

May 2017

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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.

May 20 2017	JENNINGS COUNTY BLACKSMITHS VERNON, IN
June 2-4 2017	IBA CONFERENCE TIPTON FAIRGROUNDS
July 15 2017	TBD
Aug 19 2017	TBD



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LOCKING JOINT

Dates to Remember

June 2-4
IBA Conference

October 13-14
UMRBC
(Pontiac)

Editors Message

Note: IBA Hammer-in for May has been changed. We will be meeting at the Jennings County Blacksmith Shop in Vernon.

Last month's hammer in was held at Joyce Roell's Big Cedar forge. We had a big turn out with about 30 people present. Dave Wells was the feature demonstrator. Dave demonstrated making box joint pliers. Box joints are strong and look good. As a follow up, Dave shared an article he wrote on forging box joints. The article begins on page 7.

The IBA Conference is less than a month away. Hopefully you have sent in your registration form and are ready for some fun. As always we need volunteers to help set up on Friday and pack up on Sunday. Please help out if you can. Sunday help is especially needed.

To assist with the movement of equipment from storage to the Conference site, Larry Whitesell is looking for pallets with sides. The industrial wire baskets would work well to get materials moved with less change of damage. If you have any old pallets with sides or wire baskets contact Larry.

I have not mentioned vendors at the Conference. We are expecting Blue Moon Press to bring a variety of books and materials. Be sure to check out their booth at the Conference or go to their website:

www.bluemoonpress.org

Rural Smiths are having a fund raising auction to complete their shop at the Johnson County Park. See page 6 for more details.

Larry Whitesell asked me to mention some upcoming farm shows of interest to blacksmiths. I think both of these shows are looking for blacksmiths to demonstrate. If you are interested contact Larry.

- 2017 Historic Farm Days July 13-16, Penfield IL, info contact 217-497-7686
- Half Century of Progress, World's Largest Working Farm Show. Aug 24-27. Rantoul, IL Contact info: www.halfcenturyofprogress.com phone: 219-863-1270

ABANA is beginning to promote the 2018 Conference in Richmond, VA. Here is the advanced logo.



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
 Dennis Todd (574) 542-4886

3) Wabash Valley Blacksmith Shop

Meet: 2nd Saturday at 9 AM
 Contacts: Doug Moreland (217) 284-3457
 Max Hoopengartner (812) 249-8303

5) Maumee Valley Blacksmiths

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

7) Rocky Forge Blacksmith Guild

Meet: 2nd Saturday at 9 AM
 Contacts: Ted Stout (765) 572-2467

9) Whitewater Valley Blacksmiths

Meet: 2nd Saturday
 Contact: Keith Hicks (765) 914-6584

11) Bunkum Valley Metalsmiths

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

13) Satellite 13

Meet: 4th Saturday
 Contact: Bill Newman (317) 690-2455

2) Jennings County Historical Society Blacksmith Shop

Meet: 2nd Saturday at 9 AM
 Contact: Ray Sease (812) 522-7722

4) Fall Creek Blacksmith Shop

Meet: 4th Saturday at 9 AM
 Contacts: Gary Phillips (260) 251-4670
 Dave Kline (765) 620-9351

6) St. Joe Valley Forgers

Meet: 4th Saturday at 9 AM
 Contacts: Bill Conyers (574) 277-8729
 John Latowski (574) 344-1730

8) Meteorite Mashers

Contacts: Mike Mills (812) 633-4273
 Steve King (812) 797-0059
 Jeff Reinhardt 812-949-7163

10) One-Armed Blacksmith Shop

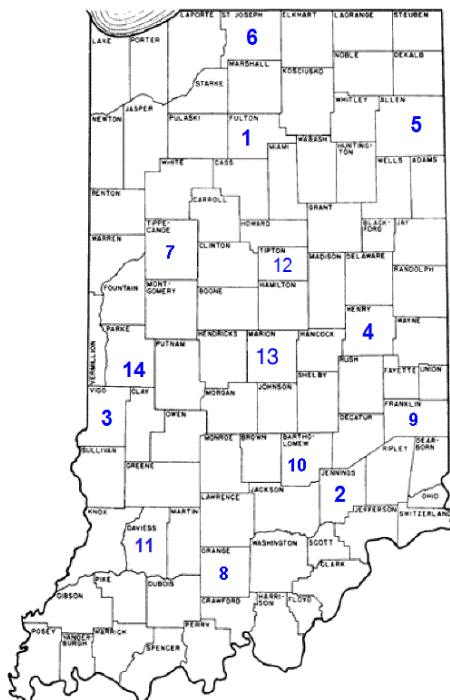
Meet: 1st Saturday
 Contact: Tim Metz (812) 447-2606

12) "Doc" Ramseyer Blacksmith Shop

Location: 6032W 550N, Sharpsville, IN 46060
 Meet: 3rd Sunday at 2 PM
 Contact: Charles Gruell (765) 513-5390

14) Covered Bridge Blacksmith Guild

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



Jennings County Historical Society Blacksmith Shop

The Jennings County Historical Society Blacksmith Shop opened its doors to a nice crowd. Bill Kendrick made a pair of extremely nice split, twisted, forge welded "S" hooks for our project. Brad Weaver, Barak Kirchner and Kevin Welsh were making more to complement them. Alex Spelman refurbished an old pair of tongs from the iron-in-the-hat. He worked on a R R spike troll. Others were working on various projects. We had a very substantial iron-in-the-hat thanks to Ray Sease and son (same name). Due to late cancellation, the State Hammer In will be at Vernon on May 20, 2017. Be sure to mark this on your calendars. The Conference booklets are out now. Early registration makes you legible for the drawing. Let someone know if you don't get your booklet.

Paul Bray

IBA Satellite Groups and News (continued)

Meteorite Mashers

The Meteorite Masher tried to meet at Dave Kunkle's shop in Branchville but were met by flooded roads from the downpour the night before. A few handy souls met at Dave's shop with the remainder retreating to Steve King's shop and so we had 2 hammer-ins at the same time. The next meeting will be at Jeff Reinhardt's shop in Floyd's Knobs with practice for the Tipton demo that day.

Fall Creek Blacksmith Shop

11 smiths signed in. We had a good day with open forge and applying a base coat to the project. iron-in-the-hat was accomplished finally. Had lunch at Sulphur Springs as usual. Nice day forging and having fun.

Reported by Dave Wells



Bunkum Valley Metalsmiths

The Bunkum Valley Metal Smiths April meeting was held at the White River Valley Antique Association Swap Meet in Elnora Indiana. We had several guests including Bill Newman, Steve King and friends.

We had a great meal over a fire pit using a crane and attachments all made by Jim Malone and the food by Kathy Malone.

It was a chilly day but you can see the expanded roof that was built last year for the blacksmiths who demonstrate during the WRV Antique show in September. Mark your calendars for the Antique Show it is a good time had by all and great for families! Thanks to our guests for visiting and our faithful group for making it a good time for all!



IBA Satellite Groups and News (continued)

Rocky Forge Blacksmith Guild

On April 8th, the Rocky Forge Blacksmith Guild met at Ted Stout's house. It was a beautiful sunny day and they had 4 forges going and lots of hammers pounding. They had a special demonstration of metalsmithing and made aluminum bowls also. It was a great time of socializing with old friends and meeting new members. Around 40 people were working throughout Ted's shop, learning new trades and perfecting their skills. Looking forward to our next meeting in May.



IBA Satellite Groups and News (continued)

One-Armed Blacksmith Shop

Greetings from the One Armed Blacksmiths Shop, May 6th Meeting: In Attendance was, Kenny Dettmer, Charley Helton, Richard Rotert, Nathan Pevlor and Tim Metz.



The main shaft bearing caps were machined to accept Grease fittings and installed on the power hammer. Nathan Pevlor was our demonstrator for the day. He brought a prepared piece of approx. 2 inch diameter cable complete with a welded on handle. Nathan verified

that this cable was made from two different types of steel by dissecting a small portion and heat-treating and etching some of the strands. After forge welding and squaring both ends, Nathan took a good heat on the entire piece and twisted it tight. Then using our swedge block as a bottom die, he was able to contained the unwelded portion of the cable while he completed the forge welding. Striking to finish the welding was furnished by Richard and Tim. There was another guy in attendance on Saturday, Helton someone, I think that is his first name. He was very helpful during this entire process. After the welding was completed the power hammer work was handed over to one of our more experienced power hammer operators. Kenny someone, I think. The billet was expertly drawn into a 1" x 5/16" x 36" L billet. This will be used for knives for Nathan to finish. If you see Nathan at the conference he will gladly show you what he has been working on.

Special thanks to Nathan, Kenny and Charley. Excellent project and a very good Hammer In.

Next hammer in will be July, due to the IBA Conference in June.



Rural Smiths of Mid-America

Donations wanted:

The RSMA is looking for donations of items for the auction at the Johnson County Tractor show, June 17. The money we raise will go toward finishing the blacksmith shop at the Johnson County Park. You can bring your item to the blacksmith shop or we can pick them up if you need us to.

Thank You Ron Gill

BOX JOINT PLIERS

by Dave Wells

I took a class at Conner Prairie on box joint pliers. Melvin Lytton the lead blacksmith was teaching this class. Melvin teaches with using minimal tooling, what tooling you do need you make it. He teaches the process in steps and lets the students spend time on each process, (repetition). This is a learning process and works especially for those that don't get a lot of forging time on there own.

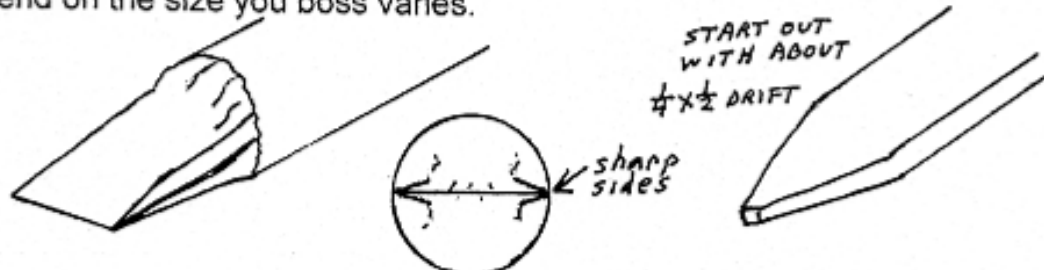
This mainly is the process for making the box joint, and completing the project. We used 1/2 in. sq. stock. You can use the process with larger stock and sizing the tooling accordingly.

Material: 1/2 sq. mild steel

1/2 coil of car spring or suitable carbon stock (to make slitting chisel)

(1) Make slitting chisel. We straightened coil spring. If torched the carbon is ruined in that area so cut off about 1/2 in. length. Use this for chisel end. Shape and let cool. Sharpen end and sides with file. You don't need to harden or temper. The other end remove burrs and round corners a little. You might heat this end, making sure its not hardened.

Make drift out of mild steel. I ended making several drifts. The drift size will depend on the size you boss varies.



(2) Next step is similar to making tongs. With about 1/2 in. on near side of anvil at slightly radius corner, set to about 1/2 stock thickness using 1/2 face blows. Forge sides back to original thickness. Taper end. Flip 180 deg. and do same thing, aiming for about a 1 in. boss length. Slightly neck down where handle starts.

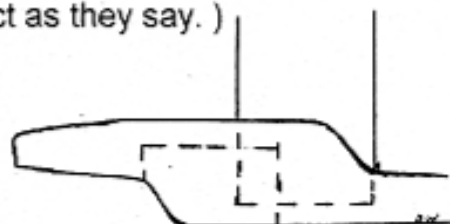
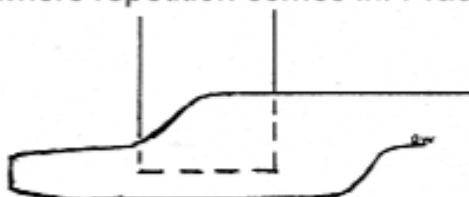
leave more than 1/2" if longer jaw desired.



BOX JOINT PLIERS

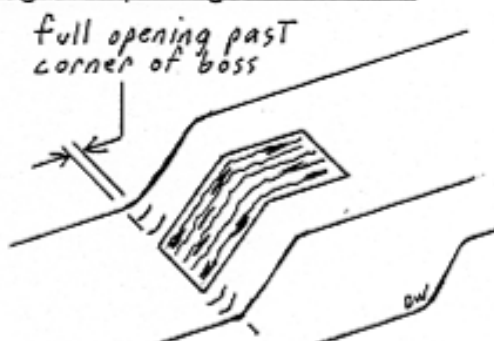
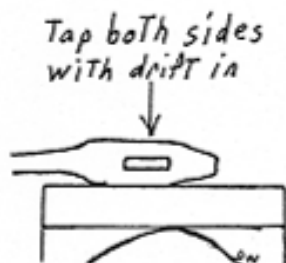
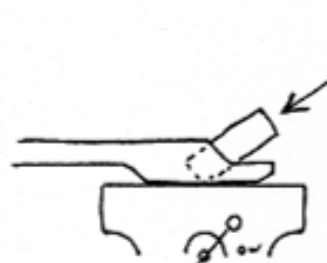
continued

(3) Take a good heat on boss area. With stock on anvil, slit as shown to about 2/3 to 3/4 boss thickness. Flip over and repeat procedure. If your slits are centered correctly on each side your chisel should have overlapped and there should be an opening big enough for your drift to enter. (This is where repetition comes in. Practice makes perfect as they say.)



(4) Take another heat, (with vise jaws apart enough so drift will clear,) lay piece on top and start drift at about 45 deg. angle. Drive in and then lay on anvil, taping side back down, flipping over and doing equally to that side. Your starting to stretch the joint. Remove the drift. Reheat and repeat procedure for other slit on opposite side. You can control squareness of slot somewhat by watching the drift and seeing if its parallel with anvil face, and hammer blows accordingly.

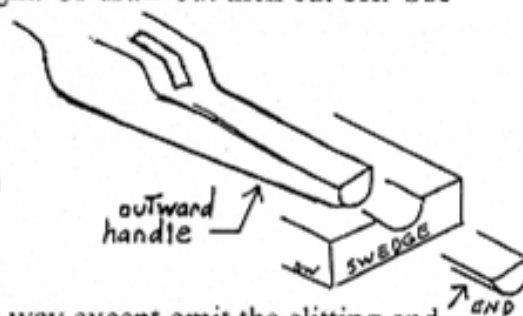
If properly done you should have a full rectangular opening at bottom of boss as shown.



Allow enough stock for handle length to be drawn out (approximately 3 in.'s. or so and cut off,) draw out handle to comfortable length. Or draw out then cut off. Use round swedge and round outward side of handle.

2" for handle draws
out To about 5 1/4" length

always heat with
slot up & down in
fire



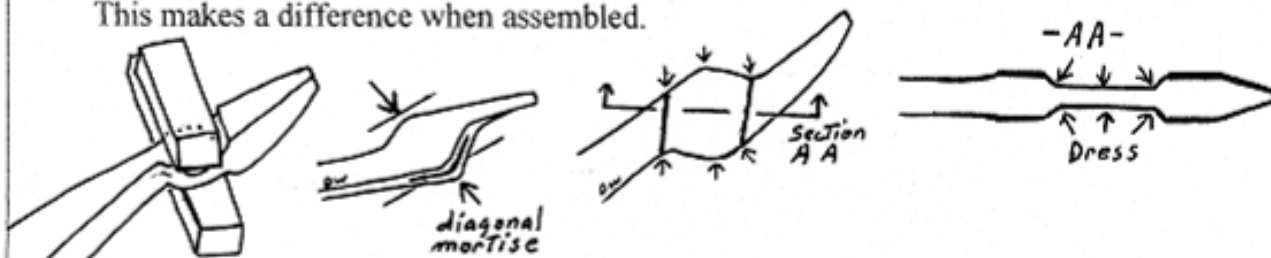
(5) The other half of the pliers are made the same way except omit the slitting and drifting. After the boss is made lay boss on top of a 1/2 in. sq. aligning with diagonal of boss. Take another 1/2 in. sq. lay on top of boss and align all three. While holding the two squares parallel, drive straight down on boss area.

BOX JOINT PLIERS

continued

Try to get an even depth on both sides. The thickness of the web should be almost the width of drifted slot. (This boss could be slightly smaller in size than the first boss because it will widen.) Also you may need to widen the width of fullered area to be a shade wider than diagonal shown below. Do handle same as first piece.

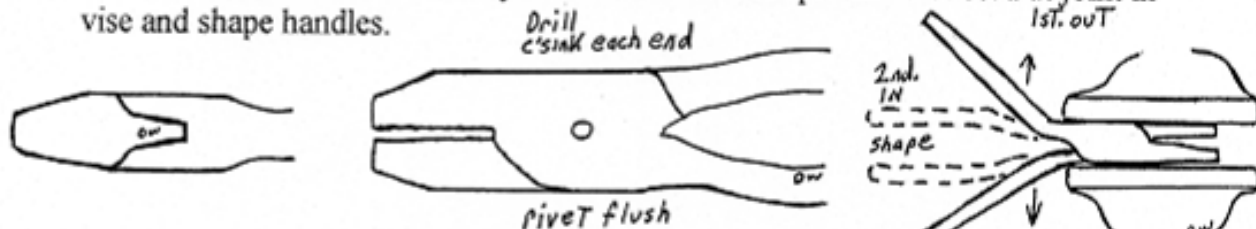
Take some time now and dress file boss areas and slot openings at end of bosses. This makes a difference when assembled.



(6) Take the slotted joint, heat it up and put in vise. Drift slot open from both sides using a round tapered drift, drift wide enough to accept the fullered joint. (Be sure to insert handle through slot in correct position.) While hot, to allow joint to fully engage you will probably have to tap side back down some, (stretching slot).



(7) Once engaged, heat assembly and start shaping sides of joint area and jaws. When shaping joint area don't over forge, your conforming the two together as one. Work the handles also. You may need to do this a couple times or so. Put joint in vise and shape handles.



Now spend some time filing on your pliers. Melvin says it's easier to make the fullered joint first and make the slotted joint to fit. Also bigger stock is better. This class was more for process purpose's. The 1/2 in. stock did make a nice pair of small pliers. (Using longer jaw stock I made small scroll pliers with 2 inch long jaws, 5 1/2 in. handles, 9 1/2 in. overall length.)

Conner Prairie is presently building a new blacksmith shop and planing on having more classes. Melvin and Nathan Allen teaches some good classes that are well worth attending.

Belgian Hardie

By Mark Smith

One of the pleasant surprises at ABANA's Ashville Conference this summer [ed. 1998] was Roger Bockstaele from Belgium. Roger is a retired machinist who forges as a hobby in the attic of his home.

When I watched him work, making leaves, bird feed, feathers and human figures, they revolved around the tool illustrated here. From dragons to owls, eagles attacking serpents, and ants to praying mantises, his work was very realistic. My writing skills cannot do it justice. I will remember it as pure enjoyment; to see Roger Bockstaele forge and see his work.

Hot Cut: wedge (made from 3/4" sq, arc welded to a 4" X 4" X 1/2" mild steel back) used for cutting and splitting

Curved Groove: used to shape leaves. It was used with a blunt chisel.

Groove: Used for making spine of a feather

Depression: used to shape a leaf

Flat Bar Stock: 1" X 1" X 2" welded on diagonal to fit in hardie hole like this:



The curved groove was made by heating the block then hammering a curved piece of 1/4" round into it

*Originally published - Pennsylvania Striker, 1998
Reprinted BOA Voice, December 2016*

Sliding/Locking Fits? Use the "proper" L/D Ratio:

Occasionally, projects call for fitting a sliding collar over a smaller rod or tube with the intent of either sliding freely along the length of the device or locking in place with an eccentric load depending on the application. This would be used, for example, on a stock support arm which is intended to automatically lock in place when raised or lowered on its stand.

I remember a rule of thumb that I was taught many years ago to be used when designing such a fitting. It was called the "L Over D Ratio." To summarize, when a sliding fit is always needed, make sure the length of the slider is at least twice the diameter (or width if using non-round stock) of the piece on which it is to travel. If you, instead, want the slider to lock when an eccentric load is applied (as in the case of a support arm to one side) then using an L/D of about 1 is more appropriate. The ratio is not exact and may depend on a lot of other variables including roughness of the material, how much gap between the inside and outside piece, etc. But the general relationship can be kept in mind when designing lighting stands, stock support stands, etc. which use this type of self locking design element. Keeping this ratio in mind should get you close to the desired result most of the time. - Editor

This article reprinted from Saltfork Craftsmen newsletter, April 2017 edition

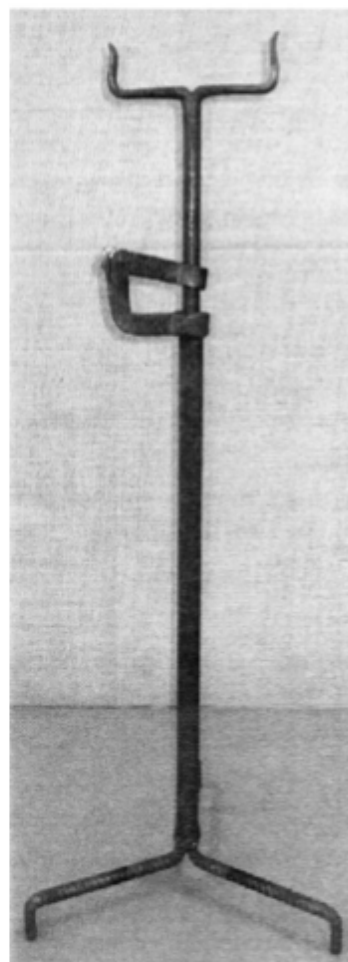
New Jersey Blacksmiths Newsletter

With A Little Help from My Friend

by Bob Selvaggio

List Of Materials

- 1 piece of 3/4" x 24" round bar ; 1 piece of 3/4" x 20" I.D. black iron pipe
- 3 pieces of 1/2" x 9 1/2" rebar
- 1 piece of 3/4" x 1/4" x 7 1/2" flat bar
- 1 piece of 3/4" x 1/4" x 12 1/2" flat bar
- 1 - 1/4" x 1" round headed rivet



I wish that I could take credit for this handy little Blacksmith Helper. I received this stand from a fellow that got it out of the Allegheny County Workhouse, which was located in Blawnox, Pa. The workhouse had a blacksmith shop as well as many other shops. When the facility was closed my friend gave me the stand.

It is a handy little thing, just right for keeping off to the side and moving it into position when forging long items that need to be supported. Being lightweight, reaching for it, and adjusting the height can be done with one hand while holding onto the material being forged.

The original stand is a mixture of traditional forging and newer arc welding. I decided to keep it that way when reproducing a couple more. The way the support piece moves up and down through the adjusting device, it is locked into place by the downward motion of the top bar.

To make this helper, begin by making the feet. Take the three pieces of 1/2" rebar and forge the ends over. The one end is forged over 1" and the other is forged in the opposite direction at 1-1/2". The three one inch ends will go up into the pipe, of which a small flair is forged. The flair permits the three pieces of rebar to fit. The 3/4" round bar is split back 4" on the one end and forged into the "T". For the adjusting device, I start out with a longer piece of the 3/4" x 1/4" bar so that I can hold onto it without using tongs. The piece that goes around the top of the pipe I measure back 5" and center punch on the edge and measure up from that mark 4" and center punch again. At these two marks, I forge it to a somewhat 45 degree bend and forge it around to match up the marks. I have found 4" to be enough to slip over the pipe. At this point, you should have an eye large enough to fit over the pipe and the remaining material should be over lapped onto itself.

The piece is then brought up to a welding heat and forge welded about 2" back from the eye. The pieces are welded together just enough to stick, no need to reduce the size down at all. Heat the piece up again past the 2" section and clamp in the vise and put about a 80 degree bend starting at 2" from the eye. This remaining piece should not be welded together and will be opened up later to accept the top piece. Open up between these two pieces so that the top bar will move freely between them. The top piece has a smaller eye, one that should take about 3-1/4" of material for the eye. First forge a taper on the end, measure back about 1" or so, center punch once again on the edge, measure from that mark 3-1/4" center punch again and forge into the eye. This eye needs to be large enough to allow the 3/4" round bar to travel freely; so if it is tight you need to forge a bigger one! This top bar is riveted to the bottom bar, line them up when they are placed in a parallel position to each other and mark for the holes and drill. Tack the feet pieces together, place the pipe over the rebar and weld the pipe to the feet, use a level to get it plumb. Weld the bottom "eye" piece to the top of the pipe, rivet the top "eye" piece to the other and slip the "T" support bar into place.

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

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First Class Mail

Address Correction Requested
If Undeliverable return to
sender

May 20 Hammer In Jennings County Historical Society Blacksmith Shop

Vernon, IN

Directions: Take State Road 3 to Vernon, IN. Turn onto North Pike St at Court House. Go one block. Blacksmith shop is on the right after the historical society building.

Please bring a dish to share.