the powdery horn has been irradicated it should be cut out a little further into the good horn to make sure that it is all gone. The edges of the sectioned out wall should be rounded off with the searcher so that no grit etc, can become lodged in there. It is advisable to have Veterinary supervision when undertaking this course of action.

Seedy Toe



A shallow cavity is left after the degenerate horn has been scooped out.

Seedy Toe



In this foot the seedy toe has left a narrow cavity which was too deep to keep clean, and so the wall had to be sectioned out.

The exposed laminae although yeilding under pressure of a thumb, secrete a horn and harden off within a couple of days. I have tried to speed this up and seal the area by using a hot length of metal rounded at the tip. But even though I cauterised it quickly, the transference of heat probably inflamed the sensitive laminae, triggering off the seedy toe once again, because at my next visit to the horse that I tried this on the seedy toe was a lot worse.

If the horse is in hard work such as hunting, I would wait if possible until the animal has been turned out for it's summer recess before cutting out the affected area, because of the danger of injury from flints etc. I have not yet found it necessary to pad out for protection the sectioned out feet of any horses, as covering the area would I believe only serve to hinder the process of recovery, knowing that seedy toe thrives without oxygen.

For the owners part, the cavity or sectioned out area should if possible be cleaned out regularly to make sure that no grit has become lodged there, and then treated with whatever medication has been recommended. Also if the feet are of a poor condition generally, I would advise the customer to talk to their veterinary surgeon about a supplement for the horses diet to improve the quality and growth of the horn. Some of my customers have added powdered gelatine to the feed and this has seemed to improve feet over a number of months.

I am afraid that seedy toe is not necessarily cleared after the first treatment and it may well linger for a couple of years or more, but normally with a regular visit every four th six weeks to check on it's progress, it can be irradicated much sooner.

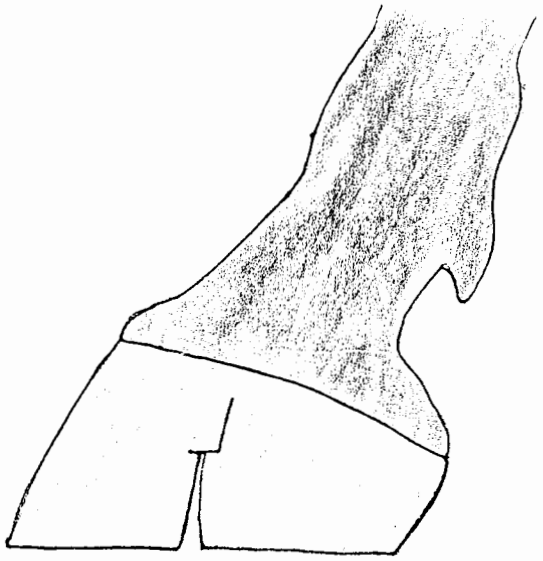
SANDCRACKS

False Sandcrack

The most common type of crack that I have come across is a false sandcrack, this sort of crack is most likely to occur on a flat footed horse with weak quarters. Quite often the horse is left too long between shoeing, this results in the shoe moving forward with the growth of toe and then of course the heels of the shoe begin to slip-in off the bearing surface of the wall. This puts strain on the quarters, which if the hoof is dry and brittle can result in a crack forming at the bearing surface of the wall and extending a varying amount up the wall.

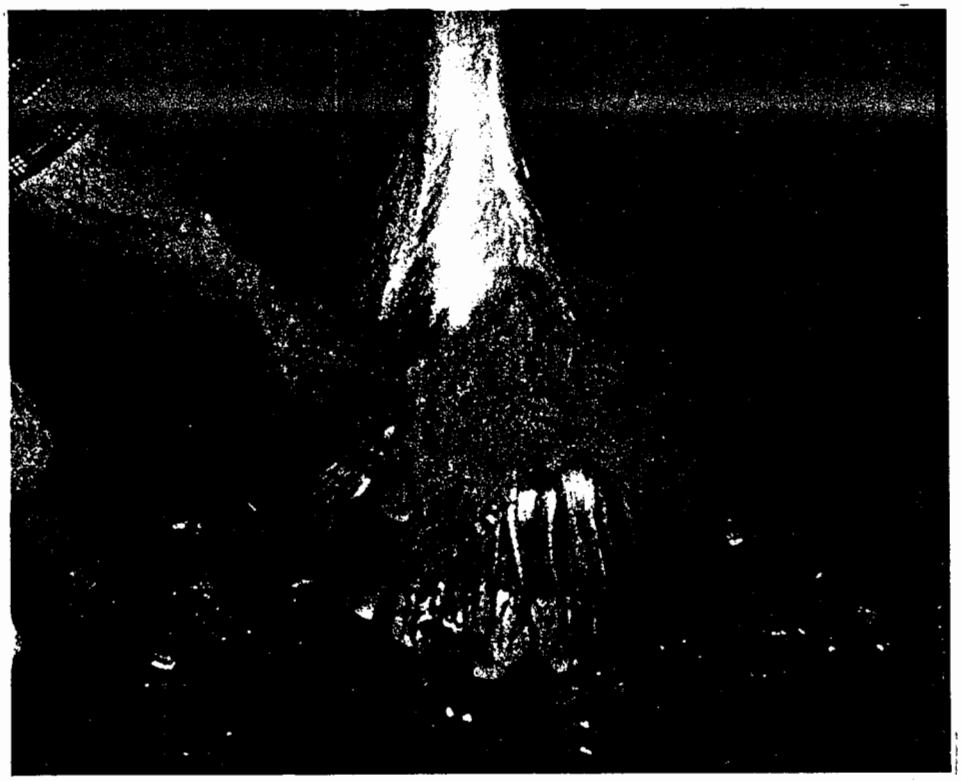
The treatment for such a crack is to burn a horizontal groove at the cracks uppermost point. Depending on the severity of the crack and the size of the hoof, the groove should be of between ½" and I" in width. If the groove is not wide enough or deep enough the crack can slightly alter its course using the groove 'en route'. It is a good guide in ascertaining the thickness of the wall to look at the bearing surface at the heelquarters. The horse will flinch when burning the groove with a hot tool if either the tool is held in position too long or it has burnt deep enough to scald the sensitive structures within the foot. So obviously care must be taken not to burn too far.

False Sandcrack



The horizontal groove at the top of the crack is either not wide enough or should be deeper, if it is to stop the crack from travelling up the wall.

False Sandcrack



A horizontal groove being burnt at the top of the false sandcrack.

False Sandcrack

A clip is placed on the outside heelquarter to give support. Unfortunately the nails are too close to the crack because there is a lack of strong horn elsewhere.

If the crack persists or has complications, other methods such as the fitting of a copper plate can be used, this will be explained, under the heading of Further Treatment.

True Sandcrack

Another type of crack which I term a true sandcrack is one that originates at the coronary band and extends a varying distance down the wall, this can be caused by concussion when the horse is being used on uneven surfaces in hot dry weather, or by an injury to the coronary band from a tread or a break-out of pus. This disrupts the growth of horn which can weaken the wall, resulting in a crack forming. Obviously the injury must be treated, but assuming that there is no further infection present, the crack must be isolated by burning a 'V' shape at the cracks lowest point and extending upwards to the coronary band.

Surface Cracks

Surface cracks which are due to concussion, extreme weather condition changes, feet being over dressed causing the evaporation of moisture, and the animal being in a poor condition or even mares that are in foal who are lacking condition because the foal is taking its share of nourishment. The veterinary surgeon should be consulted by the owner about the horses diet. For the farriers part a horizontal groove at the cracks uppermost point will stop it going any further.

Another point to remember with any sort of crack is the bedding, because wood shavings tend to over-oil the feet, this causes the feet to become too hard and brittle, they are then not able to absorb enough moisture.

Quittor Cracks

Sometimes due to a breakout of pus between the coronary band and the coronary groove, a horizontal crack may appear, this is caused by an interrupted growth of horn. As long as the infection is treated, the actual crack that grows down should not present any problems. The crack will not extend any further because it is at a right angle to the direction of the horn tubes.

Quittor Crack

The crack that is half way down the wall was caused by a breakout of pus at the coronary band.

FALSE QUARTER

A false quarter is a permanent defect of the wall, and is brought about by either a quittor that is not just an abbcess, but has progressed into an ulcerous sore. Or a bad injury such as a tread or a wire cut.

If the horn producing papillae of the coronary band have been damaged, this will cause an imperfect growth of horn throughout the animals life.

Providing that the feet are kept in check, the false quarter should be relatively trouble free unless it becomes infected.

Further Treatment

Most of the different types of cracks can if not attended to, result in a complete sandcrack extending from the coronary band to the ground surface. In such a case, after making sure that there is no infection present, the crack must be prevented from moving.

Lameness is often evident due to the pinching action incurred during expansion and contraction of the foot. To prevent movement a number of methods can be used, which are either to burn a recess on each side of the crack and then drive a small nail across the crack, clenching it up on the other side, or to drill a hole from one recess to the other using a hand drill and then thread a piece of wire through the hole, twisting it together at the front with a pair of pliers.

I must admit that I have not tried the above methods because I have had success when using a copper plate. The size of the plate depends on the foot, but 2" is an average width. Four holes are drilled and slightly countersunk, then using either a $\frac{1}{4}$"or $\frac{3}{8}$" No 4 countersunk brass screw, the the plate can be applied, using a bradawl to score the wall first. A copper plate is more malleable than a steel plate and so is fitted a lot easier. The copper plate should be refitted using new screws, once the wall has grown enough to allow it to be fitted higher up the wall again. As the crack grows down, it is a good idea to burn a horizontal groove at it's uppermost point to prevent the crack from reappearing.

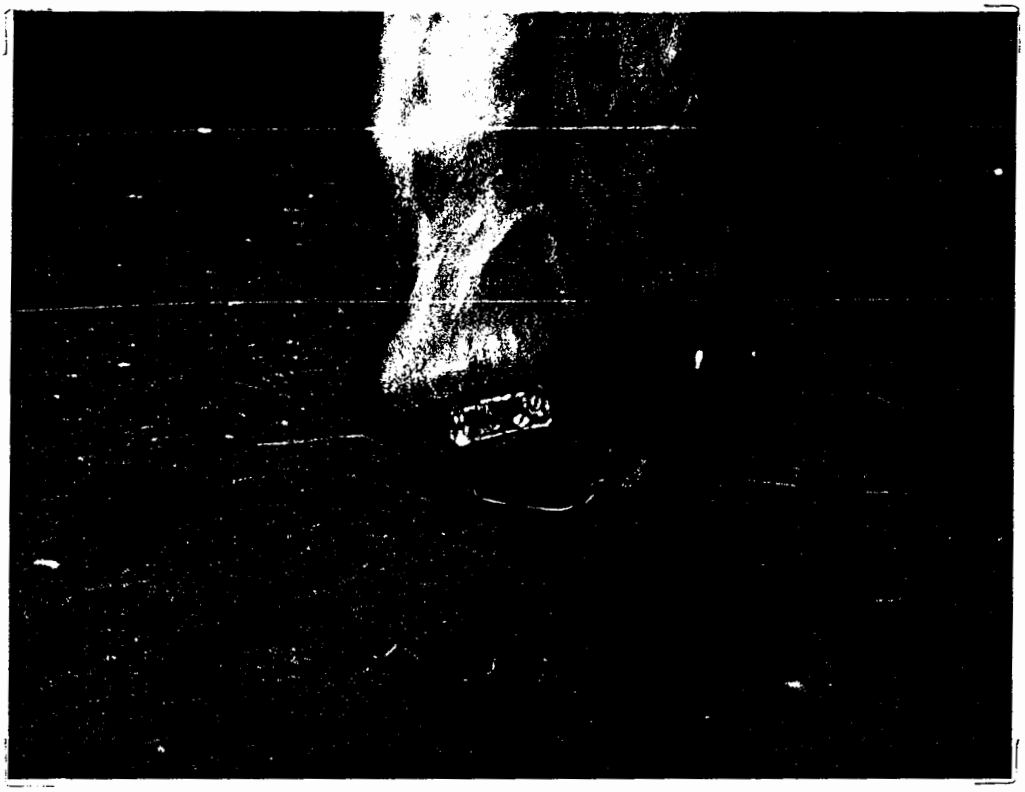
Shoeing for Seedy Toe, Sandcracks and False Quarters

The shoes for all three are very similar, and can be out of either flat metal or fullered concave, but should be of a wide web to give support.

The horse due to soreness may favour putting weight on the posterior part of the foot, if this is the case, a bar shoe can be used to give extra support.

The spacing of nail holes is important because no nails should be driven near the affected area. Sometimes because of the lack of good strong wall, and the position of the nails in a foot with Seedy Toe, another clip may be needed to secure the shoe, thus preventing the shoe from spreading.

False Sandcrack



The clips give support to the weak quarter, and the copper plate prevents movement. Only two nails have been used on the outside and they are well away from the crack.

In the case of a sandcrack, a clip should be drawn on either side of the crack, this will help towards immobilisation. But the clips should not be too close to each other as they would have no gripping power.

To prevent concussion being sent up the horn fibres, the shoe can be set down on the foot surface, or the bearing surface of the wall can be eased.

To use a bar shoe, with a section of the metal cut out directly below the crack, will certainly releive pressure at the base of the crack. But will not provide any protection from flints etc., so therefore ground conditions must be taken into account.

Caulkins or wedge heels must not be used, because they throw extra weight on to the toe, this can cause pain and aggravate the trouble.

In the majority of cases a false quarter should be shod along the same lines as above, but there are exceptions. (See case history 3).

False Sandcrack and Seedy Toe. (Case history) I.

The first case that comes to mind is of a thoroughbred mare. It's feet are of a reasonable shape but the wall and sole are not particularly thick, which is what you would expect for the breed.

During the summer, a surface crack appeared at the toe, this was probably due to the dry weather conditions at the time. The crack extended from a third of the way up the wall to a third below the coronary band. It seems I did not pay enough attention to this crack because two months later the crack had deepened, and so I cleaned off the sharp edges down the crack and then with a hot iron burnt a horizontal groove at the top of the crack to prevent it from extending upwards any further.

On a subsequent visit I found that seedy toe was now present which had caused the crack to go further up the wall, the only course of action now was to clean out the extent of the seedy toe. After doing just that, I observed the hoof was expanding under pressure so to prevent any aggravation which might cause the crack to develop further, I affixed a copper plate with four brass screws, to help prevent any further movement. I applied a concave shoe with clips on either side of the crack and made sure that no nails were near the affected area.

As the horn grew down I made sure at each shoeing that the seedy toe had not progressed any further. After a number of months the section of wall had grown enough to be able to remove the copper plate and not have to re-apply it. As the wall continued to grow down I kept a check on its progress, making sure that the seedy toe had not reoccurred, until eventually the wall had completely reached the ground surface.

Complete Sandcrack and Seedy Toe (Case history) 2.

I have had more problems with a mare of 18 years of age. Originally both front feet had a slight deviation in the coronary band which caused the feet to be weaker at this point. This in itself was no great problem, all the while she was being shod regularly with a shoe that had clips on either side of the depression. Unfortunately the horse went longer than it should have done before it was shod again, but using shoes with bilateral clips as before, enabled me to correct the antero-posterior balance of the feet after dressing back the toe which had grown too long. But a crack had appeared at the toe of one foot, and upon investigation I found that there was some underlying seedy toe. The seedy Toe persisted and was shortly all the way up the wall beneath the crack. Due to the weakened toe and working on the hard ground a slight movement in the crack caused by expansion and contraction of the foot whilst in motion, was evident. This resulted in the horse becoming unsound. I was by this time already using a flat shoe that was three-quarter fullered with nails being placed behind the two toe clips. To help prevent over expansion in the footand also to support a false quarter which was on the outside heel quarter, I put a clip on either side approximately an inch and a half from the ends of the heels. I then affixed a copper plate with brass screws as high up the wall as possible. The horse was now more comfortable at a slow pace or on the soft but was not able to be in full work.

After being shod a number of times it was clear that there must still be some movement in the crack because it was getting no better. I then consulted a vetinary surgeon who advised trying to immobilise the crack using Tecnovit Filler, as he had had some success in previous cases. Under his direction I then widened the crack to about a half of an inch and cut a key-way under each side of the crack, this was to give the Tecnovit a firm fixing. The vet then syringed the crack with Fladuolin to help get rid of any seedy toe present, and then used alcohol as a degreasing agent before applying the filler. Once the filler had hardened off I reapplied the copper plate.

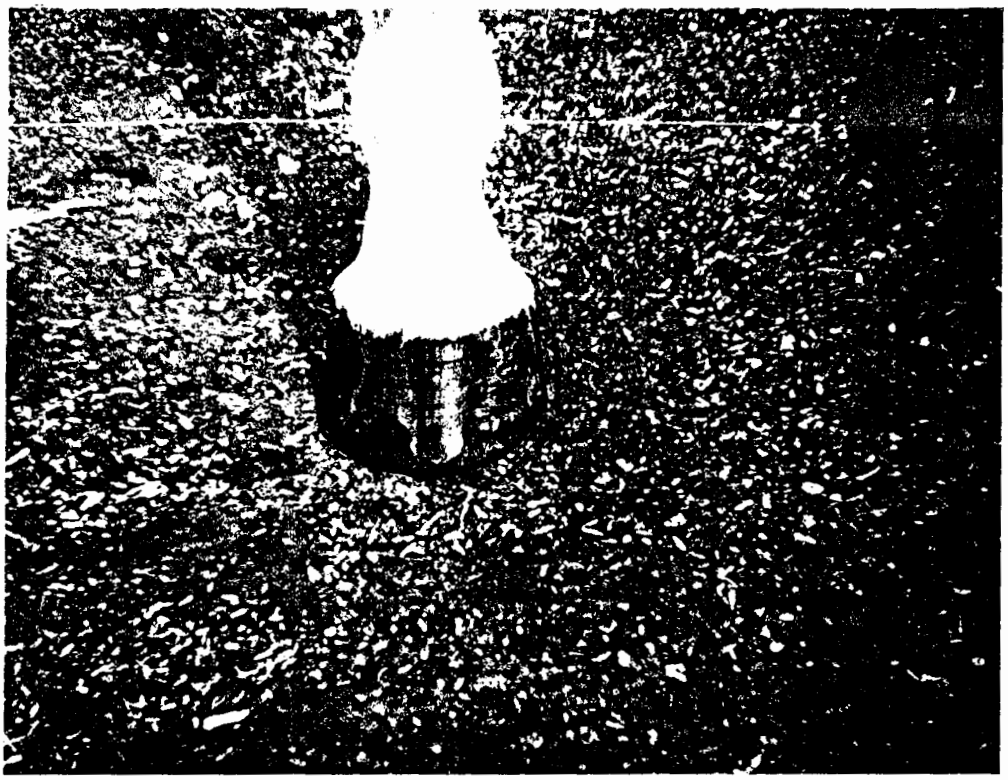
It was decided that the horse should be box-rested and only led for a short walk each day. I advised changing the bedding from wood shavings to straw, but this advice was not taken until a later date. The veterinary surgeon also prescribed using a couple of food supplements to improve the well being of the horse which in turn would produce a better quality of horn growth. Another suggestion of mine was to massage the coronary band with either Cornucresine or Vaseline, this would stimulate growth and keep the feet supple.

After approximately three months the crack was still present, this was not being helped by the fact that the owner had tried to work the horse and also turned it out in the field because it was becoming restless.

I was keeping the vet informed on the animals progress and suggested that another course of action would be to give the foot a blister. The vet agreed to try this method.

After a couple of months the Tecnovit filler became loose and fell out, but by now the new growth of the wall was fusing together. The crack took a long time to grow down as the rate of growth was very slow. But it definitely was on the road to recovery when the horse was moved to another area. I must add that from this point on I was not shoeing the horse, just observing.The horses feet were again neglected and the horse was used for slow work, the combination of which resulted in the crack reforming.

Case history (2)

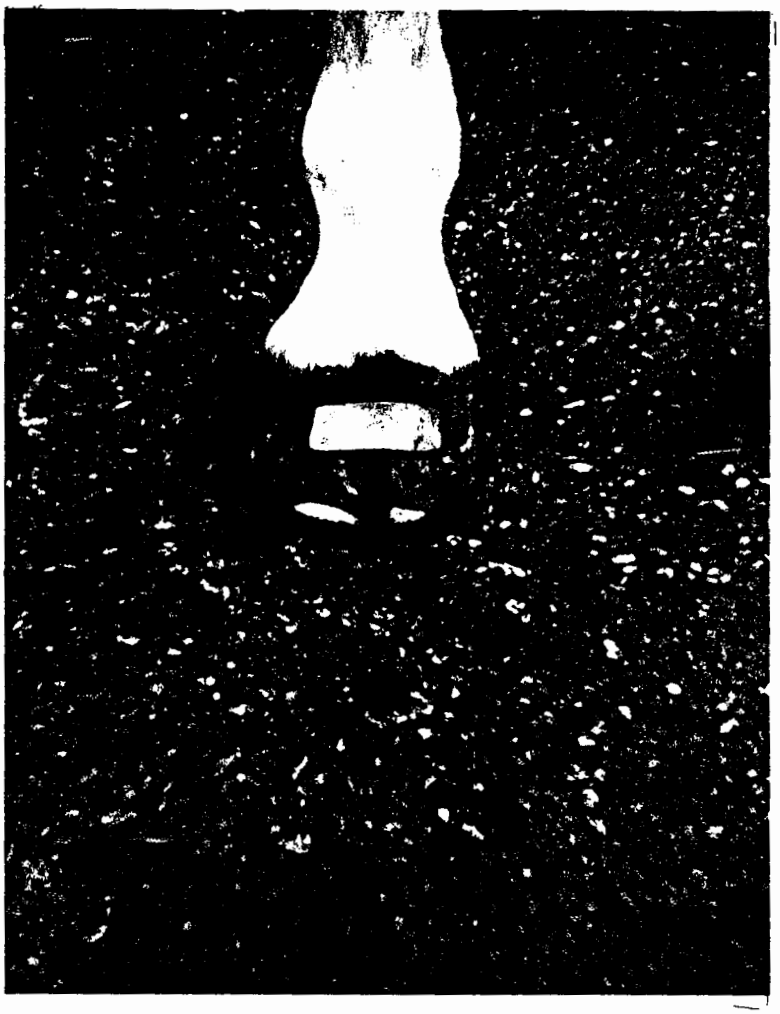


This is a picture of the opposite foot, showing the deviation in the wall, which in the other foot resulted in a crack forming.

Case history 2

The crack has been filled with Tecnovit, and the coronary border has been blistered.

Case history 2



Showing copper plate already fitted. Note position of clips.

The horse was shortly sold on, and was not worked at all, the shoes were taken off and whenever the horse was turned out an equiboot was used on the foot. The farrier under veterinary supervision screwed a plate across the crack, using brass screws and a mild steel plate. The crack is now thankfully receding down the foot. By observing this treatment I have learnt that by using a slightly thicker plate ($\frac{3}{16}$" thick, whereas mine was $\frac{1}{8}$" in thickness), immobilisation of the crack can be acheived more easily. This just goes to prove that you never know it all.

False Quarter (Case history) 3

This particular horse is a heavy hunter, that had lost a portion of his outside heel. Which I presume was due to a very bad injury.

The horn had re-covered the sensitive foot but was of a sub standard quality. Although the horse is perfectly sound, the area of sole between the bar and the wall has a slightly reddened area. The bruising is either caused by internal damage or lack of support at the heel.

When using a shoe with a normal width of heel, the bearing is limited to the outer wall. This puts strain upon the weakened point of the foot, causing it to split up the horn tubes. To prevent this happening, I made and fitted a shoe with a 'halfpenny scroll' turned inwards on the outside heel. So now the shoe has a good bearing on the bar, giving support and cover to the affected area.

Case History 3

This shoe does not offer enough support on the outside heel.

Case History 3

The 'halfpenny scroll' gives added cover on the heel.

The toe has been rolled and hard surfacing weld has been added, because the horse tends to wear his toe.