Rocky Forge News

Volume 18, Issue 5 – May, 2019

Next Meeting, May 11

At Ted's Shop

What a spring this has been, rain, rain and some more rain. Not a good year for the farmers, but the mushrooms have been plentiful. Plentiful for some of those lucky ones. It looks like we will have a nice day this coming Saturday May 11th for another blacksmith "Hammer In".

Carol and I are looking forward to hosting another meeting of the Rocky Forge group. Our last meeting in April had a pretty good attendance with 55 young, older and old working on hot metal. I was especially impressed by a young mother who wanted to make a shingle froe and had absolutely no experience. With some mentorship she took home a froe with a forge welded eye that looked like she had been at it for years. Those are the rewards of our effort.

We also had many young people learning the art with mentors readily guiding them. Having our Iron-in-the-Hat drawing before we light the forges seemed to work very well and gave some attendees metal to work with for the day. We will do the same thing at this meeting so bring your Iron-in-the-Hat donations and come early.

The meeting Saturday will start at 8:30 with coffee, doughnuts and a social period followed with the Iron-in-the-Hat drawing. I hope to have more coal forges available by Saturday and if you have a gas forge you can bring that would be helpful.

Since Carol is not cooking, lunch will be comprised of whatever you all bring. So, if you want to eat bring a covered dish to share. Someone needs to bring a meat dish.

Ted and Carol Stout

(765-491-2194)

Thanks Margie and Dan

A big thank you goes to Margie and Dan Michael for taking the lead on food at our April Meeting. Thanks to all the other members who brought a dish to share. It is quite an accomplishment to feed 55 people a first-rate meal.

Dates to Remember

May 11: Rocky Forge Meeting at Ted's.
May 31-June 2: IBA Meeting, Tipton, IN.
June 3-6, 2020: ABANA Conference, Washington County Fairgrounds, Greenwich, NY (east of Saratoga Springs and north of Albany).

Interesting Web Sites

CoSIRA Book: The Blacksmith's Craft, p. 44 http://azblacksmiths.org/Blacksmiths%20Craft.pdf
Chain Making. http://www.blacksmither.com/wp-content/uploads/2015/10/Chain-making-pdf.pdf
BlacksmitHER Radio, a podcast for blacksmiths, http://www.blacksmither.com

Young blacksmiths at our April meeting. See the Rocky Forge Facebook page for more photos.

Reprinted from ABANA's Hammer's Blow.

BLACKSMITH'S QUESTION-TIME

Dear Sir,

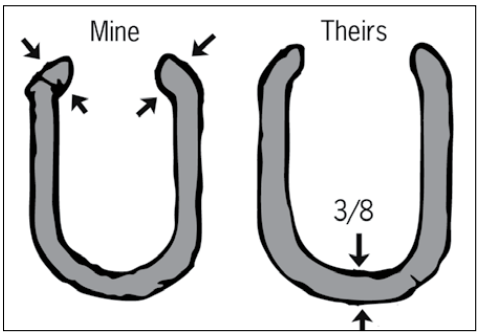
I am trying to follow the lessons in the CoSIRA book, *The Blacksmith's Craft*. I am attempting Lesson #10, "The Chain Link".

When I forge my scarf, I cannot emulate the drawing that the Co-SIRA book is showing. Their scarf is shown as the same thickness as the parent barstock; my scarf is wider than theirs.

My joint isn't disgusting, but I don't think that it is right.

Any thoughts that you may have on the subject would be greatly received.

Nick in Minnesota.



Drawing supplied by Nick showing the difference between his scarf and the COSIRA book

Chain Making the CoSIRA Way

Jay Close

I am fond of the CoSIRA books. Yet, despite high quality, they occasionally drop the ball. The chain-making exercise in the first smithing book, *The Blacksmith's Craft*, is a case in point: the technical drawing does not accurately show the chain link forged in the photographs; inaccuracy is compounded by ambiguity in the way the scarfs for the weld are depicted; add to that a less-than-helpful text and there is reason for confusion.

Ignore the technical drawings. Scrutinize the book's photographs. What follows is how I would make the link per the CoSIRA directions.

Bend the round bar to a "U"-shape. Make the ends even and the legs of the "U" parallel. This starting shape is critical. Fig. 1

Fig. 1. Make a 'U' shape in the bar. Keep the ends even

In welding rings, bands and chain links, a left-pointing horn is most convenient (for the right-handed smith). This is what I show in the following photos:

At a thorough yellow heat, hold the bottom of the "U" in tongs (chain tongs if you have them). Place the inside corner of the left leg on a sharp or slightly rounded edge of the step of the anvil with the other leg off the anvil face. Fig. 2

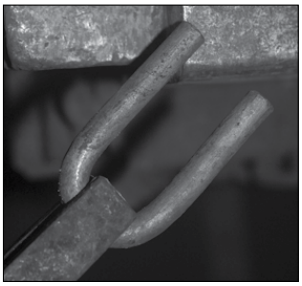


Fig. 2. Hold the link at 45° to the edge of the anvil step

Hold the "U" horizontally and at about 45 degrees to the anvil edge.

Start the scarf with one half-faced hammer blow to create an abrupt step. Draw the corner material on the anvil face to a taper, either by slightly angling the hammer or slowly walking the material off the anvil. The "scarf walk" often happens naturally as the bar and the hand respond to hammer blows. The goal is to pinch this inside corner to a tapered, feathered edge. Fig. 3

One scarf done, immediately flip the bar and make the second scarf exactly the same way. Aim to get both scarfs done in a single heat if you can.

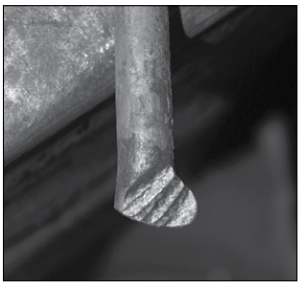


Fig. 3. Rotate the stock as you hammer to draw the scarf

WELDING CHAIN BY JAY CLOSE

If needed, take another heat and bend the scarfs so they overlap. With practice you will be able to do this on your scarfing heat. Note that the scarfs meet and create a peak at the top of the link. Fig. 4

Fig. 4. Bend the two ends over the horn so that they overlap

Flux -- if that is your practice (it is mine) -- and put the link back in the fire.

At welding heat place the overlapped scarfs on the anvil face and weld. Do not overwork the seam. Two or three blows are sufficient on the first side; then, without hesitation, turn the link over and seal the scarfs on the opposite side. Fig. 5

Quickly go to the horn while there is still welding heat in the link and forge the corners of the scarf. Hold the link at about 45 degrees and rotate it back and forth on the horn as you hit. Repeat on the other side of the weld. Figs. 6 and 7

Fig. 5. Weld on the anvil face first. Work quickly and from both sides of the link

Your completed link should exhibit the following characteristics:

- Smooth, even curve on the bottom
- Sides parallel or very slightly bowed out — definitely not peanut-shaped
- Weld area full thickness or very nearly so
- Small peak at the top of the link
- Welded area flat and not hollowed from cold working
- Link is flat and not twisted

To test your weld, allow the link to thoroughly normalize (air cool) and put it in your vise with the weld up. Thread a suitable bar through the link and give the link a 90-degree twist. If it survives that test, it's a pretty good weld. Having work-hardened the link, now try to straighten it out again. Not many welds will withstand that straightening.

Fig. 6. Move to the tip of the horn, hold the link at 45° and continue to weld

POSTSCRIPT: English smiths of the revival were wedded to the use of ball peen hammers. This, despite the fact that all historical references to earlier English trade practice, when their work stood alongside the rest of Europe, illustrate a cross-peen hammer. The ball peen is a specialized tool; its use by English revivalist blacksmiths is a regional and historic anomaly. It is also what forces the use of the anvil edge for scarfing in the CoSIRA chain-making instructions. Try your cross-peen hammer for this. I think you'll like it. It is how I was taught to forge these scarfs ----- but that is a different lesson.

Thanks to Jane Gulden for help with the photography.

Fig. 7. Rotate the link back and forth around the horn

Fig. 8. Test your weld by twisting it and then straightening it out again

Fig. 9. A chain link in the midst of testing

Fig. 10. Two finished links the CoSIRA way