August 2020

THE FORGE FIRE

The Newsletter of the Indiana Blacksmithing Association, Inc.

An Affiliate Of The Artists-Blacksmiths' Association of North America, Inc.

IBA is a Not For Profit Indiana Corporation recognized by the IRS under section 501(c)(3)

9:30 AM is the regular meeting time for IBA Hammer-Ins
with beginner training available at 9:00 AM.
PLEASE MAKE SURE TO ASK FOR HELP!

If you would like an IBA membership application form, please contact Farrel Wells, Membership Secretary (765) 768-6235.

BULK LOTS ARE AVAILABLE TO DEMONSTRATORS,
SHOPS, SHOWS AND OTHERS WILLING TO MAKE THEM AVAILABLE.
WE APPRECIATE YOUR HELP.

The Forge Fire is the newsletter of the Indiana Blacksmithing Association Inc. (IBA) IBA is an affiliate of the Artist-Blacksmiths Association of North America Inc.

More nearby resources and organizations for blacksmiths:

Rural Smiths of Mid-America:
Meetings are on the first Saturday of each month
Call Ron Gill
317-374-8323 for details

IBA MEETING SCHEDULE

Check the latest *Forge Fire* for monthly **IBA** revisions.

No August Hammer In

Check IBA Facebook site for up to date news about hammer ins

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Dates to Remember

TBD

Editors Message

I do not have any IBA news to share. The following message from ABANA gives a pretty good summary of how blacksmith groups across North America are contending with COVID19. See page 5 for more ABANA news. At this point I do not have information for IBA state wide hammer ins, so at a state level we are postponing meetings. I do know several satellite groups are meeting with recommended social distancing, frequent hand washing and/or masks where possible.

ABANA

Last Thursday I emailed the question to all ABANA affiliate leaders, "what are the guilds doing about monthly meetings? Postponing them, having them with social distancing and mask required, limited attendance, or business as usual?" I was pleasantly surprised by the number of responses and sincerely appreciate those who replied.

What we learned is, nationwide and Canada, three of the meeting options are almost evenly divided. Of those responding, we found;

Postponing meetings:	30.7%
Social distancing with mask:	34.6%
Business as usual:	30.7%
Limited attendance:	3.8%

Additionally, many indicated that they are providing some sort of virtual training in an effort to provide ongoing education for their members. Also, I believe everyone feels the need to be very careful as we move forward.

So there are the very unscientific results of what we learned. Again thank you very much for participating.

Jerry Boyd, ABANA Affiliates Committee chair
325-207-8253
abanagroupnews@gmail.com

https://abana.org/
https://www.facebook.com/groups/1018597368285578
https://www.instagram.com/abana.blacksmith/

IBA Satellite Groups and News

1) Sutton-Terock Memorial Blacksmith Shop
Meet: 2nd Saturday at 9 AM
Contacts: Fred Oden (574) 223-3508
Tim Pearson (574) 298-8595

2) Jennings County Historical Society Blacksmith Shop
Meet: 2nd Saturday at 9 AM
Contact: Ray Sease (812) 522-7722

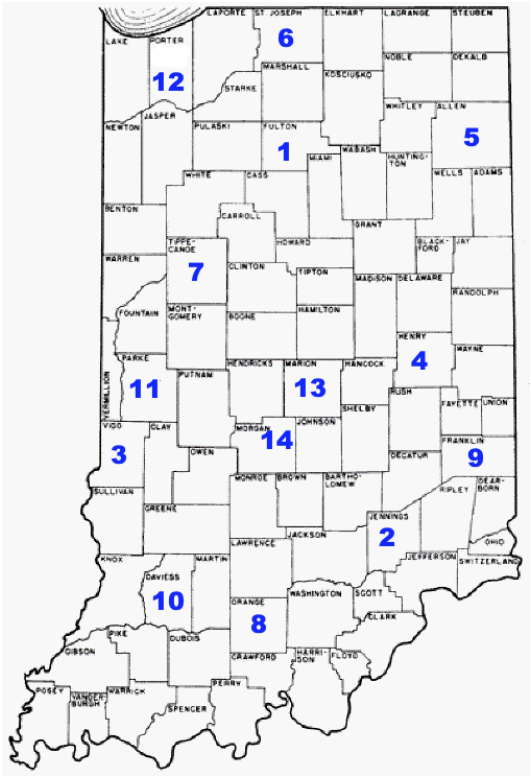
3) Wabash Valley Blacksmith Shop
Meet: 2nd Saturday at 9 AM
Contacts: Doug Moreland (217) 284-3457
Max Hoopengarner (812) 249-8303

4) Fall Creek Blacksmith Shop
Meet: 4th Saturday at 9 AM
Contacts: Gary Phillips (260) 251-4670

5) Maumee Valley Blacksmiths
Meet: 2nd Saturday
Contacts: Clint Casey (260) 627-6270
Mark Thomas (260) 758 2332

6) St. Joe Valley Forgers
Meet: 4th Saturday at 9 AM
Contacts: Bill Conyers (574) 277-8729
John Latowski (574) 344-1730

7) Rocky Forge Blacksmith Guild
Meet: 2nd Saturday at 9 AM
Contacts: Ted Stout (765) 572-2467



8) Meteorite Mashers
Contacts: Mike Mills (812) 633-4273
Steve King (812) 797-0059
Jeff Reinhardt 812-949-7163

9) Whitewater Valley Blacksmiths
Meet: 2nd Saturday
Contact: Keith Hicks (765) 914-6584

10) Bunkum Valley Metalsmiths
Meet: 1st Saturday
Contacts: Jim Malone (812) 725-3311
Terry Byers (812) 275-7150
Carol Baker (317) 809-0314

11) Covered Bridge Blacksmith Guild
Meet: 1st Saturday
Contact: John Bennett (812) 877-7274

12) Snake Road Forge
Meet: 1st Saturday
Contact: Rod Marvel (219) 241-0628

13) Satellite 13
Meet: 4th Saturday
Contact: Darrin Burch (317) 607-3170
Doug Wilson (317) 439-7684

14) Old Town Waverly Blacksmiths
Meet: 2nd Saturday
Contacts: Mike Lyvers (317-728-5771),
Kenny Hale (765-318-3390),
Mike Jackson (317-509-9115).

Meteorite Mashers

Monthly meeting of the Meteorite Mashers was held at Jeff Reinhardt's shop in Floyds Knobs. After much work by Mike Michael A. Mills, Butch Sparks and Dave David Kunkler and my self to prepare the shop for social distancing, make hand wash facilities, obtain supplies and to provide light weight face shields that are very easy to wear, we had zero participation beyond those mentioned. Judging that people are not interested in attending meetings now due either to caution in regards to the virus, or simply do not want to follow any precautions, the attendees at the end of the meeting decided to again suspend any meeting of the Meteorite mashers until interest increases. An excellent time was enjoyed by those who attended. No August meeting is scheduled.

IBA Satellite Groups and News (continued)

Jennings County Historical Society Blacksmith Shop

The Jennings County Historical Society Blacksmiths met at Vernon on the 11th with Brett Luker making angle brackets from flat stock. Kenny Dettmer was testing various pieces of steel. Charlie Helton worked on scroll starters. Hope to see you on the 8th of Aug. Again, bring your iron in the hat and your wallet! Paul Bray

Bunkum Valley Metalsmiths

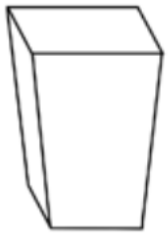
The Bunkum Valley Metalsmiths met Saturday August 1 on a nice rainy day. We had 15+ people attend and plenty of metal was bent. There was lots of wonderful food and fellowship! Senator John Waterman spent the day with us too. Next month is the White River Valley Antique Show, September 10-13, 2020. This is great event for the whole family! We will have our regular meeting next on the first Saturday! Everyone is welcome! Enjoy the pictures!

Holdfast for Anvil Without Pritchel Hole

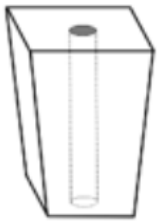
Lewis Riggleman

From the Fall 2017 New England Blacksmiths Newsletter
Reprinted by permission

1. Forge solid piece of mild steel to fit hardy hole.

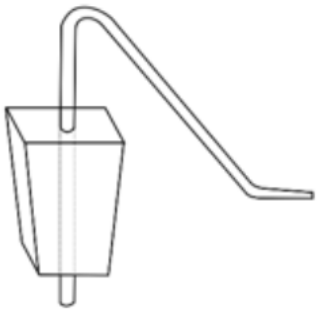


2. Drill hole into forged piece.



3. Forge holdfast of choice size - round stock.

4. Put holdfast thru piece forged to fit hardy hole.



5. Upset bottom end of holdfast.

Did this for anvil at Crowley Sarasota, works great!

Editor's Note: I made a couple of these to use with my acorn table - they are smaller and lighter than the big holddowns that came with the table.

For sizing: I drilled the hole 9/16" to use with the holdfast made from 1/2" stock.

Note: Acorn plate photo and Editor's Note reprinted from July/August 2020 edition of California Blacksmith newsletter

Forging a Viking Era Axe

Replicating an axe from the collection of the American Swedish Institute *by Thomas Latané*

Photos 1-3 The axe belonging to the American Swedish Institute measures about 3 3/4" H x 6" L x 1 3/8" W (Photo 1 provided by the Institute). Petersen Type C, 7th to 9th century Scandinavian

Introduction

I have been involved since the 1990s with the Vesterheim Museum's folk art program and my involvement has increased since the museum put together a blacksmith shop. The Vesterheim is a museum of Norwegian heritage located in Decorah, IA (see page [9 - *ed*] for more details on the Vesterheim). As part of its program the museum holds classes in cooking, weaving, rosemaling, wood carving and woodwork, jewelry work, knife making and general blacksmith work. Each summer there is an exhibition of "Folk Art in the Norwegian Tradition". Recently a blacksmith category has been added. This was a result of much campaigning on my part, so I urge Guild members forging articles inspired by Norse designs or construction techniques to enter this year!

During a tour of the American Swedish Institute's collection in storage a few years ago a curator showed me the Viking Age axe pictured in this article (dated by style to be 7th to 9th century). I was immediately drawn to it as a potential class project at the Vesterheim (ASI has no blacksmith shop) because its small size would be possible for a reasonable number of students and fit the limitations of gas forges.

This process was developed for a class at the Vesterheim Museum in 2019. The class will be repeated October 20-22, 2020. The techniques were chosen to apply to the use of wrought iron, though mild steel was used for the body. The sequence was influenced by the employment of gas forges. The example was chosen in part because a copy would fit in the 4" opening of the forges. Because a localized heat is not possible, elements were forged in an order least likely cause deformation of work already accomplished.

This article reprinted from The Virginia Blacksmith, the newsletter of the Southwest Virginia Blacksmith Guild and the Central Virginia Blacksmith Guild.

Making the Axe

Photo 4 (right) The stock chosen was 8" of 1" square cold rolled because it was guaranteed to be 1018 (simple low carbon steel). If one had good quality mild steel 1" x 1-1/4" the work would go faster. The first step was to mark the bar 2-1/2" from one end with a center punch to identify the point of the future bend. The steel around the punch mark was upset by heating that area, standing the bar on one end, and hammering upon the other end to shorten and thicken the material. The tip was cooled to concentrate the upset at the punch mark and prevent flaring the end of the bar. I made the prototype alone and demonstrated upsetting alone (to show it could be done), but encouraged the students to strike for each other to speed up the process. Photo by Scott Johnson of his piece and a scrap of 1" square.

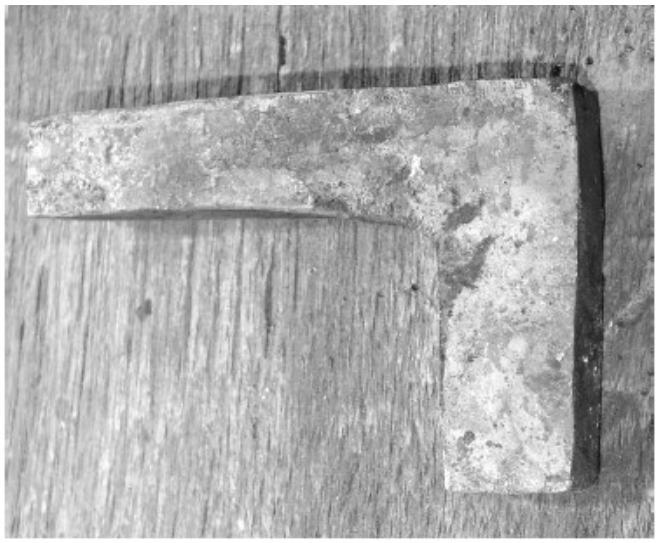


Photo 5 (left) The bar was then bent 90 degrees in the region of the punch mark over a rounded edge of the anvil, with effort made to prevent the material from flipping out of the tongs and across the room. Metal was driven towards the outer corner through a series of heats, to produce the "beard" shaped blade Care was taken to prevent the inside of the bend from forming a sharp corner or to fold over itself to create a "cold shut" (crack).

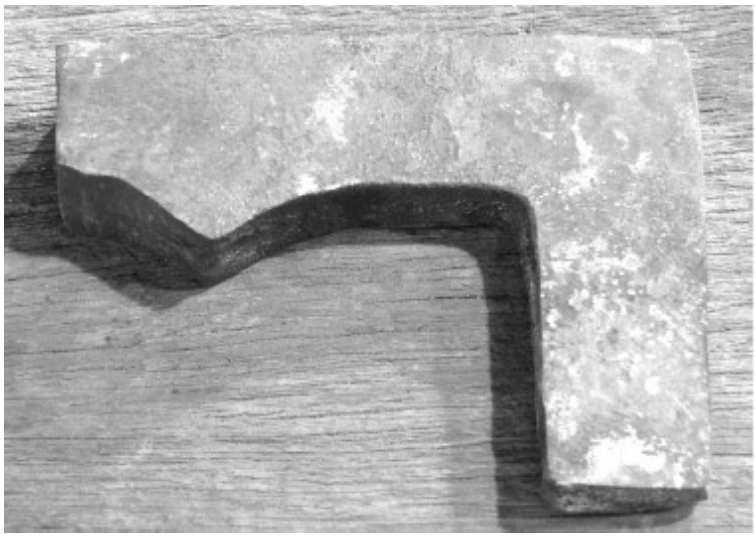


Photo 6 (right) The other end of the bar was then heated and material upset and shaped with the hammer to form the mass needed for the "ears" on the side walls of the eye. The swelling of the mass was directed to the underside of the axe by working the sides with the peen of the hammer and by catching the end on the edge of the anvil and beating the bulk to the lower edge of the axe.

Photo 7 (left) A chisel was used to cut a slit into which the high carbon steel for the edge could be welded. Much of the blade could be cut with the back resting on the face of the anvil and the eye end over the edge. The rest had to be cut with the end of the bar standing up on the face of the anvil. Both operations required that a helper hold the axe in place. The tool steel bit was prepared by forging a wedge and pricking barbs on the thin edge with a chisel. The barbs help hold the steel in the cleft when welding. To avoid the problem of the wedge curving as one edge was spread, two sides of the bar of tool steel (1075) were feathered and then cut down the center producing two wedges that were straight.

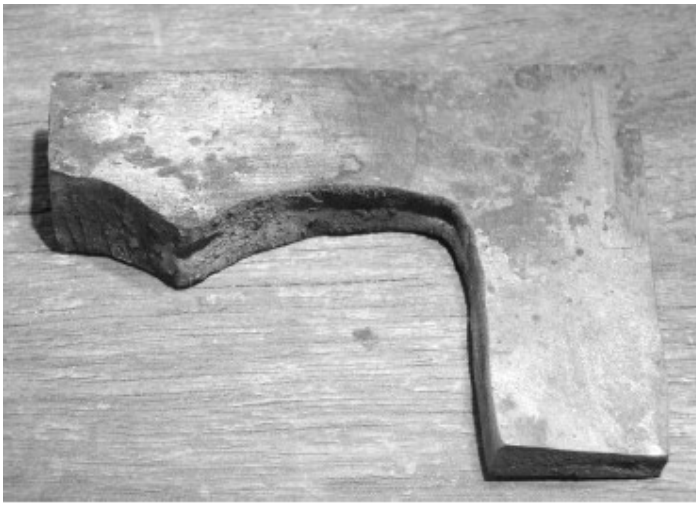


Photo 8 (left) The axe now has the high carbon steel welded along the blade, which, after the hammering involved in welding, is thinner, wider, and longer, but not yet brought to final thickness. When welding the blade should receive equal hammer blows on both sides to keep the steel centered.

Photo 9 (right) Shows the eye being split open with a slim chisel. Most of the cutting was done from what will be the underside of the axe, so the flat upper side could be supported by the anvil. The last of the cut was made with the blade of the axe resting on the anvil, cutting down from the back of the eye

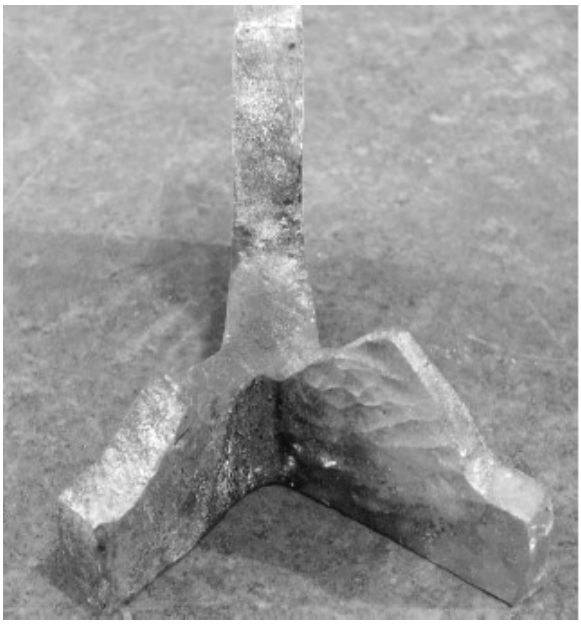


Photo 10 (left) The metal for the walls of the eye has been split and on one side the steel has been forged out for the back of the eye and the cheek has been drawn thin -ner and longer (but not to final thinness as that would be too likely to burn during the weld).

Photo 11-A (right) The two ends have been bent inwards forming corners, and the tips forged to wedge shaped scarfs before being overlapped in preparation for the weld.

Photo 11-B (left) Welding the eye. The ends of the eye were brought to a high heat in the forge with a protective layer of flux to keep the oxygen off the surface and dis-solve the existing oxides. At welding temperature the axe was removed from the fire, placed over a mandrel held in the vise, and the ends were tapped together with a light hammer. The eye should not fit tightly on the mandrel as this will conduct heat away rapidly. The mandrel is just used to back up the hammer blows to the overlapping ends of the eye. Note the blows are sideways so the mandrel is not knocked out of the vise.

Photo 12 (right) The finished weld viewed from above.

Photo 13 (right) The completed weld viewed from below

Photo 14 (right) The blade has been hammered to spread and thin the metal toward an edge. The "ears" have been thinned and elongated. Care was taken to hammer equally on both sides of the blade to keep the steel centered. Then the desired profile was drawn upon the surface in preparation for trimming the excess with chisels.

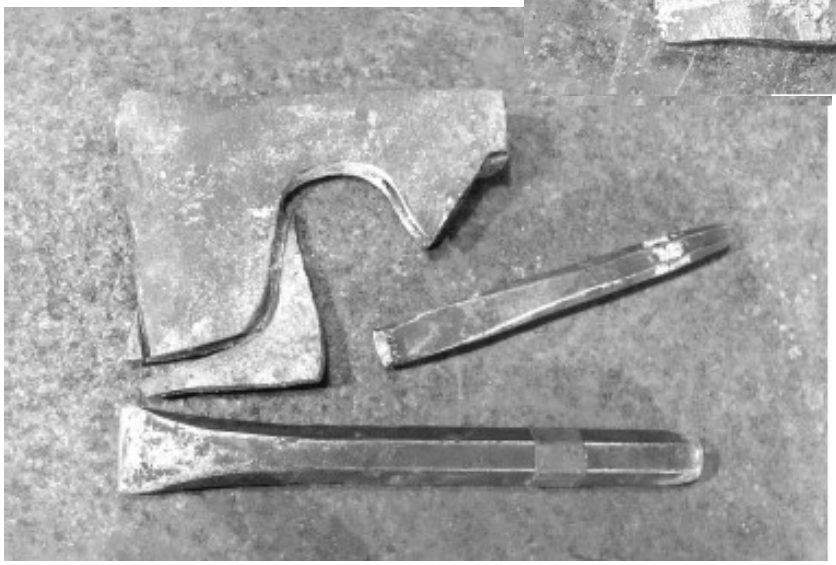
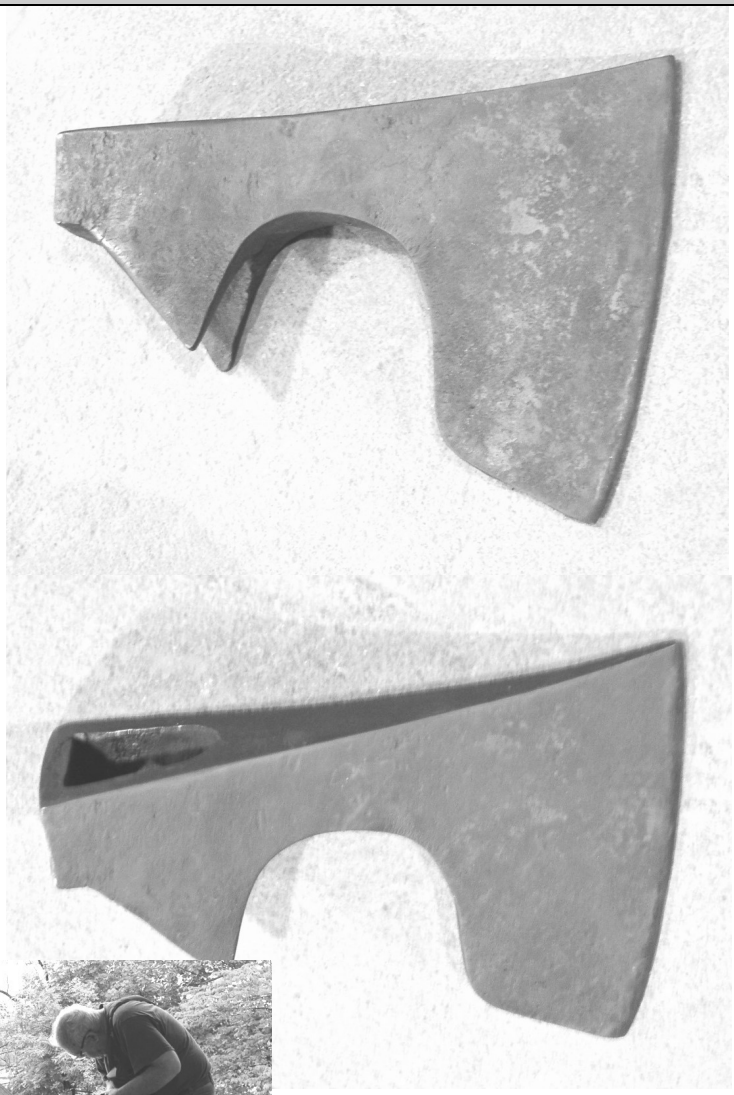


Photo 15 (left) The blade has been trimmed to a more pleasing shape. The bevel on the back of the blade of the original axe leads me to believe it was also trimmed this way. The chisel leaves a beveled surface, on the side from which the cutting was done.

Photos 16 and 17 (right and below right) Views of the finished axe. The axe was treated with a browning solution after being hardened in oil and tempered to a dark straw. The tool steel was water hardening, but the edge was thin enough to harden in oil and warping is less likely with the lesser shock of oil hardening.



Class Summary

There was enough interest to hold two classes of eight students each. One class (two days) only involved forging the axe and the other (five days) included doing some wire inlay. More students finished their axes in the longer class because of the number of evenings available to work.
Students did well striking for each other and one who had made several jigs based on the class outline shared them with anyone interested in trying them out. I offered the option of chiseling through and drifting the eye rather than cutting the end open and welding for those who were in-timidated by the complex weld. In the two-day class, the only student to finish had chosen this method. The next scheduled class is a three-day axe-only class.

Class Photos (left & below) Students hard at work and the various axe designs before any inlay work.

The *FORGE FIRE*
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Indiana Blacksmithing Association, Inc.

Farrel Wells *Membership Secretary*
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Dunkirk, IN 47336-8807

First Class Mail

Address Correction Requested
If Undeliverable return to
sender

Grooving Tool

Reymundo Lopez, Tehachapi

Shown at
Spring Conference 2018

A handy tool to make and have available.

This tip reprinted from the July/August 2020 edition of the California Blacksmith newsletter