February 2022

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. Permission is granted to other similar non-profit organizations to reproduce uncopyrighted articles originally appearing in *The Forge Fire* provided credit is given the original source.

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.

Feb 19 2022	**KEN DETTMER'S SHOP COLUMBUS, IN**
Mar 19 2022	**ANNUAL BUSINESS MEETING CARTERSBURG (PLAINFIELD)**
Apr 16 2022	**BOB HUNLEY'S SHOP SULLIVAN, IN**
May 21 2022	**TBD**

Editors Message

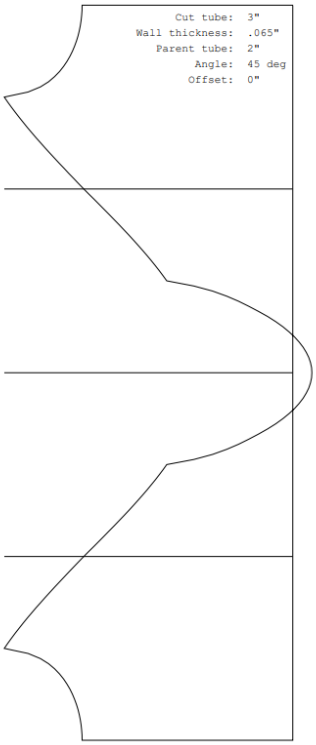
The IBA Business meeting is set for March 19 at the Belleville Masonic Lodge. The lodge is hosting a breakfast that morning until 10:00. Come early and get a good breakfast. The business meeting will begin at 10:30. If my internet searches are correct the lodge is about 10 miles west of the Indianapolis airport, just north of US-40. Driving directions are posted on the back cover. Steve King tells me that no one contacted him about running for the two board of director seats. I believe that means nominations and voting will be held during the meeting. Anyone interested in serving on the board should attend. I missed the December board meeting, so I am a little behind on 2022 plans. I anticipate a lot of good discussion during the business meeting about 2022 IBA functions.

The February hammer in will be at Ken Dettmer's shop in Columbus. Ken has a big shop and we get a big turn out. Lunch will be a pitch in. The April hammer in will be at Bob Hunley's shop in Sullivan, IN. I will have more details in the March Forge Fire.

It is time to think about acknowledging the IBA's finest blacksmith and rookie blacksmith. The guidelines and application forms for Blacksmith of the Year and Rookie Blacksmith of the Year are posted on the IBA website in the "Members" area (http://www.indianablacksmithing.org/membership.html). Brad Weaver is Awards Chairman. Contact Brad (email: bweaverhlw@yahoo.com or phone: (812) 371-8674) if you have any questions. Nominations are due by April 1.

In this month's edition we have two project articles.

The first article pertains to making saddle cuts when joining one pipe to another. The article includes a link to a website that generates a template for cutting the end of the pipe Tee'ing into the other pipe. The image to the right is an example of the output. This example may not be very useful as it illustrates a 3" pipe connecting into a 2" pipe at a 45 degree angle. The template can be printed and attached to the pipe as a cutting guide.



The second article covers blacksmithing a pair of scissors.

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Dates to Remember

March 19 Annual Business Meeting Belleville Masonic Lodge, Cartersburg (Plainfield) IN

May 11-14 ABANA Conference

June 3-5 IBA Conference

IBA website: www.indianablacksmithing.org IBA Facebook page: www.facebook.com/groups/IndianaBlacksmithingAssociation/

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

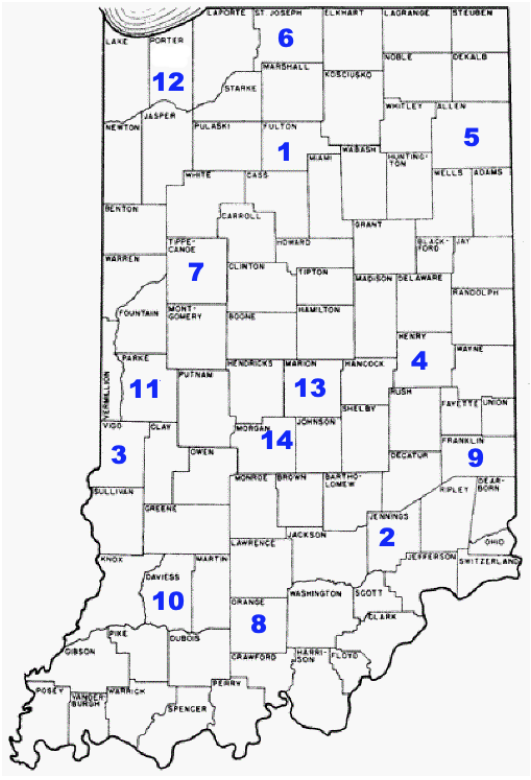
3) Wabash Valley Blacksmith Shop
Meet: 3rd Saturday at 9 AM
Contacts: Bill Cochran (812) 241-8447
Max Hoopengarner (812) 249-8303

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).

Jennings County Historical Society Blacksmith Shop

The Vernon Blacksmiths met at the forge of Dave Good in Seymour on Jan 8th. Josh Sampson made a hardy tool 1"sq welded. Kevin Welsh made several twisted "s" hooks, most 8" series. Josh made a nail header and nails to go with it. He then drew a 1" square to a taper. He then demonstrated making a leaf. Chelsea Sampson drew out a large leaf, twisted it, and made a key holder out of it . Dave Good made a wedge.

The next month meeting will be at Kenny Dettmer's forge on Feb. 12th. 15721 S 250W Columbus, IN. The State Hammer in will be here also the following Sat. the 19th.

March meeting will be at Kevin Welsh forge 25619 Gill Rd., Nabb, IN.

As usual , bring iron in the hat and- yes, your wallet! Paul Bray

IBA Satellite Groups and News (continued)

Rocky Forge Blacksmith Guild

Meeting Review, January 8th

By Dave Dillman

How exciting, this was my first time meeting Kurt, and I really enjoyed what he had to share with us. Lets start with some Trivia we got from Kurt. How much does steel stretch when hot? How much does steel shrink when cool? And last trivia question, when using a punch what will it be drawn towards? Answers will be found later in the summary.

Our main project was making tongs but within that process Kurt made several other pieces to help making additional tongs in the future. Kurt was full of useful information and tips, and I appreciated him sharing those with us. One thing that caught my attention was that he was making tongs from hardenable steel. As I found this curious I asked him about it. He explained when using a power hammer you really wanted to use tongs made from hardened steel as they will reduce the risk of a failure and having a piece of hot steel come back at you. Along with the fact that hardened steel tongs can be smaller than soft steel tongs so they are lighter to use. Of course, like any good teacher Kurt reinforced the blacksmith montra with us to always work our metal square, octogan, round. In the two power hammer pictures Kurt is first working by self and then Craig helping in a later step to create a step tool for making the jaws of the tongs. The step tool assists in making a pair of tongs without having to twist the jaw. The reasoning behind this is to avoid the twist to help make the tong jaws stronger.

Things to remember when making your tongs.

Rein and jaw tip should be on the same plane (Center Top of the rein to bottom of jaw cross line). . Now it's time to set the two halfs together but first we will need to punch some holes. For a little while I had wondered the difference between a punch and a drift so I asked. Kurt explained that a punch is designed to punch a hole where a drift is designed to widen a hole. He also recommended to make them slightly larger to allow for the shrink.

Which brings us to our trivia questions. The answer to the stretch and expand question is 1/8 inch per foot.

Punch part way thru on one side. Then flip it over. Kurt tells us to not to worry about being perfect as the punch will be drawn to the weakest point which is the indentation is on the other side. Kurt prefers to use a 3/8th rivet for the pivot.

A couple of notes if you making Bolt Jaw Tongs/ Industrial Tongs. You don't want a big loop at the end as all that does is push coal out of the way when you are tring to get something out of the fire. And that you want the tong to come in and be on the top.

And lastly, one of my favorite pieces of advise from Kurt that day was when he dropped a piece of hot metal on the floor. He picked it up with the tongs, smiled, and told us not to worry Dirt Tempering is always good!

IBA Satellite Groups and News (continued)

Rocky Forge Blacksmith Guild

The November 13th meeting was a blast. Ted Stout kicked off the meeting with the wonderful news that the forges designed and built by guild members were in the final stages of assembly and soon would be ready to be purchased. During forge time one of the finished forges was in use for all to see. Once again, Gary Lehman displayed his demonstration skills and a bit of humor. He taught us how to make a touchmark and a bottle opener to use the touchmark on. This demo was especially interesting to me as I've been wanting to learn how to do this ever since I saw "T STOUT" on several pieces in the shop. Then we had a special guest, Kurt Fehrenbach, appear, and after lunch he used the guild-made forge and Ted's power hammer to forge metal shears and a swage tool that fit in a hardy hole. It was fantastic watching Kurt manipulate the steel with such ease and precision! In the meantime, other members made their own bottle openers and touchmarks. Thanks to Carol and other members for providing the delicious food. Thank you to all who contributed to Iron-in-the-Hat.

Gary shows how to widen the bottle opener hole without thinning the material too much.

Everyone is impressed with William's hammer skills.

Kurt using the shears he made to forge the swage tool while Chuck gets his touchmark negative from the forge.

Carol, Mrs. Ames, and Mrs. Cocanower enjoy each other's company.

Jay, Chuck, and Marty work on their touchmarks.

Ted points out an interesting feature of Kurt's Swage tool to Chuck and Chris.

IBA Satellite Groups and News (continued)

The Bunkum Valley Metalsmiths met Saturday February 5th. We have lots of snow, brilliant sunshine and cold temperatures! It was a fairly small but dedicated group. You missed out on beaver stew, chili and vegetable beef soup! We always eat good!

Attached are some pictures of what was going on the shop! Please enjoy!

Requesting Input for Power Hammer Design

My name is Colin Boer, and I am an engineering student in the process of designing and creating a new design of a Power Hammer that is more convenient and easily movable for beginners or blacksmiths with limited space. I was wondering if I could conduct a survey on the members of the Indiana Blacksmithing Association through a mass email or something along those lines so I could get a better understanding of the market and what the people would want in an improved design. Please let me know if we could work something out. You can contact this email address (BOERCOL000@hsestudents.org) or reach me by phone, my number is (317) 646-0079.

Best regards,
Colin Boer

ABANA News

Anvil Theft

Recently the Ag Hall of Fame in Bonner Springs, Kansas had been broken into and a number of anvils from their collection were taken. These anvils have a large number welded onto them as with a stick welder, so are pretty distinctive. The numbers were on different spots on the anvils, some on the horns and some on the bodies. Some of them have the names of cities or towns on them indicating where the collector acquired the anvil welded onto the bodies as I recall.

Please be on the lookout for these items in your travels, or on FB or auction sites you frequent, in-person auctions, etc.

If you find one or more of them, contact Ken DeVan, he is the Outreach Coordinator, or anyone from the Ag Hall of Fame. Ken's email: Oregon.trail.farm@gmail.com.

ABANA's 2022 Conference registration is now open. Please join us for what will be an outstanding event May 11 – 14 2022 in Denton Texas!

Join the Conference

ABANA Mission Statement

The Artist-Blacksmith's Association of North America (ABANA) is dedicated to perpetuating the noble art of blacksmithing. A blacksmith is one who shapes and forges iron with hammer and anvil. ABANA encourages and facilitates the training of blacksmiths; disseminates information about sources of material and equipment; exposes the art of blacksmithing to the public; serves as a center of information about blacksmithing for the general public, architects, interior designers, and other interested parties.

On-Line Cope Cutting Templates For Pipe or Tubing

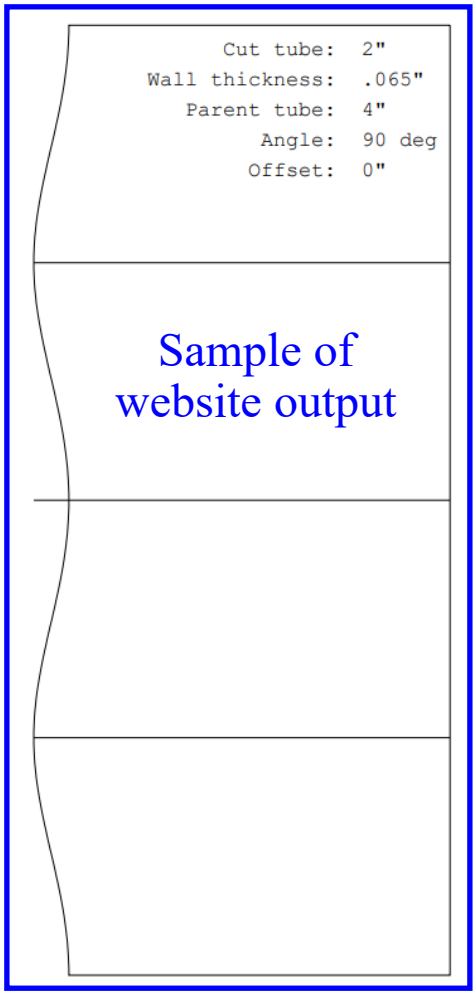
By Jim Carothers

Lately I have had to saddle (cope) cut a few pieces of tubing for a fence project. This site will make templates that you can down load and print off. They saved me a lot of time in making those saddle cuts.
http://metalgeek.com/static/cope.pcgi

The intersection angle does not have to be 90^ and the intersection can also be offset from the centerline.

I usually add about .05 to .07‖ the OD of the pipe to be cut to allow for the thickness of the wrap-around template.

This article reprinted from the January/February 2022 edition of the Philip Simmons Artist Blacksmith Guild.



Making Scissors by Mike Briskin

(Originally published in Blacksmiths' Guild of the Potomac, September 2009)

Here's my process for making scissors. Feel to free to improve on it is you see fit – I'm sure there's plenty of room! I'll try to describe the steps as clearly as I can, but before you start, find a pair or three of scissors and examine them closely. Most conventional scissors are pretty similar in form, even though they come in different shapes and sizes. There's not much point in trying forge the cheap new scissors with flat stamped blades and plastic handles, so don't examine those.

I start with two pieces of steel. I've been using 4" pieces of coil spring stock about 5/8" in diameter, which makes a medium-size pair of scissors. That's what the dimensions in this article will be based on. For simplicity, I'll just describe the operations on one of the bars, but you should work both at the same time and keep them as similar as possible (like tongs, the two halves of scissors are identical, not mirror images).

The first step is to taper one end of the bar – this gets some of the heavy drawing out of the way before the more delicate operations. I start the taper at the middle of the bar, and bring the end down to about ¼" square. Don't go much further than this or you may find that you don't have enough material at the tip of the blade.

I then start the handle by slot punching the other end. I use a punch about ¾" wide and set it about ¼" in from the end. Try to keep the punch centered in the bar, but this isn't especially critical. Once I have the slot punched, I forge the sides most of the way back in to make it easier to handle the piece later.

Next, turn the piece 90 degrees and fuller just below the slot. The fuller establishes the sloping shoulder at the top of the blade. The fuller I use is made from a piece of 9/16" diameter lug wrench; I guess that makes it a 9/32" fuller. Looking down on the piece before the first hit, the end of the slot should be about 1/8" beyond the body of the fuller. I drive the fuller in about half-way, leaving about ¼" of material. This will become the shank at the bottom of the handle.

After this, I form the angled step at the base of the handle shank using half-facing blows over the far side of the anvil. To do this, I first mark 45 degree angle across the anvil face with a combination square and soap stone. To make right-handed scissors, the mark

should cross from near left to far right (you could make left handed scissors by using the opposite diagonal). I align the piece with this mark, with the punched slot and most of the fullered notch extending beyond the far side of the anvil, and the notch facing toward the anvil. I set the material down until about 3/16" or a little less remains at the base of the step. If you've done this right, the notch and the step should meet to form an inverted vee across what will be the top of the blade.

Next, I forge the blade to profile and thickness. I keep the thickness approximately constant from the step to the blade tip; the profile should start to taper maybe an inch below the notch, and form a point at the tip (unless you want round-nosed scissors). The inner side of the blade (the one with the step) needs to end up flat, so I work with that side against the anvil to avoid hammer marks. I do not bevel the blade at this point.

Now its time to turn back to the handle. I drift the slot to ½" and then ¾", and then start working it over the horn to expand it further to form the handle. At the same time, you'll need to rotate that handle around the notch. This is a little difficult to explain, but if you look at a pair of scissors, you'll see that the handle extends to the side of the blade opposite the shoulder. At this stage in the process, though, the handle will be mostly on the side with the notch -- the wrong side. The best way I've found to address this is to slip the handle over the horn, and, holding the blade horizontal with tongs, hit the down on the shank with the cross peen. You'll probably have to do some tweaking to get the handle properly aligned.

Once the handle is drawn out and roughly aligned, I round up the cross section using the horn and the face of the hammer. Go gently here – it's easy to get cold shuts on the inside of the handle. It's okay to leave some file work for later. I then tap handle into final shape and alignment. In the end, the inside portion of the handle should align with the center of the blade, but I leave the handle slightly toward the outside of the scissors at this point.

After this, I bevel the blade. The bevel goes on the same side of the blade as the handle is now on. On most scissors, the bevel ends in a little step a just below the pivot. It's hard to forge this little step without dinging up the flat side of the blade; I just get as close as I dare with the face of the hammer and file the step in later. Remember, they call them "shears" for a reason – you're not looking for a knife edge. I forge the cutting edge down to about half of the original thickness of the blade. The blade will curve into a banana; just turn it on edge and straighten it back up.

No matter how careful I am beveling, the bottom (inside) of the blade always seems to become convex. This is not what you want. I flip the blade over, set it on a block of wood, and carefully go down the center with may cross peen. Make sure you stay away from the edges. This forces the center down and makes the blade flat or a little concave. I then flip the blade back over and flatten it against the anvil. This is an important step, and I'll take two or three heats if necessary to get the blade as flat and straight as possible.

Once the forging's done, I anneal the blade. There are probably better ways, but I put it back in the forge, shut the forge down, and plug up the vents with a little kaowool. The softer you can get the blade the better, because this will make it easier to tweak it cold if you didn't get it quite straight.

Once the blade is cool, I go to a 60 grit belt on my grinder. I generally clean the step at the bottom of the handle a little with a file, then grind the shoulder on the opposite blade down to match. Once I have the joint meeting up properly, I clean up the blade profile, making sure the tips match with the blades closed. I grind the cutting edge to a 75 degree included angle. At this point, I also file in the little step at the top of the bevel, and then grind the length of the bevel smooth. I also clean up the handle as necessary – a half-round file works well inside the loop.

As I suggested before, if the scissors are going to work right, the inside of the blade needs to be perfectly flat (or slightly concave). I can't achieve this by grinding against the platen, and with a 5" contact wheel, my grinder isn't really suitable for hollow grinding. The only way I've found to make the scissors work right it so grind the blade lengthwise on the contact wheel, using the crown of the wheel to relieve the center a little (or at least compensate for my imprecision).

If I find a kink or twist in the blade as I grind, I correct that cold. You'll notice that, viewed on edge, most scissor blades curve slightly toward each other; I put this curve in after grinding. Usually just holding the handle, resting the tip on the workbench, and tapping on the center of the blade will do the trick.

The *FORGE FIRE*
Newsletter of the
Indiana Blacksmithing Association, Inc.

Farrel Wells *Membership Secretary*
8235 E 499 S
Dunkirk, IN 47336-8807

First Class Mail

Address Correction Requested
If Undeliverable return to
sender

February 19 Hammer In
Kenny Dettmer's Shop

4252 Cartersburg Rd, Plainfield, IN

From the North: take I 65 S to Ogilville / Walesboro (exit 64) turn. right. Go to the 1st cross-roads (300 W). Turn left. Approx 1 mile to the "T' . Turn left (600s). Go to 250W. Approx. 4 miles to a brick house on your left.
From the South: I 65N to Jonesville exit 55 turn. right, go to road 950 (in Jonesville). Turn left. Go to 250W turn. right. Kenny's house is approx 1/2 mile on your right .

Please bring a dish to share.

March 19 Annual Business Meeting
Belleville Masonic Lodge

15721 S 250W Columbus, IN

From Indianapolis: take I-465 exit #12 (Washington St/US-40 West). Follow US-40 about 10 miles through Plainfield. Turn right Cartersburg Rd. Masonic Lodge is about 1 mile on left.

Pitch in lunch