



N.J.B.A. Newsletter

NJBA Volume 8, Issue 1 05/01/03

Editors Soapbox

Well Spring is finally here except for some temperature swings and late snow storms. Hopefully we are not in for another hot Summer like last year. I guess we had better get out and enjoy the Spring time just in case. We have a variety of locations for our up coming meets, so lets get out of the house and see each other this year. Remember to bring something for tailgating and the "Iron in the Hat". See you soon, Larry Brown, Editor

Upcoming events for 2002

Get you calendars out and mark these events down. For those on the web bookmark our web site and check for meet information. Remember most of our meets have an "Iron in the Hat" drawing, so be sure to bring something.

May 3rd- Membership meet at Alex and John's shop in Trenton, 10 am. Details this page.

May 31, June 1—Eastern Regional Blacksmithing Conference "the Age of Iron" at Hancock Shaker Village in MA. More information to follow. Page .

June 14, 15 — Cold Spring Village in Cape May. The meet is on Saturday and the demonstration will be both days. Details on page .

June 21 - ALFHAM- meet at Allaire Village BS shop. Details on page

July 10—13 — Caniron in Hamilton Ontario, for those who want to travel a bit. Details on page 7.

July- 23- 27th — Monmouth County Fair. The meet officially on Friday Night at 7pm, help is needed on Monday night to set up and Sunday afternoon at 6pm to break down. Details on page.

September 6—Pig iron festival at Peters Valley. More info to follow.

September 7— Tool sale and picnic at Red Mill Forge in Clinton NJ. Details to follow

October 5th - Walnford Day—More in next newsletter.

October 10th - 12th ABS Meet at Eastalco Aluminum Pavilion in Frederick, Maryland. Tom Eden is the contact

May Meet At Alex Parubchenko's Shop in Trenton NJ

Saturday May 3rd we will be holding a membership meeting and will be having various people demonstrate at Alex and John's Shop in Trenton, NJ. If you want to vote for or meet the board members or are interested in becoming more involved and joining the board this is the meet to go to. This meet is also in conjunction with a traveling tour of Trenton that is to visit the shop.

Alex Parubchenko's Shop In Trenton

Directions: You can get to Olden Ave., Trenton, from US Route 1 (Trenton Freeway) or from Interstate Route 295 or Interstate Route 195 via Arena Drive. From US 1, go SE about 1/2 mile to the shop. From I 195, go North until you pass under I 295. From I 295 go NW about 2 miles, where Arena joins S Olden make a left (Exxon Station on corner), and then about 2 miles NW on Olden to the shop. The shop is at 334 N. Olden Ave. There is a vacant lot next door where you can park. (Phone: 609-396-9583)

*** * *Remember to send* * ***
in your renewals!!

If you did not get one contact
Nate Pettengill, Membership Chairman
There is a form on the last page of this newsletter
If you have not renewed this may be the
last newsletter you receive!

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Renewal Time is Here!

June is Membership Month

If You Have Not Renewed
Your Membership Send
it in Soon !

Official NJBA Address

NJBA, P.O. Box 195
Howell, NJ 07731

The NJBA Web Site!

The NJBA Web Site is up and running at:

<http://njba.abana-chapter.com/>

**Rather than use room in the newsletter,
All correspondence between
ABANA and NJBA is now being posted
on the NJBA web site.**

**If you cannot access it there, contact me
and I will send you copies**

NJBA Board of Directors

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Bruce Ringier, June, 2003

346 Rt.565 Wantage, NJ 07641

973-702-8475 wlkngh@yahoo.com

Tim Suter, June, 2004

1112 Ladner Ave., Gibbstown, NJ 08027

856-423-4417

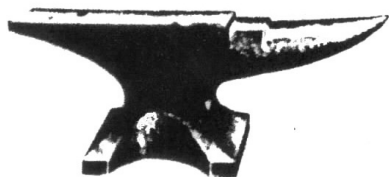
Meet in Cold Spring Village Cape May, NJ June 14 -15th, 2003

The New Jersey Blacksmith Association will hold a general meeting and demonstration at Historic Cold Spring Village (HCSV) in Cape May New Jersey. The meeting will take place on Saturday June 14th. There will be demonstrations on both Saturday the 14th and Sunday the 15th so if you can't make Saturday come out Sunday. The meeting will coincide with HCSV's tractor Trailer and Trade event. HCSV is a 19th century village so period costumes are encouraged. NJBA members not wearing costumes are encouraged to wear NJBA t-shirts. Demonstrators should be in costume or be wearing a NJBA T-shirt. Lunch on both days will be provided to NJBA members. On Saturday we will probably have lunch in the grange - always a big favorite and family members are invited.

There usually is no "Iron in the Hat" at this location. We need members to bring portable forges and anvils for the demonstrations. Members bringing forges and other equipment should be there an hour earlier at 9 am. If you are interested in being a period demonstrator or have any other questions contact:

David Macauley, 732-206-1568,
732-420-4792 drmacauley@att.com

Directions: Take exit 4A south from the Garden State Parkway and follow the signs to Historic Cold Spring Village 720 Rt. 9 Cape May NJ 08204 (609) 898-2300.



American Living Farm and History Museum Meet at Allaire State Park, NJ

Sunday, June 22

NJBA will be supporting a workshop - demonstration for ALFHAM in the Allaire Village Blacksmith Shop.

All-Day Workshops (9:00am – 4:30pm)

Beginning and Intermediate Blacksmithing

William Ker, Guildmaster, Allaire Village Blacksmith Guild

The 1836 four-fire industrial forge of the Howell Works at Allaire State Park provides the setting for both beginning and experienced smiths to hone their skills. This is your opportunity to try your hand at blacksmithing for the first time, or learn new techniques.

Note: This workshop includes transportation to and from the site and a tour of Allaire Village.

Location: Allaire Village/Allaire State Park and is a paid event for members of their conference.

Their web site;

http://www.howellfarm.com/alhfam2003/pre_conference.htm

Monmouth County Fair General Meeting East Freehold Park, NJ

July 25th, 2003 7PM

NJBA members will be providing a blacksmithing demonstration in conjunction with the Longstreet Farm Exhibit during the County Fair running July 23th - 27th. The fair times are Wednesday through Thursday 5 PM - 11PM, Friday through Saturday 11AM - 11PM, Sunday 11AM - 6PM. The general meeting will be held Friday Night starting 7 PM at the NJBA demonstration booth. Look for the Longstreet Farm Exhibit.

Blacksmiths are encouraged to submit some of their work for a display at this venue on Friday night. All work will be displayed at the exhibit. This is a great opportunity for us to advertise NJBA and

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individual members. We can distribute business cards, brochures and talk to the public regarding our work.

A forge, several anvils, some tools, stock and Coal will be kept at the fair site for demonstrators. Directions to East Freehold Park, NJ. We intend to set up our demonstration area on Monday, July 21 at 7PM. Please meet at Marshall Beinstock's to help with the setup. We intend to tear down the demonstration on Sunday July 27th at 6PM. We really would appreciate your help setting up and tearing down.

From Garden State Parkway:

Garden State Parkway to Exit 100, Hwy. 33 west. Follow Hwy. 33 to Kozloski Rd., turn right. Follow signs to Park. State Hwy. 9 to Hwy. 33 east, south of Freehold. Follow Hwy. 33 to Halls Mill Rd. North exit. Follow Halls Mill Rd. north to intersection. Road name will change to Kozloski Rd. Follow Kozloski Rd. to Park on left.

From Rt. 18;

Rt. 18 to Exit 22, Rt. 537 west. Take Rt. 537 west to Kozloski Rd., turn left. Follow to Park on right. It has also been recommended that to avoid traffic approach from Rt. 537

For more information contact:

David Macauley

732-206-1568 or drmacauley@att.com.

Free passes have been available for demonstrators in the past, but we need to know who wishes to demonstrate by June 30th, 2000. For general information on the fair call: (732) 842-4000.

W F MORAN Jr Blade Forging Demonstrations & Forged Blade Show

10-12 October 2003

At the Eastalco Aluminum Pavilion

5601 Manor Woods Road

Frederick, Maryland

Forging and Cutting Demonstrations by ABS Master Smiths;

W F Moran, B R Hughes, Jerry Fisk, James Batson, Joe Keeslar, Jay Hendrickson, Aubrey Barnes, Rob Hudson, Mark Sentz & Joe Szilaski

Hands-On Blade Forging with Tom Eden & NJ Blacksmiths. Visit Bill Moran's Historic Forge and Knife Shop Attend Forged Blade Knife Show and Auction on Saturday, October 11, 2003

\$125 Entrance Fee includes Knife Show Table.

Contact Jan DuBois at the ABS Office

NJBA Contact Tom Eden, Page 2 directors list

Eastern Regional Blacksmithing Conference "The Age of Iron" at Hancock Shaker Village in MA Sat/Sun May 31-June 1.

Hosted by;

**Berkshire Blacksmiths, Connecticut Blacksmiths
Guild, Northeast Blacksmiths,
New England Blacksmiths**

Age of Iron, Northeast Regional Conference May 31st-June 1st, 2003 at Hancock Shaker Village, Pittsfield, MA:

Featured demonstrators;

Philip Alderton, Lucian Avery, Asa Beckwith, Bob Bordeaux, Ed Carra, Chris Caswell, Ray Ciemny, Dan Crowther, Sarah Ritchie Crowther, Robert DeLisle, Clive Diggens, Robert Engle, Jack Farrell, Jim Fecteau, Joe Fisher, Richard Gross, Lee Harvey, Ed Mack, Susan Madasci, Joe Magnarella, George Martell, Fred Mikkelsen, Jack Mortensen, Mike Murray, Jonathan Nedbor, John Olsen, Jim Palcowicz, John Pease, Gregg Phillips, Michael Sarri, Walt Scadden, William Scheer, Ralph Sproul, Jim & Susan Stapleford, Michael Tennyson, Scott Wolfram Spreading these folks over 2 days should make for a inspiring conference. If you wish to volunteer to help in setting up this event, demonstrating, or promoting the Age of Iron this year please contact:

Harry Dunning at: W2HMD@aol.com

Fred Mikkelsen at: fred@trollshammerforge.com

Ted Jones at: Connsmith722@aol.com

This is the regional conference committee and they would be glad to answer your questions and welcome your help and support. Hope to see you there.

The Blacksmith Guild of Central Maryland's 15th Annual Blacksmith Days

The Blacksmith Guild of Central Maryland's 15th annual Blacksmith Days is scheduled for 17-18 May 2003 at the Carroll County Farm Museum in Westminster Maryland. This years Demonstrators are Bob Patrick (2002 Alex Bealer Award Winner) and Don Witzler. Bob will be demonstrating an Ornate Poker with Scrolls and a "critter" and How to Learn Forge Welding. Don will be demonstrating a Cowboy Head Walking Stick and other Wizard heads from round stock. I've posted a picture of Don's Cowboy Heads on the Photo Access Site in the Work Folder. There will also be other local demonstrators. John Larson will have his "Iron Kiss" Air Hammer there. In our continuing rivalry with the local farriers, we'll have the 3rd annual anvil in a wheelbarrow relay race and the 2nd annual 2 man drawing the point on a railroad spike forging contest. There's also an individual forged item contest, a candle holder. Cost for the event is \$20.00 and includes lunch both days. For complete details and a registration form visit BGCM's website: <http://www.bgcmonline.com>



a new design or technique. He started by punching a hole and expanding it out by drifting. He then cut down the hole from the end opening it up creating two shouldered turns above a U shaped opening. Later he finished the demonstration by welding tool steel to Wrought iron in forging a knife blade.

Report from the February Meet at Dick Gambinos in Garwood, NJ

The demonstration on February 3rd at Dick Gambino's was done by Richard Wansor. Rich started at a sculpture major and developed an interest in ironwork which led to working in living history museums and in decorative iron shops.



Rich demonstrated making a decorative piece that could become a table leg or other support piece. He started talking about how an idea from a particular shape could lead to



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Report on the March 15th Leg Vise Workshop

This report is written by the editor who could not be there for the workshop (I won't get into why) using information provided by Bruce Freeman, so if we have a name wrong or have forgotten you we apologize up front.

The meet got off to an early start and most were working by 9:30 am. Jim Stapleford, Bob Herrmann, David Macauley, John Choborda, Anton Holstrom, Jeff Morelli, Ben Suhaka and, of course, Mike and Mitch Were in Mikes shop. I understand Alex Parubchenko and John were at another nearby shop doing more of the welding.

Coffee and sweet rolls had been thoughtfully provided by Mitch and John.



Two horizontal band saws were in operation, one to cut 8" channel for tables, one to cut 2" x 3" x 1/8"-wall rectangular tubing for legs. One complete unit had been cut out and was being jiggged up in the next room.

There, tack welding was done, after which some of the stands were taken to another shop for MIG welding.

The work was slowed a bit by some custom fitting. An-

ton (who got two stands) and Jeff opted for tables less than 2' long. In addition, the length of the legs had to be adjusted to the length of the vise leg.

Despite this, the workshop went fairly smoothly, the only real bottleneck being welding.

Bruce Freeman ran the IITH, and we raised \$75 for NJBA.



Demonstration Opportunity

My name is Steve Blakovich and I represent Moonwalk Entertainment, Inc. I am in the process of putting together a cultural festival for the city of North Brunswick, NJ. I am interested in having a blacksmith attend the festival and give demonstrations of your craft. Would it be possible for you to be in touch with several members of your association who may be interested in performing at this event?

The date of the event is September 20th with a rain date of September 21st. I can be reached at out office (201-437-0591) or my cell phone (201-315-1269). We are willing to pay for the demonstrations and the hours for the event are from 4PM to 10PM.

We would allocate whatever space they need and pay them accordingly. Thanks in advance for any information that you can give me.

Regards,
Steve Blakovich
Moonwalk Entertainment, Inc

Honorable Mention

We would like to extend an honorable mention to Lincoln Wolf for his generous donation that we received with his renewal. Actions like this help keep us strong and better able to provide more for our members at our meets.

Furnacetown Meet

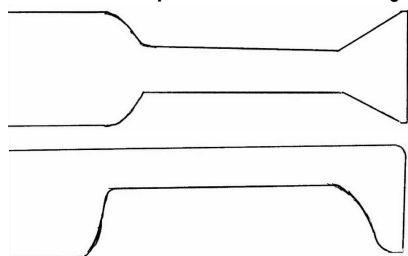
On March 29th & 30th Furnace town Blacksmiths Guild held a meet in the shop at Snow Hill, MD. The demonstrator and workshop leader was Fred Crist formally of the Yellin shop. Fred demonstrated forging techniques from the shops and made a copy of the grille that Samuel Yellin made for the Metropolitan Museum.

Notes below are from Marshall and the pictures from Anton, thanks to both. LB

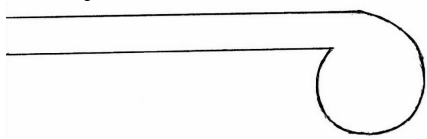
9 AM 1/4 x 1" flat



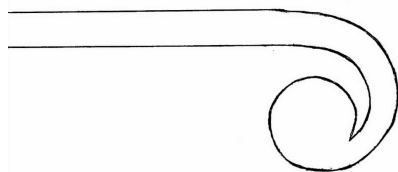
Fuller notch on edge of anvil approximately 4" in from end. Draw out on power hammer leaving mass at end.



The shaft is then offset. Working from end down on anvil, shaft is forged down to about 1/4" square with edges broken. Final length of 1/4" sq. was about 11" long to make a nice looking scroll. Working on top and far edge of the anvil the snub end was formed.

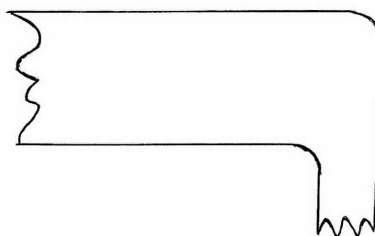


Then Fred carefully started the beginning of the scroll.



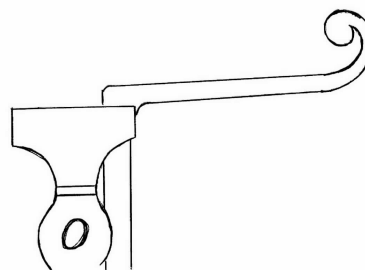
Next the offset is finished. Start bend on anvil and then upset corner in vise and then back to anvil to true up.

Heats are repeated until it looks like this;



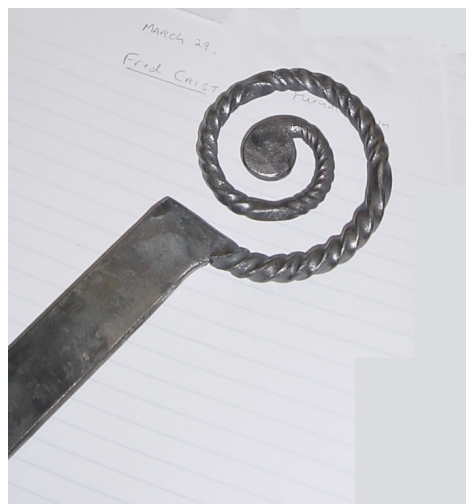
Forging the twist:

Torch is used for localized heat. Twist about 2" in one direction, let it air cool for a minute (Don't quench) Then twist the next section the opposite direction, repeating pattern till the end. Finish with snub end as shown.



Forming the scroll:

Fred held the torch in the vise and using very localized heats, started the scroll over the anvil using a rawhide mallet. The scroll center section was formed on a scroll jig—Useful especially for a twisted cross section that does not like to bend uniformly. The final scrolling up to the square corner was done free hand on the anvil.

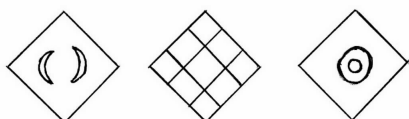
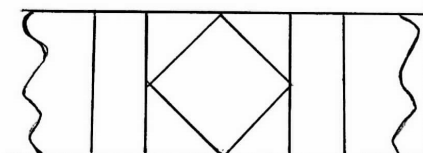


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Decorative bars;

1 1/4" x 1/2" flat stock

Using a fuller (1/2") mark bar is red heat. At high forging heat drive fuller into bar deeper (Fred used a striker) The depth of the fuller is determined by the subtleties of visual effect—Fred says slightly over 1/2 the bar width looks about right.



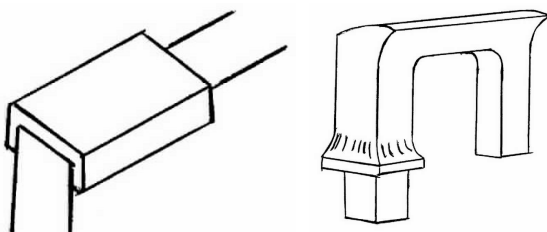
Be sure to maintain all the swells in the bar caused by the fullering process when ever the bar is trued up.

Chisel marks are then cut into the bar. For greater accuracy cold mark all the cuts. Don't make any one cut all the way at once, Work all cuts gradually down to preserve uniformity, always keeping bar straight as you go. Each square section is decorated differently using various chisels and punches (An often used Yellin technique)

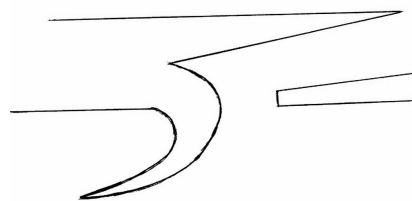
Double end scroll:

3/16 or 1/4" flat

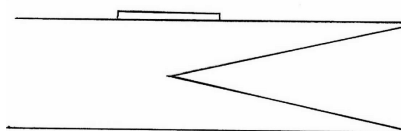
An Aluminum saddle about 1/2" thick was used for slitting. A thin sharp chisel appropriate for the stock thickness should be used. A bridge tool copied from the Yellin shops is also used for the scrolls.



After splitting draw out ends to shape shown, using a convenience bend to keep the part not being worked out



of the way. After drawing out ends align as shown below to get everything straightened out before the scrolling begins. Local heat



On the anvil bend like this, then use scrolling pliers to work the ends.



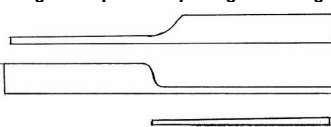
Next, using local torch heat, working from the thin end, form the scroll on the anvil. After ends are done take a local heat in center section, quench scrolled ends and bend over anvil horn tapering top curved edges for more dramatic look.



Small scrolls:

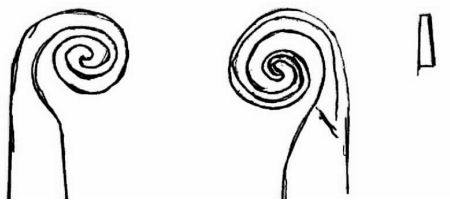
1/4 or 3/16 X 3/4" flat

Offset and forge the end section out thin with a knife edge shape. Keep edges straight when tapering and keep the width of the original stock. Start scrolling the end round and tight (Using pliers). Quench

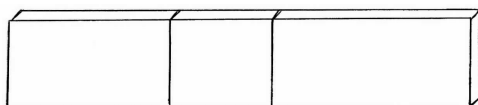


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the thin side when rolling up the scroll. Hit from back on the thick side to prevent flattening.

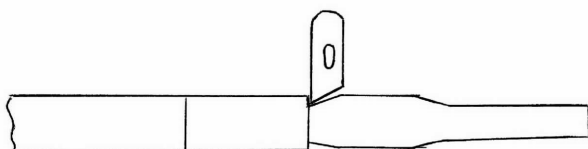


Making the center of the grill:



Cold mark transitions with chisel

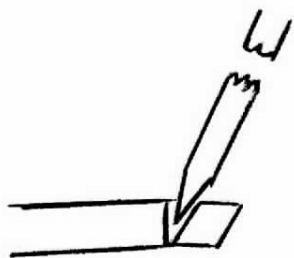
Draw out on power hammer to rough size then work as close as possible to the mark with a hand hammer. Use an offset chisel (Butcher) to move metal away from mark. Do all 4 sides alternating 180 degrees.



The finished forging with lay out marks for splitting.

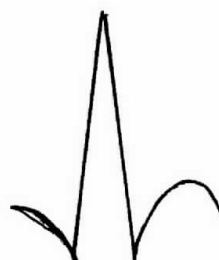


Alternate cutting through the sections near the middle. Hold chisel at an angle to keep center section square.



Use the bridge tool to square up and clean edges. Scroll leaves back to expose base and hot rasp to clean the edges, be careful to avoid kinking or flattening. Chisel cut long section using same technique as above. Cut off center section for center leaf. Start working the

taper of the long scrolls starting from the tips and finish using the bridge tool to work back to the crotch. Bend long scrolls out of the way to forge center leaf.



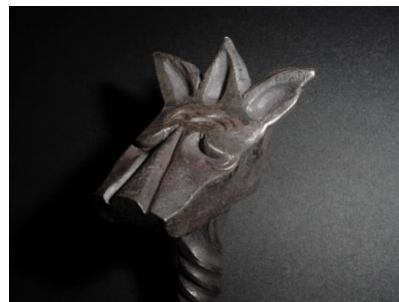
Heat and bend the two long scrolls and the two leaves back straight. Use the set hammer to true up lines around collar. Cut diagonal lines on collar, using aluminum backup plate to protect the lines. Form center scrolls first

using torch to control heat. Bend long scrolls out of the way and finish the center leaf. Heat and twist the long scrolls the opposite direction almost to the tip. Start scrolls on anvil and then use the scroll tool, finishing with a rawhide mallet.



Sundays workshop project was a horse head;

The Sunday workshop is reserved for a few members from each sponsoring group and the costs are additional to the meet fees.



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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

Carroll 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

The Blacksmith of Trenton

Alex Parubchenko occasionally gives classes at his shop in Trenton. Please contact Alex or John Chobrda at the shop, Phone # (609) 396-9583.

Red Mill Forge

Contact Adam Howard about workshops and per diem use of the shop (908)735-4573

Open Forges

We are looking for members who are interested in opening their forges up to members as a open forge. This does not have to be a weekly forge as is Marshall's the others can meet once or twice a month. Please contact, Larry Brown, Editor.

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)

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

Lincoln Wolfe

11 Overlook Terrace, Bloomfield, NJ 7003

(973) 338-3913

John Chobrda, Pine Barrens Forge

231 Morrison Ave., Hightstown, NJ 08520

609-443-3106 609-396-9583

BLACKSMITH TOOLS FOR SALE!

John Chobrda at the
Trenton Blacksmith Shop

Has a large selection of tools for sale.

Anvils – Forges - Leg Vices

Blowers – Tongs – Hammers

Will also repair and/or resurface Anvils

Call John for prices and availability

Daytime (609) 396-9583

Evening (609) 443-3106

Wanted: Donations for the NJBA Trailer

We need hand tools, files,

Tongs (Old, new and repairable),

Safety Glasses and assorted rivets.

Look around and see what you
have to donate.

Contact: Dave Macauley, Directors list, Page 2

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.

Foundations!

A Resource for Beginners.

by Bud Oggier

the Anvil's Ring/ Winter 1989 Part 11

"Hi, Jean, good to see you again. Come on in."
'Have you made any more tools for your shop?"

"Yes, I made three or four chisels and a bottom swage. Had some trouble getting the shank on the swage to size, but it came out OK.

Well, Jean, I think it's time we made a pair of tongs. You've noticed all the tongs in my rack; there are well over a hundred. You won't need that many for a while, but you'll need some. After I made the most common sizes, I made the rest as I had a job that needed them.

Jean, tongs are a very personal thing. They should be made to suit you, and of a weight suitable for what you will be doing with them. I like my tongs quite substantial, consequently, they are a little heavier than most, but they suit me.

Let's start out your tong supply with a pair of flat jaw tongs for 1/4" stock. If we use 7/8" stock, we ought to have enough material for a good pair.

First thing is to form the jaw. To do this, put the piece over the edge of the anvil nearest you with as much on the anvil as you want for the jaw, and forge it down until it is about 1/4" - 3/8" thick and about 1" wide. I like to taper the jaw so it is thicker at the rivet end than at the other.

I have two pieces of stock for each of us. It pays to make both parts on each operation before going to the next step. I'm having you use two pieces of stock so you can compare each half easily.

OK, here we go, piece in the fire. I want these jaws about 1 1/2" long, so I'll just put a chalk mark on the anvil about 1 1/4" in from the edge. My piece is ready, on the anvil, move it in to the chalk mark and hit it with my hammer, half over the anvil and

half off. That way I'll get a fairly sharp shoulder. Notice I'm using the radius corner on the anvil so I won't have a sharp corner, but one with about 1/8" - 1/4 radius in the bottom. There, I've got it about the right thickness, square up the sides, and that step is done. Your turn, Jean.

This is a mild steel, so don't be afraid to get it hot, a nice orange, that way it will be easier to forge. Can you still see the chalk mark? OK, go for it. Don't let your piece crawl away from the anvil, Jean, keep it tight up against the shoulder, that's better. OK, straighten up the sides, good.

Some smiths like to make tongs from a hardenable steel, but I don't because if you get them hot and forget to quench them to cool, they will be hard and may break, unless you draw them.

OK, now to make the other jaw. In making tongs both parts are alike. It seems that one should be right hand and the other left, but that's not true they are both the same.

My piece is ready, set it into the mark and flog away. There, notice that the jaw is thinner at the end than at the rivet end, and that it is now about 1 wide and 1 1/2" long. I'll check it against the other one because these will be a "pair" of tongs. Well, they match up quite well.

Your turn, Jean. OK, how does it match up with the other half? Good, looks fine.

Now we have to forge down the cheek where the rivet goes. To do this, bring the piece out of the fire and lay it on the anvil the same way it was when you made the jaw. Turn it one quarter turn away from you, move it across the anvil, and move it to 45° to the anvil's edge. The back end of the jaw should be right at the anvil's edge.

My piece is ready, on the anvil, quarter turn away from me, across the anvil, move it over to a 45° and hit again, half on and half off the anvil. I'll forge it down until the edge of the cheek is right at the middle of the jaw. That looks about right.

Your turn. Good, you made all the right moves.

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Drive right down on the piece and hold it back against the anvil. Don't worry if it bends the jaw down a little, we'll straighten it up. Good, let's look. See, the cheek is a little tapered. It's thicker on one end than it is at the jaw end, but we'll fix that in the next step.

Now, let's each make the other piece and check them. There, mine matches up pretty good, how's yours? That looks fine, Jean, you're beginning to produce pretty professional looking work.

Now, to forge down the end behind the cheek for the start of the reigns. We'll be using 1/2 stock for the reigns, so this end needs to be about 3/4" at the end of the cheek and taper down to about 9/16" where the 1/2" stock will weld on.

Here go, the same motions, jaw on the anvil, 1/4 turn away, across the anvil, now another quarter turn away from me and move it out until the cheek is about 1 1/2" long and forge away. See, I've got it over the large radius on the anvil. I want a good fillet in that corner. There, now to taper it down to 9/16". I'm going to leave a small lump at the weld end so I won't have to upset it for welding. There, that looks OK.

Go ahead, Jean, good, get a full 1 1/2" of cheek. Great, go. While the piece is reheating, we'll get ready to flatten the cheek and take out that taper I'll do this with the flatter. Even if it wasn't tapered, I'd use a flatter on the cheek. I like a good flat surface for the two cheeks to mate against. That piece hot yet? OK, Jean, strike for me, hit, again, OK. See, by tilting the flatter, I get a flat parallel face. OK, as soon as we get the mating pieces forged, we'll be ready to make and weld on the reigns.

Well, we're all done with these pieces except cutting them off the bar. So let's do that. Don't forget to leave the knob on the end for welding.

See how this straight sided hardie put the angle on the cutoff end and left a square cut on the bar? That way our scarfs are half made. Now the reigns, we'll have to upset the ends of these bars a little before scarfing, so here goes. Short heat and then upset, there, that's enough, reheat and scan.

Now the jaws ends are scarfed the same way. There, mine are ready to weld. Your turn. How do they match up, Jean? OK? Good.

Now to weld. Check the fire for clinker and clean it if it needs it. Well, guess we're ready. In goes one reign and one jaw end. Heat them and flux them all over the weld area.

Looks like they're getting ready, check them with the feeler, doesn't stick yet, just a little more, good, now they're ready. Knock them together to get rid of the dirt or coal that got on them, to the anvil, right hand piece scarf up, left hand scarf down, lay one on the other and weld. First hit in the middle, next over the bottom lip, then the top lip, and forge down to size.

OK, Jean, you go. Good, be sure you get the lips welded tight and check if you need a second heat. That looks pretty good, Jean. We'll weld up the other two and then finish them.

Now that they are all welded, they need a little finishing. So let's heat them up and put a light chamfer on all the edges and make a smooth transition where the square end joins the round portion of the reigns. OK, that one looks pretty good. Now the other. Now one last check to see if they are a pair. Say, they came out pretty good. If someone didn't know better, they might think I'd done this before!

Go ahead, Jean. Good, the cheeks on these are a little longer than some, but I like them to be substantial, and a long cheek helps keep them from being sloppy.

Now for a rivet hole. I like to drill mine, they can be punched, but I like the better hole a drill produces. The rivet hole goes in the middle of the cheek. So I'll measure to find the middle in both directions and center punch the outside face. That way when I drill them, the joint face will be down and the hole will be at 90° to it, then the rivet won't get bent, or the faces won't be together, and the tongs will always loosen up.

OK, what size rivet? Since these tongs are for 1/4" stock, a 3/8" rivet will be fine. You can use almost any size, but unless the tongs are very light and only for

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small work, 1/4" would be too light. I'll drill these and we can rivet them.

Now they're drilled, how long should the rivet be to make a good head? The Machinery Handbook says that 1 1/2 times the diameter makes a standard head. So the jaws are 1/2 each, that's 1"; plus 1 1/2 times the diameter (3/8" plus 3/16), that's 9/16", so I'll cut this rivet 1 9/16" under the head, and it should be right.

To rivet these, I'm going to use a top and bottom rivet set. The bottom fits in the pritchel hole and has the same depression in it as the rivet head. The top one is held in the hand and finishes the rivet head, it has the same depression as the bottom one.

OK, we're ready, put in the rivet, hit it a couple of licks with the hammer peen so it won't fall out, then into the fire, rivet head up. Heat it up until the whole area is a good red. Now it's ready, set it on the anvil with the rivet in the bottom set and hit the rivet six or seven times good with the hammer, then use the top set to finish it. Be sure the edges of the rivet get set tight against the cheek.

Now to make them free. While they are still hot, work the reigns open and shut a few times, then put the tongs in the slack tub and keep working the reigns back and forth until it's cool. You will notice that when the tongs are in the tub they will be free and then in just a little bit they tighten up; keep them working and they loosen up again. This happens when the steel is changing its crystalline form, just as in hardening. This occurs as you go through the critical temperature. If this were a hardenable material, it would come out hard.

OK, Jean, rivet yours. The reason for putting the rivet head up in the fire is that the end you are going to heat up is closer to the heart of the fire, and will get hotter and rivet easier. The reason for hitting the rivet with the hammer first and only finishing with the set is, if the rivet is hit hard enough to upset its entire length, it will fill the hole before the head starts to upset and give you a good joint.

I think your piece is ready to rivet, Jean. Don't be afraid to hit that rivet with the hammer; good, OK,

now go to the set. Get the edges down tight, now work the reigns until the jaws move freely. Now in the slack tub, work the reigns, feel them tighten up, keep working the reigns until they are cool.

Well, Jean, how do they look? The jaws are not quite in line with each other and the reigns need to be lined up, but that's easily done. What are mine like? Looks like I'll have to do the same thing, so get them hot and on the anvil and straighten things up. There now, get yours, Jean.

They look pretty good now, but we want them to hold 1/4" thick stock, and the jaws need to be sized so that when the reigns are a comfortable distance apart the jaws will be parallel and 1/4" apart.

I have a piece of wood here that if it fits between the reigns they will be the right distance for me. So we'll heat the jaws up and put a piece of 1/4" stock between them and then hit them on the anvil until they are tight on the stock, and the reigns are tight on my wooden piece.

OK, here we go, tongs are hot, stick between the reigns, jaws on the anvil, 1/4" stock between them and make them fit.

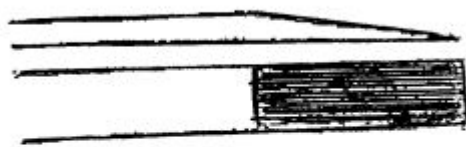
Darn, the fit is good, but the stock does not come out of the jaws straight. Well, to fix that, reheat and go to the vise, put the stock between the jaws and tighten, bend until the stock and the middle of the reigns are in line. There, go ahead and size yours.

Jean, that's a nice pair of tongs. I like my reigns about 16" long from the rivet, that's what these should be, but if they don't suit you, just cut them to suit. Jean, all types of tongs are made with this same technique, the only difference is the shape of the jaws.

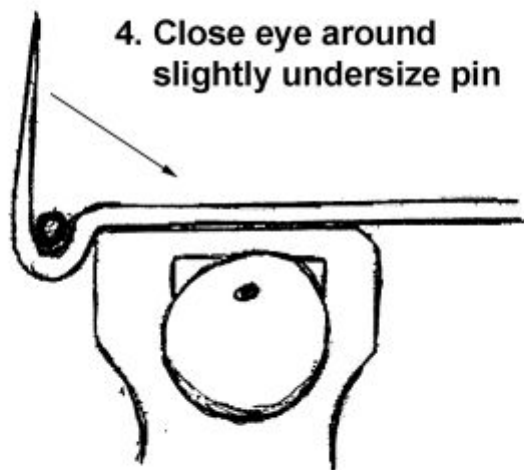
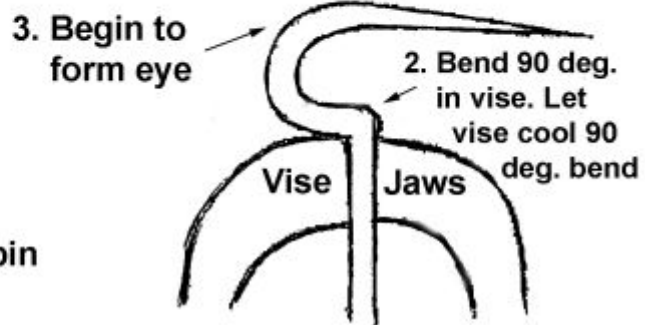
Why don't you make a pair at home and bring them next time?

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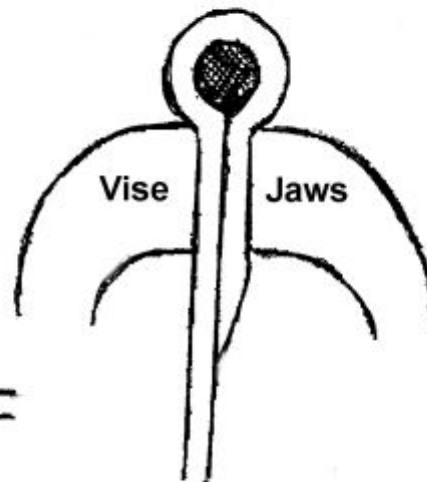
Peter Ross Forming a Hinge Eye



1. Taper flat bar
Maintain original width



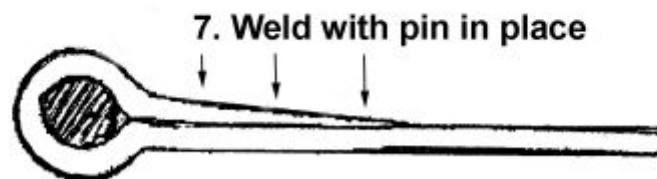
4. Close eye around
slightly undersize pin



6. Drive in full size pin, legs will
open up, ready for welding.



Illustrations by
Jeff Benson From
"The Umba Journal"



Colonial Hardware

By Lou Mueller

Commentary and Graphics by Ernie Dorrill III. As illustrated in Donald Streeter's book "Professional Smithing" From The Upset, newsletter of the Mississippi Forge Council

The Mississippi Forge Council was fortunate to sponsor this weekend workshop in April which drew a crowd from not only Mississippi but also from Tennessee, Louisiana and Missouri. For those who are not familiar with Lou Mueller, he is the current president (Now former) of the Artist-Blacksmith's Association of North America.

Lou began by talking about Streeter and his comments follow:

Streeter made his living doing colonial hardware and his main emphasis was on locks. During the 50's, 60's & 70's, Streeter was one of the leaders who was producing colonial hardware. His reproductions can be seen in New Orleans, LA, Charleston, SC, along the east coast and in Canada.

On historic buildings, a series of pieces might be needed and they would all be the same design. For example, there might be a need for 100 pair of H hinges for cabinet doors. Streeter developed tooling to produce this hardware in a more efficient way. Tooling was very simple & used the Hand Work & Forging - Hammers

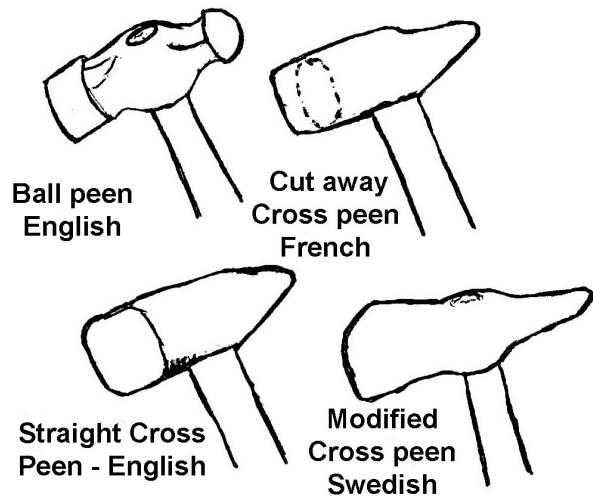
First, there are NO rules! When you work with your hands, do what is right for you. Be comfortable and in control. Adjust the anvil height where you're most comfortable.

Some guidelines might be helpful to prevent problems in the future. When hammering, use techniques to save your arm. First, at the point of impact between the hammer and anvil, the hammer face should be at 90 degrees to the anvil.

Second, hold the hammer for control and consistency.

Keep your hand dry and hold the hammer

loosely (don't squeeze the sap out of the handle, it's dry already). A tight grip will only send shock up your arm. A loose grip with heavy forging is



best and only a tight grip with the thumb on top of the handle when doing finish work. Also, don't over extend the wrist. This can be avoided by standing close to the anvil.

All these different shapes don't seem to make that much difference. The shape of the face and cross peen do have an effect on the work.

Roughing Hammers: Total crown across face in all directions with the cross peen having the same profile as the face. These hammers also make work on inside curves much easier and do not mar the work.

same concepts that were developed in the early 1700's regarding the way dies were built (cutting dies, forming dies, fixtures, etc.).

Now, some blacksmiths specialize in certain periods of time such as Peter Ross and Francis Whitaker using only hand methods and techniques of that period. Streeter's concept of reproducing hardware was that the finished product (reproduction) should be as close to the original as possible. How you arrive at the finished product and what you used in the process was not important, as long as the reproduction looked like

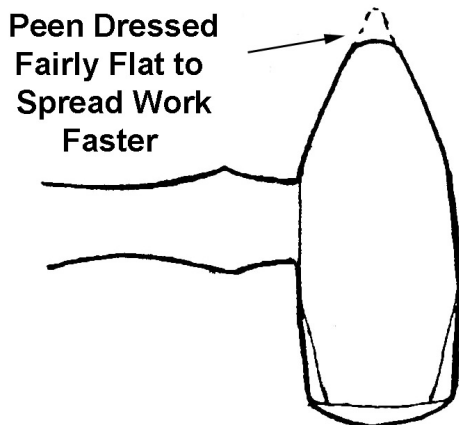
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an authentic piece.

With many reproductions, it's easier to use the old techniques, processes and methods. You can forge by hand, saw or cut, grind or use a milling machine but with some of these methods, little subtleties that make it authentic may be lost. In this case, only the original techniques will work. If you can use a file, grinder, drill press, etc. to produce that part, there is nothing wrong with that approach.

The method is sometimes not nearly as important as the finished product. Streeter had to maximize his time because he made a living doing it.

Speaking of duplication of work, there are times you might hear someone say, "someone has copied my work". An individual may be making a hanger, candle stand, fire tools, gate, etc. and another person sees it and copies it. The original designer gets upset because someone copied his work. This attitude has no merit because as you learn, you copy. You look at the old masters and you copy. This is how we learn! The learning process begins by copying and you continue copying until you develop your own techniques and then produce your own designs. The learning process first



begins with copying!

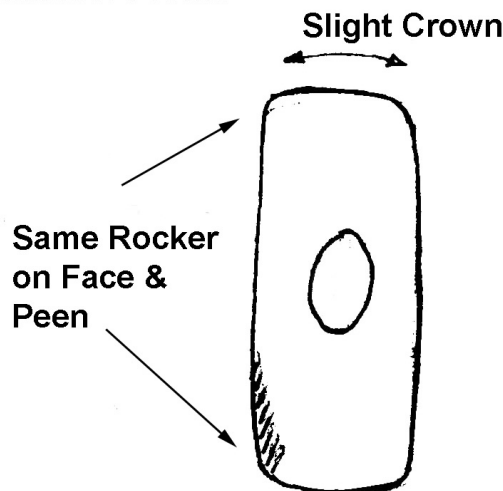
Finishing Hammers: Have a slight curve (almost flat) across the face and peen end.

Anvil position also doesn't make that much difference. Turn the anvil so that it is most comfortable for you.

Bench Tools

At some point you will need a variety of files to do finish work. There was a great deal of file work on colonial pieces. Notice that engraving tools have a large palm grip. Those tools were designed to be pushed but conventional file handles, unlike engraving tool handles, are somewhat uncomfortable. Golf balls are handy and cheap. Drill a 1/8" hole in the golf ball and drive it down on the file tang. Several of mine are

Hammer Profile



color coded.

Flat files-white
Triangular files- blue
Square files-yellow
Special shaped files-pink

File Cleaning

File cards or brushes are OK but some of the individual wires on brushes are too large to get in between file teeth. An inexpensive way to clean files is to use a flat piece of copper (annealed), file a knife edge and run that edge parallel to the teeth. The copper edge will conform to the file teeth and provide the proper dimension to move between the teeth to remove articles.

Circle Template

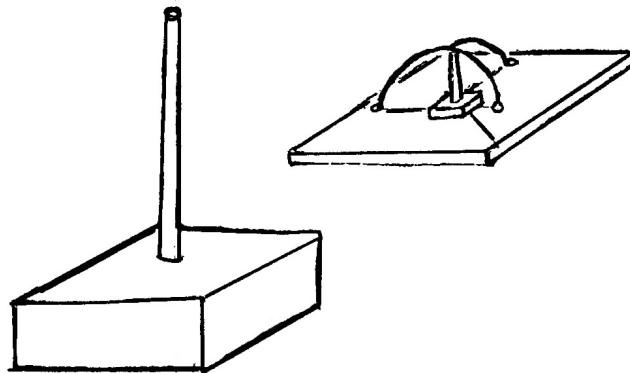
Some jobs require a ring when you are attempting to lay out divisions in a circle or along an arc. A circle template is a great tool to use for this purpose. It can

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be constructed from sheet steel, brass, copper, or aluminum. After locating the center, scribe a series of circles as shown. Drill a 3/8" hole in the center. Take a block of steel 1"x2"x2" with a 3/8" rod through the center and locked into the block with a tapped screw. the rod can be lengthened to protrude just under a multi-leg stand in order to determine appropriate spacing or leg adjustment.

Benders

An essential too that can be simply made in the shop using simple tools is the bender. Commercial or manufactured benders bend 1/2" cold can cost as much as \$2000. A shop made tool can be produced to bend any size. If only one bend is needed, then the horn of the anvil is ok but if you need 25, 50 or more, none made by hand will be the same and if uniformity is needed, then a bender will be very beneficial. Key for the bend is a roller with a radius, which will be the inside of the radius of the desired bend. It doesn't matter if the radius is 1" or 6". The roller will dictate the radius.



An Adjustable Stand and Circle Template

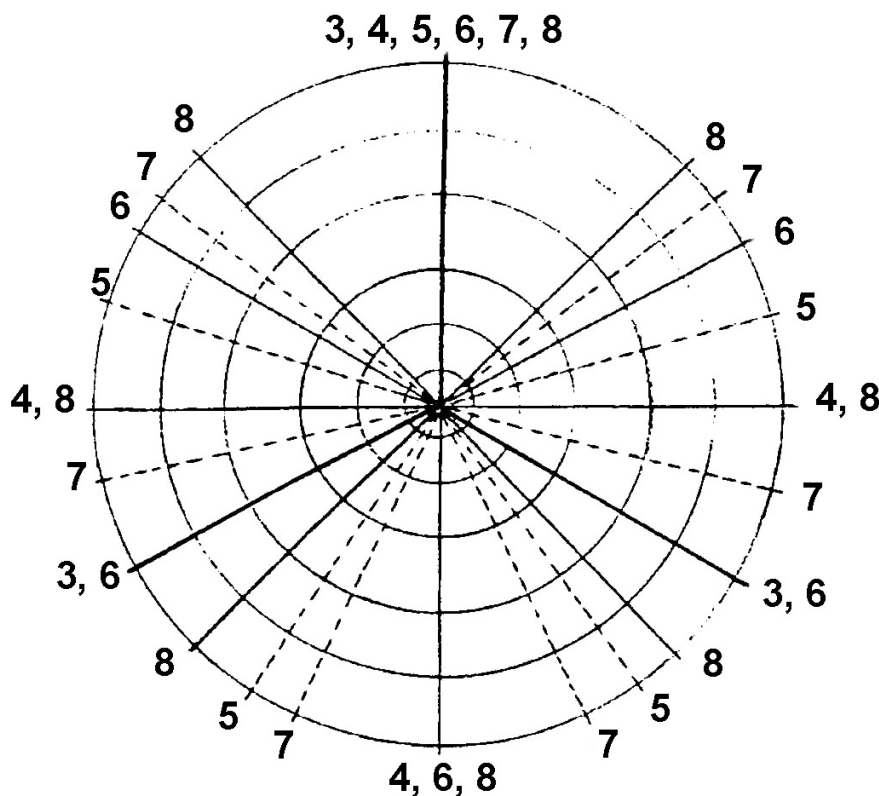
Adjust the stop - put in hot metal and bend. Anything on the outside does not have to be tight. Drill all holes on standard increments if using a plate, i.e. 1" x 1".

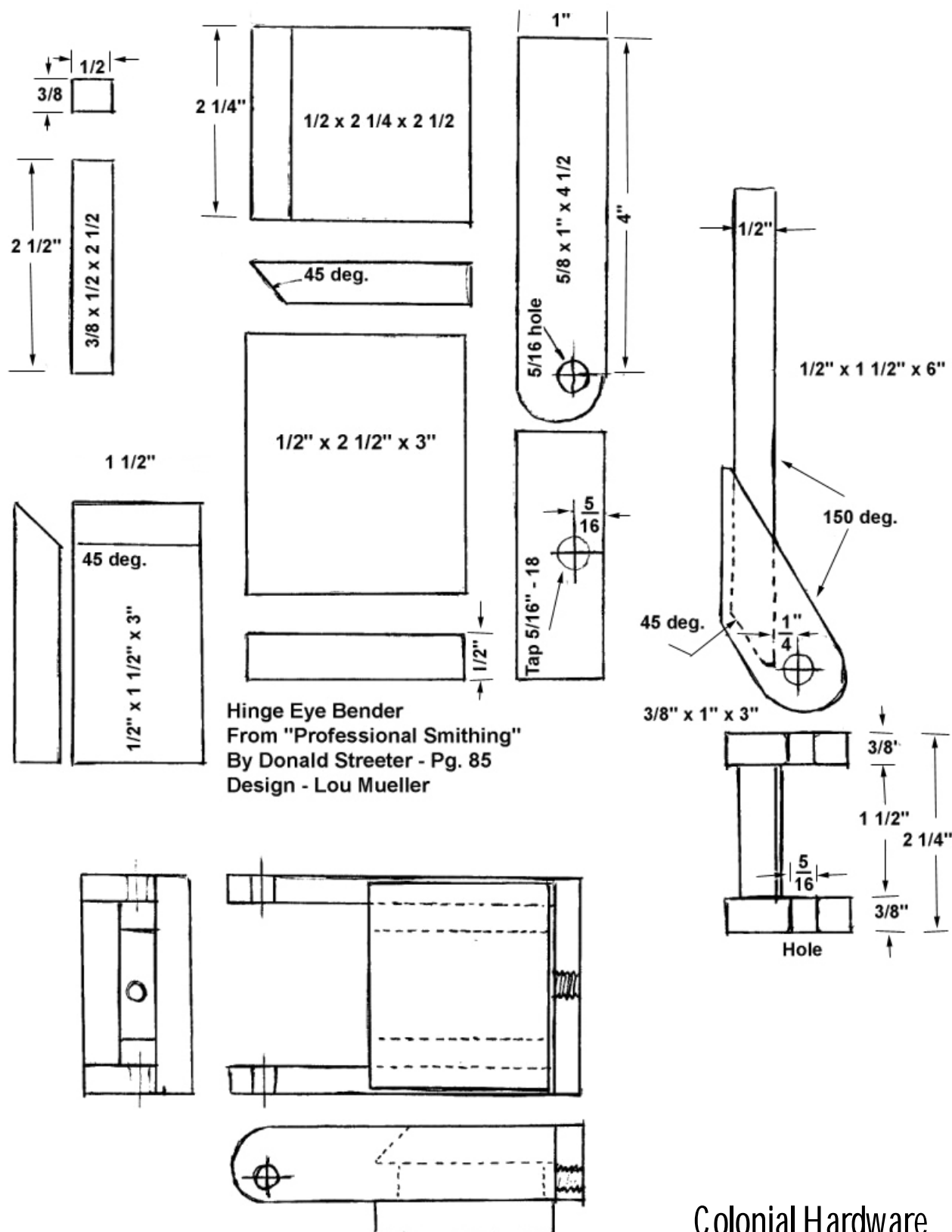
The bender is a production piece.

Punch & Die Block

For these combinations, make the punch first, then the die block. All of these pieces can be made with a drill press, grinder, saw & files.

After the punch is made with the above tools and is brought to the correct shape, place the punch on the die block and mark its' outline on the die block. Drill a series of holes on the area to be removed, chisel out the drop and file excess down to the outline. Some play is necessary. In making any punch and die sets, 10 percent is the magic number. What ever thickness the metal (1/8" or .125), a 10 percent clearance (.025) will be required on each side





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Join ABANA or Check out other area chapters!

Northeast Blacksmiths Association

Northeast Blacksmiths holds its meets twice a year at the Ashokan Field Campus in New York State.

The Ashokan campus is located in Olivebridge, N.Y., several miles west of Kingston, N.Y. The meets are held the first weekend in May and in the first weekend in October every year. The main demonstration is in the blacksmith shop and there is a "Hands On" workshop for beginners. A main demonstrator is brought in for each meet, food and bunk-house style lodging are provided as part of the cost of the weekend long meet.

Contact : Tim Neu

to register for hammer-ins

or subscribe to the newsletter;

Tim Neu, Ashokan Field Campus,

447 Beaverkill Rd.

Olivebridge, N.Y. 12461 [914]657-8333

For more information check out the web

site; <<http://nba.abana-chapter.com/>>

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Can you host a PABA meeting? ☐ Yes ☐ No

Are you willing to demonstrate at a PABA meeting? ☐ Yes ☐ No

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271 Stoney Lane

Lancaster, PA 17603

**PABA Membership
Application**

Membership is from

Jan. 1 — Dec. 31



New Jersey
Blacksmiths Association
90 William Avenue
Staten Island, New York 10308
Attn: Larry Brown, Editor



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NJBA Dues are \$18 per year (as of July 1, 2001).

Please make your check out to: "NJBA"

Please mail checks to:

NJBA, P.O. Box 195, Howell, N.J. 07731

Please include payment with the information listed below. You will receive a postcard confirmation of your membership, and will receive a newsletter within a month.

NJBA's "year" runs from June to June. If you join mid-year, the postcard will offer a prorated dues option which will then allow you to extend your membership till the following June. The following information will be listed in a roster available to other members.

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