

The Upset

Mississippi Forge Council
May 2006



See Glenn Jarreau perform magic in the fire as a featured demonstrator for this years
MFC Conference May 27 - 28

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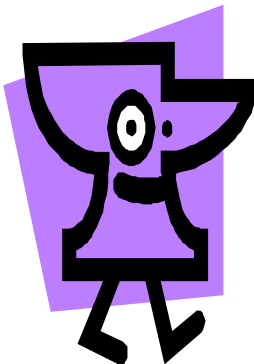
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President's Message

Our December meeting at James and Laura Monday's was a real treat. We had an excellent turnout and as usual had plenty of good food. James had put an addition on his shop so we had plenty of room for everyone to eat, mingle and visit. Thanks again to James and Laura.

The January meeting was held at the shop at the Agriculture and Forestry Museum. Lyle Wynn was our demonstrator and did an excellent job of showing how to manipulate a piece of cable into a knife blade and handle. He started by forge welding the end of the cable and working progressively away from the end until he had enough welded metal to shape a blade. The handle was left in the original form so it looks like cable.

After Lyle's presentation we opened up the forges so that several of our new members could go through Jim Pigott's green coal school. As usual he did an excellent job and then proceeded to take them through the steps of making a fire poker. Everyone seemed to enjoy the process and left with a poker.

Tommy Ward was our featured demonstrator for the February meeting at the Ag Museum. Any of you that have ever seen Tommy do a demo will remember how thorough he is. This was no exception. Drill press etiquette would be how I would describe his presentation. The various categories that he covered would include proper drill bit selection, correct drilling speeds, feed rates, lubrication and cooling for various materials, and drill bit point configuration. Drill press jigs and fixtures were covered as well. A handout was distributed covering much of the above mentioned information. There were several handouts left over if any of you would like to have one. Check with me at the next meeting. We had a good Iron in the Hat mainly because Lyle donated the knife he had started at the last meeting. After he finished the handle, polished, and etched it, the knife turned out really nice.

The meeting concluded about noon so several of us headed for Byram and Terry VanDeventer's shop. He had invited any of us that were interested to come by. They were making damascus, talking about knives, looking at knives, and talking about knife makers, and in general having a good time.

We met some knifemakers we had not met before and saw some really nice knives. Some of those in attendance indicated interest in joining the MFC so they were promptly given a copy of the Upset and invited to the March meeting. May is not too far from February as the time flies so we need to start thinking about our 2006 Conference. The format will be similar to past years but we will be doing a few things that we have not done in the past.

We are fortunate to have Dr. Jim Batson as our main demonstrator. We will probably have some short demos from a few of our members, and a few from guest craftsmen. Other possibilities are classes if there is any interest shown. Further information will be forthcoming. Commitment to classes before the conference will be necessary for logistical reasons. If you have any ideas please let me know.

The wine and cheese party will again be held on Friday night. Start thinking what you can contribute for the silent auction on Friday and the Saturday night auction. Let's make this our best conference ever.

Bill Pevey

MFC Conference 2006

DATE: May 26,27 & 28 Memorial Day Week-end

WHERE: Agricultural and Forestry Museum
Lakeland Dr. Jackson, MS
Phone- 601-713-3365

DEMONSTRATORS: Dr. Jim Batson
Glenn Jarreau

OTHER ACTIVITIES: Lampworking demonstration by Tony Harris
Jewelry making demonstration by Betsy Liles
Stained glass and mosaics demonstration by Teresa Haygood
Flint knapping by Joe Gilbert
Weaving/Spinning demonstrations by members of
Chimneyville Weavers & Spinners Guild
For the kids
'Paint It My Way' a ceramic studio for all ages will be on
site with many ceramic items that can be painted by the children
and fired to become a ceramic keepsake. There is a \$12 fee for this.

DEMONSTRATION SCHEDULE:

Friday, May 26. - We will use the early am to set up the conference site at the Pavilion. Then, starting around 9:00 am we will have an open forge and discussion with Dr. Jim Batson. Dr. Batson is well known for knife making, metal engraving, animated figures, hydraulic press and too much to mention. We will have this time to pick his brain and play in the forge. There will be a \$25 charge for this day.

Friday evening 6:30pm- 7:30 Wine and Cheese Party

7:30 - 8:30 Dr. Batson's presentation, then more wine and cheese.

Saturday May 27 - Registration begins at 7:30 am Registration fee \$40.00

8:30am - 12:00 pm Dr. Batson will discuss and demonstrate techniques for making and applying pommels and guards for knives.

12:00 pm to 1:00 Lunch - Sandwiches on site

1:00 pm to 4:30 pm Glenn Jarreau will demonstrate traditional joinery methods. Glenn was featured in The Upset after attending a joinery class at the John Campbell School. Glenn does some of the cleanest blacksmithing you will ever see. You will be impressed.

5:00 - 6:00 Dinner will be served. Ticket cost to be announced.

6:00 pm to- Auction, Anthony Goodrum auctioneer.

Sunday May 28 - 8:30 am - Dr. Batson will demonstrate techniques for engraving decorative elements in metal. This will include the making of the tools. This will be the first time the MFC has been exposed to these techniques.

Important Things to Consider

Membership dues are due on January 1 of each year. If you have not paid please do so as soon as possible.

The conference is important to our organization, please have something for the auction and volunteer to assist where necessary.

*****We need a Treasurer***** We must give Stacy a break*****
*Please Volunteer***

Have some items for 'Iron in the Hat' the drawing will be sometime during the conference

Don't forget to have a contribution for the auction, it is important!

TIME FOR A BUSINESS MEETING- LET'S GET IT TOGETHER

MAY 13, 2006 AT THE AG MUSEUM AUDITORIUM

STARTS AT 9:00 AM

TOPICS TO INCLUDE:

CONFERENCE

COMMITTEES

DIRECTION

COAL

VOLUNTEERING TO HELP

DISOLVING THE MFC

ALL MEMBERS WELCOME, ACTUALLY, ALL INTERESTED MEMBERS ARE BEGGED TO ATTEND, UNLESS, OF COURSE, THE FUTURE OF THIS GROUP DOES NOT INTEREST YOU.

AUCTION ITEMS--- DON'T FORGET AUCTION ITEMS.

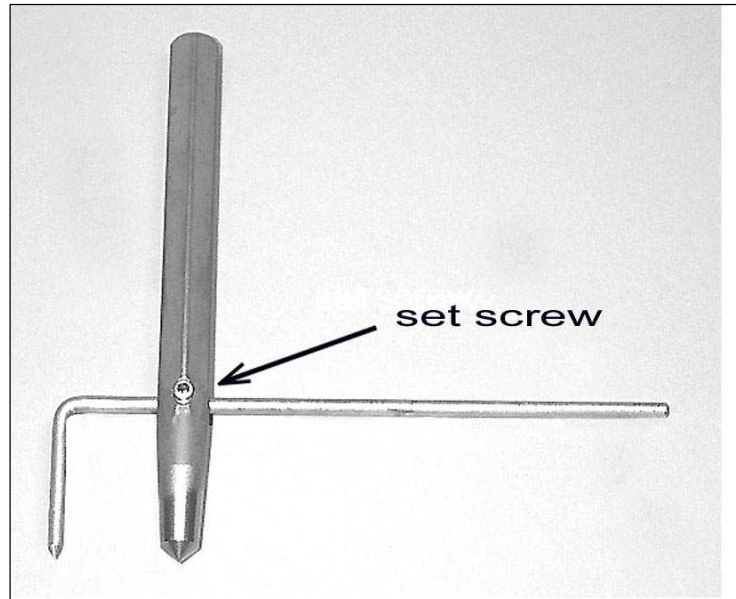
DID I MENTION AUCTION ITEMS?

A SELF-MEASURING CENTER PUNCH

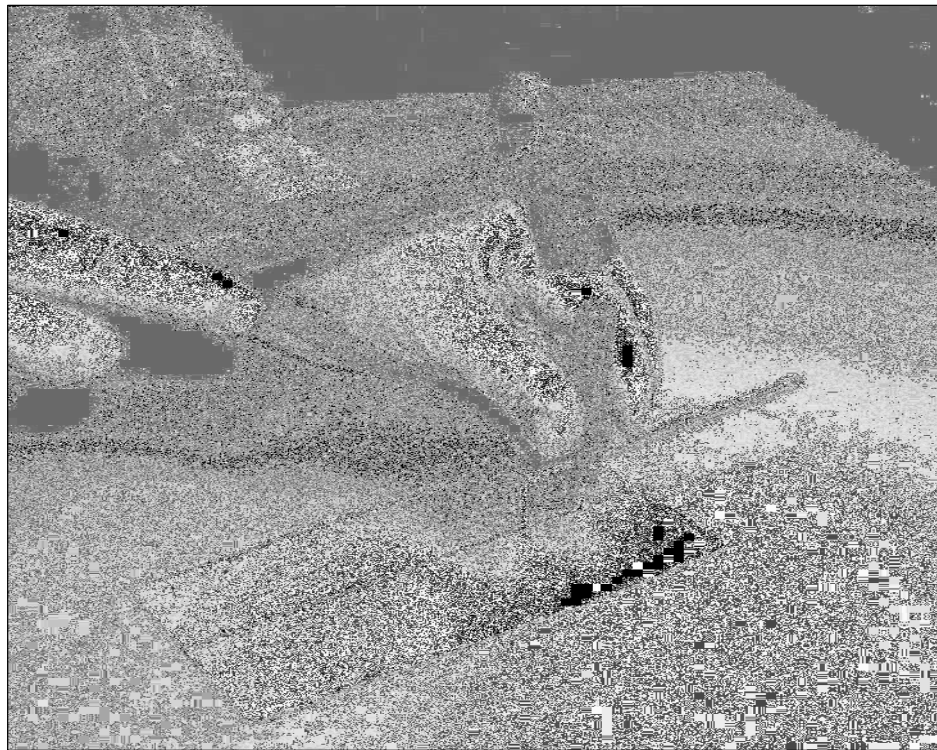
by Tommy Ward

From time to time I've had to drill a succession of equally and accurately spaced holes. Although laying out the hole spacing can be done fairly quickly using a transfer compass, the positioning of the compass points, scribe marks, and ultimately the point of the center punch itself, each present the opportunity for a slight error (particularly with my aging eyesight). Over a series of holes these small individual errors can "stack up" and result in a significant overall change in dimension. The solution to the problem is a "self-measuring" center punch. This little trick is neither new nor original, and is one I first recall having seen many years ago in an old metal trades manual.

A standard center punch can easily be fashioned into a self-measuring type by drilling a perpendicular hole thru its shank to receive a lateral locating rod. A point is sharpened on one end of a small diameter rod (I used 9/32" piano wire) and the sharpened end is bent ninety degrees to form the locating "leg". Cross-drill and tap the punch shank to accept a setscrew which will be used to lock the adjustment of the locating leg. Although punches are generally regarded as being a fairly tough steel, I had no trouble drilling a pilot hole through mine with an 1/8" dia. TiN coated bit running at 1500 RPM and using a coolant. The dimensions of things are not critical, but care should be taken to insure that the lengths from the cross arm to the tips of the punch and locating leg are identical.



To use the device, set the desired distance between the tip of the punch and the locating leg, lay out a longitudinal reference line on the work, and punch the location of the first hole. Then place the point of the locating leg in the first mark and punch a second mark on the reference line. This sequence continues for the remainder of the layout as the locating point is placed in each successive punch mark, a new mark is punched on the reference line, and the process is repeated as needed.



Hammer Down at Whynot

By Vance Moore

Saturday February 4th, 2006 was the date for the first annual Blacksmith Symposium and Hammer Down at Vance Moore's Whynot Forge, in the thriving metropolis of Whynot Mississippi. Since the holidays have passed, deer season has ended and the brim are not yet biting, February seemed like a good time to get together, swap lies and beat on some metal. Fortunately the weather cooperated and it was a perfect day for working around the forge.



No one got around to taking a group photo but the nine attendees included Benny Crevitt, Ricky-Roy Shirley, Dr. Dan Fulk, Jim Pigott, Jon McIntosh, Tommy

Ward, Will Manske, Peter Holton and Vance Moore. Vance Moore was suppose to take some pictures but forgot the camera. As luck would have it, Jon McIntosh and Jim Pigott both brought their cameras, so all the photo credits in this article go to them.



After coffee and donuts, the fist act of business was for Benny Crevitt to demonstration tong making. Starting with two eight inch pieces of 5/8 square mild stock, Benny forged out a superb pair of twelve inch tongs for holding 1/2 inch square stock.

Watching Benny forge is akin to

watching Michelangelo paint the ceiling of the Sistine chapel. We are lucky to have someone of his talent and skill in the Mississippi Forge Council www.crevtrad@bellsouth.net.

After the tong making demonstration (and more coffee) Dr. Dan Fulk wanted to make a knife from a railroad spike. Dr. Dan soon had his first experience with chiseling ornamental grooves and using a pipe wrench to twist the handle. The idea to allow Dr. Dan to use the Little Giant Power Hammer was overruled by the powers that be. It was decided that forging the blade with a four pound cross peen hammer would be a better learning experience and certainly better exercise. After the forging Ricky Roy Shirley worked with Dr. Dan on grinding the blade. For his first knife it did not turn





out too shabby, even though his initials got put on the handle backwards. About this time one and all collectively decided they were hungry and a lunch break was called. Lunch had been fixed by the startlingly attractive Rhonda Moore and consisted of tortilla chips smothered in taco soup and chocolate chip cake for desert. All attendees found seats on the veranda where they talked, ate and tried to avoid Houdini, the begging beagle (no lunch pictures since everyone was too busy eating). As tempting as it was to lay around and take naps on the lawn furniture, eventually everyone managed to struggle out of their seats and headed back to the forge. By this time the "railroad spike knife virus" had infected the group. Will Manske, and Peter Holton decided to try their hand at it. Peter and Will have limited experience in the blade forging arena and soon had a newfound respect for the blade makers of

old (swinging that hammer is a little harder than it looks isn't it boys?). The same rule applied to Peter and Will as to Dr. Dan, no power hammer. It is good to see a younger age bracket taking an interest in the blacksmith craft.

Jon McIntosh also jumped on the railroad spike knife craze and worked out a really nice twisted handle. Since Jon has a little more blacksmithing experience (but no power hammer time), Bennie Crevitt guided him through forging the blade on the Little Giant. Jon had also recently purchased some dies from Allan Kress. So he had some time to try them out. Jon had to experiment several times with shaping the bar end to fit the mouse die and keep the flashing to a minimum, but the last one came out pretty respectable.

Benny Crevitt noticed that the Little Giants timing seemed to be off. So several of us (including the owner) got a quick lesson in power hammer maintenance. It seems that the drive shaft bolt caps had worked themselves loose, and they needed tightening (see the May 2004 Upset for an article on



this Power Hammer). After that the Little Giant was back to hammering along just fine.

When it was all said and done everyone had a good time and had a chance to pick up some new skills and knowledge. It was so much fun that we may have to try it again next year



Benny Crevitt and Vance Moore, a little weary after a long day at the forge.
Thanks guys, it was a great day and thanks Vance for another great article.

National Ornamental Metal Museum
Schedule of Events

Material and Space, an Exhibition of Contemporary Metalwork

Curator: Sarah Perkins, Assistant Professor, Missouri State University, Springfield, MO

June 11 to August 28

Opening Reception: Sunday, June 11, 3:00 p.m.

Exhibit Change : August 29 to September 2

Master Metalsmith: Richard Prillaman

September 3 to November 12

Reception and Gallery Talk: Saturday, October 14, 6:00 p.m.

Repair Days Weekend

October 13 – 15

Friday, October 13

10 a.m. to 5 p.m. Repairs accepted

6 p.m. to 9 p.m., Reception and gallery talk by Master Metalsmith

Saturday, October 14

Family Activities Day

10 a.m. to 5 p.m. Repairs accepted

12 noon to 7 p.m. Silent Auction

7:30 p.m. Public Auction

Sunday, October 15

No new repairs accepted

Exhibit Change : November 14 to 18

Holiday Open House

Special Event

Discounts in the Museum gift store.

Sunday, December 3, 5:00 p.m. to 8:00 p.m.

Metalsmiths and Mentors: Fred Fenster and Eleanor Moty

Curator: Chazen Museum of Art, Madison, WI

November 19 to January 2007

Jennifer Hughes

Registrar

National Ornamental Metal Museum

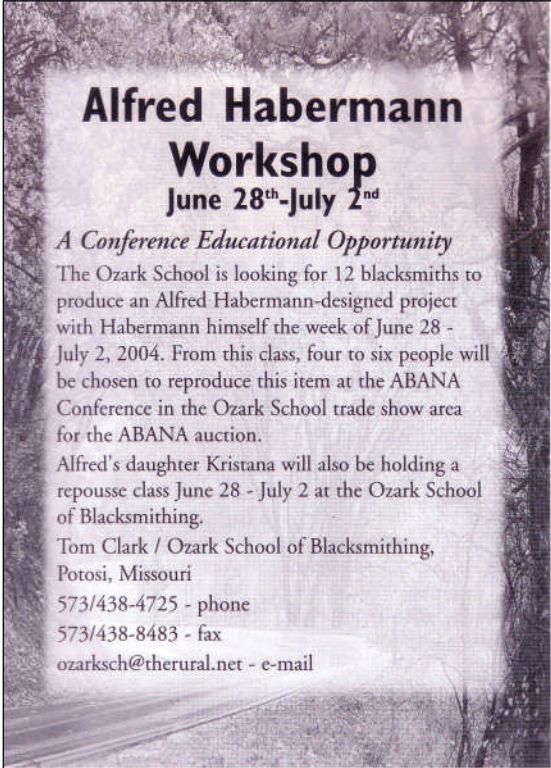
374 Metal Museum Drive

Memphis, TN 38106

phone: 901-774-6380

fax: 901-774-6382

<http://www.metalmuseum.org>



**Alfred Habermann
Workshop
June 28th-July 2nd**

A Conference Educational Opportunity

The Ozark School is looking for 12 blacksmiths to produce an Alfred Habermann-designed project with Habermann himself the week of June 28 - July 2, 2004. From this class, four to six people will be chosen to reproduce this item at the ABANA Conference in the Ozark School trade show area for the ABANA auction.

Alfred's daughter Kristana will also be holding a repousse class June 28 - July 2 at the Ozark School of Blacksmithing.

Tom Clark / Ozark School of Blacksmithing,
Potosi, Missouri
573/438-4725 - phone
573/438-8483 - fax
ozarksch@therural.net - e-mail

ITALIAN MASTERS OF WROUGHT IRON
Ed. by G. Ciscato, 10 x 13", 493 pgs., over 850 color and 350 b&w photos. Italian title "I Maestri Italiani Del Ferro Battuto". In Italian with some English. Divided into 27 chapters showing almost every type of ironwork imaginable. Includes, screens, railings, interior work, sculpture, tables, chairs, beds, candle stands, lamps, animals, flowers balconies, church work, and much more. Destined to be very popular because of the beautiful photos and wide variety of excellent items shown. **B355\$139.95**

ITALIAN IRON BEDS AND BEDROOM ACCESSORIES
Ed. by G. Ciscato, 10 x 13", 240 pgs., 350 photos & 34 sketches. Italian title "Il Letto E Dintorni". In addition to beds shows a stunning array of lamps, chairs, mirrors, bedstands, footstools, coat racks, curtain rods, and more. Includes recent projects by recognized craftsmen whose works are shown along with their biographies. **B425 \$74.95**

Note: Postage is \$3.00 for the first book and \$.75 for each additional book.

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Saturday, May 6

Poor Julia

, celebrates the opening of her studio

10:00 AM-5:00 PM

Forge Council Members, Family and Friends are invited

4615 Womack Dr

Jackson

See web site for directions

www.poorjuliaart.com

601 981 3610

Boy Scout Merit Badge Day at the Ag Museum



MFC member and Scout Leader Doug Parkin arranged for us to teach the metalworking merit badge class for some of the scouts participating in a recent camporee in Jackson. Although this was our first time to teach this class it went very well. Twelve young men worked hard for the entire day and left with several items they made and with the certificate of completion for the metalworking/blacksmithing merit badge. It was a rewarding day for the MFC members participating. Thanks go to Steve Norquist, Lyle Wynn, Jon McIntosh, Bill Pevey, Tommy Norwood and especially Ed Benton for providing the great burgers for lunch. Having the chance to meet these young scouts and help them on their quest was a great way to spend a day at the forge.

HARVEST FESTIVAL



A LARGE 'THANK YOU' GOES TO ALL THAT PARTICIPATED IN LAST YEARS HARVEST FEST. Top left-clockwise- Duke Baker, Carroll Ellis, foreground and Bill Pevey, Carroll and Bill with crowd, the horde at the gate, Bill Pevey and Steve Paulson.

Demonstrations



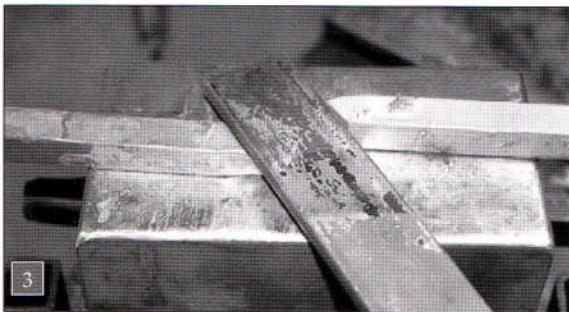
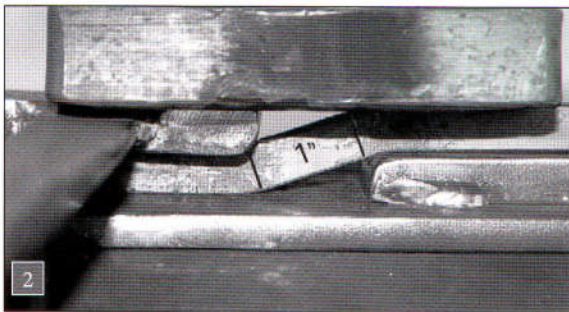
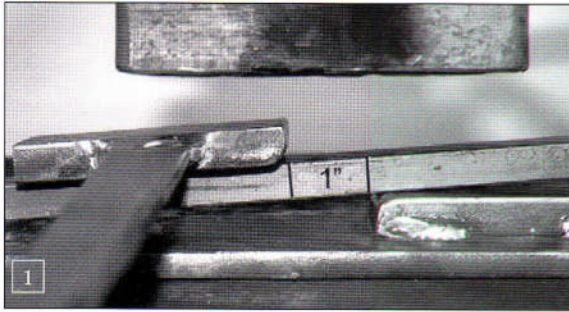
Tommy Ward, as usual, presented a fine demonstration on the various uses of a drill press. Tommy's demos are 'not to be missed' classics.



Richard Carr, from Memphis, was our demonstrator for April. Richard showed us how he does his unique door pulls and bowls, shown left. Richard is an industrial blacksmith, one of the only ones left in the country. We were lucky to have a true dinosaur in our midst.

Tongs Tip

by John Emmerling, Gearhart, Oregon



Last year I had a client who ordered three sets of fireplace tools due by Christmas that included pickup tongs in addition to the usual poker, shovel and broom. The tongs represented the greatest amount of work, and I put them off until push came to shove. Fortunately, my neighbor had a forged pair he bought at a garage sale for \$15 (the wife was angry at the ex-husband who had paid \$150 and wanted to get rid of them), and I used those as an idea for the starting point.

I'm not very good at making tongs, as I don't do it enough to remember how. It always seemed like a lot of process and was something I never cared to spend time doing. The most difficult part for me was always the offset. After several hours and eight-plus feet of $\frac{1}{2}$ " square stock trashed, I found what I think is an acceptable and simple solution. It can be done in a hydraulic press and/or a power hammer.

First, I cut a piece of $\frac{1}{2}$ " x 2" mild steel that was several inches in length. One end was given a slight radius, and it was welded to a larger base piece. Next, I repeated the procedure and welded the $\frac{1}{2}$ " x 2" to a handle. The last part of the setup was to cut a piece of $\frac{1}{4}$ " x 1" flat bar about 10" to 12" long.

Cutting two pieces of $\frac{1}{2}$ " square stock to the desired length for the tongs, I marked two lines an inch apart where I wanted the offset to be (1). Taking those to the hydraulic press, I made the offset (using the $\frac{1}{2}$ " x 2" jig) on both pieces without heating the steel (2). (A power hammer would work well, but obviously the work needs to be done hot.)

Lastly, I heated the steel, and using the power hammer, drove the $\frac{1}{4}$ " x 1" into the offset at an angle almost perpendicular to the offset angle (3). The $\frac{1}{4}$ " x 1" was driven in, only till the top power hammer die touched the parent stock, that is, $\frac{1}{4}$ ".

From that point on it was simply a matter of drawing out the reins and making the pickup forks. The completed offsets and jig components are shown (4). ♣

This 3 page article reprinted from the Bituminous Bits Journal of the Alabama Forge Council

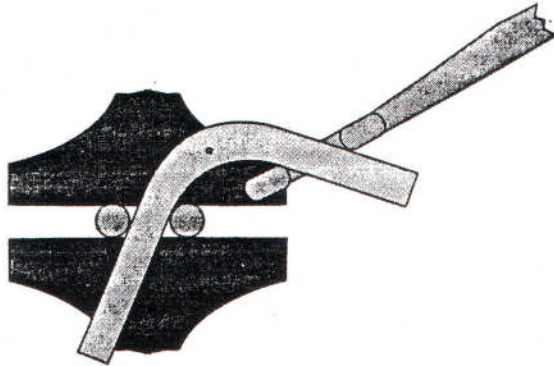
Upset Square Corner

Allan Kress was in my 1995 Advanced Class at the Folk School. This is written for his AFC scholarship.

Center punch where you want the center of the bend and in the center of the stock. Make it big enough to see easily. Don't worry, it will be closed up when you are through.



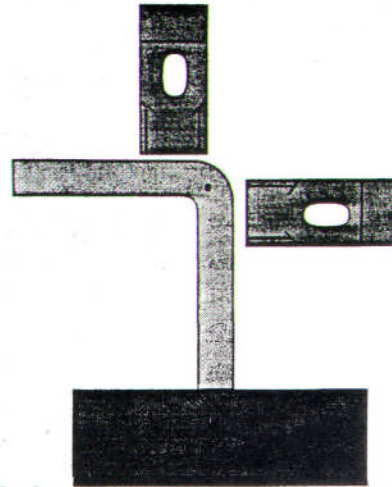
Heat at the CP mark and bend with bending "U" in vise and bending wrench. Center the mark between the "U" and bending wrench. Bend the piece to a little less than 90° with bend centered exactly on punch mark.



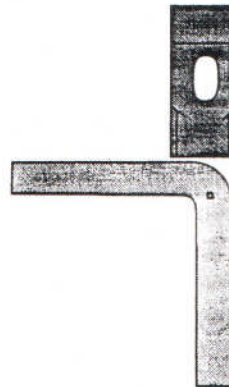
When doing any kind of upsetting, always work metal as hot as possible without burning. It is easier on the metal and your arm. Use light hammer for this upsetting. Keep heat local to where bend is so a long section won't be upset. Cool with water if heated section is too long.

Hit just behind corner but not right on the corner.

Hit with an equal amount of force on each leg. Vertical blows are more forceful or effective than horizontal blows. You should count blows and hit more horizontal blows than vertical blows.

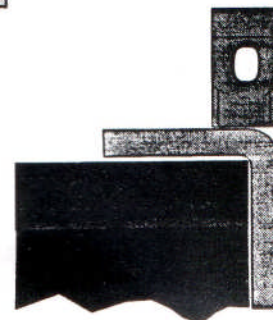


Check the corner frequently to make sure the center punch is in center of the corner. If it is further away from one side, hit on that edge of the corner with more or heavier blows until the mark is centered.



Center punch is not centered. Hit more blows on this edge. Hammering here will move the corner so the punch mark is centered.

Do not put the inside corner on a sharp edge of the anvil. You will make a mark and a crack in the corner.



This 3 page article reprinted from the Bituminous Bits Journal of the Alabama Forge Council

Upset Square Corner, Concluded

Don't hammer the angle sharper than 90° and have to open it up. This too can make a crack inside the corner.

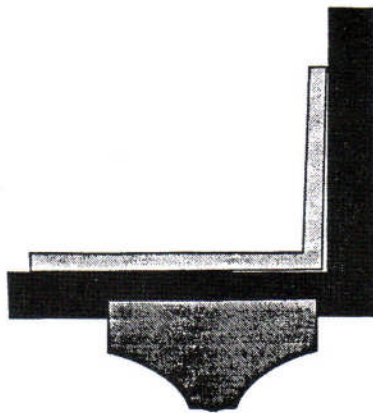


Keep open like this. Bend is too tight.

Keep the width down to the original stock thickness. Move the thickness resulting from the upsetting out toward the corner with wiping blows. Work both sides at same heat to keep everything even.

Keep upsetting until the outside corner is sharp, not rounded. The inside corner should have a small radius but not be sharp or cracked.

Check the outside of the corner for square on the inside of carpenter's square. Check each leg to be sure they are straight and not bent or twisted. Check the back and sides of each leg. If the corner stock is thicker than the legs, then you will be able to see daylight between the leg and square on one side or the other.



As an example cut a 12" length of 1/2" square stock. Put center punch exactly in the center of the width, 6" from each end.

After you have made the square corner, the center punch mark will be closed up, but should be exactly at the center of the corner. The lengths of each leg on the outside from the end to the corner should be 6 1/4" and the inside lengths from the corner to the ends should be 5 3/4". From the center of the corner center punch to each end should be 6". The center length stays the same, the outside increases in length and the inside decreases in length.

If you are making multiple square corners on one piece, get the first one square in all three planes before going to next corner. It should lay flat on the table on either side.

Another exercise to see how good you are is to make a four upset corner welded square. Cut a 4' length of 1/2" square stock. Lay out marks at 6", 18", 30" and 42". Upset the ends for forge welding but don't make the scarfs until the corners are forged square.

Check each corner for square in all three planes and make corrections as you go. It will save you a lot of work to fix each corner as you finish them.

After the corners are all made and check out square in all three planes, forge the scarfs. Make a convenience bend or twist in the opposite leg, if necessary, so you can forge the scarfs. After making the scarfs, straighten out the convenience bend/twist.

Forge weld and draw weld area back to exactly 1/2" square.

You should be able to lay it flat on a table and all four corners touch when laying on either side. If your punch marks are centered in the corner, each side should measure 12 1/4" on the outside, 11 3/4" on the inside, 12" between each center punch.

By Allan Kress

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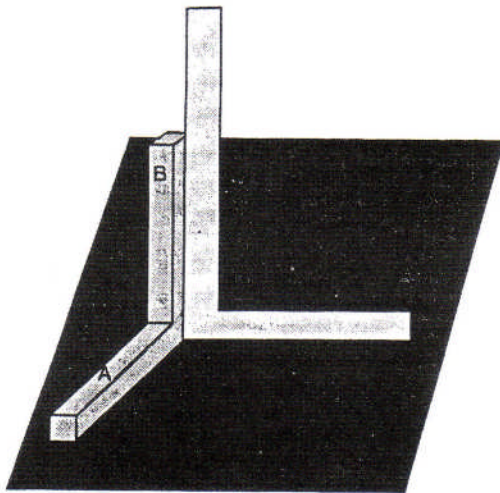
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More on Upset Square Corners

Rogers Collins figured out something that all blacksmiths should have done long ago. (Some probably did figure it out, but didn't tell the rest of us.) When checking the outside corner for square, put the square in the vise. Then you don't have to try to hold the corner and the square at the same time and you don't pick up a **hot** square.

A square corner must be checked in three planes. The first one is obvious. Check the outside corner for square. If it is not, forge it to square.

Mark one leg "A" and the other "B". Then put leg A flat on the anvil (or table is better) with leg B vertical. Hold leg A down flat by



pushing down on it with your hammer head, then slide the square up to side of leg B. Make any corrections to get this square.

Then check the third angle. Put leg B flat on the table, hold in place by pushing down on it and slide square up to side of leg A. Get it square. After you have it square both ways, then go back and check the outside corner to make sure you didn't get it out of square while you were fixing the other two planes.

Francis could keep the center punch mark centered on the corner by hitting five blows horizontal and four blows vertical. Count

and watch what happens. Adjust the number of blows horizontal and vertical that it takes you to keep the mark centered.

Francis has done seventy years of upsetting, holding the stock in his left hand and has worn out the cartilage in his left wrist. So, if you are going to do a lot of upsetting, you may want to consider holding it in your vise.

Francis says that if you are doing two corners very close together, to do both at the same time.

Francis considers the ability to make a correct upset square corner to be one of the keys to the door entering advanced blacksmithing.

Like measuring a scroll, the center line length of a piece of steel forged to a square corner should be the same length as the original piece of stock.

This holds true only if all the stock is the same size finished as it was before you started the corner. This is not usually the case. The ends may upset slightly (and unevenly), and the upsetting at the corner will increase the size of the stock both in thickness and width (thereby shortening the length, that is what upsetting does). Keeping the heated area close to the corner reduces the length which will be upset and shortened.

In the real world, the stock about 2" on either side of the corner will be upset to some degree and the length will be shortened some. You can hammer part of it back to the original 1/2" thick and 1/2" wide but probably not every bit of it close to the corner. You may find each leg to be an eighth inch, more or less, shorter than the ideal situation.

If you need a precise fit, you must forge one or more trial pieces using the same heat, tools, and technique and record the starting and finished dimensions of each. Then you will know how much shortening (or change) your technique gives when you forge the corner.

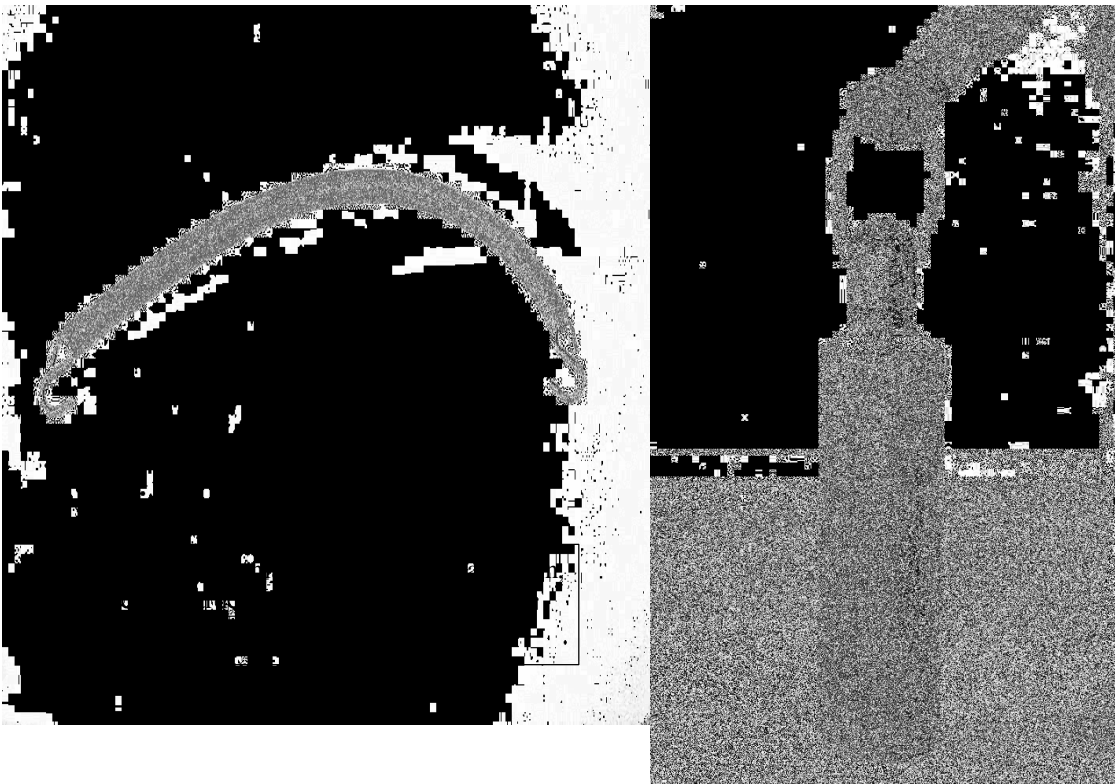
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EASY WAY TO MOVE WELDING BOTTLES

by Tommy Ward

A reasonably healthy adult should have no trouble hefting the weight of the commonly used smaller welding tanks, however the bottles are difficult to grasp and can be awkward to handle and maneuver. To avoid back-wrenching bending I made a lifting strap by threading an eighteen inch length of small chain through a piece of scrap garden hose and fastening 1/4" "S" hooks to each end.

The strap is hooked into the slots on the valve protector cap and makes it much easier to move the bottle around - particularly when placing it in a cylinder cart or other tight spot.



The lifting strap hooks into the slots on the cylinder valve protector cap.

Opportunity is missed by most people because it is dressed in overalls and looks like work.

— Thomas A. Edison (1847 - 1931)

Discussions from 'The Forge' the ABANA discussion group.

I've been an advocate of using vinegar to pickle scale from steel. One downside to this is that vinegar is volatile, and the smell gets bad (metallic) with steel pickling inside.

So, I finally got around to trying a sodium bisulfate pickle. Sodium bisulfate is available at pool supply stores for keeping the pH of pool water neutral. It comes as fine white crystals, packed in one- or two-quart containers.

After some experimentation, I used about 1 to 2 cups per gallon of water. (I used a rectangular plastic storage box - available in NJ from Cost Cutters - as my vat.) The crystals go into solution fairly easily, producing no discernable heat on dissolving. (Strong acids produce lots of heat when mixed with water.)

Much of the scale soaked off the steel within a couple hours. Some was more persistent, but came loose with overnight soaking. The resulting steel was nearly charcoal gray in color. Where it was not under the solution, the steel acquired a lovely rust patina - probably more from the humidity than anything else - but this largely sponged off. The scale did not completely dissolve. Much of it simply fell to the bottom of the vat. I plan to filter this off through a cloth when I transfer the acid solution to a jug for storage.

I did this on my kitchen counter. There was virtually no odor. Once or twice I splashed a little solution on my hands. I rinsed them soon after, and experienced no problems (acid burns). I DID wear glasses, however. I don't care to get this stuff in my eyes.

Didymium and didymium-variant filters (like the next-generation AUR-92) are sodium flare (yellow) filters. They will remove the yellow in the flame, they will remove the yellow flare that results when the flame hits metals or glass. It is not a protective filter, but a filter that allows you to see your work better. Didymium and the variants do not filter IR to any great extent. Please don't confuse them with specific design lenses for filtering IR. Kiln and furnace workers are exposed to much greater amounts of IR than torch workers (unless you are working 2-3" in diameter or larger).

Damage to the eye from IR sources is cumulative and it affects people differently. There is some data that shows that people with high content of melanin (skin colorant) have a higher resistance to IR damage, meaning that it will take longer for them to show the signs of IR injury than those that have lesser amounts of melanin. For example, people of equatorial descent (lumping together a lot of racial backgrounds, I know) like Mediterranean, African, Indian, etc typically have darker skin colors, and brown eyes. These people tend to have less IR related eye injuries than a person of northern European descent with fair skin and blue eyes. The classic case is the glassblowers of Murano, Italy. For hundreds of years these people have been blowing glass in front of furnaces and glory holes with little historical evidence of eye damage. Compare that to the glassblowers of old England, where there was a high level of eye damage, in fact this is where the term "glassblowers cataract" originated (1700's).

The eye does not have pain receptors for burns. The only indication you have of over exposure to IR is dry itchy eyes, as the eye reacts to the desiccation from the heat. In long term exposures, this will lead to the development of retinal burns and corneal irritations which lead to cataracts. What does this mean to you? If your work is small soldering or doing granulation, then didymium will help you see your work better. You don't have a massive IR exposure, but you should be aware of the symptoms and take the necessary measures to protect yourself if your work changes.

If you are doing casting or enameling with a kiln or furnace, or large, heat intensive work, then you need specific IR filters. It is a common misunderstanding that sunglasses are good to wear while working in front of a kiln or torch. After all, sunlight is hot, right? Sunglasses are about the worst thing you can wear. In fact, sunglasses typically do not filter IR. UV, yes, but UV is not an issue for the work you are doing. Sunglasses pass IR, and with your pupil wide open because you are working inside and the lenses are so dark, your eye is getting blasted with IR. I've read that a lot of metal workers have tried using welding filters from the welding shop, but have found them to be too dark. A welding supply shop is going to stock the items that welders need, not necessarily the items that jewelers need. We have found that a shade 2.0 filters 98% or better of the IR, while still allowing 40% visible light.

Compare this to a shade 5 (the usually available filter) which filters 99% of IR and allows only 5% visible light.

April's Fool

You can fool all the people all the time if the advertising is right and the budget is big enough.

Joseph Levin (1905-1987)

It is better to keep your mouth closed and let people think you are a fool than to open it and remove all doubt.

Mark Twain (1835-1910)

The Constitution gives every American the inalienable right to make a damn fool of himself.

John Ciardi (1916-1986)

Any fool can tell the truth, but it requires a man of sense to know how to lie.

Samuel Butler (1835-1902)

A little government and a little luck are necessary in life, but only a fool trusts either of them.

P. J. O'Rourke (1947-)

Thou clay-brained guts, thou knotty-pated fool, though whoreson, obscene, greasy tallow-catch.

William Shakespeare (1564-1616)

You can fool too many of the people too much of the time.

James Thurber (1894-1961)

There are more fools than there are people.

Heinrich Heine (1797-1856)

Getting your Fire started By Bob Ehrenberger

I recently read an article where the author talked about how just about everyone has their own way of starting their forge. If you asked 10 smiths you would get 12 different methods. But he didn't tell you how to start a fire. Well I've been around a while and have used or seen several of the more common methods and I thought I would give them to you here. Surely one of them will work for you. I've changed methods a couple times and use different techniques depending on the situation and what's available.

In all methods, make sure your ash dump is closed, or you won't get a good blast when you need one.

PAPER

When we first joined BAM and took the beginner's class they taught us a method that is pretty common around BAM, maybe because that is what they are taught.

The KNOT -- BAM taught that you take a couple sheets of newspaper and roll it into a long tube starting diagonally at one corner.



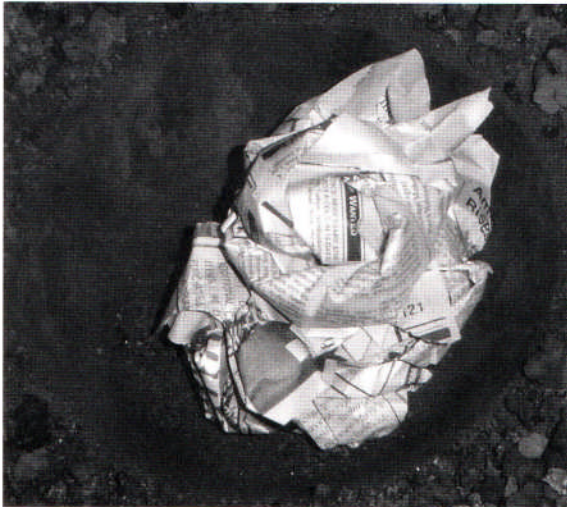
Start of a rolled up newspaper

The tube is then tied into a knot. Pull it tight and then tie the loose ends into another knot. It usually takes about three knots to use up all the paper tube.



Paper Knot

Another piece of paper is crumpled up and put in the bottom of the fire pot.



Knot on top of crumpled paper in the fire pot

The knotted paper is put on top of the crumpled paper. The crumpled paper is lit and a little blast is added. Once the paper is burning real good put a little coke or coal on top of it. As to coal starts to burn add more, make a pretty good pile. Poke a vent hole down the center and give it a lot of blast. There will be a lot of smoke at first, but once the heat builds up the smoke will ignite. When the paper is consumed, use your fire tools to knock the coal and coke into the void and keep up the blast. You don't want a hollow fire. After about 10 minutes as the coal is converted to coke, the flames will change from yellow to blue, you are ready to use it.

Starting a fire continued...

The Mushroom -- When George Dixon demonstrated for us a few years ago he showed us his method, which is what I use most of the time now. He takes a single piece of newspaper and crumples it up kind of loose. He then takes another piece of paper and wraps it around the crumpled paper. He holds the wad of paper in the balls of his hands and uses his fingers to pull the loose paper into the ball, compressing the ball and the loose paper at the same time. This process is repeated with one or two more pieces of paper until you get the size of ball you want. The resulting ball looks to me kind of like a mushroom, if you



Mushroom in the fire pot

live near the ocean it may look like a jelly fish to you.

The loose ends are lit and the mushroom is placed in the fire pot with the loose ends down. Give a light blast, then add coal and coke like with the knot. I sometimes have to hold it in place with my poker to keep the round side up until I get some coal around it.



The Mushroom. Side view

WOOD

When I took a class at Tom Clark's school he had his own way of starting a fire. This was mainly because he used commercially made coke at the school and coke is hard to start with paper. Tom kept a bucket of little pieces of wood for the students to use to start their fires. We would make a lattice of the wood, soak it with kerosene, and then wait. If you lit it right away it would just burn the kerosene off and not start the wood. After a few minutes light the wood and wait some more. You want it to get burning real good without any blast. Once the wood has all gotten going and started to look like charcoal, add a little blast and start putting the coke/coal on.



Wood in fire pot ready to light

I always cut up my scrap lumber into 4" pieces and keep by the forge. Split them down to 1" diameter or less.

If I have a project that requires a lot of prep work, this is a good method. Stack it, soak it, and then go measure and cut steel. After a bit light it and do more prep work. By the time my steel is ready, so is the fire. Just add coal to the charcoal and I'm in business.

Some of the buckskinners use a variation on this method, where they use shavings and kindling to start a fire in the forge. Then use the fire to start their coal. This is how you would do it if you had to start your forge with flint and steel.

Starting a fire continued...**HOT COALS**

When I was forging in my garage, and we were heating with wood it was real easy to take a shovel of hot coals out of the stove to the shop. This is a variation off the wood start method. It only takes a few coals to get the forge going. I also have times when I'm demonstrating at a reenactment and the guy next to me has a camp fire going, I've never had anyone say no, if I asked to have a few hot coals out of their camp fire.

This is also a good method when you need to get several forges going. Once the first one is lit, use hot coals from it to light the rest.

TORCH

I have been at events where they have used an oxyacetylene or a propane torch to light the forge. One time they just buried the end of the torch in the coal with it pointed slightly up. Another time they made a trough in the coal and used the torch kind of like a side draft forge to light it. Once you get a few coals going add the blast and remove the torch.

RAGS

I have a friend that I see at 3 or 4 events each year. He is a weaver, but his Dad was a blacksmith. He told me that his Dad always just used an oil soaked rag to start his forge. It sounds kind of messy but it does work. If I'm doing something that generates a really oily rag, I put it on the forge for the next time I need to start a fire. I don't want to put an oily rag in the trash can, and the burning barrel is a fair walk from the shop so it works out fine. The one catch is to be careful to not let the rag block the tuyere, if you screw up the air flow it won't be pretty once you pile the coal on.

FIREPLACE LOGS

One of the guys at BAM (I can't remember who) told me that he gets the pretty fireplace logs that you buy at the convenience store. The type that you just put in the fireplace and light, for people that don't want to mess with fire wood, but want an occasional fire to watch. These logs are basically compressed sawdust and wax. As the story goes, he would cut the logs into 1"-2" pieces. One piece in the bottom of the fire pot was enough to get the rest of the fire going. The stores usually discount the logs a lot when they are changing over from winter to spring, so you could get a year's supply of fire starters for just a few bucks, and a little time to cut them up.

CONCLUSION

Even with all this experience I still have a flopped fire 3 or 4 times a year. If you can't find a method here that works for you, maybe you need to get a gas forge, or find a smith in your area and hang around with him.

I'm sure I'll think of more as soon as this goes to press. If you have a method not mentioned here, write a letter to the editor and share it with us.

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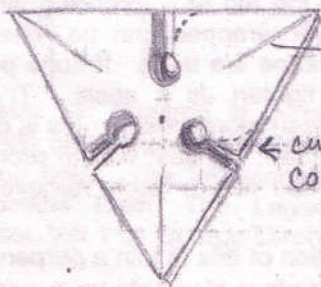
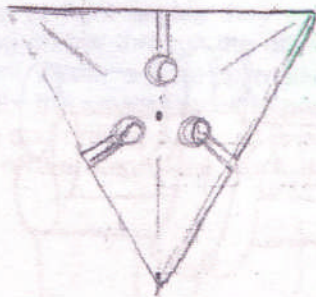


Sketch Book

Candle holder

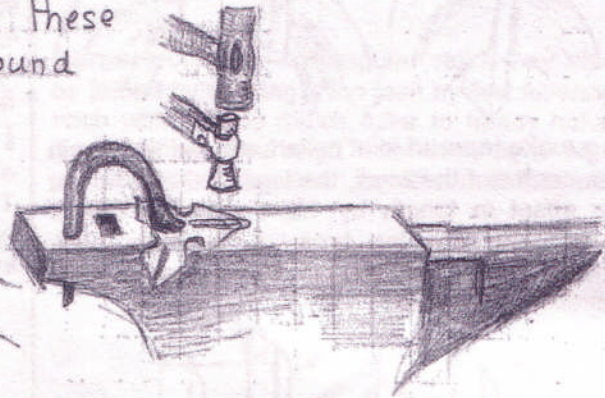
By Diana

By Brian Gilbert



chisel lines in cold, then heat and deepen

cut or file these corners round

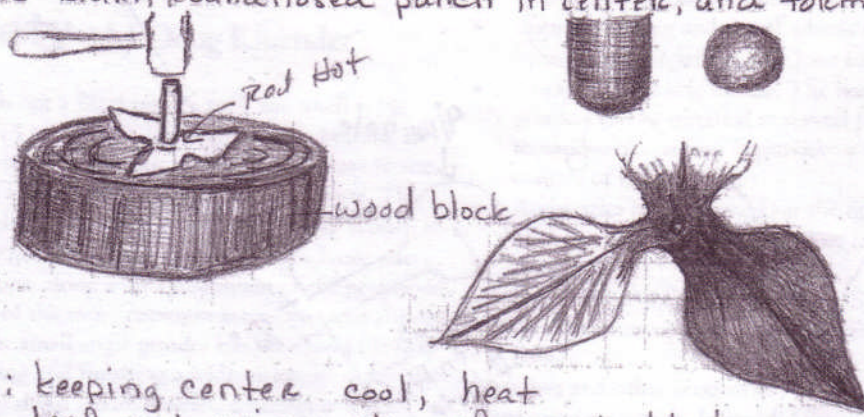


use cross pie to texture each leaf. helps give the illusion of veins and also scallops.

the edges of the leaves some.

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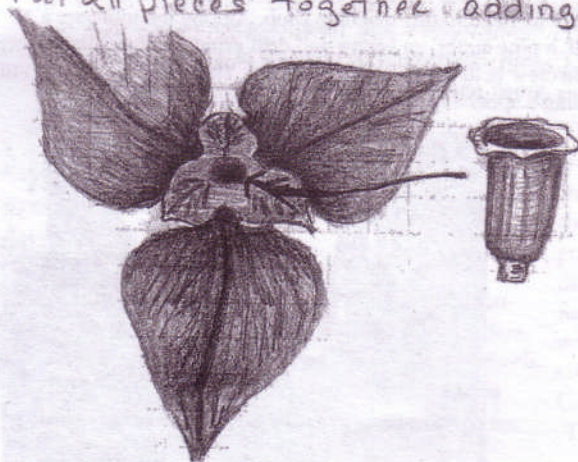
Next form center using a wood block as backup
Heat center,
Place blunt, round nosed punch in center, and form a shallow bowl.



next: keeping center cool, heat each leaf and using edge of wood block curl ends over

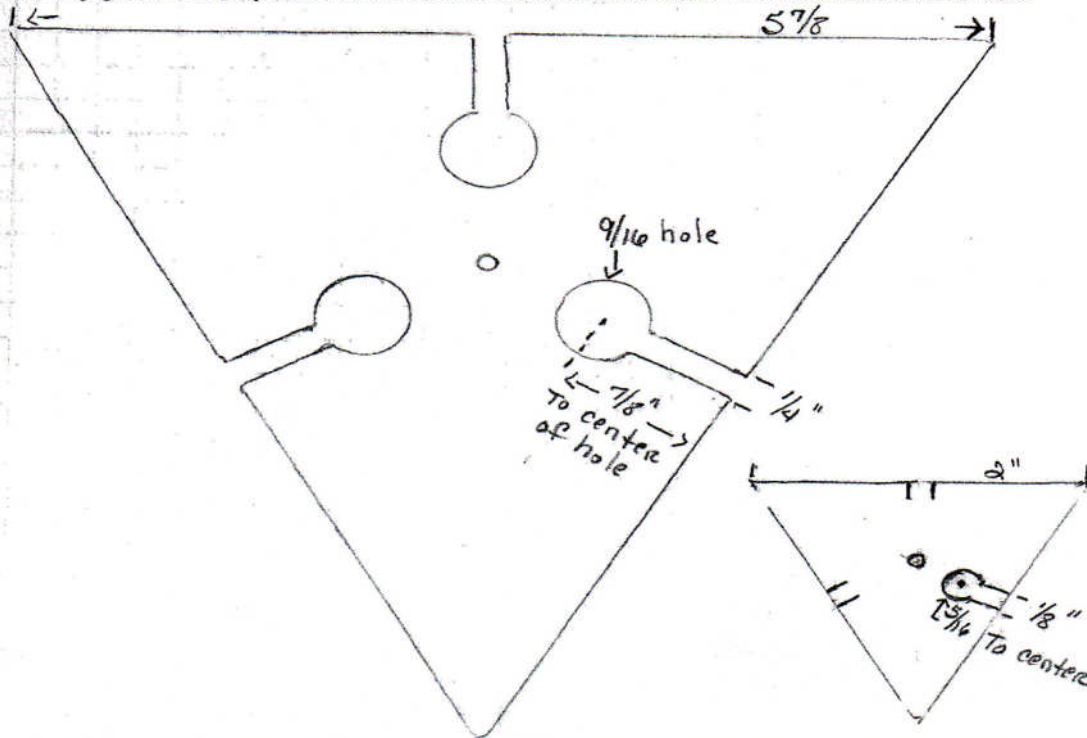


Repeat each step on small, tri-leaf part. curl tips of each leaf on the small tri-leaf down. They should be placed between each of the large leaves when assembled. Put all pieces together adding the candle cup and rivet together.



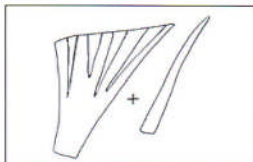
Make sure to rivet it tightly so they don't move.

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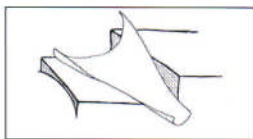


A Simple Flower (canna)

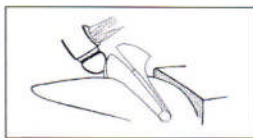
by Jake James, Vancouver Island Blacksmiths



1. Cut out a rough triangle shape from 1/8" plate. Texture and spread one end as wide as you can at the edge, tapering it into a wedge shape with a cross peen hammer. Forge a stamen out of any appropriate stock.



2. Using the cross peen, dish the flower in the step of the anvil. Once the dish is introduced, using your hammer, close up the cone on the anvil face.



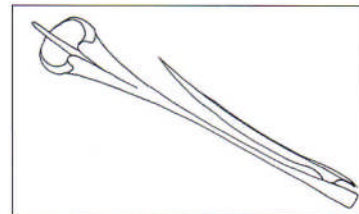
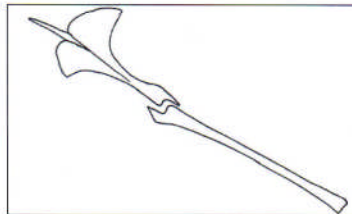
3. With a small ball peen, flare out the top edge of the flower over the bick (horn).



4. Insert the stamen. It should stick out just a little from the bottom of the flower. Forge weld it in place.

5. Prepare step scarfs on the end of the flower and on the stem. (Have ready another appropriately sized stock.) Remember: (a) Upset the scarfs so that you have enough material to forge weld. (b) Have a deep, clean, hot fire. (c) Bring your anvil close. (d) Try a dry run to rehearse where each piece goes.

6. Forge out a leaf, using another piece of appropriately sized material. You can make the long tapered leaf with round, square or flat stock. Forge weld it to the stem. ♣



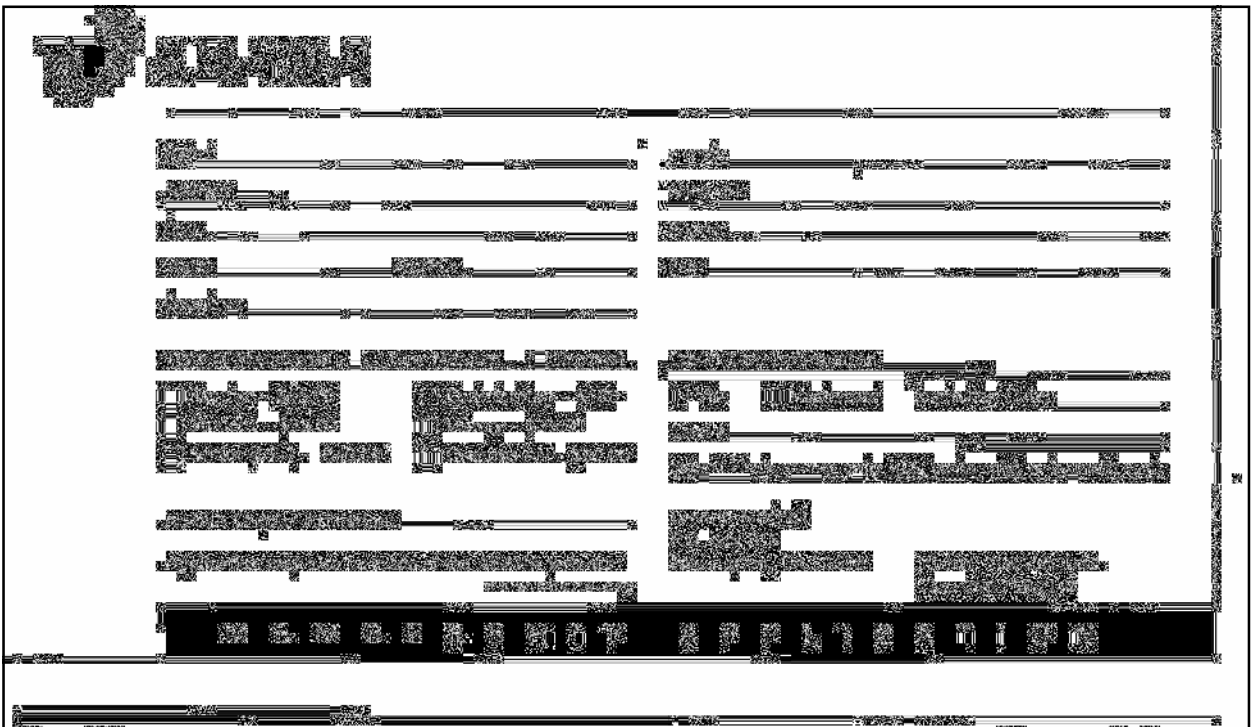
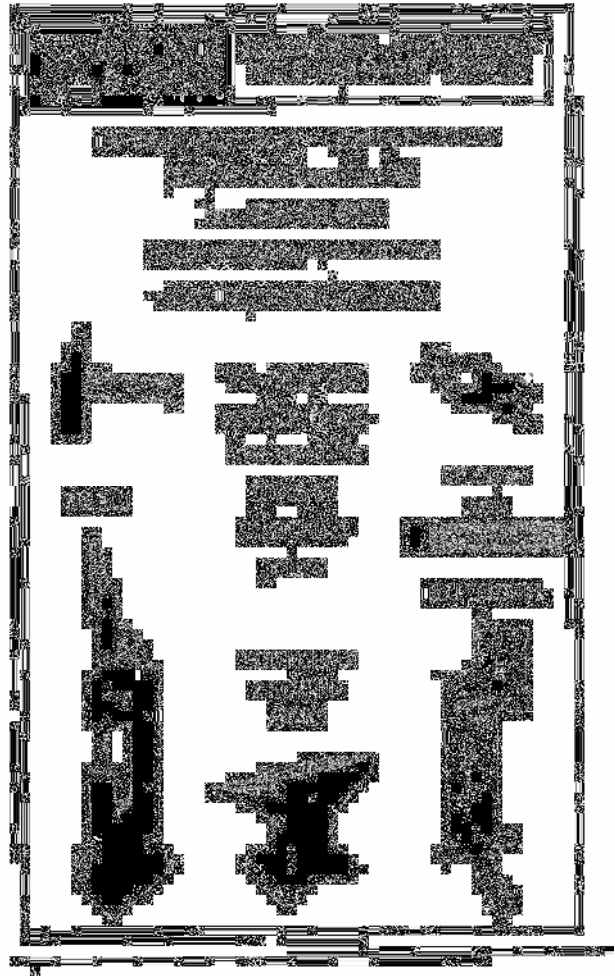


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