N.J.B.A. Newsletter

NJBA Volume 6, Issue 4 02/02/02

Spring is coming soon!

Hi all! So far winter this has not been too harsh, so lets think that spring is coming soon. Things are "sort of" back to "normal" here in the NYC area. Life must go on, people must work, children will play and we all must do what we have to survive. What will still hurt some will be economic losses. Between the WTC, Enron and Ford the country and this area have taken some big hits. Hopefully we can all miss the effects of these and recover quickly to take care of ourselves and our families.

We have a few meets coming up that are a new concept for us. I hope that a lot of you can make time to get to them.

On February 9th we have a meet at The Blacksmith of Trenton Shop featuring an Iron Pour (Note : There are rain dates for this event).

On March 16th & 17 there is a joint meet with Furnace Town Blacksmith's Guild in Snow Hill Md. Scott Lankton will be the demonstrator on Saturday and run a limited person workshop on Sunday.

On April 13th, at Tim Millers Shop in Bayport, Long Island we have a meet featuring Jonathan Nedbor as demonstrator.

In May we are hoping to a meet at Greg Phillips shop in Orange Co., N.Y. featuring Bill Senseny of Massachusetts as a guest Demonstrator, there may slots available for a hands on workshop the next day

These meets are out of the way for a lot of us, but I hope a lot of us can find the time to travel and get out to these meets. People who live near these areas should make a special effort to come out and meet the other members, it would be good to see a lot of new faces.

Bringing in a demonstrator is new to us at NJBA and it is an excellent way to learn new skills and get fresh ideas from an experienced smith. I myself have learned a lot this way and highly recommend making these meets. I am not always thrilled with the trip to some meets I have attended over the years, but I find the experience has been worth every mile.

So start the new year out with some new information and skills learned from watching experienced demonstrators, all four of these meets are worth the travel time!

Upcoming events for 2002

Remember most of our meets have a "Iron in the Hat" drawing, be sure to bring something.

February 9, with rain dates of the 10th, 16th and 17th at 10am; Meet at **Alex Parubchenko's** shop in Trenton, NJ. Details and directions on this page 3.

March 16th & 17th; Joint meet with Furnace Town Blacksmith's Guild in Snow Hill Md. Scott Lankton will be the demonstrator on Saturday and run a limited person workshop on Sunday. Details on page.

April 13th: Meet at Tim Millers Shop in Bayport, Long Island featuring Jonathan Nedbor as demonstrator. Details and directions on page.

May; Possible meet at Greg Phillips shop in Orange Co., N.Y. featuring Bill Senseny of Massachusetts as a guest Demonstrator, Details and directions on page 4.

June - Cold Springs Village, Dates and information to follow next newsletter.

July - Monmouth County Fair, Dates and information to follow next newsletter.

Can anyone help a fellow member?

Hello, my name is Eric Cuper and I will be returning to central New Jersey around June 2002 after receiving my MFA in blacksmithing from SIUC. I will be looking for work (in metals) or a studio space, suitable for coal and gas forges as well as a power hammer. I would be interested in a shared larger shop with individuals combining resources and the possibility of allowing access to part timers or teaching situations. I am willing to locate in NJ, eastern PA, or southern NY. I have also recently purchased a 275# air hammer with a large compressor and I will be seeking storage for these If I cannot find a studio soon enough. I will gladly pay for space but I am also willing to trade for time on this big hammer when it is functioning. As you can see, I am currently open to many possibilities. Please feel free to contact me with any ideas, suggestions, or inquiries. Eric Cuper, 331 Contentment Rd., IL 62958, 618-351-1391, ericuper@msn.com.

Rather than use room in the newsletter,
All correspondence between ABANA and NJBA is now being posted

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

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856-423-4417

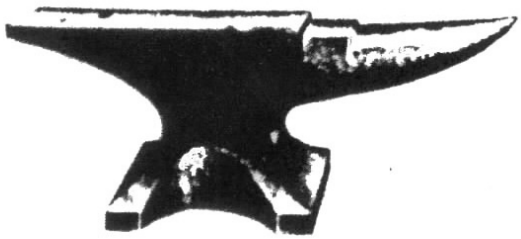
February Meet at Alex Parubchenko's Shop In Trenton

On Feb. 9th with a rain dates of the 10th, 16th and the 17th. This is because the demo is out side and cannot be done in the rain. Alex Parubchenko, the Blacksmith of Trenton, will demonstrate melting steel in a cupola furnace (a continuous melting furnace). He'll do a pour, and, with luck, we'll have a chance to see the result.

Marshall Bienstock will be showing the products of his latest classes (in January) at J.C. Campbell Folk School, and may demonstrate some of the techniques involved. A lunch will be provided by NJBA. Tailgating is permitted, but the shop is NOT in a good area, so you might want to keep things locked up. Attendees are requested to bring a contribution to the IITH.

Directions; To Alex Parubchenko's shop in Trenton, NJ

Directions: You can get to 334 N. Olden Ave., Trenton, from US Route 1 (Trenton Freeway) or from Interstate Route 295 or via Arena Drive from Interstate Route 195. From US 1, go SE about 1/2 mile to the shop. From I 295, go NW about 2 miles to the shop. From I 295 go NW about 2 miles, where Arena joins Olden, 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)



March Meet at Furnace Town in Snow Hill, MD

A joint meet will be held with the Furnace Town Blacksmith's Guild in Snow Hill Md. Scott Lankton will be the demonstrator on Saturday and run a limited person workshop on Sunday. Registration is $20 before the 28th of February and $25 afterwards. This includes coffee, doughnuts and lunch. There is a buffet dinner on Saturday night for $15, pre-registration for it is required.

To register contact Mark Williams (Home # 410-632-0914, Work# 410-651-6431, E-mail m_and_mwilliams@juno.com).

The next day's workshop is limited to 12 people and NJBA has two slots reserved, if interested contact Ray Noble as soon as possible (Home # 410-651-0987, Work # 800-220-3015, E-mail nobler511@aol.com)

April 13th Meet at Tim Millers Shop in Bayport, Long Island

Tim Miller is hosting a meet at his shop in Bayport Long Island, NY. on the 13th of April and it will feature Johnathan Nedbor as Demonstrator. Jonathan is an experienced teacher, demonstrator and Current President of the Northeast Blacksmiths. I have know Jonathan for quite a few years and have seen him demonstrate and he is informative, experienced and answers questions well.

Directions:

To Tim Miller's shop in Bayport, L.I., N.Y.; Take the Long Island Expressway to exit 62 - Nicolls Rd, go south to the end and make a right onto Montauk Highway. Go three lights (quick), look for sign on left, Tim Miller Blacksmith. Go to back of driveway and park on the blacktop before the chain link fence, some tailgaters may be able to park near the shop, call first to make arrangements.

Shop; (631) 419-1185

Cell; (631) 220- 6840

Possible May Meet at Greg Phillips in Orange County, NY

Greg Phillips has set up a meet at his place with Bill Senseney on March 16 & 17. Bill is now focusing on an Art Nouveau style of forging and will do a demo/ workshop to that effect. The demonstration will be on Saturday and a workshop limited to several people the next day. The workshop would be for a fee and would be on a first check, first reservation basis.
For information concerning the meet and workshop contact:
Greg Phillips, (845) 457-5671,
Acorn Forge, 937 Route 17k,
Montgomery, NY 12549
gphillips@hvc.rr.com

Directions to Greg Phillips Shop
From NJ: Take the Garden State Parkway north into New York State. Pick up the NYS Thruway (Route 87), and take it north to exit 17 (Newburgh-Stewart Airport) after exiting and the toll booth DO NOT bear right onto Route 84, continue straight to traffic light at Route 17k. Turn right (west) onto Route 17k proceed about 9 mi to 937 Rt. 17k (Greg's house) it will be on the left, there is a sign in front of the house " A Sure Sign". The building behind the house has the second floor painted with rainbow colors. (For anyone that has been to the Orange County Farmers Museum the house is less than a mile past the sign for the museum.)

Report on the November Meet at Peters Valley

On November 18th, 2001 NJBA had a meet at Peters Valley Craft Center. We had a turn out of about 15 people. The meets demonstration was provided by, Maegan Crowley, the resident smith at Peters Valley. We started with a tour of the Centers teaching Blacksmith shop area, discussing up coming plans for the shop. We then proceeded to Maegans' shop where she showed various items in the shop that were either completed or in progress.
The demonstration started with Maegan making three dimensional shapes by forging a thin plate through a cut out area in a steel plate. She had various shapes in the shop and for the demonstration she used a plate with two different size hexagons. She makes a striking tool from the cut out piece of the plate, which she uses to start and define the shape she is making in the form. She then uses a striking tool that is the same shape but has a hollow three dimensional shape dished up to push the metal down into the form. After that she defines and textures the piece with various shaped striking tolls and hammers. The geometric shapes formed by these are interesting and have a lot of possibilities the technique may be applied to various projects. After lunch and iron in the hat we continued the demonstration in the teaching shop using a gas forge and the power hammer to form a two legged shape out of pipe and a larger diameter piece of tubing to form a three legged sculpture. We would like to thank Maegan for her time and efforts involved in setting this up and demonstrating. The meet was informative and successful and hopefully Peters Valley invites us back again in the future.

December Holiday Party

On December 9th NJBA had its annual holiday party. The party was once again hosted in the home of Marshall and Jan Bienstock. Marshall's home is a great log cabin style home which does a good job of showing off his ironwork collection.

Marshall has many of his own pieces and projects on display as well as many old and antique pieces he has acquired over the years. About twelve members were in attendance and a good time was had by all.

NJBA would like to once again thank Marshall and Jan for the great job done hosting the party.

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 parts up. Larry Brown— (718)967-4776

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

New York State Designer Blacksmiths Francis Whitaker Ring Project

http://www.abana.org/business/nysdbproject.html

The New York State Designer Blacksmiths is going to engage in a Francis Whitaker ring project, therefore we are looking for volunteers to work on the grille and some to fabricate the rings.
If any questions e-mail me at:
Al Butlak Jr.
1351 Walden Ave
Buffalo, NY 14211-2826
butlak1@mindspring.com

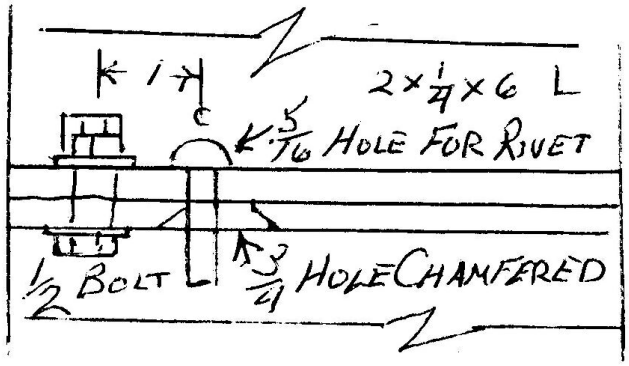
If we are interested in participating in this we should decide soon and maybe get the interested parties together at a forge work out the design and execute it.

Remember soon it will be time to send in your renewals!
If you do not get one contact:
Nate Pettengill,
Membership Chairman

THE SCRAP CORNER

Contributed by **Tim Suter**

I had occasion to cut a good number of 5/16 rivets shorter for a special use. The problem is to hold them secure and cut accurately.



The sketch will help explain what I did.

The holes were drilled and the 3/4 hole chamfered down to about a 1/32 land, note the offset of the 3/4 hole places the land in line with the rivet hole. The two parts were then hardened in super quench. The two mating surfaces polished, lightly greased and bolted together. I snubbed the nut up to barely allow the parts to move and locked it with a jam nut. A stack of washers or suitable spacer under the rivet head controls the length. To keep the gadget small and easy to store for future use I used a temporary thirty six inch handle of crescent wrench and pipe. I put the cutter in my vise, dropped a rivet in the hole arid pulled the handle. It popped that little booger and many others "slicker-n snot on the doorknob". This sheer principal could be adapted to many different uses.

Beginning at 10:00 am, Leigh Morrell will be speaking and demonstrating on his techniques for forging with an eye towards production and efficiency. Use of the power hammer, dies and jigs and other fixtures will be covered.

There will be plenty of time for networking and socializing with your fellow metalworkers. All are welcome, the event is open to the public.

- Safety glasses are required.
- The tradition of tailgating will continue. If you have stuff to sell, please park behind the shop. There is even a forklift to load/unload with so don't be shy! There is plenty of room outside and a limited amount of indoor space available.. (call ahead for indoor space) 845-457-5671

Directions:

This location is the same as last years, The shop of Greg Phillips A.K.A. "A Sure Sign" in Montgomery, NY.

Take NYS Thruway to Newburg, NY Then take Route 17K west about 7 miles to "A Sure Sign" on the left. Any Questions? Call 845-457-5671

"Ron's Snakes"; This is from the ABANA sponsored news group "The Forge"

From: "**Ron Reil**" <rreil@micron.net>
To: <theforge@qth.net>
Subject: Re: [TheForge] The Friendly Snake...a Step by Step

Here is a short rundown on making the snake as you asked.

First lay the head of the spike back to put the top of the head in line with the shaft of the spike. This is where you may want to pay attention to the short lip of the head so that is will not cause you a cold shut when you flatten the head down to join the shaft. Grind it off or hammer it gently down into the head before you align the head with the shaft.

Draw out the spike to 18" or so, about 3/8" in diameter, paying attention to how a snake is usually built.....that is he has a fatter mid section and is thinner toward the head, with a small neck, at least for the rattlers and such snakes. Certainly not all snakes are built this way, but that is part of the "look" that you want to develop. I need to do better on this part on my next one.

When you round the body remember that they are not really round but have a "flat" belly that you will put the little lines on to imitate the big belly scales.

Looking at the tutorial for the rasp snake by Bill Epps on Anvilfire, he has a great way of adding the rattles if you want a rattle snake, "buzz-tail". I will do that on my next one.

I used my power hammer to rough out the head shape, and found that the drawing dies, the only ones I presently have, do a superb job of putting in the right curves. I had a really good head until I punched the eyes, and then I had problems. I put then too high on the head and used the wrong shape eye.

Do not do any of the detailing of the head until the very end...important, or the scaling during subsequent heats will ruin your detail.

Get the head refined and split the mouth. Be careful here because this is another place I went wrong. I ended up with a mouth to low set on the head. The viper's mouth is more centered. It made my snake look like a friendly horse for a while. Also, split it quite a ways back into the head. A vipers mouth will open the entire head when it strikes.

Leave the mouth open about 30 degrees for now. Find a big finishing nail and cut off the front 3/4 of it and discard, leaving a piece about 3/4" long with the round head of the nail on one end. Flatten the other end, split and shape into the tongue. If it gets too long trim the tongue to keep it no longer than 3/4" or less.
Hammer refine the entire snake, and in the process do the chisel cuts across the belly for the scales. Once you have the scales cut take a file and remove all the sharp little ridges that the chisel has pushed up to make the snake body smooth to the touch.

At this point you should have your snake about all shaped and ready for the final steps. If there is anything that you don't like about its body conformation fix it now with the hammer or files. The snake should still be in a fairly straight form. Again, you want to be sure the entire body and head are very smooth, hammer refined, as this will determine the end finish of your work.

Choose a drill that is just big enough to allow the ball end of the tongue you forged to drop into the hole it drills, and drill a hole in the back of the open mouth deep enough to reach back all the way through the head to the base of the neck, and to position the tongue as you want it when you place the butt of the tongue in the hole. The reason you want the hole to go so far back is because its how you are going to lock it in place. Its important to keep testing the tongue in the hole as you drill it or you may over-drill, making things difficult later, or making it necessary to forge another longer tongue.

You will now take the last forge heat on the head of the snake, and the snake in general. You may need two heats if you are a little slow with your eye punch. Heat the head to a good red heat, put it in the vise quickly and punch the eyes, and while still hot drop the tongue into the hole and position it the way you will want it in the finished snake (Your only chance is now) and while still hot, place the top of the snakes head on the anvil and using a small ball peen with a relatively "sharp" ball end, hammer the underside of the head to close the hole around the tongue anchor ball. If you use the right shaped ball peen you will end up with a beautiful depression that looks very correct anatomically. This will also close up the mouth to some degree, depending on the angle you hold the head on the anvil. Don't overdue it or you will deform the head to much. The sharp ball end on the hammer will tend to concentrate the blow in such a small area that the head is not deformed too much, and in fact may improve the head by thinning it a little.

Once its cool, dress up the head with files, including a little depression between the eyes and down the forehead. Basically get the head into its final form and use very fine files at the end to eliminate file marks.

To preserve the nice smooth hammer finish on the body of the snake I elected to use my torch to do the final bending and forming of the body. I held the torch in one hand and the tongs in the other with the snake in the vise.

This way each bend was only heated once and I moved on to the next bend in a continuous motion. Using the forge, everything would be heated a number of times and greater scaling would roughen the surface. BTW, the heating you are doing now will help to eliminate any remaining fine file marks due to the light scaling that it will cause.

Once the final shape has been created, and you are happy with it as a finished snake, lightly clean the loose scale off and drop the whole snake into a plastic container of vinegar. A couple of hours should have all the scale cleaned off, including inside the mouth...use a toothbrush in the mouth. Wash very well to remove all vinegar. The results are a sick gray look, but with a fine wire wheel it almost instantly polishes up into a very attractive bright iron finish. At this point I took the torch and took a light heat (purple) on the head and carefully took the head to my brass wire wheel to give the brass highlights I wanted. I then put it on the anvil and using the torch, differentially heated it to obtain various temper colors along the body length....blue-gray in the middle, lightening to a more straw at the tail.

While still hot I then rubbed it down with beeswax, filling the mouth too with liquid wax so that the hole for the tongue was completely filled around the tongue (prevents later corrosion), and then shook out the excess, allowed it to cool and buffed with a clean cloth. It ended up very smooth and has a nice glossy highly colored finish. I should add that you do want to be careful when applying the beeswax. I hold the snake in a cloth while doing so and use the cloth to rub the wax in well, and while I was doing so I accidentally pulled the cloth out from between the snake and my hand. The snake was still very hot and the result was the snake ended up on the other side of the yard and my hand in the slack tub....grin.

All that is left is to test the snake. Place it under the covers of your wife's side of the bed and the results will tell you how effective your work was. If its a really good snake you will be sleeping on the couch for a week. :-)

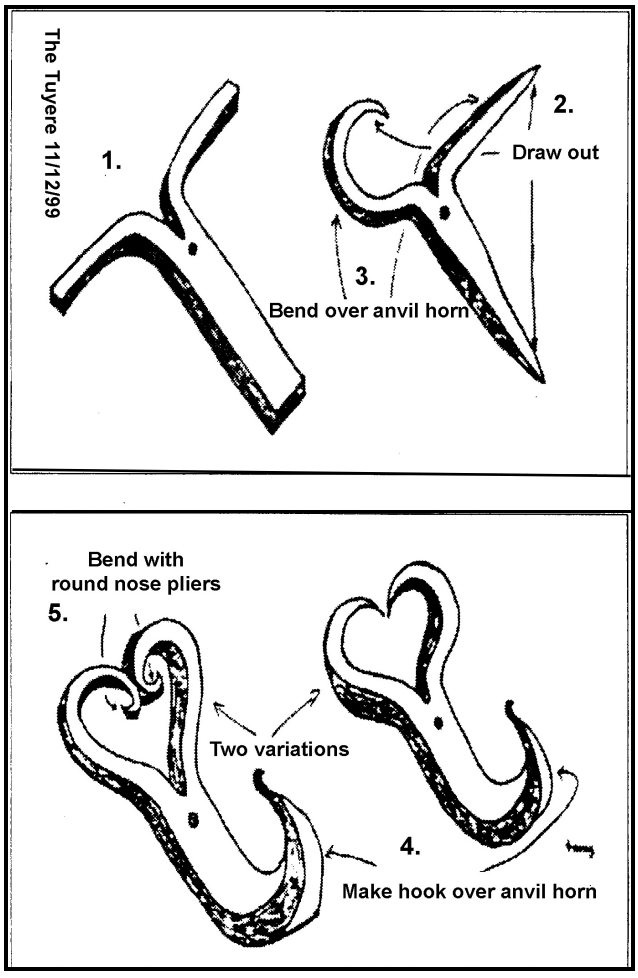
Ron

The Heart Hook

(by Stephan 0. "Rambo" CIary as shown the Editor and drawn by Tom Grimes)

Using 1/2"X !/4" X 6 ¼" stock. hot cut down center of stock (#1) 2 ¼ inches, punch or drill a nail hole 1/2" below cut. Draw out the three ends, bend over anvil horn and use round nose pliers if needed. Enjoy! (Dr. Heart Hook strikes again!)

From the Tuyere 11/12/99



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

Building Blocks

A "Back to Basics" project
The Anvils Ring/ Fall 1987
by Dorothy Stiegler
Part 4

Part 1

Well, it's fun to be back with you again! This time we're going to start a two-part project that will be a really nice item for your home. When you're finished, don't show it to your mother before you get it nailed down. Mothers like these kinds of things as a rule, and you'll probably lose it!

Start by assembling three 1/2" square pieces cut to the following lengths: 14", 16" and 24". Then get six pieces of 5/16" square, each about 5" long. You will need a hot cutter of some type; an old chisel will work if you don't have a regulation cutter. Round up someone to help you if you don't have a hold-down tool, or if you want it to go faster. If you don't have anyone available, you can do all of this alone. You'll just need to be more patient with yourself.

The three 1/2" square pieces will be similar when finished, and we will do them all at once. You may start with any one of the three; place one end in the fire and take a nice yellow-orange heat. Place the piece over the anvil and—if you are right handed—lift up with your left hand so the steel sits at about a 30 deg. angle from the flat of the anvil. By hammering with the flat face of the hammer also at a 30 deg. angle, you will point the work.

Turn it one quarter turn every five to six blows. If you hammer the same number of times on each side, you will produce an even short point on the end. Make the point about 1" long. If you keep the work hand up a bit, the taper will remain in the center. After you have reheated, hold the work on it's edge (on the diamond) and overlapping the taper, hammer straight down with flat overlapping blows

Think it through here. If you hold it on its edge and flatten straight down on the top edge, the anvil will flatten the bottom edge at the same time. Leave the other two opposing sides alone, as you will like it better if these edges remain sharp. I find if I overlap my heats carefully, and deliver flat overlapping blows with my hammer, this draws out very nicely. Make the new flat section about 1/4"1 thick, then wire brush and reheat.

Be careful to turn the piece over fairly often and work back to front, then reverse, then back to front again. This helps avoid any curl and also keeps that flat area even. If the work starts to skew to one side, heat it and whack it with a wooden hammer over a wood block. If you don't have a wooden hammer, you can use a wooden board over wood. This will keep the edges crisp.

Work your way down the bar, overlapping each heat and hammering flat. If you have trouble getting your hammer to land flat, the handle may be too long. If you have to hold it way up near the head, cut the handle off in 1" segments until it will land flat and you can hold it further back. The end should probably not extend further than 1 1/2" past the height of your hand on a full swing.

If the handle is the correct length and you are hammering flat, the face of the hammer should make contact evenly. If you are still experiencing trouble, check the height of your anvil. If the far corner of the hammer face hits first, then the anvil is too low. If the near corner of the face hits first, the anvil is probably too high.

When you get to the center—or just past it—turn the piece around in the fire and start over with step one on the other end. Do all three of the 1/2" square pieces like this. I guarantee you will make nice flat overlapping hammer blows by the time you are finished. While you are working, keep the piece flat and true (don't let it creep to one side). If it becomes skewed, get after it right away with the wooden hammer. Be sure to wire brush.

Next, using the hot chisel, run a line down the center of that flat part on front and back. For those not familiar with walking a line, I use a chisel that is rounded on the corners and sharp on all three sides. To help you visually find the center of your stock, lay the hot chisel on its side so the edge appears to be at the center of the stock where you wish to cut. Then stand the chisel up straight and strike. It will cut a nice straight line if you use the following method: To

properly position the chisel as you move down the imaginary centered line, rock it forward from its back corner until it is in an upright position, strike, rock in the same manner again, strike, etc. Try not to lift your hand. If you can keep from tilting the chisel from side to side, you will be able to make a nice straight cut down the center. Keep your eye on the line you want to move along.

It really helps if you first use a cold chisel to mark out your line while the stock is cold (using the technique described above). Then you can simply run down the line again as you overlap your heats. Cut the final line about 1/8" deep, making sure to cool your hot cutter in the water bucket every three or four blows. This also keeps the temper in your tool. Be sure to wipe it off (on your pants is handy) to prevent the water from cooling your work.

Cut a line down both flat sides on all three pieces. I find that if I begin cutting down one side, reheat the same segment, then flip it over and cut the corresponding area on the other side, it goes faster than if I go all the way down one side and then start over on the other side.

When you've finished the lines, it's time to do the twists. I use a fork wrench with another handle welded to the front for leverage. That enables me to use two hands on a twist, which helps keep the twist even. First get a can of water, pinch the front into a spout and put a bucket under the vise about where the twisting will occur. Start the twist by taking a 5" heat about 2 1/2" back from the tip of one end. Put the 2 1/2" into the vice and the wrench out 2 1/2" from the other end. If you're careful never to put a tool on the work anywhere it is going to twist, you'll avoid funny-looking marks where you don't want them, Of course, it will only twist where it's hot anyway.

Now, twist to the right one and a quarter turns, wire brush, and reheat the next 5" or so, overlapping the area of the last quarter turn at the minimum. Next use the spouted can to quench only the area where you put in the full turn, so it won't unwind. Allow the quarter turn area to move freely as you wind to the left this time (wrench way out on the end again). The quarter turn area will unwind and leave a beautifully executed reverse twist, with a nice flat area (short flat).

Wire brush, straighten with the wooden mallet or piece of wood and place the piece back into the fire again. Reheat, overlapping the last quarter turn area, quench the full turn (don't forget to keep moving the bucket forward to keep water off the shop floor) and twist the opposite way.

Continue this process all the way down the piece of stock (except the last 2 1/2"). If you overlap your heats in this fashion, work slowly using the quench can, and try to come out at the same heat each time, you will produce a beautiful back-and-forth twist design evenly spaced down the bar. The veined lines down the flat sides look great twisted and the sharp edges on the opposite sides completely change the shape of the steel from square to a flat diamond.

Well, this is a good place to pause. We'll continue next issue. See you then!

Building Blocks

A "Back to Basics" project
The Anvils Ring/ Winter 1987/1988
by Dorothy Stiegler
Part 5

(Second of 2 parts)

Hello again; I hope you had fun with Part I of this project. We will be working with the six pieces you made last time; each should be about 5" long and 5/1 6' square.

Grip one end of one piece with a tong and heat the other end to an orange-yellow. Go to the anvil and, holding the work flat, hammer straight down making a nice even taper approximately 2" long and twice the width you started with (see Fig. 1). Thin the end nicely and make a smooth transition overall from square to flat. Put the piece in the vise gripping near the square part of the stock— and rasp it evenly around so it looks nice.

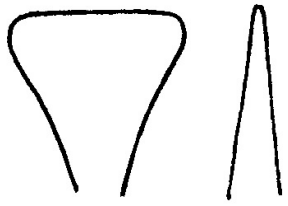


Fig. 1

Do all six pieces, striving to get them even. I make marks on my anvil with a soapstone so I'll know how far to draw out. I also write "master" on one piece and use it as the pattern, matching all the others to it. When you've finished one end on each piece, turn them around and make a square taper to within 1" of the other taper. You will be leaving roughly 1" of the stock square with a flat 2" taper on one end, and a longer square taper on the other.

If you work from the tip back, you can get a nice square taper that remains even throughout. If you turn it a quarter turn every five to six hammer blows, it should remain square. Of course, try to take care not to burn up any of the stock, but if it does happen, it's best to remake that piece; otherwise you will have to cut off all the others to match it.

Now, line them up and see if they are all the same length. Each piece will probably have an overall length of about 7" with about 1" of the parent stock remaining near the wide flat end. Heat the 1" area of parent stock and hot-cut a line down it on two opposite sides. Next, gripping the long end with a tong, heat the area that you just hot-cut. Put that long end in the vise and quench the flat part of it with the quench can, leaving only the scored 1' area hot. Grip the flat part with a wrench and twist to the right one fast turn. Do this to only three of the pieces; then put a complete twist to the left on the remaining three pieces. Reheat each piece and straighten it up.

Now for the fun part. Take one of the pieces and put the end with the square taper into the fire, taking about a 2" heat. Move quickly to the anvil and put the piece flat on the surface with the tip at the very, very edge of the far side of the anvil. With the hammer coming at a 45 deg. angle, move the work away from you as you tap the curl around (see Fig. 2). Reheat if necessary.

Fig. 2

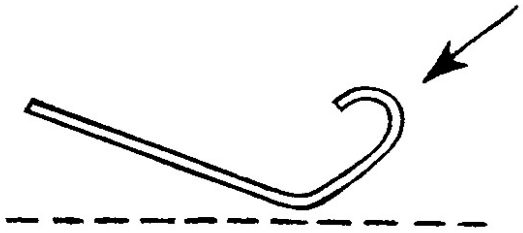


Fig. 3

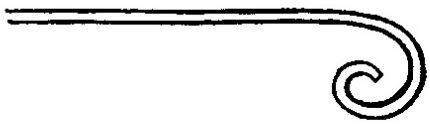


Fig. 4

Turn the piece over and strike lightly with back-up blows toward yourself to form a little "elephant nose" on the end (see Fig. 3 and 4).

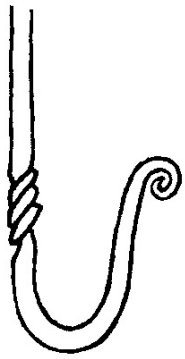


Fig. 5

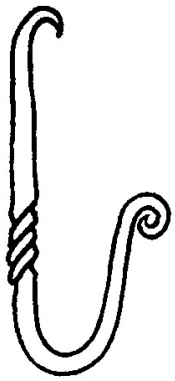


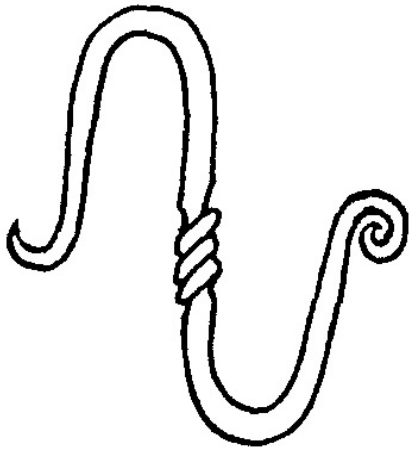
Fig. 6

Next reheat a 1" area between the elephant nose and the twist and quickly dip the nose in the bucket of water to avoid misshaping it. Place the piece over the horn about 1 1/2" ahead of the square twist, and with the elephant nose facing up, tap it turning the heated area into a U shape (see Fig. 5). Do these steps on all six pieces.

Now, gripping the U-shaped part with a tong, heat the other (flat) end and curl it up a tiny bit, going towards the other curl (see Fig. 6). It will really be just

barely turned on the end, going that direction (I use the same technique as in the first elephant curl).

Now, reheat down to the twist, quench the tiny partial curl on the end, and make a fairly tight flat bend at the center of the heated area (see Fig. 7). Do this to all six pieces making sure to wire brush as you go.



You should now have six nice looking hooks. These will work together with the three twisted bars you made in the first part of this project. Take one of those bars and heat about 2" of one end. Further flatten the flat side so that it widens, keeping everything even and taking care not to hit those nice twists you've made.

Now reheat the same end of the work and, using the scroll technique, make a small curl on the end. Do all six ends. Now take the shortest of the three pieces and measure 2 back from each end (including the curl). Hold the piece at an angle on the front edge of the anvil (curl down) and bend the tip over about 45° (see Fig. 8). Do this to the other end also.

Now heat the bar from the center to the beginning of the 45° angle bend; with the curt up, carefully make a gentle curve over the horn. It won't be very curved now, more like an arc. Turn it around, heat the other side, and repeat the process. This will form one gentle arc that has two flat "wings" one on each end. The wings will be drilled or punched so the piece can be attached to the wall at those points. The inside center of the arc will probably not exceed 3 and the wings should sit flat against the wall.

Use the technique in the last project we made in the Anvil's Ring, to punch the holes. The medium length piece can be bent the same way as the shortest one. The longest one should have its wings at about 30 deg. angles on each end and will probably be 3 1/2" to 4" at the center. Remember to punch or drill the wings on all three pieces.

Now slide the six hooks evenly over the medium length bar. Place the three that twist to the left, on the right side of the bar; place the three that twist to the right, on the left side of the bar. After they are evenly spaced, remove them one at a time, heat the end with the flat bend, and replace it over the bar in its original position; then crimp carefully with the tongs to seat it. With a little skillful measuring ahead of time, they will correspond with the flat areas in the reverse twists on the bars. Even everything up, wire brush, heat, and give them an oil finish; or you can varathane the work.

You now have a guest towel rack (the shortest piece), a bathroom towel rack (the longest piece), and a robe crown for inside the bathroom door. I hope you have fun with this project. I think you will be pleased with the beautiful shape of the steel and the graceful hooks.

The Anvils Ring Vol.#15 Issues #2 and #3 1987/88

This article was reprinted courtesy of the author Dorothy Steigler, The Anvils Ring and ABANA. It was originally published in the Fall and Winter issues of the Anvils Ring 1987/1988, Volume 15 issues 2 and 3. Reprinting of this article must be cleared through the ABANA publishing committee

Foundations!

A Resource for Beginners.

by Bud Oggier
the Anvil's Ring/ Fall 198**6** Part **6**

"Jean, today we're going to harden the chisels we made yesterday. Before we start on them, we'd better talk about heat treating a little bit. I'm not going to try and make a metallurgist of you, but you should have some understanding of what's going on inside the piece.

Heat treating steel the way we do it in the blacksmith shop is a two stage process: hardening and tempering. Many people confuse this and use the terms interchangeably. Hardening is just what the name says, 'making the piece harder.' In the hardened state, it will be very hard, but also very brittle. Tempering means to reduce the hardness, or temper it, to remove the brittleness and increase the toughness. This is accomplished by changing the shape of the molecules in the steel.

When a piece is heated, all the tiny particles get excited and move around in the steel. At one point, the critical heat, a transformation in the form of the molecules takes place, and if it s cooled rapidly, the piece will be hard. If the critical heat is not reached, no appreciable hardening will take place. The critical heat occurs somewhere above 1325°F, and varies depending on the composition of the alloy.

If the piece is not cooled rapidly, or quenched, but allowed to cool in air, it will return to its original state. Some steels are quenched in water; for others this rate of cooling is too rapid and they must be quenched in a slower cooling medium, like oil. A very few special alloys will cool rapidly enough in air to harden. These are called 'air hardening. Without some rather expensive equipment, like a pyrometer, we can only approximate the temperature for hardening.

While the piece is heating, another phenomenon is taking place in the steel. The size of the grains in the crystalline structure is growing.

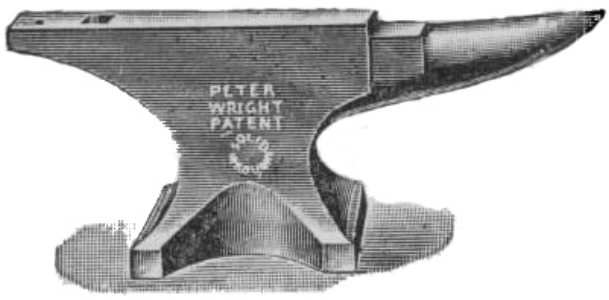
The hotter it gets, the larger the grains grow. Large grains contribute to easy fracture and consequently, less strength. We therefore need to get the piece hot enough to cause the transformation to hardness, but with a minimum of grain growth.

One temperature indicator we can use is that as a piece of steel approaches its critical heat, it loses its attraction for a magnet. If we go a little beyond that point, we should be okay. A full bright red with a tinge of orange is usually quite close.

Well, Jean, let's see if all this good theory works in practice. I know that the steel in these chisels is a water hardening steel, so we can quench them in the slack tub. I want about 3" of the cutting end of the piece to get hot. When quench it, I'll only put about 1" in the water and move it gently back and forth—raising it a little at each stroke—until the end is cold. I then quickly shine the cooled end with this piece of broken grinding wheel, and let the residual heat in the unquenched part, reheat the part I just quenched, in order to temper it.

As a piece of steel is heated, iron oxide forms on the surface. If the surface is shiny you can see it form, first as a pale yellow (lowest temperature) deepening to brown, then purple, then blue, and finally gray. These colors are indications of temperature. The lighter the color, the lower the heat. The more heat, the softer the piece gets. Since this tool is going to be subjected to some pretty severe use, and we don't want it to chip, I'm going to let the color come up to a full blue.

Let's try a magnet on this piece. See, it still wants to stick and the color is dull red. We'll apply a little more heat but we don't want to heat the piece too rapidly; the heat has to have time to soak all the way through.



There, that looks about right. Into the water about an inch deep, move back and forth, raise it a little, keep moving—there, it's cold on the end. Now we'll shine it up with the grinding stone. See the color begin to show closest to the heat? As the heat travels, you can see the color march down the piece. I want the end of this chisel to be a full blue. I'll cool the tip again so it doesn't get any softer, but not the part that wasn't quenched. I'm going to let this cool down to room temperature and make sure the tip doesn't heat up again, re-dipping it if necessary.

Remember the cut we put in the chisel? Now is when we use it to find out how good a job we did. I'll put the tip in the vise with the cut just above the jaw and break it off. The cut makes the piece want to break there first. Now look at the steel in the break. See how smooth it is and looks like satin? That's great. If we had let it get it too hot, it would have gotten hard all right, hut the grains would have been large and the broken surface would look more like rock salt than satin, and that's no good. If I try to file the end, the file just slides over it. That means it's real hard and should do a good job.

Now we'll treat the other end the same way. This time well have to be careful that the end we just treated doesn't get hot enough to temper it any further. If it starts to get hot, we can cool off the tip in the slack tub. The section on this end is larger than the one we just treated, so when the piece gets almost hot enough, I'll shut off the blower and let it soak a minute to be sure the heat is all through the piece before I quench it.

I can still touch the end with my lingers, so it's not too hot, yet. Looks like the piece is just about at the right temperature now, so I'll shut off the blower, wait a minute, and quench. Remember, into the water about an inch deep, move it back and forth, raise it up a little, and back and forth again, until it's cool. Shine it up and watch the colors run to blue, now cool again.

The reason for moving the piece back and forth is to keep cold water always against the piece and to keep any bubbles from forming on the piece. Raising it up a little, steadily prevents a sharp line of demarcation from forming at the quench line. There is a gradual change from soft to hard because, as we raise up the piece, it doesn't get severe tempering at the quench line, and that's good.

Go ahead with your piece and I'll grind this chisel to find out how it did.

Is your piece ready yet? Not quite, the magnet still sticks. Now it's ready. Keep it moving in the water, raise it a little, that's good, keep moving, now shine it and watch the colors. If there isn't enough heat left in the piece to make the colors run, you can heat the area behind the quench line a little with a torch, but just enough to show the colors. You could also heat a piece of steel in the forge and lay this piece on it and transfer the heat. If this were an oil quenching steel, it wouldn't be safe to do what we just did. The portion of the piece not in the oil is hot enough to set it on lire, and I don't need that in my shop. Jean, break off the end of your piece and let's look at the grain size. Hey, that looks good, a nice smooth satiny gray. Okay, do the other end. Be sure the first end doesn't get hot. You could shine it up again and as long as no color shows , you know it didn't get hot again.

I'm going to try out my chisel by cutting on a soft piece of material. There, I've hit it hard enough to put a good nick in the soft steel, but my chisel still looks fine. Must have gotten lucky and done a good job. Let's try yours—hit it a good lick. Now, let's look.

Great, the edge isn't hurt; looks like you've made your first tool. Jean, I always mark my tools and any work I do. I won't put my stamp on a piece that I don't feel is right, and no piece goes out the door without my stamp. You can do as you like, but my policy about this has stood me in good stead.

Jean, hardening a piece of steel is a severe process and any nicks, cuts or sharp corners are places that will want to start a crack, so when you make a piece to be hardened, try to keep this in mind, and keep these things to a minimum.

Well, you've had quite a dose for today. Come back again and we'll do some more, and start on more tools."

This article was reprinted courtesy of the author Ed Oggier, The Anvil's Ring and ABANA. It was originally published in the Summer Issue of the Anvil's Ring 1986, Volume 15 Issue 1.
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Mark Smith's notes from Tom Moore's demo. at the October 6, 2001, meeting hosted by Steve Mengel and Eric Green

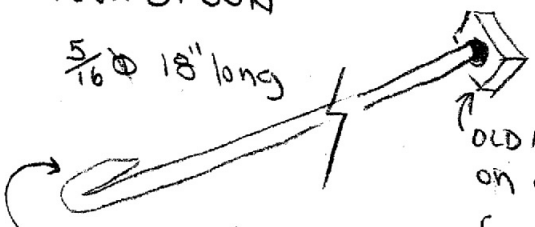
Pennsylvania Striker • November 2001

Tom Moore

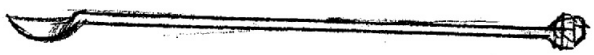
TCM®

I fire without a match
using Pure Iron®, chared cotton and fibre from rope. Tom using rapid hammer blows on nail size sliver of Pure Iron® got it red. Then he quickly moves the iron to the cotton, with a breath, the to the rope – fire!

II FLUX SPOON



WELD THEN FORGE the mass into SPOON. TROUBLE getting scarf down?. use flux & copper electric wire (just like the OI' timers) add heat file clean. Red spot? Heat again.

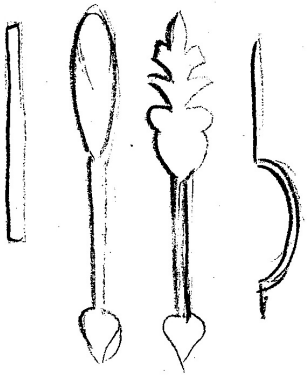


III suffolk Thumb latch

8" x 5/8" ⊞

Using Pure IRON®

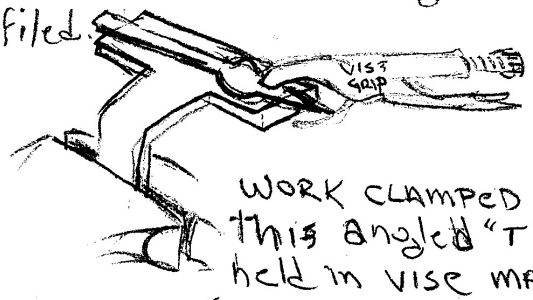
3" back
start forging the top
part of latch



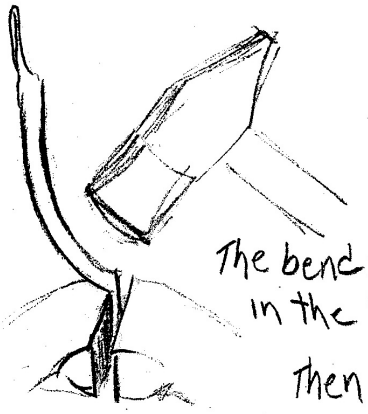
1 2 3 4

The handle, forge to 6" care taken not to make it too long.

THE design was chisled out, an easy task with PureIron® then filed.



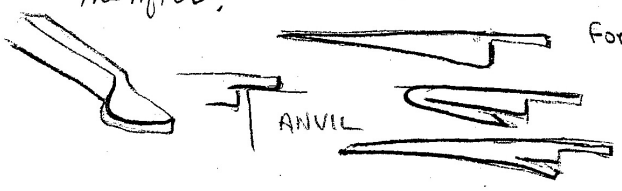
WORK CLAMPED ON this angled "T" held in VISE MAKES FILING EASY



The bends in the handle

Then the hole for the thumb latch was punched

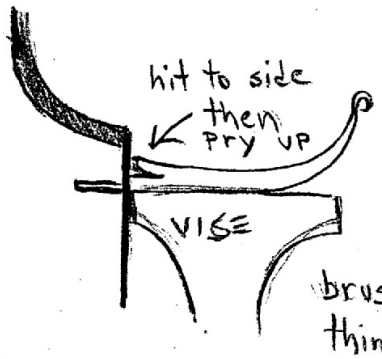
the lifter;



Forge to length
Fold & weld
Forge to length again

Mark Smith's notes from Tom Moore's demo. at the October 6, 2001, meeting hosted by Steve Mengel and Eric Green

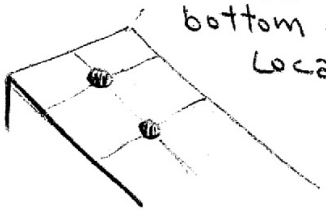
Pennsylvania Striker • November 2001



The finish: wire brushed, boiled linseed oil thinned with mineral spirits, dry (2days) coat with past wax.
(on bathroom fixtures a flat polyurethane 3 coats sprayed.)

To brown steel: clorex & water 50/50
heat 15 min

on Punching nail holes:



On hammering: keep it loose don't strangle the hammer.

on pintles: for barn work just point the end no need to taper

on Pure Iron®: cannot say enough good about it

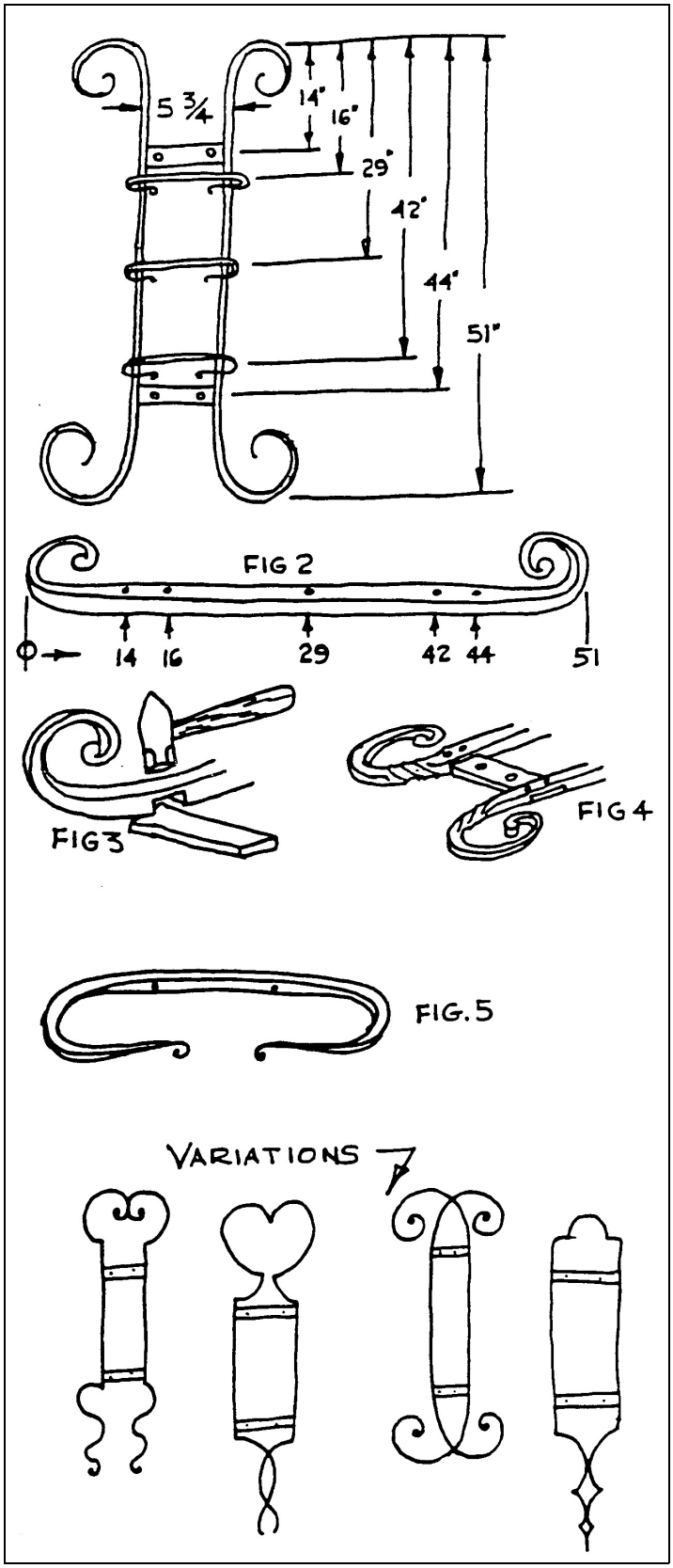
The Beginners Corner

By: Buster Grubbs
Ocmulgee Blacksmith Guild

A Plate Hanger

You will need:
* 2 pieces of 3/8 to 1/2 square 6' long
* 2 pieces of 1/4 x 1" flat 6-3/4" long
* 3 pieces of 5/16 or 3/8 square 13"
* 10 - 1/8" rivets (or welder)

Step 1-
Forge both ends of the 6' long pieces to a taper or flair or whatever, and roll these into scrolls. (Use your imagination as to design).
Step 2-
Center punch marks at 14", 16", 29", 42" and 44" from the tops of the scrolls as shown (in figure 2).
Step 3-
Heat at the 14" and 44" marks and drive a piece of the 1/4 x I" flat bar into it so that a notch is formed for the 1/4 x 1 to rest in (so that it is flush with the back of the scroll.)
Step 4-
Weld or drill and rivet the 1/4 x 1 x 6-3/4 to the upright scrolls. (as shown in Figure 4) and then drill 2 holes in each of the 1/4 x 1 cross pieces for mounting.
Step 5-
Forge the 3 pieces of 13" long 1/4 or 5/16 out to a taper so that they end up about 15" long. Form tiny pig tail scrolls on each end with needle nose pliers or small scroll tongs. Bend each of these as shown. These are the pieces that will actually hold the plates.
Step 6-
Attach these pieces to the uprights at the 16, 29, and 42" center punched marks made in step 2 above.
Step 7-
Finish by cleaning with a wire brush and applying an edible oil such as vegetable, olive, or whatever you use in your kitchen.



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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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Home / work Phone # **E-mail (optional)**

ABANA Member? O **Yes** O **No**
Can you host a PABA meeting? O **Yes** O **No**
Are you willing to demonstrate at a PABA meeting? O **Yes** O **No**

_____
Suggestions for PABA demonstrations

What is your skill level?
O Beginner O Intermediate O Advanced O Professional

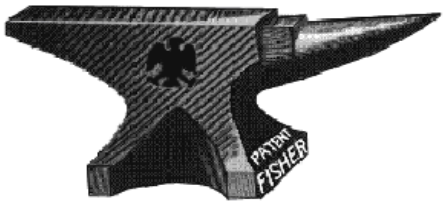
Send your completed application with $ 10 (one year dues) to;
Treasurer Gene Degenhardt
271 Stoney Lane
Lancaster, PA 17603

PABA Membership Application
Membership is from
Jan. 1 — Dec. 31

PENNSYLVANIA Artist BLACKSMITHS' ASSOCIATION

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

New Jersey Blacksmiths Association



"EAGLE"
FISHER & NORRIS, Trenton, N. J.

Index For NJBA
Volume 6, #4

How to Join or Renew your Membership in NJBA:

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.

Name _____ Home Phone_____
Address _____ Day Phone _____
City _____
State _____ Zip _____
E-Mail _____ Skill Level (optional)_____
Comments _____