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# 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) 209-4198.**

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 16 2022	<b>COVERED BRIDGE BLACKSMITH GUILD</b>
Aug 12-13 2022	<b>SUTTON-TEROCK REGIONAL CONFERENCE</b>
Aug 20 2022	<b>SNAKE ROAD FORGE</b>
Oct 7-8 2022	<b>BUNKUM VALLEY REGIONAL CONFERENCE</b>

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PASS THROUGH  
TABLE TOP**Dates to Remember**August 12/13  
Regional Conference at Sutton-TerockOctober 7/8  
Regional Conference at Bunkum Valley

## Editors Message

I apologize for being way late with the June Forge Fire. I had an extended trip immediately after the IBA Conference, and I was not able to get the newsletter pulled together sooner.

Speaking of the IBA Conference. This year's Conference was a huge success. We had a strong turn out, great demonstrations and a forging contest that required several rounds to get all of the contestants in. It was really good to see friends for near and far. A big shout out to Daniel Sutton, conference chair, and the rest of the board and volunteers for getting everything organized so well.

**2022 IBA Award Winners:**

IBA Rookie of the Year:	Josh Sampson
Clifton Ralph Blacksmith of the Year:	Bill Newman
Paul Moffett Award:	Steve King
Done at Home:	Larry Whitesell      1st
	Jeff Reinhart      2nd
	Steve King      3rd
Gallery:	Doc Schertz      1st
	Chuck Henderson/Steve King      2nd
	Allan Eldred      3rd

We have a number of hammer-ins and 2 regional conferences coming up. August 12 & 13 at the Sutton-Terock shop just north of Rochester. October 7 & 8 at the Bunkum Valley Metalsmiths near Odin.

**Fred Oden and Sutton Terock**  
PRESENTS 2022 BLACKSMITH CONFERENCE

13 Aug at Fulton County museum, 37 E 375 N. Rochester Ind  
Museum 574-223-4436, Mark Blosser 574-217-1276  
12 Aug friday setup, 13 Aug conference Saturday 9am-5pm  
Food close and on site, Lunch and Dinner Saturday by museum  
Iron in the Hat for IBA ,bring donations for auction  
Membership renewals, DEMONSTRATING  
Robert Wolfe - Colonial Crafts  
Omar Hershberger- Animals an Creatures  
BEN Ganshorn- TBA  
Mark Blosser- Induction Forge practice applications

**IBA website: [www.indianablacksmithing.org](http://www.indianablacksmithing.org) IBA Facebook page: [www.facebook.com/groups/IndianaBlacksmithingAssociation/](https://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**

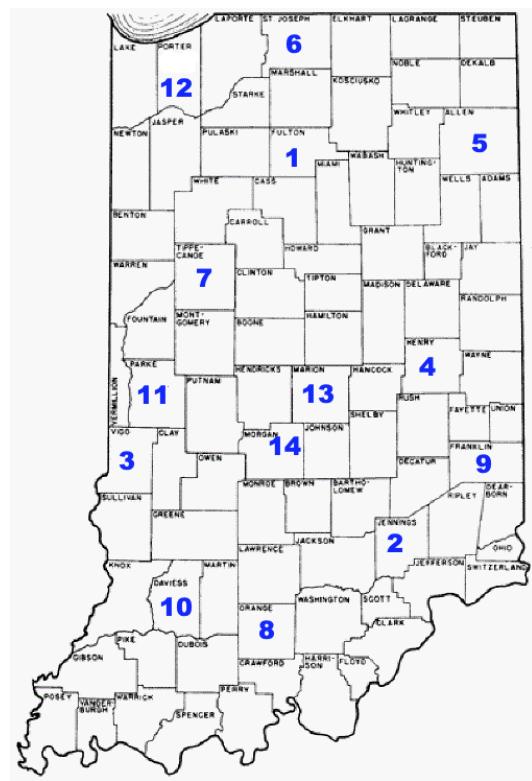
Meet: 2nd Saturday  
 Contacts: Clint Casey (260) 627-6270  
 Mark Thomas (260) 758 2332

### **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 on May 14th with Bill Kendrick cleaning out the fire pot and making two drifts. Dave Good worked on calla lilies and forge welded three together to make a nice bouquet. Dave McNulty assisted Jim King making factory cut tongs. Dave Good drew out the reins on the power hammer. Tristan Turner made a steak turner. The conference is first weekend in June. See you back at Vernon on the 11th. Hope you have some cash left. lol Paul Bray

### **Snake Road Forge looking for demonstrators**

Snake Road Forge is looking for demonstrators to support the Porter County Fair, July 21 – 30. This is a very large fair with about 150000 attendance. If you are interested in demonstrating, contact Rod Marvel at (219) 241-0628

## Inside Colonial Williamsburg

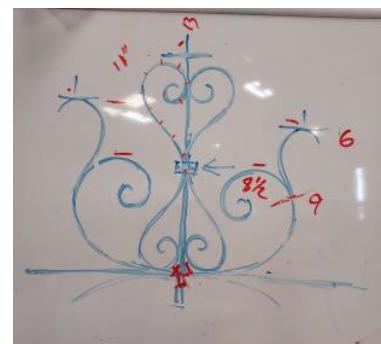
If your interests lie in the work of the Colonial Williamsburg, it may be time to revisit the site or better yet, take part in an affiliate meeting where Williamsburg smiths are presenting. This past April, the Blacksmith Guild of the Potomac featured Mark Sperry and Aislinn Lewis as their presenters. Both are excellent and talented smiths and worked together in tandem to create a candelabra with elements they create on a regular basis. Mark spoke of some of the particulars regarding the famous historic site which enriched their talk. There are six full time smiths on staff, and Ken Schwarz is the Master Blacksmith. The team is a support group to the historic site doing the work needed to keep this highly respected American institution in good condition. Not only do they provide necessary repairs, but they also make tooling for other restorative crafts. They are involved in the repairs of the horse drawn vehicles. Being a wheel wright is part of the blacksmith job. As Mark reported, working on a large wheel is a challenge and may not be a "favorite" to do item on their endless list.

There are 88 original buildings and a total of 603 buildings on site. This year, there are plans to move an additional building onto the grounds from the nearby William and Mary College. The oldest building on the grounds is a powder magazine build in 1715. There are times when the Williamsburg smiths are asked to work on items for museums or historic sites such as Monticello or Mount Vernon, and on a special occasion for a private individual that has a significant historical home. For material they do use wrought iron. Ken Schwarz keeps his eye out for the opportunity to purchase material and has been able to keep an adequate supply available for their needed work load. All the material usually has to be resized to meet the dimensions of the original historic iron.

The Williamsburg blacksmith shop is based on the original 1778 building. The owner of the original shop had a team of 3-4 working for him and was initially the blacksmith shop for the town. When the conflict with England developed, the shop was involved in working with the military and became a Defense Contract Shop. The shop expanded when it took on work for the military; there were 12 people working in the shop which also included gun repair. The current shop is laid out as the original shop was planned with four forges. Because the shop was involved with working with the military, a lot of the material can be traced through the quartermaster's records. The furnishings for the shop is an educated guess, the vises would be placed by the windows because of the access to windows/light, but the how and what the work benches looked like is a guess. Today, the smiths complete the needed work for the facility but do not "finish" the items. They are passed onto a department that specializes in whether the item would be protected by oil, wax, or sometimes no finish at all. When a damaged or worn article is presented for work, there is usually a committee discussion on how to approach the work, regarding if it can be repaired or needs replaced. These decisions are made with thought and respect for item's historical significance and importance. Aislinn spoke of one of her more challenging pieces she was assigned, which was a key swivel. Although it was small in size, it had several moving parts which added to its complexity. It was worn on the waist with three pivot points. The attached keys were to be used while still worn and attached to the individual. One of the largest projects the shop recently completed was a weather vane for the art museum. The Williamsburg blacksmith shop is a working shop and can be viewed by the public. Keep in mind, it is a working environment; projects currently worked on require the attention of the smiths.



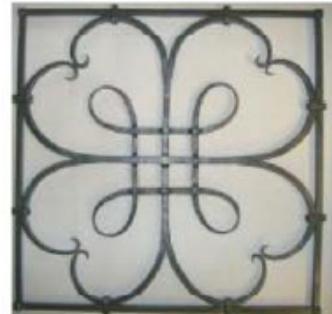
This article reprinted from the May 2022 edition of the Pittsburgh Area Artist—Blacksmiths Association newsletter.



This 7 page article originally appeared in the Alabama Forge council Bituminous Bits, March April 2010.

### The Pass-Through Table Top – Mike Linn

This article is partial payment to the AFC for the scholarship I received to the John C. Campbell Folk School. I have been interested in pass-thru designs, which show up in primarily German work, for a good number of years now. I came up with this design after assisting Mike Boone do his pass through demo at Tannehill in 1997, and really had planned on doing it in my shop at home. As the years went by I was doing less and less "blacksmithing" and more and more administrative type work. My weekends were spent doing everything but blacksmithing. To use the old blacksmithing adage, I had "too many irons in the fire".



I came to realize that I would never complete the project if I didn't have some "reason", a little external pressure if you will, to get on with it.

That kick in the pants, came in the guise of the AFC scholarship, Clay Spencer and the other class participants. Let me be clear, the pressure was ALL of my own doing and choosing. The school and class atmosphere is strictly a no-pressure learning situation. I channeled my desire to do well as a motivator to push me along and to set myself up to succeed in the class. My goal was to complete the table top in 1 week, but to do that I had to prepare. Not just material and tools, but myself.

There just is not enough time to take project like this from conception to finished project in one week. The projects you see in a demonstration at a conference are just the final outcome of months of preparation, research, development and practice. I've been in blacksmithing now for almost 15 years and one thing I've learned is it's never as easy as it's portrayed in the demos. With that in mind, I worked out as many of the kinks as I could, BEFORE I arrived for the class.

First off, your drawing is VERY important. Originally I drew the design on a sheet of 8 1/2 x 11 graph paper. Then I scanned it on the scanner/copier at work. Using my computer, I enlarged it to 24" x 24" and

printed it on the plotter we use for printing building blueprints. For those that don't have this capability, Kinkos can do it for you. A design that looks good sketched on a napkin may not look right when blown up. Negative spaces seem to magnify themselves out of proportion to everything else. I cannot stress enough how important a good scale drawing is to execution. After printing out the full scale drawing I needed to transfer it to a piece of steel to give me something to work



from. To do this I cut a piece of 16 gauge sheet to the 24"x24" outside dimensions of the top. To do the actual transfer I used a piece of children's driveway chalk and chalked up the backside of the paper drawing. By placing the drawing chalk side down and tracing the printed design, I was able to create a faint chalk outline of the original. Think of it as primitive carbon paper. Finally I filled in the outline using soapstone to create the final working print. One of the many lessons learned from this class is to use a more substantial piece of steel. As I found out later when heating and tweaking, the 16 gauge has a tendency to warp when heated. I would recommend 1/4" or even 3/8"



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thick plate. I would also recommend using silver pencil to sketch the outline, and save the chalk for fill in. The drawing should be as crisp as you can get it. I found soapstone just isn't precise enough.

Once the drawing was complete it was time to think processes. I've found it useful to think backwards, start with the finished product and work it backwards to the raw materials. I knew what I wanted it to look like and I had already chosen  $\frac{1}{2}$  square because it's easy to obtain (I had about 200 feet of it already) and its still delicate looking when used inside. As I'd seen numerous previous demos and had been up-close and personal at Mike Boone's demo, I knew I needed to make the frame first as it constrains everything else, second would be the center section, next would be the cross pieces and finally the collaring and fitting. It is very important to have a mental image of the steps you will need to take to get to the final product. Basically I "slept on it" for several weeks, imagining each step and thinking through the "what ifs". I consulted several people and asked "How would you..?" I've found there is no right or wrong way to do something in blacksmithing... there may be more efficient ways, but if the end result is the same then they both were valid. The fascinating thing is that there is may be Bill's way, Gavin's way, Clay's way and Dan's way... But you can combine them all into YOUR way. You do what works for you.

#### The Frame:

The frame is 4 pieces of  $\frac{1}{2}$ " square, tenoned at the corners. I took Francis Whitakers *Blacksmith Cookbook* and George Dixons *A Blacksmiths Craft* with me to the class, both books proved invaluable. I used the books to calculate the slit lengths for the various holes I needed to punch and drift. The corners required a  $\frac{3}{8}$ " hole,  $\frac{3}{8}$ " from one end of the bar. Francis recommended a  $\frac{17}{32}$ " slit and George a  $\frac{9}{16}$ "... but what's a 32<sup>nd</sup> among friends ☺

Mark and center punch the bar on opposite sides. Clay had a neat little tool for marking the opposite sides. It was just a piece of steel shaped like a squared up U, that when placed around the stock and aligned on the mark on one side automatically transferred the position to the other.

I make all my hot-work chisels, punches and drifts from H-13 tool steel. I use discarded ejector pins from a plastic injection molding plant. The ejector pins are H-13 and the guide pins are S-7. It's all very high quality steel and the pins are sized to within 0.001 inches.

After marking the slits with a cold chisel, I hot cut them from both sides. This does two things, it helps prevent the "sow belly" you sometimes see and it helps keep the cut centered. If you're off a little on your cutting angle, it hides it better when the two sides meet in the middle. After the slit, I upset it to make it round... Upsetting helps prevent excess stretching on the sides and keeps you from getting the little gaps at the end of the slit. Finally I drift...HOT... from both sides. You want your drift to be a bit larger than the tenon so when the hole cools you can still get the tenon through.

I made 4 of them and it is not as easy as one may think to slit and drift a hole perpendicular to the 2 axis of the bar. To correct for the out of square I took a rod the same size as the drift and fitted all the frame rails on it, heated them with a torch and beat them into submission. If anything is made out of square, the frame will be out of square or warped. With them all on the rod, it's a lot easier to mark them all for

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the proper length. I mark where the tenons shoulder should be and leaving about 3/4 inch of material for the tenon, I cut off the excess. Forging the tenons is pretty straight forward, using a spring swedge in the power hammer. One trick Clay showed us, is to use a piece of pipe and a vice grip to make an adjustable stop. You can butt the pipe right up to the swedge and hold it. This makes it easier to hold the piece in place and set good clean shoulders. After forming the tenon, it's always a good idea to monkey the shoulders to get good flat surfaces free of any rag. Make sure your monkey tool had radiused edges around the hole.



Finally, we get to fit the frame together. Fitting can be done by yourself, but it is A LOT easier with two people, that's where being in a class is really helpful. I have to give a shout out to Anthony Goodrum and Jeff Hatfield for their assistance in helping me hold, heat, bash and bend. To make the head you need 1.5 times the diameter of the tenon PLUS the thickness of the material you are passing

through. So in this case we are using  $\frac{3}{8}$ " tenons passing through  $\frac{1}{2}$ " stock... Thus  $\frac{3}{8} \times 1.5 + \frac{1}{2} = 1\frac{1}{16}$ . Heat the entire tenon, so it will upset into the hole and lock in. I found it works better to grip the upright in the vise, have an assistant heat the tenon and work all the way around when hammering. This keeps things straight and helps prevent skewing the tenon to one side or another.

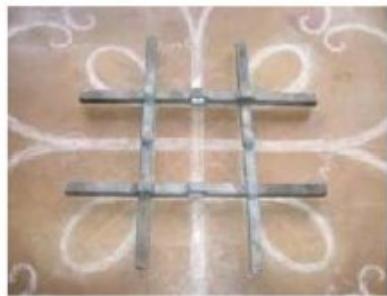


Lastly clamp the frame to a substantial work table, heat the corners to a cherry red, and allow to air cool. This will relieve any twists or off plane issues and will allow the frame to sit flat.

### The Center Section:

This is the most challenging of all the elements, but when you break it down it's not too bad. In all of blacksmithing there are only 5 basic operations. Drawing out, upsetting, cutting/slitting, bending, punching and welding. It's all in how you put them in sequence. To tackle this part I spent a lot of hours at the forge making test pieces, working on lengths, techniques, and making most of my mistakes BEFORE I got to class. I punched test holes to determine how much the stock will change in length ( $\frac{1}{8}$ " per hole), how much to draw out (2" each side), where the holes need to be (center and  $2\frac{3}{8}$ " from the center) and how to remember which planes to draw on... I probably made 6 or 7 test pieces of varying complexity.

The center section starts with 4 pieces of  $\frac{1}{2}$ " x 12". Mark the center of each and mark again  $2\frac{3}{8}$ " from the center. These will be square holes slightly larger than  $\frac{1}{2}$ " so the parent stock can pass through. I made several different drifts trying to make the right size and never seemed to get it right. Clay's answer was as elegant as it was simple...



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take a piece of the parent stock, heat a section in the middle and upset it with 3 or 4 good strong blows. Forge the ends to tapers and viola', you have a drift the right size. I was making it a lot more difficult than it needed to be. Consulting Francis and George, I needed a  $\frac{7}{8}$ " slitting chisel. That was easy enough, through trial and error is found it better to slit, open by upsetting, drift round, and then drift square. I tried to drift round then square with one tool but it was too easy to get the hole out of square with the sides. Using a drift that is square allows me to set the corners where I want them and keep them there. Because the drift makes notches with the leading edge I can index to them from the other side keeping everything square. The size, angle and position of the square holes are critical to fitting it all together.

To ensure everything would pass-thru as planned, I made a Go/NoGo



gauge to check each piece as I was forging them. This gauge checks all three axis and alignments at the same time. One leg of the gauge is longer than the other so I could slip the longest leg into the hole and see which direction I needed to go with the other hole to match the gage. It's best to pick one hole as the "master" and adjust everything to it, then you don't end up chasing your tail around in circles.



I also made an alignment jig from a piece of 4" square tubing. In reality I adjusted the entire drawing to fit that jig (not the other way around). It was the right size and easily modified to meet my needs, so instead of trying to make the right sized jig, I just made the center section a tad smaller. This jig came in really handy when scrolling and adjusting each of the tear drops, as I could clamp to it and keep everything square and on plane.

Next was to draw out the tapers on the 4 pass-thru pieces. Here is where the practice really helped out. I knew how far I had to draw each one to fit the teardrop jig, and because I had already messed up in my practice piece I knew to keep really close track of the plane I was drawing the taper in (always keep the piece oriented so you can see through the holes). Now is not the time to have to re-punch and drift...



Tear Drop Forming Jig

With all four pieces drawn out I slit the ends of each about 1 inch or so using the band saw. This allowed me to interweave the 'fingers' when the ends are wrapped around the jig. This did two things 1) it helps hold the two ends together and 2) it gives more mass to weld. (It's a lot easier to take metal away than to add it back). I thought



Tear Drop Detail

I'd discovered a neat way to weld thin stock, then about 2 weeks later I was thumbing through

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George's book and there it was on page 94! I tried a couple of different ways to weld the ends together. Forge welding worked well, my first couple of attempts came out ok, but it's really hard to hold the ends together coming out of the fire. Clay convinced me to gas weld it with the torch. My gas welding is, let us say, anything but stellar. But I did a few practice runs and managed to glob enough material on there to make it stick. I just ground and filed away the excess.



The next things to make are the big scrolls. These are  $\frac{1}{2}$ " x 30" pieces. I had to calculate from the drawing how much to draw for the tapers. You always want to begin your draw from the point of the connection (where it's collared to the frame). It just flows better. Again... I made a test piece to ensure I got the dimensions correct. After drawing out each one, you fold them in half and

faggot weld about  $1\frac{1}{2}$  inches. Next you scarf for the branch welds to the center cross pieces. To maintain dimensional integrity and to keep from getting one side too thin, I welded these  $90^\circ$  to the faggot welds. You need to taper the ends down to about  $\frac{5}{8}$ " or so to

leave enough material to weld and forge back to  $\frac{1}{2}$ ". You also need to ensure you get a good feather on the tip to transition to the cross piece. Because you have double thickness here you don't need to upset the material as you would with a typical weld. You DO have to upset the short center sections. However because these have to pass through the other bars you can only do one at a time. Clay did



Upsetting

a demo of upsetting a doing a 'drop the tongs weld'. He showed a really neat tool for doing upsets on long bars. Typically you would stand the item up on the anvil, or on a plate on the floor, he used a piece of pipe hung on the side of the anvil. This allows you to use the anvil as you backing plate and the pipe keeps the bar from slip-sliding around. You upset the material evenly by rotating the piece in your hand between each blow. Then you forge the upset back into itself at a  $45^\circ$  angle. Then you flip the piece and using the edge



Upsetting Tool



Forging the face back



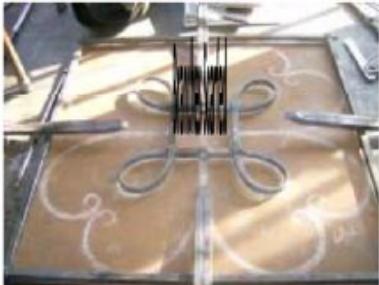
Setting the step



Pulling out the tip

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of the anvil create a step in the face of the part you just forged. Lastly you use the peen to draw out the feather on the tip.



Branches Scarfed



Last Weld

Now comes the fun part... welding all the center pieces together.

You can weld the first piece by itself, then you insert it through the center section, heat, upset, scarf and weld the 2<sup>nd</sup> branch on. I know it sounds a lot easier than it is. To fit the 2<sup>nd</sup> cross piece through I had to make a 'convenience bend' to allow enough room for the bar to pass through. Just make sure the one you bend is centered up when you do it. I used a U-tool and a big fuller with localized heat.



Inserting the cross piece after the bend

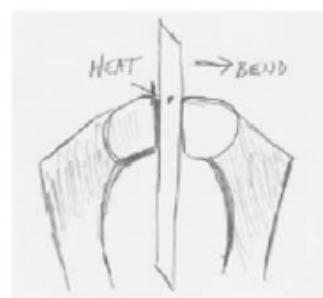
As I mentioned before these pass through the other pieces so as your welding these together your adding more and more stuff that you have to deal with and work around. In fact the mass is so heavy and awkward that I needed an assistant just to hold it during the last weld (thanks again Anthony). Practice,

practice, practice and practice some more. I would never have finished in time if I had burnt something and had to go back and redo. The last thing is to reheat the center cross and bend the overlap back to the middle, and on the treadle hammer smash them into a lap joint.

Now that the main stuff is together, I pulled out the Dogwood petals using a scrolling form. I was using a section from an old jig I'd made up years ago (I try to reuse jigs when I can vs. making a new one). I'd take as long a heat as I could and clamp the piece to the scroll jig with needle nose vise grips (grind the teeth off). The one thing I learned (or forgot and relearned) is to mark the stop point on the jig. I got going bending the scrolls and each one stopped in a different location on the jig, thus none of it fit right in the frame. I had to spend a lot of time tweaking the shapes with the torch and scrolling pliers to make it look right. Unfortunately I didn't get any photos of that process.

#### **Collaring:**

Once everything is fitted within the frame and everything squared up its time to collar. I used decorative collars made from  $\frac{1}{2}'' \times \frac{1}{4}''$  stock driven into a die. The die is made from a piece of plate heated to yellow with 2 parallel  $\frac{1}{4}''$  round rods driven down into it. That ends up giving the collar material a groove down the middle with rounded edges. According to Francis, to calculate the amount of material needed for a collar is the stock perimeter + 2.5 x the collar material thickness.



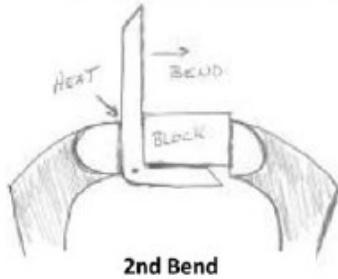
1st Bend

**WARNING:** you cannot assume each one will be the same length. You need to measure the perimeter of each joint, each one will be a little different. Joint #1 came out with a

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perimeter of  $3\frac{1}{8}$ " thus the amount of collar stock required is  $3\frac{1}{8} + \frac{5}{8} = 3\frac{3}{4}$ ". Joint #2 came in at  $3\frac{5}{8}$ " ... you can fudge some (particularly if you use overlapping collars) but not too much.

Mark the bend point as measured from the center of the stock. Next, forge a short taper on the ends



with the slopes on opposite sides, then using a sharpish spot on the vise bend the short leg of the collar. Clay did a demo using custom blocks that he made up special. They are machined from tool steel, have 3 dimensions per block, and are long enough to bend the collar and not have the vise get in the way. He had several with various dimensions like the



Clays Collar Block

one I used had  $\frac{3}{4}$ ",  $\frac{7}{8}$ " and 1" depending on how you oriented it. Chuck up the collar and the block in the vise, heat the collar and bend it over. I made all the collars at the same time and set them in position on the piece before I went to the next one.

The final assembly went pretty quick, with Anthony running the torch we were able to complete the collaring in just a couple of hours. He would heat up the collar right at and slightly below the corner and I'd bend it over with the hammer. Make sure you keep track of your overlaps... you want to bend the bottom one first. We would then bend the other leg over and before the heat ran out of it, I would lay the collar die on the overlap and work it across the joint cleaning up any hammer marks and re-enforcing the groove.

This doesn't have anything to do with the project per se, but I needed a stand to position my pieces in the fire. Searching around in the tool room I came across this little jewel made by Doug Merkle.



This stand is made from one piece of  $\frac{1}{2}$ " square and REALLY helped in making this table top. I'm going to make a couple for myself and Vulcan forge.

I must say while it was a lot of work I really enjoyed myself and if it wasn't for the AFC and their scholarship program there is no way I could have gone to the Folk School. To save money I camped in a tent in the campground, and was perfectly comfortable. I don't know that I would do that in July but early April was still a bit cool in the mornings. All in all it was a very positive experience and I would encourage everyone, regardless of experience, to apply for one of the AFC scholarships. You won't be disappointed.

Respectfully Submitted

Mike Linn



## 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

## **July 16 Hammer In Covered Bridge Blacksmith Guild**

Parke County 4-H Fairgrounds, 1472 N US-Hwy 41, Rockville IN 47872

**Driving Directions:** The fairgrounds are located on US-41 about 1 mile north of US-36

Please bring a dish to share.

## **August 12-13 Regional Blacksmith Conference Sutton-Terock Blacksmith Shop**

Fulton County Historical Society, US-31 about 4 miles north of Rochester, IN

Friday, August 12 Set Up

Saturday, August 13 demonstrators: Robert Wolfe, Omar Hershberger, Ben Ganshorn, Mark Blosser

Saturday lunch and dinner served on grounds by museum

Iron in the Hat

Auction