# N.J.B.A. Newsletter

**NJBA Volume 6, Issue 3 November 2001**

## Fall is Back!

I hope you are all going to take advantage of the cooler weather and get to the fire and make something, try a new project or use a new technique. Hopefully one you learned here!

## Editors Soapbox

These last few weeks have been hard on me, personally having lost one person who was a neighbor, friend, firefighter and another who was a co worker I hadn't seen in a few years and was now a policeman.

September 11th changed a lot of things for us all. Our sense of security was violated, our loved ones taken a way, our economy shaken and our pride bruised.

I have seen the prejudice against people who have come here from that section of the world, to live the American dream for themselves, away from the tyranny of their homelands. I try not to judge but it is hard. I have to remind myself that although I grew up in NYC, I have citizenship papers also, I just look like I'm from here.

We are now angry and hurt and have sent our troops to war, hopefully the outcome is a more peaceful world. May God and the world bless their efforts.

I would like to thank all the rescue workers who came from all over the country to NYC to help. We appreciate all their efforts and the time away from their families more than we can express. If you are one of them thanks, if you know someone or their families please pass this thanks along. I find beating hot steel therapeutic sometimes, I'm going to go forge something. Thanks for listening,
L Brown, Editor

## Upcoming events for 2001 and 2002

Remember most of our meets have a "Iron in the Hat" drawing, be sure to bring something.
**November 18th,** Sunday 10 am; Peters Valley, details on this page.
**December 9th**; Sunday 2 pm, Holiday Party! Marshall and Jan have once again invited us to their home. Details on page 2.
**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 page 3.

## November Meet at Peters Valley Craft Center

Peters Valley is hosting our meet this month with the resident smith Maegan Crowley kicking the morning off with a demonstration on working metal sheet by hand and with dies. The after lunch demonstration is to be announced.

**Directions**: Peters Valley Craft Education Center is located at 19 Kuhn Road. in Layton (Sussex Co.). NJ 07851. (Phone: 20I-948-5200).
**From Interstate Rt. 80:** Take Exit 34B to NJ Rt. 15 North. to US Rt. 206 North. Left onto NJ Rt. 560 West. through the blinking light in the center of Layton. onto NJ Rt. 640: go about 2 miles and turn right onto NJ Rt. 615. Go approximately one mile.
**From US Rt. 209** (on the west bank of the Delaware River in Pennsylvania): Take PA Rt. 739 South across the Dingmans Ferry Bridge. Take the first right at sign to Peters Valley. Go two miles.

# December Holiday Meet!

Marshall Bienstock and his wife Jan have once again graciously offered to host the **December Holiday Party on December 9th.** Marshall and Jan will be hosting the **party and pot-luck** in their home located at **301 Casino Drive, Howell, N.J.** The party will be starting at **2 pm** (ph# 732-938-6577). Please bring a covered dish (enough for 6-8 servings) and a drink. This meeting we will skip the "Iron in the Hat". Attendees are encouraged to bring a portfolio or examples of their work, especially examples with a holiday theme.

In conjunction with this, the preceding four Monday nights (Nov. 12, 19, and 26 and Dec. 3) we're encouraging attendees of Marshall's open-forge meeting to bring and share ideas for holiday-related forging projects.

**Directions;** Take any N-S route to Rte. I-195 or Rt. 33 and from there to Rt. 9. Go North from I-195 or South from Rt. 33 to Casino Dr. Travel about 3 Miles to #301.

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

## 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

## NJBA Board of Directors

**Marshall Bienstock**, June, 2003
663 Casino Dr., Howell, NJ 07731
732-938-6577 732-780-0871
mbienstock@worldnet.att.net
**Larry Brown**. Editor, June, 2003
90 William Ave., Staten Island, NY 10308
718-967-4776
lp.brown@verizon.net, brownln@hotmail.com
**Bruce Freeman,** June, 2002
222 Laurel Place, Neptune, NJ 07753
732-922-8408, 609-716-2827
freeman@monmouth.com,
freemab@pt.fdah.com
**Jon Folk,** June, 2003
P.O.Box 143, Old Bethpage, NY 11804
516- 625-5667. folkforge@worldnet.att.net
**Bill Gerhauser,** June, 2002
415 Hutchinson St., Hamilton, NJ 08610
609-394-1817, bgahow@earthlink.net
**Bruce Hay, Jr,** June 2003
50 Pine St., Lincroft N.J. 7738
732-747-4758
**Anton Holstrom**, June 2002
26 Saddle Shop rd., Ringoes N.J. 08551-1510
609-446-0349 antonholdstrom@msn.com
**Adam R. Howard**, June 2003
c/o HHM, P.O. Box 5005, Clinton NJ 08809
908-735-4573 kunstschmeide@aol.com
**Josh Kavett,** June, 2003
471 Casino Dr., Farmingdale, NJ 07727
732-431-21 52, jakavett@aol.com
**David Macauley**, Director June, 2002
4 Patricia Ct., Howell, NJ 07731
732-206-1568, 732-949-8422
drmacauley@att.com, drmacauley@monmouth.com
**Jeff Morelli,** June 2003
234 Rahilly Road, Wrightstown, NJ 08562
609-723-5990
**Nate Pettengill**, June, 2003
212 Hazel St, 2nd Floor, Rear. Delanco, NJ 08075
nate.pettengill@lmco.com
**Steven W. Rhoades,** June, 2003
513 Harding Highway, Vineland, NJ 08360
856-697-4144, hotiron1@juno.com
**Bruce Ringier,** June, 2003
346 Rt.565 Wantage, NJ 07641
201-652-4526 wlkngb@yahoo.com
**Tim Suter,** June, 2002
1112 Ladner Ave., Gibbstown, NJ 08027
856-423-4417
**Greg Phillips,** June 2002
(845) 457-5671, Acorn Forge, 937 Route 17k,
Montgomery, NY 12549 suresign@frontiernet.net

# 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)

# Report on the October 13, Meet at Mike Walker's forge in Elkton, Md.

**Report by Josh Kavett**

This meet was one of the best events in my NJBA tenure. I think that all who attended would agree. The day started out around 8:30 with coffee and donuts socializing while roaming around Mike's fantastic shop. About 15 NJBA members were there, and about 15 others from the Delaware, Md., and Pa area. This was the first time he ever opened his shop for a demo making it a treat for all who attended.

It has to be one of the most organized and complete welding and forging shop most of us have ever been in. Mike has accumulated just about everything one could need for any project, and had it organized in a way that he can find everything.

Mike demonstrated his techniques for cutting and forging leaf forms. He began by plasma cutting a blank, then marking his name and leaf type on the back. Hot chiseling the veins, then thinning out the edges and shaping followed, giving the leaf "life". He discussed various tools he uses to give the leaf forms character. It was a most informative demonstration.

After lunch break and IITH, Mike gave a short tour of his house renovation. A most fantastic job. One really must see it to appreciate what he has done in "residing" his house. Fifteen years, and untold hundreds of tons of local stone later, he has his own almost completed castle.

After the tour, we all settled back in the shop for a demonstration by Kerry Rhodes. He demonstrated forging and shaping three inch common copper pipe. It was an interesting demonstration of an aspect of forging most of us do not consider. He then forged out a wizard head from 1" square steel bar. He demonstrated hot splitting, hot chiseling, and hand and power hammer drawing of the stock. A most interesting demonstration. He also spoke about a large commission he did building furniture and various fitting for the local Harley-Davidson dealership. Very impressive work.

The day ended around 3:30 with a cleanup, and everybody heading home. It was a great day...perfect weather and host.

A large Thank-You from NJBA to Mike for his demonstration and use of his shop, and Eva Walker for her help with lunch and other details that helped the day go smoothly, and Kerry Rhodes for his demonstration.

# Peters Valley Pig Roast and Fund Raiser

Two reports on the Peters Valley Meet Sept. 1, 2001

*Report by* **Bruce Ringier**

On Saturday, September 1, 2001 a fundraiser was held at Peters Valley Blacksmith shop about 110 people attended at one time or another during the day . John Rais demoed, as did Jim Wycoff, his leaf making and flower demo was packed. John's demo was early and not as full. The band was tight and played for lunch and after the auction. All reports were positive on the music. The pig was great not a meated bone was left although there were complaints that the food was not ready soon enough {about a 1/2 hour late] salads were plentiful and there were cookies in the shape of anvils. The beer was readily consumed 2+1/2 kegs gone, a bud, black and tan and a lager (ying ling). PV ceramics studio made and sold PV blacksmithing pig roast mugs and steins "little anvils stamped on them". The party lasted until about 830 pm a few diehards stayed until morning myself included J.D Smith showed up about 630 pm He came from Boston. Many states were represented, VT, NJ, NY, MASS, FLA, NW MX, PA and I am sure others that I missed. The auction was a great success raising about $1700, there all totaled about 3500.00 after expenses. Enough to do some real good. Meagan and I wish to Thank the NJBA for their support. I knew some but not all, Tim S., Bruce F., Josh K .The money is awaiting to be used for improvements to the shop. Thanks again
Bruce Ringier

*Report by* **Doug Learn**

On 01 September over 100 ardent supporters of the Peters Valley Craft Education Center blacksmith program gathered at the blacksmith shop to show their support and enjoy good fellowship. Spearheaded by NJBA board member and PV Board member Bruce Ringier and assisted by NJBA members, the pig roast and fund-raising party was held under perfect blue skies and cool temperatures. Resident smith Maegen Crowley (and 2002 ABANA Conference demonstrator) hid her nervousness well as the attendees mingled amidst the food, drink, music, merchandise, auction items, and demonstrations in the smithy. Jim Wyckoff, John Rais, and others demonstrated for the attendees. The highlight of the event was the auction, where smiths and organizations from across the blacksmithing community donated their talents, objects and services for the cause. A substantial sum was raised to be used for the improvement of the smithy. Thanks to all who attended, helped out, and in the end showed that the blacksmith program at PV has helped many to sharpen their skills, but just as importantly, has contributed to the fellowship of blacksmithing in New Jersey and beyond.

# Report on the Dover Conference

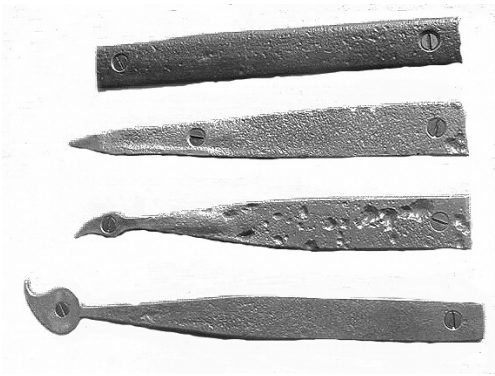
Sept. 7-9, 2001

*Report by* **Bruce Freeman**

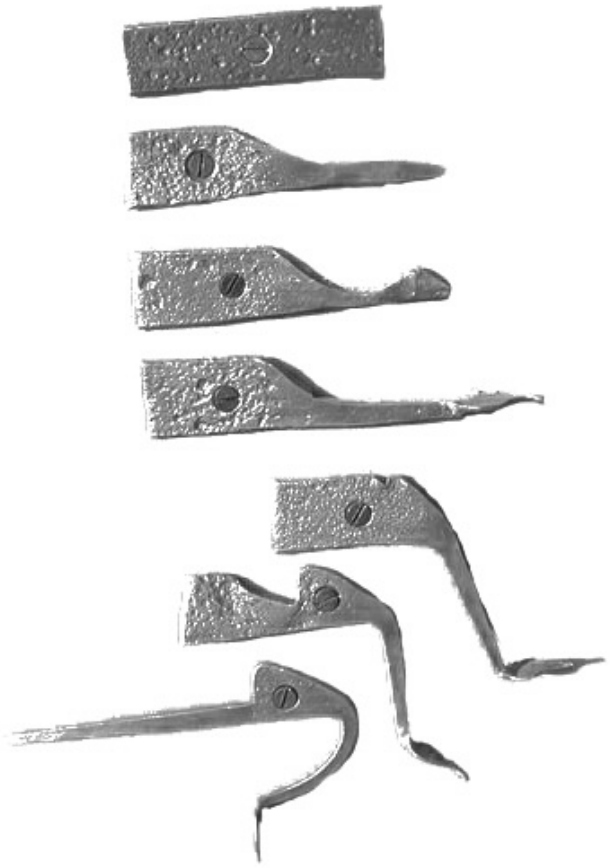
Anton Holstrom and I headed down to Dover about 2 PM, to beat the traffic.
We arrived before 6, checked into our motel, then set up chairs in the shade outside the Delaware Agricultural Museum and read blacksmithing books.
After a little while other folks started arriving and we shot the bull.

When the museum opened for the reception, we all filed in and wandered over to the room in which the show was set up. The work on display was all quite good and some of it was exquisite. There was more of Chris Ray's work present than I had ever seen assembled before in one place -- weird pieces of art, but wonderfully rendered. Naturally, we also spent a good deal of time swapping lies over the refreshments,

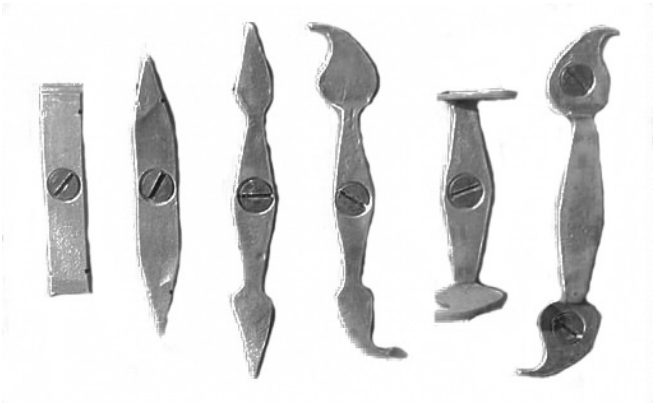
in- which
good cluded
and wine
beer.



The next morning things got going early. Anton and I met both demonstrators, Doug Hendrickson (and his wife) from Missouri, and David Court from New Hampshire over the complimentary breakfast at the hotel. We then headed over to the museum and arrived in time to watch the others finish setting up. I set up to tailgate books, made my contributions to the iron-in-the-hat, and put my example copy of the Grasshopper Treadle Hammer plans on display on the "contest" table.



Things got rolling with David Court demonstrating the making of a modified traditional latch. David pointed out that iron was expensive in colonial days, so ironwork was made thin. He prefers to make ironwork thick, and thus departs from tradition. He had put together a "storyboard" of the steps to making a latch, but didn't adhere to them absolutely.

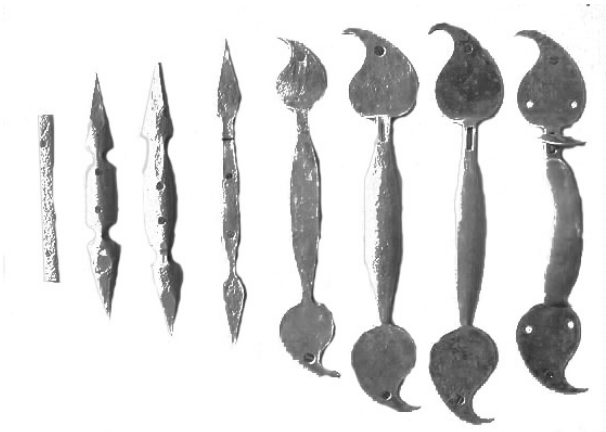


The lunch break gave me some time to look over the tailgate sales. It was a fair representation of blacksmithing tools, including anvils, vises, tongs, hammers and other hand tools, cone mandrels, swage blocks, at least one forge, plus a drill press, an incomplete lathe, a small horizontal bandsaw (which Bill Gichner snapped up) and even a flypress. Anyone looking for blacksmithing equipment would do well to attend such sales.

After the lunch break, Doug Hendrixson took over and showed us miscellaneous forging, including forging of aluminum. The trick with aluminum, as has been pointed out before, is that forging temperature is well below the incandescent. Use a wood splint or the hammer handle as a "crayon" on the hot aluminum. When it writes like a wax crayon, leaving a black streak, then the aluminum is at forging temperature. Any hotter and it will just break up under the hammer.

The day concluded with the auction, the IITH, a catered dinner and a slide show by the demonstrators. David showed us some repair work he'd done on some weathervanes from old buildings in New Hampshire. Doug showed some of the art work he creates, and spoke of how he displays pieces to representatives of major retailers.

Sunday, David again started things off, this time demonstrating how to mount traditional hardware on a modern door and doorframe. David was emphatic that the blacksmith should install his own hardware. Since his hinges are mounted on traditional pintles, he has to drive them into the doorframe.



Unfortunately, there's often an air space exactly where he needs to drive his pintle. If new construction, you can holler at the carpenters who were suppose to put wood there. On existing construction, you can drive the pintle at a slight angle (away from the doorway) to hit the wood, or you can fill the gap with Bondo! He does not simply drive the pintle because the lightweight wood used nowadays would simply split. Instead he drills a pilot hole that matches the taper of his pintle. He makes these drills himself, tapering flat stock and then making steps in the taper. A little sharpening, and he's got a drill bit. David also demonstrated the mounting of a latch. He clamps a jig onto the edge of the door. This jig has a slot corresponding to the shaft of the thumb latch. He uses the jig to guide his drilling 1/4" holes, then uses the same drill to clean out between. Very quick!

After lunch, Doug took over and demonstrated the forging of an ornamental doorknocker. He used a stone as the knocker, and had drilled two holes opposite each other in the stone to receive the iron. He forged the individual pieces of the knocker and passed them around. It seemed to me that the knocker would be very flimsy when assembled, but Doug simply welded where I had though he would be heading over tenons. The result was a sturdy, if nontraditional, piece of hardware.

# HHM Tool Swap & NJBA Sept. Membership Meeting

Sept. 15, 2001

*Report by* **Bruce Freeman**

We held our September meeting at the Tool Swap at Hunterdon Historical Museum, in Clinton, NJ. Adam Howard, the blacksmith at the museum, had arranged this tool swap. Thanks to the publicity Adam had got, the event drew from beyond the membership of NJBA. Several folks tailgated items, including books, forges, anvils, hammers and other hand tools, a treadle hammer somewhat worse for coming through a shop fire, even blacksmithing hats and T-shirts.

Adam recently completed renovations to the blacksmith shop at the museum, and he showed us the shop. The shop has an excellent forge, and the usual complement of tools, including a 25-lb Little Giant power hammer, recently refurbished. There were a few demonstrations given across the day. NJBA member Luke Gasior gave a demo on making a hardy. I missed most of the rest of the demos, so someone else will have to report on them.

I had a local pizza place deliver a bunch of pizzas, soft drinks, plates and cups, and NJBA provided a well-received lunch with plenty of food and drink for attendees and museum workers. NJBA also held an iron-in-the-hat. Since many attendees were not familiar with this tradition, we had only one table of contributions, but ticket sales were good, and we cleared the cost of the lunch.

Josh Kavett and John Chobrda took a walk through the Red Mill, a famous landmark and principal structure of the museum. Josh was impressed with the building itself and all the line shafts which ran the machinery. John thought the best thing in the place was an "ice-cycle" -- a construction like a bicycle, with one steerable skate up front and two long skates in the rear, straddling a spiked wheel. The front skate was equipped with a heal brake actuated by pressing down on the handle bars. The shaft of the spiked wheel was mounted on springs so it would press against the ice. Pedals up front were connected to the rear wheel by means of two leather belts. The whole thing was of hand-forged wrought iron. Quite a project.

# How to Start a Coal Fire

**by Pete Stanaitis**
from the Guild of Metalsmiths, March 2000

In our training sessions, getting a good fire started (and keeping it well maintained) is almost always an issue. This year we have beefed-up the fire control portion of the basic workshops in order to minimize this widespread problem. But we have a concern as to how to get this info to the rest of the organization. Well, luckily, just recently, as I was checking one of the three metalworking-related groups to which I subscribe, I saw this rather specific request for help. Below is my answer to that person. I hope these concepts can be of help to our own folks.

**The Question**

kyblacksmith@my-deja.com wrote:

I am fairly new to blacksmithing, been doing it for about a year now and have a basic question. Does anyone start a fire with a single piece of newspaper wadded up tightly? I have tried to do this and it never works. The only way I can start my forge is by building a small wood fire over my air grate. If you can do it with a single piece of paper, please let me know how. Thanks.

**The Answer**

I'm not sure that I could start a fire with only one sheet of newspaper. We teach a lot of basic blacksmithing in the Minnesota / western Wisconsin area and we teach fire starting with three or four sheets of newspaper. It works every time, once you learn to do things right.

If my life depended upon starting a fire with just one sheet, here's how I'd go about it:

1. I'd have a forge with a deep firepot, deep enough so that the balled-up paper would, once placed over the clinker breaker, all fit below the top of the firepot.
2. I'd have available at least two gallons of a five-gallon pail full of coke that I made in yesterday's fire, very dry. I would have it piled on the forge table right by the firepot, so that I could quickly use it to cover the paper. None of the pieces of coke would be any bigger than about 1" in diameter, and some almost dust-size stuff is okay.
3. I'd have the capability to run or crank my blower very slowly.
4. I'd have another bucket of dry coal to add to the coke.
5. I'd find a newspaper with the biggest sheets of paper you can find. Out in the country where I live, the sheets are only 17" X 22', but one big town paper has sheets that are 22' X 27', 60% more fuel value! Remember, my life depends on it, so every little bit of fuel counts.
6. Then, I'd have a five-gallon pail of wet coal ready to add to the fire once it got going, because that's the way to keep a mature fire under control and to be assured of making enough coke to start it again tomorrow.

Okay, so now we are ready to go.

1. Make a tight ball out of the paper. Make it tight enough so that when you let go of it, it doesn't open up much. The object is to make the ball so tight that it won't burn very quickly. You want every bit of energy in that paper to go into coke, heating it to the point where it starts fire, too.
2. Hold the ball by the top and light the very bottom of the ball, in two or three places. Immediately lower the gently burning ball in the firepot.
3. Very gently give it some air. Just a little! At this point all you want to do is to keep the fire in the paper from going out.
4. Quickly start covering the paper with the coke. Your goal is to get the paper covered completely ASAP so that all the energy in the burning paper is used to heat the coke. Remember to keep the blower going very slowly. If you blow too fast, all that happens at this critical point is that you blow the heat right past the coke into the air above the firepot.
5. Still blowing very slowly, gently, with your bare finger, push a little coke down into the area where the paper has burned away. This step keeps the coke a little closer to the burning paper. If your finger gets too hot, you are blowing too fast.
6. Look for any areas where you can see fire and gently place pieces of coke over them to again help to contain all the heat.
7. When is it started? As you repeat steps 5 and 6, you

should look down into the heart of the fire to see if any of the pieces of coke have begun to glow on their own. When it is clear that is the case, you have a fire! Don't ruin it — keep blowing slowly.
8. All the above actions take place in a matter of three or four minutes. If you run out of coke before a healthy fire is going, add a little dry dusty green coal to the top of the fire. It will smoke yellow or green, but it will add easy-to-start fuel to the fire.
9. Once the fire is going enough so that you can clearly see that the coke is glowing and that flames are starting to shoot through the coke, you can begin to mound wet coal around the fire.

Finally, if my life didn't depend on it, I'd use three sheets of big city newspaper or four sheets of the small town stuff, but I'd do the rest in exactly the same way.

CBA Editor's Note:

I like Pete's method. It's easy and it works. I might add that, years ago, I stopped using newspaper wit/i colored inks. Some of these inks gave off colored flames, and that didn't look desirable. One of CBA's favored smiths, the late Al Bart, would never use anything but wood shavings — his way of controlling contamination. One member who came by my shop started his fire with paper and green coal (or dry coal, as Pete calls it). He laid out a sheet of newspaper, covered it lightly with coal (small stuff and fines) and balled it up. Then he set that ball on another sheet of paper and coal and made a larger ball. We thought that was interesting. One day I went to a school to demonstrate and was shocked to find I forgot my coke! Needless to say, a ball of paper/coal saved the day.

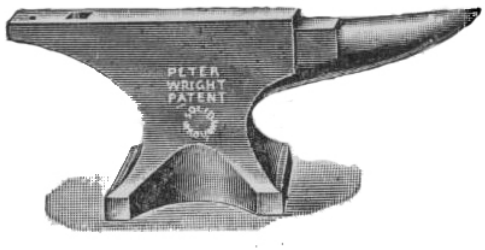
What else works? An oxygen-acetylene torch, a weed burner, diesel fuel — Charlie Sutton, who now lives in Canada, starts his fire with kerosene and a rag. (He started his apprenticeship in England in 1940 at age 14.)

Look, you just need heat and oxygen.

Several years ago at a conference, a member started his fire early on a Sunday morning. (Saturday had been his first coal fire.) He had a good fire going when our lead demonstrator from Scotland, Edward Martin, came over with a shovel in his hand and asked for some fire. Our tyro smith was overjoyed to say, "Yes."

## The NJBA Trailer Update

We are getting quite a set up!
We would like to thank John Chobrda for the donation of a lightweight 4" leg vise. It will find a home in the trailer after a spring is made for it.
We are looking to purchase an anvil or two, something in the 100 pound range at a reasonable price. If you are interested in selling one contact one of the directors (Page 2). Other hand tools and accessories are also needed, contact Bruce Freeman or David Macauley about specific donations.



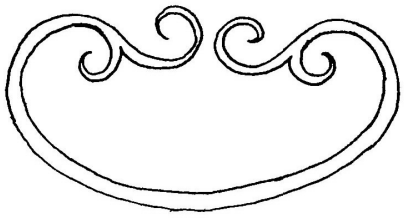
# Steve Williamson on Scrollwork

I recently applied for and got the Francis Whitaker Scholarship at John C Campbell Folk School for the two week class taught by Clay Spencer. In this class you must make a drawing of your project and submit it to Clay. Well, I wanted some practice making scrolls... and boy, did I get it!

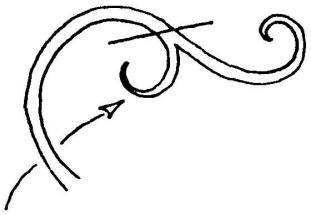
The following is some of the things I learned about making branching scrolls. But before we get into that... for those of you who hesitate to take this class because it says "advanced" and "you have to make a drawing", don't cheat yourself. Making the drawing and building the project from it teaches what can and cannot be done easily. Also the advanced part should not scare you because Clay is an excellent teacher and is more than willing to explain any question you might have.

---

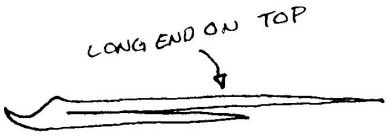
*In this article Steve describes the various processes and procedures required to make a C scroll with branching ends.*



*Start with a full sized drawing of what the finished scroll will look like.* You will have to determine the lengths of stock required for each element. This can be done using a piece of solder laid on the centerline of the scroll drawing. Clay showed me his way of determining which way each piece gets scarfed. He takes his drawing of the scroll and draws a line where the scarf will be.



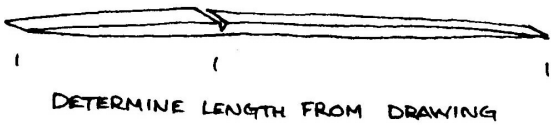
If this branch is shorter, the piece will look like this:

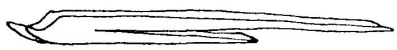



You have to remember this when making the scarf for the other end of the scroll or you may end up with the short piece up on one end and down on the other.

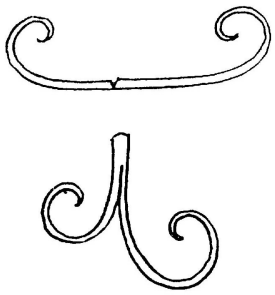
When making your scarfs, make the tip paper thin and turned up. This helps the two pieces stick together. By turning the tip up in the fire, it keeps the tip from burning and also from cooling too quickly when placed on the anvil.

*Once you have determined the length of stock required, you can make the branching part of the scrolls.* You can either scroll the pieces first and then weld, or you can taper the ends, weld, and then scroll.



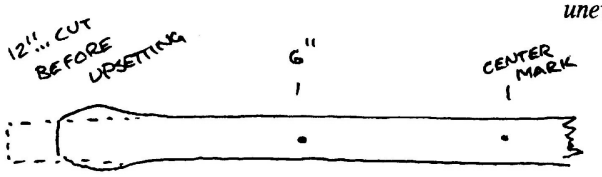



Taper the ends, cut halfway through and fold over. Apply flux and forge weld together.
Or scroll the ends, then forge weld. Make the weld about an inch long.

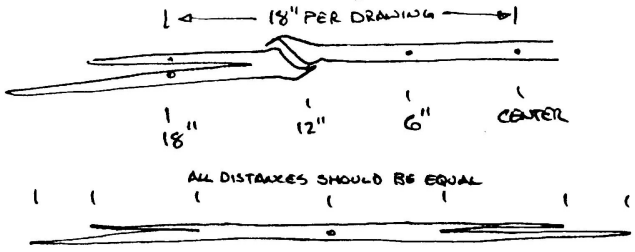


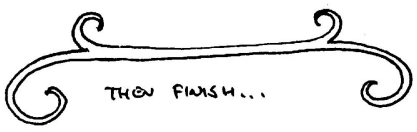
Now work on the c-shaped part of the element. Determine the length as before, using solder laid on the centerline of your drawing. After the length is determined, upset the stock to two times the original stock thickness (upset 3/4" on 3/8" stock, etc.)

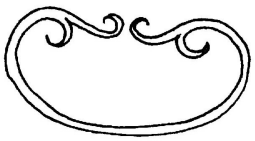
Make a test piece to determine what length of stock you'll need for this piece. *It's difficult to calculate the stock length without a test piece, because the steel will compress when you upset it, then stretch a bit as you weld. The answer here is to use "witness marks". These are small centerpunch marks placed at some convenient distance along the length of the stock. In this case, we marked at 6" and 18" on the drawing. The 18" marks will be placed on the branching scrolls, and the other marks, center and 6" on the stock for the C shaped end.* The stock for the main C was cut at 12".



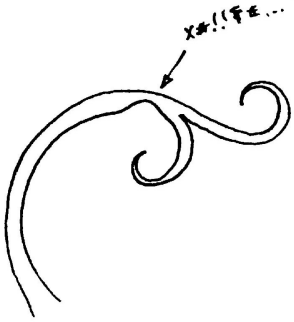

Upset the end two times the thickness of the original stock. More is better than not enough. Forge a scarf for welding, and measure your work. If you're good, the distance between the witness marks will be 18". If you're like the rest of us, it won't. Not to worry... if you've left a little extra length at the other end of the bar, you can trim it to the length required.



*One of the things that can really mess you up is overhammering the weld. This will at least leave an abrupt transition into the branching scroll, and at worst result in a thin spot, causing the scroll to bend unevenly.*



# G.O.D.'s Own Scarf

**by Daryl Nelson**
from the Puget Sound Region
NW Blacksmith Association

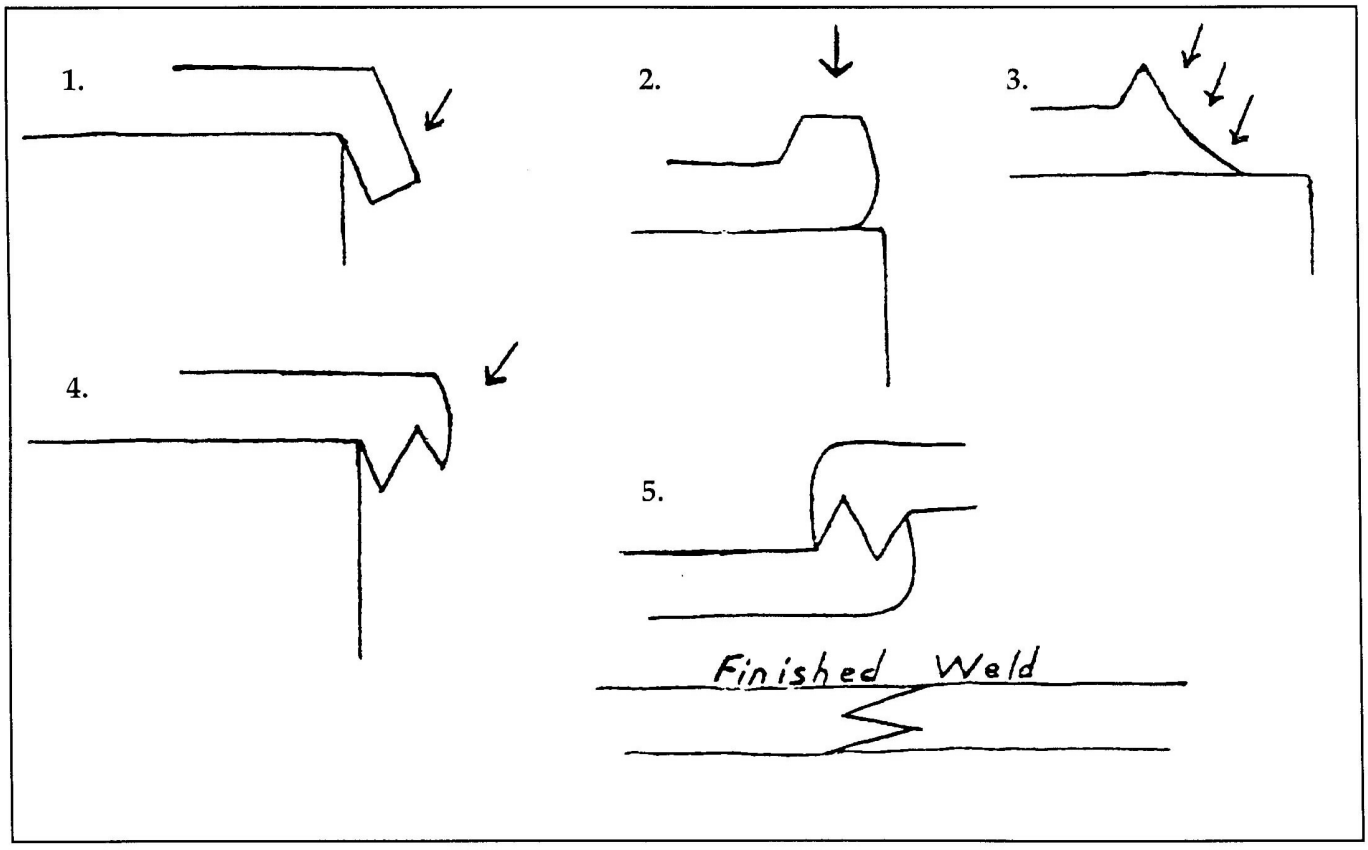
Late August in a small town in eastern Washington, a group of about 15 smiths and farriers gathered for a two-day palaver hosted by Chesaw Ideal Forge. The agenda had included Tom Bredlow and two more men. Mr. Bredlow had to cancel at the last minute, leaving many people disappointed and even keeping some from attending. Little did they know, for the men who did perform were also masters at the forge. Mr. Bob Marshall, from Mission, BC, and a small brawny man from Wales, Mr. Glyn Owen David. Mr. David was two times the British Champion Farrier, and is a working blacksmith at a coal mine in the hills of Wales.

Mr. David astounded the crowd with his wizardry at the forge as he produced various shoes and tools, using many techniques and tools none of us had ever seen before, and with the smoothness and exact ness that comes only from many years at the anvil. On more than one occasion he had everyone keeping time with their feet to a lively tune he would tap out while he and Mr. Marshall drew out heavy stock.

One of the many things Mr. David taught us was a scarf unlike any I have seen. I was so impressed with this scarf that I had to try it shortly after returning home. Time and time again I tried to miss a weld using this scarf by fumbling, dropping and generally fouling up, but succeeded in missing one only after a long day in a dirty fire and dropping one of the pieces twice at an orange heat. So I have duly dubbed this

"G.O.D.'s Scarf."

The procedure is to bend the two pieces being jumped at about an 80 Deg. angle, 3/4" from the ends, and upset, keeping your angle. The end of the scarf is then planed and bent sharply back up. It gives you a non-slipping scarf that produces a layered weld. Try it.
You'll like it.



# Ring Roll

*by Art Miller, Riverside, California*

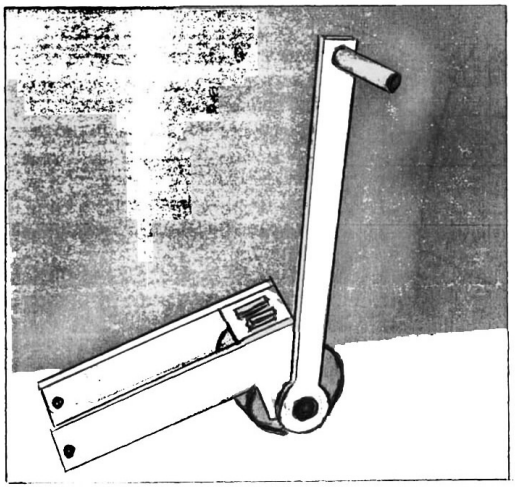
In the need for a ring roller I copied and scaled down a ring roller used in a fabrication shop. .It's made from miscellaneous cutoffs and was fabricated with a cutting torch, a cutoff saw, drill press, hand grinder and an arc welder.

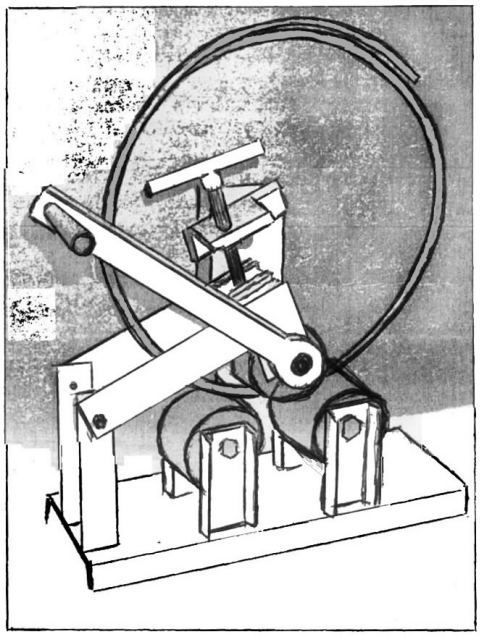
The fixed roller and crank assembly is removable from the base to allow installation and removal of welded rings.

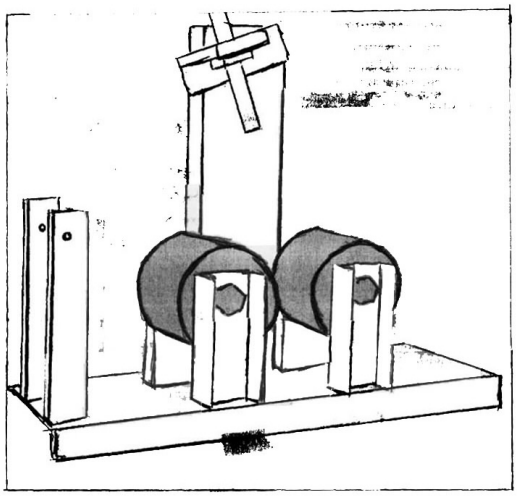
The 2 1/2" wide rollers are made from Sch. 40 pipe (3 1/2 O.D.) with 1/4" plate end caps.

3/8" bolts are used for axles. The fixed roll has a 3/4" diameter shaft with the fixed roll pinned through this shaft with a 1/4" diameter rod which is brazed to the pipe roll O.D.

Tip: The roller will not bend the ends of the materials. The length of the straight section will depend on your roller spacing. Mine leaves a little less than 2" straight on each end. So I calculate the ring material length (C=Pi x mean diameter) and add 4". Cut stock and prick punch 2" from end of stock. Lay out ring length and prick punch at other end of material. Roll ring and cut off at punch marks.







# Foundations!

## A Resource for Beginners.
## by Bud Oggier
## the Anvil's Ring/Spring 1987
## Part 5

"Hi, Jean. Good to see you!

"Thought you might have had about all of the old goat you could stand and weren't coming back. How's the shop coming?"

"Good. I've redone all the exercises we went through here and didn't have too much trouble. I brought along a 6" leg vise I'm thinking of buying but I'd like to have you look at it first."

"Hey, that's fine. Why don't you bring it in and we'll look it over.

"That's a pretty good-looking vise, Jean; it's not too small and looks in pretty good shape. Let's take the screw out and see how much it's worn. Notice the box or nut is not fastened to the vise but fits rather loosely in the rear leg. What I'm looking for here is excessive wear on the screw and how much play there is in the nut. I'm also looking for any places where the thread is coming loose from the shaft. The thread in the nut and on the shaft were made from 1/4" square stock wrapped around the screw shaft, taken apart, and one piece brazed to the shaft and the other into the nut. This was usually done with copper but sometimes brass was used. Well, this one looks fine. They can he repaired but it's certainly no job for a beginner.

"Let's take out the screw that holds the moving leg to the vise and see if it's bent or badly worn. It seems to be okay and hasn't had too much wear. Now that it's back together again, let's check the "slop" or side play in the moving leg. In this one, the side play is minimal with no excessive slop. Of course there has to he enough clearance on the sides or it couldn't move. The last thing to look for is whether the vise is twisted. Notice when we tighten up the screw that both jaws come together evenly. If it had been abused much, the jaw faces would no longer be parallel and that would have been a problem. Note that the tops and sides of the jaws have not been beaten up too badly; that's a good sign. This vise still has a lot of good use in it. I don't know what the fellow wants for it but vises like this one sell for somewhere between $50 and $150 depending on their condition and how badly the owner wants to sell. If the price is in that range, this would be a good vise to have in your shop.

"Jean, it sounds like your shop is coming together and you're far enough along that we better spend a little lime on making tools.

"The biggest change you'll find is that we will be working with a material that can be hardened. Up to now everything we've used has been mild steel. You'll notice that tool steel doesn't move under the hammer as fast as mild steel but the operations are the same. Tool steel is also more sensitive to heat: you need to do all your forging between an orange and mild red heat. If it gets any hotter than that, it will tend to break and if you go any colder, you may develop forge cracks. These cracks may not show up until we harden the tool and if that happens, the tool is usually ruined. Temperature limits vary from one tool steel to another, but generally all forging should occur within this orange to red-orange.

"All the old blacksmith tools were made from a straight carbon alloy. Modern tool steels come in all kinds of alloys. Additional elements are added to enhance particular properties. Chrome, nickel, molybdenum, tungsten, manganese and silicon are a few of the more common elements added.

"We're going to start out by making a cold chisel. I make mine from octagonal stock, that is, it has eight sides. I'll never get it mixed up with any other since it's the only octagonal stock I keep in the shop. Where buy it, it's sold as a chisel steel, hut it's mostly 1060 carbon with a little molybdenum and chrome in it to make it a bit more shock-resistant and tough.

"First we'll forge a taper about 3 1/2" long on one end, keeping the width the same, and have it about 1/8" thick at the end. Remember, Jean, work your piece between orange and bright red. Here we go. As in the earlier exercise on forging a taper, start at the end, make a blunt taper, then work it back to the desired length. Give it a few blows on the sides to bring it back to width, then go hack to the taper. See, my

piece is getting cold—it's just about to the point where I need to reheat. There is a strong temptation to keep on forging and not take the time to reheat hut that's courting disaster; it's better to take the added time and do it the way you're supposed to.

"I'm ready to start again. I'll just finish out this taper, he sure the sides are straight, and straighten out the chisel blade so it's aligned in the middle of the bar. There, that looks pretty good. There's one thing left to do on this end—I'm going to put a cut across the end of the chisel about 1/2" back from the end and about 1/16" deep. We'll use that to check our piece after hardening.

"Okay, Jean, your turn. Work it hot and keep it straight. You're doing well, Jean, but notice that your piece is curling up a little—that's because you don't hold it quite flat on the anvil and with each blow it gets bent up a little. Nothing serious but try not to let it happen—it will save you straightening time. You could have gotten a little more out of that heat before you went back into the fire, but better to quit early than work it too cold.

"Your taper is finishing up fine. Give it a few light blows to even out any hammer marks, then straighten it up. The chisel you used for putting the cut across the end is a hot cut chisel. The only real difference between it and the one we're making is that the cutting edge is much sharper than a cold chisel and the blade is thinner, if you used it on a cold piece, the edge would turn or deform because it doesn't have enough thickness to stand the shock. Well, let's cut these off to about 7' long and finish up the other end.

"While the bar is heating let's talk a minute about how to tell where 7" is. My method is to put a chalk mark on the anvil 7" back from the edge. Then when I bring out my piece I set it at the mark, put my hammer on the piece at the anvil's edge, and move both the piece and hammer together to the hardie or hot cut end and set the edge of my hammer right above the edge of the hardie. When you cut the piece, hit it so that the hardie is in the middle of your hammer face, hit it once and turn the piece to the next flat and so on around the piece. When it is almost cut through, hit it so your hammer lands just beyond the hardie or grab the piece with a pair of tongs and twist it off. The hardie is quite hard, but a hammer blow on it can nick it very badly.

"Now that our pieces are cut to length, we need to put a short taper (only about 3/4" long) on the striking end so it doesn't burr over too fast and also reduce the thickness by about 1/3". Well, my piece is ready now. Remember to hold your piece up at an angle so the taper forms on both the top and bottom at the same time. Strike each flat until it is tapered back the right length and turn the piece to the next flat. There—now a few blows on the end to flatten the striking end and my chisel is forged. Your turn!

"Now our pieces are ready for heat-treating or hardening, Jean. All the hammering we did on these chisels has put a lot of internal stress on them which could cause us trouble during hardening, so we're going to anneal them to relieve all the internal stress. To do this, we need to heat the pieces to a bright red and cool them very slowly. A lot of different methods are used to slow- cool; some of the more common ones are to bury the hot piece in sand or ashes or lime. I like to use sifted wood ashes; they act as a good insulator and keep oxygen from getting to the piece, which creates scale.

"Usually when I know I'm going to do some annealing, I set my bucket of ashes on top of the stove for a couple of hours and warm the ashes up some. If the pieces are real small (1/4"_1/2" thick), I'll heat a couple of pieces of scrap in the forge, lay one in the ashes, put my hot pieces on it and cover them with another piece of hot scrap—then put ashes over the whole works. When doing this, Jean, the piece needs to be hot all over, so you may have to move it around in the fire a little to get an even heat. Looks like these pieces are ready— into the ashes and cover them up.

"We won't disturb them until tomorrow. In the morning these pieces will be dead soft, stress-free and ready to heat treat. See you then!'

*This article was reprinted courtesy of the author Ed Oggier, The Anvil's Ring and ABANA. It was originally published in the Spring Issue of the Anvil's Ring 1986, Volume 14 Issue 4. Reprinting of this article must be declared through the ABANA publishing committee*

# Building Blocks

A "Back to Basics" project
The Anvils Ring/ Summer 1987
by Dorothy Stiegler
Part 3

Here we are again with our leaves, scrolls and bracket. I hope you are having fun with this; I sure am! All of you who have trouble getting into the fire because the lawn needs mowing and the screens need to be put up, just hand this finished project over to your spouse or friend—you'll be amazed at all the time that suddenly becomes available to you. Instead, they're going to think up a lot of neat things that need to be made for your home and may even trot out there with you to strike or lend a hand.

The first thing we need to do is determine which way the piece should hang, i.e., long or short side down, and then where the leaves should go. Lay everything down on the table and put the two large pieces together. Remember, this will need holes, so when you lay the leaves down, keep in mind how to get a screwdriver or socket set in when mounting it (see Fig. 1). If you made six leaves, use the five best. Design-wise, uneven numbers are usually best (if you made four, use three, etc.).

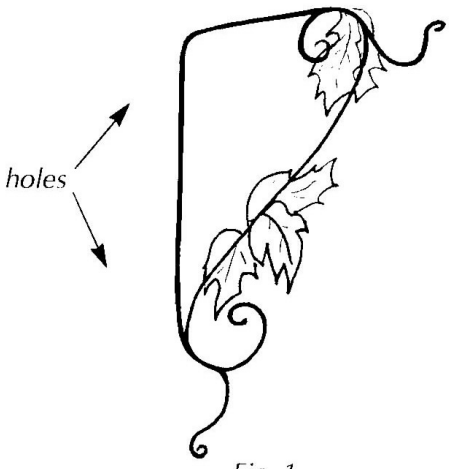



*Fig. 1*

Look at the piece with the leaves laid in different positions and change them around until your eye views it smoothly, without having to dart around. Generally, the larger group will be at the bottom or you can trail them down the outside curve of the scroll, perhaps. This is where you add that special touch that only you can give the piece. Those nice long stems will come in handy here. When you've decided where everything goes, draw it out on the work table and mark the leaves so you can remember where each belongs.

If you are really basic and don't know how to work tool steel, remember these four pointers: 1) Don't hit it unless it is hotter than red. 2) Don't get it hotter than light yellow. 3) Cool it off in oil at a red heat and keep it moving when you get done. 4) Get Jack Andrew's book The Edge of the Anvil and read the section on tool steel, following step-by-step.

Now we are ready for the holes. You can drill if you wish, but I punch mine because I like the way it looks. Hopefully, you have a round drift tapered punch; if you don't, you may convert an old pritchel or center punch. In the meantime, you can make a fast punch that probably will hold up for two holes.

Mark the center of the bar at the point where the holes will go into the bracket. Do this cold, with something that will dimple the work so you can see it later, when it's hot. Assemble your hammer, a helper (if you have one) with another pair of tongs, your punch and a quench bucket of water (to keep the tool cooled off).

After heating the bracket in the fire, bring it out and hang it over the anvil with the "L" shape down the far side. Punch the hole holding the punch over the dimple you made earlier. When you feel the punch bottom out on the anvil, quickly flip the bracket over; if you see a dark ring in the heated portion, you are ready to back-punch the hole. Quench the tool in water and dry it on your pants leg.

It's harder if you're working alone, of course, but not that hard. Reheat the piece and flip the bracket over, find the black ring again, and with the ring ideally positioned over the pritchel hole of the anvil, place the punch over the ring and strike in quickly with the hammer, punching it out. if you have a thick piece, putting green coal fines in the hole will help

keep the tool from sticking.

Reheat and drift the hole to the desired size, then do the second hole. Be sure to space them so you have one near the top of the bracket and one closer to the bottom (keeping in mind the inner scroll and screwdriver handle). If anything is out of alignment at this point, straighten it out again. Make sure to keep your tool quenched and wiped off as you go; this keeps your tool working and the work hot.

Hot collars are next—this piece looks great with a vine wrap. I use 3/16" round stock (gas welding rod is great). Lay the scroll down on the table with the bracket around it again. The curves all touch at some point, hopefully. if they don't, then look for a place where, if you pinch it with the tongs, it will back into itself. This is where the top collar goes (see Fig. 2-A).

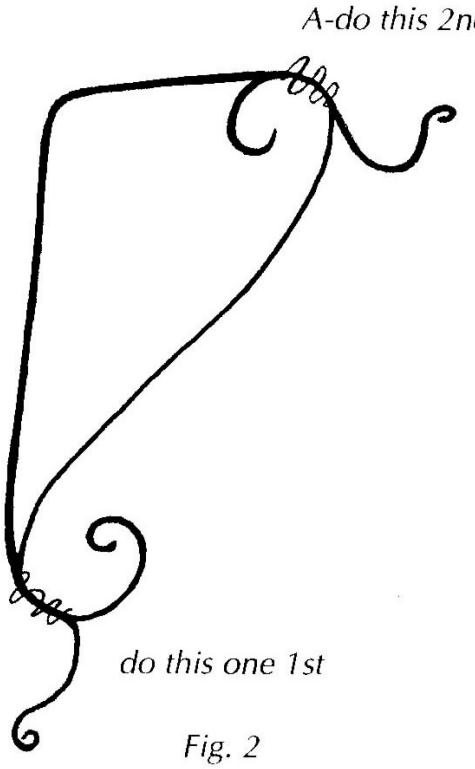



Fig. 2

The other collar needs to go on the bottom side of the lower curve—otherwise the bracket won't sit flush against the wall. Measure (at the collar site) all the way around the two pieces three times. Then multiply the thickness of the collaring material by 2 1/2. Add those two numbers together and add an additional 1" for the "tails". This may seem like a lot of material—it will vary a bit depending on where you start on the scroll.

The nice thing about this type of hot collar is that it's okay if you end up with extra because you can wrap a little more, curl the tendril, or whatever. Before wrapping, taper each end of the material a little and make a point—looks better if you do.

Put the bracket and scroll into the vice so the collar area is up and cleared from the face of the vice. Choose a pair of tongs that grip the collaring material tightly (if you don't have any, vice grips work great)—these will be the wrapping tongs. Get another pair of tongs that will go over the bracket, scroll and wrap all at once~—these will be the holder tongs. If you have a gas torch, you are going to find the wrapping particularly easy. Think about where the wrap has to go to clear the spaces between the scroll and bracket.

One scroll is facing out, but one is facing inward, and you will need to maneuver the end of that wrap inside the triangular opening of the bracket. I'd do the easy one first, myself (see Fig. 2). You will do well to try a couple of dry runs first—this will show you what you'll need to do so you'll be ready when you get the parts hot.

While holding one end with vice grips, take a heat halfway down the wrapping material, then take it to the work and place it on the curve where you want the scroll. Next use the large tongs to trap the wrap, scroll and bracket together. The vice grip hand can wind the wrap 1 1/2 full turns fairly quickly. Switch to another pair of holder-size tongs, and while the wrap is still hot, drag it around tightly, especially where it has gaps (a torch is handy here). Finally, wire the other scroll end shut with a piece of wire so the work stays together.

Now put the already half-collared end into the forge to heat the other half of the wrap, then place it back into the vice. Holding the already wrapped part snug with the big tongs, grasp the heated end with vice grips and pull it around. Then turn the piece around in the vice and do the other end. You may

need to pre-bend strategic parts of the wrap so you can get it through the inner space. Let the wraps cool and shrink tightly. You'll find that with a little dexterity, you will have a clever hot collar and a one-piece bracket.

If you didn't get the leaves made, you will still have a pretty finished piece, ready to hang. I always wire brush here and clean it up as I go. If you made leaves, gather these up now. Get a piece of 1/4" by 3/4" strap and put it sideways in the vice—this will to be your mandrel. If your leaves are going to go around two pieces, use two pieces of strap. On this operation it will be helpful if you do a dry run first.

Stick only the stem of the leaf into the fire and when hot, use the horn of the anvil to curl the stem up some. Select a pair of tongs that can act as holders again and take the still-hot leaf over to the mandrel trapping the end on the bar (s). Now wind the leaf around the mandrel. This will probably be easier because you have more leverage from that end. Don't make it tight yet, just get it to hold.

If you have heat left, unwind only enough to get it off. If the piece is too cold, take the bar and leaf to the fire and heat the tail up again. You are going to want to leave some of the corkscrew shape in the leaf for when you start on the main piece. Hopefully, this will allow you to get it onto the piece in one heat. Do all the leaves this way. Remember, you can face one or two out on either side of the finished piece so it has neither front nor back when finished.

After everything is start-curled think about what goes where. Do the leaf that will be impossible to do last, first (think it through). You can "dry run" maneuver the leaves onto the bracket while they are cold—this will help you see where each one will need to be gripped or squeezed to get the tail to wind itself snuggly around the scroll. Each leaf will hold itself on fairly neatly if pre-curled, reheated, and then wound onto the scroll—it will shrink-fit and be fairly snug.

I sometimes do have to put everything back in the fire and, with two tongs, coax it around the work. Of course, for those of you with a gas torch, this is faster and easier, but the idea here is to realize you don't have to have a lot of tools and a great forging background to make neat things. Make simple things and cleverly hook everything together into something that only looks complicated. You will want to think it through first, however, to make sure you do step A before step D.

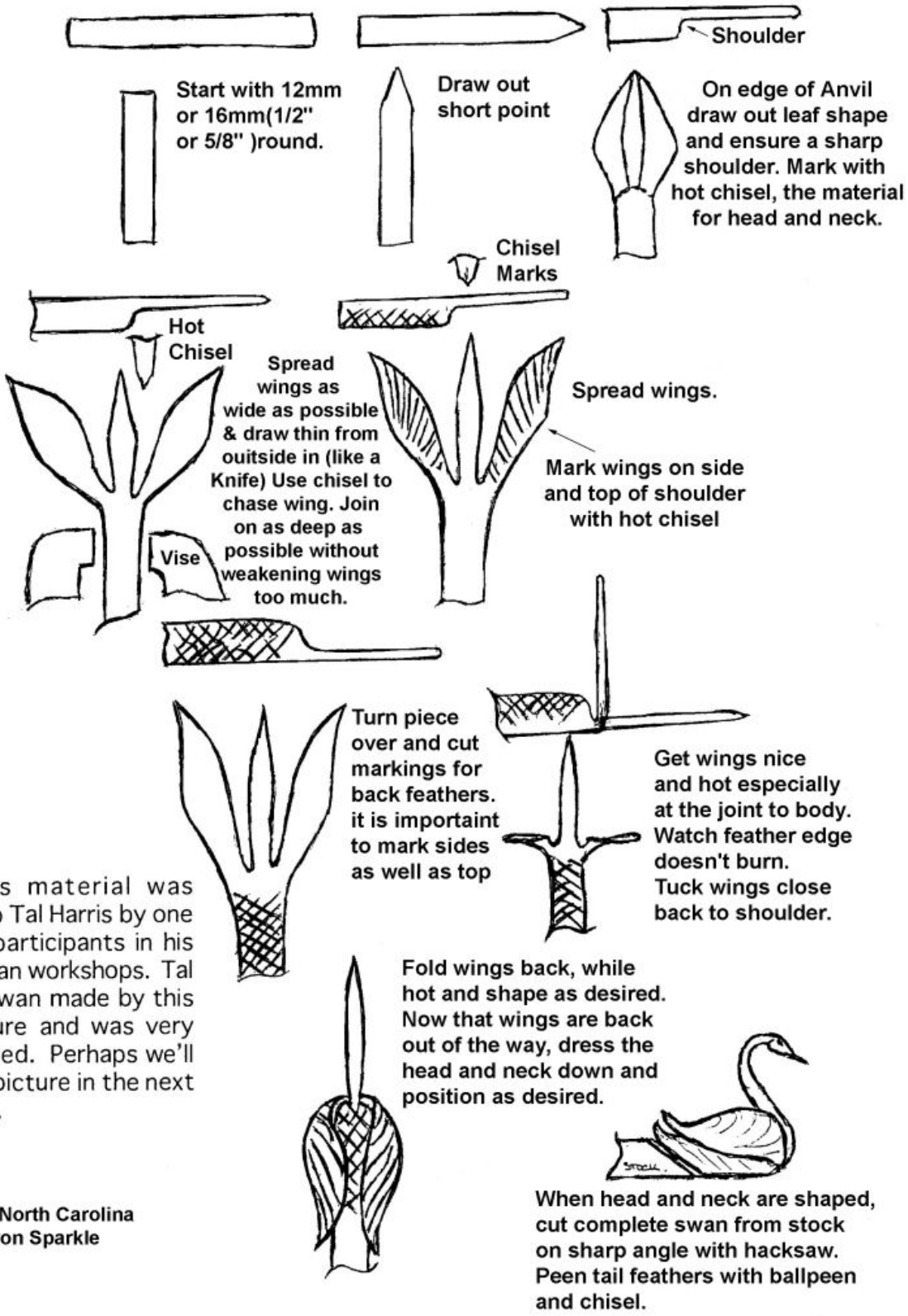
After everything is snuggly on, and you like the position of the leaves (they turn easily on their stem if you decide you want to face one slightly differently) wire brush again. Emery paper is also a good scale remover. If you've kept the work fairly clean as you went along, this part goes more quickly.

After it's descaled, heat it up carefully to about 500 deg. (an oven's nice here) and if you have a brass brush (even a plastic handled one) highlight the iron by rubbing it with the brush. This is really effective. Then, before the piece cools, spray with WD4O and wipe clean with a rag. My Lindsay is no longer in diapers, so I have great rags—real soft, too.

I think you'll end up with a nice finished product and hopefully I'll get to see some of these leaf hangers some day. just get out there and get started, even if you think you can't do it when you begin. Think it through, break it down into parts, make the parts, and put them together. It's great fun!

*This article was reprinted courtesy of the author Dorothy Stiegler, The Anvil's Ring and ABANA. It was originally published in the Summer issue of the Anvil's Ring 1987, Volume 15 Issue`. Reprinting of this article must be cleared through the ABANA publishing committee*

# Forging a Swan, by Burke Hobba, Queensland, Australia




This material was given to Tal Harris by one of the participants in his Australian workshops. Tal saw a swan made by this procedure and was very impressed. Perhaps we'll have a picture in the next *Sparkle*.

**From the North Carolina Hot Iron Sparkle**

NAME _____

ADDRESS _____

CITY_____

STATE/PRO V. _____

COUNTRY_____

ZIP (+4)/POSTAL CODE_____

PHONE # _____

EMAIL _____

***Order Online, Mail, Call or Fax your Check or Credit Card Payment to:***

**ABANA**
**P.O. Box 816**
**Farmington, GA**
**30638-0816 USA**
**706-310-1030** VOICE , **706-769-7147**FAX, WWW.ABANA.ORG ABANA@ABANA.ORG

ABANA

___ Regular Member $45.00
___ Senior Citizen (Age 65+) $40.00
___ Full Time Student $35.00
___ Foreign Member $60.00
__ Foreign Member, Air mail $80.00
__ Public Library-USA $35.00
___ Contributory $100.00

MASTERCARD OR VISA ACCOUNT NUMBER

_____-_____-_____-_____

EXPIRATION DATE ____ ____

# 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/>

## Join The Pennsylvania Blacksmiths Association!

**Name** _____

**Address** _____

**City, State, Zip code** _____

**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

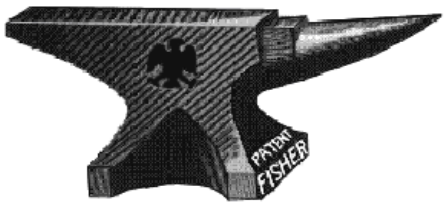
Send your completed application with $ 10 ( one year dues) to;
Treasurer Gene Degenhardt
271 Stoney Lane
Lancaster, PA 17603

**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.

## 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 _____