

Rocky Forge News

Volume 5, issue 3 – March, 2006

Next Meeting:

The next meeting of the Rocky Forge blacksmiths will be at 9:00 A.M., March 11th, at Ted's shop. Shane S. and Jim K. will be demonstrating the making of a long medieval sword. This will be a neat demo so try to make it if possible.

Carol will provide a cold meat sandwich lunch with baked beans, chips and whatever else I can talk her into. A donation can will be available to help cover expenses. Going to the West Point grill for this day will simply take to much time.

Be sure to bring Iron-In-the-Hat items. We have such a good times and good quality items in our drawings.

Looking forward to seeing all of you at the meeting. Come for a good day of fun and fellowship.

Also at the March 11 meeting there will be several tables of tools from a widow lady who has ask Ted to help dispose of her husbands tools. He had a lot of stuff. The family has picked what they wanted and what's left will be offered for sale at our next meeting, priced to sell. At this point I do not know what will be there, it may be junk and may be treasures. See you at the meeting.

Last Meeting

The February 11th meeting was at the ALCOA plant in Lafayette. This is huge old industrial plant. This is the largest aluminum extrusion plant in the world. The products made here sell largely to the aeronautical industry.

The event was well attended, the announcement in the Forge Fire helped. We had about 22 attendees. We largely discovered that few of us know much about aluminum. This was an interesting tour and ALCOA went out of their way to entertain us on a weekend. The test lab got me to thinking about our discussion of the "Spark Test" (see next column).

Illiana Show Ground Fundraising

The Illiana Steam and Power Assoc. is in fundraising mode to purchase the show grounds. Now is the time to step up to the plate and help the Illiana group with their fundraising. It will ultimately help the Rocky Forge group. Any offering would be greatly appreciated and may be mailed to Doris Manllief. Please note on the offering that you are a member of the Rocky Forge group. Her address is 3618 Donna Drive, Lafayette, IN 47905.

IBA Board Election

You should have received a ballot for the IBA board election in the February Forge Fire. Our membership alone might be enough to get a member on the board. There are three candidates for two openings. I (David Childress) am one of the three and would like to carry your voice to the board and improve the fit between what we want and what we get as a satellite group of the IBA. If you can go to the March IBA meeting and vote all the better to get our voice heard. If you can not make it fill out the ballot from the February "Forge Fire" and send it in. The meeting is in Jennings County. If you need a ride or company I am going, just contact me to make arrangements.

Call for article submissions

I have enclosed two articles from Mark Brier. I will be thankful for a response from the membership both about these articles and additional submissions.

I am working on an article on the science behind the "Spark Test" for identifying type of steel as discussed here in past issues. Ted still does not believe that the test works and maybe he can not see it. There is bound to be a method to make the test surer than what I have seen demonstrated. There are several of you that know more than I do about the related field and maybe we could even build an apparatus to make the test more accurate.

Traditional vs. Modern Blacksmithing

Depending on who you talk to this could be a very hot topic. I have several elderly blacksmith friends who live in the mountains of Kentucky, Tennessee, South Carolina, and Virginia, and to them arc welding or other corner cutting techniques does not make one a master blacksmith by any means. And when I talked to all of them before writing this article they all shared the same blunt and argument starting opinion, "as long as you make no pretence about being a traditional blacksmith that is fine, but if you use modern methods to create old time work, that say's that you are not good enough or talented enough to do it the proper old time way." With that being said I am sure some of you may be very upset right about now, but let me explain. In my everyday job I use all forms of welding and use a torch set everyday, yes they are amazing and make short work of what would have been long hard jobs. So who am I to write this you ask? It is my opinion that this gives me great insight and yet many questions of how things would have been done in the past.

So traditional vs. modern what does this mean? To me I look at it as one big question, and I only came up with this thought a few days ago. About two weeks ago I received a phone call from a newcomer to the field of blacksmithing. He stated that he was repairing a driveway gate for an elderly woman and at the bottom of the gate frame were several flat iron hoops. The missing hoops are what he intended to fix or replace. While he stated that he was able to make nice symmetrical hoops he had a problem in forge welding them together. Apparently on his attempts to weld the ends together he was not quick enough to get the ends stuck together because they kept springing apart. Finally as a last resort he tacked them together using a modern welder. Although the young smith felt bad about doing it that way he made the statement that he could think of no other way. So there is the question, how would've it been done. Obviously the man had no idea of what an anvil clamp or hold down was, so I told him of another way that it was done. When a smith in the past had no helper to assist in this example of an aggravating task he would have riveted the ends together first to hold them in position for welding. I am very confident in saying this because I have seen it several times in original antique works.

So what is my view of traditional vs. modern? I see it as a tool to learn by, never stop wondering never stop asking how and as I always say beat it out till you figure it out.

Until next time,
Mark Brier

Wrought Iron and the Modern Blacksmith?

This could be a very deep subject or a very short one. But for this article we are going to concentrate on my experiences of using wrought for the 18th Century gunsmithing trade. Wrought iron and the modern blacksmith could be a very confusing statement, because for the modern blacksmith to procure wrought today can and usually is a very tough job in itself. You see modern pieces in stores everywhere labeled wrought iron and for the average person today they wouldn't give it a second thought. But for those of us that know the difference this junk as I call it is just what I call pot metal. It has no good quality about it as far as iron or steel goes, and is very brittle. So let's talk about metal and iron.

For the gunsmith of Colonial America all of the iron hardware on the gun was shaped while the iron is hot (such as the barrel and lock) or it is cold forged (such as the trigger, rear sight etc.). To forge up a gun barrel is no job for the timid. It is a long job with several hundred welding heats to complete it. The use of wrought iron to make a barrel is law no questions. The skelp stock for a barrel is 3/8" to 1/2" x about 3". Tough job to find right? Wagon wheels can be used with success, but I have found the iron to be work hardened and cracked on most of its surface. So what do we do? One answer is to fold it in half length wise and weld it back into a bar. After that is done we do a lot of work with double striking and then employ the use of a flatter to bring it back to the shape of the flat billet we started with. Tired yet? After that is done you got about 5 to 6 hours of forge welding.

Option number 2, if you have the wallet to support it, (and I don't) there are places in England that is still producing wrought iron, but the price of it and then shipping to get it here is, well I will leave that so that you can have your own little surprise. But on the more local end is option number 3. There is a fairly new iron out called Double Ought Iron, and it can be purchased in most standard sizes. I have not been able to get my hands on any of it yet, but two of my friends who work in the gunsmith shop at Colonial Williamsburg have used it successfully in the making of barrels and stated that it is the closest thing to wrought that you are going to get in a modern metal. I have sent off for the chemical makeup of this iron but have not received it yet. But in the studying and research of this material I believe the carbon content of it is well below 1.0%. Getting closer to useable metal aren't we?

Option number 4. This is very close to option number 1 with one welding step removed. I have procured about 200lbs. of wrought iron fencing. Can you believe they were going to haul it in for scrap!!!! This fence consisted of several panels, but the main frame work to hold it all together was 1" square stock. Yes sir, pure wrought that has never been damaged let alone hammered on. But how do we get our flat skelp to make a barrel? We are back to double striking then the flatter, bummer. But hey I am not complaining, that square stock has given enough material for 6 or 7 rifle barrels or numerous pistol barrels.

But like in the making of anything you need to have an idea and to stage your work ahead of time, right? So what am I going to do when this supply runs out and say I can not obtain any of this double ought iron? Yell, I will tell you my latest idea that I have come up with. Tentative option number 5. Remember my new fence? Most of the weight came from the vertical spindles that make up the fence, 3/8" square stock 42" long, already the length of most rifle barrels. I figured why can't I take 2 or 3 or 4 of those pieces (trial and error) twist them around each other for their entire length and weld them together? Getting my idea? And what do we have? Probably a piece about 1" square and probably about 44" to 48" long. Why longer than what we started with? Because appropriate welding heats and proper hammer blows (the right striking weight or force) makes iron stretch doesn't it. That's why when you make a barrel you start with the skelp about 3" shorter than what you want the length of the barrel to be.

Now let me back up to my statement of the use of wrought iron being law. Let me give you a small taste of modern mild steel. Mild steel is wonderful for the modern blacksmith it shapes very easily it doesn't work harden and is available in all the shapes and sizes you want. But be careful in what you want to use it for, such as this example of making a gun barrel. Mild steel, I don't care how many times the representative or salesman tells me it has under 4% carbon content it is steel, a metal still having a large chemical makeup and not enough raw iron. It does not work, yes you can forge and weld it up into a tube but it can not handle the stress. After you spend about forty to fifty hours to make this beautiful octagon barrel, you need to proof or test it before you ever think about putting into a stock of wood. And what will you find? It is going to open up like a suit case the whole length of your seam. But don't get me wrong I use mild steel if I am making wagon hinges or something like that because the weld will do perfectly fine in jobs of this nature but not anything that will receive high volumes of stress of pressure.

That's about it for iron and barrels, please let me know if you enjoyed this little article and if you learned anything. If so we can continue on in the future, probably with the making of a lock the iron and metal used and how to convert the surface of wrought iron into steel for certain parts of the lock. Please feel free to call or write me with questions or comments I always like to learn more. Till next time.

Mark Brier

1-(765)-585-4213
7034N. Rainsville Rd.
Pine Village, In 47975