

The Natural Angle

A PUBLICATION OF PRACTICAL IDEAS AND SOLUTIONS FOR FARRIERS

Volume 8: Issue 1

Opening Week at Churchill Downs

THE 129TH RUNNING OF THE KENTUCKY DERBY WENT OFF ON SCHEDULE, THE FIRST SATURDAY OF MAY, 2003. The final week before the Derby is usually filled with media hype, rumors and drama and this year was no exception. Most of the focus this year was on the "foot bruise" on Empire Maker's right front. The Derby favorite had been shod prior to coming to Kentucky but there was some concern that the horse had suffered a bruise in the Wood Memorial. Trainer Bobby Frankel decided to have the heel of the shoe (about 1-1/2") cut off to relieve pressure in that area. This is sometimes referred to as a 3/4 shoe. It appeared, by the end of the week, that Empire Maker was reasonably sound but it changed the dynamics of the betting, although he still went off as the favorite. For the days just before the race there was constant monitoring of the situation and discussion between the trainer, vet and farrier.

We spent most of the two weeks before the Derby at the track and with Steve Norman, a farrier from Lexington, KY. The photos in this article will help illustrate some of the many facets of shoeing racehorses at this level. There is often a misconception on the part of horseshoers away from the track that race plating is simply a quick trim and even faster shaping and nailing of a race plate on the foot. Long toe, no heel and inadequate support are tags put on track shoeing. There is no doubt that this occurs, but it's very likely that it is no more prevalent at the racetrack than it is in the rest of the shoeing world. The encouraging thing is, at the track and off, the quality of shoeing and hoof care is improving.



Churchill's twin spires



Churchill's blacksmith shop

As you enter Gate 5, the backside entrance, the blacksmith shop is to the right, conveniently located across from the track kitchen. The shop is only lightly used now as many of the farriers carry all the equipment they need. But take note of the "reserved parking" sign. How often do you see that? It has a long history and farriers like Richard McChesney, Bobby Boston and others still active at the track can tell you stories about the Rice brothers and others who spent long hours in the shop, forging driving hammers and other items.



Left to Right - Jimmy Costello, Roy Bloom & Steve Norman

Steve Norman usually has at least one farrier working with him at the track and often more. This is especially helpful when clients have a number of horses racing in one day and they are accustomed to shoeing the day of the race. Not all trainers follow this pattern but it makes every day a bit uncertain and difficult to schedule. This Derby, Steve had Jimmy Costello from Indiana, and Sam Christian from Kentucky working with him. Jimmy also has his own clients and shod this year's Oaks winner, Bird Town, for Nick Zito.

Typically one of the guys with Steve will

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pull shoes and prep the foot. Steve then does the trim, fits the shoes and nails them on. Then someone else steps in to do the clinching and finishing. It's a very efficient system and allows them to get a lot of horses shod.

If you look closely at the photo showing the hind shoe being nailed on you will see the "highest, widest part of the frog" is a part of Steve's approach to trimming. You can also see that he is using the Kerckhaert race plates and providing a good base of support and adequate length for heel support. He very seldom sets a shoe to the perimeter of the toe, and is far more likely to set the shoe back and dress the toe accordingly. The image with a rear view of some front shoes that were glued on gives you an excellent view of the support he provides with his shoe fit.

One of the most damaging things for the Thoroughbred foot (or any breed) are shoes that are punched too fine, forcing the farrier to fit the shoe tightly, try to drive nails in the white line and still not have to rasp too much wall, particularly in the toe quarters. As these pictures show, the nails were driven into the wall, not the white line and very likely the foot was still dressed to compensate for the poor nail position of the shoes. It may be that the Thoroughbred has a thinner wall but over the years many of the feet were forced this way, because of poor shoe design.

Throughout the week there were a number of horses that required something more than the normal shoeing job. You can see the image of the front foot that had suffered a laceration in the heel area that was not treated properly. It had to be resected in order to get the healing underway. In this case, Steve used a Z bar shoe, done by gas welding an insert into a normal race plate with the heel cut off. The foot was blocked so he could cut away all the undermined hoof wall and get to solid laminae. Amazingly, a week later, this horse is back in training.

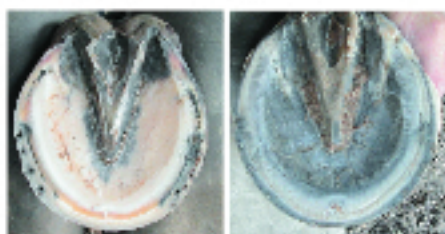


Fitting hind shoe for support

Nailing hind shoe



Support and expansion on glued shoe



Poorly punched shoes with nails in wall

Some trainers complained that the Churchill track surface seemed to be hard and have an unusual number of small stones mixed in. For the horses that seemed a little tentative, Steve used Equi-Pak. He cleans the foot with a wire brush but also uses a small torch to heat the sole area before application. He typically fills the cavity only to the foot surface of the shoe, allowing the foot to have more cup in it than you would have if you used the foam forms or a pad to fill the entire void.

When Steve runs across a foot that is really weak and shelly he is very likely to use an acrylic product to glue the shoes on. There are a lot of horses racing today that have normal shoes glued on. Usually this is a temporary measure, perhaps for a



Resection of medial heel



Prepping foot for Equi-Pak

Equi-Pak application



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few shoeings until there is adequate growth and strength in the wall for nailing. But there's no hesitation or doubt that gluing shoes on can work in this environment.

As Derby Day came the work didn't end. Steve shod Peace Rules, third place finisher in the Derby, the morning of the race. The decision was made by Frankel not to put full shoes on Empire Maker that morning. Steve shod for other clients that had horses in the numerous stakes races that take place on Derby Day. And he worked the starting gate for the Derby.

The pace is grueling and the pressure can be overwhelming shoeing for clients like Steve Asmussen, Bob Baffert, Bobby Frankel and Elliott Walden, but Steve and his crew handled it all, keeping a good sense of humor and attitude throughout. Steve had Stone Well Bodies classic '34 Ford shoeing truck on the backside and it was amazing to see the heads turn as he drove through the barn area Derby week.

Perhaps the most important step in all of this, according to Steve, is illustrated in the photo of Steve writing up the work for a client. At the pace he was keeping it would be easy to lose track! ■



Finishing work by Sam Christian



Dale Eagleson and Steve Norman



Equi-Pak application



Finished front glue on



Working in combination



Steve Norman shoeing Peace Rules Derby morning



Taking care of the paperwork



Derby traffic

**KERCKHAERT
RACE PLATES FOR
A STRONG FOOT**



Manufacturing Tools is not a One Step Process

The images we have assembled for this article will give you an idea of the many steps involved in producing forging tools for the farrier market. Many of the punches made by Bloom Forge start from round stock and are forged on a 100 lb. power hammer. This first forging step requires close attention and careful working of the material. Straight tools have to be dressed and ground to fit templates set up for the various nail heads. And all tools are tumbled to remove any scale before getting a final polish.

Hammers are drop-forged and come to the shop to be finished to size and style. They then go through a heat treat process before final polish and the installation of handles. Clipping hammers also include a forging step on the power hammer to get the clipping pein drawn.

The many styles of tongs in the Bloom Forge line are drop-forged and then undergo various milling and grinding steps to get to the appropriate features for each tong. After riveting, the tongs go to the forging area to be fit to size.

The steel handled tools are made using tool steel heads and mild steel handles. Each head is forged on the power hammer, and cleaned in a tumbling process. After welding of the handle to the head (taking pre-heats, etc.) the tools are tumbled again and then ground and polished.

Wood handled tools are also drop forged, and then ground to the proper dimension. They undergo a heat treat before final polishing and finish. Handles are now applied using a rubber keeper, a method that helps with the life of the handle.

Next time you get your forging tools out, think a little bit about the time and effort that has gone into producing them. An appreciation of this work will likely give you good reason to be careful in how you use your tools - and how you maintain them. There are a number of previous articles done by Roy Bloom covering care and maintenance of your tools. Contact your supplier to get copies if you don't have them. ■

(photos continue on back page)

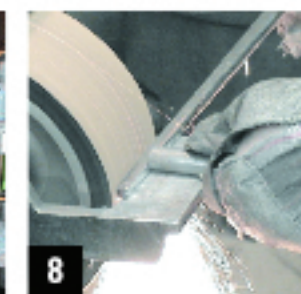
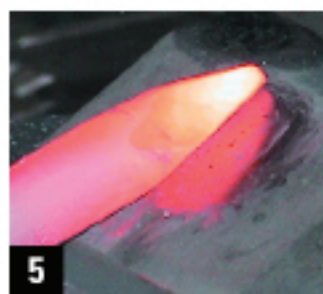


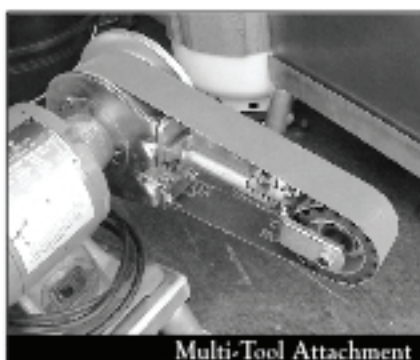
Photo 1: Forging area. **Photos 2-6:** Forging punches on power hammer. **Photo 7:** Hammers following heat treat. **Photo 8:** Grinding tong reins.

Building Efficiency With Equipment Adds Profit

No matter what business you are in, building efficiency into your operation is a key to making more profit in less time. A shoeing business is no different from a manufacturing or distribution business. You need to look for equipment that helps minimize your labor and time spent in getting to the final product, the finished shoeing job.

There are a number of power tools and other pieces of equipment that can be worked into your rig setup that will help with everyday steps in shoeing. A propane forge is the most obvious. The ability to heat your shoes will make the shaping and modification steps much easier. Everyone runs into feet that are in such bad shape that simply punching additional nail holes will make an otherwise difficult situation easier to handle. This doesn't require a large forge but can be done with some of the single burner units. Mounting the forge on a swing out arm or slide out will help get the heat away from the rig and more accessible for your forging steps.

A lot of horseshoers are finding a belt sander/grinder combo to be an extremely useful piece of equipment. The belt sander is much more versatile than a grinding wheel as you can select coarse grit belts (24 or 36 grit) for heavy grinding and finishing of steel and aluminum



Multi-Tool Attachment

shoes. A quick change to finer grits like 80 or 120 and you will have the ideal setup for maintenance of your tools. You can even cut fine belts to a narrow width and use them for sharpening knives. If you have a combination sander grinder you can mount various buffing wheels, like sisal, felt or Scotch-Brite® to use for final honing of your knives or cleanup of nippers, punches and other hand tools.

If you already have a grinder unit but it doesn't have the belt sander you can buy one of the MultiTool attachments and mount it. This is a 2x36" belt sanding attachment that is compact and has a contact wheel that makes working shoes and tools very easy because of its position away from the body of the grinder. These MultiTool attachments work well

on 1/2 hp or larger grinders. Some of the better quality grinders at 1/3 hp will also work well.

Don't look merely at price when you buy equipment like grinders. You are making an investment and want to maximize your return. Buy equipment like Jet, Baldor or Kalamazoo in order to get the most life from the unit. One of the easiest ways to compare quality is to check the weight of the units. A 1/2 horsepower unit that weighs 20 lbs. will not have the "guts" of one that weighs 35-40 lbs and will not perform as well or last as long.

If you are doing a lot of work with hunters and jumpers you will have to drill and tap for studs. For pleasure horses the drive in studs are excellent traction devices but require holes to be drilled. Setting up a small drill press will make these jobs much easier, with less broken drill bits and less effort. A drill press will also make the job of riveting pads an easy task.

Remember the key phrase - time is money. If you consider the time spent using inefficient tools or methods to get your work done you will see that the investment in a few key pieces of equipment will add significant profit to your bottom line.

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Photo 9: Milling hot fit tongs.

Photo 10: Tongs ready for sizing.

Photos 11 & 12: Sizing tongs.

Photo 13: Forged undercut head ready for welding.

Photo 14: Parts being tumbled.

Photo 15: Polishing wheels used in final step.



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