N.J.B.A. Newsletter

NJBA Volume 6, Issue 1 August 2001

It's the Mid-Summer Heat!

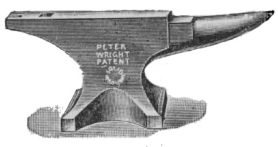
Well summer is half over and I'll admit it's hot, but I hope there are some forges burning out there. This years election meeting was held during the Cold Spring Village meet in June. Doug Learn has stepped down as director and Bruce Hay has stepped in, we now have three Bruces on the board.

Bruce Freeman has set up a web page with links to various pages on the ABANA Web site (http://www.monmouth.com/~freeman/NJBA/abanawebsite.htm), It's easier to navigate than the site itself, so if you are on the web and you have a favorite spot on the ABANA site, look for it on Bruces' link page, if you don't see it let him know I'm sure he'll add it. You can get to Bruce's page from our NJBA web site

Remember to send in your renewals!
If you did not get one contact
Bruce Freeman, Membership Chairman

Upcoming events for 2001

Remember most of our meets have a "Iron in the Hat" drawing, be sure to bring something.
September 1; Fund Raising Pig Roast at Peters Valley, see this page for details and directions
October 13; Meet at Mike Walker's in Elton, Md. See starting page for details
November; Possible meet at Peters Valley
December; Holiday Party!



First Annual Pig/Iron Fest At Peters Valley

Help us help the Blacksmith Shop in Peters Valley
Join us on September 1st at 1:00 pm

There will be a pig roast, Hamburgers, hot dogs, salads, beer, live music, an auction and demonstrations. Advance Reservations are required.

- Tickets $30 before August 15th
- Tickets $40 after August 15th
- $5 for kids, 6 and under are free!

Payments should be sent to;

Peters Valley Blacksmithing
19 Kuhn Rd.
Layton, NJ 07851

Payment by check, credit card or money order are accepted. Make checks payable to:
"Peters Valley"

For more information please contact;

- PV Blacksmithing (973) 948-2393
- crowleymaegan@hotmail.com
- yllwbrnfrm@aol.com

Directions to Peters Valley Craft Education Center are on the next page

The NJBA Web Site!

The NJBA Web Site is up and running at:
`http://njba.abana-chapter.com/`

Bruces' links to the ABANA site;
http://www.monmouth.com/~freeman/NJBA/abanawebsite.htm

Directions to Peters Valley;

Directions:

Peters Valley Craft Education Center is located at 19 Kuhn Road. in Layton (Sussex Co.). NJ 07851. (Phone: 20I-948-5200).

From Interstate Route 80 West:
Take Exit 34B to NJ Route 15 North. to US Route 206 North. Left onto NJ Route 560 West. Go through the blinking light in the center of Layton. onto NJ Route 640: go about 2 miles and turn right onto NJ Route 615. Go approximately one mile.

From US Route 209 (on the west bank of the Delaware River in Pennsylvania): Take PA Route 739 South across the Dingmans Ferry Bridge. Take the first right at sign to Peters Valley. Go two miles.

Official NJBA Address

NJBA
P.O. Box 195
Howell, NJ 07731

ABANA Correspondence

I am now posting the ABANA Correspondence, the Presidents Message and the Chapter Liaison Message, etc. on the web site. It is accessible through;
http://njba.abana-chapter.com
Anyone who wants a hard copy please contact me. This will provide more space in our newsletter.

NJBA Board of Directors

Marshall Bienstock, June, 2003
663 Casino Dr., Howell, NJ 07731
732-938-6577 732-780-0871
mbienstock@worldnet.att.net

Larry Brown. Editor, June, 2003
90 William Ave., Staten Island, NY 10308
718-967-4776
lp.brown@verizon.net, brownln@hotmail.com

Bruce Freeman, June, 2002
222 Laurel Place, Neptune, NJ 07753
732-922-8408, 609-716-2827
freeman@monmouth.com,
freemab@pt.fdah.com

Jon Folk, June, 2003
P.O.Box 143, Old Bethpage, NY 11804
516- 625-5667. folkforge@worldnet.att.net

Bill Gerhauser, June, 2002
415 Hutchinson St., Hamilton, NJ 08610
609-394-1817, bgahow@earthlink.net

Bruce Hay, Jr, June 2003
50 Pine St., Lincroft N.J. 7738
732-747-4758

Anton Holstrom, June 2002
26 Saddle Shop rd., Ringoes N.J. 08551-1510
609-446-0349 antonholdstrom@msn.com

Josh Kavett, June, 2003
471 Casino Dr., Farmingdale, NJ 07727
732-431-21 52, jakavett@aol.com

David Macauley, Director June, 2002
4 Patricia Ct., Howell, NJ 07731
732-206-1568, 732-949-8422
drmacauley@att.com, drmacauley@monmouth.com

Jeff Morelli, June 2003
234 Rahilly Road, Wrightstown, NJ 08562
609-723-5990

Nate Pettengill, June, 2003
212 Hazel St, 2nd Floor, Rear. Delanco, NJ 08075
nate.pettengill@lmco.com

Steven W. Rhoades, June, 2003
513 Harding Highway, Vineland, NJ 08360
856-697-4144, hotiron1@juno.com

Bruce Ringier, June, 2003
346 Rt.565 Wantage, NJ 07641
201-652-4526 wlkngb@yahoo.com

Tim Suter, June, 2002
1112 Ladner Ave., Gibbstown, NJ 08027
856-423-4417

Greg Phillips, June 2002
(845) 457-5671, Acorn Forge, 937 Route 17k, Montgomery, NY 12549 suresign@frontiernet.net

MEET AT MIKE WALKERS

ELKTON, MD

OCTOBER 13, 2001

8:00 -9:00 ARRIVAL, SHOP TOUR, SOCIALLIZING

9:00- 12:00 DEMONSTRATION BY MIKE WALKER ON MAKING LARGE LEAF FORMS, AND OTHER SMITHING TECHNIQUES

12:00 - 1:30 LUNCH, IRON IN THE HAT, VIEWING OF MIKE'S PHENOMENAL STONE WORK ON HIS HOUSE

1:30 —3:30 DEMONSTRATION BY KERRY RHOADES, DEMONSTRATION AND EXPLAINATION OF HIS CREATIVE APPROACH TO DESIGN IN DEALING WITH CLIENTS.

PLEASE BRING LOTS OF STUFF FOR THE IRON IN THE HAT. TAILGATING.

A NOTE FROM JOSHUA KAVETT:

"The first time I went to Mike Walker's shop, I was totally overwhelmed by his enthusiasm, and creative spirit. His shop is every smiths dream.. .1 could not imagine that any other tool would be needed for any blacksmithing job. The shop alone is worth the trip down. Bill Ker shared my amazement that day. To top off the blacksmithing part, we walked up to Mike's house to see his "world famous" stonework that he has done in creating his "castle". It has to be seen to be believed. This meet will be worth the time and the drive. This is the first time Mike is opening up his shop to outsiders. I hope that everyone will take the time to visit. I will be worth it."

Directions; Start by going to the bottom of the Turnpike or 295, cross the Delaware Memorial Bridge, and go about 8 miles on 95 to Exit 1-B. Then proceed with the directions on the map. (Following Page)

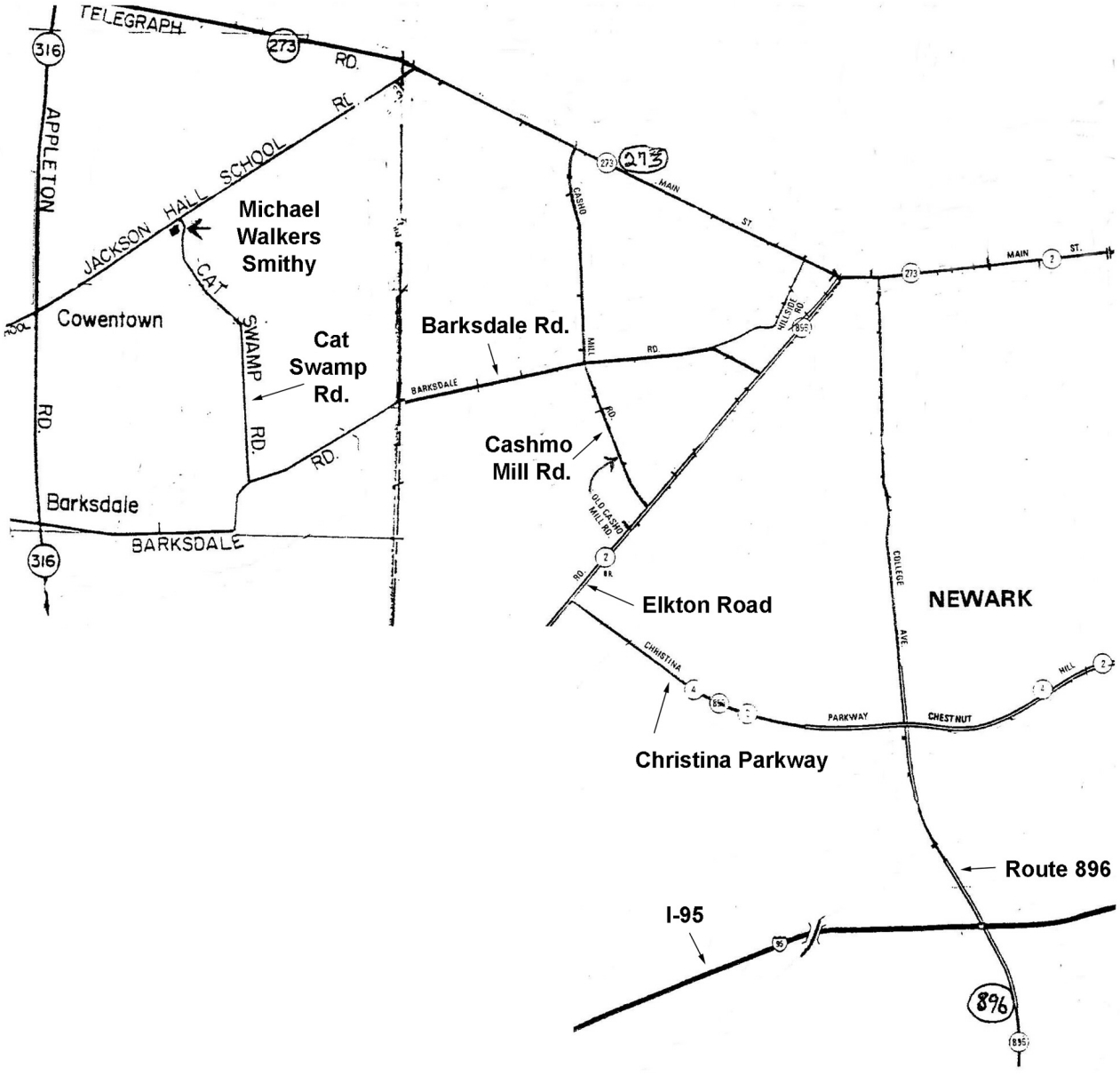
Driving time from Marshall's shop in Howell is about two hours.

Start by going to the bottom of the Turnpike or 295, cross the Delaware Memorial Bridge, and go about 8 miles on 95 to Exit 1-B. Then follow directions below

DIRECTIONS TO MICHAEL WALKER'S SMITHY

95 South to exit #1-B 896 North. After exit ramp, travel .7 miles to 3rd light, turn left onto Christina Parkway (896 North). Travel 1.4 miles to 3rd light, turn right onto Elkton Road. Travel .4 miles to 1st light, turn left onto Casho Mill Road. Travel .5 miles to 1st light, turn left onto Barksdale Road. Travel 1.4 miles, turn right onto Cat Swamp Road. Travel 1 mile. The House is on the left at the corner of Cat Swamp Road and Jackson Hall School Road. Address is 644 Jackson Hall School Road, Elkton, MD 21921. Phone 1-410-398-1785.

95 North to exit 109B (Newark, DE). After leaving exit ramp you are on MD 279 which becomes DE 2. Travel 2.6 miles to 7th light and turn left onto Casio Mill Road. Follow above directions from Casho Mill Road.



Report on the NJBA Demonstration Trailer

by Bruce Freeman

As you are probably aware, NJBA is putting together a trailer of tools and equipment to bring to meetings and demonstrations. Marshall Bienstock donated the trailer and much time, as has David Macauley and others. Recently I started work on a toolbox to mount on the fender of the trailer to hold hammers, tongs and other tools. Marshall donated the box, an old electrical box, and did all the necessary welding.

We won't quite finish the job -- it won't be mounted on the fender -- but the box itself will be ready for the Monmouth County Fair which will occur just before this newsletter goes to press. By the subsequent event we hope to have the box mounted properly. Depending upon need, we may put together one or two more such toolboxes.

From David Macauley

We are still looking for donations of tools for the trailer, some items that are still needed;

1. Another anvil 150 lbs of less
2. Another small leg vice
3. Another small barrel for a quench bucket.
4. Forging hammers with a cross peen. We have plenty of ball peens but no cross peens.

Non-NJBA events in the area

HUNTERDON HISTORICAL MUSEUM

Blacksmiths open house and tool swap

Hunterdon Historical Museum
56 Main Street, Clinton, NJ
Saturday, September 15, 2001 Rain or shine
They have a newly refurbished shop and facility. There will be a blanket style tool swap and sale and coal forges will be available for guest demonstrators and people desirous of a little forge time.
This event is free for participating blacksmiths, registration required. Please call Adam R. Howard, Blacksmith, (908) 735-4101

Events that have requested demonstrators from NJBA

If you visit any of these events you might find NJBA members demonstrating, or if you want to get involved contact David Macauley : 732-420-4792 <drmacauley@att.com>

- South Street Sea Port in NYC, Date not set
- Crosswicks Village 9/22/01 in Hunterton County
- Monmouth County Fair 7/25 - 7/29/2001, Just past see report on page 7.
- Buckelew Day : 8/11/01 Jamesburg
- Howell Day - October 13th.
- Sussex County Horse and Farm Show: 8/301 - 8/12/01
- Wainford Mill, Sunday, October 7th

Non-NJBA events outside our area

- ### Northeast Blacksmiths Fall 2001 Meet

The Northeast Blacksmiths are hosting a meet October 5,6 &7 at the Ashokan Field Campus outside of Kingston, NY. The demonstrator this time will be Scott Lankton. For more information on this weekend event contact: Tim Neu, Ashokan Field Campus
447 Beaverkill Rd., Olivebridge, N.Y. 12461
[914] 657-8333
Or check the web site at;
http://neba.abana-chapter.com/

- ### Southern Ohio Forge and Anvil Presents the SOFA Quad –State 2001

September 21-23. Miami County Fair Grounds
Troy, Ohio. For information write or call:
SOFA Quad-State 2001, P.O. Box 24308
Huber Heights, OH 45424-0308
Or call (937) 237-2200

- ### Delaware Agricultural Museum Wrought Iron Conference

Saturday and Sunday, September 8 and 9, 9 am to

4.pm. 866 North DuPont Highway, Dover, Delaware, 19901 (302)734-1618 e-mail DAMV@dol.net

Report on the May 19 Membership Meeting

by Bruce Freeman

The May meeting was held at Longstreet Farm (in Holmdell Park, Monmouth Co., NJ). Jeff Morelli was present with his forge and anvil, demonstrating making extensible coal tongs ("lazy tongs"). He also had a number of his other products on display - knives, a pipe tool, a striker, etc.

I had borrowed Marshall Bienstock's display of the stages in making a spoon, and had laid it out where people could see it. I did some work on one such spoon that I had previously begun, but yielded the forge when Grant Clark needed it.

Grant went to work finishing up some brackets for a fire engine. These brackets apparently hold a pole in the horizontal position. The is generally S-shaped, with a fork on the upper end. Grant made a tool to help make the S-curve uniform between the several brackets.

This meeting was to have been the NJBA elections meeting. Attendance was quite low, apparently due to late delivery of the newsletter. (Norm had only received his copy that morning!). Accordingly, the election was postponed until June.

However, the demonstrations were well received by the visiting public, and Norm invited a couple children into the shop to crank the blower handle while Grant or I were forging. Overall, it was a worthwhile day.

Report on the June meeting at CSV

by Bruce Freeman

Saturday, June 16, I loaded my 1835 costume and, some tools and iron into the car. Bruce Hay and Larry Brown showed up at my door at about 7:40 am, and we loaded their stuff into the car and headed down the Parkway to Historical Cold Spring Village ("CSV"). After a couple hour's drive, in which Larry regaled us with stories of the bad old days, we arrived at CSV a little before 10 am. Stopping at the front parking lot, I went in to find where we should go, and immediately ran into Jerry Goldman, the blacksmith at CSV. He directed us around to the back road.

When we got back to where the action was, we found two trucks and the NJBA trailer. The trucks were those of Mike Mills and Tim Suter, both of whom had brought forges and other equipment. (Tim had generously brought two forges, at least two anvils, a leg vise and slack tubs.) David Macauley had towed the trailer down the night before. Out front was a table with a few examples of peoples' work, and with our NJBA sign (made and donated by Greg Phillips) hung on the front, looking quite spiffy. David also put out some NJBA brochures.

David, Mike, along with his son Mike, all in period costume, already busy at the forges when we got there. Bill Futer was there in his NJBA T-shirt with the most jury-rigged forge I've ever seen. It was a shallow square tin pan atop a hibachi atop a riveter's forge blower all mounted to a collapsible saw horse -- wobbly but effective. It just shows you how simple a forge can be.

I quickly changed into period costume and fired up one of Tim's forges. We've been remiss assembling tools for the trailer, so I had to borrow a poker from Bill to get my fire going. I got a piece of rebar from the stock in the trailer to use to make a poker, but Luke stepped in to do the job for me. Luke turned out a lovely poker with flat, pointed, re-curved tip and a lovely loop handle. It was typical of the quality work Luke (whose mentor was Frank Turley) displays. He donated it to the trailer tool kit.

By this time the fire was going fine in my forge. I returned to a project I'd started another time - a spoon, based upon Marshall's demo (written up a few issues ago in this newsletter). Marshall has put together a dandy board showing each step in the process of making this spoon. Both Bill and Jerry took photos of this board. I've already had success at this project twice before, so felt fairly confident. I had already completed the round flat that is later dished to become the bowl, so I cut the blank off the rest of the bar in preparation for drawing out

the handle. (Lacking a hardy, I did this against the sharp edge of the anvil - worked just fine.)

Finding my tongs too loose to grip the flat of the spoon, I took a tip from David and tightened up the tongs to fit the project. Then I drew out the handle of the spoon, leaving a lump toward the end for the embellishment, as in the example done by Marshall. After completing the handle to my satisfaction, except for fine details, I flipped the spoon around and dished the bowl against a stump, kindly provided by Jerry - a trick that impressed the audience.

Although my progress was slow, before the end of the day I'd finished this spoon and had started another project. During the course of this work, a reporter from the Cape May Herald shot a lot of pictures of me and some of the others -- always good publicity.

David, meanwhile, was making tongs for the trailer. Bill seemed to be making a keychain. I missed completely what the others were working on. (It's hard to demonstrate and observe at the same time.)

(Editors note, Larry Brown made a punch and a chisel for the NJBA trailer out of some S-7 he donated and Mike Mills and son were making curved BBQ skewers for a customer).

At noon I called the business portion of the meeting to order. In addition to the members listed above Mitch Swirsky and Dan Cruzan were present. The only item of business was the election. Doug Learn, who is now the ABANA president, had previously told me that he would be dropping off the NJBA board for lack of time. Therefore the directors up for reelection were Marshall Bienstock, Larry Brown, Jon Folk, Joshua Kavett, Jeff Morelli, Nate Pettengill, Steven W. Rhoades and Bruce Ringier. I called for self-nominations. After some hesitation, Bruce Hay put in his name. This slate of nine candidates was elected unanimously. (The "Bruce's" now number three on the board, which should make the minutes of the board meetings even more interesting.)

After the election we adjorned for lunch. CSV had provided lunch tickets for the demonstrators, so most of us headed over to the booth and were provided a small but satisfying meal. After lunch I wandered around the village to see what I could see. I saw a great little collection of tools, including some clever pipe wrenches, and a collection of farm and kitchen apparatus, the former being a particular interest of mine. (I have a couple of the cherry pitters they showed there.) There was a collection of miniature tractors on a table, as well as a collection of tractors rather too large for the tabletop. I bought some chances on a John Deere. (Why not?)

I met Shirley Stefanovicz, the CSV Program Coordinator, who said we were welcome back on a weekend in September to October, after their regular season ends. I also met Dick Newkirk, contact person for the "19th Annual South Jersey Gas Engine Show" at Cowtown on Oct. 6-7, who said we were welcome to demonstrate there. The NJBA board will discuss these and other ideas for upcoming meetings.

Around 4 pm, I changed back into my civvies. Then, while munching on one of the large soft pretzel thoughtfully provided in quantity to the blacksmiths by some young lady, I said my goodbyes to Jerry and the others, gathered up Bruce and Larry, and headed home. A most satisfactory day.

Report on the Monmouth County Fair Meet

By David Macauley

The Monmouth county fair went flawlessly this year. We thought we might have problems with lighting, but we were able to use a propane lamps without any problems. The small forge worked wonderfully. The chimney that Bruce Freeman rigged for it needs some more work, but what he put in place worked. We were able to vent most of the smoke up the chimneys this year.

At the meeting on Friday we had present Alex Burke, Marshall Bienstock, Bruce Freeman, David

Macauley, Daniel Rice and his son David. Did I miss anyone? We primarily made tongs this year.

We fabricated a pair or 5/8" box jaws, 1/2" round and a pair of slotted flat tongs. I also donated some files, punches, stock, tape, hammers, and some other things. The tool box Bruce and Marshall salvaged worked great. Now we need another to hold all of the tools we are collecting. Lighter weight hoods would be very valuable. I would like to add a special thanks to Daniel and David who helped with the setup and tear down of the demonstration site

Win A Power Hammer!

DUSTY, the sequel to the original Appalachian Power Hammer (RUSTY), is finished. The ABA will sell raffle tickets beginning May 5, 2001 at the Cedar Lakes Blacksmith Shop. The drawing will be held at Cedar Lakes Blacksmith Shop on October 20, 2001 in conjunction with our Fall Conference. DUSTY is a scaled up version of the original RUSTY.

Unlike RUSTY, DUSTY has all new parts. Dusty comes with "hands-free" spring dies for fuller and tenon work. "Hands-free" dies lock into the 1" slot on the horizontal anvil brace. Bolt on hammer dies (pictured) are flat. With this flexibility, you will be able to customize several dies for your projects. Center column is a hollow chamber which allows user to fill with sand and lead weights.

SPECIFICATIONS:
Hammer Weight: 50#, Overall Weight: Approx. 1000#, Motor: 1.5 HP, 115/208-230 volt (US), single phase, TEFC, Overall Height: 5' 6" (at pivot)
Base Plate: 25" w. x 38" l.
No warranty, expressed or implied, is provided by the Appalachian Blacksmiths Association for this power hammer. No Delivery.

Do not send cash

Before ordering, check with your ABANA chapter to see if it is reselling tickets. Do not order tickets before May 15, 2001. Mailed-in tickets will not be received after Wed., October 10, 2001.

Raffle ticket information:
Tickets cost $1.00 each.
To order, write to;

Appalachian Blacksmiths Association
c/o Josh Schlicher, President
P. O. Box 1076
Marietta, OH 45750
Make check payable to "ABA--DUSTY".
Check it out on the web site at:
http://hometown.aol.com/anvilwork/rusty.html
You do not need to be present at the drawing to win. However, the winner will be responsible for picking up the power hammer at Cedar Lakes Park, Ripley, WV and transporting it. Drawing will be held at 1:00 pm, Saturday, October 20, 2001.

Questions on Iron Smelting from the Forge list with answers from Bruce Freeman

Daniel,
Historically, there were two basic processes (and LOTS of variations). Take iron ore, burn with charcoal (and a little limestone as flux) in some kind of closed furnace, a puddle of high-carbon iron is formed. Such iron is essentially "cast iron" and has limited uses. Where malleable metal was needed, it was useless. No good for weapons. No good for the blacksmith at all.

Keep the hot puddle of high-carbon iron exposed to air and the carbon (and some iron - inefficient!) burns out of it. As it does so, the pure iron will tend to form a mushy mass, mixed completely with slag. What I'm describing is the general sort of bloomery process. Lift this 200# "bloom" out on a pole and take it to a trip hammer (think: 700# head) and hammer the slag out if it. Result: wrought iron (very low carbon, full of slag which is in the form of fine filiments from the drawing out process under the hammer).

Take iron ore, burn with charcoal (and limestone) in a vertical "blast" furnace. A pool of molten iron forms at the bottom, with a pool of slag on top of it. Tap the slag off the top of the iron. Tap the iron off the bottom of the furnace, into ladles, or run it onto a sand floor with troughs branching off like. The individual chunks from the latter

process are the "pigs", hence "pig iron" which is nothing but cast iron, brittle and high in carbon. If you take the iron off in ladles, you can pour it into sand molds for cast iron products. In this case there are a number of tricks that can be done to alter the properties of the cast iron, depending on need. "Chilled iron" and "malleable iron" are the result of two such tricks. Of course, this stuff is still just cast iron, of no use to the blacksmith.

There were any number of processes to convert cast iron to wrought iron. One of the better approaches was the reverbatory furnace, in which pig iron was remelted without direct contact to the fuel. To make a long story short, the carbon was burned out of the pig iron, producing wrought iron, complete with slag, which was puddled and hammered as in the bloomery process. This was a more efficient method than a bloomery, but still was manual labor. Attempts were made to automate this process, but it wasn't until the Kelly (aka Bessemer) converter was perfected that any real progress was made.

So far we have only "iron": high carbon cast iron, and zero-carbon wrought iron. Steel, with its superior strength, requires carbon in limited quantities. Again there were many approaches to producing this. One was blister steel. This was billets of wrought iron cooked in charcoal until it picked up carbon. (Blacksmiths do this all the time. We call it "burning" the steel!) Iron picks up carbon and the surface blisters. By appropriate hammering, a fairly homogeneous billet of medium to high carbon steel can be produced.

This wasn't good enough for a watchmaker in England who needed high quality, high-consistency, high carbon steel for watch springs. He took blister steel and melted it in a crucible to thoroughly homogenize it. Hence "crucible steel". See specific answers to your questions offset by ">>>>>", below.

Bruce Freeman
NJ

>>> Daniel Crowther <smithy@nycap.rr.com> 07/17 3:45 PM >>>
Ok here's the big questions,
I've been interested in smelting & casting iron for awhile so I've been doing some research on the internet about furnaces etc. One of the biggest issues I seem to be having is one of definitions, terminology, and an over all process of what begets what. Many of the sites include these things but they don't compare/contrast them.
Here's what I think I know. :) Please correct and add detail.
Cast Iron - High carbon content (above 1%), brittle, created by re-melting a bloom and pouring into a mold?
>>>>No. Once a (low carbon) bloom was laboriously produced, you would NOT use it for cast iron. You could, but you wouldn't.
Bloom - Heterogeneous carbon content, spongy porous mass, created by smelting ore
>>>>No. A bloom is low-carbon, a mix of pure iron and slag (iron silicate), created by puddling, as described above.
Wrought Iron - Iron with bands of silicate slag inclusions, ductile, created by repeated heating and hammering a bloom.
>>>>Yes.
Crucible Steel?
>>>>>See above.
Ok, what other related metal definitions are important to understand while I'm reading these articles? If I melt down mild steel (A36) scraps and pour it into a mold do I still have "Cast Iron"?
>>>>>No, you have "cast steel" with essentially all the same properties of steel. However, casting will produce a different steel properties than forging. Forged steel is usually better, but for reasons I won't go into here.
Can I melt it down into an ingot and hammer it out into a usable form again or will it crumble like Cast Iron?
>>>>>Yes, since it's still steel, it's malleable (hammerable). No, it won't crumble (unless hot-short or some other such complication).

Daniel Crowther
Oak & Acorn Ancient Metalcrafts
Valley Falls, NY

Blacksmithing Workshops and Classes:

Peters Valley Craft Education Center
19 Kuhn Rd., Layton, NJ 07851 (973)948-5200
pv@warwick.net www.pvcrafts.org
Academy of Traditional Arts
Carrol County Farm Museum
500 South Center St. Westminster, MD 21157
(410)848-7775 (410)876-2667
Touchstone Center for Crafts
R.D.#1, Box 60, Farmington, PA 15437
(724)329-1370 Fax: (724)329-1371
John C Campbell Folk School
One Folk School Rd.
Brasstown, NC 28902
1-800-365-5724 www.folkschool.com

Coal

Coal is now available through Alex Parubchenko at his shop in Trenton. Please contact Alex or John Chobrda at the shop, Phone # (609) 396-9583.

Open Forges

We want to encourage all to join us at:

Monday Night Open Forge in N.J.

Marshall Bienstock is hosting an open forge in his shop at 7 pm almost every Monday night (Please call ahead on holidays to make sure , (732)780-0871)

Monday Night Open Forge In Orange County

Greg Phillips will be hosting an open forge in his shop in Orange Co. NY. For more information Contact: Greg Phillips, Acorn Forge, 937 Route 17k, Montgomery, NY 12549, (914) 457-5672, Suresign@frontiernet.net

Cheap !!!

I can't locate an engine, so I now have parts to an old Lincoln engine driven welder (2 cylinder, 250 amp) for sale or free to someone who can pick the

Business Members

We would like to thank those who joined with our new Business Membership category
Please show them our support

Ginty's Welding Service, Inc
2 Lee Mack Ave.,Danbury, Conn, 06810

Timothy Miller, Artist Blacksmith,
Bayport, Long Island, NY (631)419-1185

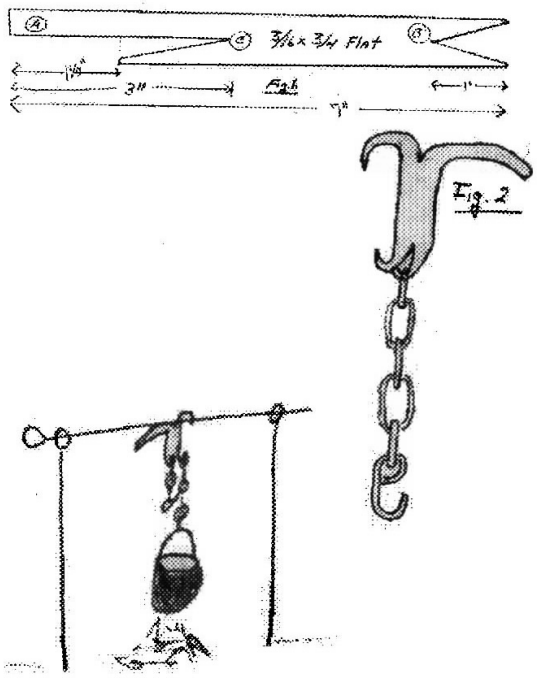
Marshall Bienstock
663 Casino Dr., Howell, NJ 07731
(732) 938– 6577, (732) 780-0871

www.artist-blacksmith.org
It may be the only address you need

Tips and Scrap Corner
From The Prairie Blacksmiths Association 12/2000

Campfire Pot Hook (Adjustable)
Jr. Strasil

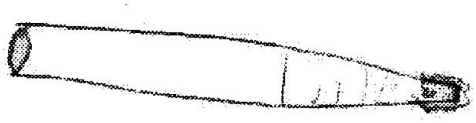
1. Make cuts with hacksaw per fig. 1 in a piece of flat iron 3/16"x 3/4"x 7"
2. Heat and round the long part of end 'A'.
3. Heat at end of cut 'C', lay across edge of anvil and bend 90 degree, but not real sharp. See fig. 2. Then while still hot, lay on horn of anvil and roll end down a little, this is the handle. Hammer out any saw marks.
4. Heat short part of 'A' and form hook. This hook goes on the top piece of the campfire irons.
5. Heat end 'B' and form small hooks. See Fig. 2. Have a piece of side link chain from a set of car tire chains ready to put in closed hook, before closing hook. Chain should be about 18-20 inches long. Cut the last link on one side and form hook to hold pot.
6. Pot height can be adjusted by putting any link of chain in the second bottom hook.



Portions of the last issues Scrap Corner were also from the Prairie Blacksmiths Association by JR. Strasil.
I apologize for the omission

When Hot Punching Holes
Jr. Strasil

1. When hot punching holes, hit the punch twice and then remove and cool the tip. Keep a container of fine coal dust handy and dip the wet end of the punch in dust before punching. Some of the dust adheres to the punch and helps release the punch from the hole. Old—timers used to sprinkle some dust in the hole.
2. Do not punch over the hardy or pritchel hole, use the top face of the anvil. Hit twice, remove and cool the punch until you feel the punch bounce. The turn over and punch from the other side at the dark spot. The slug will usually be lying on the anvil.



Formula for Bending Circles
Jr. Strasil

To determine the required length of stock to form a ring or circle, measure the inside diameter and the thickness of the metal. Add the inside diameter and thickness together and multiply by 3.1416. This will be a center-line measurement. When bending the inside shrinks and the outside stretches, but the center-line remains relatively unchanged.

Formula For Heading Rivets & Bolts
Jr. Strasil

1. To forge the head on a rivet, allow 1 1/2 to 2 times the diameter of the rivet
2. To forge the head on a bolt, allow 3 to 3 1/2 times the diameter of the bolt.

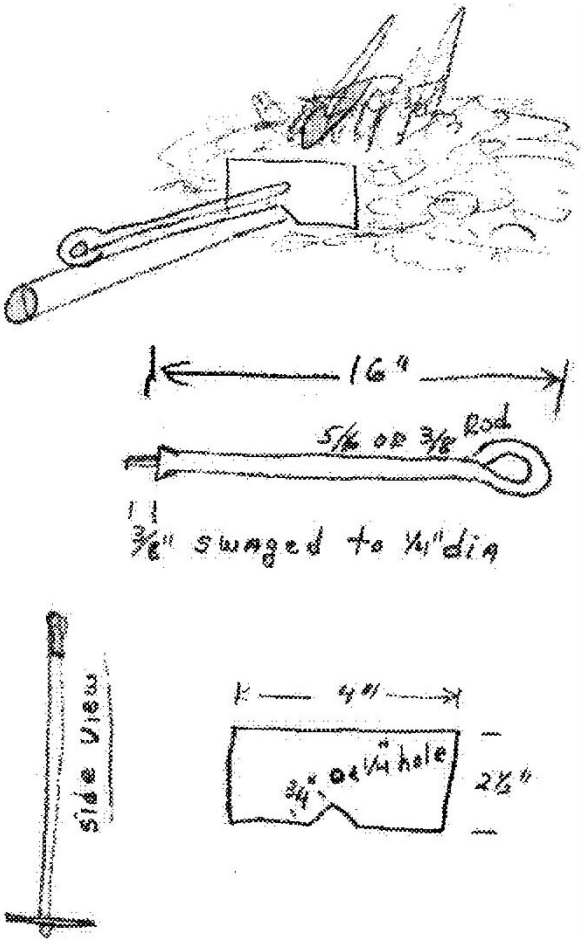
Tips and Scrap Corner
From The Prairie Blacksmiths Association 12/2000 Part 2

Heat & Hand Saver

Jr. Stasil

When heating short or heavy pieces in the forge, the fire has a tendency to shoot back over or under the piece you want to hang onto. Sometimes it is awkward or unhandy to hold it with tongs. You also tend to lose part of your heat when you hold the handle in water to cool it enough for your hand. By using the heat shield, it will deflect much of the heat and doubles as a coal rake.

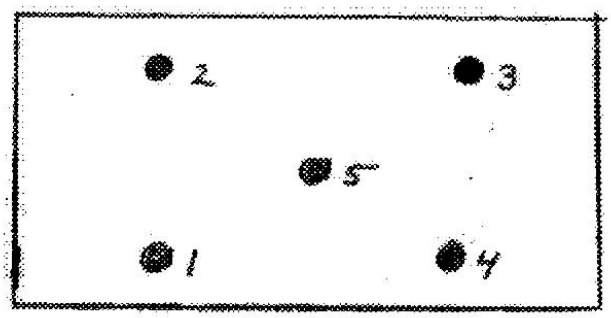
For flat stock, put the straight side down. Use the notched side for round or square stock



Hammer Technique

Jr. Strasil

At the workshop held at Halan Krueger's on May 20-21 I noticed that some participants were having a hard time hitting where they wanted. Over the years all of the employees I have hired had the same problem, eye-hand coordination. This problem causes a person to take short rapid blows because they are afraid to hit it hard and do possible damage with a miss-aimed blow. It is nothing to be ashamed of and with practice it can he cured.
The follow describes the method I have used to teach employees and others how to improve their eye hand coordination with a hammer. Take a piece of 2 by 4 about 6 inches long and put 5 common nails (10-16 penny) and number them 1 to 5.



Start with the smallest hammer and tap the nails in order, the object is to tap not drive the nails. Do this for about 15 minutes twice a day 'With practice you will be able to tap the nails faster.. When you become fairly proficient, do the exercise with your eyes closed. You should also practice with your non-dominant hand. Soon you will be able to hit where you want and heavier blows can be made when working. The reason to become proficient with both hands is in case something happens to one, you can still work (make a living) with the other.

Building Blocks

A "Back to Basics" poject the Anvils Ring/Spring 1987 by Dorothy Stiegler Part 2

"Well, hello again. I hope you had fun making those leaves! For the next phase you will need two pieces of 1/4" long by 3/4" flat stock—one 36" long and one 44". We'll work with the 36" piece first. On one end we will make a very simple ribbon scroll.

Heat the end of the bar and rasp it to make sure it is flat and square on the end. Reheat, and with the piece laid flat on the anvil, deliver flat, overlapping blows to taper the end nicely to about 3" up the stock. Aim for a smooth taper, down to 1/16 or so. Let the stock spread on the sides to about 1" wide or a little more (see Fig. 1). Try to get it evenly spread on both sides of the center line so it will roll up evenly.

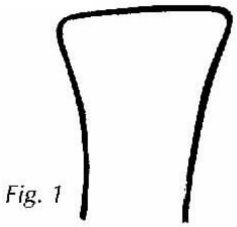


Fig. 1

After quenching, turn the piece around and heat the other end, squaring it up as before. Take a second heat about 2" back from the end and with 1" hanging over the far side of the anvil, hold it on its edge and hammer a neck into the bar as shown in Fig. 2. This narrow neck area will be more than 1/4" thick now, so turn the flat side to the anvil and reduce the neck back down to 1/4" Turn it onto its edge again and rework it until the piece is nicely tapered at the neck. The neck area just toward the shoulder should be a somewhat thinner taper (1/4" to 1/8") Leave the block 1" x 1/4" - you'll need the mass to make a fiddle head scroll on this end.

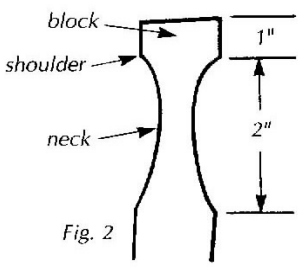


Fig. 2

Now you will want to heat to a nice orange-yellow and use a crosspein hammer for the next step. Lay the steel flat with the 1" block area on the center of the anvil. With the cross-pein end of the hammer at 45° to the piece, hammer out toward the left ear (Fig. 3). This will spread the left ear out somewhat as in Fig. 4. To repeat this process for the other ear you can reheat this area and either turn it over to the other side, or you can work from the same side, turning the work so you are hammering to the right instead of the left. Keep the cross-pein of the hammer at a 45° angle to the center line of the piece, then stretch the steel forward by starting at the center and making a series of overlapping fullerings out to the end. The steel will move ahead of the pein if you go slowly and aim carefully. Don't hammer out on the end first and then jump to the center because you will be pushing the steel back into the center of the block. When you are finished it should look something like Fig. 5. Try to get it about 1 1/2" wide at the end and about a 1/2" taper at the neck. If the piece looks rough, take the time to rasp the edges and square the end. I like to take the extra few minutes here and there to clean the work and straighten up the piece—it always pays off later. Now to scroll this baby up—this is the fun part. Heat the first 2' of the end and hold it flat side down on the anvil positioning the flared end just at the far edge of the anvil. (Keep it all on top of the face but right at the edge.) A "cold run" might be helpful here. Hold the piece with a loose hand while aiming the hammer blows into the far edge of the anvil at 30 deg. (see Fig. 6). The hammer will not be used to fuller the piece over the edge, but rather to break a radius using the edge of the anvil to do it. Be careful not to hammer hard enough to crease the scroll on the inside run. As you come down with the hammer, slowly advance the scroll with your hand so

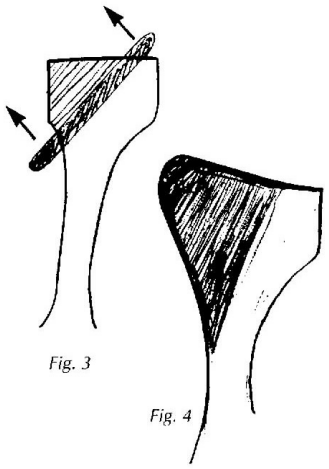


Fig. 3 Fig. 4

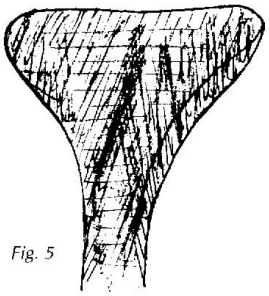


Fig. 5

it goes over the edge of the anvil as you hammer with light glancing blows (hold the hammer at a 30° angle to the edge). Each time you raise the hammer advance the scroll a small amount—about 1/4 or so. Remember, you are making a series of radii and if you hold too long in one place or advance too quickly, a flat spot will result. Move the steel ahead until you have hammered about 3/4" of it into a small curve. If you started at the very edge of the piece, everything will curl.

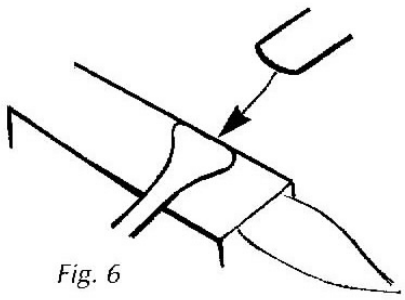


Fig. 6

Now take a new heat and hold the piece on its back with the curl up (see Fig. 7). With the hammer behind the curl, strike toward yourself and bend it up into an elongated curve (Fig. 8). Keep the left wrist and shoulder loose, allowing the shoulder and elbow to drop and the wrist to rise as you do these scrolls. Also, let the arm swing in an arc out from the body as you raise the wrist (try it a couple of times first). Next, heat the piece and position the work so that the last part of the bend is down on the anvil and the curve is up.


Fig. 7


Fig. 8

It's helpful to keep a mental image of a scroll in mind but right now yours should look similar to the one in Fig. 9. Position area 9-A on the anvil so that it rests as shown. Strike lightly on the tip of the scrolled end to round out the part between the tip and the bend. You will need to keep the left hand moving (shoulder and elbow down, wrist rising) moving away from the body. Keep the contact points of the anvil and hammer changing, and everything between the two will round out.

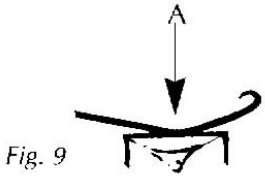


Fig. 9

It's a good idea to reread this and do a couple of dry runs. I'm sure you will find you are actually doing quite well. If you do get a flat spot, heat the flat area and position the piece so that one point of the flat area is touching down on the anvil and one is not. Tap with your hammer on the point that is not on the anvil and the piece will round out, if you have it hot.

Now back to the fiddle scroll—it should be fairly tight on the end. Reheat it, and repeat the procedure described earlier—with the left hand moving, hold the piece on the anvil and tap it into a smaller curve. Reheat again and hang the curl over the far edge of the anvil, gently tapping with the hammer to close it up. Then move the piece back to the top of the anvil and curve it up a little more. You should end up with a piece as shown in Fig. 10. It's only curved up on the tip at this point, but we are going to curve it up even more, so hang the entire existing curl over the far edge of the anvil with the curl down and pull the piece back until it touches the anvil. Using the scroll technique again, advance the work as you tap or lightly hammer the piece coming in at 30° to the anvil edge. Bring it back onto the top of the anvil and again lifting with the left hand and hammering toward yourself, take out the straight part.


Fig. 10

Now we will make the bends. Take a heat about 4" long on the end, just past the fiddle scroll (and overlapping a little); with the scroll up, hold it over the horn just past the scroll. Now heat area 11-A and quench out both the curve and curl.

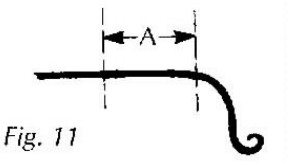


Fig. 11

Hold it over the horn with the curve up this time (Fig. 12), hammer lightly on the tip end and make the curve go down (see Fig. 13). straighten it round and true it up.


Fig. 12

Quench and turn the piece around to the other end and position it on the anvil as shown in Fig. 14. Now repeat the above procedure to this end. Your piece should end up looking like the one in Fig. 15.


Fig. 13

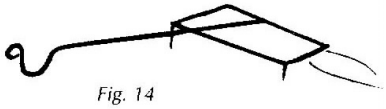


Fig. 14

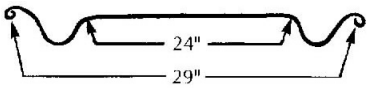


Fig. 15

The next scroll will be an 'S' scroll. Measure back about 18" from one end and bend it to look like Fig. 16 (it shouldn't take much heat for this). Take the 44" piece of stock and heat 2" at one end. With the flat face of the hammer, deliver flat overlapping blows to make a nice flat end on the piece. Taper the thickness down from 1/4" to 1/16" and allow it to spread a little on the width, Again, keep the spread equal on both sides of center. Rasp it until rounded on the end (Fig. 1 7) and clean it up. Now take a round bar or a rounded fuller and hold it on the heated spade as shown in Fig. 18-A.

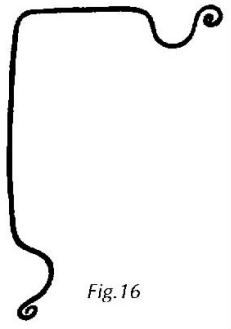


Fig.16

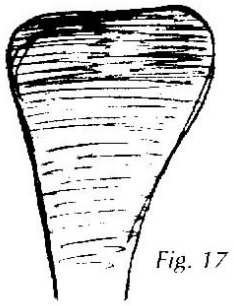


Fig. 17

With the piece hot and the bar cold, strike the bar with a good sharp quick blow; use a heavy hammer—a striker is handy here. This will fuller the piece. Then reheat and repeat the process on the other side (Fig. 1 8-B). If you like, you can put one down the center, too (Fig. I 9), or maybe up the neck a ways. Now hold It over the far edge of the anvil, fullers up, and again use the scroll technique we discussed to roll the piece up a bit. We will continue to curl this one around farther than the last one until we have the shape shown in Fig. 20. to roll the piece up a bit. We will continue to curl this one around farther than the last one until we have the shape shown in Fig. 20.

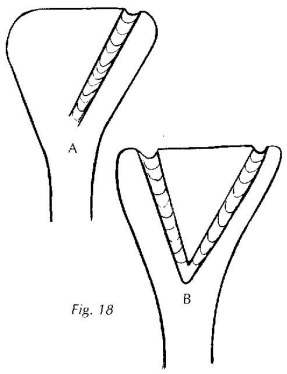


Fig. 18

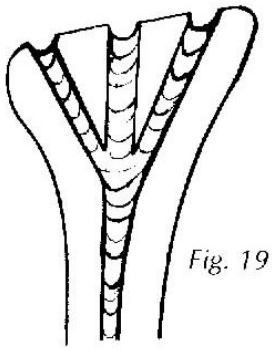


Fig. 19

Continue to advance the piece over the anvil, tap at 30° with the hammer, bring the piece to the face of the anvil and scroll it up a little, then repeat the process.

Next, turn the work around and with the scrolled end up, repeat the entire process on the other end. This time, when you turn the scroll you will find it has turned into an "S' overall with the fullered scrolls on the outside of their curve. These scrolls will fit together as shown in Fig. 21. Heat the bracket curves and, laying the work flat on a table, use a pair of tongs to squeeze and fit them around the cold "S scroll (Fig. 24).


Fig. 20

Next time we will add the leaves, hot collars and punch holes. See you then.

Dorothy Stiegler is an artist-blacksmith from Rochester. WA. She serves as vice-president on the ABANA Board of Directors. (1987)

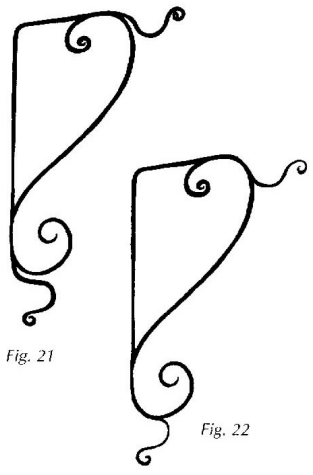


Fig. 21

Fig. 22

The Anvil's Ring/Spring 1987

This article was reprinted courtesy of the author Dorothy Stiegler, The Anvil's Ring and ABANA. It was originally published in the Spring Issue of the Anvil's Ring 1987, Volume 14 Issue 4. Reprinting of this article must be cleared through the ABANA publishing committee

Foundations;

A Resource for Beginners. . .
by Bud Oggier
the Anvil's Ring/Winter 1986/87
Part 4

"Hi, Jean, good to see you again. The second time you were here we were upsetting and made a piece of 1/2" round bar with two upsets in it. I've saved those pieces and today we're going to put a 1/2" hole through 1/2" round bar. Instead of using a round punch to put in the hole, we're going to use a slot punch. The punch is oblong 3/16" x 1" with a full radius on each end. After punching we'll upset the slotted section some more and then finish up the hole. The reason for doing it this way, rather than with a round punch, is that we need to spread the slot to give us a wall all around the hole. This kind of hole is used when you want to pass one bar through another and they are both close to the same size. Well, here's the two pieces we made earlier. Let's see what happens when we do all this good stuff.

"Jean, this kind of hole is used quite a lot in making gates, fences and grills, and sometimes on decorative pieces, so its well worth learning. My piece is hot now, so watch how it goes. I line my slot punch up in the middle of the upset, parallel with the length of the bar, and drive the slot punch just the way we did with the round punch last time. I'm trying to get it lined up as close as I can to keep the hole in the middle of the bar. Hear the sound change as the punch gets closer to the anvil? Now I'll turn the piece over and punch out the plug from the opposite side. There, that's not too had. See, the extra time spent lining up the punch paid off. I have just about the same amount of stock on each side of the slot.

"Time for you to try it. Is your piece ready? Don't forget to cool the punch. Good, hit hard. There, turn over and knock out the plug. Great! Let's look. Your slot is well-punched, but off to one side a little. I think we can fix that later, though.

"Now, Jean, we'll upset the sides to give us more stock around the hole. We'll have to heat the piece, then cool the bar on each end of the slot so the sides will upset. I'm going to upset until my slot has become a square. Now I'm hot enough. First, I cool with my water can, then upset. I still have to be careful about bending and not hitting too hard - many light blows are better than a few heavy ones. I've got to straighten the piece — see how much shorter my slot is? I'll reheat, cool right up to the slot and continue upsetting. Just a little more...now my slot is a square.

"Try yours, Jean. Since the sides of the slot are quite thin they will cool rapidly, so don't waste any time getting to the anvil just as soon as you get the bar cooled up to the slot, go! Good light clean blows get the job done. Straighten before it gets out of line too much. That's good. Get another heat and go again. You're hot enough now, so cool quickly and go. Good. Keep an eye on your slot and keep forging until it's about square. That's great! Straighten it up and let's take a look. Jean, you got the little square okay, hut the two ends of the bar are out of line with each other, so we'll have to fix that. I'd like to do it for you so you can see how it's done; then you won't have trouble when you have to do it again. Once the bar is hot, I'll lay it on the anvil with the upset part down in the hardie hole and hit the out-of line portion of the bar on the anvil face to make it straight, okay? Here we go. Upset in the hole, hit the out of-line end on the anvil face and turn it over to be sure it's straight.

"There —see how that was done?

"Now, Jean, we're going to use a new tool called a drift. Here are two, one for 3/8" and one for 1/2" holes. Notice they look a lot like a cigar, with a long taper on one end and a short taper on the other. To use them, the long tapered end is put in the hole and driven through. The center section of the drift is straight and when you reach the short taper, the drive goes right through. Since the square hole we have in our pieces now is only about 5/16" square we'll have to use the 3/8" drift and then the 1/2" drift. The 1/2" drift wouldn't fit into the square, so we'll open it up some first. Here we go. Put the long tapered end in the square, drive it down (check to see that it is going straight and that the walls are of even thickness) and drive it through. See how that went? Now I have a 3/8" round hole where I had a 5/16" square before.

"Jean, since your slot is a little off center, only

drive the drift in about half way up the taper and then let's look. Get your piece quite hot, Jean. The cold drift cools it fast. Okay, don't drive in too far. Now, let's take a look. First, knock the drift back out — you can see the hole is quite a bit off center. To correct that after your piece is hot, pour water on the side opposite the way you want the hole to move and then drive in the drift. What we're trying to do is to make the drift move in the line of least resistance and since one side of the hole is cooler than the other, the drift will migrate to the hot side. We'll probably have to do this two or three times because heat is running into the cooled area while we're working and we don't want that side to stretch any more. Okay, cool just the side you don't want to move, drive in the drift about an inch further up the taper. That's far enough. Lets look. See, the hole is larger, but it has moved closer to the center- let's keep going. This time I think you can drive the drift right through, but cool the side just like before.

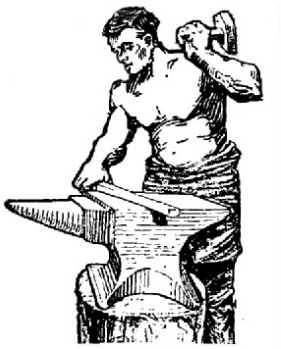
"Okay - cool, put in the drift, drive it through. Don't pick up that drift! Didn't mean to sound so rough, hut that drift is hot and you would have gotten some burned fingers. That's coming along great looks like about one more cooling ought to take care of it. Let me finish drifting mine and then you can finish. This time I'll use the 1/2" drift and drive right through, turn the piece over, hit it once just over the hole to drive down any swelling around it, and drive the drift through again from the opposite side. The drift will he hot so I'll have these tongs handy to pick it up. Here goes! I set the drift in, drive it down all the way through, turn over the piece, knock down the swelling and drive the drift through again. There, that's done.

"Let's finish yours up, Jean, but go only halfway through in case we have to cool the wall again. Cool the side you don't want to move, go only half way and then let's look. Good. See, your hole is back in line now and the walls are the same size on both sides. Now you can reheat and finish drifting, but you won't have to cool this time. Go for it, Jean, drive the drift through. Good. Now, turn it over, hit over the hole, put the drift back in the hole with the tongs and drive it through. There, now you've put a 1/2" hole in a 1/2" bar with a good wall all around the hole. Do you understand why the drift moved over when we cooled one side of the hole? Sure, the cool side didnt want to stretch and the hot side would, so it went that way.

"Great Jean, you're a good student.

See you next time!

This article was reprinted courtesy of the author Ed Oggier, The Anvils Ring and ABANA. It was originally published in the Spring Issue of the Anvils Ring 1986, Volume 14 Issue 3. Reprinting of this article must be cleared through the ABANA publishing committee



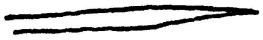
Hot Tips

REPRODUCTION CANDLE HOLDER
Submitted by: Buster Grubbs - Shady Rest Forge

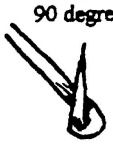
Reprint from THE OCMULGEE BLACKSMITH GUILD NESLETTER May-June '96, #42

Recently Dennis Sutton came to visit from Kentucky. While working in my shop, Dennis showed me how to make a reproduction of a candle holder that was dug up at Williamsburg. He thinks! Well, if it wasn't, it should have been. Here's how he did it.

1 - With about a 3 ½ foot length of 3/16 round stock, heat one end to bright red and taper to a point.



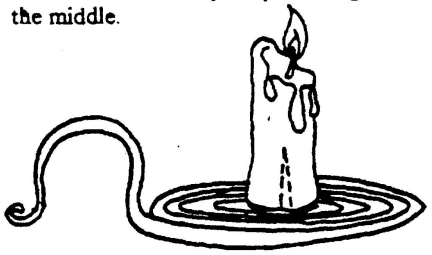
2 - Heat pointed end again and bend 90 degrees for about ½ inch.



3 - Heat at bend and bend again at 90 degrees opposite other bend.

4 - Heat about 8 to 10 inches at end and catch point in vise jaws. Let vise jaws cool point just enough so it won't twist off. Start making a coil by going around and around keeping coil tight.

5 - Keep heating and coiling tight and flat until you have about a 3 to 3 ½ inch flat circle made from coil with point protruding from the middle.



6 - This should leave about 4 or 4 ½ inches to form a handle. Heat handle end and bend to form handle.

Note: I have watched our president, Jeff Mohr, demonstrate so much that I have taken up his habits. Notice that all measurements are <u>about</u>. This will give you a little room for self expression and me a little room for error. Thanks Jeff!

Reprinted from The Indiana Blacksmith Assoc. newsletter, "The Fire Forge"

NorthWest Blacksmith Association