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)

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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.

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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.

July 28– Aug 20	INDIANA STATE FAIR
Sept 16 2023	TBD
Oct 21 2023	TBD
Nov 18 2023	TBD

Editors Message

The Indiana State Fair is underway. I have been seeing the feeds on the IBA Facebook page. There certainly looks to be a lot going on. I have to give a big shout out to Bill Corey for coordinating the IBA presence again this year.

Aside from the State Fair, I do not have any defined dates for future IBA events. SOFA (Quad State) is coming in September. Some details are posted on the back cover. Advanced registration is strongly advised to avoid waiting to check in.

I have been migrating to new email system and cell phone. During this technology migration I find myself more disorganized than usual. This month I cannot find any satellite group news. It may be that everyone is busy with events and did not submit any news items, or I may have misplaced the items sent to me. If anyone sent me information in the past month, please send it again. I apologize for any inconvenience. My new email is cmikendrick@gmail.com. My new cellphone number is (812) 569-1209.

One Item I did receive is a question about whether there is value in the IBA mailing out membership cards. Throughout my 20+ years with the IBA, we have always had physical membership cards, and my personality does not like change. However, I can quickly estimate that a membership card, stamp and envelope would cost around $1, possibly more. With annual dues at $35, I do question if 3% of my dues is well spent on a membership card that I often misplace. I think the IBA might better apply the money to scholarships and other activities. If you feel strongly about this topic, please share your opinions (in a polite and cordial manner) with a forge master or board member.

Although I do not have any satellite submitted news, I can report the Jennings County satellite group purchased a 50 lb Little Giant power hammer for the shop in Vernon. The hammer replaces a 50 lb hammer that has been on loan from the IBA. The IBA hammer needs some TLC as the bottom die has a tendency to work loose. If any satellite group is looking for power hammer, I would recommend they contact a board member.

On the topic of mechanical hammers, I found the Little Giant website to be very interesting: Little Giant (littlegianthammer.com) . The “information” section contains quite a bit of interesting information about the history and evolution of these machines. These hammers have gone through many design changes. I have often seen a single foundation and anchor bolt layout for all Little Giants of a given size. The 50 lb hammer acquired by the Vernon group does not have the same mounting pattern as the IBA 50 lb hammer. Be sure to do your homework before pouring concrete.

INDEX

Dates to Remember

SOFA
(Quad State)
Sept 22-24

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: Paul Bray (812) 521-7177

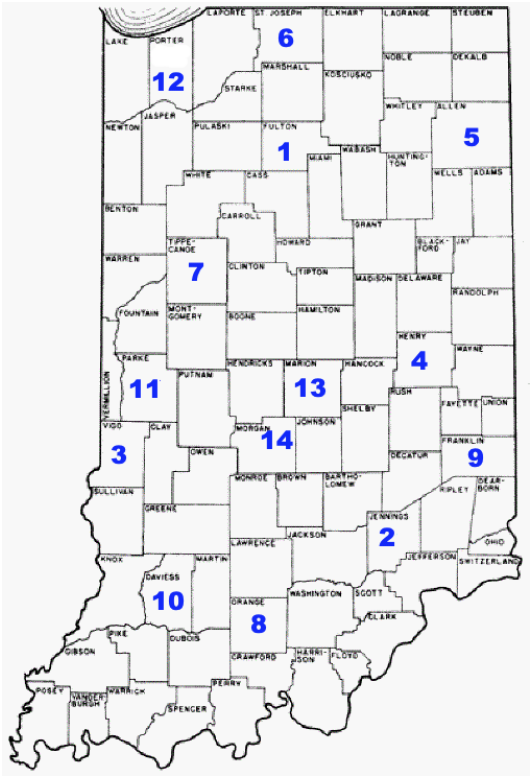
3) Wabash Valley Blacksmith Shop
Meet: 3rd Saturday at 9 AM
Contacts: Bill Cochran (812) 241-8447
Max Hoopengarner (812) 249-8303

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).

No Updates

Hydraulic Press For Sale

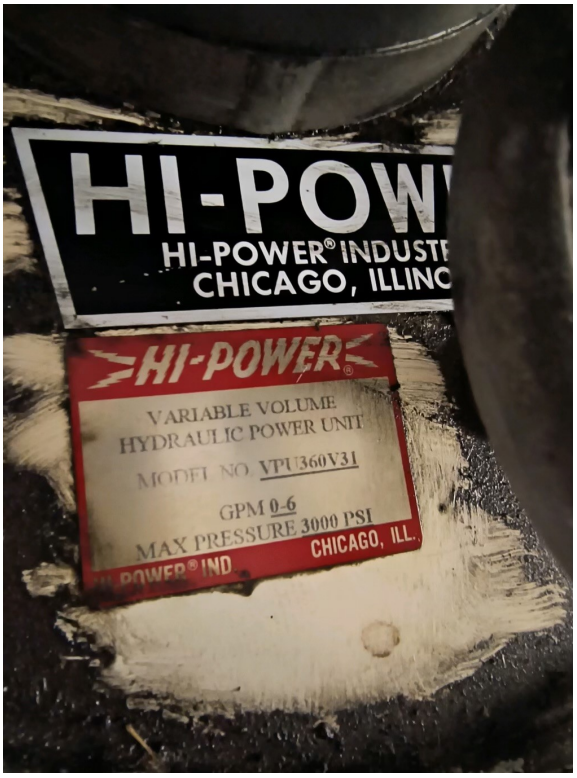
In July the Jennings County Historical Society Blacksmith Shop acquired a 50 lb Little Giant power hammer. The seller is a blacksmith / knife maker who is no longer able to forge.

He is also selling the hydraulic forging press shown here. The press is home made, but has served him well and appears to be fully functioning. He has additional dies and tooling. Asking price is firm at $500.

The hydraulic system is connected to 220V, single phase. The press is located in Morengo, OH which is just north of Columbus, OH

If you are interested in this press,
contact Bill Scarbury at (740) 815-2802

As a side note, the Vernon group passed on the press primarily due to shop layout limitations. The overall height is roughly 7 ft. Much of the Vernon shop is below a loft that is lower than that height. The press appears to be a good buy.



Tips (on Tongs)

Nicholas Downing
Downing Arts

Below are a gaggle of tips in no particular order about the making and selecting of tongs for a variety of blacksmithing work. Anvils and hammers get all the glory, but put simply, tongs are your hands in the fire. You will probably own more of them than any other piece of basic blacksmithing equipment. Good tongs that provide a sure grip in the fire are a tremendous asset to the smith. Poor fitting tongs ill-suited to the workpiece are a dangerous liability.

Tong tip #1: Use 'em. This tip is less about the tongs themselves and more of a rationalized plea to use your tongs often and well. While many blacksmithing manuals will instruct beginners to cut stock long enough that it will serve as its own handle, for the more seasoned smiths this practice is not efficient. The extra material will act as a heatsink and will lead to more heats, more scale and shorter times at the anvil.

"Well, what if I don't have a pair of tongs that fits the work properly?", I hear you asking. What a golden opportunity to make a pair!

"Ugh, but they take so long, and they don't come out that good anyway.", I hear you complain. Well, what a golden opportunity to improve your skills! Tong making is an exercise that, generally speaking, has the smith forge two identical components. There are tapers, there are offsets and shoulders, there are upsets, accurately punched holes and maybe even forge-welds. What great practice! What's more, the proof is in pudding. Those two components must come together and function, if they don't, you've learned something- If at first you don't succeed..

"Can I just buy tongs?", you whine. Sure, you can buy tongs. The internet is full of reasonably priced tongs, many of which are remarkably good quality. If you have the money, you can outfit yourself out quite nicely... (There's a 'but' coming). I am not

saying that you should never buy tongs, BUT, if you do, you'll miss out on all that opportunity to improve your skills. What's more, some projects simply necessitate the making of a pair of tongs. Plus, it is one of the simple pleasures of blacksmithing to use tools that you have made, and even better when another smith admires them.

Tong Tip #2: Seize the rivet. When making tongs, this simple step can save you a lot of consternation down the road. It boils down to this: By making a few nicks with a chisel (or the blunt-tapered square punch like the one shown) around the perimeter of one of the rivet holes, and then setting the head of the rivet such that the hot rivet head is forced to key into those nicks, it fixes (prevents form pivoting) the rivet on one side. The purpose of this is perhaps more easily explained by looking at what happens when this is not done. I'm sure we've all used an old pair of tongs that got hung up in the open or closed position (or somewhere in between). It is extra frustrating when we've gone through the effort of

reheating the boss and working the reins open and closed, thinking we'd solved the problem only to have it start again ten minutes later. These 'hangups' are caused by the rivet holes not being perfectly round, or the rivet being bent, or the bosses of the tongs being of inconsistent thickness, or some combination of the three. As the rivet spins in the rivet holes it pinches inconsistently. Seize the rivet on one side = no hang ups

Note: The nicks go on the outside of only one-half of the tongs. The rivet, with one head already formed, should be inserted hot, from the side without the nicks and the second head should be formed as quickly and with as few hammer blows (ideally only four or five) as possible.

Tip #3: Flat bottom bows. Bolt jaw tongs should have bows that form a flat above the boss. I first heard this tip on an episode of 'The Blacksmith's Pub' Podcast from Jesse Savage, but he alleged it came from Haley Woodward. The thinking goes thus: Whena piece of stock is in the bits of the tongs, its back end will tend to get pushed back towards the boss with heavy hammer blows. If this area is not flat, the back end of the stock will wedge into the angle and force the bits open. Now, if you're working with *s" stock and a hand hammer, it's unlikely that the forces generated will be enough to compromise your grip, but the larger the stock and the larger the (power) hammer, the more of an issue this has the potential to become

Tip #4: Hollow bits= better grip. You may have noticed the detent in the bits of farrier tongs. You may also have noticed that most flat-jaw and wolf-jaw tongs have a groove running down the middle of each bit. In the flat/wolf-jaw example, the function of said groove is two fold: It makes a pair of tongs able to hold small stock or a long taper, but the other function is prophylactic. As tongs wear, they take the bulk of the abuse we meet out on them on the edges of the bit. If the bits were indeed dead flat as the name would suggest, this would eventually cause the inner surface of each bit to crown slightly, making them pinch the workpiece at only two points. This results in poor grip, spinning, flopping and potentially a very dangerous situation. Putting a groove or hollow in tong bits is like tapering the struck end of a chisel. It's a little bit of extra work at the beginning but saves a lot of cursing later on.

Tip #5: Add a notch at the transition of the bits and boss. Similar to putting a hollow in bits like we did in the last tip, a small notch at the juncture of the bit and boss creates, when the tongs are assembled, a hollow that can grab onto points or corners of the work. After all, you can't (or at least shouldn't) hit what you can't hold. I remember this tip came to me from an old issue of The Anvil's Ring but I wasn't able to find the author in my stack of back issues

Tip #6: Closer to the rivet = more torque.
This may be intuitive for most smiths but it bears repeating: The closer the workpiece is to the pivot point, the more gripping force the smith can apply by squeezing the reins. I have a pair of tongs I made specifically for gripping the poll of axes. By keeping the bits under an inch I am able to get a good secure grip while planishing cheeks and edges.

Tip #7: When forging tongs, roll counterclockwise (or clockwise if you're a lefty) Somewhat counterintuitively, right-handed smiths use left-hand tongs and left-handed smiths use right-hand tongs. Since the majority of the western world is righthanded, I'm going to describe the process for a righthanded smith. If you happen to be a southpaw, just reverse these instructions. How can you tell at a glance if a pair of tongs is right or left-handed? Look at the tongs tips-up, if the top half of the tongs jogges (dog-legs) to the left they are left hand tongs (for a right handed smith)

One brief note before we begin: In my personal opinion there is a touch of the dogmatic when it comes to the handedness of tongs. If the tongs are well made, the handedness of either the tongs or the smith shouldn't matter (much). one will however, on occasion, encounter a pedant who insists on the importance of using tongs of the appropriate handedness. To this individual I would say "well what about scrolling pliers which are almost always held in the dominant hand?" Or "What about adz-eye tongs which are used with the jaws vertical as often as not?" The point is, if it works for you and it doesn't cause long-term/repetitive-use injury, then it is a valid approach. Having said that, here's how to do it "properly."

I first heard this approach laid out by Ed Lutgents, who studied with Doug Wilson prior to founding Portland Barrell Co. This 'rolling' technique applies to tongs that start in the flat-jaw style. These include, but are not limited to, box-jaw, wolf-jaw, pickup, adze-eye, and scrolling tongs. They are characterized by three shoulders and three setdowns.

The first shoulder and setdown is done at the near side of the anvil, and forms the bit, the second and third shoulder(s)/ setdown(s) is/are done at the far edge of the anvil, and form the transition from bit to

boss and boss to rein respectively. Once the bit is roughed out (nearside) roll the tong blank 90 degrees counterclockwise and slide it to the far edge of the anvil so that the bit is hanging over the edge. Now pivot the stock away from your core until it is lying about 45 degrees to the far edge of the anvil, and start your second shoulder. The shoulder will tend to drift a little bit so start it just to the far side of your first shoulder and index it firmly against the edge of the anvil as you begin forging it. Dig in with the heel of the hammer to really flatten this area out, but beware of going too far. I make most of my tong bits out of %4" square stock andI try to keep both the root of the bit and the boss a little over 3/8" thick in their narrow dimension (over 50% the original thickness).

Once the boss area of the tong is roughed out, rotate the stock another '4 turn (90 degrees) counterclockwise and determine the length of your boss (I try to keep my boss roughly square- (i.e. If my stock has squished down toa little over ¥s" in its narrow dimension it is probably approaching 1" in its wide dimension, aergo I hang about 1" of this flattened section over the anvil in preparation for forming my final shoulder and setdown). Again, it is important not to go too thin. In this style of tong, everything should taper from the boss. I like to keep everything on the thick side as it's easy enough to go back and refine once the reigns are forged or forge-welded to the tong blank.

Mark Aspery has a great description of forging and shaping tong bits & bosses in his book ***The Skills of a Blacksmith, Volume 1.***

Tip #8: Make your Box-jaws more versatile.
When making box-jaw tongs, make the width of the box the same as the distance from the boss to the 'wings'. This allows stock to be held in line as well as perpendicular to the tongs. On some very wide box jaw tongs this is impractical, so it's a guideline, not a hard and fast rule.

I hope these tips help you in the making and selection of tongs. If you have any questions I'm always happy to try and answer them. I can be reached at downingarts@gmail.com. Now get out there and make something.

This article was reprinted from the newsletter of The New England Blacksmiths, Spring 2022.

Steel Stamps to Identify Metal Stock A tip from ABANA:

A Tip from Kelly Kring with the North Texas Blacksmith Association, CE Blacksmithing Instructor at Brookhaven College, and proprietor of Hot Off The Anvil LLP: "The best purchase I've made for my students, and myself, was a set of 24 stamps of the most common steels types (including one for wrought iron) to help us identify what we have after any labels or sharpie ink is long gone!
When students bring in their stock and we hot stamp them with the correct identification stamp on one end. The students know they need to cut off what's needed from the "unstamped" end. No more rubbed off ink, peeled off or burnt labels!
For more, check out ABANA's public (you don't have to log in) post on Facebook, https://tinyurl.com/bdf3sbmt

Bowl/Sheet Metal Tongs

Patrick Beck

Pori, Finland

Responding to the call for Saturday Afternoon Blacksmith projects, Patrick Beck sent this storyboard.

The stock for the storyboard is ½" x ½". The ring is 3/4" inside diameter.

Patrick suggests: "adjust them to hold 1/16 inch material and they will suit most sheet metal work."

Construction Notes:

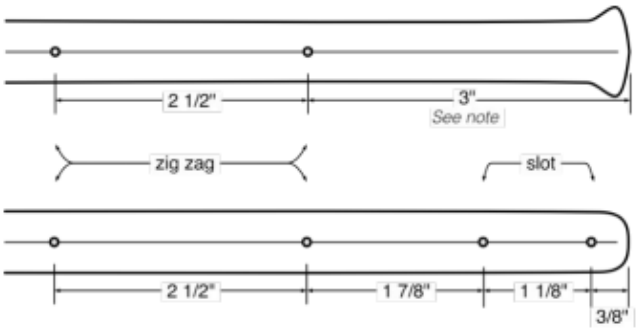
Photo Shoot at RoadRunner Forge

Stock: 24" of 9/16" round, cold-rolled steel.

1. Upset and round the end of the bar for the top jaw, to about 5/8".

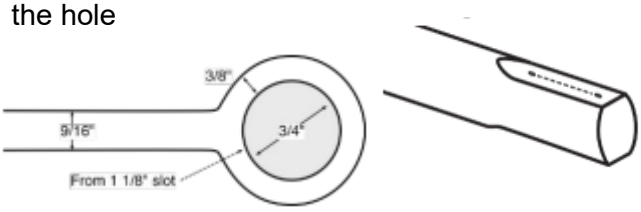
2. Round end of bottom jaw bar. Note: this round is a cylindrical round - it helps when making the loop rounded, to have the bar end rounded.

3. Punchmark for references for forging the jaws.



Note: 3" was used for the upper jaw in this example, but it would have looked better at 3 ½"

4. Put a slight flattened area on the top and bottom of the bar where the ring will be. This helps hold everything still when you go to chisel or punch the hole

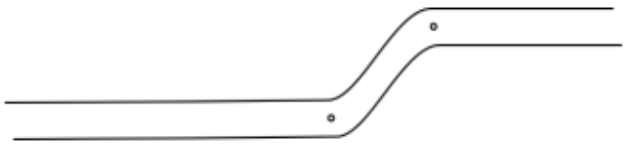


5. Chisel or punch for the hole (in the example shown, I chose to chisel the hole rather than slot punch it. However, this leaves more rag in the hole than if I were to slot punch it.
Note: Patrick sometimes draws out the end, makes a loop and forge welds the loop end

6. Drift, and bring the hole to round, and of uniform thickness and height. The hole is ¾" inside diameter. Make a nice taper from the 9/16" shank down to the ring.

7. On the upper jaw piece, make a slight taper, in a plane which will be parallel to the pivot plane of the tongs.

8. At the two punchmarks that are 2 ½" apart, make a zigzag with 45 degree bends. Do this on both pieces.

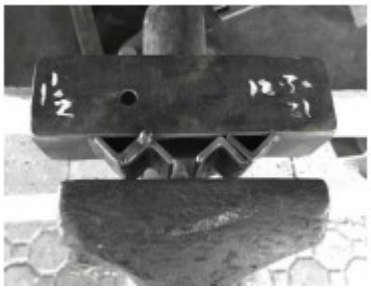


9. Flatten and spread the pivot (boss) area. I go for 5/16" thickness in the center of the boss, which gives about a ¾" width there. These tongs are to be held in the left hand, so the bar for the top jaw goes to the inside. Flip both bars to the left, so that you hammer on the outside of the boss, letting the anvil maintain a flat for the mating surfaces. Mark for the pivot hole.

10. Punch and drift the pivot hole. I punch to slightly under 3/8", then drill out to 3/8". A 3/8" rivet fits nicely.

11. Set the rivet. If the pivot ends up being sticky, apply the Tong Dance procedure (Calif. Blacksmith, May-June 2019, pg. 23).
12. Find the middle of the smooth action range for the pivot, then clamp in the vise and bring the jaws into alignment. I use an oxy/propane torch for this.

13. Clamp the jaws in the vise, then align the reins. I like to have the reins 1 ½" apart and parallel, when holding stock of the intended size. I use a torch to align reins and jaws.
14. You likely distorted the jaws while aligning the reins, so clamp the reins in the vise, re-align the jaws. I use a vise helper jig, made of a few pieces of angle iron.



15. Cut off extra stock, then clean everything.

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Rob Hough
Membership Secretary
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If Undeliverable return to sender

Southern Ohio Forge and Anvil (SOFA) Quad State

September 22-24

PLEASE NOTE: Registration Change Anyone not pre-registered online or by mail-in form will be required to register at the north gate when you arrive. If pre-registered we will have your event package at the pre-registration desk.

Information Brochure: [2023-Booklet-Final-with-changed-cover.pdf (sofablacksmiths.org)]

On-Line Registration: [Quadstate 2023 Tickets, Fri, Sep 22, 2023 at 12:00 PM | Eventbrite]

Demonstrators

Mark Aspery - Traditional
Springville, California

Lin Rhea - Bladesmithing
Prattsville, Arkansas

Richard Sillivan - Gunsmith
Williamsburg, Virginia

Allan Kress - Tooling
Cullman, Alabama

Clayton Spencer - Tooling
Union Hill, Alabama

Cincinnati Hands on Instruction