

Defining the Equine Heel

BY EMIL CARRÉ

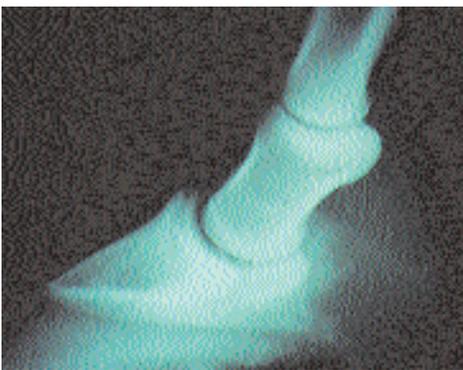
Defining the equine heel is not as easy as one would think. We have all had clients tell us they would like to see their horse with more heel. "Stand him up so he can break over" has become the

mantra of the Western Stock horse crowd. But what is it they really need, or want? I believe a balanced horse is a comfortable horse and will perform at his peak level. That is all we can ask of him.

For years we have focused our attention on appliances (shoes, pads, etc.) to such an extent that we have, in many cases, forgotten that our real task is the balance of the equine digit, orthopedics if you like. The unbalanced foot, with the best appliance man can attach to it, is still an unbalanced foot and will lead to poor performance and even lameness. The object of farriery then is trimming and shoeing to achieve proper loading and weight bearing through the structural members of the horse. Balance therefore must be when weight is transferred evenly through the center of the bones, joints and hoof capsule.

What is weight? According to Webster, it is "the force with which a body is attracted toward the earth by gravitation." Physics then is that thing we all have to deal with when we work to balance a foot in preparation for shoeing.

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Note - Center your shoe around the bridge of re-aligned and trimmed foot

Even depth of sole

To be removed (trimmed off)

Wedge if required to align coffin joint axis

Bridge after trimming

Vertical Depth

1A

Defining

CONTINUED FROM PAGE 1

If we overlook the laws of nature (physics and gravity), we are doomed to failure.

A hoof capsule is out of balance when the gravitational forces or weight is not centered within the hoof capsule. Sometimes the forces of weight may not even be located in the hoof capsule (photo 1 & 1A). You will note that this horse suffers from caudal rotation as well as a badly misaligned coffin joint axis. Weight bearing in this case is falling out the back of the hoof capsule. As you can imagine, this former World Champion Mare is extremely lame and will have a hard time staying sound enough to bear the weight of a foal.

Where should we begin? I believe that the heel can only be defined by vertical depth, i.e. the distance from the distal border of the coronary band to the proximal border of the hoof wall (Savoldi, Cal Poly, Pomona). This, in combination with what has become known as the bridge (Buzzwords & Brainstorms to Decode Duckett's Dot, Hoofcare & Lameness), helps establish the proper heel length (see 1A). The bridge is a point about 1/2- 3/4 inches behind the apex of a trimmed frog. It does not matter how badly the hoof capsule is deformed, the bridge will always maintain its relationship to the coffin joint. Using these concepts and reference points I attempt to trim the foot to an even depth of sole with a uniform thickness from front to back (A/P) and from side to side (M/L). I remove all the



flares and as much of the hoof wall distortion as possible (photo 2). In the case of this mare, radiographs indicated that her coffin joint axis was still out of alignment (broken forward) so I used a wedge pad to align the coffin joint (photo 3). Once I am able to establish more normal hoof growth I will remove the wedges. Using the "bridge" as a mark for centering the shoe, I nailed up an eggbar shoe for caudal support (photo 4). She was now sound enough to go to the breeding shed.

It is my feeling that a farrier who works with the foundation (orthopedics) of the horse in mind, instead of merely the capsule, will enjoy far more success than the farrier who simply relies on appliances installed around a perimeter fit. If you work with the orthopedics of the horse you will develop a better understanding of how to build the optimum appliance for the job at hand. While farriers debate and argue ideas of practitioners like Duckett, Redden



and Ovnicek, a closer look tells us that we are all trying to achieve the same thing; the centering of the four points of the "square in the circle." (Russell, *Scientific Horseshoeing*, written over eighty years ago.) ■



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Tool Maintenance

The overwhelming majority of tools that are returned to manufacturers of top tools are not defective. Most tools show obvious signs of misuse and/or lack of maintenance. Even under correct use you have to realize top tools are not life-time tools. If you have used your tools properly and taken the time to maintain them you will generally find you get your money's worth.

The following photos will give you some idea how simple it can be to extend the life of your tools. When reworking tools, the most useful piece of equipment in your truck or shop is a belt sander or disc grinder. The belt sander serves a dual function, it can also be used to bevel or dress shoes. Most rework is done with no heat in the tool. If you try to forge the tools back into shape you will probably destroy any heat treatment that has been done or create problems with the weld between the mild steel handles and the tool steel head. ■



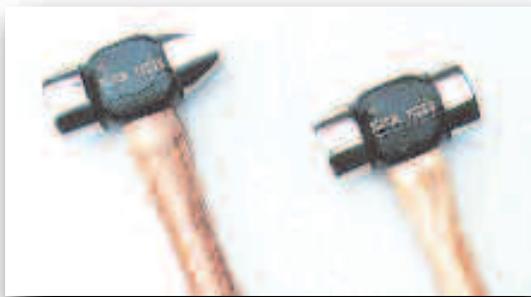
Any struck tool will need cleanup and maintenance on a regular basis. A driving hammer with its edges and the off center blows on a clinch cutter will cause minor mushrooming and then small chips to break loose. Be sure to dome the struck end of your tools and put a good chamfer on the edge.



When the head of your forging tools are struck off center often enough this is the result. Both ends of the tool have been deformed. Better hammer control and early cleanup would fix the problem.



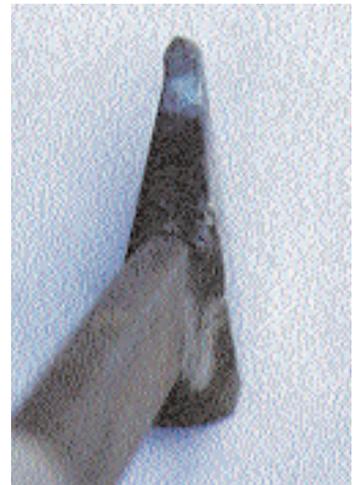
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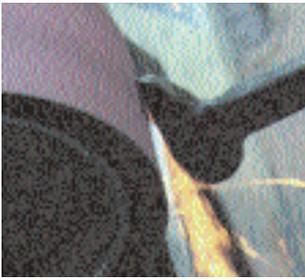
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This e-head punch has been held too long in hot material and was struck while the tip was too hot.



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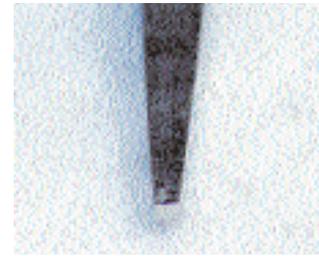
Check against nail or use a guide. This one is made from aluminum.



Put point on all forepunch ends. **Right:** Maintained and ready to go back to work.



Grind back to desired dimension, note slight grind curvature behind the tip to keep drift from changing your forepunched hole. An easy fix and it's good as new.



Pritchel with broken tip. Grind end flat. Grind to desired dimension. Use this approach to the wheel for aggressive stock removal.

CONTINUED ON PAGE 6



The tip of this drift was broken. Grind the end back flat.

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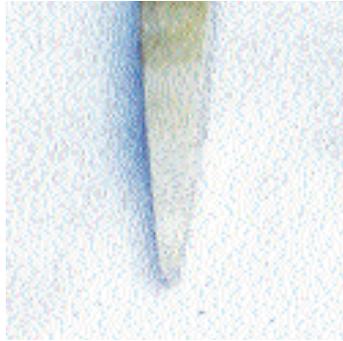
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Tool Maintenance

CONTINUED FROM PAGE 4



Use this approach for finish control. Back to work but be more careful and you can avoid the breakage.



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The farrierproducts™ SX-8 Egg barshoes are now available at FPD dealers. These finished barshoes come in a front shape with quarter clips. They are fabricated in the US using Kerckhaert SX-8 shoes and a mig welded insert. The only work left for you is the foot prep and final shoe shape. Available in sizes 00 through 4. Packed in 5 pair boxes. Look for other types of farrierproducts™ barshoes in the near future.

