

Saltfork Craftsmen
Artist-Blacksmith Association
Officers and Directors

President: Jim Carothers 580-336-9213
9501 Frontier, Perry Ok. 73077
frontiershop@wildblue.net

Vice-President: Gerald Franklin 580-467-8667
Rt. 3 Box 239J, Duncan, Ok 73533
franklin@gci-wireless.net

Sec-Treas. Mike George 580-327-5235
1227 4th St. Alva, Ok. 73717
mike-marideth@sbcglobal.net

Director: JC Banks 580-482-3209
16007 S. CR 206 Altus, Ok. 73521
jcb@osu.altus.ok.us

Director: Curtis Allen 918-786-7537
34400 S. 610 Rd. Grove, Ok. 74344
prairieiron@gcinet.net

Director: Bill Kendall 918-742-7836
1756 E. 59th St Tulsa Ok. 74105
wwkendall@aol.com

Director: Richard Dyer 918-582-5065
1119 S Birmingham Pl. Tulsa, Ok. 74104
irondyer@aol.com

Assignments:

Editor: Diana Davis 580-549-6824
23966 NE Wolf Rd Fletcher, Ok 73541
Lazyassforge@tds.net

Librarian/Education: Gerald Franklin 580-252-6002
Rt 3 Box 239J Duncan, Ok 73533
franklin@gci-wireless.net
cell phone 580-467-8667

Events coordinator: Bill Davis 580-549-6824
Lazyassforge@tds.net

The Saltfork Craftsmen Artist-Blacksmith Association, a non-profit organization of amateur and professional artist and craftsmen, publishes this newsletter monthly. Our purposes are the sharing of knowledge, education and to promote a more general appreciation of the fine craftsmanship everywhere. We are a chapter of the Artist-Blacksmith Association of North America.

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Visit our Saltfork Craftsmen Website:
www.saltforkcraftsmen.org



SEPTEMBER 2006

LIBRARY LIST

- A Traditional Suite: Sword Making, set hammers
- A Water powered Smithy
- ABANA comes of AGE: 1994 NOMN Exhibit
- Basic Blacksmithing with Hershel House
- Basic Blacksmithing with Hershel House part 2
- Basic Blacksmithing with Hershel House part 3
- Bill Bastus: Guthrie 2002 SFC tapes 1-6
- Bob Patrick-Forge Welding
- Broom making for the Blacksmith
- Doug Merkel: Misc. projects
- Doug Merkel: Nail Header
- Doug Merkel: Saw tooth Trammel
- Doug Merkel: Tomahawk and Misc.
- Elmer Roush: Colonial American Hardware and Fixtures
- European masters Fire and Fantasy
- Forge Welding with Bob Patrick
- Frank Turley-Tool making tapes 3,4,5
- Hammer man in Williamsburg: An 18th Century Blacksmith
- Hershel House: Blacksmithing part 2 and part 3
- Jerry Darnell: 18th Century HDW-Hinge pintles tape 4
- Jerry Darnell: 18th Century HDW-strap Hinges tape 3
- Jerry Darnell: 18th Century HDW- Suffolk Door Latch tape 2 Jerry Darnell: 18th Century Lighting- Tapes 1,2 and 3 Jim & Kathleen Poor: Tool making-Guthrie 2001 tapes 3,4 and 5
- Jim Hrisoulas: Forging Damascus Part 1
- Jim Hrisoulas: Forging Damascus Part 2
- Omey's 2002: Kendall and Dyer- Table
- Omey's 1997: Ted Sawyer 4 tapes
- Rob Gunter: Hammers Tape 2
- Rob Gunter: Hollow Forging
- Rob Gunter: Hollow Forging tape 4 & 5
- Rob Gunter: Scrolls Tape 7
- Samuel Yellin's Legacy; The story of a Metal working shop
- The Loveless Legend
- Tom Smith at Hartdner
- Yellin Foundation: Manfred Bredohl
- RD-1 1990 Metal Madness
- RD-2 Ivan Bailey and Paul Hubler
- RD-9 1992 BAM Ozark Conference
- Knife making with William White.
- RD-69 2002 UMBA Conference with Roger Lorange
- RD-79 2003 UMBA Conference with Bob Tuftee
- RD-82 Wooden Wagon Wheel workshop, Perry Ok.
- The Loveless Legend
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- RD-69 2002 UMBA Conference with Roger Lorange
- RD-79 2003 UMBA Conference with Bob Tuftee
- RD-82 Wooden Wagon Wheel workshop, Perry Ok.
- 2005 SCABA Conference tapes

If you are interested in borrowing any of these tapes, contact Gerald Franklin at a meeting or call him at 580-252-6002.

TRADING POST

For Sale:

3/4" round bar of 5160 (\$3.30 per foot plus shipping)
3/4" and 1" round bar of 52100 (\$6.00 and \$9.45 per foot plus shipping) Contact Ray Kirk,
ray@rakerknives.com or 1-918-456-1519

Army surplus round nosed pliers that make good scroll pliers for small items. They are 6" long \$5.00 each plus shipping. I also tie broomcorn brooms on your handle or mine. \$15.00 plus shipping. Contact Diana Davis, lazyassforge@tds.net or 1-580-549-6824

Hand Pump Rivet Forge all there but needs work \$300.00; Hand crank post dill missing hand crank \$50.00; Leg vise \$50.00
Contact Bill Kendall 918-691-2173 or Jeff Kendall 918-607-8495
bill@ttownmetalmen.com
jeff@ttownmetalmen.com
More information and pictures are posted on the Saltfork Website "Tailgate" Section

Club Coal

Saltfork Craftsmen have Arkansas coal for sale. The coal is \$95/ton to members and \$145/ton to non-members.

Bring your own containers. Contact Tom Nelson at 1-580-862-7691 to make arrangements to pick up a load. **DO NOT CALL AFTER 9 P.M.** If you make arrangement well in advance, Tom can load your truck or trailer with his skid steer loader. Otherwise you will need to bring a shovel. The coal can be weighed out at the Douglas Coop Elevator scales. The coal is in large chunks; bring something to break up the coal into manageable size pieces.

We now have a load of coal in the S/C Region. This coal is in 1-2" size pieces. Bring your own container. The coal is at Max Scudder's place in Mountain View. Contact Max for load out instructions.

Cost for this coal is .06/pound or \$120.00/ton. NO SALES to non-members.

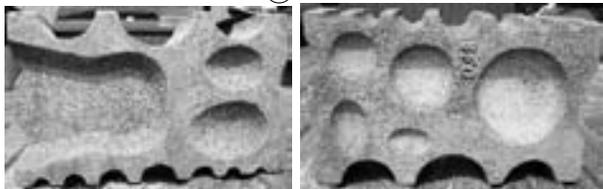
Max Scudder can be contacted at (405)226-9951

Rebuilt Little Giant Trip Hammers! Better than New! 25#-\$3495; 50#-\$4595; Misc. leg vices and hand cranked and electric blowers. Contact Mike George at 1-580-327-5235 or Mike-marideth@sbcglobal.net

Sold out....."New supply arriving soon."

Saltfork Craftsmen Swage Blocks \$85.00 each plus shipping. SCABA members can purchase one block for a special members price of \$60.00

Contact Mike George at 1-580-327-5235 or mike-marideth@sbcglobal.net or Jim Carothers at 1-580-336-9213 or colonel@fullnet.net



Wanted:

Advertising Coal Hammers, Contact Mike George at 1-580-327-5235 or o Mike-Marideth@sbcglobal.net

Send your ads to Diana Davis, 23966 NE Wolf Rd. Fletcher, Okla. 73541 or email them to lazyassforge@tds.net

CALENDAR OF EVENTS

September

NE Regional meeting (Sept. 9, 2006) hosted by Pat Cowart.

South/Central meeting (Sept. 16, 2006) hosted by Terry Jenkins at the Sulphur tractor show.

NW Regional meeting (Sept. 23, 2006) This meeting will be at the Major County Historical Society's facility. Mike George and Ron Lehenbauer will be the co-hosts. Food will be available on the grounds. This meeting will be in conjunction with the combined Fall Threshing Bee and JC Two Cylinder show. We also need demonstrators to help out on Friday as well. Friday is when a lot of local grade schools bring their students out. We need an especially good turn out for this event. Please bring your portable equipment and some thing for "show and tell". If you have stuff to sell, that's OK too.

October

October 14 and 15, 2006 SCABA Conference

South/Central meeting (Oct. 21, 2006) open

NW Regional meeting (Oct. 28, 2006) meeting will be at the Nescatunga Fire Station (north side of Great Salt Plains Lake). Leroy Haight and Richard Winn will host the meeting. Leroy says they'll have a cook off. He's going to dig a shallow trench and build a fire in it. Everyone who can is to bring something to cook and whatever equipment they need to cook it over an open fire. Of course, all are encouraged to bring their portable equipment. It might be fun to make the cooking equipment after you get there.

November

NE Regional meeting (Nov. 11, 2006) open

South/Central meeting (Nov. 18 2006) hosted by Bill Davis

NW Regional meeting (Nov 25, 2006) open

December

NE Regional meeting (Dec. 9, 2006) open

South/Central meeting (Dec.16, 2006) hosted by Larry Morefield

NW Regional meeting (Dec.23, 2006) open

2006 DEMO REQUEST

September 22-23 Oklahoma John Deere Two Cyl Tractor Show and Old Time Threshing Bee.

Possible location for a NW Regional Meeting.

September 29-30 Don Colwell Heritage Days It is located at the Cache School Grounds. Friday is school day. Friday evening the Cache FFA will host a Free Brisket Dinner to all exhibitors and others starting around 5:30 pm. Also the Cache School will provide lunch for all exhibitors on Friday. For more information contact Diana Davis at 580-549-6824 or Tommy Hawthorne at 580-429-8200.

Sept. 30 Gracemont City fest. The city of Gracemont has invited the SCBA to be a part of their festival. They would like to have a blacksmithing demonstration on Sat. 30th of Sept. Member Delbert Stallings is going to be there and would appreciate anyone that can come and help him to let him know and he will give you the needed information. There is no charge and they invite you to sell anything you make.

October 13-14 D-Boone Days at Henrietta, Ok. Contact Marvin Boatwright at 918-625-7338 for more information.

Saltfork Craftsmen ABA Tool Box



Anyone can purchase tickets and you don't have to be present to win and the club will pay for shipment, if necessary, anywhere within the continental USA.

The tickets sell for \$2.00 each. Diana Davis is the chairperson for this drawing. If you would like to purchase tickets or get some to sell for the club you can contact her at 580-549-6824 or lazyassforge@tds.net. I can accept payment for tickets by PayPal if buying 10 tickets or more and you will need

to add \$1.00 to cover PayPal charges. So for 10 tickets @ 2.00 each = \$20.00 plus Paypal charges of \$1.00 = \$21.00. When I get confirmation of payment I will mail you back the ticket stubs along with a receipt for the payment. ***Please email me if you plan to buy tickets this way because I don't normally check the PayPal account unless expecting payment for something.***

By: Diana Davis

LESS THAN 6 WEEKS UNTIL THE CONFERENCE

Demonstrators:

Ed Brazeal and Tal Harris

Date: October 14-15 2006

Location: Noble County Fairgrounds, Perry, Okla.

Registrar: Aubrey Washington

Family Classes:

- Copper enameling, this class will repeat The techniques that were taught last year and then add new projects, teacher John Burns
- Indian beadwork, this is a bookmark with a piece of beadwork created on a loom, teacher Teresa Gabrish
- Broom tying, this class will teach you the basics of tying a broom on a wood or metal handle. You will need to bring your own handle or ask one of the blacksmiths to make one for you before the class. teacher: Diana Davis

Auctioneer: H.O. Hodge , he was the auctioneer last year.

Meals: Catered by Stagecoach Catering

Don't forget....Very Important

Due to caterers requirements pre-registration for the conference is required if you plan to eat one of the catered meals. We need a final count for meals by October 2nd.

****Safety Glasses are required in the demonstration area and to participate in open forging times.****

DON'T FORGET CONFERENCE

SETUP

Those that can come up to the conference early are asked to help setup. Set up will start at 9 A.M. on Friday October 13.

THE NATIONAL ORNAMENTAL METAL MUSEUM

Gerald Franklin

In July of this year, Frankie and I went on a short vacation to Memphis, Tennessee. Of course, no trip to Memphis is complete without a visit to the National Ornamental Metal Museum (NOMM). It sits on a bluff that gives a beautiful view of the Mississippi River, but the real beauty is inside the large double gates that afford entry into the grounds of the museum. These gates, the so-called "Anniversary Gates" were installed in 1989 in conjunction with the museum's tenth anniversary. The design and construction of the massive pair of gates (they weigh about 1500 pounds each) was truly an international effort. Pieces-parts of the gates came from about 180 individual smiths from around the world. The rosettes are as varied as their sources: birds, flowers, ham and eggs, sausage and eggs, letters, comic faces, scary faces, etc.

Inside the gates are the grounds of the museum, which include several buildings that house a classroom, the Schering-Plough smithy, outdoor exhibits, indoor exhibits, and the gift shop. There is also an extensive library consisting of over 3,000 volumes and 10,000 slides. The library is available by appointment to artists, scholars, and the general public for in-house research.

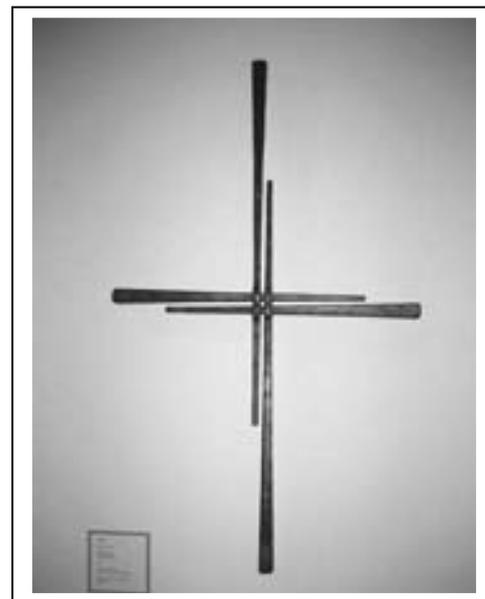
The indoor exhibit area included a temporary exhibition of really nice work by nationally known gold and silver smiths. Most of the finer points of this work were lost on me except that I did appreciate the fine craftsmanship that went in to producing the pieces. Works by Samuel Yellin and Manfred Bredohl were everywhere throughout the museum. It's worth the time to go by the museum whenever you are in, or close to, Memphis.



One of the "Anniversary Gates" at NOMM



Grille by Samuel Yellin - NOMM



Cross- Manfred Bredohl- NOMN

THE ROCKY MOUNTAIN SMITH'S CONFERENCE

Gerald Franklin

In early August, J.C. Banks, Byron Doner, and Gerald Franklin went to Carbondale, Colorado to attend the 16th Rocky Mountain Smith's Conference. Corrina Menshoff, Peter Ross, Shan Sutherland, and Brad & Chad Gunter treated us to a good set of demonstrations.

Corrina kicked things off with a good demo of her "organic" forging. She knocked out cattails and bamboo in iron and also did a few leaves in copper. She came back later in the conference to demonstrate how she puts a nice blue finish on copper work using table salt and ammonia.

Peter Ross, a specialist in mid-1700's English ironwork, demonstrated the forging of the joint used in tools such as a layout compass/divider. It was amazing to see this high precision joint being worked without any precision tools. It was all hammer and fire with no high-tech millwork involved. Peter also demonstrated the forging of a boxed joint used on tools such as fireplace tongs of the period. Again, he forged a very tight, close tolerance, joint with just heat and hammer with a minimal amount of filing. He gave a good talk about how the advent of later tools (such as drill presses) has changed the order that smiths do the steps of a given project.

Shan Sutherland is a young silversmith who demonstrated working a couple of silver billets into a serving spoon and a baptismal chalice. While most of the attendees (I'd suspect) were blacksmiths rather than silversmiths, we could appreciate that many of the processes are similar when working the two metals. I personally was surprised to see that a silver spoon can get just as crooked and out of whack as one forged from steel.

Brad and Chad Gunter were very informative. Chad forged a small chasing hammer from a 4140 billet. He shared his tooling ideas with the crowd and explained how the tooling can really make a difference in the outcome of the finished piece. Brad did a very good demo of "Poz Tong" making. This process is named after Richard

September 2006

Pozniac who resurrected the process from some old 18th Century literature. The process results in a lightweight but very strong set of tongs from 1/4" X 1" strap.

The conference was good and the setting was excellent. We three Okies spent almost all of our free time wandering around the shop area gawking at all the Francis Whitaker items that were hanging on the walls. If you get a chance to make one of the RMS conferences, do so. It will be worthwhile.



Grille by Francis Whitaker



Cross by Francis Whitaker

Multi-Position Bending Fork

Text and Photos: Jim C.

8-16-2006

For quite some time I've been noticing that many farriers are also really good blacksmiths and that some of their tools are special or different for their work. In particular, some of the farriers' anvils have two really handy bending pins (like a bending fork on its side) sticking out from a side of the anvil.

At the 2005 Saltfork Craftsmen ABA Annual Conference (<http://www.saltforkcraftsmen.org>), I also noticed that professional demonstrator Peter Happny repeatedly used a heavy bending fork mounted in the anvil hardie hole. However, Peter's bending tool was not pinned solidly to the borrowed demo anvil; each time he hit or pulled on a piece of metal the bending fork would move.



Photo 01: From these observations came the idea for the Multi-Fork you see presented here in these notes. This is simply a combination of the farriers' horizontal bending pins and traditional anvil mounted vertical bending fork. I turned the legs of the vertical fork 45 degrees to the anvil center line; it seems to be handy for me in that orientation. My cut-off hardie is also rotated the same way as this bender.

As old as the blacksmith's craft is and as new as I am at this craft, I expect that I am not the first person to think of making a bending tool like this. The pins are spring steel; the inside

spacing between the legs of both forks is 1". The pins are not heat treated – only annealed after forging to shape. The parts were preheated before welding.

Notice also in **Photo 01** the tapered pin lying on the anvil. This was made from 1/2 of a horseshoe (my favorite piece of scrap steel).



Photo 02 shows the Multi-Fork firmly pinned to the anvil. With only a light hammer tap on the tapered pin the tool is locked in the hardie hole. You can turn the anvil stand over before moving the tool.



Photo 03 shows how the pin is used with a hardie stem or peg made from U-bending basic flat bar stock. For my tools that I want firmly mounted to the anvil (anvil cone for example), I have been making the hardie stems in this manner. A second benefit is that the tools are lighter than if the hardie stem was solid bar.



Photo 04 shows the end of the U-shaped hardie stem and the tapered pin as seen from the underneath side of the anvil heel. I really like this old Trenton anvil, but the factory did not do any finishing work to the under sides of the heel or the horn.

Jim Carothers
President (2006) Saltfork Craftsmen ABA

NW REGIONAL MEETING

The meeting at Mike George's shop turned out great. We had a good crowd and the weather was beautiful. In the morning, we had several impromptu demonstrations going on. Jim Carothers and Richard Dyer both did very good jobs. Just before lunch e had a drawing out contest on the 50# Little Giant. We heated seven inch pieces of 7/8" bar in a gas forge then everyone who participated drew it out as long as they could in one heat. It was a fun contest and a good excuse for those who had never used a power hammer to try it out. Ty Rankin was the winner by a wide margin. There wasn't any prize except for bragging rights.

Terry Brooks,
Verina Omey, Maria Hart



and Teresa Dyer all worked hard at getting lunch set out and ready.

After a very good lunch, it was back to demos, playin' in the fire and good fellowship. Jim Carothers and Ron Lehenbauer showed some things and late in the day Mike George and Richard Blasius explored making quickie tongs.



The host had a really great surprise on Friday afternoon. Richard and Teresa Dyer showed up early afternoon and, after some small talk, pulled out a fabulous handrail for Mike's back door step. Richard also brought his installation equipment and the handrail was installed before dark. Mike's wife and children had commissioned the handrail in secret as a birthday present. What a wonderful surprise.



HAPPY BIRTHDAY MIKE.

SOUTH/CENTRAL MEETING

Gregory George hosted the meeting at Mountain View. There were 5 forges fired up during the day. I think we could have saved the coal and just used the sun's rays to heat the iron! About 20 showed up. Gerald Franklin assisted several young smiths try their hand at S hooks.

Seth Bernard and Ethan

Bernard made the S hooks under the expert guidance. Alex Scrudder worked on his forge projects.



Max gave me my first lesson on making a steer head. I tried this and was looking at a dragonhead pattern book; well you can guess what happened, a dragon/steer head

is now on my ice pick handle. Evan and his Grandfather were there from Okmulgee, I think. Evan supplied the blower power. Evan is an expert on beetle bug roasting while cranking the blower for the Bernard brothers.

Max making a steer head.



Brahk Hadick made a great dragon for a trade item and showed off a private sword he had made. When lunch was called by Gregory's Mom, June where was a cloud of dust and all were standing in line for an old fashioned BBQ. Mighty fine vittles and pink lemon aid for all.

Back to the forges, the hammers hit and the anvils rang. The trade items filed the show table. From dragons, mule, bird, ladybug, centipede and porcupine, all were great items.



My day was complete with improved skills, lots of good people to share time with, the special spark in the eyes of the young smith and "O" that great homemade apricot cobbler mixing with Gregory's BBQ brisket. I think we were all in heaven and just did not know it.

I left with sun to my back going east with my trade item a Lazy Ass mule forged by JC Banks, nice job and that pirate sword by Brahk Hadick, had to do some money trading for that sword. He likes the money and I really like the sword.

Any one that I did not mention I apologize, all of the Saltfork Craftsmen family are truly the Salt of the Earth. Keep the anvils ringing until we meet again.

Richard Simpson
Stargate Forge

MEMBERS HANDIWORK

Received an email with a picture of a piece of ironwork made by John Jobe that will be entered in the Creative Arts Competition at the Texas State Fair. Good Luck John.



SAD NEWS

On Wednesday August 23rd, Lynn Clowdus passed along the information that member Royce G. Mercer was in ICU at Integris Hospital. Well, we are sorry to say that on Monday, August 28th he informed us that Royce had passed away.

Please keep his wife and family in your prayers.

MORE DEMONSTRATION OPPORTUNITIES

September 16th 2006- Noble County ad Perry, Ok will be celebrating the 114th anniversary of the 1893 land run that opened the Cherokee Outlet to settlement. There will be a parade and many activities for adults and children on the town square in Perry and also at the Cherokee Strip Museum on the west edge of town. Come join me and other Saltfork members for a great day of small town fun and living history smithing under the large shade trees at the museum. Bring your portable forge and tools or just show up and use the equipment that we will have on hand.

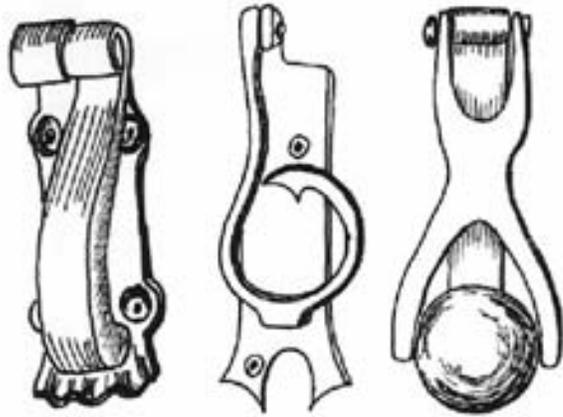
The Museum is on Fir Avenue just across the street North of Braum's and the new Motel 8. We'll set up around 9 AM or so: things usually wind down about 4 PM.

November 18, 2006- Guthrie Centennial Year Kick Off Day. Saltfork has been invited to participate. For more information Call the Oklahoma Territorial Museum (405) 282-1889 or check out their website <http://www.guthrieok.com/centennial.html>

Don't forget that you need safety glasses at the conference and you need to register by October 2nd if you plan to eat some of the fine food cooked by Stage Coach Catering.

ARTICULATED CONNECTIONS

By: Eden Sanders, San Andreas, California



Doorknockers, looking a lot like these drawings, were seen at CanIron V in Halifax, Nova Scotia, last year. (I'm sorry I don't know who made them). They used hinges and loose rivets both to hold the pieces together and to allow the knockers to pivot. All have countersunk holes for mounting screws. Doorknockers design possibilities are endless. Here is a great special gift project that could easily be personalized. Just put initials on the ends of the rivet head/hinge pins.

Never made a hinge before? Put a short chamfer on the edge that will be rolled. Start the roll over the edge of the anvil. Take a heat and quickly clamp a rod and the hot curled tip together in the vise, then tap and pry to continue to roll the hinge. The vise will act as a heat sink, so you may need to take another heat before re-clamping farther up the roll. Do not heat the rod, Duh. You can either stop at about three-quarters of the way, or with the rod in the hinge, finish rolling on the anvil by using your hammer.

If you use a rod slightly larger than the hinge pin (or rivet) you will be using, the knocker will swing more freely. (You would never do that for a door or cabinet hinge, however.)♣

Making ladles and spatulas

Hot Iron News, 2005/2

by Bob Race

*(Bob presented this class at the
spring conference in Corvallis.)*

THE EXERCISE

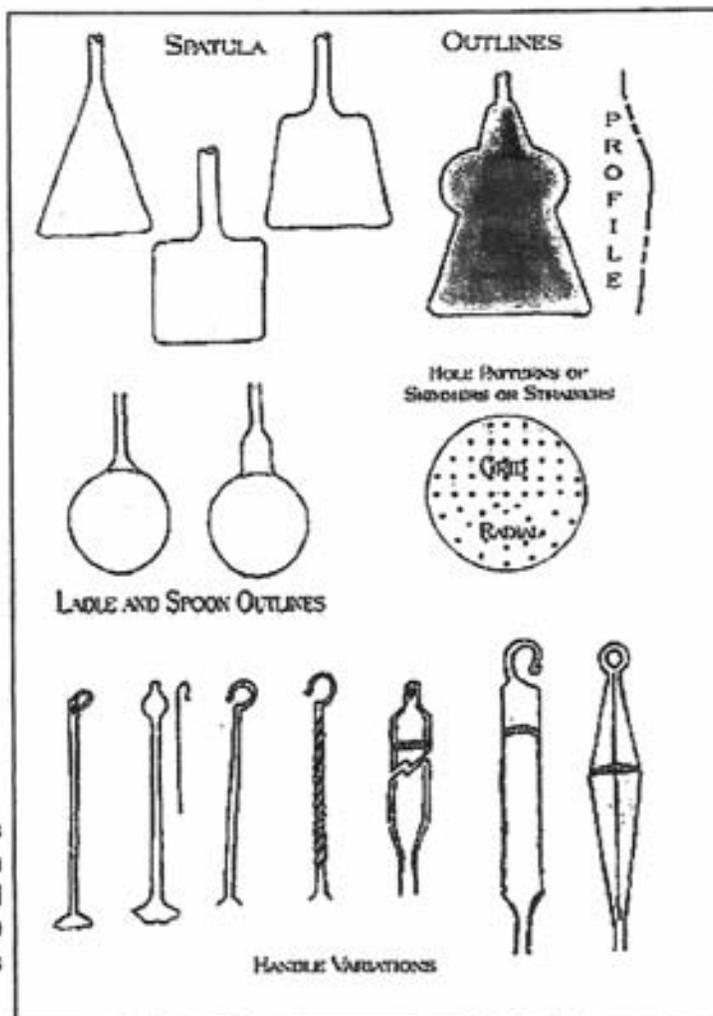
Learning to make simple pieces with the least amount of tools possible.

It does not take much imagination to make a triangle bell, nor a bracket to hold it; nor does it take a whole lot of effort to forge out a spoon, ladle, or spatula that is functional enough for the user to be happy. But it takes practice to achieve the skill to make any of these items look as though they were crafted to be pleasing to the eye.

The drawings on this page show variations of original pre-1850 pieces commonly found in museums and antique outlets. Searching the Internet is an excellent source, but be sure to realize which is original.

Tasting spoons primarily had a side profile whose line went down the length of the handle and stem,

Drawings
from
original
pre-1850
pieces



with the lip of the bowl's line with that of the handle. The ladle's bowl lip line was nearly perpendicular to that of the handle.

The lines of holes in skimmers and strainers could go either way, but the bowl was generally two or three times that of the size of the spoon.

The profile of the handle may have been straight or had a slight curve. Most spatulas were straight in side profile. Remember, these are items of kitchenware and seldom

used on the table.

Perhaps the best stock to use in making ladles and spatulas is 1018. It has a very low carbon content and there are only trace elements to mix with the iron. The down side is that it can be expensive, even if it is scrap. But when brought up to a near-welding heat it is so soft that it moves like pure lead and it takes quite a bit of pounding before it will start to crack. If you want to save money, use A-36, the final results will look the same.

(continued on page 9)

This information is primarily aimed at students who are in the beginning steps of basic blacksmithing and is only meant as a guide to make their future in this field a little easier to understand. Some of the things mentioned in here may have been pointed out to me numerous times in the past, but some of it did not come of age until the proverbial 'slap along side of the head' was repeated over and over again.

ladle and spatula making

(continued from page 8)

The Art of Fullering

There is no shame in using a spring fuller, guillotine, or similar tool to swage in corners of a piece of material, especially when one is a beginner who feels like he is threading a fine-eyed needle with a piece of limp cord in a bone-chilling wind storm. However, it would behoove everyone who is serious about becoming a good smith to practice fullering in from both sides by using the corners of the hammer and anvil to do the necking down process.

For some it may be a long row to hoe, but once the habit is acquired there is some sort of satisfaction achieved in being able to make do with less.

Find an edge of the anvil face whose corner profile matches the corner of the hammer's face. This will act as a double fuller and give you an initial setup for the stem between the bowl and handle.

ONLY go part way, because if you neck it down too small it will lose material with each heat and become weakened making for a fragile piece by the time you are finished.

Making a spoon or spatula is an exercise similar to learning to play 'Twinkle, Twinkle, Little Star' on a musical instrument. All you need is a 1/4"x1 & 1/4" piece of mild steel, neck it down in the right spot, spread out the bowl or blade, draw out the handle, and you are done. This should give you a bowl that is about 2 1/2" wide and a

handle 6 to 10" long.

Making spatula profile is not any different than that of the ladle. It is just figuring where to put the lumps in the proper place. Use the "visualization" drawing as a guideline. It all depends on your design.

About an 1-1/2" from one end make a mark on the narrow edge of the piece. Heat this up to a near welding heat, take it over to the anvil and fuller

the fire and heat it up as before, bring it out so the wide part is flat on the anvil and taper back from the end about a third of the way until the narrow edge is a little less than 1/8".

Round off the two outside corners. Reheat, then placing the wide section back on the anvil, take your cross-peen and fuller down the center being careful not to get near the neck.

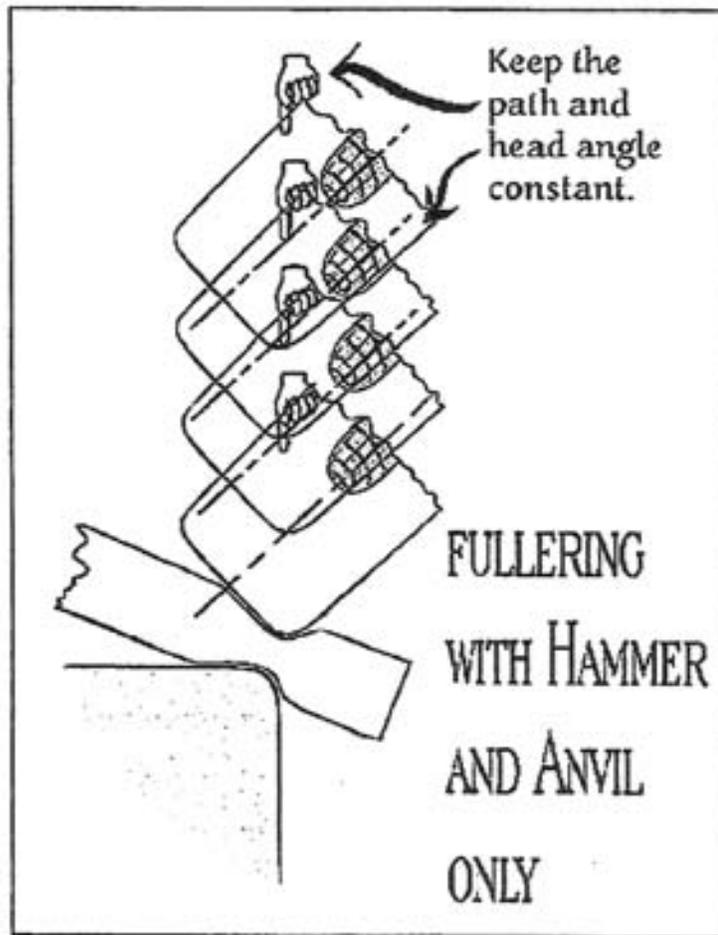
Reheat and spread out from the center to one edge; repeat the same towards the other edge.

Hopefully you will have a

rounded outline of a flattened piece that is about 1/16" thick. Flip this end for end and heat up the short fullered out section.

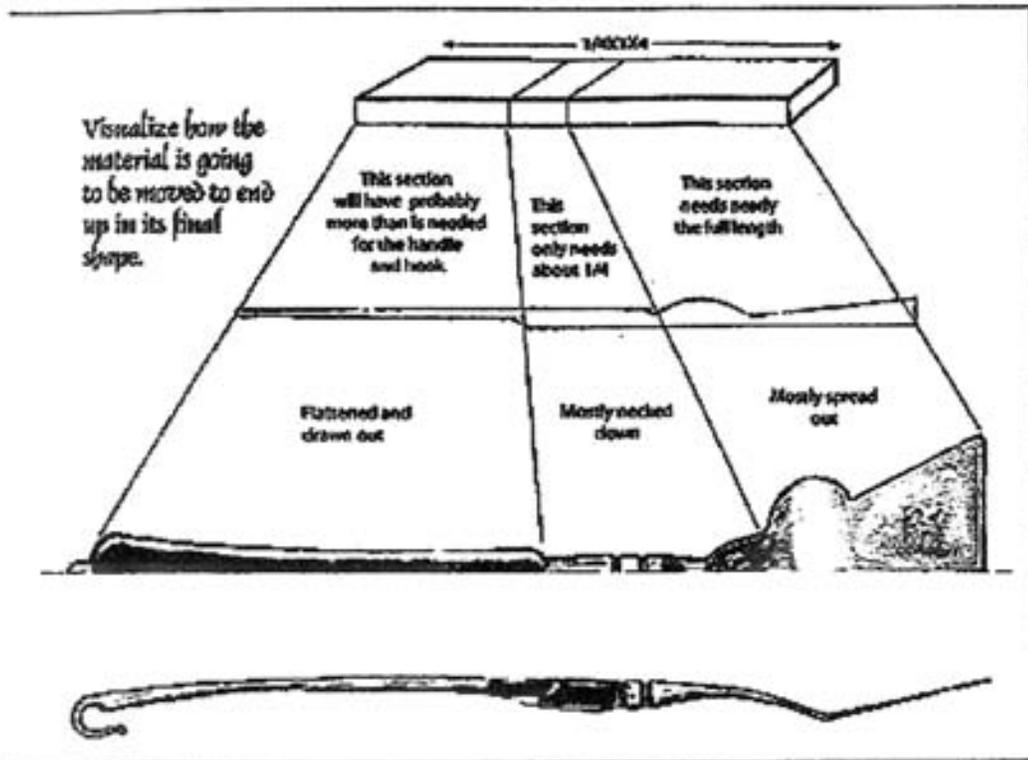
Bring this to the horn and draw out the handle until it is near the shape you wish to have. Straighten and align the handle with the bowl, but try to keep the side profile on a straight line as much as you can.

Take a compass, or small tin can the right size for your bowl and scribe an outline so that the handle's axis is passing through the center of the bowl. Trim off this surplus stock with snips, chisel, or belt sander. Now put the final touches on the handle so that it looks symmetrical



in from both sides using a spring fuller or the method shown on the previous page.

Work on this until the necked down section is about 1/3 the width of the piece. Put the long end back in



a pair of scissors and cut this pattern out and unfold the paper. Usually the handle and stem section are pretty close to what you want, but the bowl or blade section can stand some correction with a belt sander or file. You can cut and paste the paper to the face of the bowl or blade with paper glue. It will dry quickly with a little persuasion from light passes of a propane torch. Sight down the handle and stem and make sure your bowl or blade center is on line.

and utilitarian. Find a chunk of log which does not have any knots in its end-grain and set it on the floor near the forge. Heat the bowl up to a dull orange and place it over the end-grain. While holding it just immediately above the wood use a ball-peen hammer and shape the bowl.

When it starts getting black, reheat and repeat the process until the bowl is at the depth you wish.

Remember - this is an exercise in learning to neck down or spread out by fullering; nothing more.

Doing the Symmetries

Even though nothing in this world is perfect, the pleasing effects of symmetry will add to the appeal of your final piece. There is a simple way to accomplish this task and it does not take long.

The first thing to do after you have the rough shape formed with

hammering, is to straighten every section along the center line of the front profile; (the side profile should remain a straight line until the last).

Make sure that the slightest twist between the handle and the blade or bowl is not visible while sighting down its length. When you are satisfied with the tweaks and twists, lay the piece on the face of the anvil, and with a wooden mallet, gently hit the high spots so that all is nearly flat to the world.

Take a piece of translucent paper that is wider than the piece and draw a straight line down the long way and in the center. Lay your piece on the paper so that its center-line coincides with the line you have just drawn. Firmly hold the piece down and trace its outline on the paper. Take the piece of paper and fold it in half along the centerline and hold it up to a strong light. Notice that the profiles do not perfectly line up. Draw a pattern to your liking on either side of the folded paper that will cover the existing material. Take

You may need to apply a little heat, but usually a smart tap will put all in alignment. Then dress the sections down so that they are pleasing to the eye.

If you want to file finish the handle and stem and then put some pretties, don't hesitate to use your own imagination.

Most handles had either a closed or open loop at the end which allowed it to be hung on a nail, or a simple tail which was centered and then bent over the back side of the handle so that it could be hung on a rack overhead.

Early Americana seemed to favor five pointed stars, but your research into some of the antique books will give you plenty of ideas from which to start