

Officers and Board of MFC

President

Bill Pevey
1021 Pevey Lane
Crystal Springs, MS 39059
601-892-1867
WBPevey@aol.com

Vice-President

Steve Norquist
3433 Lanell Lane
Pearl, MS 39208
601-939-5227
Miwde3derj8@aol.com

Secretary

Steve Paulson
2007 Pleasant Gift Rd.
Canton, MS 39046
601-859-3855

Treasurer

Stacy Stegall
690 S. Watertank Rd.
Morton, MS 39117
601-537-3296
stegall@bayspringstel.net

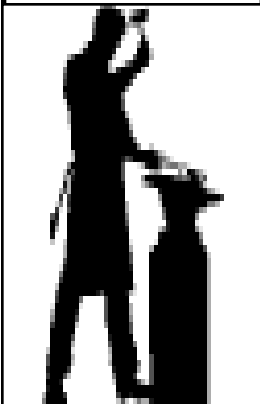
At Large Board Members

Benny Crevitt
1573 Marion Russell Rd.
Meridian, MS 39301
601-483-7025

Max Goodman
404 Parkway Rd.
Brandon, MS 39042
601-992-0383
ogremax@msn.com

Editor

Jim Pigott
136 Munich Dr.
Madison, MS 39110
601-540-6030
jpigott@jam.rr.com



President's Message

Since our last newsletter we had our annual conference and it was a success except we did not have a large participation from membership. Thanks to those who took an active part in the preparation.

Thanks also to our demonstrators, Tom Clark, and Ed and Brian Brazeal. They not only did an excellent job of demonstrating but did a great job of finishing the hinges on our gates. We hope to see them again. Brian and Ed are going to Europe to study with some blacksmiths there and promise to come back and show us some of what they learned.

We still need to finish the fence at the shop so that we can have a more secure facility. Any of you that are willing to help please let me know. We will schedule a time in September or October to accomplish this task.

The business meeting will be held on September 25. Be thinking about who you want to nominate for what. Anything else that needs to be brought up should be at this time.

Thanks to Ed Benton and Lyle Wynn for helping with cleanup day in June. We got the shop in pretty good shape so that maybe we can find what we need when we need it.

Max Goodman and I had a good time demonstrating for the July fourth celebration at the Ag Museum. There was a good turnout and we talked to a lot of people. Believe it or not it wasn't too awfully hot.

We will be demonstrating at the Soule' Museum in October so you need to plan on being there. It should be fun to see what changes have been made since we were there before. Other activities are shown in the schedule of events.

Anyone that is interested in Bob Thomson's class needs to let us know as soon as possible so that we can go ahead and schedule it.

I need some input on what demonstrators you would like to see in the coming months. We can have just about anyone we want. Let me hear from you. Feel free to call me at 601-892-1867. You can look on the ABANA website to see a list.

Bill Pevey

Best Wishes to Jon McIntosh of the MFC. Jon recently had a serious neck surgery and we hear that he is doing well.
Hang in there Jon, hope to see up and about soon.

Notice— September Meeting Date Change
**Our Business meeting will be held on
September 25 at the Ag Museum conference
room. We are moving this date in order for
many of us to go to Alabama Forge Council's
conference at Tannehill on Sept. 10, 11, 12**

Schedule of Events

◆ **September 25**— We will have our annual business meeting to plan the next year and set the date for election of officers. We will meet in the conference room of the Ag Museum at 9:00am. We really need your attendance here. Stacy Stegall has suggested we get started planning for our 2005 conference. Let's choose some options for demonstrators and lock in the dates. Go to the ABANA web site www.abana.org and check out the list of demonstrators, choose the ones you want to see. Volunteers are necessary for sharing the work it takes to make our organization prosper. We have a good thing going here, please help make it better.

◆ **September 17, 18, 19**— Bob Tomson will lead a class to make copper fountains. Bob, as you may remember, is the master responsible for the huge fountain at the main office of the MS Dept. of Wildlife Fisheries and Parks in Jackson. The class will be limited to the first 10 people sending the class fee to Stacy Stegall, address on page 2. The cost is \$200 and includes material, patinas and pump. You will be able to create your own design from many options and will go home with a completed fountain worth \$300. This will be the inaugural class for Bob as he prepares to write his book on the process and take the class on the road. After working with Bob, I can't say enough good things about the experience. This is going to be a memorable experience.

◆ **October 2**— Apprentice Day at the Ag Museum, this is a joint effort with Dr. T.J. Ray who runs the print shop next door to our blacksmith shop. We are inviting the general public to sign up for classes in the print shop and blacksmith shop. We will have a "green coal" class for 8 students in the morning and 8 more in the afternoon. Dr. Ray will have 8 students for the day. This is an attempt to attract more people to both of our disciplines. Will you volunteer to help me with this? If you can assist for even one class it will be very helpful.. Call Jim Pigott, 601-540-6030

◆ **October 9**— Scheduled meeting. Ernie Dorrill will demonstrate 'repose' processes. This will be at the Ag Museum shop. This demonstration will take your blacksmithing to a new level. Ernie has studied with the best and his skill level is on a par with anyone I have ever seen. If all things work out, this demo will be a pre-cursor for a workshop on making chisels, this in preparation of having Ernie, George Dixon, Mindy Gardner or Wendell Broussard (all excellent artists) teach a class here. Don't miss this meet.

◆ **October 29-30**— Halloween at the Ag Museum. These are the nights we make sparks for the kids. The festival starts at 6:00 pm and lasts until about 9:00. Help burn iron and scare kids, what could be more fun. No blacksmithing experience necessary.

◆ **November 11, 12, 13**—Harvest Festival at the AG Museum. This is the biggest demonstration of our year. We will demonstrate before over 5,000 public school children from all over the state. This is the best possible way to gain hammer control and how to work the crowd. Please make plans to help, even if it is for only a couple of hours during this period.. The Ag Museum needs us.

◆ **November 13**— Our normal meeting day, part of the Harvest Festival program.

◆ **December 11**— Christmas Party in Canton.

"COPPERTUNITY OF A LIFETIME"



Remember these from the last newsletter? Hopefully, you recall that Bob is the creator of the Jackson Oak (above) and the exotic fountain at the Mississippi Dept. of Wildlife, Fisheries and Parks office in Jackson. Bob was also did the copper fountain demonstration at our June meeting at the Ag Museum.

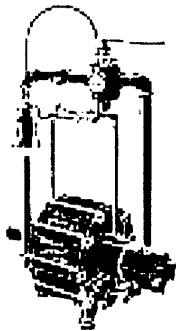
Well, Bob is coming back to Jackson. This time to teach a class on copper fountains. The first class will be September 17, 18, 19. The class is limited to the first 10 members to send their money to MFC Treasurer, Stacy Stegall, see address on page 2. If there is enough interest, the second class will be October 7, 8, 9. We will be starting on Friday afternoon and have a completed fountain by noon Sunday. In this class we will have several options for fountain styles, we will be doing our own patinas and have a fountain complete with pump and ready to go.

The cost of the class is \$200.. this includes the \$50. material costs. Having a little of experience with brazing will be helpful. If you would like to practice before the class, let Jim Pigott, info on page 2, know and we will set a time to have a hands on demonstration/class.

Those of us that attended Bob's fountain demonstration were impressed with his skill with copper and brass and teaching. This is going to be an opportunity you will not want to miss.

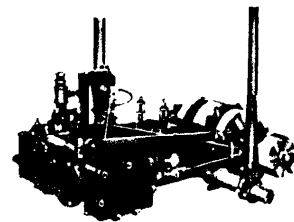
The 2nd Annual Soulé Live Steam Festival

Saturday, November 13th 2004



Rain or shine.

402 19TH Avenue
(Old Soule Steam Feed Works Factory)
Downtown
Meridian, Mississippi



**Bring Your
Steam Engine
Or Hit-and-Miss
Engine**

EXPECT TO SEE
Antique Machine Shop in operation
Foundry ■ Blacksmithing
Antique Tool Display
Broom-making ■ Woodworking
Full Size and Model Steam Engines
(including the famous Soulé Spee-d-twin)
Hit and Miss Gas Engines
Grist Mills

**Great Food
Available On-site
Event Day**

**Alabama Art Casting will present "Sparks in the Dark"
Molten Iron Pour Demonstration at 5 p.m.**

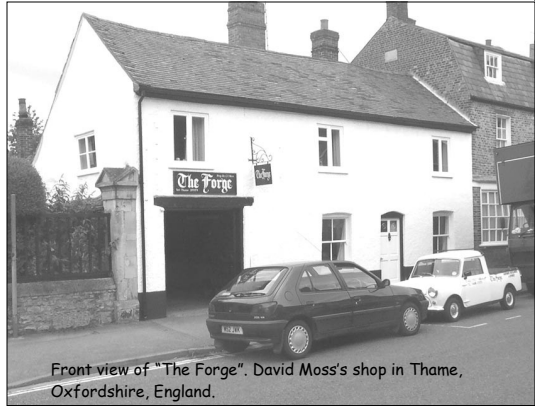
For More Information or to Reserve Your Spot
Contact: Greg Hatcher 601-693-9905 or Sammy Feltenstein 601-632-4712
Benny Creutz (601) 483-7025

A VISIT TO AN ENGLISH SMITH
 By: Tommy Ward

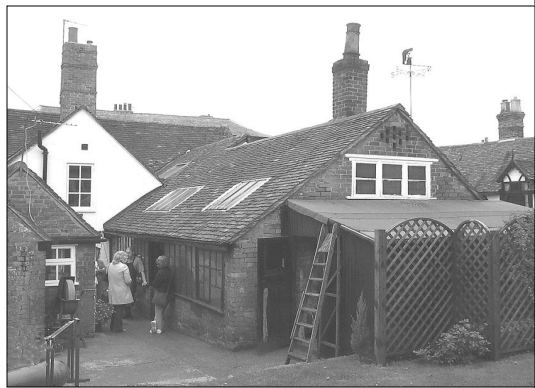
Note from the author: During a recent trip to the U.K. our new British friends, Adrian and Ann Dite, thoughtfully arranged for us to visit the local blacksmith in a town not far from their village.

“The Forge”, and a phone number, is all that appears on a simple sign at the front of the blacksmith shop in Thame, Oxfordshire, England - I suppose that further advertising embellishment isn’t necessary when the address has housed a smithy since the 1700’s (portions of the structure may possibly date to the fifteenth century). But history isn’t unique just to “The Forge”; a number of other local establishments along picturesque High Street are of similar vintage, and the town of about 10,000, located forty-five miles northwest of London, can trace it’s roots all the way back to Roman times.

The historical feel of the place is overwhelming, and as we moved through the wide front entrance into an open space used for storage and layout, I could only wonder at how many pounds of coal and iron had passed over the well-worn brick floor under our feet. The owner, David Moss, welcomed us in, introduced his son, Zeke, and we chatted and ambled back towards the ancient masonry forge located to the rear. The forge area was compact and cluttered with the accumulation of the ages, and I was struck by the general simplicity and timeless look of the operation - by removing a few of the newer devices from view, one could easily be transported a couple of centuries back in time. The Moss’s do utilize some modern equipment, such as welders, saws, and the like, but they obviously are not tool fanatics, and prefer to make do with simple hand tools and fixtures. When I asked if they used a power hammer, Zeke told me they had considered one, but became concerned about the noise impact the machine might have on the historical neighborhood and decided against the idea (I got the distinct impression, however, that the



Front view of “The Forge”. David Moss’s shop in Thame, Oxfordshire, England.



Author’s wife and daughter chatting with the Moss’s outside the forging area at the rear of the building. Note blacksmith figure on weather vane.

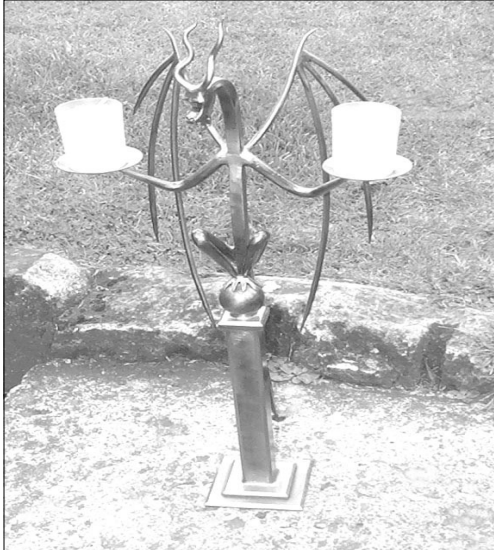


Moss’s are quite content to move metal by hand, thank you, anyway).

After seeing the shop, David invited us into his adjoining home to look over albums containing photos of some past projects. A wide variety of endeavors was evident, with the body of work ranging from small, decorative interior items, to larger, outdoor type works. Of particular interest was a very nice pair of gates recently commissioned for the grounds of a nearby country manor house restoration owned by Robin Gibb, of the “Bee Gees” rock group fame. David also produced several smaller pieces designed by Zeke, including two unusual “dragon” candle holders, and a delightful miniature anvil and stump that Zeke had made as a gift for his dad.

The Moss’s story is an interesting one. David origi-

Forge area. The forge was long ago converted to an electric blower, but David still has an original “barrel” type bellows that once was in use.

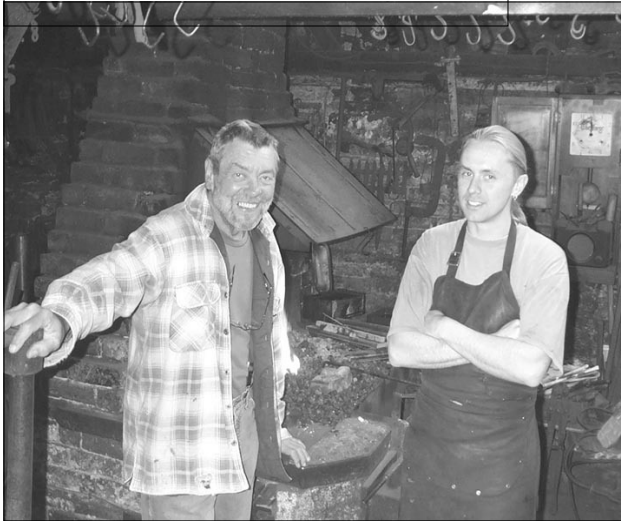


Dragon” candle holder, by David Moss. Note detail of feet and ball.

nally was a microbiologist, and although mechanically inclined, had no experience as a blacksmith. About twenty years ago, he bought the property on High Street solely for the residence, and the adjoining blacksmith shop came along with the deal. Even though the shop had been in use as a smithy for over two hundred years (the prior owner was a farrier), David had no plans to continue the operation. However, after occupying the house he became curious, and began tinkering in the old forge. One thing led to another, and before long



Miniature anvil and stump, by Zeke Moss. This piece was a present made for Zeke’s dad, and includes a set of scale-sized tools.



David Moss, and son Zeke

townspeople were bringing various bits and pieces to the shop for repair or fabrication. In due time David reached the conclusion that he could make a go of metalworking and abandoned his career in order to devote all of his attention to blacksmithing. Zeke began helping his dad part time at age fifteen.



Arrow points to a curved structural beam embedded in the masonry of an original area of the building. Zeke told us that the Ancients often strapped young trees so as to force them to grow into the curved shapes desired for structural arches. The use of this technique diminished after the fifteenth century, leading the Moss’s to believe that this portion of the structure might possibly date to that period.



Forge blower speed is regulated by this antique rheostat.

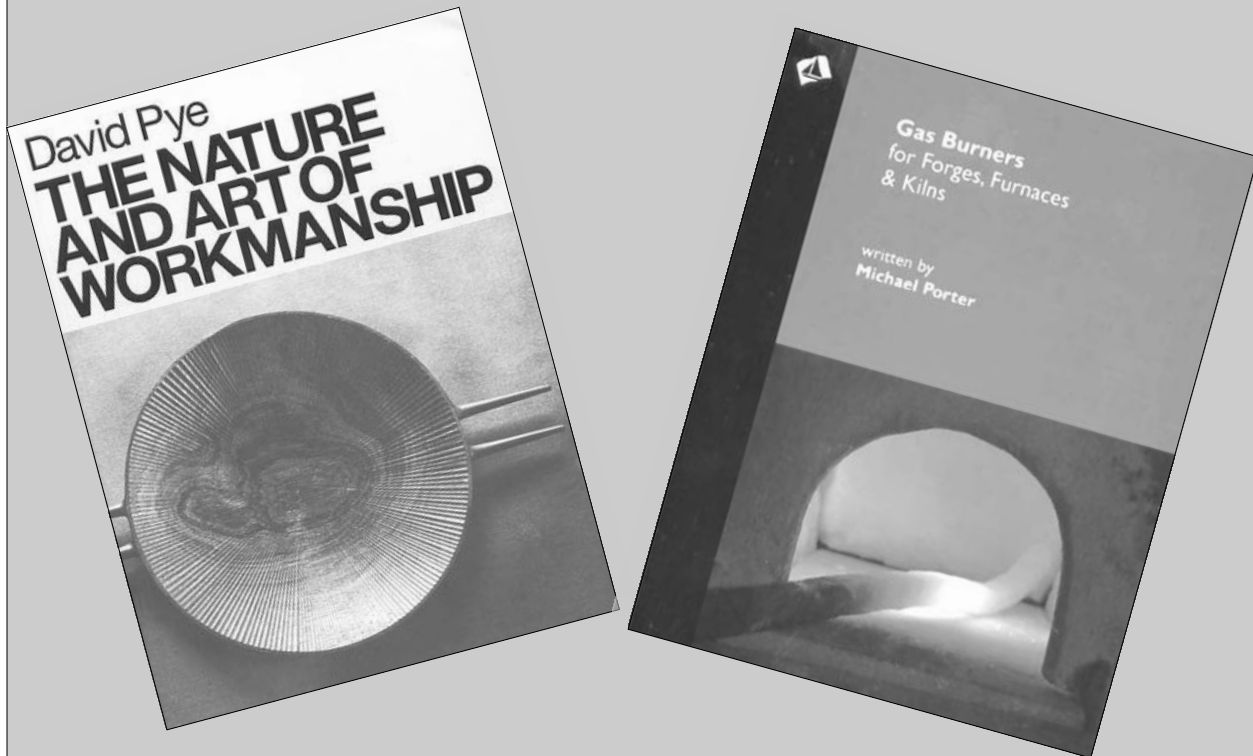
Now twenty-seven, he’s been working full time in the operation for several years. David was justifiably proud of Zeke’s skill as a smith, and told us that his son’s talent for design had added a new dimension to the business. Remarkably, neither David nor Zeke, have any formal training as smiths, and apparently are entirely self-taught.

The Moss’s are probably aware that they’re on to something special, but I doubt they would consider themselves wizards or saviors of some ancient skill. So “The Forge”, although steeped in history, is operated not as a museum, but rather as an ageless enterprise

providing a service to the community - be it the simple repair of a garden tool, or a high art commission. And with the enthusiasm of a father and son for their craft, surely the ring of the hammer and the scent of a coal fire will continue to emanate from the old English smithy for many years to come.



How’s this for a company vehicle? A rare pickup version of the legendary Mini-Cooper. Nicely restored, David has owned this tiny vintage truck for many years and drives it daily.



BOOK REVIEWS

By: Tommy Ward

THE NATURE AND ART OF WORKMANSHIP by David Pye. Originally published in 1968. Revised edition reprinted in 1998 and 2002. Available from Skipjack Press @ www.skipjackpress.com/ or Amazon Books @ www.amazon.com/

“To do a thing in style is to set oneself standards of behavior in the belief that the manner of doing anything has a certain aesthetic importance of its own independent of the importance of what is done”.

- David Pye

The late David Pye was a designer, architect, long time Professor at London’s Royal College of Art, and a renowned woodworker. He’s been called “The Apostle of Workmanship”, and his book, “The Nature and Art of Workmanship” is considered the bible on the subject. My interest was piqued after Dan Nauman referred to Mr. Pye’s work during a presentation at “Forging on the River” in Memphis this past spring, and after obtaining a copy of the book, I wasn’t disappointed. Pye’s introduction of a concept he called “the workmanship of risk and the workmanship of certainty” was unique and thought provoking, and left me with a new perspective on the quest for perfection (and new ammunition for rebuttal the next time someone accuses me of being an anal perfectionist during one of my notorious excursions in minutia). I also found prophetic and timely his views on the societal role the crafts must play in adding diversity and stimulation - particularly in view of the numbing sameness in today’s mass-produced, “Wal Mart” culture.

Mr. Pye had high regard for the potential of the amateur, stating, “*Amateur*; after all, means by derivation a man who does a job for the love of it rather than for money, and that happens also to be the definition, or at least the prerequisite, of a good workman.” and predicted that the future of workmanship would rest in the hands of “part-time professionals” (his preferred definition of an accomplished amateur) due to their ability to devote immoderate amounts of time and effort to the pursuit of perfection; free of the need for profit or production.

A slight downside to the book is a dated and formal English writing style that does not make for light or easy reading. I found it necessary to read some passages several times over, and even laid the book aside for days at a time before picking it up and revisiting certain points. Nevertheless, the subject matter was so unique and thoroughly considered that I found the exertion required to digest it well worth the effort.

GAS BURNERS FOR FORGES, FURNACES & KILNS by Michael Porter. First printing 2004. Available from Cambium Press @ www.cambiumbooks.com/ or Amazon Books @ www.amazon.com/

A while back I watched a simple metal casting demonstration in which a small, shop made, LP gas furnace was in use. The furnace took forever to melt just a few pounds of aluminum, and its burner quite obviously was mis-adjusted (and likely also improperly designed), producing a rich and fummy, inefficient flame. I thought to myself that the demonstrator, though obviously highly skilled in the casting craft, was sorely lacking knowledge of the heating equipment he was using.

I’ve always wanted to found out the “whys” of a thing, feeling that the more one knew about a process or device, the better chance he had of mastering it. Unfortunately, my past attempts to learn the “whys” of gas forge design had generally been unrewarding and I suspected that some key, but unidentified, parts of the picture had eluded me. Even the “experts” had varying theories, and seemed to be unable to satisfactorily address certain areas related to performance. Until now. Michael Porter’s new book, “Gas Burners for Forges, Furnaces & Kilns” absolutely nails the subject, and does a superb job of covering the “whys”.

It’s all about volumetric efficiency, and as any serious hot-rodder knows, most schemes for increasing the performance of an internal combustion device boil down to getting more fuel and air into the combustion chamber. In an atmospheric burner [note], the fuel part is comparatively easy; it’s the air that’s the hard one. Attention to burner airflow is where others appear to have been missing the boat and this is an issue that Mr. Porter has really pursued. With my aviation background, I was certainly familiar with the airflow related language in the book (“laminar flow”, “streamlining”, “aerodynamics”, “turbulence”, “venturi”, “drag”, etc.), but I’ve not seen such terminology used in conjunction with gas burners before. However, it’s all relevant and makes perfect sense as Porter clearly explains concepts that can “soup up” the efficiency of a gas burner. Every aspect of LP gas equipment and related hardware is covered, and the book contains very detailed instructions (and excellent illustrations) on building several sizes of burner assemblies, as well as forges, furnaces, and kilns. Also included are numerous charts and graphs, twelve pages of resources for anything related to the construction or operation of gas equipment, and even a bonus chapter on brazing techniques.

This is as thoroughly a researched and presented work as I’ve seen on the subject, and an absolute must for anyone contemplating building equipment for heating metal or glass, or just simply interested in the “whys”.

Note: all of Mr. Porter’s designs are for normally aspirated burners. Although not specifically mentioned, I would assume that he shares my belief that a forced induction type burner using a blower is a complex, ticklish, and potentially dangerous proposition for the homebuilder.

For your tool box

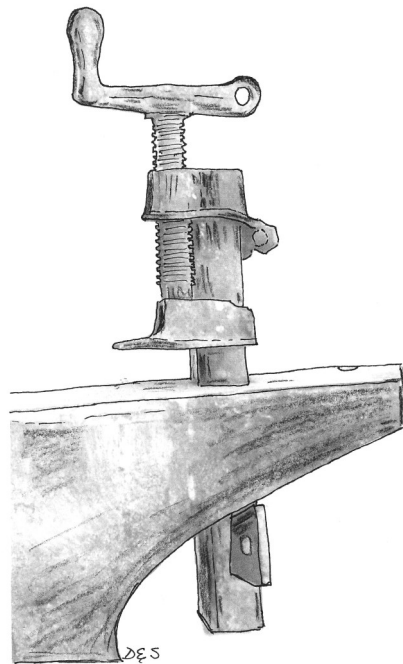
by Dave Smucker

Matt's Vices – Oh, I mean "Matt's Vises"

Matt Walker from the Bristol Forge sent me some photos of anvil work holding tools that he uses in his shop. I have taken his photos and used them for the basis of these sketches in this issue's toolbox section.

For all of these tools, Matt has made them fit the hardie hole in his anvil. Tools like this are really useful to the blacksmith who works alone. With no helper or striker to hold things you have to find a quick way to do it yourself.

The first of these is a pipe type bar clamp converted to work on the face of the anvil.

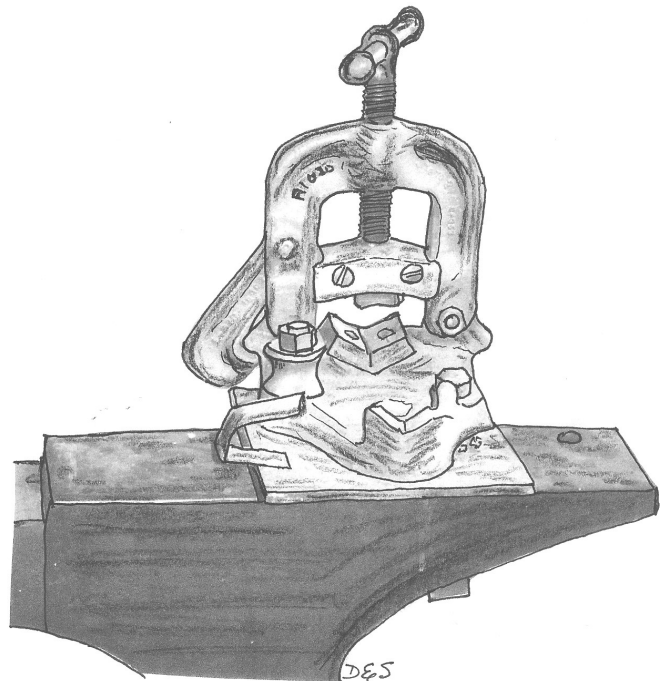


As Matt says, "this has been around for a long time and I think I first learned about it from Elmer Roush". No matter where it came from, it is a good idea and not very expensive to make. To make one you will need the clamp parts that you can find from

many sources, a short length of pipe, some square tubing and some material to make the locking wedge. I say square tubing for the portion that extends through the hardie hole – because 1 inch square tubing fits my hardie hole and is easy to work with. You can, of course, use bar stock or another size of tubing that fits your anvil. Some folks have also squared up the pipe to fit their hardie hole.

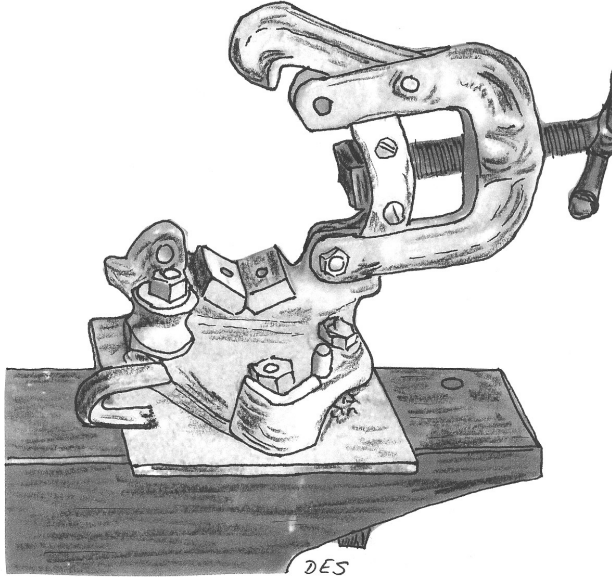
You will need to drill and saw or punch a slot in the portion below the anvil to accept the locking wedge. Make the wedge from 3/16 or 1/4 inch stock. The portion above the anvil needs to be the correct size pipe for the clamp parts you have (either 1/2 or 3/4 pipe). A 4 to 6 inch pipe nipple should work for this and it gives you the correct thread for the clamp head. The other end can be cut to the correct length and welded to the square tubing. Add a welded tab, so your clamp doesn't fall through the hardie hole and can be preadjusted to the setting you want for the hot stock you are going to hold. Then just a half turn can clamp it to the anvil.

Here is another of Matt's vises:



Many of you will recognize this as one of the classic Ridgid pipe vises. Most every maintenance shop and every pipe shop has several. In my oil field days, we had one on the back of every well service truck. You almost "can't work on pipe without one". Matt has taken this basic tool and set it up for

blacksmith use by attaching it to a plate with a hardie hole stem or tang.



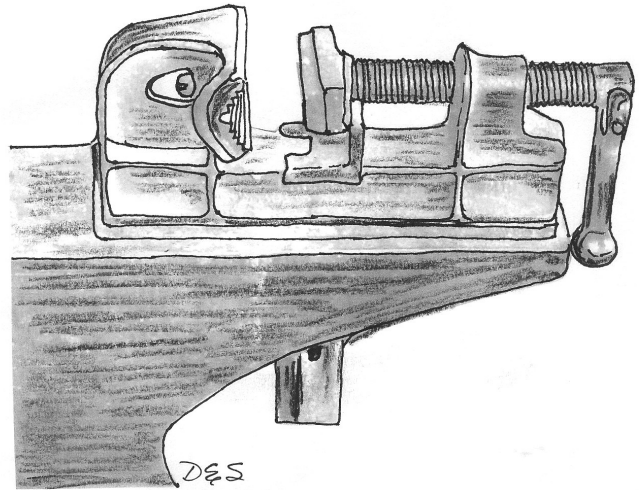
Here is another view of the Ridgid pipe vise but in the open position. Big advantage here is that you can close the vise with just one hand. By having the vise preset to just a little over size for your stock you can come out of the forge with the work piece in one hand, lay the hot metal in the vise, quickly close, and clamp with the other. By placing a bolster or block of steel that is the right height to support your stock you can now punch or slit the material and it is almost as if your "helper" is holding it.

You can also arrange the vise so that your stock is length wise to the anvil by just turning your vise 90 degrees in the hardie hold.

Another great option with this vise is to use it for bending and / or twisting operations. It also lends itself to holding square stock on the diamond, which can be very useful at times. Matt says that he most often uses this vise to hold work that he is brazing or doing other torch work. It puts it at just the right height to make it easy to work on. Matt has also found that these vises come in handy as an extra vise at group functions. They are easy to take along and setup time is zero. With this arrangement of mounting the pipe vise to a plate and having a hardie stem or tang you still have the option to use this vise elsewhere in your shop if you have a square receiver at those locations.

I can see doing this in my large swage block and also on my welding bench.

That's not the end of Matt's vises – he sent me one too:



This one is another type of pipe vise that I had not seen before. This vise would be a great one for twisting operations. It puts it at a better height than most leg vises for twisting and by having it on your anvil; it is very close at hand to your forge. I was taught by Charlie Fuller to do twists with the stock horizontal so that you could use water to cool a portion of the twist that was going "too fast". Having the stock at anvil height makes it easy to look down on your work and judge both the "rate of twist" and how straight you are keeping your stock.

Matt found these vises "around" and purchased them used. Keep an eye out for what you might find from an industrial sale, a pipe fitter, or flea market.

Thanks, Matt, for some great work holding ideas. As Francis Whittaker used to say, "if you can't hold it – you can't hit it".

Ok Folks, bet you have some useful tools or set ups like this too, that we should share with the rest of the AACB. Send me the information – it doesn't have to be fancy, just a photo or two and a brief description and I will do the rest.

Dave

(Another great article from Dave Smucker editor for the Appalachian Area Chapter Blacksmiths, Thank you , sir, for sharing with us.)

New England School of Metalwork
2004 Workshop Season

Guest Instructors from Around the Country

May - Dereck Glaser, Susan Madacsi

June - Charley Orlando, Doug Merkel, Clay Spencer

July - John Rais

August - Steve Yusko

September - Rick Smith, Mindy Gardner, Bob Becker

October - Rob Kirchner, Zack Noble, Mike Greene, Todd Greene

Botanical, Welding, Colonial, Beginners, Tool Forging, Sculpture, Repousse', Damascus, Armor

The largest selection of courses offered

Call to register 1-888-753-7502 or online at www.newenglandschoolofmetalwork.com

7 Albiston Way, Auburn, Maine 04210

What is wrong with America?
"I don't know and I don't care"

Artemus Ward

"Good is the enemy of Excellent.
Talent is not necessary for Excellence.
Persistence is necessary for Excellence.
And Persistence is a Decision."

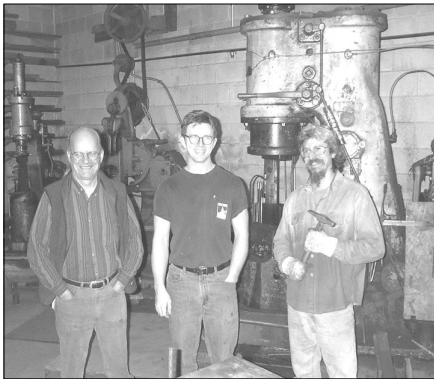
Ralph E Douglass

When Opportunity Knocks
By Jim Pigott

In my lifetime I have discovered that some of the most interesting experiences have come suddenly, out of nowhere. Such is the case of the ABANA Conference in Richmond, KY this past July.

An email from David Mudge, LAMA (Louisiana Association of Metal Artists) editor, web master, good friend to the MFC and board member of ABANA, started this adventure. He suggested that the MFC might want to entertain an offer, from ABANA, to sponsor a demonstrators tent at ABANA conference. The concept was to encourage interested affiliates to get involved in the conference on an active level, emphasis on active. In exchange for room, board and conference fees we would be expected to help set up the demonstration site and supply some necessary equipment, tools and support for the demonstrators. What a deal. I immediately accepted the offer. You know, it is one of those impulsive things when it sounds great at the time but when the reality of logistics sets in you have second thoughts and as the time comes around to actually start putting it all together you wonder, why did agree to this?

Another thing that I have discovered is when you finally make a decision, I mean the real decision, to commit to something everything starts falling into place. As long as you vacillate, nothing happens. Also, if you recruit good help, great things happen. Such was the case when Steve Norquist signed on to participate. Steve and Christine had already cleared their schedules and made plans to go to the conference so this was a good deal better than paying just to spectate.



This way there would be actual interaction with blacksmiths from all other countries, and a ringside seat. Eventually Christine bailed out of the trip, maybe the reasons were legitimate, maybe she decided to let the boys have a week of bonding, I don't know for certain.

The third member of our group, Shane Kingston, shown in center of picture on left, whom we have known from the River Bluff Forge Council, in Memphis, and more recently, working with Jack Brubaker in Indiana, jumped at the chance to accompany us on this venture. Man, I got lucky, having these guys to pull the load.

You know Steve, he is far too capable, it is an affliction of some sort, I'm hoping it's contagious.

As the system worked, we were assigned to work with three demonstrators during the three days of demonstrations. The first was a team from the Czech Republic consisting of team leader Daniel Cherny, Jan Stanek and Gert Bruyninx. They had a day and a half to create the ABANA sign for the conference, shown at right. This work was almost four feet wide and three feet tall. The material used was 5/8"x3" flat bar, this was heavy metal and to accomplish this feat they brought 2



(Continued on page 14)

(Continued from page 13)

hammers and 5 hammer size chisels they designed and made the day before leaving to come to the US of A. In this picture, on the right, Gert swings the "Czech power hammer" while Daniel chisels "KENTUCKY 2004" in the bar which becomes the base of the sign. That's Jan in the background. These guys did an exceptional job of moving iron. I saw them use a tape measure only once while working on the sign. Steve had a tape that showed inches and feet on one edge and millimeters and centimeters on the other. A lot of head scratching went on converting one to the other when trying to cut stock for the demo. Working and socializing with this Czech team was a real treat. They have amazing talent. It would be cool if they could come back here and tour the country demonstrating for other blacksmithing groups.

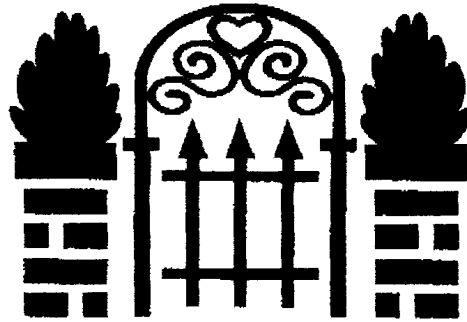


At left is Jouko Neiminen from Finland. He is a professional smith and has done some really impressive work. Check out his "Tipping Scales" on the ABANA web site www.abana.org look for the conference demonstrators page. Jouko is a very personable man, he doesn't mind sharing his "tea" with his new friends from Mississippi. Steve Norquist, in background, skipped the demonstration he most wanted to see just to be able to work with him. Jouko does not use flux to weld mild steel and did not miss a lick. He is one of the people that makes blacksmithing look easy, he has a real relaxed style.

Steve Dunn, from Smith's Grove, Kentucky, was our final demonstrator. He is an excellent blade smith. At right he is finishing a roman style spear head he made in damascus. This was a beautiful point. Steve is a very popular man in the knife making world. He drew a very large crowd for his demonstration.

I believe Steve Norquist would agree with me, this was a great trip. Having the opportunity to meet and work with an international array of blacksmiths was worth the effort. If I am ever given the chance to do it again, I would. This ABANA conference, chaired by Dave Koenig, was a very well organized event. I recommend your participation in the next event in Seattle, WA. In the meantime, if you are not a member of ABANA, join.





**ALABAMA FORGE COUNCIL
FALL CONFERENCE**

Sept. 10-12 2004

DEMONSTRATORS

Walt Scadden- Ship Smithing & English Wheel

Matt Jenkins- Traditional Smithing

**Demos Start at 8:30 to 11:30
1:00 to 4:00**

Cost of Conference \$30.00 non-member \$50.00

Other Events

Rick Jay- Flowers

RJ Handle- Origami

(Green Coal) Beginning Blacksmithing Classes

Friday night contest

Saturday night slides

Sunday 8:30 to 10:00 Lecture by: Walt Scadden

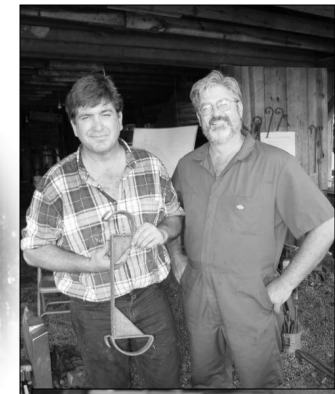
Business in Blacksmithing

**For Information Contact
Judd Clem 256 232-2645**

**Did you know?
We had a conference too.**

Tom Clark was our featured demonstrator this year and, as always, there was a lot of "bang for the buck." Tom always gives much more than you ever ask. Tom brings a head full of knowledge and a trailer full of tools wherever he goes. We couldn't ask for a better supporter for the MFC. We were also treated to the Brazeal brothers, Brian and Ed, the self appointed "freak show." After the conference the Brazeal brothers conducted a class on forge welding. This was a nine-hour day chock full of new techniques. I will show you some pictures of the conference and class but if you want to learn what they have to teach, you have to start showing up and participating.

We had 32 registrants, Anthony Goodrum did an excellent job as auctioneer, there were some really nice auction items, good food and fellowship and we lost money.



Tony Harris, shown below, of North Carrollton, MS, demonstrated lampworking techniques during our conference. Tony does some exceptional work in glass. The picture of a marble he made does not do the marble justice. The vortex design in the glass looks like it goes on for miles. This is beautiful work. We will be seeing more of him.



Forge welding class, below



From: Linda Crevitt [crevtrad@bellsouth.net]
Sent: Saturday, July 17, 2004 11:09 AM
To: Jim Pigott
Subject: Interesting Project

Jim,

Check the website listed below. There is a pair of shackles that I made to use for this "Walk Through History" website. I am working on the "Forks in the Road" project at Natchez. This is where they had the slave sales and I'm making a whole bunch of assorted shackles and chains that will be partially imbedded in cement at the site.

Linda got her a digital camera so I'll be able to send you a picture when I get everything made.

How was the ABANA conf.? Did ya'll get to see any demo's or were you tied up at the tent all the time? Hope you had a chance to get some interesting pic's for the newsletter. Who went from MS?

Benny

<http://www.slaveryinamerica.org/walkthru/roadtofreedom/main.html>



The talented James Dillard recently attended a reposit class at Tom Clark's Ozark School of Blacksmithing, in Potosi, Missouri. The class was taught by Christina Haberman, Austrian native, and daughter to the renowned Alfred Haberman. As I hear it, James was considered "best of the class" which does not surprise us at all. Beautiful work, James.

I would like to introduce you to "The Forge". It is a discussion site where you can ask questions about blacksmithing and receive responses from all over the world. This is a great way to increase your knowledge on blacksmithing and a wonderful resource if you have questions.

On the following few pages I will reprint just a few of the discussions I have read lately.

To subscribe to The Forge, go to the ABANA web site, www.abana.org go to education resources and go to The Forge.

Your Editor.

OK, the four basic blacksmithing exercises are now at the following links:

<http://netlabs.net/~osan/Documents/ex1.jpg>

<http://netlabs.net/~osan/Documents/ex2.jpg>

<http://netlabs.net/~osan/Documents/ex3.jpg>

<http://netlabs.net/~osan/Documents/ex4.jpg>

They look simple and in fact they are VERY simple. But doing them correctly AND to dimension isn't nearly as easy as it may appear.

Spend a few days doing nothing but these exercises and you will gain something in hammer control and your knowledge of volumes. In order for the exercises to work, you MUST adopt an attitude of pushing the limits of your control, which in turn requires an adjustment of your standards (maybe). Peter Ross had me up on the rack for an entire week, stretching me for all I was worth. I came away from the class with a fundamentally altered perception of what I could do and what it meant to be a real blacksmith working to specifications. If you are patient with yourself and the exercises, they may bring you to a place you never thought you'd come to, or even that it existed in terms of what is possible in precision with nothing more than hand, hammer, anvil and a pair of eyes.

Do each step as if it was the ultimate goal. That is, when you finish a step, all planes would be flat and at the right angles; all edges should be dead straight, and the piece should look FINISHED. Then move on to the next step and not before. Peter Ross was emphatic on this point, saying that one's work cannot, except by mere chance, come out right unless you adhere to this principle. It changed my smithing forever, and for the better, even though I say Peter ruined it for me forever. Knowing what I was capable of, I no longer had the excuse to do sloppy and imprecise work.

If you think these may be boring... well, I never find swinging a hammer so. But even so, when you start producing these objects such that they begin to look closer and closer to machine-made (to a degree), I think the sense of satisfaction will speak for itself. Flatter planes and straighter lines than you perhaps thought possible... very satisfying

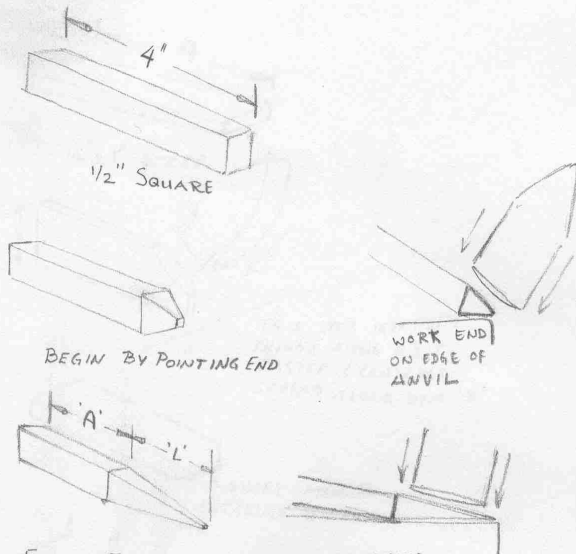
to know they came from your own hand, that much I can and will promise you.

I will also way that if your work doesn't improve and you are certain that your attitude and attention were correct, the result may call into question things such as your hammer, posture, anvil height. Don't be afraid to change these if by chance things aren't improving. Either that or you're already a perfect smith. :)

Best wishes.

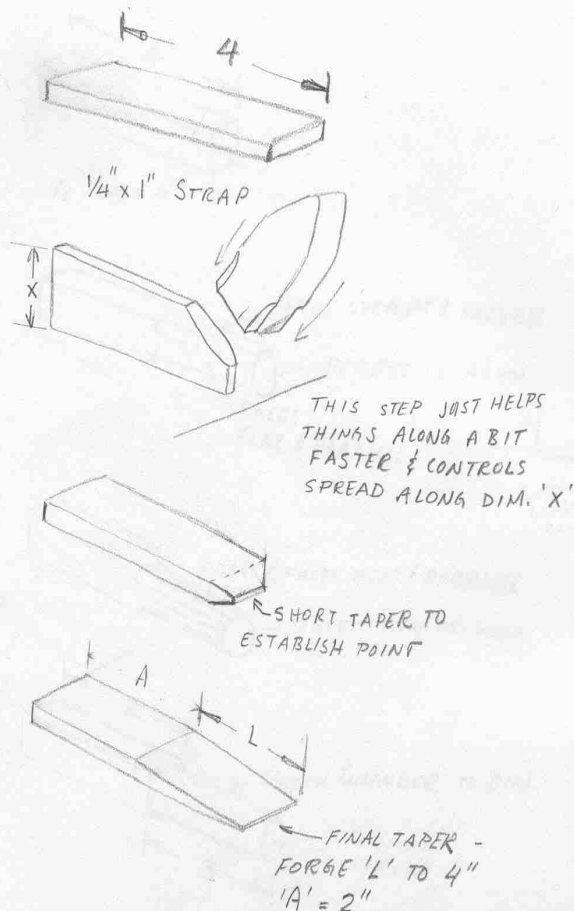
-Andy

EXERCISE #1 SQUARE TAPER



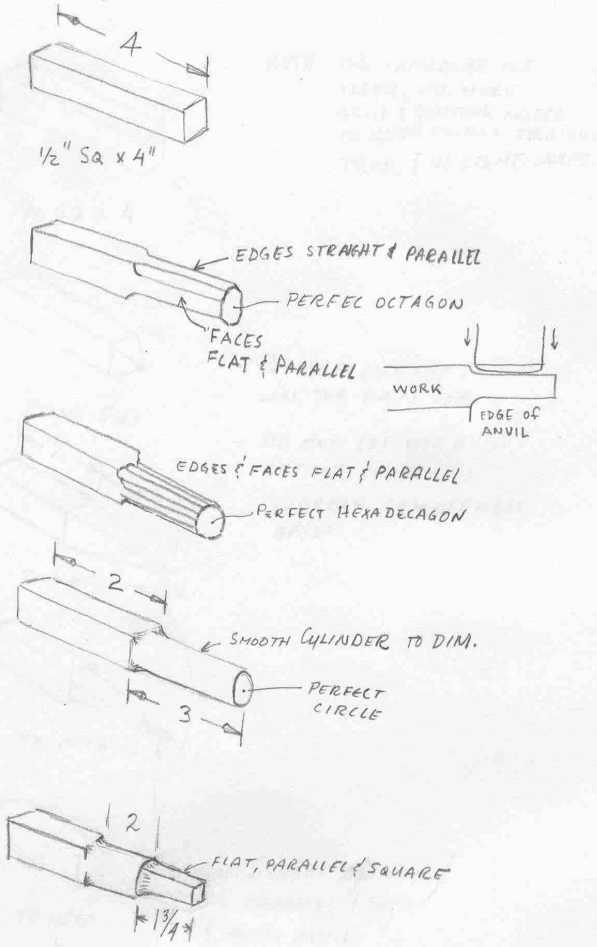
- FINISH TAPER - 'L' SHOULD BE PRECISE AS MUST 'A'
- FINISH EACH STEP AS IF IT WAS THE LAST
- NEVER ALLOW THE WORK TO GET TOO FAR OUT OF SHAPE
 - MAKE FREQUENT CORRECTIONS
 - DECIDE ON LENGTH 'L' BEFOREHAND AND PRACTICE FORGING THE TAPER TO PRECISE DIMENSION
 - ALL SIDES SHOULD BE IDENTICAL
 - ALL EDGES SHOULD BE DEAD STRAIGHT
 - ALL PLANES DEAD FLAT & EVEN
 - CUT STOCK TO LENGTH BEFOREHAND
 - * FORCES USE OF TONGS
 - * DIS ALLOWS "CHEATING" BY FORGING ONE TO WORK TO A DIMENSION

EXERCISE #2 - RECT. TAPER

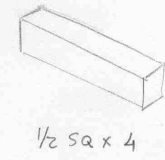


- ALL PLANES DEAD FLAT
- ALL EDGES DEAD STRAIGHT
- FORGED TO PRECISE DIMENSION

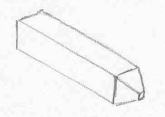
EXERCISE #3 - SQUARE TO ROUND TO SQUARE



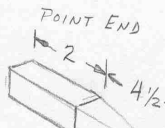
EXERCISE #4 - SQ. TO ROUND TAPER



NOTE: THE SHALLOWER THE TAPER, THE MORE SKILL & CONTROL NEEDED TO KEEP THINGS STRAIGHT, TRUE, & IN RIGHT SHAPE

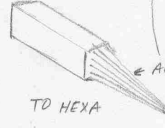


- PERFECT EACH STEP AS IF IT WAS THE FINAL ONE

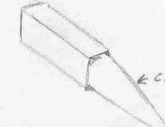


- DO NOT LET WORK GET OUT OF SHAPE

- CORRECT CROOKEDNESS OFTEN



ALL SIDES & EDGES STRAIGHT AND PARALLEL & FLAT & EQUAL ANGLES



CIRCULAR CONE SMOOTH & SYMMETRICAL ALL AROUND & TO DIM.

You do need to anneal any aluminum sheet before you try to form it. Easiest way is to set your oxy/acetylene torch for pure acetylene, and put a layer of black soot on the aluminum. Then, with the biggest tip you have (a rosebud is good) you very very carefully just burn off the soot. Too much heat in any one spot, and you have a puddle of aluminum on your workbench. Then let it air cool, and the aluminum is soft. You may have to repeat a few times as you work it.

> > I have been given some old iron nails from a cathedral in Vancouver.
 > > They recently did a renovation and someone thought that the origin
 > > nal hand forged nails could be made into something interesting to
 > > sell as a fundraiser. I've searched the archives but haven't found
 > > anything very helpful on how to work with this material. I'm
 > > wondering how much I can manipulate the metal - can it be annealed
 > > and bent? - can it be soldered or should I be planning on cold
 > > connection? and finally, how do I keep it from rusting?
 > > Thanks very much
 > >
 > > Joanna Francis

Hi Joanna,

If these are old hand made nails, they are almost certainly wrought iron.

You don't mention your level of experience or even if you are a blacksmith, so I will assume you are at best a novice. Please correct me if I'm wrong.

Wrought iron is an interesting material to work. I happen to love it, but most smiths hate it. It has to be worked at a bright yellow heat most of the time. The less refined it is, the more this is true.

Wrought iron is a mix of essentially pure iron with siliceous slag, iron silicate, a glass-like material. It is added to the pure iron to impart better strength characteristics as pure iron is very soft and mushy. The slag, being a glass, also imparts very good corrosion resistance to the iron. What happens is that as the ball of iron comes out of the furnace, it is full of voids that are filled with the slag and must be refined by hammering, which forces most of the slag out of the iron, but some remains. During this hammering, the iron and slag align themselves in the direction in which the material is being drawn. In single-refined iron, the bloom is hammered basically once and drawn into a bar that is often called "muck bar". If you take a piece of this and etch it in acid you will see a beautiful wood-like pattern in the grain.

Double-refined wrought iron has been folded back upon itself, re-welded into a single block and then drawn into bar. This iron will be of a better quality in that there will be finer voids in the iron and less slag. Triple-refined iron has had this done yet again and has a significantly finer structure. Then there is something called, if I recall correctly, king bar or King's Iron, or some such, that has been refined four times and it considered the highest quality.

Nails are probably either made from muck bar or double-refined iron and almost certainly not of anything better than that as the finer the iron the more costly and there was no reason to spend extra money on nails.

You can work wrought iron cold in terms of bending it, but you do run the risk of its splitting and fracturing if the bend is too tight in relation to the stick size. If you are looking to make a ring, for example, you may get away with it, but don't be surprised if cold bending results in some failure in the material.

Hot working at the right temperature will also further refine the iron.

Wrought iron forge welds much more readily than modern steels, largely due to the absence of carbon. A good smith can forge weld wrought without using flux. When welding, make sure the iron is "drippy hot". This is a high welding heat where the material looks almost oily on the surface. That is the right temperature at which to weld wrought.

As for what you can make from these nails, that is really a very open

set of possibilities. You can weld many nails together to make a larger piece of material and make something from that or you can choose to make something from each individual nail, which may be what you will want because it will provide more finished pieces. Another factor to consider is how large the nails are. If they are large spikes, I might consider making crosses from them, an appropriate thing perhaps, given where they came from. You can weld two nails together in a cross or if a nail is large enough you can make a nice cross (don't recall the precise name offhand) by splitting each end at 90* to each other and spreading the splits flat, resulting in a very nice cross.

If a spike is too long and not thick enough, bend it back upon itself, weld it all together into a heavier bar and work from there.

You could make various hooks, 'J's 'S's, etc. as well. I'm sure there are many things you can make that I cannot think of or don't know about.

OR, you could etch the nails very lightly in acid or ferric chloride to reveal the grain of the metal and offer them as historical artifacts as they are. I would be inclined to this solution. They remain original and the hand of the smith is revealed to the observer. They are a piece of history and are worth preserving as they are. You could even make a small wooden stand with a plaque stating that it is a nail from such and such a church t fancy it up a bit and to document the artifact so that someone finding it in a garage sale 173 years from today will know that this isn't something to be tossed away without thought... or hopefully they will have that much sense.

That is my low dollar opinion.

Best wishes, and if you have any other questions, please feel free to ask.

Regards,

- Jim,
- I would like to ask you to put an ad in your newsletter for me if possible. The information below is pertaining to my business, Zoeller Forge. On my website there are
- several burner plans and simple air hammer modifications plans that you can use to print in your newsletter also. The plans may be found at www.geocities.com/zoellerforge
-
- Zoeller Forge
- 4312 Lahna Dr
- Louisville
- State: KY
- Zip: 40216
- Phone: 502-361-0706
- Email: zman59@earthlink.net
- Website: www.geocities.com/zoellerforge
- Description: Supplier of stainless steel burner flares to fit the Reil , Side arm, Mongo and T-Rex burners. He carries a full line of quality propane regulators, hoses and fittings. He sells all the parts for the burner designs in Michael Porter's book both separately and in kit form. He has 1" and 2" Durablanket 2300 degrees ceramic blanket and a refractory coating, Plistx 900F, that will replace ITC 100. Call for pricing.
-
- Thanks in advance
-
- Larry Zoeller
- zman59@earthlink.net
- Why Wait? Move to EarthLink.

Iron Symposium**Cooperstown, NY****October 9, 10, 11, 2004**

This Fall will see the first ever “pre-industrial iron symposium” Hosted by the Farmer’s Museum of Cooperstown, NY, this three day event will bring professionals and enthusiasts from across the country together to participate in activities, demonstrations and lectures related to the production of bloomery Iron.

New York state was once a leader in the production of iron and iron work in the United States and bloomery iron played an important part in the State’s as well as the Country’s economy. Join us over Columbus Day weekend as we explore this exciting early technology through a series of lectures and demonstrations.

On the first day (Sat, October 9), we will light a charcoal fire, on the second day we will fire up a smelter, and on the third we will go into the shop to fashion an artifact from the iron we have made. Lectures and demonstrations pertaining to the making and use of early iron will be held throughout.

We have some wonderful demonstrators lined up including:

Paul Spaulding, NY	– Forge work (19 th c. blacksmithing)
Lee Sauder, VA	- Smelting Demo and lecture (contemporary bloomery smelting.)
Darrell Merkowitz, Canada	- Forge work and lecture and exhibit (Viking-age ironwork)
Daniel Karem, Canada	-Lecture, Slide show and exhibit (Iron work of the Spanish Renaissance)
Tres Loeffler, NY	-Forging demo, lecture (Colonial tool making)
Barry Keegan, NY	- Lecture, Demo (Backtracking the iron age, stone-age smithing)(Charcoal Making) (Eight ways to make fire)
Michael McCarthy	- Lecture, Demo (Forging Blooms), Slide show (The blacksmith shop)

Ticket Price will \$150.00 for this three day event, and will include breakfast and lunch on each day. One day tickets are \$75. Any specific lecture can be attended for \$5. Call Karen Wyckoff at 1-607-547-1410 or 1.888.547.1450 for Registration and Details.

If you have any questions, feel free to get in touch with me! michael@hammerinhand.com (or leave message with Karen)

Hope to see you there!

But can you forge it?
New amorphous steel is twice as strong

By Charles Choi
United Press International

New York, NY, Jun. 24 (UPI) -- U.S. scientists have made amorphous steel, which has molecular bonds that resemble those of a liquid more than a metal, and a hardness and strength more than double the best ultra-high-strength conventional steels.

The new steel could find use in everything from submarine hulls to skyscrapers, experts told United Press International.

Steel is a metal alloy composed mostly of iron, with varying amounts of carbon and other elements, such as titanium. Its molecular structure is crystalline, containing orderly rows and formations of atoms.

In amorphous substances, the atoms are highly disordered. One example is window glass, which is more akin to an extremely viscous, immobilized liquid than a solid. Another amorphous substance is water ice, the most dominant form of water in the universe, which condenses from water vapor onto cold surfaces, such as interstellar dust, and forms the deep-space wanderers known as comets.

Amorphous materials possess "a non-crystalline structure, in which the atoms arrange randomly, thus no crystallographic defects" form, Zhou Ping Lu, a research scientist at Oak Ridge National Laboratory in Tennessee, told UPI. This is why they can be so strong, he added.

Compared with crystalline counterparts, amorphous materials usually show superior mechanical and temperature properties and corrosion resistance. On the other hand, amorphous materials can cost about \$100 a pound, "much more expensive than the crystalline materials," Lu said.

Several amorphous, iron-based alloys already have found use in industry. An amorphous, ferro-magnetic alloy, sold under the trademarked name Metglass, has extremely high energy-conversion efficiency when used in the cores of electrical transformers or other energy converters. "As a result, using these materials as cores can save up to two-thirds of total energy loss due to heat dissipated by distribution transformers and motors with conventional ferro-magnetic cores," Lu said.

Because of their strength and anti-corrosion properties, amorphous steel also would be desirable in buildings, but until now no one has been able to make components big enough to be structural members. Before Lu and his team conducted their research, the largest amorphous steel rod anyone had cast was only about 4 millimeters wide. Now, after nearly a year of work, the team believes it has found a way to make amorphous steel in bulk economically with traditional, drop-casting methods. Its cost should be comparable to that of conventional steels, Lu said.

The researchers presented their findings in the June 18 issue of the journal Physical Review Letters. "In a nutshell, the key technological impact is that the invention of amorphous steels can potentially revolutionize the steel industry," said Joseph Poon, a materials physicist at the University of Virginia in Charlottesville, who was not involved in the research. Poon's team last April reported similar results in making amorphous steel in bulk in the MRS Bulletin, the journal of the Materials Research Society. The key was adding just a dash of yttrium. The rare-earth metal helps frustrate the onset of crystallization even as the liquid steel approaches its solidification temperature -- about 2,500 degrees Fahrenheit (1,370 degrees Celsius). The steel then can be shaped with conventional melting and casting techniques.

Poon noted the steels could even be processed like plastic. "When you produce a block of some metal and want to shape it, you can do machining," Poon told UPI. "However, if you can treat these guys as plastics, you can build a mold, and then when you cast it, you can just cast it in. You can squeeze it, compress it, deform it, flatten it out, shape it like plastics." The centimeter-sized samples the researchers made showed extraordinary strength and hardness, as well as no magnetism. "The Navy wants to make non-magnetic submarine hulls," Poon said. "Right now, the steels the Navy uses for submarine hulls are ferro-magnetic. You don't want to be sitting in a mine field if you're sitting in a magnetic field to begin with."

Among applications Lu listed for amorphous steel, in addition to buildings and machinery, are armor-piercing projectiles, as well as electronics and recreational equipment, such as fishing poles, tennis rackets, golf clubs and bicycles. The publicly traded company Liquidmetal Technologies in Lake Forest, Calif., owns an exclusive license to inventions made from amorphous steels. The firm's customers include Samsung and Rawlings Sporting Goods Co. "You could use some parts in motor vehicles," Poon said. "They're so strong, you can reduce the quantity of steel you use (to) make (products) lighter." Lu said further improvements will be necessary in the new steels to meet scale-up challenges. "The present amorphous steels, although strong, are still brittle. Thus, more effort will be needed to improve on the ductility and damage tolerance," Poon said. "Once the damage tolerance can be improved, applications will soon be realistic."

There are several ways to improve these properties, Poon said. Ironically, one is partial crystallization. "Basically what you end up having is a composite of amorphous steel with microcrystals or nanocrystals," he suggested.

Manage membership or unsubscribe at:
<http://mailman.qth.net/mailman/listinfo/theforge>
theforge mail list group photo site is
<http://www.photoaccess.com>
Login: blacksmithblacksmith@hotmail.com
password: anvil

Since it was just May 5, I thought it appropriate to rehash the founding of "Cinco de Mayo" for those who may be a little confused about this most important Mexican holiday.

Most people don't know that back in 1912, Hellmann's mayonnaise was manufactured in England. In fact, the Titanic was carrying 12,000 jars of the condiment scheduled for delivery in Vera Cruz, Mexico, which was to be the next port of call for the great ship after its stop in New York. This would have been the largest single shipment of mayonnaise ever delivered to Mexico But as we know the great ship did not make it to New York The ship hit an iceberg and sank and the cargo was forever lost....

The people of Mexico, who were crazy about mayonnaise, and were eagerly awaiting its delivery were disconsolate at the loss

Their anguish was so great, that they declared a National Day of Mourning which they still observe to this day

The National Day of Mourning occurs each year on May 5th and is known of course As "Sinko de Mayo"

The Traditional Metalsmith
Blacksmithing: Illustrated & Explained
 By George Dixon, former Head Blacksmith
 Samuel Yellin Metalworkers

Volume 1, Number 3
July 2000

Topic: *Drawings & Layout*, pg. 7

Motif: *Floral, Folded Sheet*, pg. 6

Tooling: *Layout Tools & Techniques*, pg. 10

Architectural Iron: *Rails*, #1 of 4, pg. 12

Gallery: *Railings*, pg. 16

Topic: *Jigs, Fixtures & Forms*, pg. 2

Motif: *Picket Motifs*, pg. 4

Tooling: *Split Picket Jig*, pg. 8

Architectural Iron: *Rails*, #2 of 4, pg. 12

Gallery: *Pickets & Panels*, pg. 16

Volume 1, Number 4
October 2000

Topic: *Jigs, Fixtures & Forms*, pg. 2

Motif: *Picket Motifs*, pg. 4

Tooling: *Split Picket Jig*, pg. 8

Architectural Iron: *Rails*, #2 of 4, pg. 12

Gallery: *Pickets & Panels*, pg. 16

Annual Subscription Please mail \$28.00 to:
 \$28 US & Canada \$40 Overseas
The Traditional Metalsmith
 1229 Bee Tree Lake Road
 Swannanoa, NC 28778
www.traditionalmetalsmith.com

KAYNE & SON

Blacksmithing & Metalworkers
TOOLS - EQUIPMENT - SUPPLIES

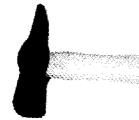
100 Daniel Ridge Road • Candler, NC 28715

(828) 667-8868 or 665-1988

Fax: (828) 665-8303

Email: sales@kayneandson.com

www.kayneandson.com



BIG BLU



Off Center Tools

We carry the world's finest blacksmith's tools at affordable prices



PEDDINGHAUS 2 HORNED ANVILS



BLU CRUSHER



ABANA

Name: _____

e-mail: _____

Address: _____

www url: _____

City: _____

Phone: _____

State: _____ Zip/PC: _____

Fax: _____

Country : _____

Type of Membership New Member Renewal

Credit Card Information _____

Regular - \$45.00 Contributing - \$100

Visa Mastercard Expiration Date: _____

Student - \$35.00 Library - \$35.00

Card # _____

Senior (65+) - \$40.00 Overseas Air - \$80.00

Submit check, money order (U.S. banks only), or by credit card:

ABANA Chapter Affiliation: _____

LeeAnn Mitchell

Application may also be made at the ABANA web site:
www.abana.org

P.O. Box 816
 Farmington, GA 30638

Phone: 706.310.1030
 Fax: 706.769.7147

M E M B E R S H I P A P P L I C A T I O N

Mississippi Forge Council Membership

Date -----

Name -----

Spouse -----

Address -----

City -----

State/Zip -----

Phone -----

E-mail -----

Make check for \$25.00 payable to MFC and send to:
 Stacy Stegall
 PO Box 320744
 Flowood, MS 39232

MFC is an affiliate of the Artist-Blacksmith Association of North America (ABANA) Dues are \$25.00 per year and include subscription to The Upset.

Disclosure
 Blacksmithing is inherently a dangerous occupation. You are responsible for using eye, ear and respiratory protection and safe work methods. The Mississippi Forge Council, it's Officers, demonstrators, writers, editors and members specifically disclaim responsibility for any damages, injuries or destruction of property as a result of the use of any information published in the Newsletter, demonstrated at conferences or at meetings. Every effort is made to insure the accuracy and safety of information provided, but the use of any material is solely at the user's own risk.

NewslettePolicy:
 Material is composed and written by the editors except as indicated. Unless otherwise noted, material herein may be reprinted without written permission provided proper credit is given. This is YOUR newsletter and contributions are encouraged and needed. A SASE should accompany any material you wish returned. Any suggestions or comments regarding the newsletter are welcome.
 Send contributions to:
 Jim Pigott
 136 Munich Dr.
 Madison, MS 39110
 jpigott@jam.rr.com

**MISSISSIPPI FORGE COUNCIL
 P.O. BOX 320744
 Flowood, MS 39232**

Presorted Standard
 U.S. Postage Paid
 Jackson, MS
 Permit No.80