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.

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.

Oct 20 2018	**JENNINGS COUNTY BLACKSMITHS VERNON, IN**
Nov 17 2018	**TBD**
Dec 8 2018	**DON REITZEL'S SHOP (2ND SATURDAY)**
Jan 19 2019	**TBD**

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Dates to Remember

Oct 20
IBA Hammer In
Jennings County

Dec 8
IBA Hammer In
Don Reitzel's Shop

Editors Message

I will start out by saying I do not have any real news this month. I have been focused on the old 9-5 (actually 6-5) routine and have not networked with the blacksmith community. If you have news to share, please send it my way. Alternatively the IBA Facebook page has new information posted every day.

At this time there are two scheduled hammer ins left this year. The October 20 hammer in will be hosted by the Jennings County satellite. The December 8 hammer in will be hosted by Don Reitzel. The December hammer in will be on the 2nd Saturday.

If you are looking for an anvil or cone anvil, Chupp Auctions has a pretty good selection coming up on October 25-27. The anvils are scheduled to sell on Friday, October 26. Items are available for on-line bidding, so you do not need to be present. More details and a link are available on page 4.

On page 4 & 5 we have some useful information from Jeff Reinhardt. Jeff has written a number of articles on different topics based on his experience in industry. This month's article is on proper glove selection for the task. Look for more from Jeff in future editions.

Artisan Ideas asked me to review a new book offering of theirs "Secrets of the Forge". This is a project book, originally published in Europe, now translated to English. This book targets beginner and intermediate skill levels. It is a companion to "The Blacksmith's Project Book: Intermediate & Advanced Projects from European Masters". The book offers a number projects that I will want to refer back to. The copy sent to me for review will be placed in the IBA library. That means I will be buying a copy for my personal book collection.

As we are approaching the year end holiday season, this edition includes several small item projects that fit into a gift giving theme.

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 Hoopengarner (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

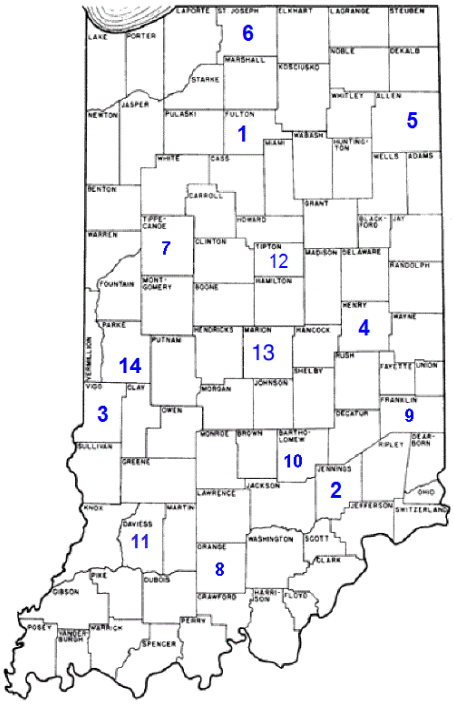
6) St. Joe Valley Forgers
Meet: 4th Saturday at 9 AM
Contacts: Bill Conyers (574) 277-8729
John Latowski (574) 344-1730

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



Bunkum Valley Metalsmiths

The Bunkum Valley Metal smiths met Saturday October 6th. We had a smaller crowd than usual but we had two new visitors who plan to join and come again next month. They were able to watch a chain being built link by link. The power hammer was in use and there was a lot of good camaraderie. We had two good days at the White River Valley Antique show before the show was rained out. This is a great group of men, women and youth who look forward to our monthly meetings. All are welcome to attend the first Saturday of each month starting around 9am. We have a pitch in lunch around noon and the food is always good!

IBA Satellite Groups and News (continued)

Jennings County Historical Society Blacksmith Shop

The Jennings County Historical Society Blacksmiths met on the 8th with Jack Neukam leading off by crafting a heart hanger. Russell Ray Dean followed suit by starting one of his own. Alex Spellman tried out the 50# hammer and saw the potential of this amazing hammer. Charlie Helton was working on what seemed to be another version of the heart hanger, while Alex toiled with a 1/2" "S" hook . We had 14 who signed in, others may not have. We took advantage of our new addition, which has been a blessing to our growth. We also had a good iron in the hat. Come next month with more treasures and a pocket full of money! Paul Bray

Large Auction with Anvils and Other Blacksmith Items

Chupp Auctions presents our 3-Day Antique & Advertising Auction on October 25, 26 & 27! Featuring 40+ anvils selling Friday evening starting at 4:30 PM along with several cones, swage block and multiple hardies.

Lots of other farm primitives and advertising as well! To see the full listing for all 3 days, go to www.AuctionZip.com (Auctioneer ID#11841) or www.Proxibid.com. Held at the Chupp Auction Center, 890 S Van Buren St, Shipshewana, IN 46565. 574-536-8005 or 260-768-7616 for info.

A BIT ON GLOVES

By Jeff Reinhardt

Having about 35 years of factory experience with either safety as a second task or as a primary task, lets discuss gloves. I have worn gloves in factories since 1970. I wore them in the military. I wore them skydiving and as a pilot and jumpmaster. I have worn them as a welder. I have worn them as a chemical response worker and as an asbestos abatement worker. last but not least I have worn them as both a blacksmith and in industrial forge shops. I have specified them and bought them for big factories where the budget for gloves was $100,000+ per year. That said, I do have some little experience with gloves. I have worn the terrible rotten no good worthless gloves that some purchasing manager saved "a ton of money on". I have worn good proper fitting gloves.

Most of the myths about gloves being dangerous came from bad glove choice and ill fitting gloves. I will say it is not a myth that one should not wear gloves when running lathes, mills and drill presses. Anything that has that much torque and exposed rotating parts is a glove no go.

Lets talk a bit about choices. I see folks wearing latex exam gloves for oily greasy work. Poor choice as they are attacked quickly by many oils and fail and then fail to protect. Nitrile exam gloves would be the choice there. And you can find this info out by googling glove material chart for chemical compatibility

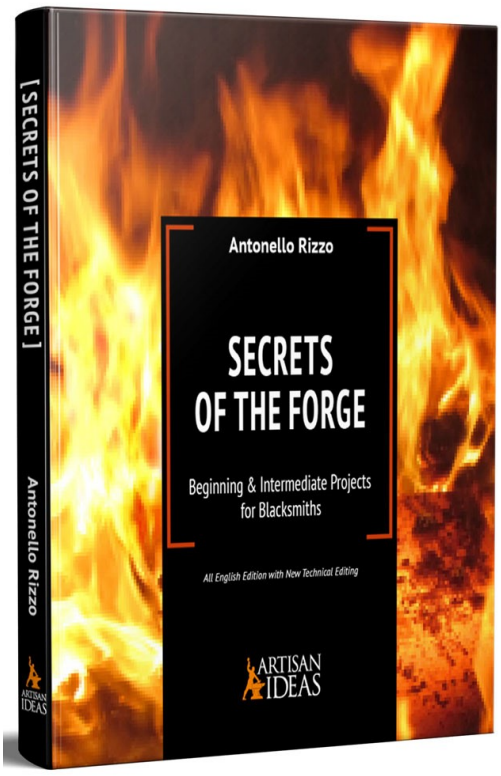
Lets talk about knit gloves. Many gloves are a type called String Knit. These are knit from yarn somewhat like a knit sweater and have that open weave appearance. While these are a cheaper glove they have no chemical resistance since the chemicals can go straight thru the open weave, they can offer a bit of cut resistance. They, even in a high temp material weave would be a poor choice for forge welding as the flux will go right thru and if above 800F,and it will be well above 800F for welding steel the Kevlar decomposes and you have a bad burn. Great cut resistance, but no chemical protection. A leather palm on a string knit Kevlar glove is a great cut and abrasion glove. I once worked in a stamping plant where the edges were extremely sharp. The operators wore 3 pair of cotton poly string knit gloves for cut resistance. They tossed then at every break and in so doing used 12 pairs of $0.17/pr gloves a day. The poly melted to them when the got a weld spark, and they were tossing them as they were so cut up after 2 hours the hands were still getting cut. Replaced with a cotton Kevlar "Oven Mitt" that cost just under $3.00 a pair. No more cuts, the cotton content was enough to stop weld sparks before the Kevlar decomposed, and most could get 3 to 5 days wear. Now one hand surgery avoided would have paid for the difference but they lasted so long that they were quickly adopted.Owners were happy as their workers comp cost was lowered and their people were not being hurt. They also liked that several drums of gloves a day were not going to the landfill. The people liked them as they could now work their shift and not be cut or burned and ohh by the way their arms and hands were less tired since they were not trying to grip smooth sheet metal thru 3 layers of fluffy gloves. The cotton content also reduced that hand in a plastic bag feeling of straight Kevlar.

Lets talk about welding gloves. Stick welding calls for Gauntlet type gloves and Chrome tanned leather for its resistance to heat and sparks. Now many wear TIG glove of goatskin or pig skin and they are nicely soft and supple. They also are the wrong material and don't have the insulation to protect from stick welding. They quickly get burn holes.For stick welding, you just spent a ton of money for the equipment and rods, and probably have a nice helmet. Don't buy the cheapest gloves at HF. Buy a name brand, glove that fits and you hands will thank you after a long spell at the welder. TIG gloves are great for that. Light MIG and you tig gloves are only OK. Heavy MIG at bigger wire sizes/amps and you will be wanting those good stick welding gloves.

By now you are wondering what I am going to say about forging gloves. I advocate a glove on the tong or holding hand for cut and abrasion and scale pop protection. I do not advocate a glove on the hammer hand. Increases you grip requirement, and that is usually the last thing you want on your hammer hand. So what kind of glove for that holding hand. I prefer a leather palm glove. You can get a decent Leather palm glove for about $1.25 a pair by the dozen. They have a cotton back that will nicely shed scale and flux. The leather palm protects from cuts and a bit against vibration. and gives a heat protection if CHROME Tanned. This is the one place where I recommend cheap gloves and say get them about one size big so when you goof up and grab something very hot you drop the hot steel and sling the glove off as it is shrinking and getting stiff and you will have at most a mild 1st degree burn. Why the cheap ones? so every time they get stiff from a hot metal contact, or a burn on the canvass back or the stitching fails they can be trashed before you get an injury thru the hole.

And what kind of glove does a skydiver wear? I was a demo jumper for the military and we jumped smoke grenades mounted to our feet. Sometimes the grenade would melt the can seam and spray pyrotechnical smoke (Very HOT!!!) on your foot or leg. If over open country you cut away the mount and the grenade fell away. Over the crowd, no cut away. So you removed the mount from your foot and held it by the straps as you flew the wing parachute over a safe to drop area. I wore rabbit leather gloves with rabbit fur lining to protect against cold at altitude and heat if... They also had to be supple enough to allow pulling the rip cord and cutting away the main parachute in a malfunction. Lot of conflicting requirements. And when I had that run away grenade over a large crowd, I destroyed those gloves. 2 to mild thirdish burns to my hands and fingers, but I could not have held that grenade until clear to drop otherwise. Ruined them and kept my hands. Good trade.

Secrets of the Forge from Artisan Ideas



Artisan Ideas (https://www.artisanideas.com/home.jhtm) has published a re-edited version of Secrets of the Forge. The book is originally written in Italian by author Antonello Rizzo, and has been translated to English by Jim Blaho.

Secrets of the Forge is a project book intended for beginning and intermediate blacksmiths. Antonello Rizzo also authored The Blacksmith's Project Book: Intermediate and Advanced Projects from European Masters, which was reviewed in the March 2018 Forge Fire (and copy added to IBA Library).

This is a project book, not a skills development book. A given project may call out a 2" taper. The book will not walk you through how to make a taper. Much of the book is devoted to what I would call elements. Elements are the forged items that can be assembled to create a larger, more intricate work. Examples of elements shown on this page are the basket twist and the volute scroll.

The basic elements are separated into sections on:

- Finials, Ornaments, Twists and Scrolls
- Flowers and Leaves
- Birds, Bugs and Mythical Creatures

The last third of the book is devoted to larger projects with architectural and home décor themes.

In the realm of blacksmithing, understanding and using elements is extremely powerful. The large group projects are almost entirely based on bringing together different elements. Combining scrolls, twists, finials and organic elements can bring a project to life. The simple volute scroll is a good example. "C" and "S" scrolls can be very appealing to the eye, but in general they work to balance positive and negative space in 2-dimensions. The volute scroll flows in 3-dimensions, which adds depth to overall project.

This book is a fast read and something I want on my bookshelf for future reference. As projects arise, I want to look for those elements that will elevate a project from just functional to truly desirable.

Challenging Bottle Opener

Jim Pepperl

(Photos by Jim Pepperl)

This little opener came from Jerry Hoffmann's "Blacksmith's Journal" (I highly recommend his series as a resource). Unfortunately I have long ago lost that page; it's in a file, somewhere in the shop. The original size of stock that Hoffman used was ¼" x ¾", which I found a bit petite after all the forging. The instructions were to punch a ¼" square hole, hot cut three legs, poke the middle one through the hole, forge weld the outer two into a loop and scroll the opposite end, then make a little lip on the end of the post sticking through the bar. Jerry makes wonderfully elegant drawings that look like it would be so simple.

My process is similar to his with a few adjustments and a lot of 'fussing'. I've intentionally made these look confusing with both the scroll and the loop having the false appearance of a function and vaguely resembling commercial openers. One of the problems with small objects is how to hold them for the series of forging operations; this is my solution with this little opener. So let's begin: **(photo 1)**

- Forge ¼ x 1" to 5/16" x 13/16". This dimension gave me the "Goldilocks" size for what I wanted it to look and feel like. It also provides a little extra material in the three legs for errors in cutting. I work the first set of operations on longer bars making it easier to do; with one on each end of the bar. Once the process has been "discovered" multiples saves time.

- Lay out for a ¼" slit and drifted hole at 2 7/8" and a cut off line at 4 5/8" from the end of the bar. Center punch these points and forge the little ¼" hole.

- Lay out lines for the saw cuts, I use ¼" key stock placed against the edge of the bar and trace that. Stop the saw cuts at 9/16" from the ¼" hole. I try to make the outer legs slightly wider at the top and narrower at the bottom. I use a portable band saw for cutting. Hot cutting works but alters the dimensions.

- Bend the outer legs to 90 degrees left and right. Forge the center leg square then bend it 90 degrees vertical, in this position I want it to measure 2 5/16" from the bend. This dimension gives me a minimum of 9/16" protruding through the bar after I loop it through the hole. This may vary depending on size of loop. Consistency is important.

- Clean up the saw marks on the two outer legs, leave as much material as possible toward the ends at the weld, bevel ends for welding.

- Poke the center leg through the hole.

- Loop the outer legs and weld, grind and file. There is plenty of material in the lower part of these legs to stretch

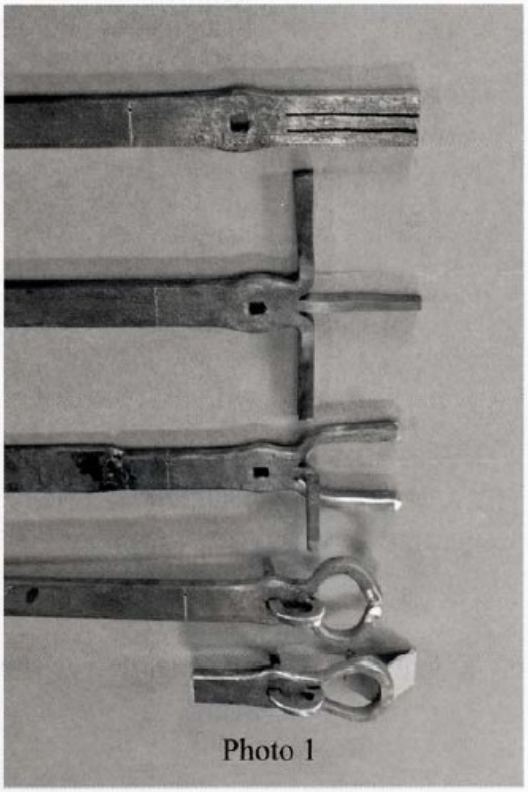


Photo 1

Photo 2

them for a forge weld lap if you have that skill. An inferior electric weld will show up later so make sure it is clean and 100% weld.


Photo 3

• Shape the loop, this is easier after the weld, pinching the crotch area with a rounding hammer and the anvil horn. After I've got the shape I want, I remove some material from the outside of the lower part of the legs to thin them and balance their size from crotch to half way around the curve.

• Cut off at the marked length (4 5/8"), this takes you to the last step (**photo 1**). Now fishtail and scroll the end (**photo 2**). The width of the fishtail is about 1 5/16" and 1 ¾" long measured from the protruding center post. Note the tongs in **photo 3**, flat jaws with a curved welded backstop slightly thinner than the opener loop. This was my solution to holding the little part. I've successfully done the scroll using a locking pliers, but do not recommend that for multiples of these little critters, there is insufficient mass and leverage to back up for forming the scroll. It's hard on your wrist. I use a rounded hammer to roll the scroll to accentuate the natural curve as it is rolled and I do not hit the outside edge of the scroll, only the center area. Because of the short stocky nature of this scroll and the small size of the part it tends to be a little difficult to get a 'nice' shape.


Photo 4

• Now it's time to finish the top loop (**photos 4 and 5**, again, note the tongs in **photo 5**). I frequently use this style to hold hinge barrels to work the strap ends. They are quite handy for holding odd shapes and also flat bar.) I pull the top of the loop out with a cross pein to increase the width then finish with a rounded hammer and fade the chamfer down the length of the leg. The loop is then bent over a 2" diameter mandrel or the anvil horn and a compound curve added with the swage block. A dome tool could also be used for this last curve, it's a small detail, but I find it important (**photo 6**). The finished profile should be a pleasing ogee curve from loop to scroll.

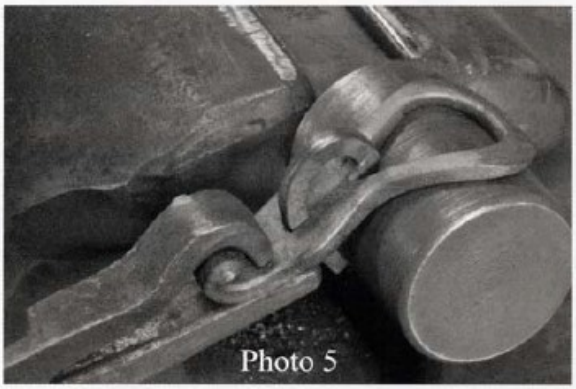


Photo 5

• The last forging step is to form the bottle cap "lift" on the protrusion of the center bar. Grab the small loop in the vise, heat the tip of the bar and 'mash' it down on a piece of 5/16" flat stock (**photo 7**). This is a simultaneous bend and upset. File to shape, the edge should be fairly sharp, then heat and bend the very small lip at the edge to create a catch point (**photo 8**). I use a ½" die grinder burr to make a radius indentation. I tell myself they work better that way. The original Hoffman version had a very simple lip which also functioned (**photo 9**).


Photo 6

• Final step: heavy sanding and hot wax.

This 2-1/2 page article reprinted from The Anvil's Horn November 2016


Photo 7


Photo 8


Photo 9

Pick a Card...Any Card!!!

By John Elder

This item can be used as a business card holder, recipe card holder or a cell phone holder! John saw this idea and customized it in his own way. Because this project is made from one piece; it is a good project to demonstrate or for a beginner.

Start with a 7-1/2" long piece of ¼" X 1" flat bar. Drill or punch a ¼" hole, located 3-5/8" from one end, centered on the width. Split the bar along center up to the hole. (Top Photo, Right)

Draw out the two split legs to ¼" diameter and taper the ends, until you have at least 8-1/2" of leg length. (I added a leaf ornamentation to this example.) Hammer a nice chamfer around three sides on the top edge of the flat section.

Scroll the first 4-1/4" of the legs (down from the top face), then reverse and bend the legs up to their final position. Adjust the legs for straightness, wire brush and finish to suit.

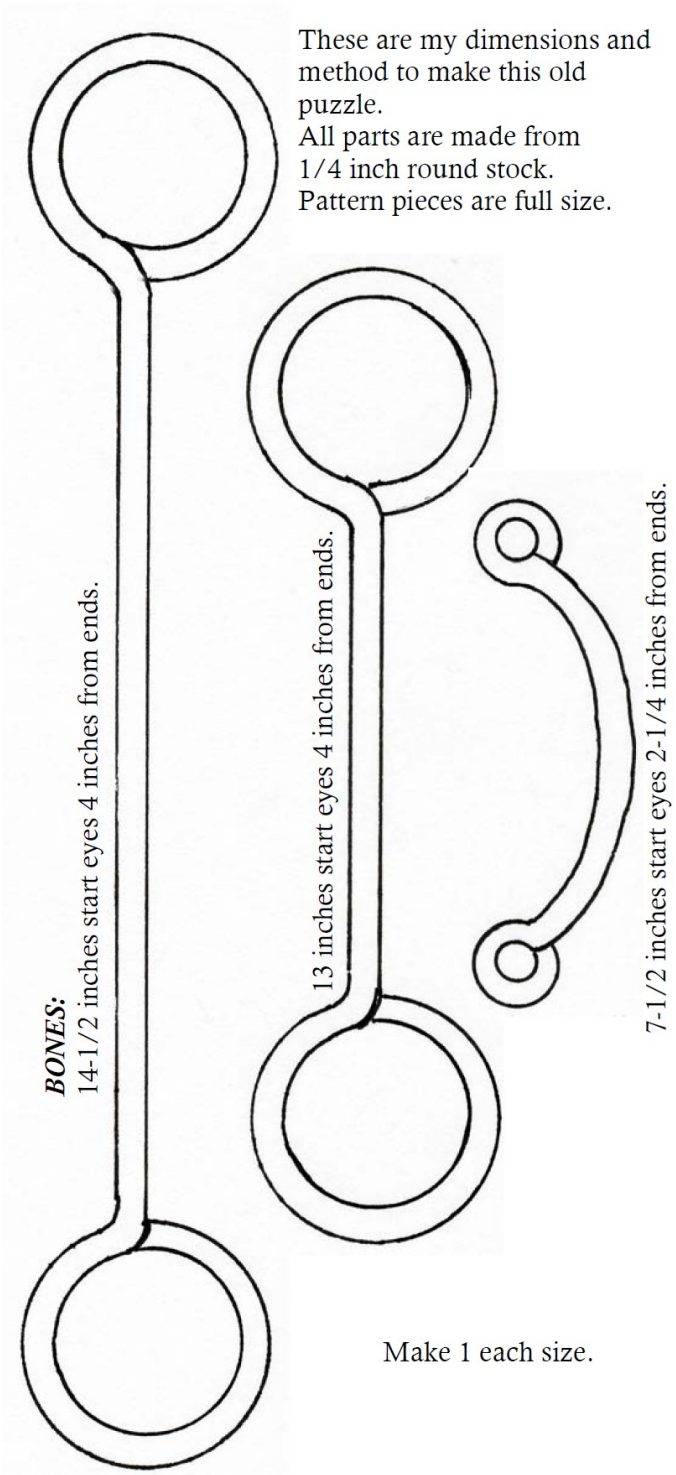
This article reprinted from the September 2018 edition of the Pittsburgh Area Artists—Blacksmith Association newsletter

Editors Note: This article has been re-sized to fit our page format. The patterns shown may not be full size

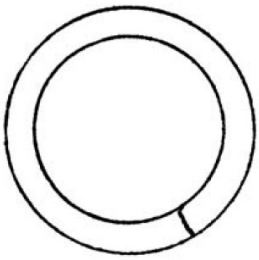
The Dirty Dog Tavern Puzzle

Project drawings and write up by Steve Anderson, A MABA member

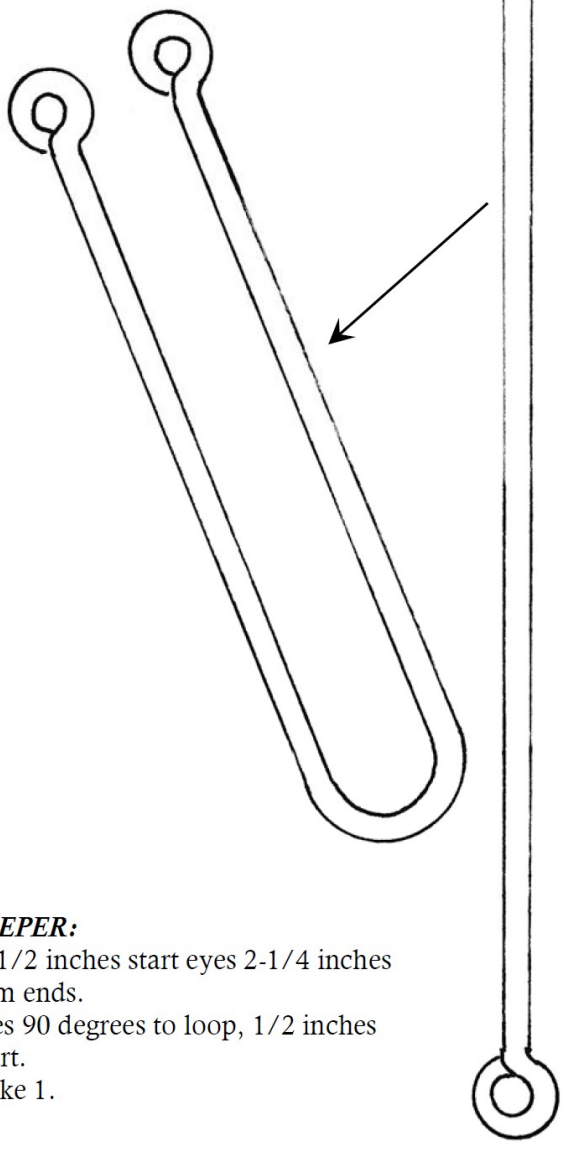
These are my dimensions and method to make this old puzzle.
All parts are made from 1/4 inch round stock.
Pattern pieces are full size.



Make 1 each size.



RINGS:
Wrap 1/4 inches stock around 1" (ID) pipe, and cut with hacksaw. Flatten and close rings.
Make 5.



KEEPER:
17-1/2 inches start eyes 2-1/4 inches from ends.
Eyes 90 degrees to loop, 1/2 inches apart.
Make 1.

Cutting stock to make rings.

ASSEMBLY:
Use a Crescent wrench to open and close the rings held in a vise and assemble all the parts cold.

FINISH:
Hot wax or wire wheel. Apply Penetrol and three coats of wax.

THE PUZZLE:
This puzzle requires two operations to remove the keeper and also to replace it.

Blacksmiths are excellent thinkers and problem solvers. If you find this puzzle difficult, you probably are not spending enough time in your shop.

The Dirty Dog Tavern Puzzle

Half way off-

Half way on-

This article reprinted from the July-August 2018 edition of the Michigan Artist Blacksmith Association newsletter

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

October 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.

Pitch in lunch.