

Saltfork Craftsmen Artist-Blacksmith Association

June 2011



Larry Roderick showing his grill that he completed at the tenon workshop that was conducted at Gerald Franklins place last month.

President's Notes

Gerald Franklin

The month of May was a pretty good one for meetings. Bill Phillips hosted the South East meeting on May 7th at his place near Indianola, James Maberry hosted the North East meeting in Claremore, Bo Hall hosted the South Central meeting at Blanchard, and Don Garner and Mandell Greteman hosted the North West meeting at Mandell's shop in Foss. This is the first time in a good while that Bo Hall has felt well enough to host a meeting and it's good to see him back in the swing of things. David King again hosted his annual Swap Meet in Guthrie. It's great to see those months when we have a meeting scheduled in every one of our regions. Thanks to all of you who host these meetings and thanks to those of you who attend them.

The Oklahoma State fair folks have told us that they are going to pay Saltfork a stipend this year for demonstrating at the fair in September. They are also providing us with a hotel room and will give our demonstrators access to a participant's lounge area where we can take a break away from the action. If you haven't demonstrated at the fair before, please try to help us out this year by signing up for one or more days. If you have demonstrated there before, we thank you and hope that you will come back this year. It's hard work, but it's time well spent, I think.

Speaking of demonstrating, try to get out to that local event to help present our craft to the public. We get calls quite frequently from people wanting demonstrators for their events. It may be for a school group, a tractor show, or a community event. Sometimes the event will fall on a weekday, but usually, we are needed on a Saturday...just when many of our members want to "kick back" after a long workweek. I know it's hard to get cranked up to go out and demonstrate but look at it this way, it's free practice time. Most of us don't take the time in our own shops to engage in the little mindless tasks like forging S-Hooks or making nails. But consider that these little "pee-dunk" projects require hammer control and when you turn out more and more of these as you talk to the public you are grooving your swing, which is the pay off for you. Some of us make a little money. Some of us actually like dealing with the public. Whatever the reasons, the bottom line is that we always seem to have more requests for demonstrators than we can service. So please consider covering a demo. I often hear smiths say that they don't know what to make. Well, after having done a LOT of these things, I can tell you that it really doesn't matter what you make. If you can put a stick of iron in the fire and get it to an orange heat, you have won the game. It really doesn't matter a great deal what you do with the iron after you get it to the anvil, the spectators are already impressed.

SOUTH CENTRAL REGIONAL PAGE

Meeting dates:

January 15, 2011
Host: Bill Davis
Phone # 580-549-6824

February 19, 2011
Host: Gerald Franklin
Phone #: 580-252-6002

March 19, 2011
Host: Terry Jenkins
Phone # 405-476-6091
Trade Item: Cross
Lunch: Sack Lunch/ On your own

April 16, 2011 (ANNUAL PICNIC)
Host: Byron Doner
Phone #

May 21, 2011
Host: Bo Hall
Phone # 405-485-2690
Trade item: Wall hanger

June 18, 2011
Host: Diana Davis
Trade items campfire tool
Lunch: hot dogs

July 16, 2011
Host: Terry Jenkins
Phone # 405-476-6091
Trade item: Fork

August 20, 2011
Host: Richard Simpson
Phone # 405-334-7413
Trade item: camp item

Sept. 17, 2011
Host: Bob Kenemar
Phone #:
Trade item: hook or hanger

October 15-16, 2011
SCABA Conf. Perry, Okla.

November 19, 2011
Host: Bill and Diana Davis
Phone #: 580-549-6824
Trade item:

December 17 2011
Host:
Trade item;



Meeting Notes:

The May meeting for the SC region was hosted by Bo Hall at his son's shop west of Blanchard. You couldn't have asked for a nicer day for the meeting. With everything going on Saturday, he still had a good turnout. I arrived about lunch time after making the trip up to Guthrie to check out the swap meet that David King was hosting. There was still plenty of burger and desert to enjoy when I got there.

Gerald had his forge going and showing a member how to make a S-hook. Several members took advantage of the forge to try their hands at making something.

The trade item was a wall hanging and there were six nice pieces that anyone would be proud to take home. Unfortunately I didn't have one to put in the trade. Maybe next time.

Larry Roderick showing how to make a cricket from a fork.

June meeting: Will be hosted by Diana and Bill Davis at their home west of Rush Springs. (follow signs starting at 81 & 17) The trade items is anything used over a campfire. Lunch will be hot dogs, bring something to go with them..

NORTH EAST REGIONAL PAGE

Meeting dates:

January 8, 2011

Host: Gary Gloden
Phone # 918-321-5015
Trade item; made from horseshoe

February 12, 2011

Host: Gerald Brostek
Phone# 918-687-1927
Trade item. Valentine

March 12, 2011

Host: Dan Cowart
Trade items: Spoon

April 09, 2011

Host: Omar Reed at Ft. Gibson
Trade items:

May 14 2011

Host: James Maberry
Phone #: 918-636-7773
Trade item; cooking utensil

June 11, 2011

Host: Mike Krukoski
Phone #:918-789-2484
Trade item: **Garden Tool**

July 9, 2011

Host: Clayton Hall
Phone #918-605-6241
Trade item; **Kitchen tongs**

August 13, 2011

Host: Bill Kendall
Phone# 918-742-7836
Trade item

Sept. 10, 2011

Host: Dan Cowart at Pawhuska, Ok
Phone # 918-440-0653
Trade item: Leaf

October 2011

State conference

November 12, 2011

Host: Matt Goyer
Phone # 918-272-8424
Trade item:

December 10, 2011

Host: Charlie McGee
Phone #: 918-245-7279
Trade item: ladle

May 14th. Was not a typical May day in north-east Oklahoma. The air was cold and the wind blew. I arrived at James Mayberry mini-farm to find everyone huddled around the forges most with coats, jackets and



hoods pulled up, even the chickens were hanging near the warmth of the forge fires. I commented that James had some good looking chickens and Ed McCormack said they would look better in a frying pan.

Tracy Cowart was forging a spoon and Mike Krukoski was working on a rose. Mike's daughter, Elora found an open forge and began to make a handmade nail. As I watched her at the anvil, I could see a future artist/ metal smith in the making and expect to see some great works from her hand in future years.



We enjoyed a meal prepared by James wife of potato ham casserole, with veggies and hot rolls. Desert was brownies.

Trade item was a cooking utensil.

Mike Krukoski has invited all to come to his meeting on June 11th. It will be at the Chelsea farmers market, bring your forges and your iron works, and there is no charge to sell your goods on this day.



Article by:

Gerald Brostek,
Saltfork Craftsman

NORTH WEST REGIONAL PAGE

January 22, 2011

Host:
Phone#
Trade item;

February 26th, 2011

Host: Mandell Greteman
Phone # 580-515-1292

March 26, 2011

Host: Dorvan Ivey
Phone #:
Trade item; letter opener

April 23, 2011

Host: Mandell Greteman
Phone # 580-515-1292
Trade item: **Grilling tool**

May 28, 2011

Host: Don Garner/Mandell Greteman
Phone #:580-661-2607

June 25, 2011

Host: Mike George
Phone #: 580-829-1968
Trade item; Paper Towel holder
Lunch, Pizza cooked in wood fired horno.

July 23, 2011

Host: Tom Nelson
Phone #: 580-862-7691
Trade item: camp fire trivet
Lunch: brown bag/on you own
Special program: hot wagon tire setting (10:00 am)

August 27, 2011

Host: Gary Seigrist (Elk City Route 66 Museum)
Phone #:

Sept. 24, 2011

Host: Ron Lehenbauer (Fairview Thrashing Bee)
Phone #:
Trade item; Fire tool

October 2011 State conference

November 26, 2011

Host:
Phone #:

December 24, 2011



The NW Regional meeting was hosted by Mandell Greteman and his wife LaQuitta at their blacksmith shop in Foss, Okla. They had 10 members show up to enjoy the day of forging and fun.

To get the day started there was plenty of donuts, brownies and coffee.

Paul Schuwah joined the club while attending the Greteman meeting. Welcome to the club, Paul.

The trade item was a grilling tool. There were some really nice tools made by the members.

Don Garner and Mandell took the opportunity to work on the tool box for the conference. Mandell and Don worked on fabricating the metal box corners.

Laquita fixed a great lunch of pork roast, mashed potatoes and gravy along with green beans. Members brought some great deserts to finish up with. The Gretemans would like to thank everyone who came to the meeting and also those that brought dishes to help out with lunch.

Because of printing dates the May meeting will have already taken place. Don Garner hosted the meeting at the blacksmith shop at the Mandells. Hope everyone that could, attended. *If you did, please send me a pic or two to go in the newsletter.*

The next upcoming meeting will be hosted by Mike George at his home in Alva. Mike lives on fourth street in Alva. When you get to Alva, turn south on fourth and go as far South as you can go and you are at Mike's driveway. The trade item is a paper towel holder. Mike also plans to cook pizza in his wood fired "Horno" They say that is the only way to cook pizza, in a Mexican oven. Bring something to go along with it to help out.

If you need better directions you can contact Mike at 580-829-1968.

SOUTH EAST REGIONAL PAGES

January 1, 2011

Host:
Phone #:

February 5, 2011

Host: Eddie Horton
Phone #: 580-873-2634

Cancelled

March 5, 2011

Host: Eddie Horton
Phone #: 580-873-2634

April 2, 2011

Host:
Phone #:

May 7, 2011

Host: Bill Phillip
Phone # 918-200-4263
Trade item: steak turner

June 4, 2011

Host: Old Frisco Depot
Jackson street and railroad tracts in Hugo, Ok
Trade item is something from a RR Spike
Restaurant in Depot
Contact Mark Hamell at 580-317-3700

July 2, 2011

Host:
Phone #:

August 6, 2011

Host: Bill Phillip
Phone #: 918-200-4263
Trade item: rabbit head

Sept. 3, 2011

Host:
Phone

October 1, 2011

Host: Bill Phillip
Work day for conference
Tool box

November 5, 2011

Host: open
Phone #:

December 3, 2011

Host:

South East meeting.

May 7, 2011

I arrived at the ranch just in time for the noon meal. Host Bill Phillips had gathered up about 16 smiths, wives, guests, and strays in the shop area. The trade item was a steak turner and several were made at or brought to the meeting. All were one of a kind, unique, and not available at your local Wal-Mart store. Bill showed off his grillwork done with mortise tendon type joinery and, I might add, very well done. Ed McCormick showed his latest work, a fish complete with scales and so real looking you had to look twice to be assured it was made of iron. Soon we filled our plates and the chatter subsided as we feasted on chili-dogs. We topped off our meal with a cobbler from handpicked blackberries, and some sort of cake that I'm sure would have won a Betty Crocker award. We drew for the stake turners and I ended up with a turner that should turn my grilled baloney just fine, as steak can only be had these days by bankers and Wall Street tycoons. I was able to sign up a new member, Frank Dear, of Hanna Oklahoma. Welcome aboard Frank!

Gerald Brostek, Saltfork Craftsman

SCABA Library”

VHS Titles

SCABA Conf - 2002 - Bill Bastas
A Traditional Suite: Sword Making, Set Hammer
A Water Powered Smithy
ABANA Comes of Age - 1994 NOMM Exhibit
ABANA Comes of Age - 1994 NOMM Exhibit
Basic Blacksmithing - Hershel House (Part 1)
Basic Blacksmithing - Hershel House (Part 2)
Basic Blacksmithing - Hershel House (Part 3)
Forge Welding - Bob Patrick
SCABA Conf - 1997 - Frank Turley (Tools)
Hammerman in Williamsburg
Jerry Darnell - 18th Century Lighting (Part 1)
Jerry Darnell - 18th Century Lighting (Part 2)
Jerry Darnell - 18th Century Lighting (Part 3)
Jerry Darnell - 18th Century Hdw - Latches
Jerry Darnell - 18th Century Hdw - Hinges
Jerry Darnell - 18th Century Hdw - Pintles
SCABA Conf - 2001 - Jim & Kathleen Poor
Jim Hrisoulas - Damascus Pt 1
Jim Hrisoulas - Damascus Pt 2
Omey's 2002 - Kendall & Dyer - Table
SCABA Conf - 1998 - D. Steigler - Baskets
SCABA Conf - 1998 - R. Gunter - Hammers
SCABA Conf - 1998 - D. Steigler – Iris & Finishes
SCABA Conf - 1998 - R. Gunter - Hollow Forging
SCABA Conf - 1998 - D. Steigler - Repousse'
SCABA Conf - 1998 - R. Gunter - Scrolls
Samuel Yellin's Legacy
Omey's - 1997 - Ted Sawyer
Omey's - 1997
The Loveless Legend
Tom Smith at Hartdner, KS
Yellin Foundation & Manfred Bredohl
Allen Rogers - Projects
Forge & Anvil - Various Episodes
Unknown Conference - Unknown Smiths
Broom Making for the Blacksmith
Elmer Roush: Colonial American Hdw & Fixtures
European Masters & The Woodwright's Shop
: Misc Projects
Doug Merkel: Nail Header
Doug Merkel: Sawtooth Trammel
Doug Merkel: Tomahawk & Misc
Doug Merkel: Hammers Blacksmith's Journal Techniques – 1
Blacksmith's Journal Techniques – 2
Bill Epps – Tongs
Bill Epps – Animal Heads
Bill Epps – Birds & Bugs
Bill Epps – Leaves & Flowers
1990 Metal Madness
Ivan Bailey & Paul Hubler
1992 BAM Ozark Conference
2002 UMBA Conference
2003 UMBA Conference
Knifemaking With William White
Wagon Wheel, Marble Inlay, Strikers

National Museum of Horse Shoeing Tools

SCABA Conf - 2004 – Don MacKay

SCABA Conf - 2004 – Bob Patrick

SCABA Conf - 2005 – Peter Happny

SCABA Conf - 2005 – Brian Gilbert

SCABA Conf - 2006 – Tal Harris

SCABA Conf - 2006 – Ed & Brian Brazeal

SCABA South Central Meetings - 2004

DVD Titles

BEMIDJI Conf. (Ward Brinegar, Jim Batson)

Power Hammer & Punch/Chisel Wrkshop (Bob Bergman)

1995 Haverhill/Guild Meeting (Roger Lowrance, John Hanks)

1994 ABANA Conf. “Yellin's Legacy”

1996 Tunnel Mill

1998 Metal Madness (Nol Putnam) (Pt. 1)

1997 BEMIDJI(Plus Remainder of '98 Metal Madness w/N. Putnam Pt.2)

Uri Hofi 5 Day Workshop (Part 1 of 3)

Uri Hofi 5 Day Workshop (Part 2 of 3)

Uri Hofi 5 Day Workshop (Part 3 of 3)

Tunnel Mill

2002 BEMIDJI

Wooden Wagon Wheel

1997 UMBA Conf. (Mike Boone & Paul Hubler)

2003 Metal Madness (Lorelei Sims & Tom Latane')

1997 BAM Ozark Conf. (Uri Hofi & Bob Bergman)

Bill Calloway

Tunnel Mill, 3 Hrs of 1998 ABANA Conf.

2005 UMBA Winter Conf. –BEMIDJI (Mike Garrett & Lou Mueller)

2005 BAM Conf. (Bill Epps)

Beginning Blacksmithing (Robb Gunter) Part 1

Beginning Blacksmithing (Robb Gunter) Part 2

Beginning Blacksmithing (Robb Gunter) Part 3

Controlled Hand Forging Series – Hammer's Blow

Accompanies Robb Gunter

1990 Metal Madness (Dorothy Stiegler, Monty Bygd, Kitty Latane', Dan Butt)

Smithing Books (*Elementary Metal Work, Forge Practice, Forging of Iron and Steel, Hand Forging & Wrought Iron, Ornamental Work, Practical Blacksmithing II & IV, Spanish Ironwork, Steel Working & Tool Dressing, The Mechanic's Textbook & Engineer's Practical Guide*)

1992 BAM Conf. (*Clay Spencer, Robb & Chad*

Gunter, Stan Winkler, Bob Patrick, Jerry Hoffman, Floyd Daniel, Doug Hendrickson, Fred Caylor)

2002 UMBA Conf. (Roger Lowrance)

2003 UMBA Conf. (Bob Tuftee)

Jerry Darnell (Hinges & Pintles) & Bob Patrick (Forge Welding)

Jerry Darnell (18th Century Lighting & Door Latch)

Various Short Titles (*Hammerman in Williamsburg, A*

Water Powered Smithy, NOMM Exhibit - ABANA Comes of Age, Tom Smith at Hardner KS, Yellin Foundation & Manfred Bredohl, Samuel's Legacy, European Masters & the Woodwright's Works ABANA Gallery Exhibit - 1992

Doug Merkelhop)”

Saltfork Smithing #2 (Omey's 2002, Kendal & Dyer Table, Omey's 1997)
 Saltfork Smithing #1 (Omey's 97 Ted sawyer & John Burns Silver Solder, Omey's 98 - Wagon Wheel, Ricky Nussbaum: 2004 South Central Meetings)
 ABANA Series - Power Hammer Forging w/Clifton Ralph Parts 1-3
 ABANA Series - Power Hammer Forging w/Clifton Ralph Parts 4 &5

Librarian Contact Information:

Tony Cable
 2812 Land Run Road
 Moore, OK 73160
 (405) 793-9626
 tcable@sbcglobal.net



Scenes from David Kings' swap meet.

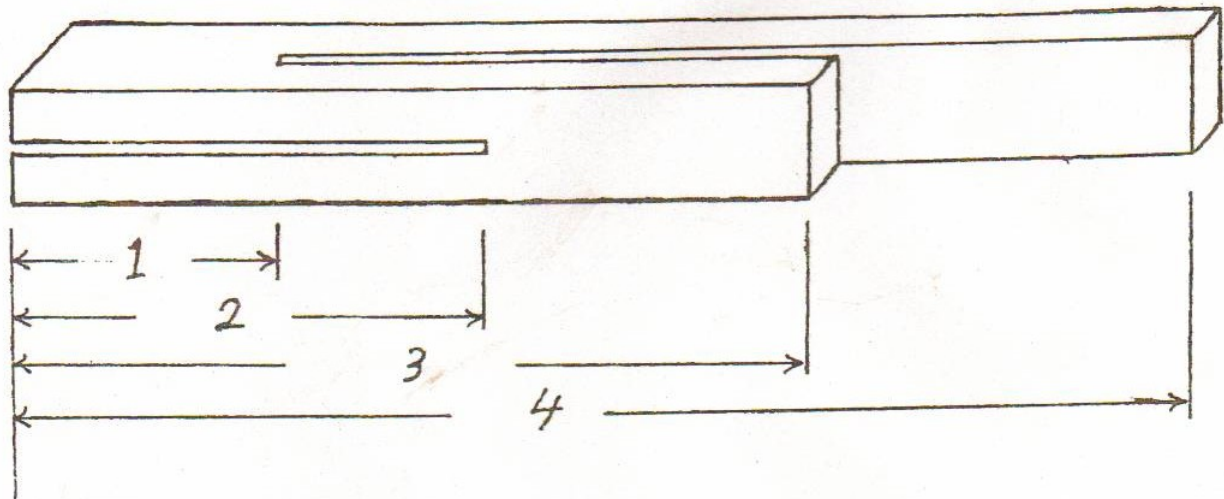


Interesting tool.

I've had some request for the pattern for the Frederick cross. Here are the dimensions for 3/8 and 1/4" square stock.

Editor

<u>Frederick Cross, Necklaces</u>		
	<u>3/8 Square</u>	<u>1/4 Square</u>
1	7/8	11/16
2	1 3/8	1
3	2 3/16	1 11/16
4	3 1/2	2 11/16



Upcoming events:

- ◆ Drumright Discovery Days, June 11th 10-3pm Drumright Community Historical Museum 301 E Broadway, Drumright, Ok. For more info call Angie at 918-352-3002
- ◆ Pawnee Bill Ranch Wild West Show, June 11, 18, 25 Contact person is Erin at ebrown@okhistory.org They have a really nice blacksmith shop to work in.
- ◆ Golden Harvest Day, June 18th Hosted by Jim Esben Shade Farm Near Achille, Okla. (Free Admission) Bring your three wheeler, ice chest full of cold pop and enjoy a day filled with vintage farm related activities. They plan on having an anvil shoot this year. You can get more information by contacting Larry Roderick at 940-237-2814
- ◆ August 6-7th 2011 Girls Inc. Arts and Crafts Show. (Juried event) in Santa Fe. NM is still looking for artist to participate in this years show. You can get more information at; <http://girlsincofsantafe.org/index.php?page=arts-and-crafts-show> or contact Melissa Glick at 505-982-2042
- ◆ September 1st is the Poor Boys Tractor show in Fletcher, Okla. Diana Davis usually handles this one day event but if anyone wishes to come and help it is appreciated.
- ◆ September 24th is one of the days for the Fairview Threshing and John Deer Show. Ron Lehenbauer is hosting a meeting in the Blacksmith shop there on that Saturday. The trade items is a fire tool. Plan to attend the meeting and enjoy the many tractors and other vendors on site.
- ◆ Tyner Tractor Club Show, Blackwell, Ok Oct 8th, 2011. Kay County Fairgrounds at 800 S. Main St. (Hwy 177) Blackwell, Ok. Starts at 9:00 am and goes until 5:00 PM that day. Contact Truman Steiner 580-363-3309 or Richard Wyler at 580-628-1143 for more information.
- ◆ SCABA Conference is October 15 and 16th with setup day being the 14. It is held each year at the Fair ground in Perry, Okla. You will want to book your rooms as early as you can because sometimes we have to compete for rooms with the home football games for Stillwater. I have a schedule but haven't look to see if this is one of those years. Doesn't hurt to book early. Our attendance grows each year.

3rd Friday Gallery Walk in Norman

On the 3rd Friday of each month between the hours of 7 and 9pm, the Masters House and other business along Broadway host an Artist exhibition. Artist are invited to come and display their works. They are also free to sell if they want to. In May, Saltfork was represented by two of our members. Mark Carter set up outside the Masters House art gallery with his forge and demonstrated his blacksmithing skills for anyone that happened by. (It was a slow night because of high school graduations going on). Teresa Gabrish was set up inside with her copper roses and crosses displayed across her work space. Neither did much selling

but Teresa was invited back for next months walk with assurances that it gets better.



Mortise & Tenon Workshop

Gerald Franklin

On April 30, 2011, I conducted a Mortise & Tenon Joinery Workshop at my shop near Velma, OK. There were a total of eight students in the class. Attendees were Roy Bell, Justin Cranford, Don Garner, Bob Kennemer, Charles McDevitt, Bill Phillips, Larry Roderick, and Bill Schulte. Since some of the students had as much as a three-hour drive to get here, so we didn't start until 9 AM.

We began with a short safety talk and then we went over the design of the small (10" X 10") grille that we were going to build. The frame of the grille was made from 1/4" X 1" flat strap with 1/4" square mortise & tenon joints at the corners. The central elements consisted of a 1/2" round rod passed through a 1/2" square bar. The round and square elements were joined to the frame with 3/8" round mortise & tenon joints.



The first task was to layout all tenons and mortises on the pre-cut stiles and rails of the frame. Precision (to blacksmith tolerances, anyway) and accuracy were stressed here since small errors tend to make final assembly difficult.

We cut the tenons for the corners of the frame with either a hacksaw or a band saw. I offered the guys the opportunity to cut these tenons with a hot cut but nobody took me up on it. The mortises for the corner joints were drilled on a drill press, heated in a forge, and drifted to 1/4" square.

The 3/8" round mortises for the two interior elements were hot punched with 3/8" punches made from hay rake teeth. The 1/2" pass-through in the center of the 1/2" square bar was slot punched and drifted to 1/2" round.

The shoulders were set for the 3/8" round tenons and then they were drawn out to dimension on each end of the round and square elements. Shoulders were set using a butcher and the tenons were drawn out using dies.

The first step in the assembly phase was determining the actual length of each of the horizontal elements. The longest of the three was used to set the width of a shoulder gauge. The shorter elements were hammered cold to bring them to the length set on the gauge. Nobody had to do much cold hammering since they had taken a great deal of care in the layout phase to get shoulders marked uniformly.

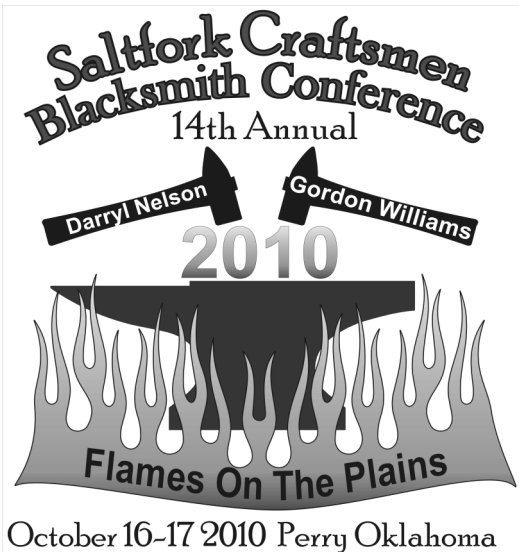
Once all elements were brought to the same length, the final assembly was done by heating the tenons with an acetylene torch and setting them.

I want to thank all the participants for the effort that they put out during this workshop. Everybody worked hard and made an effort to put out a quality product.



T-SHIRT DESIGN CON- TEST

We are having a T-Shirt design contest to come up with a T-Shirt for the Perry, OK Conference in October. Below is the design from last year.



The design must include:
Saltfork Craftsmen Blacksmith Conference
15th Annual
October 15 and 16, 2011
Perry, Oklahoma
Save the file as a jpg if you create a design.
Include your name, address, phone number
and E-mail with your submission. You may
send a CD or E-mail your work to:

SCABA
10380 N. 4010 Rd.
Wann, OK 74083-2014
ddcowart@gmail.com
918-440-0653

Salt Fork Conference	Tool Box
Item	Donor
Box	Don Garner
Hardware for toolbox	Byron Doner / Bill Kendall
Cross peen hammer	
Straight peen hammer	
Rounding hammer	
Tongs	
1/4 V-bit	Please help out by making a tool and getting it to Bill Kendall. The tool box is only as good as the tools in it.
3/8 V-bit	
1/2 V-bit	
3/4 V-bit	
1/4 flat	Help make this one the best yet.
3/8 flat	
1/2 flat	
3/4 flat	
Scrolling	
Side grip	
Pick up tongs	
Fire Tools	
Shovel	Gerald Brostek
Rake	Gerald Brostek
Poker	Gerald Brostek
Hot cut hardy	
Twisting Wrench	
Treadle/Hand Hammer tooling	
Set of punches and holder	
Center Punch	
Chisel, Large	
Chisel, small	
Chisel, hot slit	
Slitting chisel	
Hold down	
Flat wire brush w/handle	
File, flat bastard cut w/handle	
File, half round w/handle	
Set of monkey tools	
Rivet backing tool	
Rivet setting tool	
Hacksaw	Maurice Hamburger
Bolster plate	
Bevel Gauge	Maurice Hamburger
Square	Maurice Hamburger
Dividers/Compas	
Scribe	Bill Kendall
Bending forks	
Spring swage/fuller	
Flux spoon	Jim Carothers
Flux, Iron Mountain	Jim Carothers
Metal folding ruler 24" or 72"	
Soapstone and holder	Diana Davis
Ball tool (round blunt nose punch)	
Hook ruler	
Finish wax	
Nail Header	Diana Davis
Dual Caliper	

Making the Patrick Pelgrom Tongs

Michael Wollowski

I made the tongs in figure 1 based on an article in the German metalworking magazine Hephaistos (<http://www.metall-aktiv.de/>). The tongs were developed by Patrick Pelgrom, a Belgian blacksmith who travels a lot by airplane. In order to reduce the weight of his luggage, he developed a pair of tongs that would be able to securely hold square, round and flat stock. This way, he was able to reduce the number of tongs he carries with him. His tongs were inspired by how one would hold a piece of (cold) metal with three fingers. The V-angled bottom takes on the functionality of the index and middle fingers and the rounded top that of the thumb. Notice the notch in the rounded top which is designed to give good grip.

While they are in essence v-bit tongs, they excel at holding flat and irregularly shaped stock. They also work well in situations where you need to hold two pieces to forge weld.



Figure 1: Three-quarter view and front view.

In this article, you will find construction notes on how to make these tongs. I find it easiest to rework old tongs as it saves time. While I like to use flat tongs as a donor, any tongs will do provided they have enough material to be reworked. I have made two pairs of tongs, the one described here started out as pick-up tongs in which the business end was approximately 1/2" square. They are going to be on the small side, to be used with 3/8" and 1/2" stock.

Start by cutting the rivet. Next, grind off any burrs and sharp edges. Now is also a good time to remove any excess materials so as to lighten the tongs. Figure 2 shows the result of this step.

In case your donor tongs are pick-up tongs, cut the business end so that you are left with about 2" of material. If you start out with flat tongs, you may skip this step. To make the V-bit bottom, draw the business end to about 1" wide, 1/8" thick and 2" long. If you start out with pick-up tongs, first spread them to about 1" wide and if they are still too thick, spread them out lengthwise. If you start out with fairly thick flat tongs, first draw the bit lengthwise so that it is equally thick. Then draw it out to a width of 1" and a thickness of about 1/8". Next cut the bit to length, about 2".

Now, it is time to form the V on a 45 degree V-groove of a swage block. It is important that the V-bit is slightly concave lengthwise, otherwise, the piece to be held by the tongs may wobble. Small imperfections can

be removed by grinding them away later on.



Figure 2: Tongs separated, sharp edges removed and trimmed for weight.

To make the rounded top, draw the business end to 1/2" wide, by 3/16" thick by about 2 1/4" long. Figure 3 shows the result of forging the top and bottom. Notice that the top is actually too long.

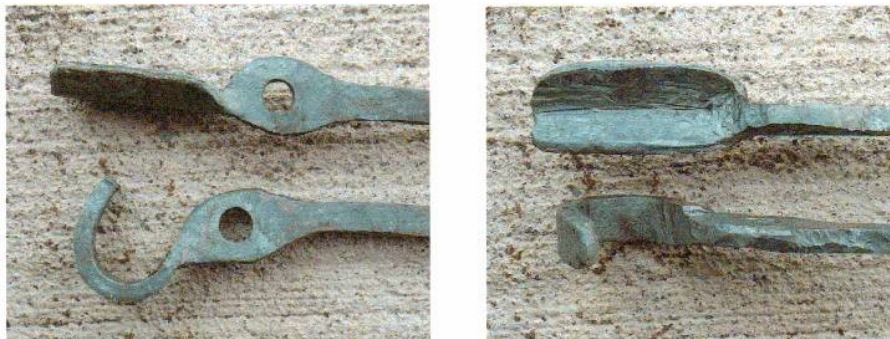


Figure 3: Forged business ends.

Next, clean-up the pieces with an angle grinder and cut the top to size and add a small V-notch. The length to which you cut the top determines the stock size you can hold comfortably. You may wish to experiment with that by dry fitting the tongs. The ones I made for this write-up open up to 5/8" from the inside of the top notch to the inside of the bottom V. This was measured with the ends of the reigns opened up to about 2 1/2". They hold 3/8" to 1/2" square and round stock as well as 1/2" flat stock.

The medium sized tongs that I made prior to writing this article open up to about 1 1/8", measured from inside of top notch to inside of bottom V, with the ends of the reigns opened up to 2 1/2". These tongs work well with 3/4" and 7/8" square and round stock. However, I primarily use them for knife making where I need to hold flat stock. They comfortably hold 3/4" to 1" flat stock. The medium sized tongs have the following dimensions. Bottom V: 2" long, 1/4" wide, 1/8" thick. Rounded top: 2 1/4" long, 5/8" wide, 1/4" thick. Notice that they have the same lengths as the smaller tongs. This is partly due to the different design of the donor tongs. Figure 4 shows the two pieces after clean-up.

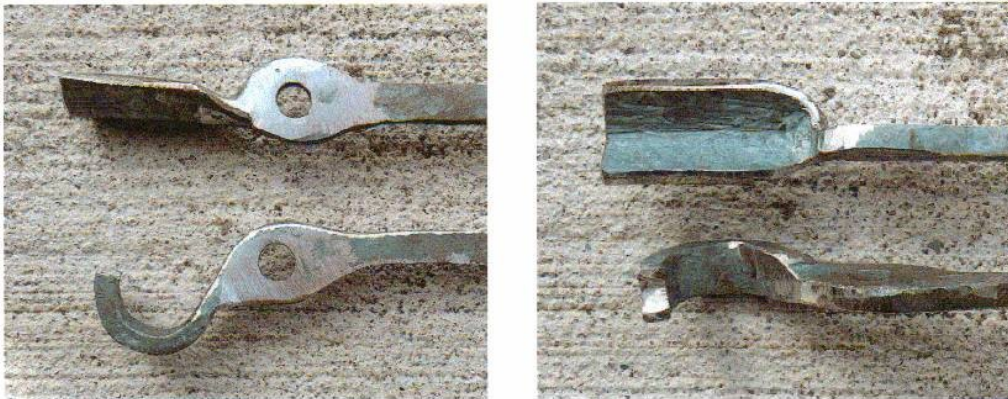


Figure 4: After clean-up.

When putting together the tongs, I like to insert a thin piece of cardboard between the pieces, such as from a cereal box. This prevents over tightening of the tongs when setting the rivet. I just burn off the cardboard piece when finished and tighten the tongs if necessary. Figure 5 shows the medium sized tongs holding the small sized ones.



Figure 5: Big brother holding little brother.

Wire-handled Hot Punches And Chisels

by Robb Gunter

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Association.*

A few years ago Russ Swider introduced me to a fantastic tool steel for hot punches, hot chisels, and punch/drift combinations called ATHA PNEU S-1, manufactured by Crucible Tool Steel Co. and available from your local tool steel supplier or Crucible Tool Steel Company, P.O. Box 5248, Arlington, TX 76011. (817) 640-7777. Originally designed as a

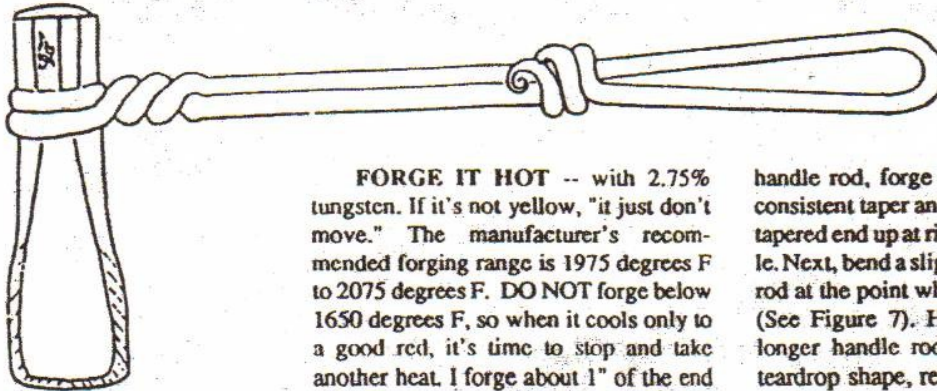
punch or chisel will come out of the bar with a visible dull red color and not have lost its cutting edge, and that's with an air-quenched tool. Also, the hot durability of this steel allows the smith to forge it to a thinner cutting edge and not sacrifice strength.

I normally use 3/4" round stock for hot tools and on my first set I split and drifted eyes for wooden handles. This uses more of a fairly expensive tool steel, and wooden handled top tools always seem to be loose. Three inches of stock is adequate to make a tool with a lifetime handle made of 1/4" round rod, typical of some of the English flatters and punches.

effort. You'll notice that ATHA-PNEU scales more than some others.

A suggestion for polishing your tools: 3M Products makes "Scotch Brite surface conditioning discs in at least 4 grits, which fit on your air grinder or 4" or 7" electric grinders. You won't believe how well they work, and once you've tried them, you'll probably find yourself polishing your anvil face and horn, a few hammers, and a host of other tools. The hardness of the steel matters very little to the "Scotch Brite" disc.

Straighten and parallel both 1/4" rods after twisting and make sure the handle is perpendicular to the tool. On the longer



drop forging die steel, it has some unusual characteristics which prove to be quite valuable for the blacksmith. First of all, it is extremely tough and durable material for hot/hammered applications. (AISI classification "S-1" is a shock-resistant tool steel). Look at its alloy analysis: .55 carbon, 2.75 tungsten, and 1.25 chromium. You'll know you have something tough when you first forge ATHA-PNEU.

Secondly, though by design it is an oil-quenching steel, it seems to work quite well as an air-hardening tool steel. In other words, forge it and use it. Perhaps the only negative aspect is the price -- 3/4" round delivered is usually around \$1.00 per inch -- but once you've tried it, the price doesn't seem so intolerable.

In some typical uses, when punching or slitting through 1" square bar stock, the

FORGE IT HOT -- with 2.75% tungsten. If it's not yellow, "it just don't move." The manufacturer's recommended forging range is 1975 degrees F to 2075 degrees F. DO NOT forge below 1650 degrees F, so when it cools only to a good red, it's time to stop and take another heat. I forge about 1" of the end to an even octagon and then fuller two concentric 1/8" radius grooves into the stock about 3/4" from the end for handle attachment (See Figure 1). The 1/4" grooves can be ground into the stock or fullered hot, which require making a double groove fullering tool. This tool can be an intricate hinged or guillotine type, but one made of 1/4" mild steel rod will get the job done (See Figure 2).

The remaining 1-3/4" of stock is plenty to draw out to whatever type of hot tool desired. For example: round, square, rectangular, oval or heart -- hot grooving or slitting chisels -- hot slit and drift combinations, hammer eye punch/drift tools -- No end! (See Figure 3).

After forging, allow the tool to air-cool. I recommend grinding or polishing away the scaled surfaces at least on the business end of the tool, as this allows it to slide through the hot iron with less

effort. You'll notice that ATHA-PNEU scales more than some others. A suggestion for polishing your tools: 3M Products makes "Scotch Brite surface conditioning discs in at least 4 grits, which fit on your air grinder or 4" or 7" electric grinders. You won't believe how well they work, and once you've tried them, you'll probably find yourself polishing your anvil face and horn, a few hammers, and a host of other tools. The hardness of the steel matters very little to the "Scotch Brite" disc. Straighten and parallel both 1/4" rods after twisting and make sure the handle is perpendicular to the tool. On the longer handle rod, forge the last 3" to a long, consistent taper and then stand this entire tapered end up at right angles to the handle. Next, bend a slight angle on this longer rod at the point where the short rod ends (See Figure 7). Heat the center of the longer handle rod and form to a nice teardrop shape, returning the 3" tapered end to touch the shorter handle rod (See Figure 8).

Stand the teardrop handle up in the vise and wrap the tapered end around both handle rods, localizing the heat while wrapping. Reheat and thoroughly wire brush the handle. Then coat with wax or your favorite iron finish. Remember, it needs to feel nice in your hand.

One of the primary benefits of this handle design is that the two different length rods which make up the handle dampen and virtually eliminate any vibration traveling up the handle and into your hand -- an important consideration on a metal-handled tool.

If you want to get fancy, a teardrop-shaped wood insert can be installed in the wire handle as it's being formed. Also, the same handle design can be used for larger tools by changing to larger rod sizes such as 5/16" or 3/8". □

SUGGESTED DESIGNS

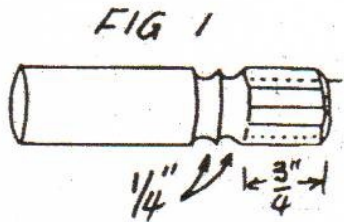
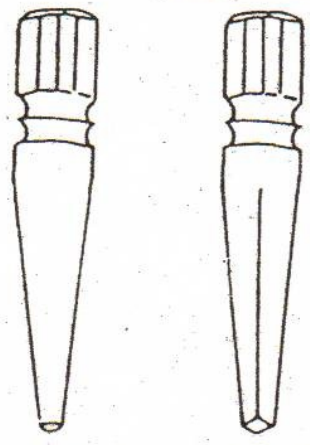


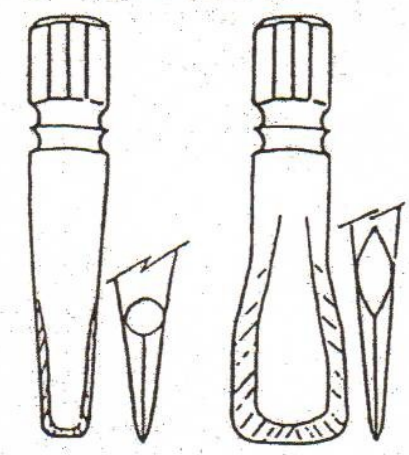
FIG 1



DOUBLE GROOVE FULLERING TOOL
1/4" ROUND WELDED
2" O.C. ON OUTSIDE
FIG 2



ROUND PUNCH-DRIFT
SQUARE PUNCH-DRIFT
FIG 3



HOT SLIT DRIFT
HOT CUT-GROOVING TOOL
FIG 3

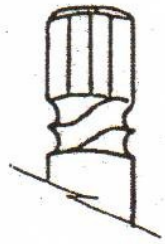


FIG 4

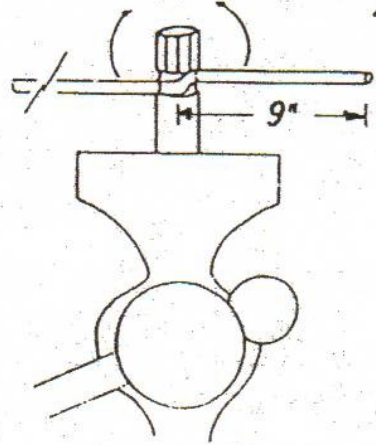


FIG 5

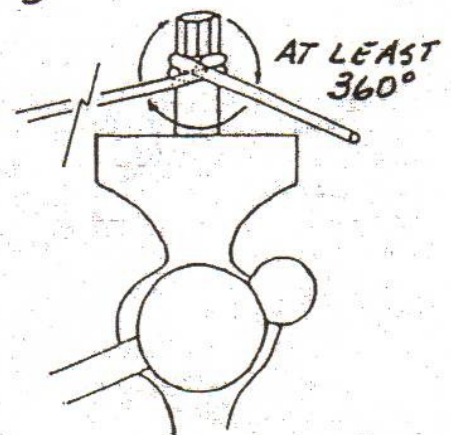


FIG 6

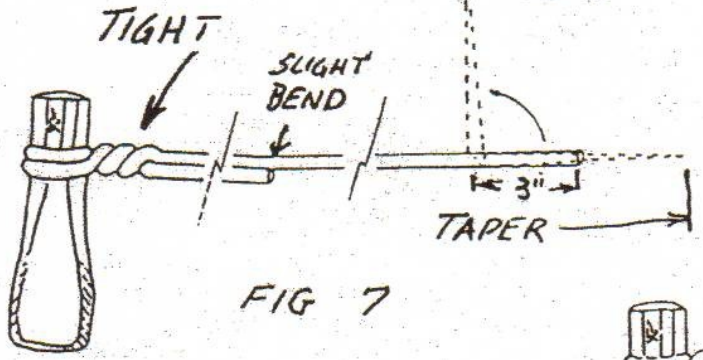


FIG 7

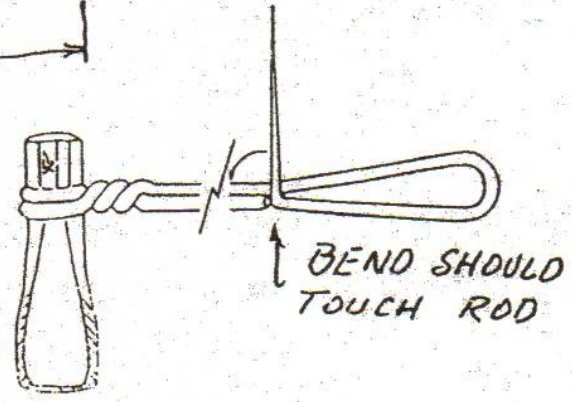


FIG 8