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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) 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.

Dec 14 2019	DON REITZEL'S SHOP (2ND SATURDAY)
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Jan 18 2020	TBD
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Feb 15 2020	KEN DETTMER'S SHOP COLUMBUS, IN
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Mar 21 2020	ANNUAL BUSINESS MEETING LOCATION TBD
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INDEX

PGS 3-4
SATELLITE NEWS

PG 5
IBA NOVEMBER
HAMMER IN

PGS 6-7
FORGING A
RECTANGULAR
PASS THROUGH

PAGES 8-11
TRAVEL
WORKBENCH

Editors Message

It is sad to report that Judy Berger passed away on October 31. Judy was the founder of Blue Moon Press. Judy and Blue Moon Press were regular attendees at the IBA annual conference. A scholarship fund has been established in Judy's name. More details about Judy and the scholarship fund can be found at <http://www.bluemoonfarm.org/memorial/>



We had a very successful hammer in in November hosted by the Covered Bridge Blacksmith Guild. There were about 20 people attending. Dave Wells gave a very good demonstration on making animal traps. The spring and clamp mechanism requires some precise to forging to for smooth operation. Some of the tight bends can result in stress cracks. Serving ladles were the trade item. There was a very good variety of handle designs.

We will have a December hammer in at Don Reitzel's shop on Dec 14. Note that December Hammer Ins are held on the 2nd Saturday of the month, rather than the 3rd Saturday. There will be a board meeting. Chicken and noodles and mashed potatoes will be provided. Please bring a food dish to round out the menu. Driving directions to Don's shop are listed on the back page.

At this point, I do not have any information about the January hammer in. I believe February will be at Ken Dettmer's shop, which has been a high attendance event. March will be the annual business meeting. With the closing of the Doc Ramseyer satellite, I do not know what location for the business meeting.

For the satellite group forge masters, check the satellite group meeting dates and contact information. Please send me any updates. This same information is posted on the IBA website, so prospective new members need good information on who to contact in their area.

Dates to Remember

Dec 14
IBA Hammer In
&
Board Meeting

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: 2nd Saturday at 9 AM
 Contacts: Doug Moreland (217) 284-3457
 Max Hoopengartner (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

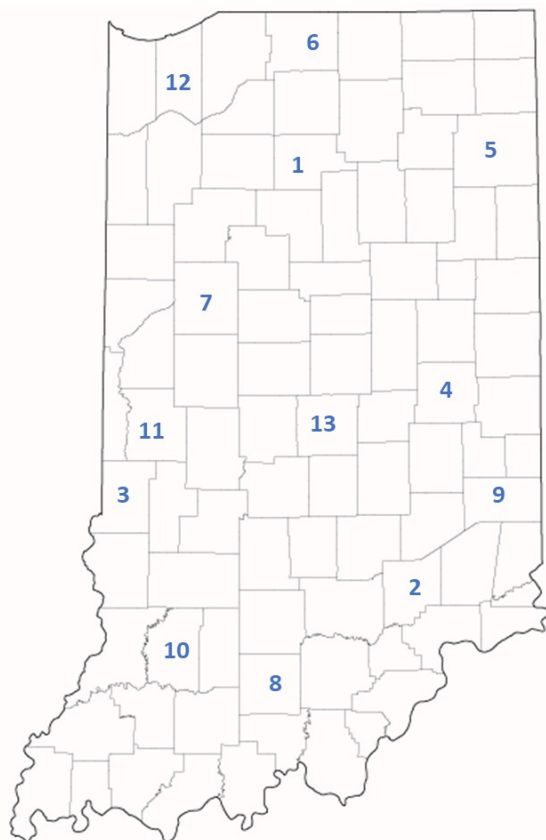
Meet: 1st Saturday
 Contact: John Bennett (812) 877-7274

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



Meteorite Mashers

The Meteorite Mashers met at Jeff Reinhardt's shop this month for the now infamous Smoked Turkey Hammer-in. Small point of fact; 3 turkeys were smoked this year, providing enough sliced hickory smoked turkey to allow everyone to get enough. There was actually almost 2# leftover. We had a great crowd, who put up with incessant rain. The shop was full yet we still had team striking and beginner classes going on. A lean-to had the beginners. We did get in 3 heats on an anvil bickern outside before a thunderstorm brought us back inside. We had visitors from the far north of Indiana with Shane Steidmier and Mark Yoder and son coming down. Bill Cory and Jason Melis Attended. Stuart Mullins and family and Jimmi and Amy Hampton from Kentucky came as well as our usual crowd. Everyone brought great food, and there was no hunger involved in this meeting. Shop was cleaned by about 8:00pm. Already looking forward to next years Smoked Turkey Hammer-in.

IBA Satellite Groups and News (continued)

Jennings County Historical Society Blacksmith Shop

The Jennings County Historical Society Blacksmiths had their final Vernon meeting for this year on the 9th. Our shop and our bodies were warmed by the grace of Bill Kendrick and Kevin Welsh with gas heaters. Many thanks to them. Brad Weaver gave an excellent demo on poz tongs. Kevin assisted drawing out the reins. Thanks also to all who helped clean and winterize the shop.

The December 14th meeting will be at John Cummins , 14473 Chesterville Rd., Moores Hill , IN 47032. Directions: From Hwy 350, approx. 3 miles east of Milan turn south on Palmer Rd. Turn left at 2nd stop sign. Turn right on Chesterville Rd. to 8th house on right.

January meeting is at Paul Brays at 139 South Park Drive, Seymour In 47274.

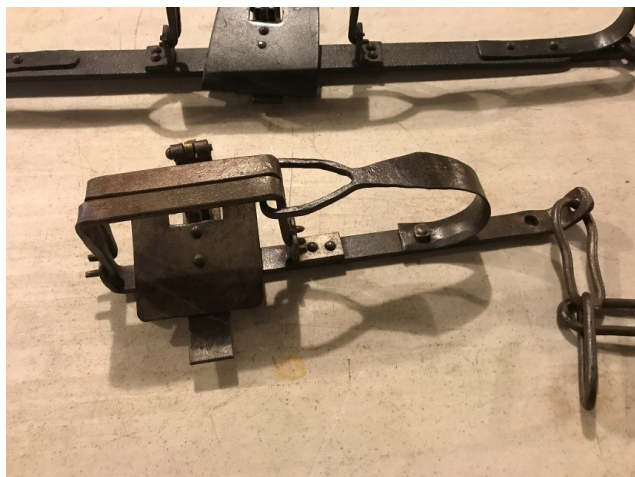
February meeting at Kenny Dettmers 15721 S 250W Columbus In .
March at Kevin Welsh 25619 Gill Rd., Nabb IN. April will be back to Vernon.

Paul Bray



IBA November Hammer In

Here are some photos from the November hammer in hosted by the Covered Bridge Blacksmith Guild. The trade item was a ladle. We had a wide variety of well crafted items. Dave Wells demonstrated critical aspects of forging traps.



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 passthroughs. 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.

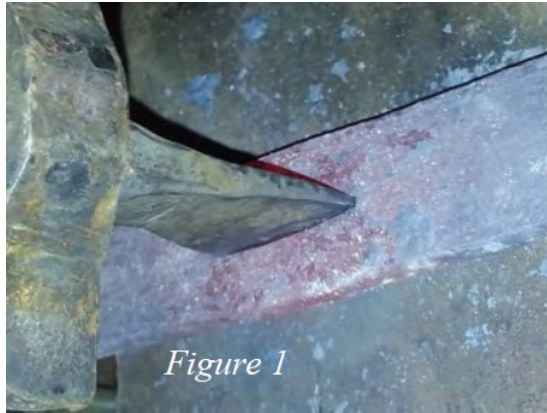


Figure 1

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 3

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.

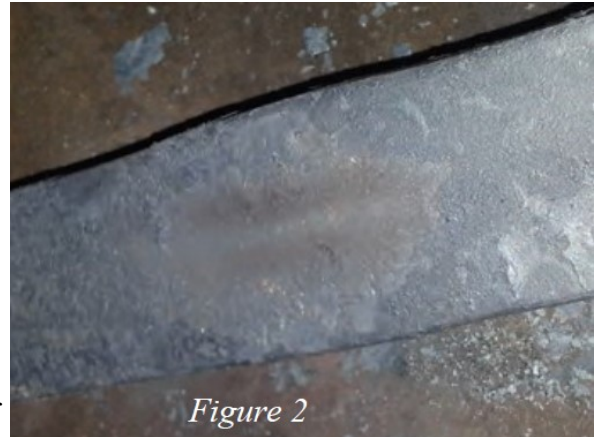


Figure 2

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 unforced 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.

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).

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 8

Reprinted with permission from the
New England Blacksmith



Figure 9



Figure 10



Figure 11

Travel Workbench

By Steve Alford, Athens, Alabama

I built this workbench to take to workshops, classes, and demonstrations. It made its debut at the copper rose class taught by Bob Taylor at Athens Forge in November 2017. Since then it's been to the lock class last March and a couple of public demonstrations.

When I started thinking about this workbench I wanted something that would break down to be easy to move, but sturdy enough to work on without burning up energy chasing my bench around. It needed to assemble without nuts and bolts I've spent too much time looking for dropped hardware in grass or gravel, or fumbling with nuts and washers in the cold and rain! I wanted a vise and a useable work surface without being too big to be easy to move.

In the end I settled on using wedges to hold the table together, based loosely on an old trestle table design. That trestle table fit together so tightly that we never took it apart again! For this workbench I can tap the wedges in with my fist to make it solid, and usually work them loose the same way, without needing a hammer. It may be a little light, but a post vise and bench anvil add enough weight to keep it from going anywhere.

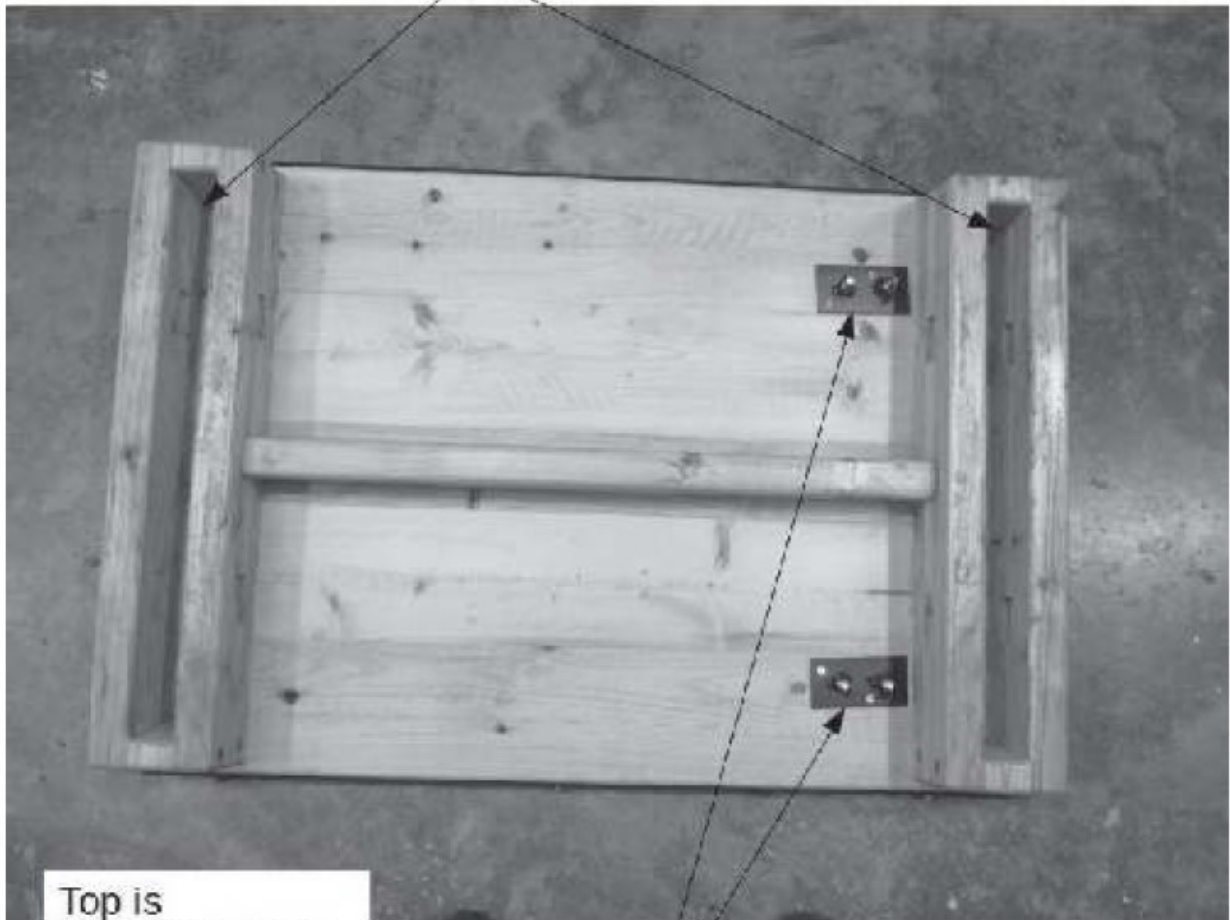


These pictures show the assembly sequence: Set the stretcher between the legs, then set the top on and tap in the wedges. Only the two wedges in the legs are really necessary for stability. Gravity would hold the top in place, but using wedges there, too, means two people can pick the bench up by the top and move it when we need to make more room in a class.



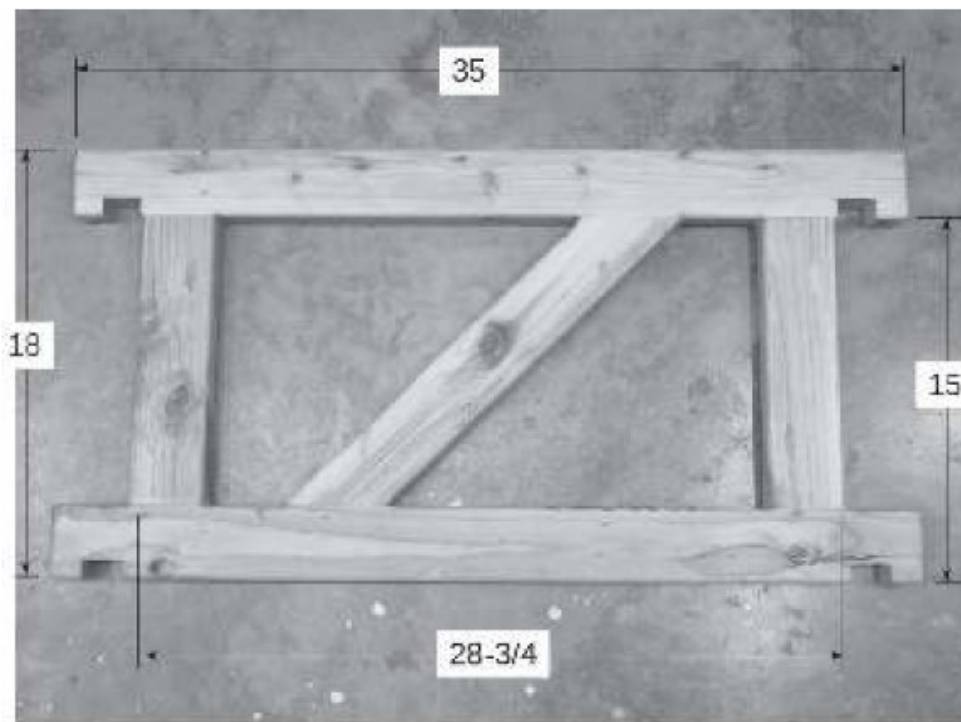
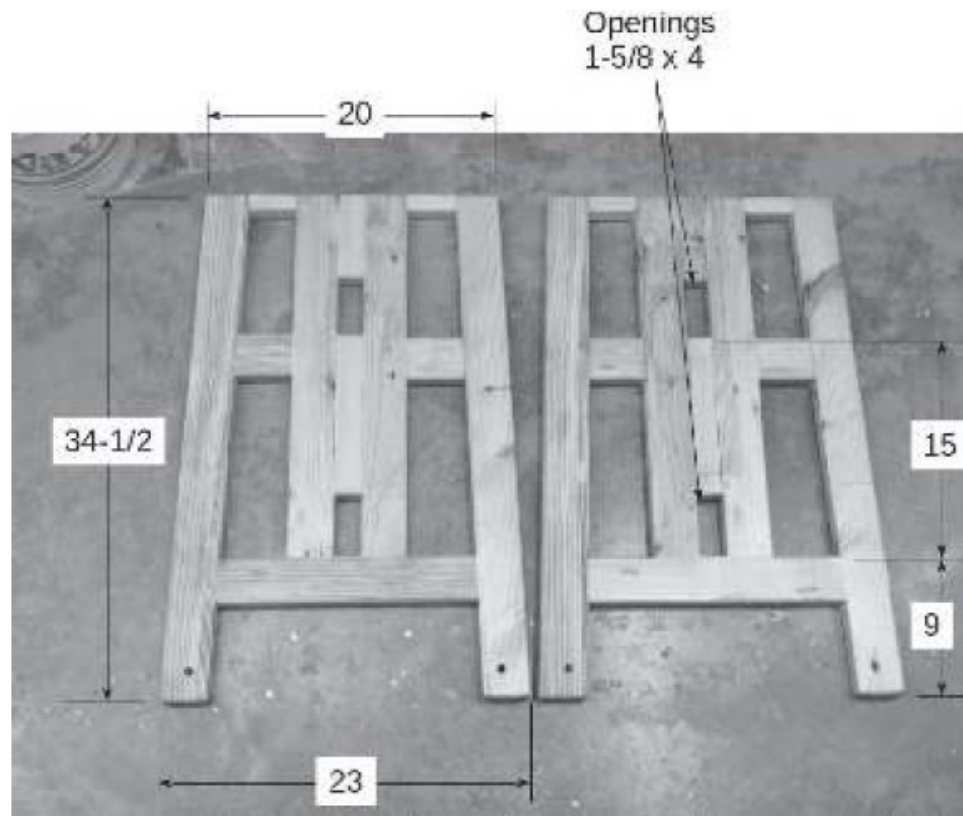
These pictures show enough dimensions to give an idea of the size and the joinery. The construction reflects my woodworking background 2x4s ripped down to 3 inches to get nice square corners, legs angled out, pocket screws and doweled joinery, and all the edges rounded off with a router. If I were making another I might think about some simpler joinery to make it go together faster.

Pockets approx $1\frac{5}{8}$ x $20\frac{1}{4}$,
spaced to fit legs



Top is
 $24\frac{3}{8}$ x $37\frac{1}{2}$,
glued from 4 2x6
and a 2x4

Nut plates to bolt on vise



This 4 page article reprinted from the November-December 2018 edition of the Bituminous Bits, The Journal of the Alabama Forge Council



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

Farrel Wells *Membership Secretary*
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First Class Mail

Address Correction Requested
If Undeliverable return to
sender

December 14 Hammer In

Don Reitzel's Shop
4113 W County Road 900 S, Stilesville, IN 46180

Directions: Take I-70 west of Indianapolis to exit 59 (SR 39). North on SR 39 for 1 mile. Turn left on County Road 900. Shop is about 6 miles on left.