

July 2018

## BOARD OF DIRECTORS

### Gary Phillips '22 President:

14800 N SR 167 N  
Albany, IN 47320  
(260) 251-4670  
behere@netdirect.net

### Steve King '22

1155 S. Paoli Unionville Rd  
Paoli, IN 47454  
(812) 797-0059  
kingstephen228@gmail.com

### Bill Conyers '19 Vice Pres

50964 Lilac Rd,  
South Bend, IN  
(574) 277-8729  
billconyerssr@yahoo.com

### Bill Newman '19

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

### James Johnston '21

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

### John Bennett '21

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

### Jeff Reinhardt '20

2810 W. Riley  
Floyd's Knobs, IN  
(812) 949-7163  
ptreeforge@aol.com

### Dave Kunkler '20

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

### Librarian:

Larry Rosentrader  
8715 E. 375 N  
Churubusco, IN 46723-9501  
260-693-3267  
lrosentrader@gmail.com

### Editor:

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

### Treasurer and membership secretary:

Farrel Wells  
8235 E 499 S  
Dunkirk, IN 47336-8807  
(765) 768-6235  
flwells@frontier.com

### Awards Chairman:

Charlie Helton  
2703 South Water Plant Road  
Westport, IN 47283  
(812) 591-3119  
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*.

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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.

Jul 21 2018	JIM CLAAR'S SHOP NEW LISBON, IN
Aug 18 2018	TBD
Sept 15 2018	TBD
Oct 20 2018	TBD



### INDEX

PGS 3-4  
SATELLITE NEWS

PG 5  
DEMO LEAVES

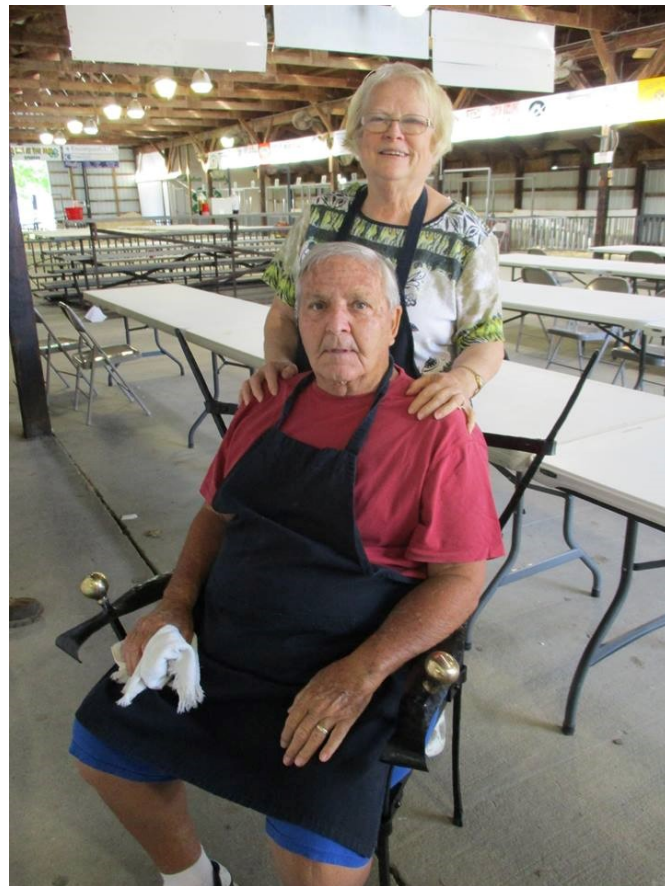
PGS 6-7  
CHASING AND  
CHISELING

PGS 8-11  
GAS WELDING

## Editors Message

This month we will have a very special hammer-in and tailgate sale at Jim Claar's shop in New Lisbon, IN. The last time the IBA met at Jim's shop was 2014. The shop was originally a school gymnasium. It is huge and Jim has filled it with tools of all sorts. Some of the most interesting items are of Jim's own creation. Check the December 2013 Forge Fire, for an article Michael Wolloski wrote on a mechanical power hammer that Jim had built. It will be an interesting day. The event specifically includes tail gaiting, so bring something to sell and plan to take something home. Lunch will be on your own. There are several fast food restaurants at the I-70 interchange just a few minutes away.

Our IBA Conference caterers  
Butch and Caroline  
(photo courtesy of Beverly Robertson)



### **Dates to Remember**

July 14-15  
Power Hammer  
Class at Jennings  
County Blacksmith  
Shop

Aug 3-19  
Indiana State Fair

IBA website: [www.indianablacksmithing.org](http://www.indianablacksmithing.org) IBA Facebook page:  
[www.facebook.com/groups/IndianaBlacksmithingAssociation/](https://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

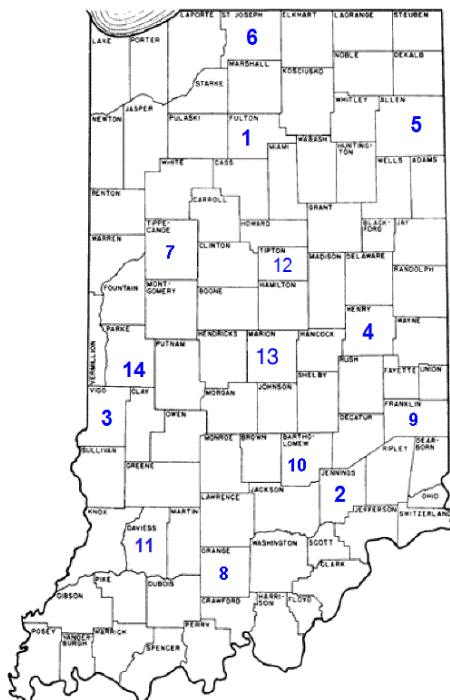
Meet: 1st Saturday  
 Contact: Tim Metz (812) 447-2606

### 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



### Meteorite Mashers

The Mashers met at Jeff Reinhardt's shop in Floyds Knobs this month. Smaller crowd as it was over 100 heat index and several member had family health issues. Steve King taught tong making and boy does he make it look easy. Several of our members took home tongs they made one half of. Steve makes one half to show how and then has the student make the opposing half. Roxane Reinhardt brought a big crock pot full of spaghetti and meat sauce up to the shop for us to feast on. Very good iron in the hat, and it seems as the day got hotter we spent more time sitting and drinking water then forging although Steve and his students stayed at it.

Next meeting will be at Steve's shop in Paoli.

## IBA Satellite Groups and News (continued)

### One-Armed Blacksmith Shop

The One Armed Blacksmiths July Meeting was held at the opening Day of the Bartholomew County Fair.

Steve King and Jeff Williams were our Special Demonstrators. I encouraged Steve and Jeff to use 4H power for as much of the work as possible throughout the demonstration. Utilizing 3 different striking teams made up entirely of 4H kids and one team all-female. The team upset the head of a very large tack. After that was complete the team opened up a Fredericks Cross.



Steve and Jeff were clearly experts working with the 4H kids. Guiding them through the entire process. I had the privilege to be able to stand back and watch as the striking teams talent was developed by Steve and Jeff's gentle leadership.

Many new friendships were made and the kids will never forget this day. The knowledge shared with these kids is what we are there for and Steve and Jeff did an excellent job. Plans for next year are already being planned.

Thanks to all who made this day possible.  
Tim

### Jennings County Historical Society Blacksmith shop

#### Power Hammer Class

The Jennings County Historical Blacksmith Shop will be hosting a power hammer class on July 14 and 15. The class will be taught by Kurt Fehrenbach. The class will be held in the newly expanded shop in Vernon, IN. Topics will include: Hammer safety, dies and tooling, techniques for completing various functions. Cost is \$25 per person in advance or \$35 per person at the door.

For advance registration contact Charlie Helton at (812) 591-3119 or email: [heltoncs@frontier.com](mailto:heltoncs@frontier.com).

Lunch will be pitch in or local restaurants. For accommodations, North Vernon has a Quality Inn and there are 4 hotels at the I-65/US50 interchange in Seymour.

We will not have our normal open forge on July 14.



# Transformer!

*By Don Pfaff*



For those individuals that do demonstrations for the public, there is always a need for some quick and easy projects. Transforming a common horse-shoe nail into a botanical element can be a way to get the attention of visitors. Use a 3 1/4" horseshoe nail, this one was made by Capewell and also made in USA. It is a RH 12. Heat the head, hammer into a fan shape, forge the length, carefully soften the point, and scroll. This decorative element can be adjusted to wear on a chain, fashion as a book mark, or use your own idea.

Ginkgo biloba also known as the Ginkgo tree or Maidenhair tree, is the only living species in the family Gingoaceae, all others have been extinct. It is the oldest existing species in the world. In Japan, they are known to live 600-1,000 years. It is found in fossils dating back 270 million years ago, the time of dinosaurs. For landscapes today, they are known to adapt well to urban environment, tolerate pollution, and confined soil spaces. Another benefit of this tree is that they tend to lose all their leaves in 24 hours after a hard frost. In the Fall, it is a great advantage for raking up leaves. The leaves are fan shaped and are not identical, some have a split in the fan".



*Leaves are similar in shape but not identical. This allows for variety when demonstrating!*

Originally published by the Pittsburgh Area Artist-Blacksmiths Assn., Dec. 2017  
Reprinted from the May-June 2018 *The Upsetter*, Michigan Artist Blacksmith Assn

# A Primer on Chasing and Chiseling Work

By Jody Durham

At first glance, works using chasing and chiseling can look complex and intimidating to recreate. When in reality it takes a minor amount of skill to achieve decent results. The real secret is the labor and attention to detail to gain jaw dropping re-sults. As a beginner it is best to start with a simple design that will allow you to have a completed pro-



ject in a minor amount of time.

A candle holder designed by Mike LaMarre and inspired by a Samuel Yellen rosette is a great start-er project. You can complete the Candle holder using just a few tools, and will offer a good start-ing point on chasing in designs and chiseling the shape out.

The first tool you will need is the incisor/chisel. It has a very specific shape which is important to achieve good results. Minor changes to the geome-try of the edge can make big differences in the tools performance and quality of the end product. The best description of the edge is the profile of a canoe. Thicker in the middle and tapering to a thin edge on either end. The corners are rounded off which

helps achieve even results. The leading edge of the chisel cuts, the middle planishes and starts to push the material out of the way. With chasing the smaller the chisel width, the more detail is ac-quired, with a drawback of adding time to the project. I would recommend a chisel width of no

Chisel Profile

1/8 inch



Edge View

canoe shape



more than 1/8th inch for this project.

Most all traditional chased work starts with the pattern being glued on to the metal. The best glue to use according to Ernie Dorrill is normal rubber cement. The glue adheres easily to both the paper and metal and will burn off leaving no residue if needed. Once the pattern has been glued on, cen-ter punch the middle and drill a small hole to fit a machine screw. Now it's time to start your first pass on the project. A pass is considered one com-plete cover of chisel hits on all lines of the pattern. If memory serves, it may take 4 or more passes to cut out one piece on 16 gauge steel. With the first pass complete you can burn off the pattern or leave it on. I have seen little difference either way. Be aware of what is decoration and what is to be cut totally through. You can achieve what is called line weight by var-ying the depth of the chisel cuts on decoration lines i.e. hitting deeper into the material will give a wider line. Calligraphic writing is a good way of picturing what I am talking about. Once you've made 4 passes and you can hold up the work piece to a light source and can see light passing through in places, relief cuts can be made on a band saw and the part can be broken out of the sheet. If you have the prerogative you can completely chisel cut the design out without the relief cuts.

This article reprinted from the March/April 2018 edition of "On the Anvil" the newsletter of the Philip Simmons Artist Blacksmith Guild.

Note: drawings on the following page may be found full size on the Philip Simmons website under Classes and Notes



The second tool needed is a ball fuller. Basically a ball shape on the end of a punch. 9/16 diameter or similar will work fine. Place the bottom part of the candle holder face down on a stump and use the ball fuller to dome out the leafing to produce some depth in the design. Generally, you need 3 hits per leaf on the design to dome it out, one on each leaf point and one on the center.

The smaller rosette is done the same way with one added step. The center triangular leafs need to be pushed up and bent out to form a singular leaf.

The third and top layer is chased, chiseled out, and bent to shape to form a candle holder. A 7/8 inch round rod was used as a mandrel to form the cup of the holder. The tips are bent down to add design and character.

Once all the pieces are ready to assemble, bolt all pieces together make sure to pose the stack in a pleasing manner and finish with a coat of some type of protectant.

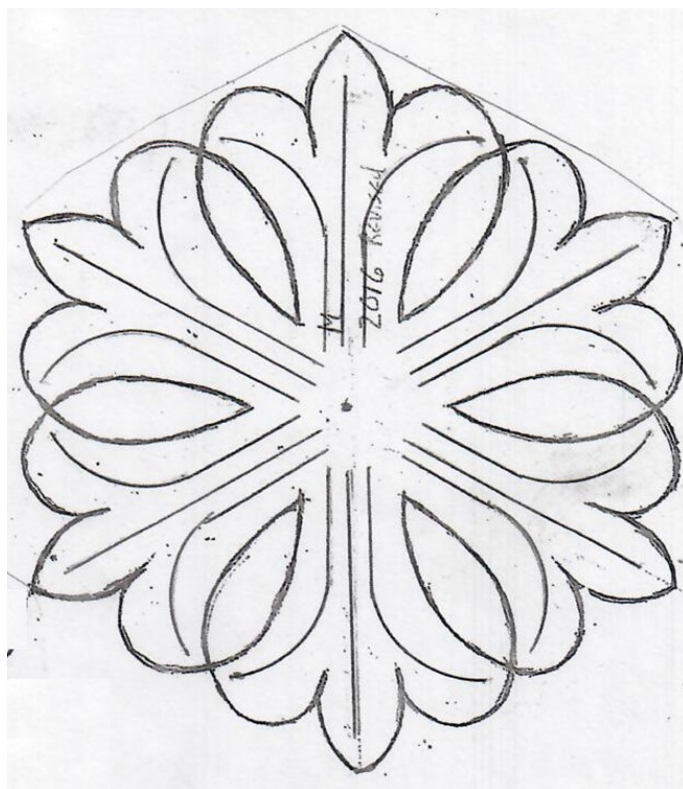
I would like to thank Mike LaMarre for his help and generosity in sharing his design and providing a pattern. I would also like to thank Ernie Dorrill and Clay Spencer for their Tireless efforts in teaching and sharing their knowledge.

Thanks also to the guild for the scholarship. Without our member's donations and participation, many of our group would not be able to receive such valuable training and knowledge!

## Candle Holder Pattern

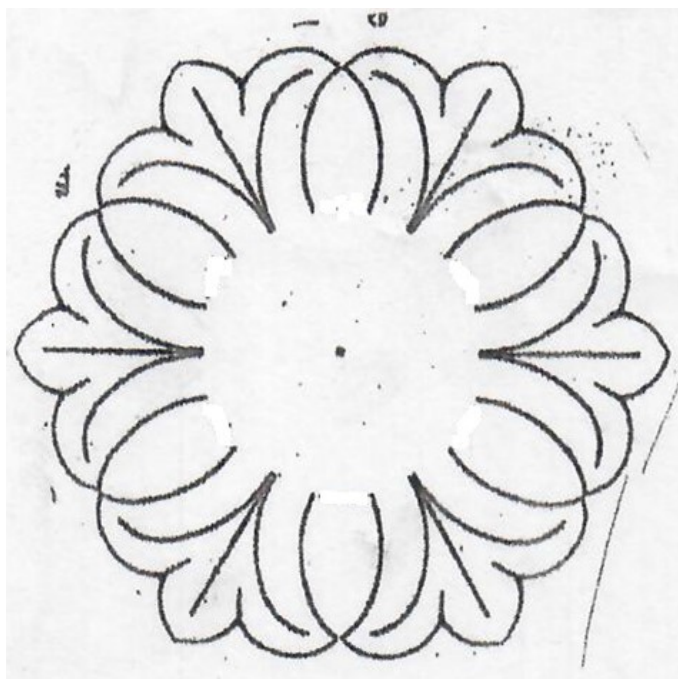
Base ( Part one)

Enlarge to 4.5", point to point"



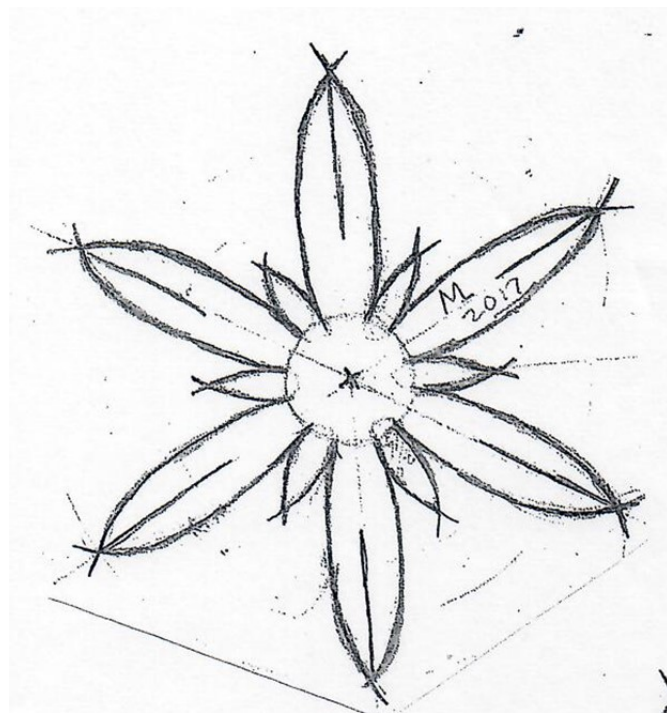
Top (candle holder piece)

Enlarge to 3 5/8", point to point



Middle ( Part 2)

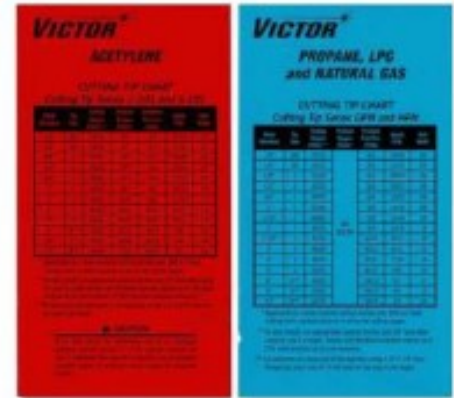
Enlarge to 2 7/8", point to point



## Randy Calhoun on oxy/acetylene setup, gas welding and plasma cutting.

### Oxy/acetylene setup

- First get the book on your torch set. Read it. At the same time pick up the free cards for your torch set that have all the information you need on pressures for cutting, heating and welding with acetylene, propane and natural gas.
- When mounting the gauges on your bottles turn the gauges up slightly. If the diaphragm fails the gauge will hit the ceiling.
- Turn the gas on slow and don't stand in front of the gauges. If the diaphragm fails on the oxygen the gauge will shoot out of its case with 2200 lbs. of pressure behind it. That's enough force to penetrate a human body.
- Set the regulator pressure with the gas flowing. The listed pressure is flowing pressure.
- Match the pressure to the tip size and the thickness of the metal listed on the free information card you get from your local welding store.
- Crack the acetylene valve, point the tip away from you and strike the lighter.
- Turn the acetylene up until the soot stops forming and the flame is still connected to the tip.
- Add a little more gas but keep the flame connected.
- Turn the oxygen up until the inner flame shrinks to a single blue flame with an outer bluish to orange flame. This is a neutral flame.
- A long white inner cone is an oxidizing flame—too much oxygen.
- Two inner flames with a light orange tip and a white outer flame near the second inner flame is a carburizing flame—not enough oxygen. The inner flame beyond the inner cone is an acetylene feather.
- The gas knobs on the torch often get bumped changing the gas settings. The fix is: with the gas off at the regulator or the tank, open the knobs on the torch a couple of turns and slightly tighten the lock nuts. A very slight turn on the lock nut tightens the valve knob so it won't easily move when bumped.



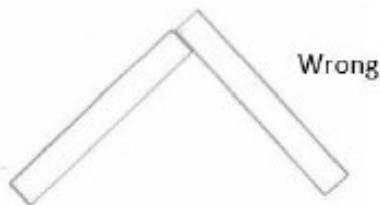
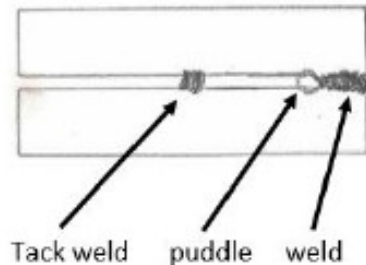
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Calhoon continued

### Gas welding

- When welding flat bars side by side, leave enough of a gap so that you can get good penetration between the bars: the width of the filler rod for bars less than 1/4". For bars 1/4" and over grind a bevel on the edges to be welded. Technically the included angle should be 60°. Tack weld in the middle to avoid pulling the bars out of parallel.
- Weld direction (when gas welding with a filler rod) is to push the flame/puddle.
- Start the weld from the right side (for a right hander) by forming a puddle—push the rod into the puddle and work to the left. Pushing the rod into the puddle is like "feeding the baby." Don't push the rod into the puddle too far (you'll gag the baby) and don't hold the rod above the puddle (the baby will scream) and the filler rod will drip.
- When welding outside corners don't over-lap the pieces—place them corner to corner and weld in the gap to get good penetration.



Wrong



Right

- When doing a T weld, aka fillet weld, set up a fixture or two to make the weld easy.



Jig 1



Jig 2

This fixture (right) is for finishing one side of the weld. It is easier to weld in a trough.



Jig 1 and 2 are for tack welding the ends. Use what you have available.

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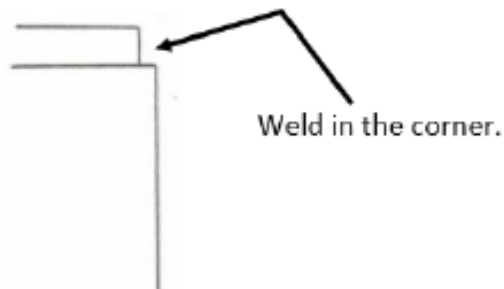
Calhoon continued

- When welding outside corners (i.e., a cap on a square tube) instead of cutting the cap the exact size of the tube, cut the cap slightly smaller.
- Weld in the corner to get good penetration.
- File or grind the weld round for a nicely finished weld.

Wrong



Right



- When welding tube to a plate, tack weld the corners first. If the tube's walls are 1/4" or thicker, bevel the end and weld in the gap.
- Why waste rod? When a gas welding filler rod gets short—Stick it to the weld and weld a new rod to the short rod. Burn the original rod loose.
- Hide welds whenever you can. One way is to use plug welds—grind flat and heat with a torch to create some scale blend.
- When a weld is stopped, restart the weld in the crater that is left, but stay in the crater half as long as you would normally to prevent a knob.
- With all gasses in any kind of welding don't over pressurize. If anything, slightly under pressurize.
- When using a shield gas for mig or tig, back off the recommended pressure until porosity shows up in your weld, then increase the pressure slightly and use that as your setting.
- Same thing when brazing. Use less pressure on oxygen and acetylene—creates a softer flame that works better. If you're impatient, the higher pressures do work.
- Brazing works well as a substitute for inlaying brass. Fill a grooved pattern using a silica-brass rod, sand the piece, bring the tempering color up to purple.



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Calhoon continued

## **Randy Calhoon on Plasma Cutters**

### **Pros**

- They can run on different voltages.
- Portability.
- Work well to cut 4' x 8' sheet metal down to a manageable size.
- The best way to cut expanded steel.

### **Cons**

- One dimensional.
- Can't heat with it.
- Can't weld with it.
- Slow pay-back on the money you pay for it because it is not used very often.

### **Tips**

- The newer plasma cutters have built-in compressors assumably with a built in air dryer.
- On older cutters use two air dryers: One on the output of the compressor and one on the air intake of the plasma cutter and use as little air pressure as possible. Less air means less moisture cuts down on dross (rag on the cut) and prolongs the life of consumables because less condensate = less water degradation.
- Practice cutting at different speeds until you find the speed where no dross is left on the cut.
- If dross is present use a ball-peen hammer to lightly tap the dross off. Tap dead on the edge, not at 90° to the edge.

## **Welding and layout tables**

- A good welding fixture is a piece of angle iron with the inside corner ground square and the outside corner ground flat - to allow a place for the lower jaw of a clamp or vise-grips to seat. Weld the angle to the edge of your welding table.
- Cut C clamps in half and weld top to a plate. Clamp or weld the plate to the welding table.

Continued on next page





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**Farrel Wells** *Membership Secretary*  
8235 E 499 S  
Dunkirk, IN 47336-8807

First Class Mail

Address Correction Requested  
If Undeliverable return to  
sender

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## **July 21 Hammer In Jim Claar's Shop**

New Lisbon, IN

Driving Directions: I-70 Exit #131 (New Lisbon) and turn North on Wilbur Wright Rd. Go about 3/4 of a mile. Look for signs

Lunch at local restaurants or brown bag.

## **July 14 & 15 Power Hammer Class Instructed by Kurt Fehrenbach**

Hosted by Jennings County Historical Society Blacksmith Shop  
In Vernon, IN