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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)

10:00 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 Moe Handy
(317) 862-5647 for details.

IBA MEETING SCHEDULE

Check the latest *Forge Fire* for monthly IBA revisions.

July 21 2012	SOUTHERN INDIANA METEORITE MASHERS
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Aug 18 2012	ONE ARMED BLACKSMITH SHOP
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Sept 8 2012	SUTTON-TEROCK MEMORIAL BLACKSMITH SHOP
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Oct 20 2012	WABASH VALLEY BLACKSMITH SHOP
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Editors Message

Please check the mailing address for your membership expiration date. IBA memberships run June to June. If your membership has expired, contact Farrel Wells, your forge master, or log on to www.indianablacksmithing.org to get a renewal form.

On page 11 you will see that IBA member Alan Brazzel's shop was recently destroyed by a fire. The shop and contents were totally destroyed. Alan is trying to rebuild so he can continue to enjoy and teach blacksmithing. I encourage you to contribute what you can to his effort.

State Fair is just around the corner. Take a look at page 4 to see the daily schedule. If you are interested in demonstrating at the Fair, please contact the individuals named for the day(s) you are interested in. Also note that the Fair is charging for parking. Dave Childress is arranging pre-paid passes. Please notify Dave if you need a pass. As always, please get some action photos to share through the Forge Fire.

This month's hammer-in is at the Southern Indiana Meteorite Mashers. The hammer-in will be at Steve King's shop (see back cover for map and directions). This is an active group with a number of very skilled smiths. The group covers the gamut of blacksmith genres, but there is a definite strength in Damascus and blade work. If you have not attended in the past, I strongly encourage coming down.

Michael Wollowski submitted an article on universal tongs. Last year Michael submitted an article on Pelgrom tongs. Here is a view of both styles.

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Dates to Remember

- July 18-21
ABANA
Conference
Rapid City, SD
- August 3-19
Indiana State Fair
- September 21-23
Quad State (SOFA)



Pelgrom Tongs



Universal Tongs

IBA Satellite Groups and News

Sutton-Terock Memorial Blacksmith Shop

Meet: 2nd Saturday at 9 AM
 Contacts: Fred Oden (574) 223-3508
 Dennis Todd (574) 542-4886

Wabash Valley Blacksmith Shop

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

Maumee Valley Blacksmiths

Meet: 2nd and 4th Saturday
 Contact: Clint Casey (260) 627-6270
 John Schamber (260) 579-7303

Rocky Forge Blacksmith Guild

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

Whitewater Valley Blacksmiths

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

Bunkum Valley Metalsmiths

Meet: 1st Saturday
 Contacts: Doug Neukam (812) 259-4430
 Steve Stoll (812) 486-9668
 Kathy Malone (812) 725-3310

Jennings County Historical Society Blacksmith Shop

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

Fall Creek Blacksmith Shop

Meet: 4th Saturday at 9 AM
 Contacts: John Zile: (765) 533-4153
 Larry Singer (765) 643-5953
 Farrel Wells (765) 768-6235

St. Joe Valley Forgers

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

The Southern Indiana Meteorite Mashers

Contacts: Billy Merritt (812) 338-2876
 Steve King (812) 797-0059
 Jeff Reinhardt 812-949-7163

One Armed Blacksmith's Shop

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

"Doc" Ramseyer Blacksmith Shop

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

Jennings County Historical Society Blacksmith Shop

The Jennings County Historical Society Blacksmith shop fire was lit by forge-master Kenny Dettmer at 7:15 am. He reworked a pair of wrought iron tongs. Keven walsh then opened a 1" cross. Tim Metz then made a "Russian rose". Bill Newman began making an eagle from angle iron, but it failed to live up to his expectations, so he instead decided to make a butterfly from angle iron. Two visitors , Stem Broke and Tina (sp?), worked on their forge welding skills. Riley Rapp for his first time made his first "S" hook. Moe Handy drew the tickets for the iron-in-the-hat. K.C. Reschar opened a 3/4" cross (cut out by Bill Newman) and inserted a marble. Brian Simmons made a rough skinners' knife from a railroad spike. Mikal More and Ray Sease worked on a flag pole holder while the rest of us rested and swapped stories. We had 18 attending.

June 7&8 found Jerry Williams and Ray Sease showing some basic blacksmithing skills to 126 3rd graders from St. Mary's, Graham Creek Elementary, and Scipio schools. This is only a part of our continuing education plan. Other ideas are welcomed. Happy 4th of July.

Paul Bray

For Sale:
 Canedy-Otto #16 Post Drill

Contact: Donna Gray
dgray@sparktoignite.com

IBA Satellite Groups and News (continued)

Rocky Forge Blacksmith Guild

Our next meeting will be in our club building at the Illiana Antique Power show grounds near Rainsville. The date and time is July 14th at 9:00. Coffee and doughnuts should be ready by 8:30. The days plan will be to prepare the building for the Illiana Power show July 20, 21, 22, which is the following weekend. I am going to set up my work station and except for the hand tools leave it over the next few days. Security wise there will be several Illiana members camping during the week to keep an eye on our stuff. Assuming we get set up, we need to make several of the flower pot holders that Jim Bolen designed to hang on 6" posts. I will provide 1/2" round stock for that project. Beyond that we can have open forge time to make whatever you please.

Also, we need volunteers for the State Fair; if you would let me know ahead of time that would be appreciated so that we can get our passes on order. I know it is going to be hot, but I trust you all will pitch in on July 14th to prepare for the show and be available for the show July 20th and the State Fair August 6th and 7th.

Another decision we need to consider is whether to have a meeting in August, the same week of the State Fair.

On Friday evening July 20th the Illiana has contracted with the "Highway 341 Band" from Wallace for entertainment. If you have never heard these guys they are really quit good and do a variety of music. The food vendors will be open late that evening for our convenience. Bring your family, friends and lawn chairs for the evening. A free will offering will be taken to help cover the expense.

Lunch on the 14th will be a pitch in and I will bring a large pot of bean soup or we may just bring cold cuts for sandwiches. So bring what you can to go with those goodies.

See you all on the 14th. Ted

State Fair Blacksmith demos, David Childress

It is getting to be that time. I need numbers for entrance and parking passes. We have a new requirement. The Fair Board has decided that it is charging for all parking. The policy says \$5/day-\$10 for 2 or more days. Rural Smiths will open the fair (and whatever we need to arrange will be done already) and there will be parking passes to be picked up at Gate 9 every morning, unless more vehicles show that I do not know about ahead of time. It will make my life easier if on your first day you arrive between 8-8:30 AM or allow me to know about other arrangements. I need to know how many parking passes for each day. The largest number for any single day will determine total cost, (probably covered by donations).

- Aug 3,4,5 Rural Smiths of Mid-America Moe Handy (317) 862-5647, <ruralsmiths of midamerica @ hotmail.com>
- Aug 6,7 Rocky Forge Blacksmith Guild Ted Stout at (765) 572-2467. <stout8525@tds.net>
- Aug 8,9,10 Jennings County Historical Society Blacksmith Shop, Ray Sease (812) 522-7722, <anvil.8@hotmail.com>
- Aug 11, 12 John Bennet, Doug Moreland
- Aug 13 Kenny Detmer, John Cummins
- Aug 14 Kenny Detmer, Larry Whitesell, Dominick Andrisani, Gene Hollingsworth
- Aug 15, Clint Casey & Family
- Aug 16, 17 One-Armed Blacksmith/Bill Newman
- Aug 18,19 Fall Creek John Zile at (765) 533-4153, <forger@hrtc.net>

IBA Satellite Groups and News (continued)

The Southern Indiana Meteorite Mashers

The June meeting was hosted by Dave Kunkler and his wife Donna, in Mead Co. Kentucky. Billy Merrit decided to initiate Dave into the rare group who have forged Meteorite. Billy had Dave saw off a hunk, and then attach a handle. Then the hunk was cleaned up a bit and forged. Dave then used his rolling mill to make a VERY smooth thin billet to make a pendant from. The rolling mill has several of those in attendance thinking hard about building one. Then We had a wonderful lunch of smoked bar-b-cue and green beans followed by wild blackberry cobbler with ice cream.

After lunch as the heat increased to its worst of 103F, Jeff Reinhardt demo'ed a split cross that had a glass nugget melted into the center as he had seen at Tipton. The Hostess received the finished cross as Jeff is well known for "Will forge for food" and since the food was sooo good there had to be a reward.

The small but dedicated crowd then retreated into the air conditioned part of the shop, where Dave demo'ed his fly press. Several of the attendees are now planning to acquire a fly press.

The next meeting is the July IBA meeting at Steve King's shop in Paoli, on July 21st.



Universal Tongs

Michael Wollowski

The tongs in figure 1 are possibly the most universal tongs you can make. They combine the superior holding power of the Patrick Pelgrom Tongs and the light weight and geometry of the Off-Center brand tongs.

In a prior article (see May 2011 IBA Forge Fire newsletter), I showed how to make the very versatile Patrick Pelgrom tongs by re-working existing tongs. Recently, I taught a couple of students how to blacksmith. We decided to make our own tongs, however, I did not have five donor tongs lying around. This meant that we were going to have to start from scratch. I always liked the light weight of the Off-Center brand tongs as well as the fact that you can hold items that have an end on them such as the water lily of figure 2. Hence, I decided to combine the advantages of those two types of tongs and a new kind of tongs was born. After some research, I decided to make the tongs from 36" length of 3/8" round 1045 carbon steel. In this article, you will find construction notes on how to make these tongs. The bit shown on the upper side of figure 1, I will call the "top".



Figure 1: The finished tongs



Figure 2: Usefulness of tongs



Figure 3:

Top Bit. To make the top bit, gradually flatten one end Detail of bits over a length of about $1\frac{3}{4}$ ", ending in a $\frac{1}{2}$ " wide and $\frac{3}{16}$ " thick tip, as shown in figure 4. Next, bend this end to a semi-circle of about $3\frac{1}{2}$ " diameter. The exact diameter is up to your specific needs. Make a second, fairly tight 100° bend where the reigns begin. Mine ended up with a $\frac{1}{2}$ " radius. See figure 5 for the current state of affairs.

Using a 1" round punch; flatten the tight bend, the portion that will eventually be punched for the rivet. Flatten it to about half the width of the material, i.e. about $3/16$ ". Ensure that you flatten a little bit towards the business end of the tongs. See figure 6 for details.

Next slit and drift a $1/4$ " hole for the rivet. You need to make sure that the center of the hole is at least above the inside edge of the reigns; see the dashed line in figure 6. Otherwise, the reigns will open up too much when you hang them in-between the reigns.



Figure 4: Business end of top flattened



Figure 5: Top bit bent to shape



Figure 6: Top bit finished

If you do not have a $1/4$ " slot punch and drift, a quick fix is to obtain a small round punch and grind the tip so that it acts as a slot punch. Measure and mark the punch where the tip has a diameter of $1/4$ ". Figure 7 shows this combination slot-punch drift tool. Slit one side all the way through, then turn over the bit and slit from the other side. Continue on until the punch is just shy of the $1/4$ " mark. You may have to use the 1" round punch to re-flatten this portion of the tongs. The hole may not be perfect; however, it is ok to drill the hole to size.

Once this end has cooled, you are ready to work on what will become the bottom bit of the tongs. Be mindful that 1045 will crack if you quench it from too high of a heat.

Bottom Bit. The first order to business is to flatten the other end so that you can eventually form the bottom V. Since this requires a good amount of materials, spread the steel with the pein to about $3/4$ " wide and about $1/8$ " thick. Do this over a length of about 1". The transition from the $3/8$ " round stock to the flattened tip is about $3/4$ " long. See figure 8 for details.



Figure 7: Combination slot-punch drift

Next, form a V over a 90° swage block and while you are at it, extend the V by scoring the round portion of the bit; see figure 9 for details. Bend the bottom bit by first bending the V you formed at a fairly tight 100° angle, then bend the next portion to a semi-circle of about 2" diameter. Finish the bending operations by a fairly tight 100° bend where the reigns begin. This last bend should be similar to that of the top bit. See figure 10 for details.

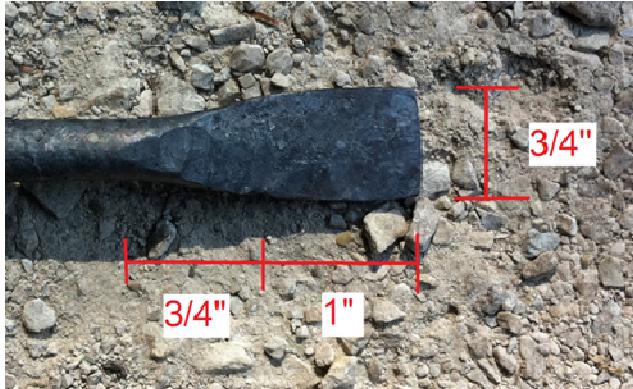


Figure 8: Business end of bottom flattened



Figure 9: Bottom bit end formed

Now is a good time for some file work. The back portion of the bit, i.e. the portion that was merely scored, now needs to be filed to a V. The V has to extend over the entire length of the bottom bit, such as shown in figure 11. The bottom bit needs to have just two contact points, one on each end. In other words, it needs to be slightly concave. This way, with the top bit meeting up in the center of the lower bit, you have just three contact points, ensuring a tight grip.

The next couple of operations are the same as for the top bit: flatten the bend, slit and punch a hole for the rivet and drill it to size. Next, cut the forged piece in the center between the two rivet holes and draw out the reigns to your preferred length and shape. For your reference, mine ended up 13" long, as measured from the rivet hole.



Figure 10: Bottom bit bent to shape



Figure 11: Bottom bit filed to V

Assembly. Using a $\frac{1}{4}$ " rivet, dry-fit the tongs and based on it, ensure that the two bits line-up. Next, cut the tip of the top bit to size and file a V notch into it. See figure 3 for details. Punch a $\frac{1}{4}$ " hole in a small piece of cereal box cardboard, heat the rivet and assemble the tongs, placing the piece of cardboard in between them. Once the rivet is set, burn away the cardboard and gently tighten up the rivet as needed.

Handy Vise Tooling

By Brian Gilbert

This design for vise tooling was sent to me by Phil Rosche in Summerville, South Carolina, and would be just the thing for upsetting round stock. With a little imagination, the same basic principle could be used to hold several different sizes of round or square securely in the vise while working it hot with minimal scarring.

The main elements are a couple pieces of angle, about $1/4" \times 2"$, two pieces of $3/8"$ steel for pads, and some thin stock for the spring. There are probably several different ways to make this type of tool... here's how I did it.

I started with a bar of $1/2" \times 1"$ for the jaws. I fullered the bar at 5" and folded the bar back on itself. Then I took another heat, shoved some stock in between the pieces, and hammered them together in a treadle hammer until they were almost closed, leaving perhaps a $1/8"$ gap. If you leave too big a gap, then the jaws won't effectively grip, but if you close the gap all the way, the piece will slip in the jaws. You can make several different impressions for different sizes of stock, both round and square.

Remember to leave about an inch at either end for the springs. If you are making the tool to hold square stock, then be careful when pressing the stock into the jaws... it will attempt to rotate away from you as you hammer. Hold it with vise grips, and try to start it as nearly perpendicular (on the edges) as possible.

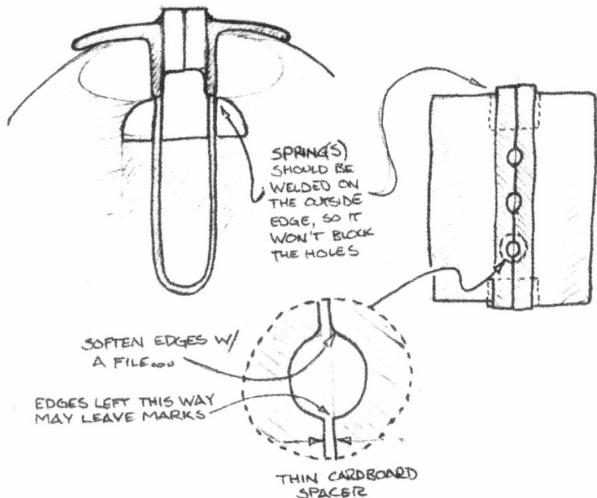
Next, I clamped two pieces of angle iron into the vise with the fullered jaws in between and tack welded the jaws to the angle iron. I then warmed the whole assembly in the forge, and welded the jaws. I then got the whole thing hot, clamped in the vise, and hammered the angle iron down to conform the tool to the vise.

Now I welded springs to the tool, using a piece of $1/8" \times 3/4"$. I used two springs, but one may work just as well.

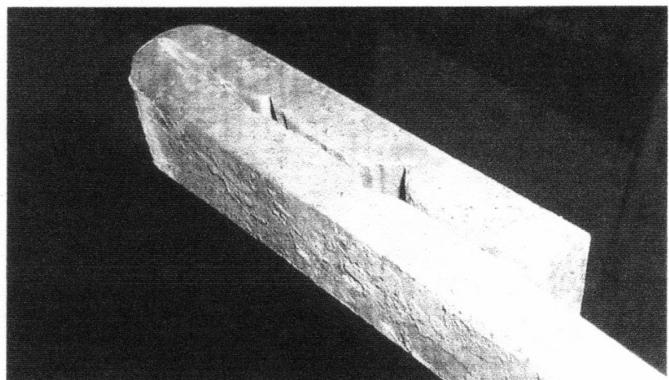
The last step was to cut the jaw free of the bar with a chop saw. I cut off the fullered end first, then trimmed the other end. I did it this way so that the jaws would stay in close registration. You need to dress the tool by grinding or filing away the raised areas on the jaws.

If you plan on using this tool for round stock only, then you can machine the jaws cold and get a better fit. Space the jaws with a business card and drill for the correct size of stock. This method leaves sharper corners, so you'll need to soften these with a file.

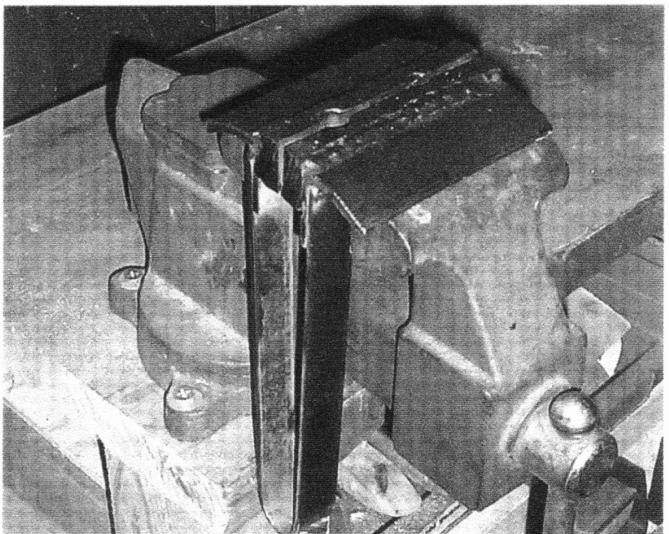
Conform the angle to your vise by heating it up, clamping it in the vise, and hammering down until you get it to lie fairly.



Vise tooling with drilled holes



Forging the vise pads



The completed tool

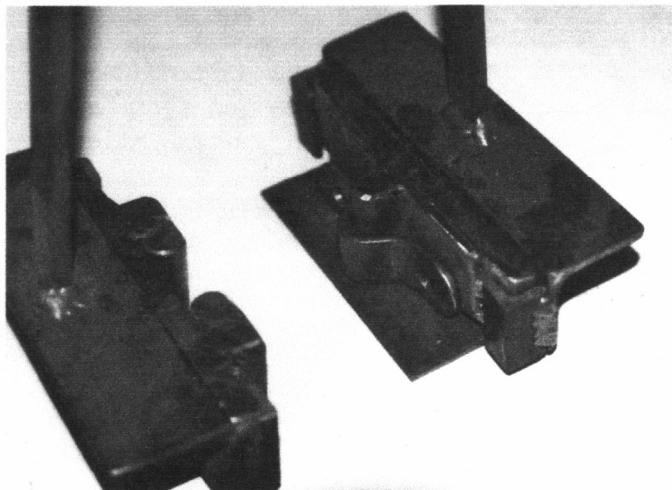
Reprinted from *The Hammer's Blow*
Winter 2002

Vise Tooling, Version Two

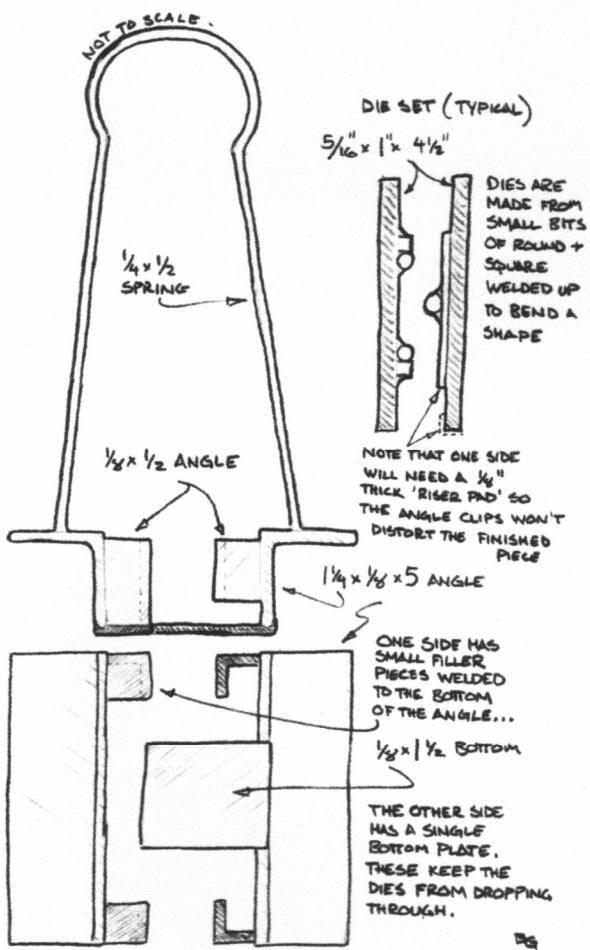
By Brian Gilbert

Along a similar vein to the tooling on the preceding page, this vise tool was designed by Mary Reid Gioia of Black Dog Forge in Seattle, Washington, who recently hosted the ABANA board meeting. Mary is the "Tool Queen" at Black Dog. (She showed me several neat designs that I'll present in upcoming issues.) This tool uses the vise as a mini press to make repetitive shapes using drop-in dies. These dies made small clips and collaring pieces that Mary used in her iron jewelry, but there are lots of uses for this type of tool.

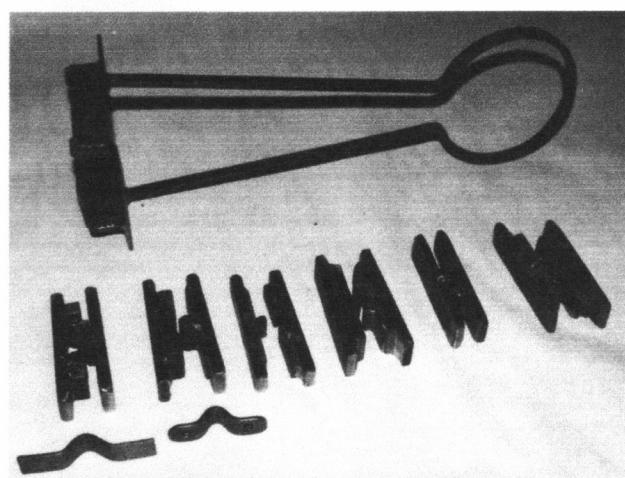
While exact stock sizes can be changed to suit, Mary's die holder was made from two pieces of $1/8"$ x $1\frac{1}{4}"$ angle. The tiny side clips that hold the dies are $1/8"$ x $1/2"$ angle. It's important to note that some of Mary's dies had a $1/8"$ pad added so that the work being formed would clear these side clips.



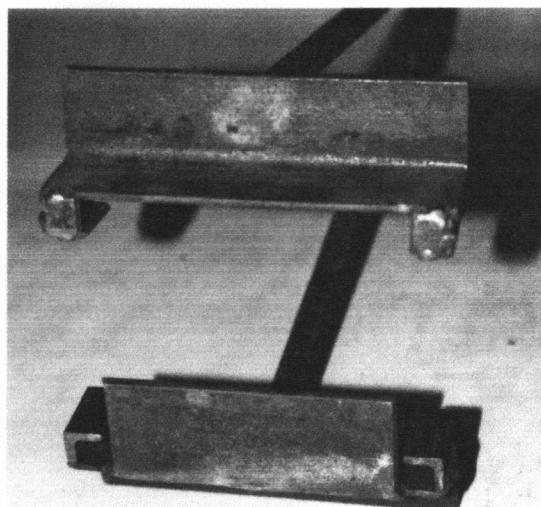
A die in the holder, and the piece it was designed to make



Reprinted from *The Hammer's Blow*
Winter 2000



Mary's die holder and dies



Bottom detail-note the filler pieces to keep dies from dropping

IBA Member Shop Destroyed in Fire

My name is Alan Brazzel, I'm an IBA member through Bumkun Valley and Southern Indiana meteorite Mashes. On June 04, 2012. I lost my blacksmith shop and all equipment due to a fire. I am trying to get things together to rebuild and restart the shop. A few years ago I became disabled due to spinal injuries, this is making this task almost impossible. Several fellow members have offered help and I greatly appreciate the kind outpouring from the blacksmith community.

I was asked to set up a donation link for monetary contributions and I have done so through PayPal.

I know it's asking a lot in these hard financial times but with out help I simply cannot start over. I teach a lot of youth and merit badge counsel the boy scouts to help keep the knowledge of blacksmithing alive and well. I have been doing this for the past 15 years. Thank you for any help you can provide in getting this out to our membership.

God Bless
Alan Brazzel
5784 S Owensburg Rd
Springville IN 47462
Home...812-863-4733

donation link <https://fundrazr.com/campaigns/1KNC8>





The **FORGE FIRE**

Newsletter of the
Indiana Blacksmithing Association,
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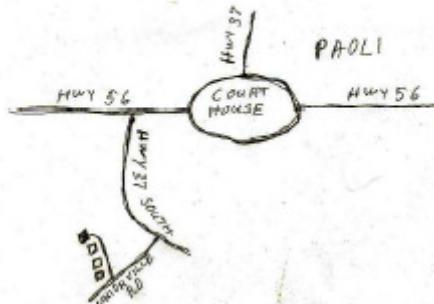
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First Class Mail

July 21 Hammer In Southern Indiana Meteorite Mashers

Steve King's Shop
1155 S Unionville Rd
Paoli, IN

Home of Steve King



August 18 Hammer In One Armed Blacksmith Shop

The Henry Breeding Farm
13730 North 100 West
Edinburgh, IN

Directions: I-65 take exit 76-B (US-31 North toward Edinburgh). About 3/4 of a mile turn right on CR 800 N. Turn left on CR 100 W. The Henry Breeding Farm will be on the left. Park