

**BOARD OF DIRECTORS****Gary Phillips '22 President:**

14800 N SR 167 N  
Albany, IN 47320  
(260) 251-4670  
[behere@neidirect.net](mailto:behere@neidirect.net)

**Steve King '22**

1155 S. Paoli Unionville Rd  
Paoli, IN 47454  
(812) 797-0059  
[kingshen228@gmail.com](mailto:kingshen228@gmail.com)

**Bill Conyers '19 Vice Pres**

50964 Lilac Rd,  
South Bend, IN  
(574) 277-8729  
[billconyersrr@yahoo.com](mailto:billconyersrr@yahoo.com)

**Bill Newman '19**

4655 Williams Rd  
Martinsville, IN 46151  
(317) 690-2455  
[ruralsmiths1@yahoo.com](mailto:ruralsmiths1@yahoo.com)

**James Johnston '21**

*Education Chairman:*  
806 Twyckingham Lane  
Kokomo, IN 46901-1885  
(765) 452-8165  
[kokomoblacksmith@comcast.net](mailto:kokomoblacksmith@comcast.net)

**John Bennett '21**

*Secretary:*  
741 W Jessup Rd  
Rosedale, IN 47874  
(812) 877-7274  
[JohnBennett1959@gmail.com](mailto:JohnBennett1959@gmail.com)

**Jeff Reinhardt '20**

2810 W. Riley  
Floyd's Knobs, IN  
(812) 949-7163  
[preeforge@aol.com](mailto:preeforge@aol.com)

**Dave Kunkler '20**

20749 Lancaster Rd.  
Branchville, IN 47514  
(270) 945-6222  
[dwkunkler@yahoo.com](mailto:dwkunkler@yahoo.com)

Librarian:  
Larry Rosenthaler  
8715 E. 375 N  
Churubusco, IN 46723-9501  
260-693-3267  
[lrosenthaler@gmail.com](mailto:lrosenthaler@gmail.com)

Editor:  
Bill Kendrick  
1280 N 900 W  
Seymour, IN 47274  
(812) 445-3009  
[bill.d.kendrick@cummins.com](mailto:bill.d.kendrick@cummins.com)

Treasurer and membership secretary:  
Farrel Wells  
8235 E 499 S  
Dunkirk, IN 47336-8807  
(765) 768-6235  
[fwells@frontier.com](mailto:fwells@frontier.com)

Awards Chairman:  
Charlie Helton  
2703 South Water Plant Road  
Westport, IN 47283  
(812) 591-3119  
[heltoncs@frontier.com](mailto:heltoncs@frontier.com)

# 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 Indiana Blacksmithing Association, Inc., its staff, officers, directors, members, and hosts and the *Forge Fire*, specifically disclaim any responsibility or liability for damages or injuries as a result of any construction, design, use, manufacture or other activity undertaken as a result of the use, or application of, information contained in any articles in the *Forge Fire*. The Indiana Blacksmithing Association, Inc. And the *Forge Fire* assumes no responsibility or liability for the accuracy, fitness, proper design, safety, or safe use of any information contained in the *Forge Fire*.

*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.

Mar 16  
2019

### BUSINESS MEETING

Apr 20  
2019

TBD

May 18  
2019

TBD

**IBA CONFERENCE  
MAY 31-JUNE 2**

**INDEX**

- PGS 3-5  
SATELLITE NEWS
- PG 6  
IBA FEBRUARY  
HAMMER IN
- PGS 7-9  
ONE PIECE SPLIT  
BAR TRIVET
- PGS 10-11  
FORGING A  
RECTANGULAR  
PASS-THROUGH

**Dates to Remember**

- March 18 Annual Business Meeting at Kelley Farms
- May 2-5 BAM Conference Sedalia, MO
- May 29 & 30 Pre-Conference Class at Conner Prairie
- May 31—Jun 2 IBA Conference

**Editors Message**

The February IBA hammer in was held at Ken Dettmer's shop in Columbus. We had a big turn out as usual. I counted 35 people, but may have missed a few. At the forge we had range from a new member working making S hooks to Steve Parker and Kurt Fehrenbach forging each half of a pair of tongs. Steve and Kurt showed no reservation about letting the power hammer run at full speed as they drew out the reins. Some photos are posted on page 6. Some videos are also posted on the IBA Facebook page.

The 2019 IBA Conference is May 31 through June 2. This year Mark Aspery will be our primary demonstrator. While working on getting a second demonstrator the feedback indicated a single demonstrator alleviates the frustration of missing one demo to see the other. We still plan to have a couple of 1/2 day demos on Saturday.

Need auction and iron in the hat items. Iron in the hat will be similar to last year where your tickets are applied to a specific item. One item will be a complete blacksmith set-up with forge, anvil and tools. Please donate items to both the auction and to iron in the hat.

We are planning to have a 2-day pre-conference class (wed/thur) led by Mark Aspery at Conner Prairie. Details on the subject matter are being worked out.

Charlie Helton is looking for nominations for Blacksmith of the year, Rookie of the year and Paul Moffett award. Nomination details and forms can be found on the IBA website ([www.indianablacksmithing.org](http://www.indianablacksmithing.org)). Charlie has limited email service, so nominations should be sent via regular US postal service to: Charlie Helton, 2703 South Water Plant Road, Westport, IN 47283. If you have any questions call (812) 591-3119.

The Ozark Blacksmith Conference sponsored by the Blacksmith Association of Missouri (BAM) will be held May 2-5 with the primary demonstrations on May 3&4. For more details visit: <http://www.bamsite.org/>.

I would like to take a moment to acknowledge Clifton Ralph. As I write this, Clifton's family is preparing a Celebration of Life memorial. For those of us in the blacksmithing community Clifton was a teacher and a mentor. He shared his immense knowledge of blacksmithing and forging. His style was direct. We will miss him greatly.



**IBA website:** [www.indianablacksmithing.org](http://www.indianablacksmithing.org) **IBA Facebook page:** [www.facebook.com/groups/IndianaBlacksmithingAssociation/](http://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  
 Dennis Todd (574) 542-4886

### **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  
 Dave Kline (765) 620-9351

### **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**

Meet:  
 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**

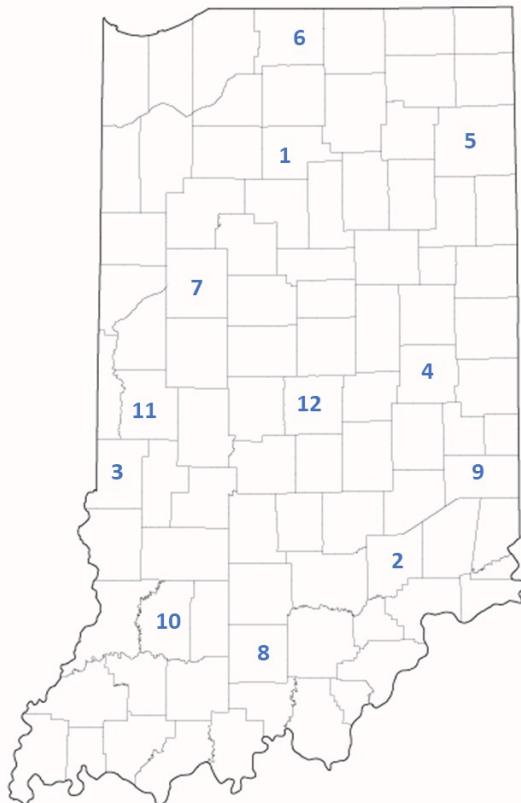
Meet: 1st Saturday  
 Contacts: Jim Malone (812) 725-3311  
 Terry Byers (812) 275-7150  
 Carol Baker (317) 809-0314

### **11) Covered Bridge Blacksmith Guild**

Meet: 1st Saturday  
 Contact: John Bennett (812) 877-7274

### **12) Satellite 13**

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



### **Jennings County Historical Society Blacksmith Shop**

The Jennings County Historical Society Blacksmiths met at the forge of Kenny Dettmer. Several old friends from other satellite paid us a visit. Kenny and Bill Newman drew out reins for tongs on the power hammer. Bill then worked on the rest of the tongs and demonstrated a real nice forge weld. Dave Good used his hand held power hammer and made a nice pair of tongs after much effort. There was more food than we could eat. We had a lot of iron in the hat and free for the taking items. Around 34 attended.

The next meeting will be at the forge of Kevin Welsh, 25619 Gill Rd., Nabb IN 47147. This is a pitch in.

April meeting will be back to Vernon. As usual, bring lots of iron and even more , money!

Paul Bray

## IBA Satellite Groups and News (continued)

### Meteorite Mashers

The Mashers met at Jeff Reinhardt's shop this month. Plan had been to meet at Dave Kunkler's shop but weather forecasts called for a change to Jeff's shop. Had a good turnout with several from Kentucky attending as well. Chuck Henderson brought a large hunk for forklift tine and Steve King punched and drifted it with striking help from several. Micheal Mills ran beginners classes and did his usual fine job. Had a 3 hour window of dry weather and so opened the doors and had a beginners forge running outside as well. Much good food and learning going on. Our March meeting is again scheduled for Dave Kunkler's shop in Branchville, weather permitting. If inclement weather then the meeting will be shifted to Jeff Reinhardt's shop.



### Anvil for Sale

Anvil similar to Peter Wright Anvil- no name is visible-

Markings 2-3-A ( E - at Base)

14 1/2" H X 32 1/2" L. ( Horn-  
12 1/2" L) Face 5 1/4 W" X  
20" L.

Estimated weigh 310# -325#.

( 1/2" Ball Bearing Bounce at  
3'-0" Ft = 70% -80%.

Reasonable offers will be considered. Please call for additional information.

Ed 708-623-5802



## IBA Satellite Groups and News (continued)

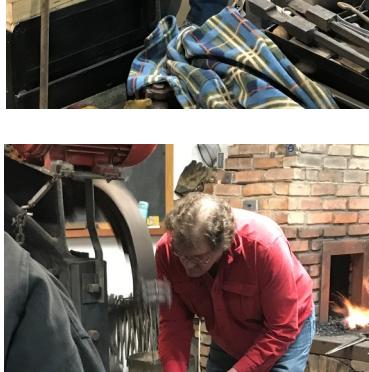
### Bunkum Valley Metalsmiths

The Bunkum Valley Metalsmiths met Saturday March 2nd. We have young and old, new and skilled blacksmiths. There was plenty of smithing going on, a baby blanket being made and lots of good food including beaver stew! Everyone is welcome to join us the 1st Saturday each month and bring a dish to share! Everyone is willing to teach new comers too! Next month we will be at Elnora for the spring swap meet!



## IBA February Hammer In

Some photographs from our February hammer-in. It was a good time with a large turn out. The fire was lit and blacksmiths with all levels of experience took turns working from both sides of the forge. The big Williams White got a work out from a couple of guys who cut loose.



## John Switzer's One Piece Split-Bar Trivet

On October 13, 2018 at Black Bear Forge John Switzer demonstrated his one piece split-bar trivet based on Christoph Friedrich's split cross. (right)



Believe it or not, John put a 5-3/4" hole in a 1" x 10" square bar using traditional blacksmith techniques. You can see a video of John's demonstration at: <https://www.youtube.com/watch?v=Hs55dsEYqMI&t=742s>

### NOTE:

The stock is 1" square x 10" long.

Each chisel cuts that goes all the way through the bar is cut from both sides.

The chisel cuts amount to one 8" cut all the way through, a 5" chisel cut all the way through and a 3" cut halfway through the bar. This sounds complicated, but John did the math, so splitting this way you end up with 3 legs spaced correctly and a handle between 2 of the legs.

I hope the clay models make the process clear:

The clay models were rolled away from me for each successive chisel cut. Sides 1 and 3 are opposite each other, as are sides 2 and 4.

Chisel cut 1 goes clear through the bar for 8 inches. Remember to cut halfway through the bar then flip it over to finish the cut from the other side. When the cut is done, flip the bar back over to stay with this sequence.



1

Turn the bar 90 degrees away from you. Chisel cut 2 goes clear through the bar for 5 inches from the opposite end of cut number 1.



2

Turn the bar away from you again. This is the opposite side of chisel cut 1—it should be cut all the way through already.



3

Turn the bar 90 degrees again—you should have a 5" cut already through this side of the bar. At the end of the 5" cut make a 3" cut halfway (in depth) through the bar. Don't mark the split bar below this cut.



Switzer demonstration, continued



The bar partially split in the forge.



Splitting the bar with the help of young Smith Nicolas Taricco.



Once the splitting is done, open the chisel cuts 180 degrees at forging temperature. Drive the split on to the hardy hot cut to start spreading the split.



Open the other split the same way.



Finish opening the splits by flattening on the anvil.



Open the corners of the splits and begin rounding over a cone or the anvil horn.

The handle is the longest piece.



The legs are 3" from the handle and 6" apart from each other.



Continued on next page



It takes a lot of rounding, hammering out twists and hot rasping to clean up the piece.



John and a striker straighten out the handle.



The trivet shaped, ready for final clean-up



This 3-page article re-printed from the Fall 2018 edition of the "FORGE FACTS" a publication of the Rocky Mountain Smiths

## FORGING A RECTANGULAR PASS-THROUGH

By Don Schad

It has been said that only a blacksmith can pass a one-inch bar through a one-inch bar. While other metalworkers might want to make an argument over this point, pierced joinery does highlight one very unique and distinctive feature of forge work. In the fall of 2012, I worked on a project during a traditional joinery class at the Campbell Folk School that required eight rectangular pass-throughs. The following is the process that I used and found effective to create the necessary pass-throughs for my project. In particular this process is for passing a rectangular bar through stock of the same size.

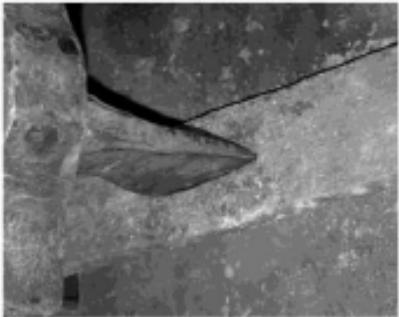


Figure 1

The first step in creating a pass-through is to create a hole which will allow the walls of the bar to be thick enough to ensure that the amount of material in the cross-section of the hole is the same as the unmodified bar. The perimeter of this hole should be equal to the perimeter of the bar which is to be passed through it. To obtain this length the punched (or slit-cut) hole will be long and narrow, requiring that it be opened up and reoriented to accommodate the bar which will pass through it. In order to maintain equal material on each side of the hole, it should also be centered in the width of the bar.

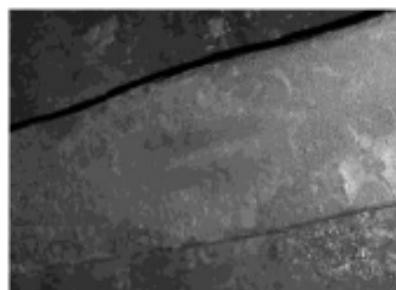


Figure 2

Mark the stock with a punch mark in the center of the material at the location where you want one end of the slot to start. As an aid in keeping the slot parallel to the edges, a second mark at the mid-point of the slot can be helpful as a guide when placing the punch. Additionally, a very light punch at a low heat can be used to verify that that everything is in position. The low heat and lack of scale allows the punch marks to be readily located, and a shallow punch mark can be corrected if necessary.



Figure 3

Heat the material a yellow heat and engage the end of the slot-punch in the punch mark where the slot is to start. Bring the punch square to the material, taking care that the punch is exactly parallel to the long axis of the material being punched and properly centered. Drive the slot-punch until you can feel the anvil resistance and stop, cooling the punch every couple of hits (figure 1). Do not drive too far as you can easily bend or mushroom the end of your tool. Having reached the anvil, flip the stock over and locate the slot from the back side by looking for the flat spot/line on the back (figure 2) and back punch, breaking the slug from the bar. Move to the hardy-hole or bolster and clear the slug from the slot (figure 3).

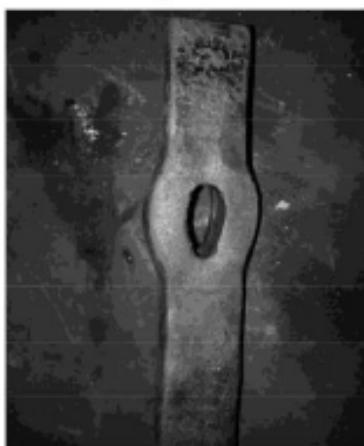


Figure 4

After the slot has been created, it needs to be transitioned from a long skinny oval to a shorter, wider rectangle, and rotated 90 degrees. To start this process, take a very high yellow heat which is localized around the slot, and drive the end of the bar back into itself as if you were upsetting at the center of a bar. This will upset the sides of the slot and cause the long narrow slot to take on an oval as the sides move outward and the ends of the original slot become closer (figure 4).

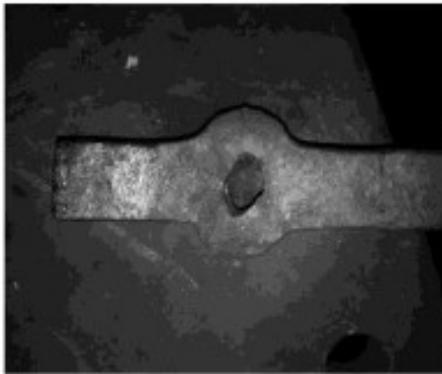


Figure 5

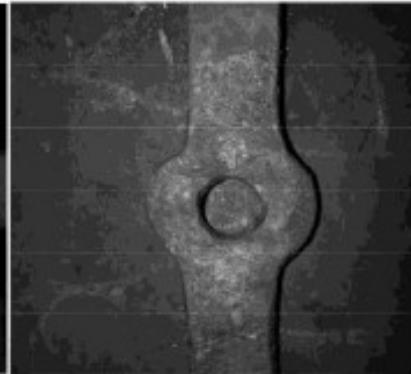


Figure 6

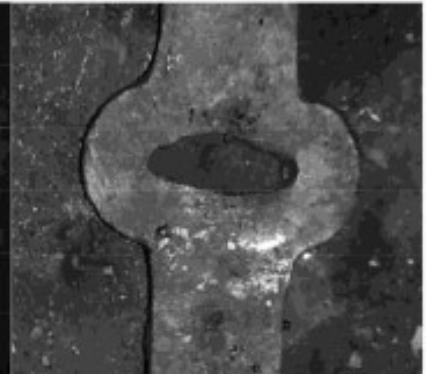


Figure 7

In the process of transitioning from a slot to an oval, the opening may take on an amorphous shape (figure 5). When this begins to happen, slightly drift the hole to round, drifting only the minimum required to obtain a smooth hole (figure 6). Drift from the front and back to keep the insides of the hole even. Resume upsetting until the hole becomes an oval which is smaller than the bar which is to pass through the hole in both dimensions (figure 7).

If while trying to reorient the opening, the unforged bar on the far sides of the hole fall out of alignment, stop and correct as soon as possible. Corrections can be made by taking a localized heat around the opening and supporting one side of the bar on edge on the anvil while striking the other side (figure 8). If the bar is really far out of alignment, inserting a mandrel and using fullers to drive the bar into alignment can be effective.



Figure 9

Once the hole is smaller than the drift, the outside edges should be worked, if desired. If the final drifted hole is to have flat sides on the outside instead of the rounded sides naturally produced by the upsetting/drifting, the outside edges should be forged flat before drifting. Additionally, the outside corners can be cleaned up at this time using fullers or other suitable tooling (figure 9).

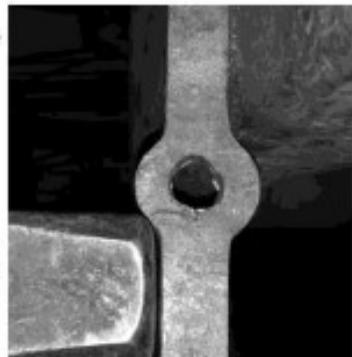


Figure 8



Figure 10

Once the outside edges of the bar have been shaped the hole is ready for final drifting. Take a rectangular drift and at a high heat drift to final size. Make sure that the drift is at a right-angle to the edge of the stock. Drift from both sides and flatten on the anvil (figure 10) and your pass-through should be ready for assembly (figure 11).

#### Acknowledgements:

Thanks go to Clay Spencer and The Campbell Folk school for a great class and learning opportunity and wonderful week in the mountains of North Carolina. The class was funded in part by a Francis Whitaker Blacksmith scholarship.

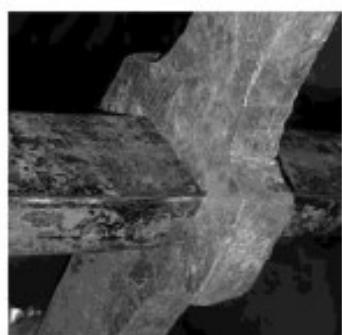


Figure 11



**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

## **March 16 IBA Business Meeting**

### **Kelley Farms / Doc Ramseyer Shop**

6032 W 550 N Sharpsville, IN 46060

Located just west of US-31. Approximately 6 miles north of SR-28 (Tipton) or 3 miles south of SR-26 (Kokomo).

Please bring a dish to share