

THE HOT IRON SPARKLE

* Newsletter of the North Carolina ABANA *

www.ncabana.org

Volume 26 Number 4



4 th. Quarter 2008 – Oct/Nov/Dec



Tom Troszak and Sue Hutinson

Demonstrators at the Third Quarter Chapter Meeting

INSIDE THIS ISSUE					
President's Message	P 2	Making a Hinged Fuller Tool	P13	Controlled Hand Forging – Mortise and Tenon Joinery	P29
Editor's and Secretary's Notes	P 3	Update on Blacksmith Annex at JC Campbell Folk School	P16	ABANA Affiliate Letters	P32
Regional Group Meetings	P 4	Visit to the Quadstate Conference	P18	Upcoming Event – Simple Living Festival	P34
Third Quarter. 2008 Chapter Meeting	P 8	3D Design for Artistic Blacksmiths	P19	Blacksmith's Exchange	P 35
Forth Quarter 2008 Chapter Meeting	P 11	Heavy Duty Hold Down	P21	Forms	P 38
New Regional Group Forming In Eastern North Carolina	P11	Care & Handling Of Your Hammer	P22	2008 Chapter Calendar	P 39
Alfred Habermann	P12	Solving the Picket Problem	P24	New Members	P 40
Health and Safety - Stupid Is As Stupid Does	P12	Blacksmith's Journal - Vincetoxicum	P26	Chapter Officers	P 40

A MESSAGE FROM OUR PRESIDENT



Jimmy Alexander
Photo by: Hill Willis

Our third quarter meeting was at Steve and Shirley Kayne's shop in Candler. Tom Troszak and Susan Hutchinson filled our day with their demonstrations. There was a crowd of about 75 watching them show their talents. David Kayne started up the grill and a lunch of hot dogs and hamburgers along with sides were served. It was a great meeting! Thanks Shirley, Steve, David and Cathy for hosting us.

We were able to hold a chapter business meeting after lunch. It was time for nominations for president and treasurer. Seeing as there were no more nominations Parks Low and myself will stay in office for 2 more years. We will not send out ballots for voting.

Fall is here and it's time to get ready for the fairs! The Dixie Classic Fair and the NC State Fair will be here before you know it. Please volunteer to help out with both fairs.

Our next meeting will be at my shop in Durham on November 15. James Kennaday will show us what he learned from his scholarship to the folk school in Doug Merkel's class.

Hope to see everyone there.

Forge safely,

Jimmy Alexander

Submissions to the HOT IRON SPARKLE can be made to:

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EDITOR'S NOTES

I would like to thank Randy Stoltz for submitting his article on making a hinged fuller tool. This is the second article in a row Randy has submitted. Last month's issue was filled with submissions from our membership. In addition to Randy's article, we had articles by Tal Harris, Allan Kahkonen and your editor. This month is back to the usual – a lot of things from other chapter's newsletters. I get a lot of these newsletters and most have much more from their own members.

Let me tell you what kinds of submissions I am looking for from you the NC ABANA member:

1. Photographs of your work. This is the most valuable submission. Not only does it give you a venue for showing what you have created, it inspires others, and gives them ideas for their own creativity. Even if you are a beginner, let us see what you are doing and inspire the other beginners in the group (of which there are many).
2. Construction projects with drawings and photos. If you have created something or solved a particular problem, or created a tool or technique to make your blacksmithing life easier, please let us know about it. I believe this is what the membership value most in the newsletter.
3. Blacksmithing tips (or tips on anything). Generally, these are short, but can be of any length; of things you have found that others would enjoy knowing about.
4. Health or Safety Issues. Let us know of your experiences when something unexpected happened that put you in danger or compromised your health. Let us know what you learned from that experience. Prevent it from happening to others, or if it does, how to deal with it.
5. Notices of a personal nature that you can share with us. This includes births, deaths, honors, awards, etc.
6. Other stuff. This includes technical information, historical information, trips you took, courses you attended or taught, and jokes.

Good Blacksmithing,

Martin Lyon, Editor

SECRETARY'S NOTES

President Jimmy Alexander convened a meeting of the membership attending the third quarter chapter meeting at Steve and Shirley Kayne's shop in Candler, NC.

Jimmy asked for nominations for president and treasure of NC ABANA. No nominations were offered. Since this is the second chapter meeting that no one tendered nominations, Jimmy will remain president and Parks Low will remain treasure for the next two years.

As reported in the last newsletter, Jimmy is trying to arrange a conference at the Durham Farmer's Market during the season when the market is closed. Unfortunately, the Farmer's Market has decided it will now be in operation every Saturday, all year round. Jimmy is now looking into alternatives.

Jimmy encouraged all to attend the Southern Blacksmith Conference in Madison, GA. The conference dates are Thursday, May 14, 2009 to Saturday, May 16, 2009.

Respectively Submitted,

Martin Lyon, Secretary NC ABANA

REGIONAL GROUP MEETINGS

Triangle Blacksmiths Guild Meetings by Randy Stoltz

Meeting at Parks Lowe's Shop – August 2, 2008

The Triangle Blacksmiths Guild met Saturday, August 2 at Parks Low's shop in Apex, NC. Twenty-four members and guests came out for the combination tool making workshop and cookout. Parks got the meeting started by demonstrating how to reshape a ball peen hammer into a straight peen, cross peen, or a punch. Inexpensive ball peens are available in numerous sizes and can be used to make many different specialty hammers that would cost much more.

Next Parks displayed a variety of scrolls and the jigs used to create them. He then demonstrated how to create scrolls using a scroll jig. Using a jig to form the scrolls can speed up production and help keep the scrolls uniform.



Using a scrolling jig.

Following the demonstrations members were given the opportunity to make a scrolling jig and a hardy tool for bending. While work progressed on the fabrication and assembly of the tools, some of the members fired up the grill and started cooking. When the work on the tools was completed, we gathered for an excellent plot luck meal and cookout.



Scrolling jig and bending tool made at the meeting.



Cookout and pot luck with Jim Alexander manning the grill

Triad Area Blacksmiths by Marshall Swaringen

August 5 Meeting

The Triad Area Blacksmith's August Meeting was called to order by Marshall Swaringen. There were seventeen members present.

The first item of discussion was the Ralph Zimmerman Museum. Needed items were identified and plans were made to clean and ready the museum for the Dixie Classic Fair. Work will start at the August 9th Saturday meeting.

Item two was discussion about moving the monthly meeting to a Saturday. Lots of thoughts, pro and con, were presented. A vote will be held at the November meeting to decide if our meeting date will change.

Item three was the August 9th Saturday Hammering and workday. Plans were made and business meeting closed.

Forges were open and member had fun for a couple of hours.

August 9 Meeting

The third quarter Saturday Hammering started at 9 AM as a workday. Members divided into three teams, inside, outside, and museum.

The museum had been used for storage for years. The first task for the museum team was to clean out items and then decide how to display the items. Bernd Mergener donated a large bellows and a traveler. Needed items were identified and will be addressed during the Fair. Larry Crews will donate a handrail for the entrance.

The outside team tackled the job of cleaning the outside area. After stacking the cooking firewood and raking leaves, the area was ready for the Fair crowd.

The inside crew started cleaning the work and display areas. Believe it or not, we used a vacuum cleaner. The inside team divided into cleaners, tool repairers, and item cleaners.

It was a very productive Saturday and the Area is looking good for the Fair.

The afternoon found the member enjoying them self on the anvils.

September 2 Meeting

The September meeting was attended by 17 members. Meeting was called to order at 7 PM. It was acknowledged that member Gail Wall was featured on a segment of Roy's Folks on Fox channel 8.

The October meeting will be held during the Dixie Classic Fair. Instructions were given for parking and entrance during the Fair. Member George Manuel purchased Ralph Zimmerman's anvil at auction. Items on the display table will be sold to reimburse George for the anvil.

Details for opening and closing the shop during the Fair were finalized. Billy Phelps will restock the coal. All is ready for the Fair. Hope you can join us.

Quick Observations of the Dixie Classic Fair – Winston Salem, NC

EDITOR'S NOTE: The Dixie Classic Fair was over the night before Marshall submitted his regional reports. He was good enough to add a couple of lines about the fair and his experience. I've added them here: He promises more for the next issue.

“The fair was great!! We had about 18 different members working at different times. Had people in front of the shop watching all the time, even Wednesday in the rain. I feel lucky to have Billy (Phelps – Ed.) available to learn from. Made my first chisels and tongs under Billy's instructions. It was great!!” – Marshall Swaringen

Western North Carolina Blacksmiths by Shirley and Steve Kayne

July Meeting

Previously, at our July meeting 18 of us came to see David Burnette do a presentation on hammer handles in which he went through every detail of the hammer handle, its construction, materials, humidity, etc. in a scientific manner. Then he went into detail as to the various techniques for installation of a hammer handle into a hammer head, delving into the modern and traditional methods, construction of the hammer eye and long term care and maintenance of the hammer and handle. Various types of wedging and wedges were discussed. A subject which at the onset was thought to be dull and mundane was found to be very interesting and of great value.

September Meeting

At our Sep 10 meeting we had 17 attendees sign in. David Burnette taught us everything you would want to know about welding. He conducts a formal blacksmithing training course for credit at Haywood Tech. He presented his lecture series on forge welding which was about 2 1/2 hours long. Everyone was very attentive. Aside from showing display pieces of various fluxes he did not demonstrate a forge weld until the end of the lecture. For the first time in memory, people saw a forge weld and had the background to understand what had transpired. We are indebted to David for sharing his knowledge and teaching approach with us so that we can thoroughly understand the process in depth behind a forge weld. The WHY and the HOW are as important in a thorough understanding as seeing the process live. Seeing the process live without the understanding is just watching a magic show.

October Meeting

On October 18, Bill Wiggins, a journeyman knifemaker of reknown, brought a group of 12 bladesmiths by for a tour of our gallery and shop. They were interested in another aspect of forging beyond knifemaking. We spent a few hours exchanging ideas and becoming more aware of the similarities rather than the differences between knife making and ornamental blacksmithing. Haywood Tech has conducted a number of American Bladesmith Society symposiums with many of the greats in bladesmithing in attendance. Personally we always enjoy an encounter with Dr. Jim Batson. It is always educational and hilarious.

Brasstown Blacksmiths by Paul Garrett

August Meeting

The Brasstown Blacksmiths met at Paul Garrett's shop in August and had a day of forging and talking about all things blacksmithing.

Despite the heat, we made some tools, and kept the forge running all day. Anyone who wanted to make something and got the chance to swing a hammer.

We met on our new day of Saturday. We now meet on the third Saturday of even numbered months, and I think that this will allow more members to attend, and be active.

Also, the Folk School recently held its annual Fall Festival. It happens the first week of October, and it was a huge success this year. The weather was perfect and the crowds were large. There was music, dance, great food, and over 250 artists and crafters selling. Paul Garrett, who is artist in residence at the school demonstrated blacksmithing all weekend, and sold some his work as well.

THIRD QUARTER, 2008 CHAPTER MEETING

Kayne's Shop, Candler, NC – August 23, 2008

Photos by Randy Stoltz, Doug Merkel, and your editor

We thank the Kayne's for hosting a great meeting - they even supplied good weather. Their shop is ideal for a chapter meeting being spacious and with plenty of resources for the demonstrator. The meeting was quite well attended in spite of high gas and diesel prices. There must have been about 70 of us watching the two demonstrations with rapt attention.

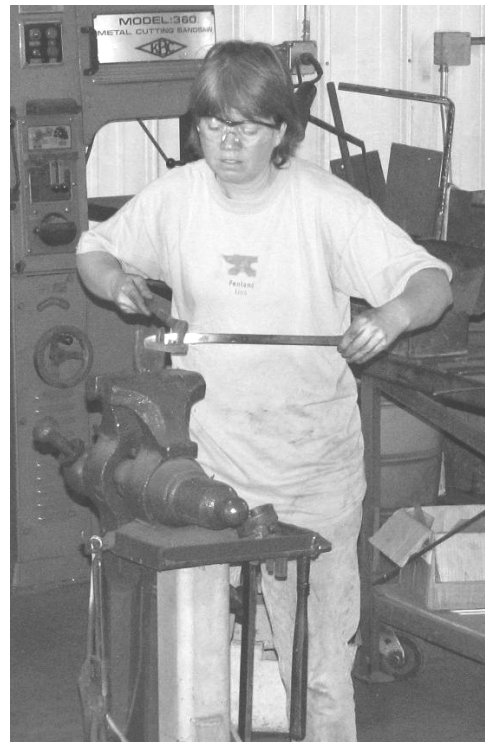
Tom Troszak was the morning demonstrator. Tom stated the theme of his demonstration was "Transformations Using The Power Hammer". We saw the power hammer used in a great many more ways than a lot of us thought possible. Tom was the developer of the Bullhammer power hammer, sold by his company and later by Phoenix Air Hammer. The Kayne's shop is equipped with one of these hammers so Tom was right at home.

After lunch, chapter meeting, and Iron in the Hat, Susan Hutinson took over the floor and to demonstrate various techniques while making a bookshelf bracket.

Susan talked about progression of design: changing a design to solve problems, to improve the functionality of the product, and to provide variations to the product. Susan communicates as well as she forges and constantly provided tips about the techniques required to produce the bracket. She demonstrated forge welding to broaden the end of a rod so a larger leaf could be made. To make an aesthetically pleasing result she demonstrated her method of making square corners by upsetting. The bracket required collars to join the two major pieces together. To size these collars smiths usually do a lot of math and measuring. Susan takes a different path. She makes jigs one for each size she uses that automatically provide the right lengths and the right bends to form around the pieces. That's good thinking and illustrates the practical approach she has towards blacksmithing.



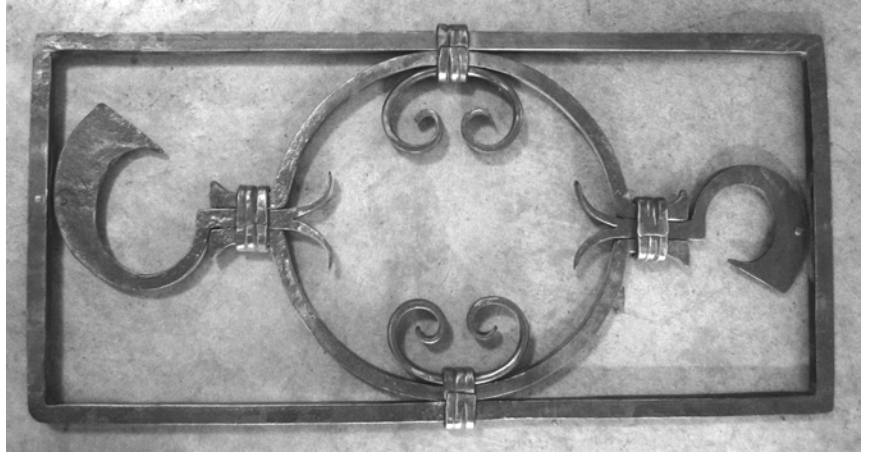
Tom Troszak



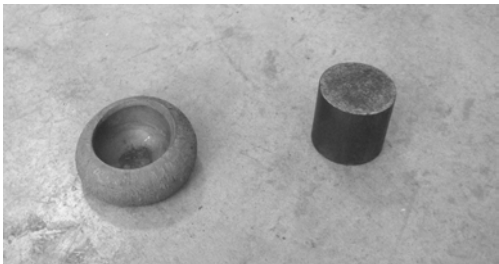
Susan Hutinson



Susan



Example of Susan's Work



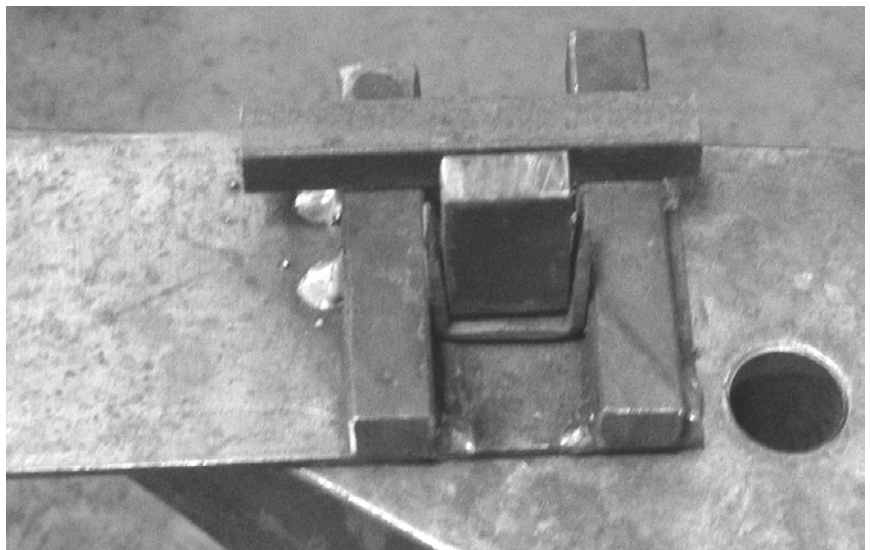
Made by Tom on power hammer. Starting stock on right



Hook made by Tom on power hammer. Starting stock on right.



Susan's demo bookshelf bracket



Susan's Collar Jig



Our Newest Member:

We proudly present James I. Kennady, known as Ike, to the membership. Ike was born on May 30, 2008 to James and Lisa Kennady.

Ike's hammer was made by Doug Merkel and presented to Ike at the Kayne's meeting.



FORTH QUARTER, 2008 CHAPTER MEETING

Jimmy Alexander's Shop, Durham, NC – November 15, 2008

James Kennady will be the demonstrator. He will show us what he learned taking Doug Merkel's class at John C. Campbell Folk School.

Jimmy's shop is at: 540 Foster Street, Durham, NC 27701
His phone number is 919-302-1401.

The meeting starts at 9:30 AM

Directions:

From Raleigh and points east:

Take I-40 west and take the Highway 147 (Durham Expressway, exit 279B) exit.

Follow Highway 147 and take the Duke Street Exit.

On Duke Street go through 3 stoplights and turn right on Corporation Drive.

At the first stoplight turn right onto Foster Street

The shop is in the middle of the big gray warehouse at the corner of Corporation and Foster.

From I-85 (north or south)

Take the Gregson St. exit off I-85 (Exit 176A)

Go 10 blocks and turn Left onto Trinity Street.

At the third stoplight turn right onto Foster Street.

The shop is in the middle of the big gray warehouse, three blocks down on the left at the corner of Corporation and Foster.

NEW REGIONAL GROUP FORMING IN EASTERN NORTH CAROLINA

EDITOR'S NOTE: For quite some time, the easternmost regional group of NC ABANA was the Triangle Blacksmith Guild. This region is centered in the Raleigh, Durham, and Chapel Hill area of the state. Considering that there are many more miles of North Carolina east of that area, I am happy to report that a new group is forming on the southeast coast.

Richard Coley and Ben Kastner, co-owners of Intracoastal Iron LLC in Wilmington are spearheading the effort. I'll let Ben Kastner speak for the group:

"With growing interest in blacksmithing and metal work, we have decided to host a regional ABANA group here in the southeastern part of the state. This group will be for any one interested in metal work from sculptors, machinist, knife makers, and our main focus will be blacksmithing. We plan to have quarterly meetings, which will hopefully have guest artists demonstrate and give lectures. Our first meeting will cover everyone's ideas of what they would like to get out of this and how they would like to structure it (an officer, what to do at meetings etc.). We are just trying to get a good thing started and offer a place to do it. With that said we will have our first meeting Oct. 25, at 12:00. It will be held at 2725 Old Wrightsboro Rd. Unit 8-C Wilmington NC 28405 Call with any questions 910 233 8264 "

EDITOR'S NOTE: Report courtesy of Hammer's Blow, Spring 2008 Issue

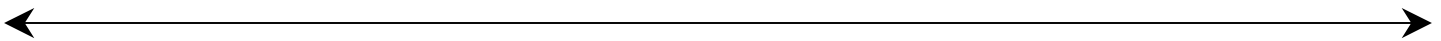
RENOWNED BLACKSMITH ALFRED HABERMANN DIES AT 78

Alfred Habermann, 1931-2008

Alfred Habermann, one of the most influential art masters of 20th-century blacksmithing died on April 28, 2008. The "Pope of the forge," as Habermann was affectionately called, died shortly before his 78th birthday. Habermann travelled the globe promoting blacksmithing and the forging arts. He influenced scores of blacksmiths in the art of modern metal design.

The international family of blacksmiths and the historical blacksmithing town of Ybbsitz lose with him an artist of visionary view and almost infinite creative force.

EDITOR'S NOTE: Mr. Habermann was born, in Czechoslovakia and lived, under the communist regime, before moving to Ybbsitz, Austria.



EDITOR'S NOTE: From the Appalachian Area Chapter of ABANA Newsletter

HEALTH AND SAFETY

Stupid Is As Stupid Does

It's something that we all agree that we should practice, but we don't always. When I experience a lapse in shop safety, I am reminded of a line from the movie *Forrest Gump*: "Stupid is as stupid does."

The incident happened to a member of our group who was working in my shop last winter. Bob (*not his real name*) was making a pot rack for his wife. He had made two very nice S hooks for hanging the pot rack but they were four inches too short. Rather than taking the time to make two more hooks, Bob decided it would be faster to cut the hooks in the middle and weld a 4" piece between the two forged ends.

The hooks were made of round stock, and there were several options available for cutting the stock. Bob chose to put the pieces in the vise and cut them with a cutoff wheel mounted on a 4" grinder. Using this method is pretty fast but creates huge amounts of sparks, so I offered him an apron to wear. He declined and cut the first hook without incident.

He cut the second hook in such a way that the sparks were directed at his stomach. Because it was cold he was wearing three layers; a T-shirt, a long-sleeved shirt and a shirt jacket. It was the shirt jacket that caught fire. It didn't just smolder. There were actual flames! Bob very calmly put the grinder down and patted his tummy. Fortunately he was wearing gloves. He had a large hole in his shirt jacket **and** in his long-sleeved shirt. No damage to the T-shirt or to Bob, except, maybe, his ego.

I did not have a fire extinguisher in the shop that day. I do now!

Never wear synthetic fabrics while working in your shop. Cotton and wool are the safest bets. I'm sure Bob was wearing

Making a Hinged Fuller Tool

By Randy Stoltz

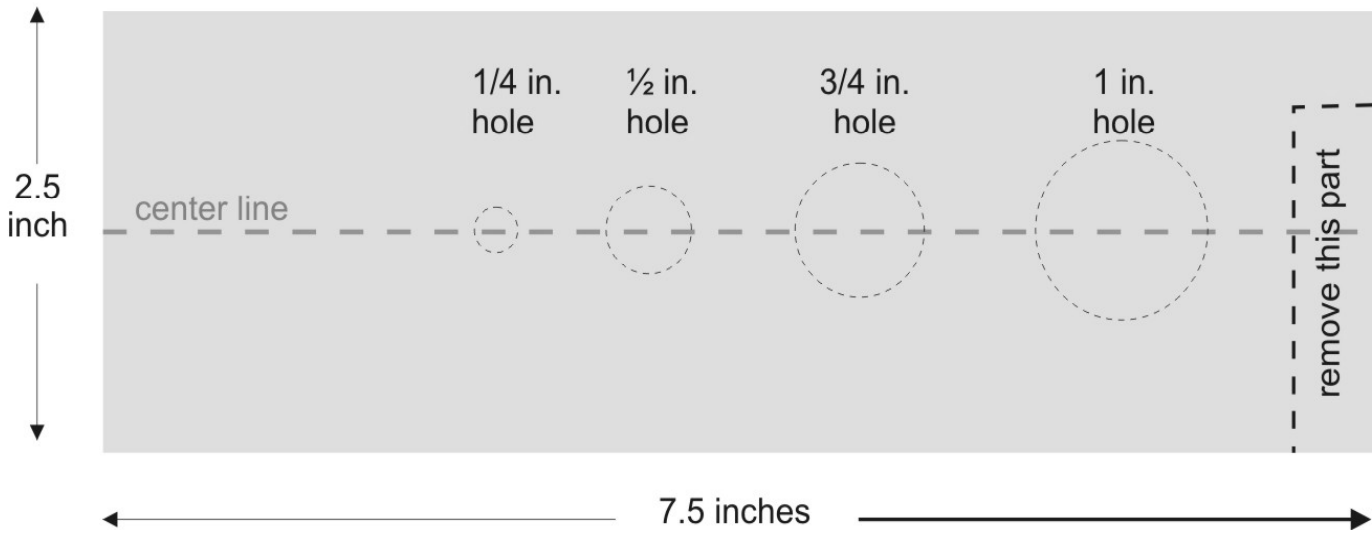
This hardy tool for fullering was created specifically for making candle cups using $\frac{3}{4}$ inch steel pipe but is useful for many fullering tasks. It is an improved version of the first one I made which I broke at the June Triangle Blacksmiths Guild meeting. That fuller was repaired and modified to work with Allan Green's anvil so I gave it to him. Both of these fullers are based on one that Doug Merkel had at the NC State Fair last year and worked much better than the spring fuller I had been using.



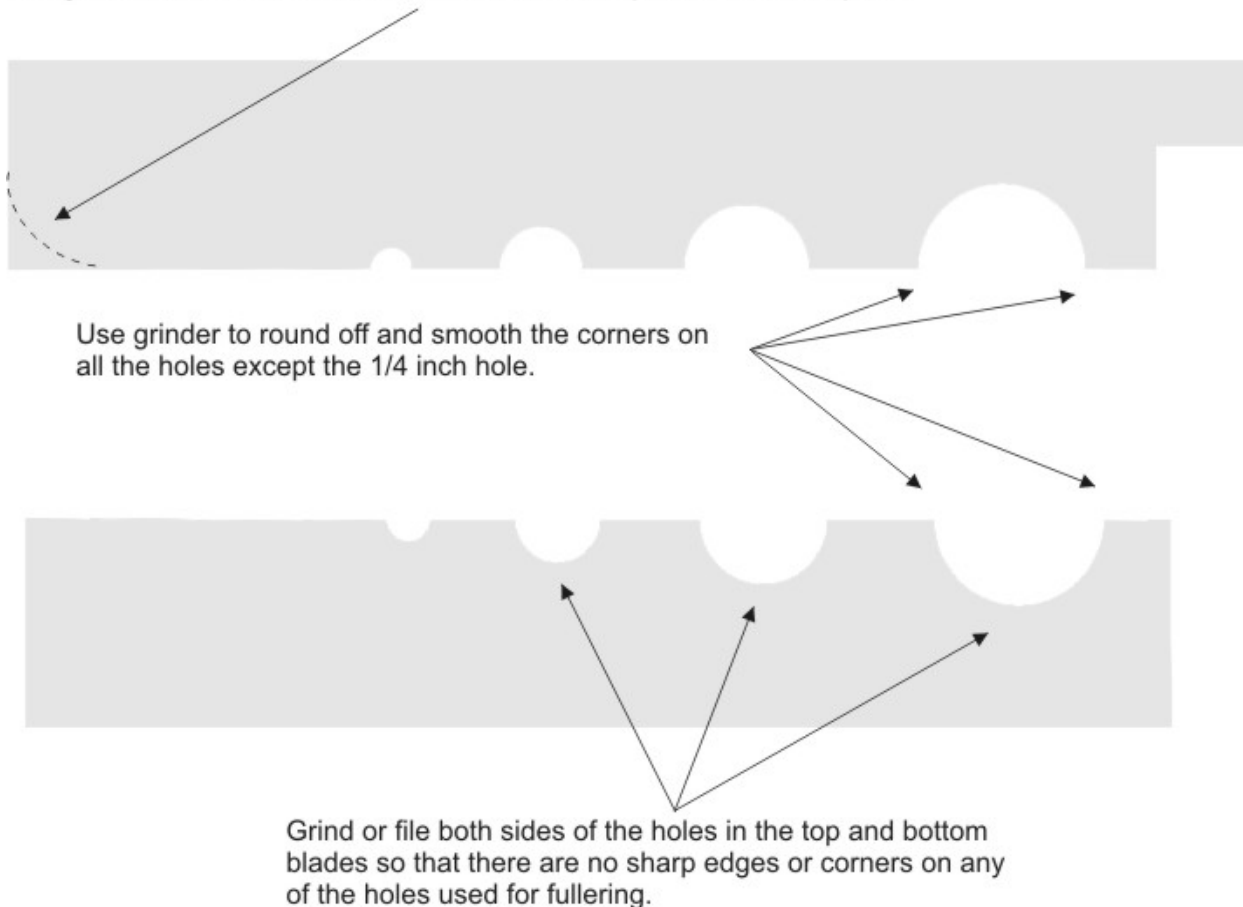
I created this fuller with multiple holes because it makes it easier to work with the 1 inch and $\frac{3}{4}$ inch stock used to create candle cups. The 1 inch hole is used for 1 inch and larger stock, the $\frac{3}{4}$ hole is used to start the candle cup with $\frac{3}{4}$ steel pipe (1 inch outside diameter), the $\frac{1}{2}$ inch hole will reduce the $\frac{3}{4}$ inch pipe to a $\frac{1}{4}$ inch inside diameter, and the $\frac{1}{4}$ inch hole can be used to create the tenon on the stem for the candle cup. To make this hardy tool you need a 6 inch piece of square stock (1 inch in this example) to fit the hardy hole on your anvil, a 7 $\frac{1}{2}$ inch piece of leaf spring, and 2 rivets (I used $\frac{5}{16}$ by 1 $\frac{1}{2}$ inch rivets). The tab on the top blade was suggested by Dick Snow who observed that it would make it easier to open the fuller using the hammer

1. Measure and mark the centerline of the spring steel.
2. Mark and drill the four holes. A hole saw works well on the larger holes.
3. On the lower right corner of the spring steel cut off a 1/2 inch by 2 inch piece. This will create a tab on the top blade that you can lift with the hammer during use.
4. Cut the spring steel in half along the centerline

Layout for hinged fuller blades

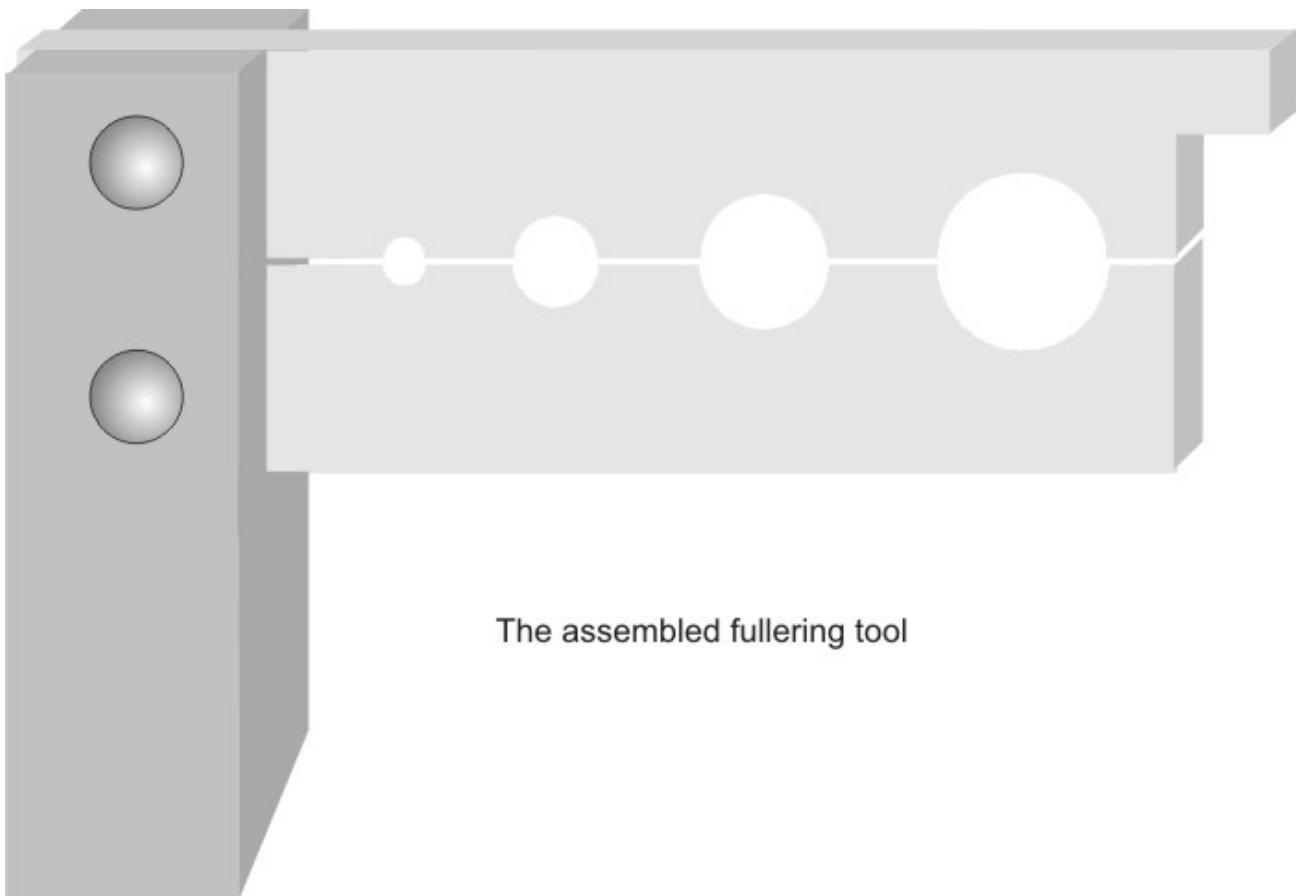
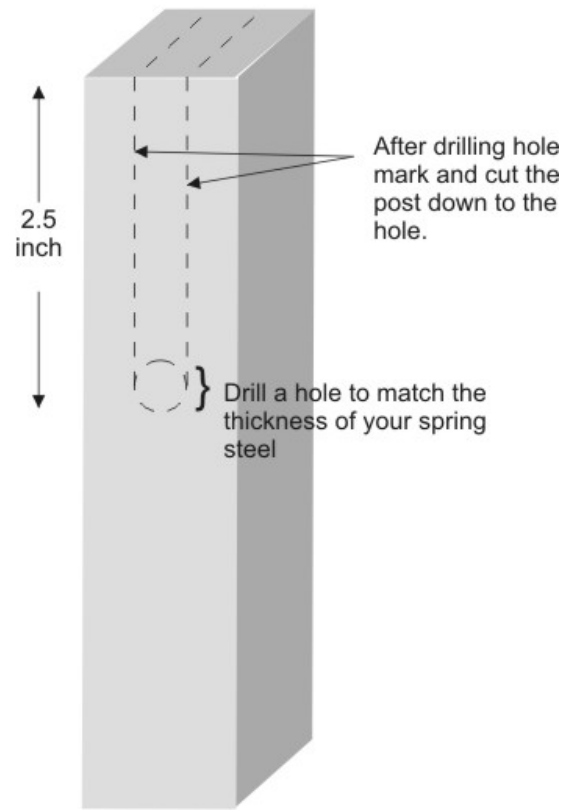


5. Grind or file the corners and edges of the 3 larger holes so they are smooth and have no sharp edges.
6. Round off the bottom left corner of the top blade so that it can pivot upwards.
use grinder to round off bottom left corner of the top blade so it can pivot



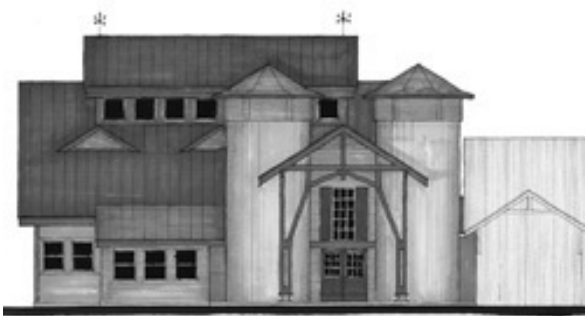
7. Place the two blades together and measure the height of the two pieces. Use this measurement (2 ½ inches for my blades) to mark the post.
8. Drill hole in the post at the mark with a diameter that matched the thickness of your spring steel.
9. Use a saw to cut a slot for the blades in the post to the hole just drilled.
10. Assemble the post with the bottom blade in the slot. Drill a hole for the rivet through the past and blade. Insert the rivet and peen. This blade is fixed so it could also be welded.
11. Insert the upper blade in the slot and align the holes with the bottom blade.
12. Drill a hole for the rivet through the post and top blade. Insert the rivet and check to see if the upper blade pivots before you peen the rivet.

Layout for hinged fuller post



The assembled fullering tool

Update on the Blacksmith Annex at the John C. Campbell Folk School



EDITOR'S NOTE: I thought the membership would like an update on the Annex to the blacksmith shop being built at the Folk School. We haven't discussed it for a while. The "Sparkle" first introduced the Annex to you in the First Quarter, 2007 issue. The next issue had more information including architectural drawings.

The following is taken from the Folk School's web site:

The John C. Campbell Folk School is proud to announce plans for an annex to the historic Blacksmith Shop, originally dedicated to Francis Whitaker in recognition of his two decades of teaching and demonstrating at the school.

Whitaker, known as the "Dean of American Blacksmiths," devoted his life to keeping the art of blacksmithing alive in this country and the existing studio stands as his symbolic legacy. But, while blacksmithing has long been the most popular of some 50 programs the Folk School offers, the shop has suffered decades of wear and its space is no longer adequate for the size and diversity of classes such a premier program should offer.

The solution is to renovate the Whitaker Studio and to build an annex with the help of the Timber Framers Guild, which has offered to assemble close to 80 timber framers to do a traditional barn-raising in June 2009.

The new addition will be located right behind the existing shop and will be connected via a short vestibule. The two existing silos will frame a beautiful timbered entrance and a clerestory roofline will allow natural light to pass through into the spaces below. The fully handicap accessible building will include an air conditioned classroom, a library, a center for technical, safety, and design information, and reference resources.



The old shop will be brought up to modern standards of comfort while retaining its historic charm. It will be completely re-wired and re-plumbed, fitted with a sprinkler system, and have improved ventilation and energy efficient windows.

Fundraising for the project kicked off with a \$1000 gift from longtime instructor Lou Mueller. Clay Spencer, nationally known blacksmith and fixture at the school also donated \$1000. Not to be outdone, Don Neuenschwander, a long time student and friend of the Folk School from Indiana, donated \$5000. Then Julie Clark, Folk School blacksmith instructor, donated \$10,000!

While the full architectural plans have not been finalized, the project cost is estimated at an ambitious \$500,000. With the strength and spirit of the Blacksmithing community, we are confident the goal can be met. Ours is a community that is resourceful, creative and, like the Folk School, dedicated to the spread of knowledge and education about blacksmithing.

Kicking off the fundraising project. Instructor Lou Mueller (right) presents a gift of \$1,000 to Resident Blacksmith Paul Garrett.

A restricted, interest-bearing fund has been set up specifically for the project. Contributions can include cash, stock, or materials, and the Folk School is a non profit 501(c)(3) so all contributions are tax-deductible. Donations of \$500 or more will be recognized with a plaque in the new building, and opportunities to name the new spaces will be developed as soon as plans are finalized.

Please contact Reed Caldwell, Development Manager, at reed@folkschool.org or at 828-837-2775 ext.118 to contribute or to discuss making a gift and Paul Garrett, Resident Artist for Blacksmithing, at pdg86@hotmail.com or 828-835-8441 with ideas to assist with the project.

WOW! The Timber Framing is planned!

Sue Fruchey, Publicity Assistant for the John C. Campbell Folk School provided the following information:

What: Timber Frame Addition for the Francis Whitaker Blacksmith Shop

Workshop: A two-week hands-on class hosted by the JCCFS but organized and held by the Timber Framers guild. Estimated 30-40 participants.

Project: The raising and completion of the frame.

This will also be hosted by the JCCFS and organized and held by the Guild. It will involve up to 80 people.

When: June 2009

Workshop: May 29th to June 13th

Project: The raising will be from June 15-19 during Little/Middle Week

Blacksmiths Work Week: June 7-13, (production of iron items relating to the timber frame.)

Why: Folk School Blacksmith Program is growing

The blacksmithing program has once again outgrown its facility as it continues to grow with a near record student count in 2007 of 501. The old milking barn that serves as the current shop is in need of serious repairs and historic preservation. The new facility (when eventually coupled with the old) will provide a more spacious, more comfortable, and a safer learning environment. It will include a small classroom and library, and an area for the safety and source information for the students.

Who: The Timber Framers Guild, with their workshop participants and raising volunteers.

Local volunteers to assist in tasks such as moving around materials and clearing the work site. Work Week blacksmiths to forge and fabricate iron work relating to the project. JCCFS will provide meals, beds, and the facility, as well as participation in materials procurement, equipment, crane etc.

How: The components of the timber frame will be hand cut by the participants using traditional and modern methods, and assembled and raised also using traditional and modern methods.

How much \$\$: Currently, we have raised approximately \$100,000 of our fundraising goal of \$650,000.

Timeline of project:

Jan-May 2009 (Site preparation), May 29-June 13 (Workshop), June 7-13 (Production of related iron pieces/Blacksmith Work Week), June 15-19 (Frame Raising)

If you are interested in joining the timber framing workshop and helping in the “raising” talk to Paul Garrett at 828-835-8441. You can also check the Timber Framers Guild’s website at:

<http://www.tfguild.org/projects/BlacksmithShopAnnex/index.html>. You will eventually be able to register for the workshop from their site. Check them out anyway at the above URL.

Visit to the Quadstate Conference

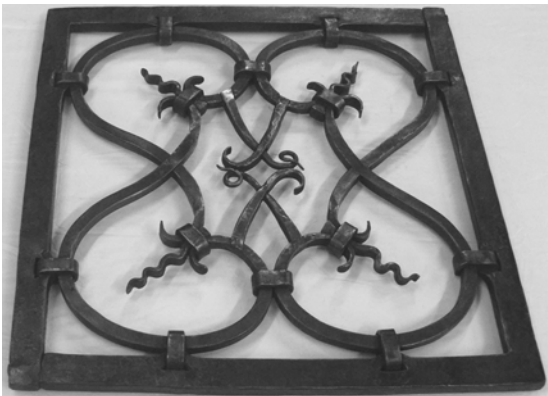
By James Kennady

Garret Dunn and I traveled to the Quadstate Conference, held at the Miami County Fairgrounds in Troy, Ohio. This is an annual conference organized by the Southern Ohio Forge and Anvil organization. We arrive on Friday morning when the conference officially began.

The Miami County Fairgrounds is a very nice facility, with plenty of room for the ~850 people attending the conference. The conference featured demonstrations beginning on Friday evening through Sunday evening. Friday evening's demonstration was Thermite welding of railroad tracks. Railtech Boutet showed a large crowd their Aluminothermic Welding System process. This process produces molten steel produced through a reaction of iron oxide and aluminum and is cast at a temperature exceeding 2000 degrees C in custom refractory mould. The companies website has more information, <http://www.railtechboutet.com/products.htm>.

Saturday's and Sunday's demonstrations included: Powerhammer Techniques - Phil Cox , Scagel Knife - Doug Noren, Traditional Hardware - Bob Alexander , Iron Smelting - Darrell Markewitz, Armor - Robb Martin "Thak", Dragon Head Forging/Air Tools - Glenn Horr, Plant and Floral Forms - Jack Brubaker, Beginner/Hands-on Instruction - Lorelei Sims.

There was a lot of tailgate sales. I would estimate somewhere around 75 different tailgate 'booths'. Anything you would want, and some of the things you need, were for sale. I was surprised to learn that many people arrived as early as Tuesday. I am sure these early birds found some of the better deals on tools and equipment. The Upper Midwest Blacksmith Association was selling blacksmith demonstrations on DVD. They offer 150 different DVDs for \$5 each. I bought 4 DVDs and will donate them to the NCABANA Library. There was a large gallery of work and I tried to get a picture of each item



A very small sampling of the work shown at the conference's gallery

EDITOR’S NOTE: The following article is from the Spring 2008 issue of Hammer’s Blow

3D Design for Artistic Blacksmithing

by Terry Ross

Austin, Texas

Blacksmiths enjoy adopting new tools and technologies. Contemporary smiths with a high-tech bent can use 3D drawing software to help in the design and fabrication of their projects. Having digital designs enables smiths to communicate and coordinate more easily with clients and co-contractors than they can using pencil and paper.

SketchUp®, available for free from Google®, is a 3D drawing package that I have been using to create full-scale working drawings. SketchUp® is widely used by architects. It is popular because it is easier to use than CAD. In general terms, SketchUp® is visualization oriented whereas CAD is engineering oriented.

To increase the usefulness of SketchUp® to blacksmiths, I have programmed three plug-ins (extensions) for SketchUp®. The plug-ins are Taper Maker, Curve Maker and Stock Maker. You can download these plug-ins free of charge from my website: www.drawmetal.com.

How can you use SketchUp® in metalwork design? Despite its name, you probably will not use SketchUp® to capture initial design ideas. Hand sketching with pencil and paper is still the quickest and easiest way to record your thoughts. Going from a hand sketch to working drawings is where SketchUp® comes in. The hand sketch in Figure 1 evolved into the SketchUp® design in Figure 2 which yielded working drawings for fabricating the stair railing shown in Figure 3.

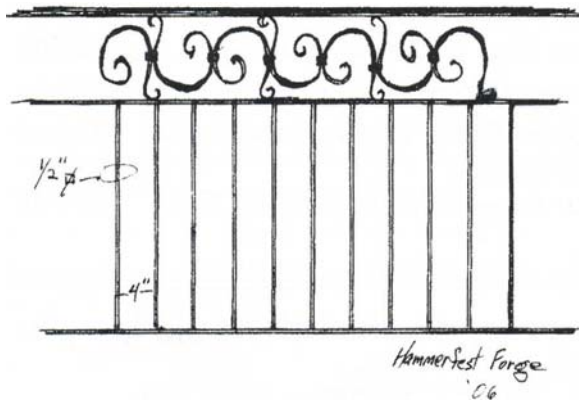


Figure 1. A hand sketch.

©2006 Hammerfest Forge— Used with permission.

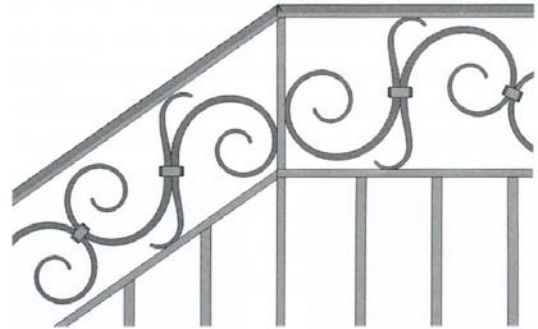


Figure 2. Design in Sketch Up®



Figure 3. Stair rail fabricated by Hammerfest Forge.

Here's one way to create a metalwork design in SketchUp®. Let's suppose you envision a curved tapered element in your design like the one shown in Figure 4 below.

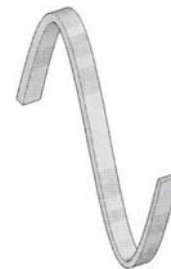


Figure 4. What you envision.

To draw your element in SketchUp®, you must first imagine the center line that runs from end to end through your finished element and draw that line. SketchUp® provides a variety of line-drawing tools ranging from a freehand tool to a bezier curve tool. (Another option, for drawing mathematically precise curves and spirals, is to use the Curve Maker plug-in or the plug-in "ktools.") In any event, suppose that you drew the approximately 18 1/2"-long line shown in profile Figure 5.

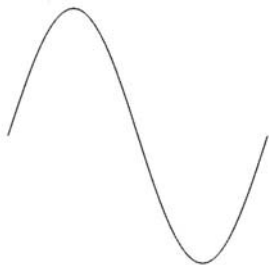


Figure 5. Your Center Line.

The second step is for SketchUp® to draw a curved tapered element to your specifications along your center line. To accomplish that, you tell Taper Maker what shape cross-section the taper should have and the dimensions of the cross-section at the beginning and at the end of your center line. For example, telling Taper Maker to draw a rectangular cross-section that is 3/8" x

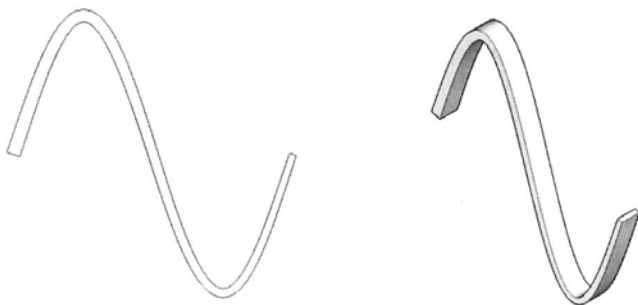


Figure 6, left. Profile view of taper. Figure 7, right. Isometric view of taper drawn by Taper Maker.

3/4" at one end of your center line and 3/16" x 3/4" at the other end will result in taper shape shown in profile in Figure 6 and shown in an isometric view in Figure 7.

If you don't like the way the tapered element looks, you can simply erase what Taper Maker drew and tell it to draw it again using a different cross-section and/or different dimensions. Figure 8 shows isometric views of several alternative tapers you might consider.

Taper Maker will draw tapers with round, square, diamond, rectangular, hexagonal or octagonal cross-sections. The lines you draw do not have to be the centers of tapers. You can tell Taper Maker to draw the taper to the left, right, above or below a line. Figure 9 below depicts several examples.

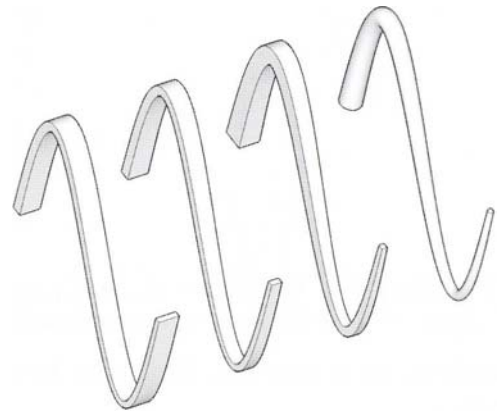


Figure 8. Isometric view of alternative tapers.



Figure 9. Taper Examples.

With Curve Maker you can draw spirals (Bernoulli, golden and Archimedean), sine and cosine waves, and helices. Curve Maker accepts as inputs the dimensions you want the curve to have. For example, Figure 10 illustrates a Bernoulli spiral drawn to two specified dimensions.

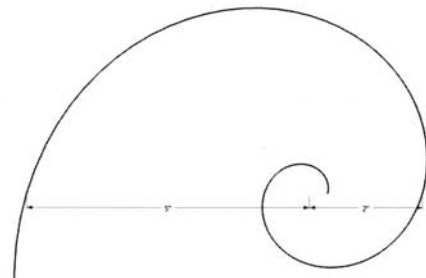


Figure 10. Example of a Bernoulli spiral.

Once you have a taper designed to your satisfaction, you can use Stock Maker to estimate how much stock will be required to make the taper. The first step is to describe the stock you want to use. For example, if you want to fabricate the element in Figure 7 from 1" square stainless steel, you need to tell Stock Maker what alloy you will use (e.g., 304), the cross-section shape (e.g., square), the cross-section dimension (e.g., 1"), and optionally, the weight and cost per unit (e.g., per lineal foot). Once you have given Stock Maker that information, it can compute how Much of the stock will be required to fabricate any taper that you have designed. Figure 11 illustrates that approximately 4" of F square stock weighing approximately 1.12 pounds and costing

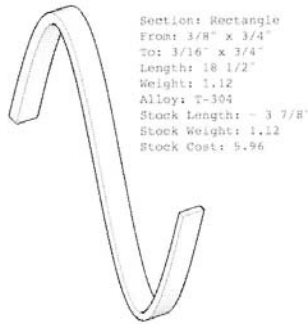


Figure 11. Stock requirements for your element.

approximately \$6 will be required to fabricate the 18 1/2" taper shown in Figure 7.

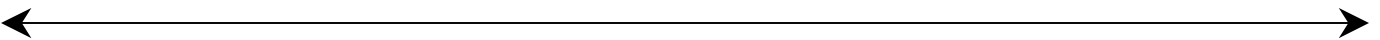
Obviously, most designs comprise numerous elements, so Stock Maker can summarize all the materials required for a complete design, the total weight of the design, and the total cost of the materials. Having an accurate estimate of total materials requirements is essential when working with higher-priced materials like non-ferrous or precious metals. Figure 12 provides an example of total stock requirements for a project fabricated from two different alloys and three different stocks.

Alloy	Stock	Taper Name	Stock Requirements			Stock Length	Stock Weight	Stock Cost	Loss Pct
			Count	Taper Length	Taper Weight				
A36	1" sq ms	Vertical	5	24"	2.66	- 9 7/8"	2.8	2.66	5.0
A36	1" sq ms		Total:	120"	13.3	- 49 5/16"	14.0	13.3	
T-304	1" sq ss	Large Scroll	3	27 1/4"	2.28	8 3/8"	2.4	12.87	5.0
T-304	1" sq ss		Total:	- 81 3/4"	6.84	- 25 1/8"	7.2	38.61	
T-304	1/2" sq ss	Small Wave	4	10 3/8"	0.26	- 3 9/16"	0.26	1.56	
T-304	1/2" sq ss		Total:	- 41 7/16"	1.04	- 14 1/4"	1.04	6.24	
T-304			Total:	- 123 1/8"	7.88		8.24	44.85	
			Total:	- 243 1/8"	21.18		22.24	58.15	

Figure 12. Total stock requirements calculation.

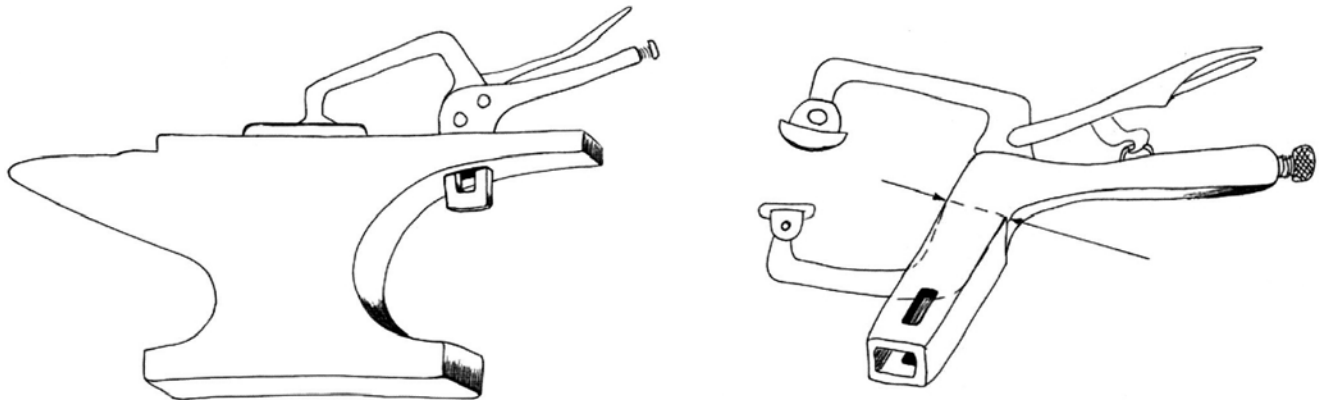
For more information on SketchUp®, visit the website www.sketchup.com. For more information on the plug-ins and more design examples, please visit my website at www.drawmetal.com. You can e-mail me at terry@drawmetal.com.

Many thanks to Larry Crawford of Hammerfest Forge (www.hammerfestforge.com/) for permission to include images of his stair railing. SketchUp® is a registered trademark of Google, Inc.



EDITOR'S NOTE: The following article is from the May/June issue of California Blacksmith

HD HD (Heavy Duty Hold Down)



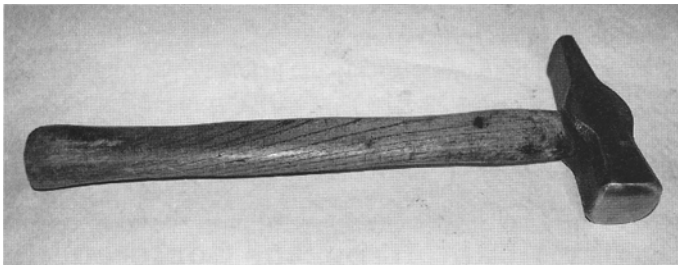
This anvil hold down originally came from www.metalsmithinghowto.com. We saw it in the Top of the Anvil.

EDITOR'S NOTE: The following article is from the Winter2008 issue of Hammer's Blow

Care & Handling of Your Hammer

By Wayne Coe Sunbright, Tennessee

Your forging hammer is a tool that should be cared for similar to your anvil. You don't want chips, dings, gouges or other flaws in the face of your forging hammer. These flaws will be imprinted on your forged work, just as such flaws on the face of the anvil will affect the appearance of your work. It's important that your forging hammer be used only for forging hot metal or planishing. (Planishing means "producing a smooth surface finish on metal by rapid blows by highly polished dies or by a hammer designed for the purpose, or by rolling in a planishing mill.") Another hammer should be used whenever striking any cold metal (metal at less than a forging heat). Whenever striking punches, chisels, top tools or other items not being forged or planished, use this hammer rather than the forging hammer.



A 100-gram Swedish hammer, after dressing.

Another common abuse forging hammers suffer is striking the end of the handle on the anvil in the false belief that he is tightening the head on the handle. In fact, each time this is done it crushes some of the wood fibers and actually, over time, loosens the handle even more. Another common misconception is if the handle is loose, soak it in the slack tub. The wood fibers will absorb water, swell and tighten the handle. While this is true, when the water swells the wood fibers it also crushes them. When the handle returns to its normal humidity it is looser than before. I have been using the same forging hammer for seven years—the handle is still tight and in good shape.

The face of your forging hammer should have a smooth, domed face and the peen should be broad and arched, in both axis, front to back and side to side. By "domed" I don't mean like a rounding hammer or a doming hammer, just a slightly convex... somewhat "canoe" shaped. Not flat and certainly not concave.

The 1000-gram Hofi-style hammer sold by Tom Clark, Big Blu, Doug Merkle and others usually come ready to use. They cost between \$100.00 and \$115.00. A 1000-gram Swedish hammer costs about \$30.00. I use a Swedish hammer. As purchased, my hammer was nearly useless for forging. The face was flat, there was a sharp line milled all around the face (in about a quarter inch from the edge), the peen was straight across the width and too narrow. The handles are too large for most hands.

Some smiths just grind the face and cut the peen back to the thickness desired, then grind to the desired shape. It is my belief that this is bad practice. By cutting away a portion of the peen you have both reduced the weight and balance of the hammer. A better practice is to re-forged the face and peen. This can be done with the handle still in the hammer. This procedure is the purpose of this article.



The left hammer is new, the right is dressed

Tools needed will be:

A post vise

Another hammer to forge with

A gas torch, either acetylene, propane, propylene or other suitable gas with a rosebud or cutting torch head

A supply of water (slack tub)

An old bath towel

A belt grinder capable of having a "slack belt."

The hammer should be mounted in the post vise with the handle parallel to the vise jaws. If the hammer is mounted with the handle protruding over the jaws, there is a good chance that during the forging process the handle will be driven down against the jaws, thereby breaking it.

Dip the towel into the slack tub, then wrap it around the projecting portion of the hammer, protecting the handle and eye from the heat and flame. Do not wring the towel out.

Direct the flame on the hammer face to obtain a bright orange forging heat. Hammer the face around the edge to forge out the milled line and even upset the face, making it slightly broader than it was originally. If the towel loses too much water during the heating process, either remove it and soak it again or use a squirt bottle to add water to the towel. Keeping the towel in place, heat the full face to a very bright orange, almost yellow. Quickly remove the hammer from the vise and dip about one inch into the slack tub until the color fades, then raise the hammer from the water. Almost immediately the hammer will dry due to the heat. Immediately re-dip the hammer to the one-inch area and remove it. Continue doing this until the hammer stays wet when removed from the water. By dipping the hammer in this manner you have hardened, then tempered the face, while keeping the eye soft. Remove the scale with an old rasp or stone, then test the hardness with a file. It's good practice to test the face with the file before heating the hammer, giving you a reference point for testing after forging the face. If the face is properly hardened, proceed to re-forging the peen in a similar manner. The peen should be upset to about 3/8ths to 1/2" wide, or about the size of a finger. The peen should be canoe-shaped from side to side and rounded from front to back.



The hammer wrapped in a damp towel, ready for the rosebud.

With the face and peen properly forged, hardened, and tempered, it is time to go to the belt grinder and finish shaping. I start with a new 40-grit belt and just remove all blemishes on the face and peen, working without a platen. The belt will contour to the face, grinding off high points. Be sure to work across the face, right to left, up and down and diagonally in order to obtain a smooth, evenly convex shape. Treat the peen the same way.

Use finer belts and repeat the process for a polished shiny surface, ending with 400-grit. Now, replace the 40-grit belt and sand the handle, from head to the end, obtaining a straight, rectangular shape with rounded corners.

I next use a wire brush on an angle grinder to remove all scale and burnt paint from the hammer head to give a nice appearance. The temper line on the head will probably still show, indicating the forging process. I then stamp the new owner's name on the side of the hammer. It is a nice personal touch and shows that the eye is not hardened. Had the eye hardened, the letter stamps would not make a good impression.

Now that you have a good forging hammer, care for it and don't abuse it. Hit only hot metal with it. Don't hit punches, chisels, or cold metal with it. Don't strike the handle on any hard surface and don't let anyone else use your forging hammer. Letting others use your forging hammer is kind of like letting others use your spouse or chain saw. Care for your forging hammer and she will serve you long and faithfully.

EDITOR'S NOTE: The following article is from the November / December 2007 issue of California Blacksmith newsletter of the California Blacksmith Association

SOLVING THE PICKET PROBLEM

Story and illustrations by Beth Holmberg, San Diego, California (Inspired by Todd Caffo)

Many building codes require that stair and balcony railings have no space where a 4" sphere can get through. This baby head test limits and even dictates our designs for indoor railings. So, chatting around the smithy, Todd says, "There must be a way to use math to figure out how many vertical pickets you need to fill a space properly without having to guess and then check."

Yeah, there must be! I went home, drew pictures, scribbled down every mathematical relationship I could come up with (some of them pretty stupid), substituted and simplified, and came up with an easy solution. Todd and I thought some other folks might find it helpful, too.

Here's our language for this problem. We know (or get to decide for ourselves):

L = the LENGTH of the space to be filled with pickets.
W = the WIDTH of the pickets. Note: If pickets are to be placed on the diagonal, use the diagonal measurement. Remember to use the actual material width, rather than nominal, if it's at all close – don't want the inspector to poke that ball-on-a-stick through when you least expect!

We want to know:

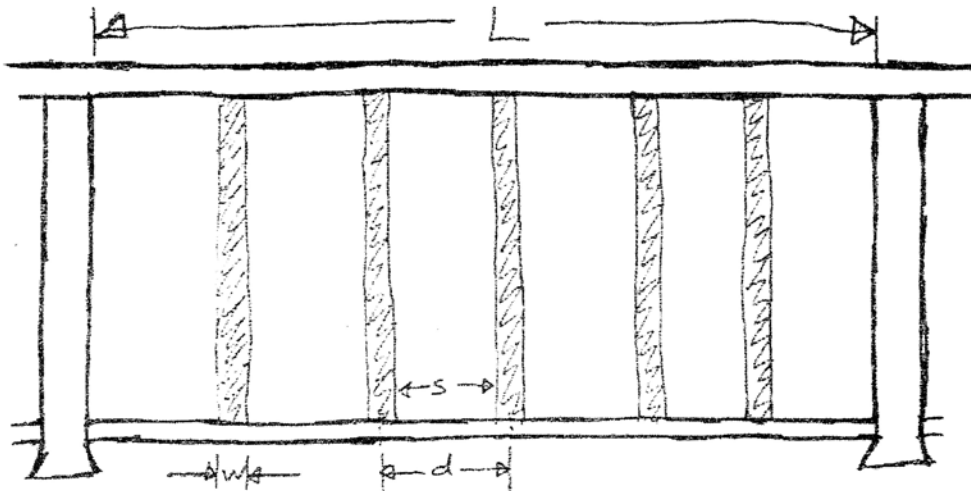
N = the minimum NUMBER of pickets needed to (legally) fill the space. Note that unlike all the other variables, this one can only be a whole number.

And we might also like to know:

S = SPACING between the pickets.
D = the DISTANCE, on center, between pickets, that is, where the holes go.

For any of this to work, you need to use the same unit of measurement for everything – here everything is in inches, but this could easily be used with metric stock and measurements or with building codes calling for spacings other than 4".

Without going through the algebra-based proof, the easy plug-and-chug solution is: $N > (L-4)/(W+4)$ when 4" is you minimum spacing (everything in inches). If you need to use a different minimum spacing, substitute that measurement for the number 4 in the equation, and use the same units (inches, mm, cm) for all you numbers.



Example

L = 3' = 36" (the space to be filled with pickets is 3').
W = 1" (big, beefy 1" picket stock, mostly to make the math easy).
Plug and chug: $N > (L-4)/(W+4)$ to get $N > (36-4)/(1+4)$, which is to say $N > 32/5$ or $N > 6.4$.

But, wait! The number of pickets (N) has to be a whole number (what the heck is 4/10ths of a picket?). So if N is a whole number greater than 6.4, the minimum number of pickets needed to fill the space legally is 7.

Another example

Let's try a different length of railing needing pickets:

$L = 2' = 24''$ (only 2' to be filled this time).

$W = 1''$ (still that beefy stock).

Plugging into $N > (L-4)/(W + 4)$ gets us $N > (24-4)/(1 + 4)$ which simplifies to $N > 20/5$ or $N > 4$.

This means that if you use 4 pickets, each 1" wide to fill the 24" space, you'll have a gap between pickets of exactly 4". BUT, the code says that your railing must prevent a 4" ball from passing through – your spaces are too big! Our formula, however, tells us that the real solution is that N (the number of pickets) is the nearest whole number greater than 4, so the correct solution is that 5 pickets are required to ensure that the spaces are always less than 4"! The only other solution in this situation is to use 4 pickets, but with a slightly wider picket stock (perhaps placing square stock on the diagonal, if it works in your design) to get that just-under-four-inch spacing.

So once we know how many pickets we're going to use, what is the space (S) and on-center (D)?

EDITOR'S NOTE: Let me provide a little help to the algebra challenged. Let's take one of the equations for example and analyze what you do with it.

For example: $N > (L - 4) / (W + 4)$ from the preceding page:

From the drawing on the preceding page:

N is the minimum number of pickets, which is what we are trying to find out.

W is the width of the pickets. Lets assume the width of your pickets are 3/4"

L is the total length of the space to be filled with pickets. Lets assume the length of the railing to be filled with pickets is 8 feet exactly.

The symbol $>$ means greater than

The symbol $/$ means divide

The symbols $+$ and $-$ mean just what you think, add and subtract, respectively.

The parenthesis (and) are important as they show the order of things to do. With the parenthesis you know you do not divide 4 by W. You do the operations in the parenthesis first.

So now we can proceed:

First of all, the units must be the same. Since 4 really is the open space and is 4 inches, and W is in inches, L must be in inches as well. So convert 8 feet to inches, which is 96 inches.

Next, lets figure $(L - 4)$, which $96 - 4$ or 92

Likewise, figure $(W + 4)$, which is $3/4 + 4$ or 4.75

Next, get out your calculator and divide $(L - 4)$ by $(W + 4)$ which is 92 divided by 4.75.

The result is 19.36 and a lot more numbers to the right of the 6, which we don't care about.

So the result says that N (number of pickets) is greater than 19.36.

Since the number of pickets must be a whole number, the answer must be the next whole number greater than 19.36 or 20. So, N is 20 pickets

Here are two more handy plug-and-chug formulas: For actual space between pickets, $S = (L-NW)/(N + 1)$. For the on-center distance is $D = S + W$. In our first example, we know that the number (N) of pickets must be at least 7 when the length (L) to be filled is 3' (36"), and for pickets we have (W) 1" stock.

So, plugging into $S = (L-NW)/(N+1)$ we get

$S = (36-7 \times 1)/(7+1)$ which simplifies to

$S = (36-7)/8$ or $29/8$, the space between pickets being

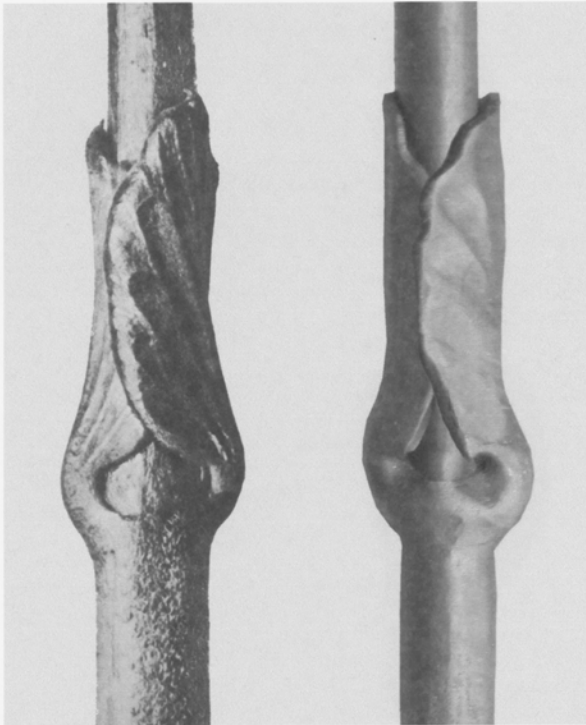
$S = 3.625''$ (or $3 \ 5/8''$).

We'll lay out an on-center distance for the pickets of $D = S + W$ or $D = 3 \ 5/8'' + 1''$, so $D = 4 \ 5/8''$.

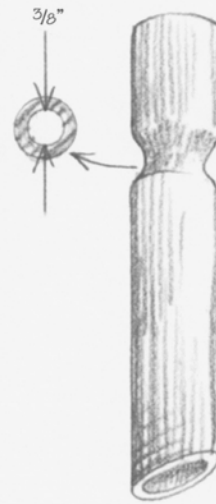
That's it! Hope this all makes your plans and bids go quicker and easier.

Notice on this page, above, he gives us an expression that contains $(L - NW)$. What do you do with the NW? You multiply the number that represents N by the number that represents W together. Algebra does not like the multiply symbol.

EDITOR'S NOTE: This article is from the "Blacksmith Journal" published by Hoffmann Publications. They have been kind enough to allow ABANA chapter editors access to some of their back issues free of charge. The "Blacksmiths Journal" publishes beautiful shop drawings of blacksmith projects. See the last page of this article for more information,

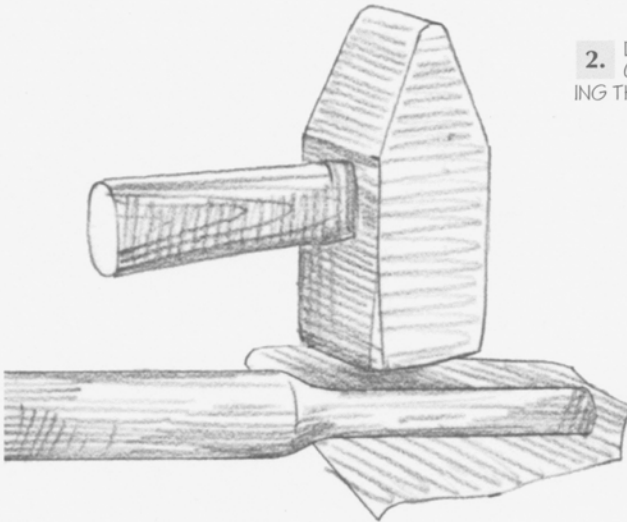


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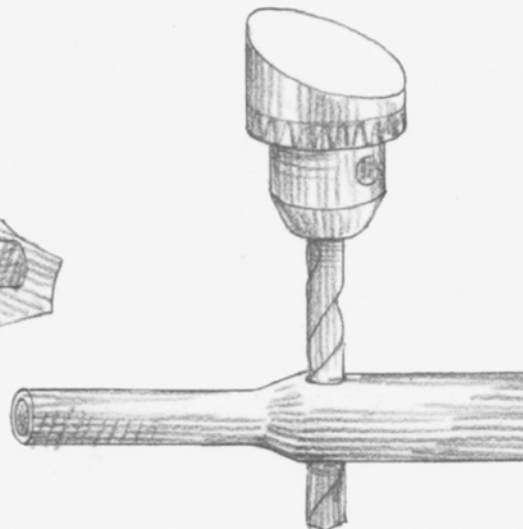


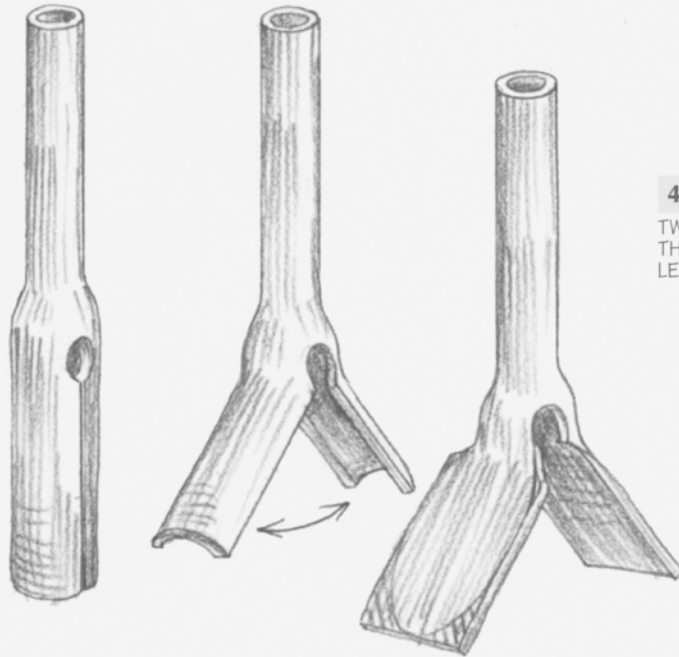
1. NECK DOWN 3/4" SCHEDULE 40 PIPE TO 3/8" INSIDE DIAMETER.

2. DRAW OUT TO THE END OF THE PIPE, MAINTAINING THE 3/8" INSIDE DIAMETER

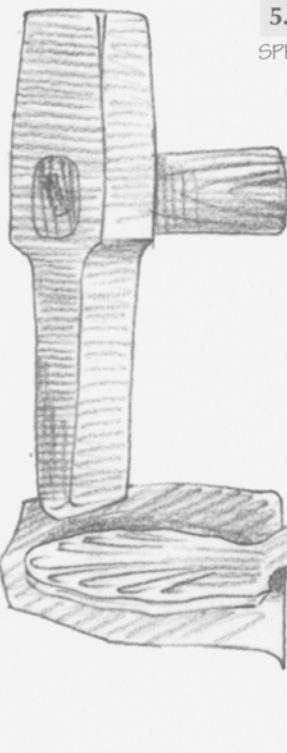


3. DRILL A 7/16" HOLE THROUGH THE PIPE WHERE SHOWN.





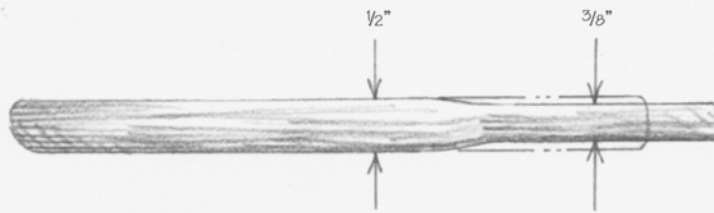
4. SAW FROM THE END UP TO THE HOLE. SPREAD THE TWO HALVES, THEN FLATTEN THEM. MARK AND CUT OUT A LEAF SHAPE ON EACH HALF.



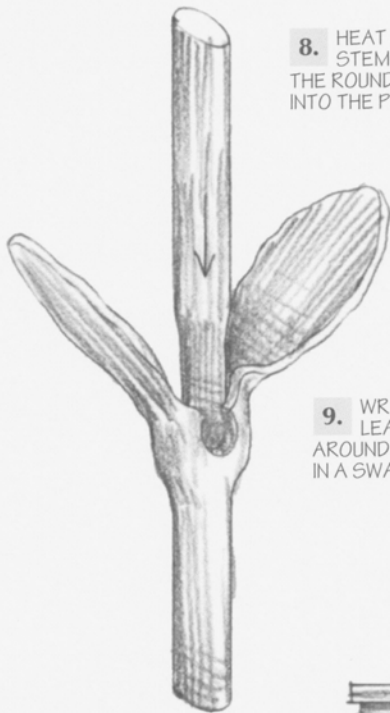
5. VEIN THE LEAVES AS DEEP AS POSSIBLE, SPREADING THEM LATERALLY.



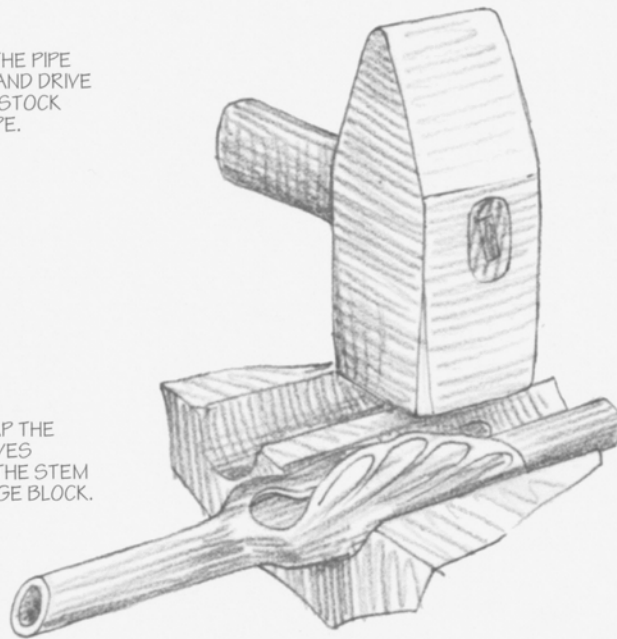
6. HEAT AT THE BASE OF THE LEAVES AND SQUEEZE TOGETHER WITH SCROLL TONGS.



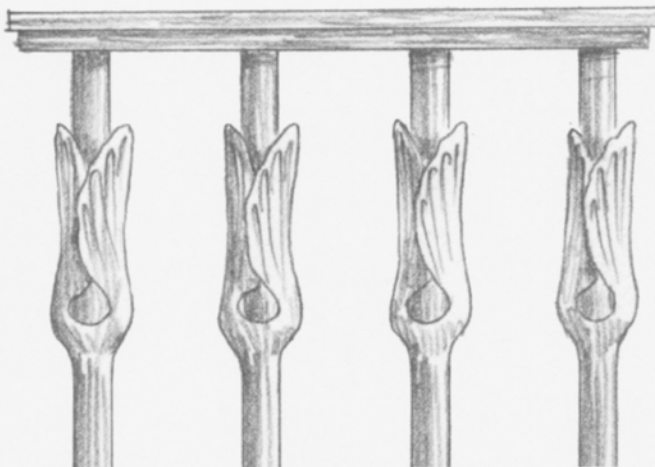
7. DRAW DOWN THE END OF 1/2" ROUND STOCK TO 3/8" DIA.



9. WRAP THE LEAVES AROUND THE STEM IN A SWAGE BLOCK.



ONE OF THE MANY USES FOR THIS FORM INCLUDES RAILING BALUSTERS.



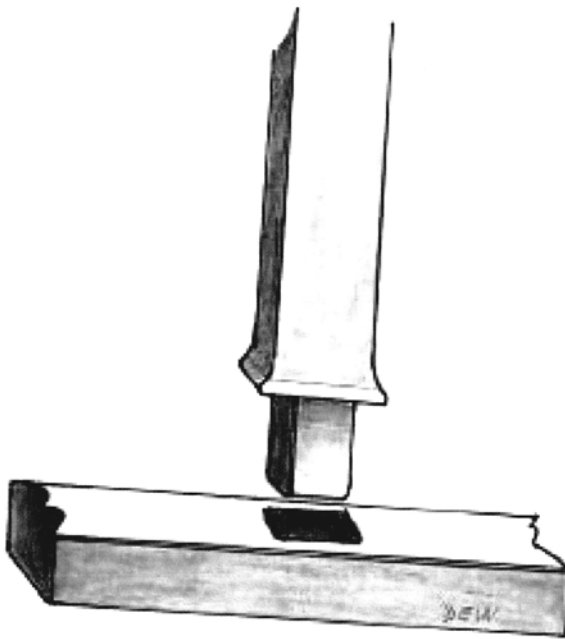
This Feature has been provided by the Blacksmith's Journal for information about ordering call 800-944-6134 or go to www.blacksmithsjournal.com

EDITOR'S NOTE: This article was originally printed in the Summer 2004 issue of "Hammer's Blow". It is from a series of educational articles, directed towards beginning blacksmiths, made available by ABANA

CONTROLLED HAND FORGING

Mortise and Tenon Joinery

Text and Illustrations by Doug Wilson



#1. Example of technique



#2. A top and bottom side set

Lesson Number Nine—Mortise and tenon joinery

Definition:

Making a mechanical joint with two or more pieces

Intent:

The smith will learn to forge a tenon and assemble a mortise and tenon joint.

Tools

Side set – top and bottom (drawing #2) Note that the cutting edges aren't sharp. The cutting edges are slightly radiused.

Set hammer

Monkey tool or bolster plate with 1/4" x 3/4" hole (drawing #3)
(This is a tool block with a 1/4" x 3/4" hole in center.)

Materials

1/2" x 1" x 18" mild steel bar.

Method:

Step One:

Upset end of bar and forge to 1 1/8" x 5/8", 3/4" from end. End tapers down to 3/8" x 3/4". (drawing #4) Mark bar on hot cut 3/4" from end.

Step Two:

Take a full yellow heat. Place the bar over the bottom side set. Hit a light blow. The bottom surface of the bar will be cut. Turn

the bar up on its corner. Strike another light blow.

Turn bar onto uncut next surface. Strike again. This marks the second side of the bar. (drawing #5)

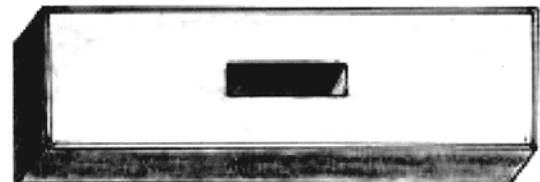
Repeat and cut the remaining two corners and sides with light blows.

Notes: The light blows on the corners help to insure proper tool alignment.

Misaligned cuts or double cuts cause hot shuts, then cracks. Proper tool alignment is critical here. Any mis-cuts should be filed out immediately.

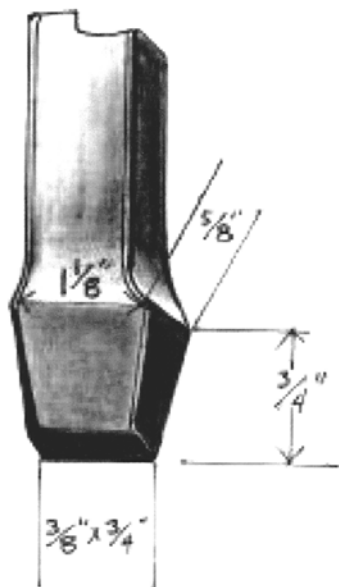
Once marked, the bar can be supported on a stand or your hip. Use top tool to continue. (See previous lesson for bar support.)

Reheat bar if necessary. Continue cutting until the core of the bar is just a bit oversize, in this case about 5/16" x 13/16".



#3. A bolster plate

CONTROLLED HAND FORGING



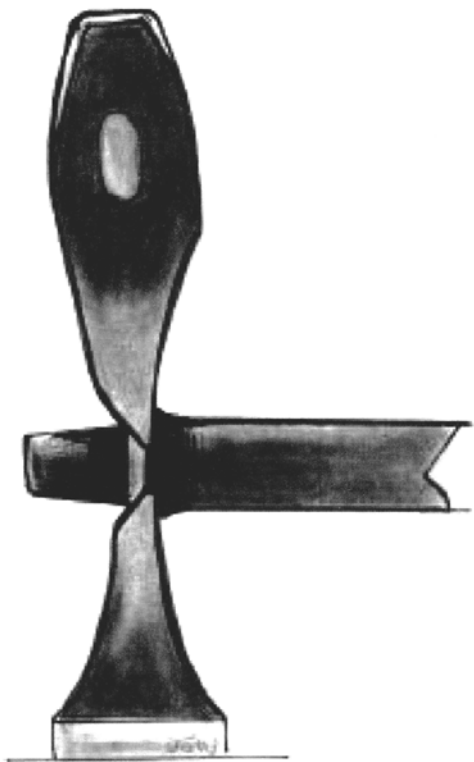
#4. Upsetting and forging dimensions

Notes: If the tenon is a bit too fat that's ok. Too thin won't do. A striker's assistance helps with drawing down the tenon.

Step Three:

Reheat bar to full yellow. Place bar over sharp edge of anvil face. Place set hammer directly over it. (drawing #6)

Strike a heavy blow. Turn the bar 1/4 turn. Strike again. Turn again in the same rotation. Strike again. You are drawing out the tenon.



#5. Marking the second side of the bar

Continue until you have drawn down the tenon to 1/4" x 3/4"; length as far as it goes.

Finally, lightly forge down the corners.

Note: As you forge down the tenon, the set hammer and the anvil must be parallel. Check size of tenon by inserting end of tenon into bolster.

Step Four:

Upset square shoulders. Reheat to full yellow. Heat should extend about an inch up from tenon shoulder.

Note: Quench the tenon to prevent burning if necessary.

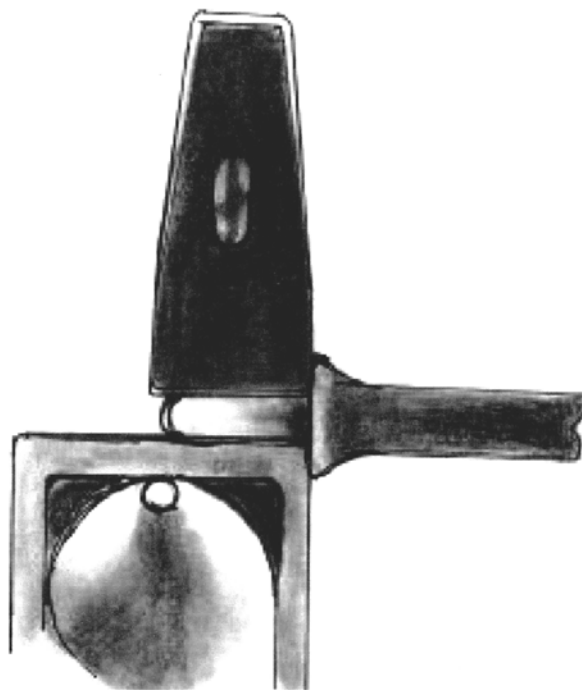
Pull the bar from the fire. Set bolster over the hardie hole. Insert tenon. Upset and square by hitting hard on top end of bar. (drawing #7)

Straighten bar as necessary. Square shoulders to bar with light hits on anvil face.

Note: Tenon should be centered on the bar. Centerlines of bar should be straight. Shoulders should be straight and square.

Step Five:

Cut tenon to length on cutoff hardy. In this case, length should be 1 1/4" from shoulder.



#6. Using the set hammer

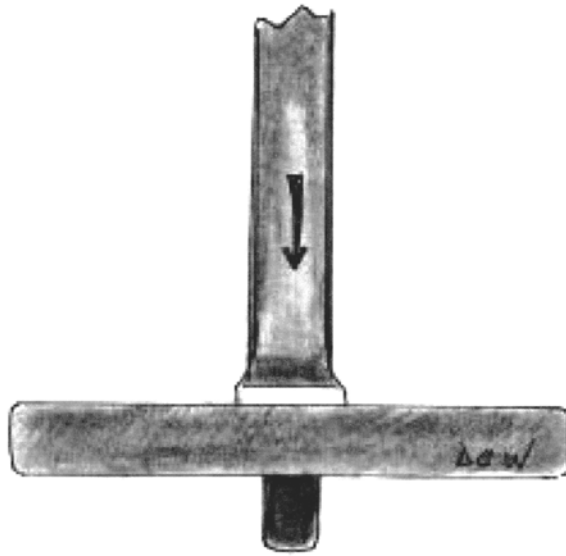
Note: Beveled edges on the end of the tenon help prevent thin, sharp or cracked edges on the finished tenon head.

Step Six:

Finishing the joint. Heat tenon and about 1" above shoulder to full yellow.

Quickly set bar in vise. Set mortise onto it. Tap it down so it sits firmly on tenon shoulders. With rapid hammer blows, upset the tenon. (drawing #8) First hammer blows are straight down. Finish with angled blows.

CONTROLLED HAND FORGING



#7. Using the bolster plate

Note: The entire tenon and a bit of the shoulder must be at a bright heat to insure a tight joint.

Forge the head of the tenon into a symmetrical shape with smooth edges. It should be centered on the face of the bar it has joined.

Note: If you run out of heat, you can use a torch to reheat the tenon head. It is best to finish this operation in one heat. A second heat should only heat the tenon, not the bar with the mortise. (drawing #9)

Troubleshooting:

If the tenon has cracks at the shoulder, this was caused by (1) cutting too deep in step two, (2) misaligned or double cuts, or (3) forging tenon at black heat.

Note: File out hot shuts before and during forging of the tenon.

If the tenon head is not centered on the bar it joins, your upsetting blows may not have been straight down or the mortise was not centered in the bar the tenon joins.

Targets, Time:

Upsetting bar, one heat.

Cutting shoulder and drawing out tenon, two to three heats.

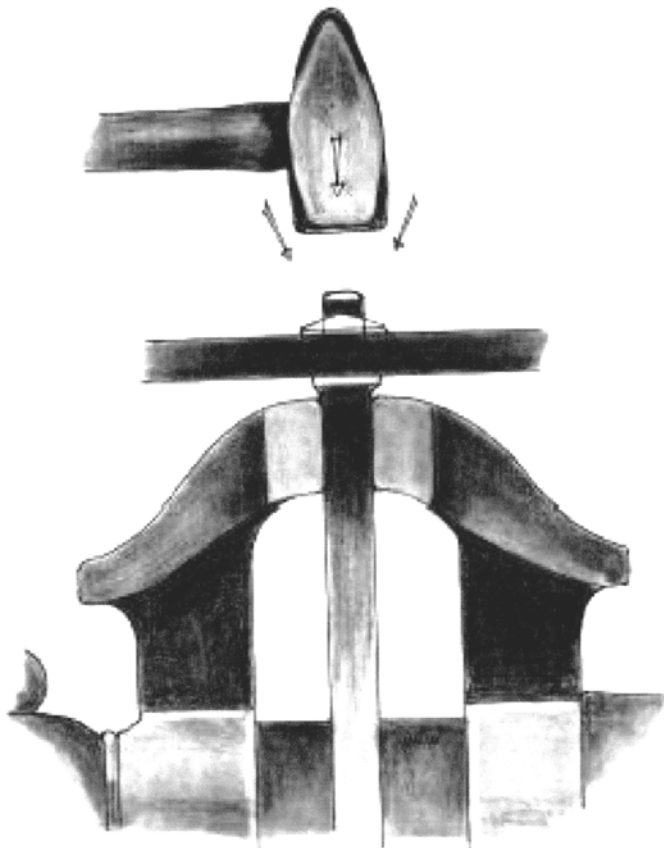
Trimming end of tenon, one heat.

Assembling pieces and heading tenon, one heat.

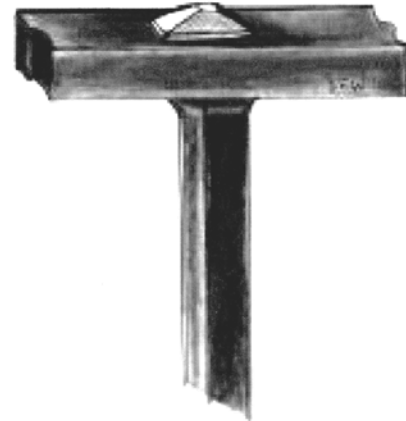
Targets, Dimensional:

Tenon head should be symmetrical, without sharp edges and centered on the bar it joins.

Tenon shoulder should be the same dimension or slightly smaller than the bar it passes through and joins.



#8. Upsetting the tenon



#9. The lesson completed



Affiliate Letter July 2008

To ABANA Affiliates and Affiliate Members,

This time the big news is the new ABANA Central Office. Many have already heard of this change but it is important enough to bear repeating. In addition a reminder of the upcoming election is in order.

Introduction to our new Central Office Administrator

Diane Walden, WH&L Associates, LLC, and her team have contracted with ABANA to provide services as the new ABANA Central Office. Walden brings to her clients more than 24 years of experience in the for-profit and non-profit arenas. Walden and her team, Teresa Hannon, technical services, Victoria Lonergan, membership, and Denise Propps, finance, are looking forward to working with the ABANA organization to help guide and grow the membership.

“We look forward to serving the needs of the ABANA organization to promote membership, to increase member retention efforts, and to assist the organization to create, develop and recommend strategies to move the organization forward. We realize the importance of preserving the integrity of blacksmithing and promoting the ‘love of the craft.’ Special thanks to ABANA for honoring us with the mission to serve your membership,” says Diane.

Diane Walden is founder of WH&L Associates, LLC, a consulting and service company, located in Dumfries, VA. WH&L Associates specializes in assisting association and corporate leaders with leadership initiatives, marketing, public relations, and administrative support.

ABANA Central Office
15754 Widewater Drive
Dumfries, VA 22025-1212

Phone: 703-680-1632
Fax: 703-680-6222
e-mail: abana@abana.org

The ABANA Board would also like to thank Heather Hutton for the dedicated service she provided during her time as the Central Office Administrator. Heather decided to pursue an opportunity to be a blacksmith. Now who do you suppose would give the poor girl that idea?

ABANA Election coming up

The next Anvil's Ring features the work of Dan Nauman and the BAM Conference Ring project. It also is the annual election issue. Exercise your right to influence the future of ABANA by voting for the candidates who will do the best job for the organization.

The revised bylaws will be up for a vote at the same time. The Bylaws committee respectfully requests that you reward their efforts with your attention and vote when the Summer Anvil's Ring appears in your mailbox. (See the draft bylaws (www.abana.org/business/Proposed_bylaws.shtml)).

ABANA Appreciation Day – Blacksmith Guild of Virginia

Thanks to the BG of VA for donating the proceeds of their Iron-in-the-Hat at this event towards seed money for the ABANA 2010 Conference. Over \$1000 was raised.

Progress on the ABANA 2010 Conference:

The ABANA Board has approved Memphis, TN as the site and the first week in June as the date of the 2010 Conference. Final details will be forthcoming when a contract with the site has been obtained.

Best Regards and please be in touch (pboulay@abana.org).

Paul Boulay

ABANA Affiliate Relations Board Member



Affiliate Letter September 2008

To ABANA Affiliates and Affiliate Members,

The ABANA Elections have concluded and we have 5, going on 6, new Board Members. The ABANA board is making preparations to meet for the annual face-to-face meeting and we're working on 2 new programs for members.

ABANA Election Early Results

Jim Masterson, the ABANA Election Committee Chair has declared a result in the Bylaws referendum -- the Bylaws revision passed by a wide margin! The board members results will be announced after Chris Winterstein talks to each of those that ran for the board. So if you ran for the Board, contact Chris. The new board members will be announced on the ABANA Web Site and in the "Anvil's Ring" scheduled to be in your mailbox in early November. The 6th highest vote getter will take over Elizabeth Brim's seat, Elizabeth is stepping down to focus on a book on blacksmithing and other projects.

Board meeting date and location

The annual ABANA Board meeting will be held at The National Ornamental Metal Museum, 374 Metal Museum Dr, Memphis, TN 38106, October 31st 8AM, through November 2nd. All ABANA Members are welcome. Time to talk to new and old board members can be arranged during breaks.

Bookmasters closed, ABANA goods moving to VA Central office

The ABANA store is moving to the new Central Office and will be open for business again in mid October. Once that happens ABANA merchandise, books, plans and back issues will be available again. In the meantime you can call the central office and discuss your needs (703-680-1632) or email abana@abana.org.

Report from SOFA

ABANA Board Member and Treasurer, Linda Tanner reports from the recent SOFA conference held in Troy Ohio: "We couldn't have asked for better weather for this event and this has gone down as the biggest SOFA Event ever. They had over 1000 in attendance. Lots of tail gating for you to get and find any thing you could possibly want or need." ABANA Board Members Kim Saliba, Peyton Anderson and Linda were in attendance. Kim donated a box of Anvil's Ring back issues for their auction and it brought in \$100.00 for SOFA. Linda says, "I would say if you haven't attended a SOFA Event it is well worth the effort to go. It was fun times to get to see old friends and make the acquaintance of some new folks."

New Australian Affiliate

The Australian Blacksmiths Association (Victoria) is ABANA's latest Affiliate Group. This group is well established with roughly 110 members. They meet twice a month in the Melbourne, Victoria area. They have been established since 1989 and run basic blacksmithing, wrought iron, power hammer and knife making courses for members. If you visit Down Under, look them up, you are sure to receive a warm welcome. Check them out at <http://www.abavic.org.au>

Progress on the ABANA 2010 Conference

From Jill Turman, Conference Division Chair: "I am VERY happy to announce that **Kate Dinneen** has agreed to be the **Chair for the 2010 ABANA Conference!!!!** Many of you know Kate from her work on the 2008 BAM Conference. She brings lots of conference planning experience, great organizational skills and enthusiasm to this project." She is also a candidate for the ABANA Board and has agreed to serve as Conference Chair regardless of the election results. **The theme of the 2010 conference will be "ABANA's Greatest Hits"**

Reminder of ABANA's new Central Office Administrator

ABANA Central Office
15754 Widewater Drive
Dumfries, VA 22025-1212

Phone: 703-680-1632
Fax: 703-680-6222
e-mail: abana@abana.org

Best Regards and please be in touch (pboulay@abana.org).

Paul Boulay

ABANA Affiliate Relations Board Member

Upcoming Event – Simple Living Festival – Dan Nicholas Park, Salisbury, NC. April 25, 2009

EDITOR'S NOTE: I received word of this event from member Jeep Sabo. He demonstrated at this event in past years and would like to interest other blacksmiths to come and work at this year's event, which will be expanded, to feature blacksmithing.

Here is some of what Jeep says of the event:

"I am one of the main contacts for the event as far as demos go. We are trying to develop a juried type of festival. Bob Pendergrass and Mike Lambert work at the park and are the chairs of the festival and are the best contacts. There never has been payment for demos, but crafters can sell their items. I will take 2 forges out and possibly 1-2 more, if needed."

Bob Pendergrass wrote me and much of his message follows:

"First, a background on the "Simple Living" festival: In short, it began as an expansion of our annual celebration of Earth Day. Last year we decided to promote it to attract a crowd beyond the choir so to speak, and decided to turn it into a festival that would include nature and natural resource type booths i.e. Sierra Club, NC Wildlife Federation Etc., Land Trusts, etc, our staff, as well as some traditional hand labor technology crafts like yours. The event also includes some great local folk and bluegrass music.

What I was thinking that might be an expansion step this year for us is to expand the crafts area with a focus theme. This year it hopefully will include a "hammer in"- your guys. Next year it may be a "knap-in" (flintknapping), the next a "spin-in", etc. We would keep the other crafts as well, but see some changes in focus from year to year. This helps us to attract new folks and make the advertising interesting from year to year. Experience has taught us that "new" gets better media coverage. This is the theory at this time. We hope that you are willing to help us out. We cannot provide any payment to demonstrators, but encourage sales of your crafts. We have some local smiths- Jim, Randy McCombs, Corey Owens, etc. We want to make 2009 the spotlight on blacksmithing.

This year's event will be April 25th from 10-6. The location will be Dan Nicholas Park, a 425 acre park visited by folks from a wide region of the western Piedmont. Visit our website at www.dannicholas.net for general info. You will be surprised if you do not know us already.

We are in the early planning for this year, but have high hopes. If the weather is good we will have lots of folks at the park- we always do in the early spring."

**Bob Pendergrass, Nature Center Supervisor
Rowan County Parks and Recreation**

6800 Bringle Ferry Road
Salisbury, NC 28146
page 704 638-6915
desk 704 216-7819
cell 704 326-6071
Direct Connect 150*24*13685
web www.dannicholas.net

Blacksmith's Exchange

*Have something for sale, or looking for something?
This is just the place to look.*

Send your "for sale" or "looking for" requests to Marty Lyon (at the address or email address on the back cover). Please include your name and phone number

For Sale

125 pound bullhammer air hammer, in excellent shape and hardly used. Two dies go with it. Need to sell it soon, and would like \$5000 for it. I live in south Asheville. Phone is 828-215-6003. Bill Drake

For Sale – Antique Forge

I have an antique forge with some tools- it appears to still work. It is from the Champion Blower and Forge Company, Lancaster, Pa. I was told it is about 100 yrs. old. I also have a few blacksmith tools to go with it. I am interested in selling it. I live in Florence, S.C. E-mail me if you are interested in it. I bought it for my brother who has done some blacksmithing, but he has become disabled from cancer and is unable to use it. Thanks Martha Smith - memarmarsc@yahoo.com

Tire Hammer For Sale

\$2,500.00. New never been used. Call 919 772 4111 or cell at 919 818 3036. Parks Low

Ray Clontz Tire Hammer Plans by Clay Spencer

Ray Clontz Tire Hammer Plans, \$30, including postage to US and Canadian addresses. Send check or money order, e-mail me for cost to other countries

Tire Hammers for sale, 50 lb. hammer head, approx. 250 blows per minute, 1 hp motor, 6" diameter anvil, 700 lbs., 2 ft. square base, \$2200 at my shop or reasonable delivery if I am headed to your area.

Tire Hammer workshops at my shop 20 miles south of Huntsville, AL. Workshop cost expected to be \$1100, 5 days, contact me about lodging. Starting September 2008.

Beverly Shear blades sharpened, \$35 + postage. Blades must be removed from shear, extra cost for deep nicks or blades previously sharpened at angle.

Clay Spencer, 73 Penniston Private Drive, Somerville, AL 35670, 256-498-1498, cell 256-558-3658, clay@tirehammer.com

For Sale

Blacksmithing/ Knifemaking/ Forging POWER HAMMER - 50# Little Giant

Little Giant 50#, manufactured in 1947, modern style (clutch at rear) excellent condition, Plug and pound! Has drawing dies, 2hp original motor, single phase, runs like a sewing machine can forge up to 2" solid metal. \$3800.00 919 / 444-1665

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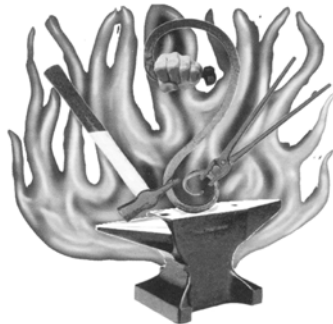
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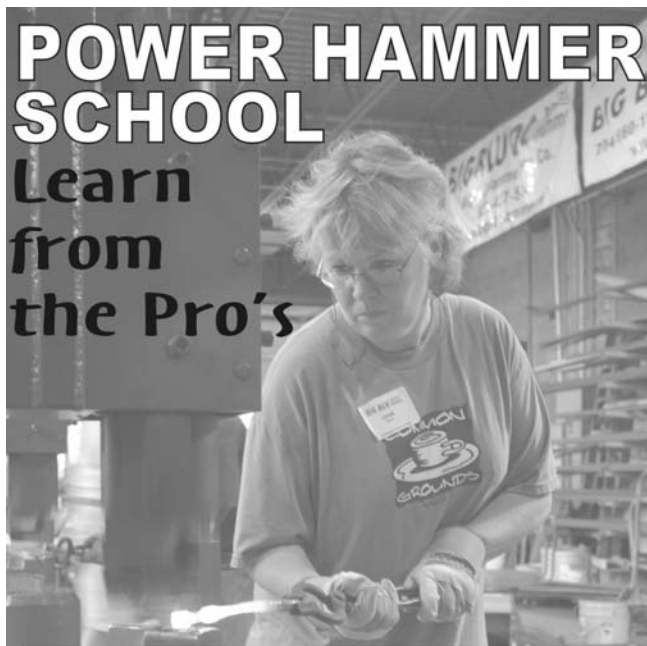
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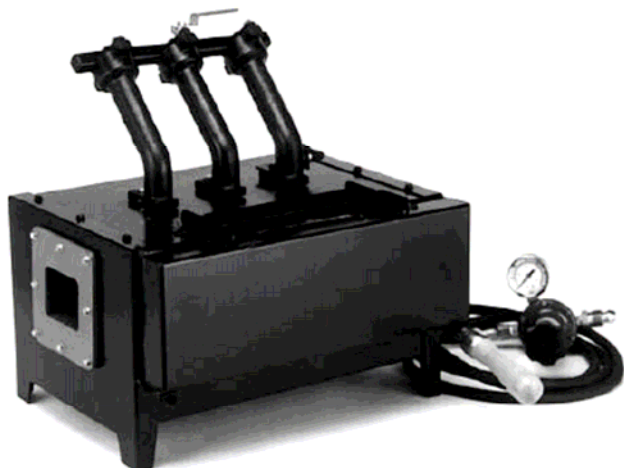
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Coal For Sale

I have roughly 15 tons of Sewell Vein pea stoker washed coal from the Green Valley Mine. 15.5 BTU, 1.25-2% ash. I sell it in 50 lb. bags for \$10.00 and no charge for the bags-you pick up. Whatever bulk load the buyer wants, my front end loader bucket holds 400 lbs. \$10.00 loading fee (or I can furnish shovels). I prefer not to make deliveries. I should have a consistent supply for several years. References available. Fred Pugh 5332 NC87N Pittsboro, N.C. 919 542 4164

Carpool to SOFA Conference

I would like to find someone that may want to carpool to the SOFA conference. I will be driving up and would like to find someone to split the cost of gas with. Call or e-mail. Jim Kennady, 919-528-5636, jim@kennadycustommetal.com Creedmoor, NC.

For more information on the conference see below:

QUADSTATE CONFERENCE 2008

September 26 – 28, Miami County Fairgrounds, Troy, Ohio

<http://www.sofablacksmiths.org/conference2008/conference2008.htm>

Don't miss this wonderful opportunity to learn from some of the best blacksmiths and enjoy one of the largest annual gatherings of vendors and tailgate sales in the country. Your hosts are the Southern Ohio Forge & Anvil members.

Wanted:

Champion Forge Fire Pot / Box Whirlwind

Any condition considered

Kirt Jarrett 919-736-1280 home. 919-583-8089 cell

kirtj@earthlink.net

EDITOR'S NOTE: The following was submitted by Bill Brown concerning a proposed congressional bill:

Finally...

This artist deduction bill (S.548) would give artists the right to deduct the fair market value of their work when donating it to a charity. We artists are always asked to donate work to charitable causes for fundraising purposes but when our work is auctioned, the buyer gets the benefit of being allowed to deduct their contribution above the market value, whereas the contributing artists and artisans can only deduct the amount of the material costs of creating their work (the cost of paint, canvas, clay, paper...)

Please...

This bill is non-partisan and fair. Please click on [this link](http://capwiz.com/artsusa/issues/alert/?alertid=9521951) and simply by typing in your zipcode a letter of support will be sent to your particular senators and congressmen. The link below will allow you to enter your easily enter your zip code so a letter can be sent to your congress person.

<http://capwiz.com/artsusa/issues/alert/?alertid=9521951>

MEMBERSHIP APPLICATION

NORTH CAROLINA CHAPTER OF ABANA

Name: _____
Address: _____
City: _____
State: _____ Zip: _____
Telephone: (_____) _____
E-mail Address: _____

ABANA Member?: Yes No
Blacksmithing Experience: _____

DUES: \$25.00 per year (within USA)
\$35.00 per year (outside USA)
MAKE CHECK PAYABLE TO: NC ABANA
REMIT TO: Marty Lyon
220 Fearington Post
Pittsboro, NC 27312

If you are renewing your membership and your address and phone number have not changed, you do not need to use this form.

ABANA APPLICATION

Name: _____
Address: _____
City: _____
State: _____ Zip: _____
Telephone: (_____) _____
E-mail Address: _____

DUES: ___ Regular (US/Canada/Mexico) \$55.00
___ Senior 65+ (US/Canada/Mexico) \$50.00
___ Student (US/Canada/Mexico) \$45.00
___ Foreign \$65.00
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___ Contributory \$100.00

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Library Code of Item: (if known) _____
Title of Item: _____

Mail this request form to:
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4222 E.L.G. Road
Efland, NC 27243

If you are a member in good standing of the NC Chapter of ABANA, the book you select will be mailed to you as soon as it is available. You may keep it for up to 30 days and then you must mail it back to the librarian. A return address label will be included when the book is mailed to you. All books must be returned in the condition they were received in or you may be charged for the damages. You may have ONE book (Code BK) or up to THREE Hot Iron Sparkles (Code HIS) or THREE magazines (Code MAG) at any one time. A new copy of this form will be sent with each book.

CHAPTER CALENDAR 2008

JANUARY	☞ <u>REGIONAL MEETINGS</u>
FEBRUARY	☞ <u>REGIONAL MEETINGS</u>
MARCH	☞ <u>REGIONAL MEETINGS</u> ☞ <u>1ST Quarter Chapter Meeting</u> MARCH 15 , at 9:30 a.m. Dean Curfman's, Oak Hill Iron Works Morganton, NC
APRIL	☞ <u>REGIONAL MEETINGS</u>
MAY	☞ <u>REGIONAL MEETINGS</u> ☞ <u>2ND Quarter Chapter Meeting</u> - MAY 17 , at 9:30 a.m. Dixie Classic Fairgrounds Winston Salem, NC
JUNE	☞ <u>REGIONAL MEETINGS</u>
JULY	☞ <u>REGIONAL MEETINGS</u>
AUGUST	☞ <u>REGIONAL MEETINGS</u> ☞ <u>3RD Quarter Chapter Meeting</u> AUGUST 23 , at 9:30 a.m. Kaynes Shop, Candler, NC
SEPTEMBER	☞ <u>REGIONAL MEETINGS</u>
OCTOBER	☞ <u>REGIONAL MEETINGS</u> ☞ <u>Dixie Classic Fair</u> <i>October 3 – October 12</i> ☞ <u>North Carolina State Fair</u> <i>October 16 - 26</i>
NOVEMBER	☞ <u>REGIONAL MEETINGS</u> ☞ <u>BONUS MEETING</u> Nov. 1 at 9:30 a.m. J.C. Campbell Folk School, Brasstown
DECEMBER	☞ <u>REGIONAL MEETINGS</u> ☞ <u>4TH Quarter Chapter Meeting</u>

REGIONS

See map on bottom of the page for approximate locations of each region within North Carolina

(1)

Western North Carolina Blacksmiths
Steve Kayne Candler, NC
(828) 667-8868
2nd Wednesday evening, each month

(2)

Triad Area Blacksmiths
Marshall Swaringen Advance, NC
(336) 998-7829
1st Tuesday evening
Dixie Fairgrounds, Winston Salem, NC

(3)

Grand Buzzard's Nest
Tal Harris Waxhaw, NC
(704) 843-5586
Last Saturday, even # months

(4)

Southern Foothills Blacksmiths
Steve Barringer Mooresville, NC
(704) 660-1560
2nd Sunday, each month

(5)

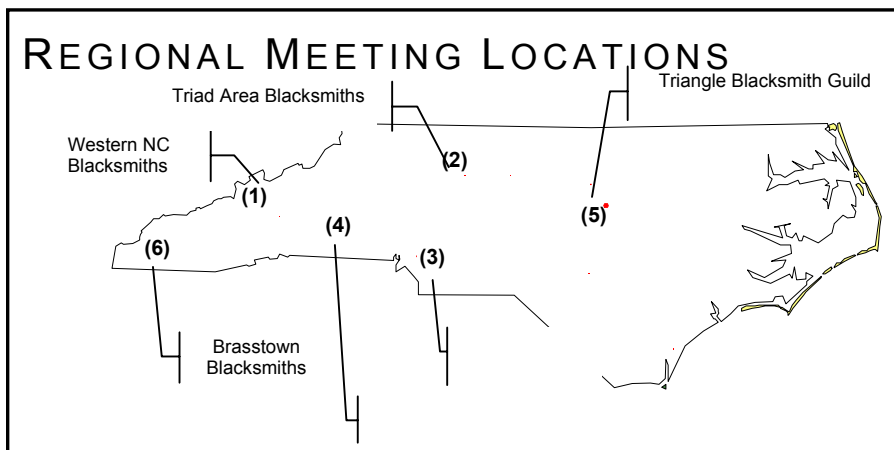
Triangle Blacksmith Guild
Randy Stoltz Cary, NC
(919) 481-9263
1st Saturday, even # months

(6)

Brasstown Blacksmiths

Paul Garrett Brasstown, NC
(828) 835-8441
3rd Saturday, even # months
Noon to 4PM
Note Changes

Note: Any member is welcome at each of the Regional meetings. Call host to confirm date, time and location.



PRESIDENT

Jimmy Alexander
922 Lakeside Drive
Durham, NC 27712
919 / 684-7820
jima136040@aol.com

VICE-PRESIDENT

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steve@powerhammerschool.com

SECRETARY

Marty Lyon
220 Fearington Post
Pittsboro, NC 27312
919 / 642-0098
NCABANAML@EARTHLINK.NET

TREASURER

Parks Low
8108 Deermeadow Drive
Apex, NC 27539
919 / 772-4111
P.Lowjr@att.net

PLEASE WELCOME THESE NEW MEMBERS

James Hodge	Newton Grove	NC
Lark Hubbard	Germanton	NC
Chris Miller	Logan	UT
Dan Mills	Liberty	NC
Kevin Daniel and Amber Teachey	Smithfield	NC
Joe Henrey Williams	Efland	NC
Morris Brown	Seagrove	NC
Jim Griffin	Lexington	SC
Jackson County Green Energy Park	Sylva	NC
David Macdonald	Atlanta	GA
Daniel Miller	Waynesville	NC
Richard Coley	Wilmington	NC
Ben Kastner	Wilmington	NC
Mike Smith	Tobaccoville	NC
David Pennington	Chapel Hill	NC
Billy Siler	Siler City	NC

Don't Forget
2008, 3rd Quarter Chapter Meeting

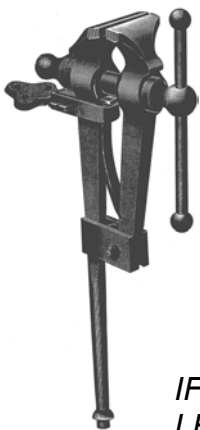
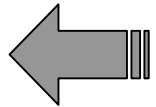
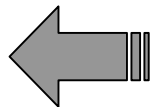
November 15 - 9:30 AM

Jimmy Alexander's Shop, Durham, NC

Bonus Meeting

November 1- 9:30 AM

J.C. Campbell Folk School, Brasstown, NC



**North Carolina Chapter Artist Blacksmith
Association of North America**

THE HOT IRON SPARKLE

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