

The Natural Angle

A PUBLICATION OF PRACTICAL IDEAS AND SOLUTIONS FOR FARRIERS

Volume 1: Issue 1

Achieving Harmony Between Hoof Shape and Shoe Shapes

BY DAVE FARLEY

We're all aware of the differences in hoof shapes we see beyond just front and hind. I've found with minimal but consistent effort I can often re-shape the foot to establish better function or symmetry. I always do this after looking closely at the shape of the coronary band. It's been my experience that the foot will function better when it conforms to the shape of the coronary band.

If a foot appears out of shape or symmetry (relative to the coronary band) I often start simply by putting the shoe where I think the hoof

should be. In time, the hoof will move in this direction. I generally take off flairs that have developed before shaping the shoe. I put the frog in the center of the foot and provide enough support and expansion room to allow for growth. If I need to fit the shoe fuller and the punching does not allow for good nailing, I repunch the branch to be sure I get good nails. If necessary, I'll use a filler material to blend the foot to the shoe until it has time to grow to this shape.

If the white line is stretched or yellow in the toe, it's telling you to back the shoe up. This moves the breakover back and relieves the stress on the toe which causes the discoloration or stretching. I broaden the toe as much as possible and bring the shoe back. This is one of the reasons I use quarter clips on most front shoes. A toe clip can restrict my ability to back the shoe to a point I feel will work the best. Most of the horses I work on perform well with the broad toe in front and a somewhat squared toe behind.

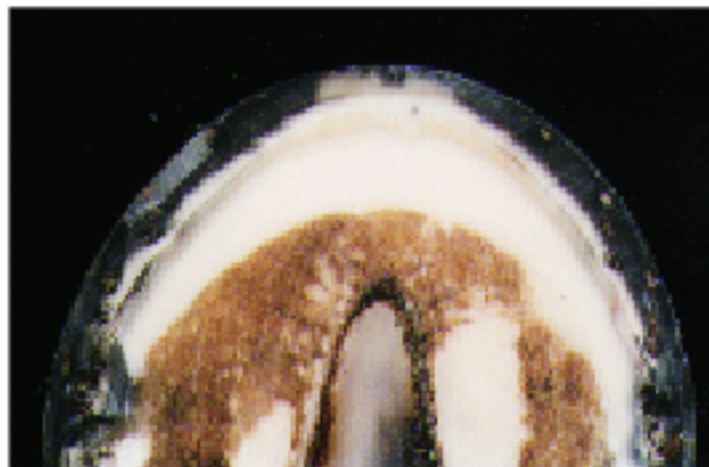
I see three basic hoof shapes in my work and I use

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Right: Look at the coronary band and try to establish a shoe shape to match.

Below left: White line at toe is stretched, indicating stress.

Below right: Shoe should be backed up to relieve stress at toe.





Left: Repunch shoe if necessary to fit fuller.

forth to the horse.

I'm fortunate that many of the horses I work on have classic, round shaped front feet. I use the Kerckhaert SX-8 or SX-7 front shoes on these feet.

Whenever the front foot is a bit more pointed or straight through the quarters I start with the Standard

which has a typical keg shoe shape but doesn't have a pointed toe. I never put a pointed toe shape on a front foot.

The hind shape of the SX-8 and SX-7 generally requires only closing or opening

and a slight change in the heels to fit the hind feet. Because the hind foot shape tends to be more consistent, I seldom use anything but a hind pattern shoe. It is generally squared enough for most of my work and only requires a couple blows to square it more when needed.

With the pre-shaped shoes I've found the three legged stall jack is generally all I need when doing cold work. A few minor adjustments at the horse is often all it takes. I found early on that the time savings over the course of the day is enough to shoe one extra horse. The financial benefit is staggering when I add it up. One a day, 5 a week, 20 a month, 240 a

year! Multiply those numbers times the price you get for shoeing.

Final Note: Don't forget that the coronary band responds to the weight bearing surface under it for direction of growth and support. We have the capability to remodel poorly shaped hooves. Do this by placing a shoe where the coronary wants it to be. Don't place a poorly shaped shoe on a poorly shaped hoof. If you look at the hoof and it does not resemble the shape of the coronary band something is not right. ■

Dave Farley is a full time farrier in the Cincinnati, Ohio area. He also does clinics in various parts of the country, stressing the importance of practical, everyday skills.

Harmony

CONTINUED FROM PAGE 1

three general shoe shapes to cover most of my horses. By using pre-shaped shoes I am able to minimize my time spent at the anvil and going back and

Which Credit Card is Good for You?

Despite what all of the advertising the credit card companies and banks would have you believe there really is no single "best" credit card deal. What is best for you depends on whether you carry a big balance from one month to the next or if you pay your bill off each

month. You've heard about the rebate cards. If your buying habits do not include a large number of credit card purchases, such a card is useless. Also, watch out for those great introductory rates or sometimes called "teaser rate" cards. Those offers entice you to switch your balances

from other cards or lines of credit. If you do not intend to pay off those balances by the time the teaser rate runs out, you may be facing a significantly

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higher rate in the long run. So with so many different types of cards to choose from, how do you make your selection? First, you have to examine the way you prefer to use a credit card; and then find the right match.

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than \$1,000 or so, you are probably better off to get a no-annual fee credit card. If your card balance stays small, the annual fee on a low-interest rate card might cancel the slightly lower interest rate you would pay. More than half of all bank cards do not charge an annual fee. When you carry a higher balance, it may be more suitable to obtain a low-rate card that has an annual fee. Most offer attractive introductory rates and then move to a rate tied to the Prime rate. Make sure that you understand the billing cycle on your credit card. By charging your purchases at the beginning of the billing cycle and paying the balance in full, when due, you have been able to have the use of the money, interest free, for at least 25 days. ■

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The Tool Corner

PROPER USE OF THE FOREPUNCH

BY ROY BLOOM

THE FOREPUNCH is used to create an impression of the nail head. There are four questions that should be discussed before using the forepunch.

1. What size nail are you using? The common nail heads are city, regular or e-head (European). In Figure 1 the dotted lines show nail head angles; front and side. These angles are the same for all sizes of city head nails. Likewise, the angles of a regular head are the same for all sizes and the angles of the e-head are the same for all sizes. The length of the head, labeled B, is the variable for each size. The

important thing to remember is your punch end must match the two angles of the nail you are punching for.

2. What size stock are you punching? The nail size used is directly related to the stock size. A 6 city or regular would not be used in 1/4 inch stock. You would be more likely to use a 4-1/2 city or 5 race. The most common stock size used in manufactured or hand-made shoes is 5/16 x 3/4. The most common nail would be the 5 City. I'll use these common sizes for this discussion. In Figure 1, area A is the portion of the nail that will be projecting above the ground surface of the shoe.

Area B is the focus of our attention. This is the area the punch is used for. It is also the area with the trademark on it. The

length of this area on a 5 City is 3/16 of an inch. That is the maximum depth the punch should penetrate to create an impression for this nail.

3. What happens to the material when we drive the punch into it? The punch does

not remove material, it displaces it. This material must go somewhere, hence, "frog eyes." If every hole is punched exactly in the center of the stock there will be minimal distortion.

However, most shoes are punched to the outside of center. The closer to the edge, the bigger the frog eye (Figure 2). The displacement always takes the path of least resistance. Figure 2 shows the toe nail, punched more to the center, has less distortion than the heel

nail. There is also a change in the thickness of the shoe between the hole and the edge. It is now thinner. If you simply grind off the frog eyes the thinned area still remains. When you tap the frog eye back the nail hole is distorted and you have to re-punch. If the initial punching produced an impression the size of the nail head then you will find the impression is too big for the nail after addressing the frog eyes and re-punching. The tapping in of the frog eyes actually draws the hole longer. Therefore, it is important to only penetrate about 2/3 of the desired depth with the initial punch run, address the frog eyes and then reopen to finish size.

4. What type of tip should your forepunch have? The forepunch should have a sharp, diamond shape tip on it for two reasons: a. Suppose your punch tip is flat (Figure 3). The steel comes out to be punched at a yellow heat. The surface is slippery from this heat. When you place the punch on the hot steel and raise your hammer the punch will often slip. After the hammer makes contact and you see where the hole is punched you can't understand why your nail holes are out of place! A flat end on your forepunch will cause this every time. By putting a sharp point on the end (Figure 4) you can stick it into the stock with no movement.

b. When the punch end is flat you create a resistance area. The tip is a lot smaller than the stock and the stock is hot. Resistance + Small Dimension + Heat = Upsetting. The longer you dwell in the material, the hotter the tip gets and the more danger you have of upsetting the end of your forepunch. You may have started with a city

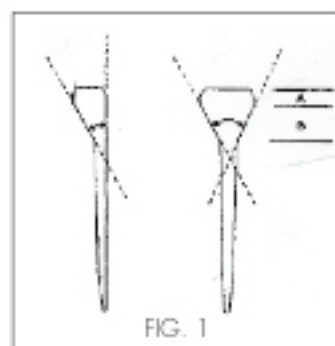


FIG. 1



FIG. 2

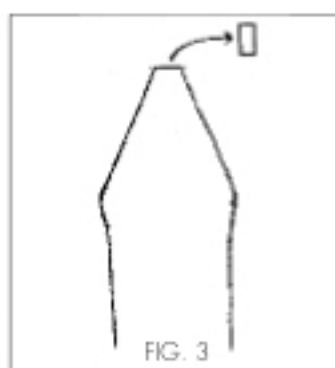


FIG. 3

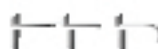


FIG. 4

Stop Back Punching!



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head punch but ended with a regular head. The sharp tip allows the punch to enter, displace the material and exit with the least amount of resistance.

To Recap:

1. The end of your forepunch should match the angles of the nail style you are punching for.
2. The nail size should work for the stock size.
3. The punch should be driven in 2/3 of the way, frog eyes addressed and then the final punching done to finish the hole.

4. The tip of the forepunch should be sharpened (with a diamond shape).

FARRIER'S QUESTIONS

Tim Sigmon, of Union, South Carolina, has written us with a question on creasers. "Why the cut out below the handle eye?" Tim isn't alone when he asks this. I've been asked this same question at every clinic. The answer simply is, the cut or notch appears during the forging of the creaser.



Let me try to explain this. I'll refer to figure 1. When an attempt is made to forge the taper of the creaser, the result is a cup or pocket at the end of the piece. If the forging continues, it will result in a fold and a cold-shut or crack (figure 2) rendering the point useless. It is

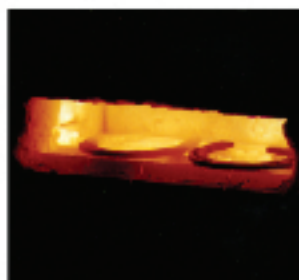


nearly impossible to forge this large a piece without this result. There is an easier way which requires less work with better results. This is where the notch comes in.

If a round is placed just off the eye and forced into the material (figure 3)

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Gas Forge Maintenance



BY BOB SCHANTZ

In the Blacksmith shop, and many Farriers trucks of yesterday, the first lesson that apprentices had to learn was the care and maintenance of the coal forge and the fire it

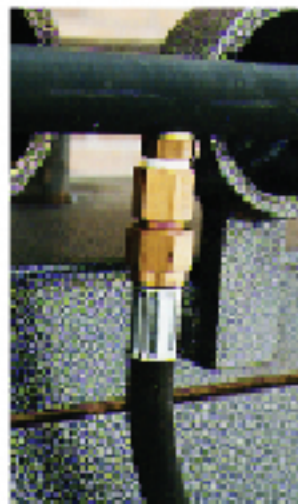
contained. I suppose because of the convenience and simplicity of the modern propane fueled forges, regular care and maintenance is overlooked. We usually remember only when the darn thing doesn't run right, or begins to burn in places it wasn't designed to burn, that we need to provide regular and careful maintenance to any forge.

Here are a few simple things that you can (and should) do every so often:

Take a plastic spray bottle (like you'd use for fly spray). Put a shot of dish soap in the bottle and then fill it about 3/4 full with water. At least twice a week, shake the bottle and spray all joints and connections from the tank to the burners. If you develop leaks from bouncing around in the back of the truck, you'll see bubbles growing where the gas is leaking. Take the time when you find a leak to fix it immediately. It may mean just tightening the connection or you may have to disassemble the fittings, apply a joint compound or tape and reconnect. So always plan enough time to correct problems when you test for leaks.

After you spray the soapy water on and no leaks are found, wipe off the excess

CONTINUED ON PAGE 6



Far Left: Check fittings at tank, don't overtighten. Be sure regulator and gauge are functioning properly. **Left:** Check fittings at manifold.

Kerckhaert's 80 Years

Four generations of the Kerckhaert family, passing from father to son, have run the horseshoe factory in Vogelwaarde, Holland. The factory began production in 1916, under the direction of Honoré Kerckhaert, who had been a farrier and farrier instructor. The production in 1916 was primitive by modern standards but in fact was efficient for the times. It has been the constant effort to improve efficiency that has brought Kerckhaert to its premier position in the world of

horseshoe manufacturing. As World War II came and went, the use of the horse changed dramatically. Mechanization in transport and agriculture brought serious change to the horse world. Many factories in Europe closed as a result of the declining use of the horse. As the 1960's approached, the effects of mechanization began to show a more positive side. The population was more prosperous and people began to have more leisure time. This development led

to an amazing comeback for the horse in the guise of a sport and recreation animal. The third generation, in the person of Rudy Kerckhaert, was quick to discover this change. He began gradually to produce shoes for sport and riding horses. His grandfather's production machines seemed to him to be too slow and inefficient for the times and demands. He spent eight years developing a new type of machine that is now capable of making up to 35 shoes per minute. At the same time Rudy was modernizing the production he also spent a great deal of time in the area of product development. His regular visits to farriers all over Europe and North America gave him the input he needed to develop shoes that worked for the many segments of the market. The factory now produces in excess of 10 million shoes a year. In North America we have seen the positive results of the Kerckhaert

willingness to produce shoes that make the job of the farrier much easier. Front and hind patterns, improved clips and a variety of stock sizes are some of the results. Today we can see that Rudy Kerckhaert's inspiration came from the pride and work ethic of his grandfather and father. His sons are now a part of the company, learning from the ground up the many facets of producing and marketing quality horseshoes in the 90's. Look for Kerckhaert to continue to lead the way in production of horseshoes in the world market. FPD, Inc. of Shelbyville, Kentucky has been importing and distributing Kerckhaert shoes since 1991. The distribution throughout the U.S. and Canada has expanded steadily and the shoes are now a familiar product to farriers in both countries. The communication between the Kerckhaert factory and FPD has encouraged the development of new shoes for the North American market. ■



Check fittings at forge valve(s), in and out.

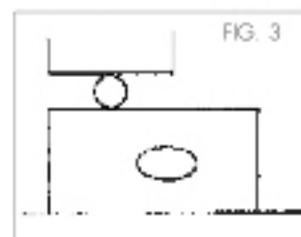


FIG. 3

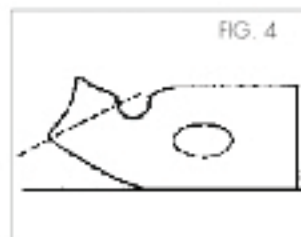


FIG. 4

Tool Corner

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the bottom edge lifts and becomes the point (figure 4). The only thing left to do is cut off the excess as the dotted line shows in figure 4.

So, the notch accomplishes two things; an easier more accurate method of producing the working edge and a tool with a little something extra to catch the eye. Thanks for the inquiry. I hope I answered it for you. ■

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Gas Forge

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residue. It will stain your brass fittings and attract dirt and generally get really gunky. At least once a week do a visual inspection of the hoses on your forge. If you have cracks, cuts or any other damage in a hose, get a new one immediately. While duct tape can fix a lot of things (I have convinced my wife that if duct tape can't repair something it just can't be fixed) do not use it to stop a propane leak or to shore up a

damaged hose. Electricians tape will blend in better than duct tape, but it also **should not be used** to repair a weak or damaged propane hose. The proper way is to buy and install a new hose to replace the damaged one. If your hoses are 3-4 years old, throw them away and get new ones. The little savings you might realize by pushing the life of an old hose isn't worth it. Your **regulator and gauge** should never be left with pressure on them. When you are finished forging shut the tank valve off and let the propane that is in the hose drain through to the forge to burn. After all the propane remaining in the hose has burned, turn the regulator adjusting screw counter clockwise to relieve all pressure on the regulator.

Below: Check fittings at forge valve(s), in and out.

Finally shut off the fuel valve that is on the forge. Propane that is allowed to remain in the regulator and fuel line converts to a paraffin like substance that will eventually restrict the full flow of propane to your forge. If your regulator/gauge does not appear to be working properly, have it tested. If it is **not** working properly throw it away and buy a new one. You'll be amazed at how much better your forge will run when it receives the right amount and right pressure of propane delivery. When you connect the regulator to the propane bottle (you should **never** operate a gas appliance without a regulator directly connected to the bottle) do not over tighten the brass fitting that goes into the bottle outlet (POL). Brass to brass fittings can be damaged by excessive tightening. Finally, order a new liner

at least a month before you think you'll really need it. Then you can arrange a time at your convenience to replace it and not be in a panic, or have part of the steel case warp or burn out waiting for the lining. There are two things that help to destroy the liners in gas forges. One is vibration. As you travel down the road on your nice cushioned seat, your poor forge is bouncing around in the back. So, make sure it is secured from as much movement as possible. Second, the ceramic lining likes to drink water. Even if it sits unused for a few days in humid weather it will absorb moisture. Rain of course is the death of ceramic lining material. Keep it dry. If it has not been used for a few days don't expect it to be as hot when you first light it, as some time will be needed to dry out the moisture it absorbed. These four maintenance items will help your forge last longer and will generally improve your outlook on life.

Bob Schantz is a certified Journeyman Farrier from Forristell, MO and manufactures Forgemaster propane forges. ■



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