

THE HOT IRON SPARKLE

NEWSLETTER OF THE NORTH CAROLINA ARTIST-BLACKSMITH'S ASSOCIATION OF NORTH AMERICA



Volume 33 Number 4

Fourth Quarter 2014



Jerry Darnell demonstrating at the 3rd Quarter NCABANA Meeting.

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A Message from our President

Greetings All,

9th DEC 2014

Millers Creek, NC

As we approach this time of year when things seem to slow down a little bit and the weather turns more favorable to smithing it feels good to stand next to a coal fire and take the chill off an early morning in the forge, before prepping new beds to divide and conquer the ever bearing raspberries.

Your Board of Directors will be having our annual winter work session January 10th at B2 hosted once again by Steve Barringer. Please contact your area leaders with any concerns you would like to raise for consideration. We have found that this retreat format serves well to conduct our business and plan for the year to come and beyond.

We have experienced a smooth transition with Jennifer Phillips taking over as editor of the Hot Iron Sparkle. Her first effort with the Q3 edition was well done and well received and I look forward to future publications.

Please note the reports herein detailing our successful operations at the Dixie Classic Fair and the North Carolina State Fair. These are our largest opportunities to put blacksmithing before the public and preserve the traditions that got us here. Both fairs involve the efforts of many dedicated individuals and they reflect well on our chapter. Thanks to all who participated.

Our recent meetings at Roger Barbour's in September, the Folk School in early November and at Peter Ross' shop mid-November were excellent, interesting and a lot of fun. Reports on these gatherings are inside. The board is considering expanding our efforts in that direction with the possibility of adding two or three additional meetings next year. By transacting a major portion of our business at the annual retreat we can offer more demonstrations and blacksmithing fellowship while servicing our large geographical challenge.

The blacksmithing world mourns the recent loss of George Bassinger. A remembrance of him is in this issue.

Having accepted the acclamation to lead this organization for the next two years, I look forward to working with our board and area reps to promote and increase the opportunities for forging hot iron in Carolina. Thank you for your trust.



Lyle Wheeler, President NC ABANA

Join NC ABANA

Annual dues are \$25 (inside USA), \$35 (outside USA). Make check or money order payable to NC ABANA and send it to:

NC ABANA c/o J. Phillips
97 Trinity Ridge Lane
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or visit the NC ABANA website: ncabana.org

NC ABANA Reports

Treasurer's Report



Finances as of Nov 19, 2014

	<i>2014 YTD</i>	<i>2014 Budget</i>
<u>Business Checking Account</u>		
Dues	\$5,785	\$5,875
Heritage Forge Net	\$2,249	\$2,800
SBA Madison Conference Net	N/A	N/A
Newsletter Printing & Postage	(\$2,138)	(\$2,390)
Newsletter Editor Fee	(\$900)	(\$1,200)
Insurance	(\$1,460)	(\$1,500)
Statewide Quarterly Meetings	(\$1,792)	(\$1,000)
Postage	(\$284)	N/A
Other	(\$487)	(\$100)
Net	\$973	\$2,485
Balance	\$16,940	
<u>MMA - Scholarship Fund</u>		
Income	\$1,483	\$1,560
Scholarships	(\$250)	(\$1,400)
Net	\$1,233	\$160
Balance	\$5,890	

Jim Kennady, Treasurer of NC ABANA

Secretary's Report



The business meeting of the NC ABANA chapter was held at the third quarter chapter meeting at the Roger Barbour's Shop in Clayton, NC on September 13th, 2014. The meeting was led by President Lyle Wheeler.

There were new rules announced for the Dixie Classic Fair. These can be found in the third quarter "Hot Iron Sparkle".

The NC State Fair sold over \$30,000 of inventory in 2013 and hopes to do even better in 2014. Contact Eric Campbell with questions and to set up a volunteer time. The split for items sold is the same as in 2013 in that you receive 80% in you demo and 75% of a sale if you don't. The other percentage goes towards NCABANA's expenses (i.e. maintenance fees) along with paying sales tax and credit card fees.

Jim Kennady, the treasurer, reported on NCABANA's accounts and announced that \$225 was raised today from iron-in-the-hat to go towards the scholarship fund. Scholarships are currently available; please send applications to Vice President Garret Dunn.

Nominations were opened for president and treasurer. Currently Lyle Wheeler is the only nomination for president and Jim Kennady the only nomination for treasurer. No new nominations happened so the positions were filled by acclamation.

The fourth quarter chapter meeting will be at the John C. Campbell Folk School in Brasstown, NC on November 1st, 2014. There will also be an additional meeting at Peter Ross's Shop in Siler City on November 15th, 2014.

New Members

Amanda Avery	Durham
Laura & Ryan Williams	Burlington
Andy Brinkley	Wallburg
George-ann Greth	Durham
Nancy Kramer	Durham
Brad Martin	Chapel Hill



**NC
Whisper
Low Boy**



**NC
Whisper
Momma
w/Open
End Ports**

*Minimize fuel consumption when you're forging **small hooks, leaves, flower parts and ornamental pieces** from bar stock. Place the bar stock through the end ports, leaving front door closed for quick heat recovery.*

 **NC Tool Company Inc**
 6133 Hunt Rd, Pleasant Garden, NC 27313
 800/446-6498 www.nctoolco.com

Summary of publication and meeting dates for NC ABANA

<u>Quarter</u>	<u>Submission</u>	<u>Publication</u>	<u>Meeting</u>	<u>Location</u>
1	31 January	9 February	14 March	Morganton
2	16 May	25 May	27 June	Winston-Salem

Forging Colonial Ironwork

Jerry Darnell's new book *Forging Colonial Ironwork* is finally here. It is a compilation of over 22 years of teaching notes at John C Campbell Folk School and various conferences throughout the US. The book is about 120 pages both sides and divided into 4 chapters; Colonial Lighting, 18th Century Hearth Equipment, Early American Hardware, and Hooks and Hangers. There is a mix of 63 different projects from simple to advanced.

The cost is \$20.00 plus 6.75% tax and \$10.00 for shipping and handling. Order by phone, e-mail or visit the salesroom M-F from 10 to 5 and on Sat. 9:30-5.

www.millcreekforge.com

Mill Creek Forge

Jerry Darnell

4512 Busbee Road Seagrove, NC 27341

E-mail forge_on@rtmc.net

Phone: (910) 464-3888 (Shop)

(910) 464-2636 (House)

Need representative to the SBA

We need to identify a new NC ABANA member to serve as our representative to the Southern Blacksmiths Association. (SBA) This role has traditionally been performed by the NC ABANA President, but the Board would like to seek others that have an interest in representing our organization.

Every other year on the third weekend in May the Southern Blacksmiths Association holds their conference in Madison, GA. Historically, this was one of the original conferences that revived blacksmithing. There are seven groups in the SBA; Alabama Forge Council (AFC), North Carolina Artist-Blacksmiths Association (NC ABANA), Appalachian Area Chapter of Blacksmiths (AACB), Ocmulgee Blacksmith Guild (OBG), Alex Bealer Blacksmith Association of Georgia (ABBA), Philip Simmons Artist-Blacksmith Guild of South Carolina (PSABG) and the Florida Artist Blacksmith Association (FABA). Last year Cindy Alexander finished serving as NC ABANA's representative and we need to identify a new SBA representative. Many thanks to Cindy for all her years of dedicated service!

The SBA's Madison Conference involves participation by all seven groups. Each year one group is designated as the 'host', who is responsible for organizing the overall conference. The next Madison Conference is being planned now and will be held May 2015. NC ABANA is scheduled to be the 'host' group in 2025. Until 2025, the general duties for the NC ABANA representative include:

- Participate in phone conferences to plan the Madison Conference. Typically phone conference last 1-2 hours and are held every 6 weeks.
- General conference assignments which can change each year; for example, grounds keeping and organizing the auction, registration, t-shirt sales, catering, gallery, tailgate/vendor sales, green coal or demonstrations.
- Work at the conference in Madison, Tuesday through Sunday.
- Independently performing various conference activities, dealing with last minute changes and being able to handle multiple tasks in an efficient and professional manner as requested by the conference chair.

No prior experience is necessary, but flexibility and a willingness to work are required. The ideal representative will be familiar with organizing public events and work as an effective and proactive team player. Travel reimbursement is available. This is an exciting opportunity to interact with a fun-loving group of blacksmiths from throughout the South-east.

The SBA website has some additional information: <http://www.sbaconference.com/>

Those who are interested or want additional information please contact Jim Kennady, NC ABANA Treasurer. jimkennady@gmail.com 919-528-5636.

A Community workshop coming to the Triangle in 2015

Shop Space will initially be a full-service metal shop with access to a wide variety of tools and educational opportunities. The long-term goal is to create a state-of-the-art community shop offering a wide range of tools for many trades and materials, including wood, glass, and plastic. Shop Space will also have a library, classrooms, short-term fabrication spaces, and long-term lease studios. We'll offer a wide variety of classes in a number of subjects (such as blacksmithing and woodworking) to further student's skills and interests, along with introductory courses to teach students safe and proper use of the machinery. Please visit www.shopspace.org for more information, or contact Lucas House at (919) 345-6359 or at www.ironhouseforge.com.

SHOP SPACE
est. 2014 n.c.
COMMUNITY WORKSHOP
INITIATIVE

“The Last Real Blacksmith”

A Tribute to George Basinger

Photos Courtesy of Jimmy Freeze & Jon C. Lakey

Memories from Jimmy Freeze

I met George Basinger in 1976 during a bicentennial event in Mooresville, NC. I was just getting interested in blacksmithing and was looking for information. George invited me to his shop in Salisbury and I became a frequent visitor there. George had a business making brick hammers, chisels, and all kinds of mason's tools. He introduced me to all kinds of blacksmithing from light industrial type to useful and artistic. He was raised in Rowan County and his father and uncle were blacksmiths not far from where I live now. Maybe that connection was why we got along so well.

He took me to my first NCABANA meeting at the state fairgrounds one Saturday. I went on frequent trips with him to the coal mine in West VA; he used a lot of coal running his tool business. I also helped when he would repair wagon wheels for the Buffalo Ranch and picked up some knowledge in that field.

George did a tour in the Air Force, ended up in Pennsylvania and bought a blacksmith shop there, which he ran for several years. When a road project took the shop, he returned to Rowan County and built his shop on Webb Road. He was also an accomplished farrier and shod all types of horses. George was one of the lifetime members of NCABANA.

Memories from Tal Harris

I met George in 1978 after my daddy moved to Salisbury as a lieutenant in the Highway Patrol. George was always good to me, freely sharing whatever he was doing at the time. He let me put my first power hammer in his shop and took the time to find a spring and get it in running order, or getting it “situated” as he called things like that. He was proud of his heritage, loved history and our Country. One of the most versatile blacksmiths I've ever known, George was an accomplished tool maker, wheelwright, and made repairs to all kinds of equipment. George was a 6th or 7th generation blacksmith and had a forge in his shop with the names, birth and death years of his ancestors stamped on anvil-shaped

pieces of steel that were attached to the brick hood of the forge.

Seems his only expectation was that if he showed you how to do something, he expected you to do it his way until you could do it. While it sometimes felt like tough love, I believe it was just his way of teaching. If he gave you the steps to a process that worked and you didn't succeed, he could go back through it and find the point where trouble began and set you back on the path. He was also open to new ideas that would help him be more productive and I saw several changes in his product, process and equipment over the years.

Always a character, he could be kind, cantankerous, caring, ornery and friendly all in the course of 10 minutes. A man of conviction, you didn't have to be around him long to know where he stood on many topics, a character trait that seems to be disappearing from our society. Those who knew him know exactly what I mean. George was a gracious host of many NC ABANA Chapter meetings of which I believe he was a charter member.

While his passing marks the end of a lifetime of metalworking experience, the knowledge he shared lives on in all those whose lives he touched. He was just George, and he will be missed.

Excerpt from *Salisbury Post*, Written by Mark Wineka

George M. Basinger could talk. Boy, could he talk. “I wear out telephones,” he said once in a newspaper interview in 2000.

Betty Basinger, his wife, says George actually missed his calling — he could have been a lawyer or a preacher. In reality, however, Basinger proved to be many other things. Above all, he was a blacksmith, who learned at the elbow of his father and other mentors and whose family tradition of blacksmithing went as far back as 1770 and his great-great-great-great grandfather, Johann Basinger.

But Basinger also was a traveler, woodworker, musician, trader, country weatherman and politician.

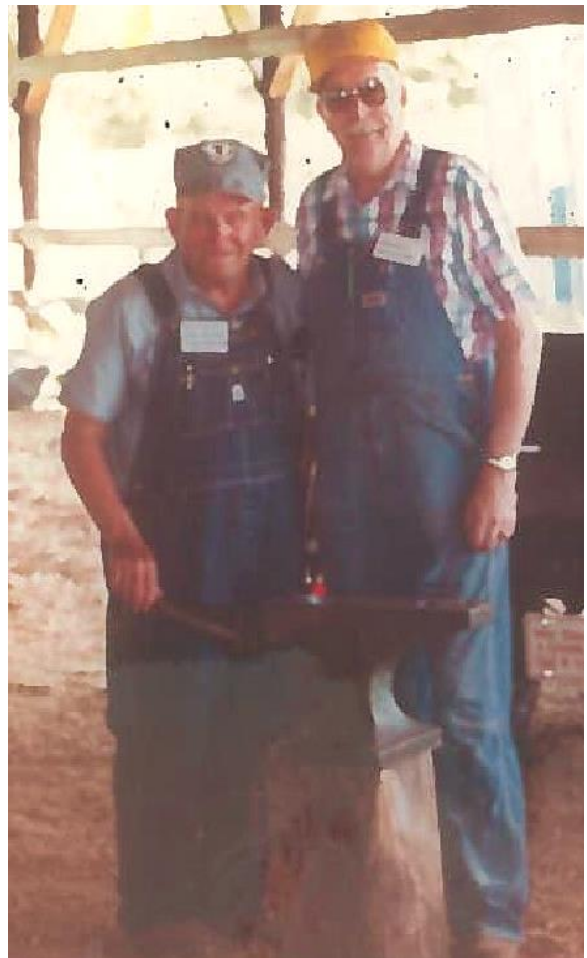
Basinger died at his home in Concord Sunday night [Nov 16, 2014] at the age of 84. His health had been declining since he suffered a stroke almost two years earlier, Betty says.

As a blacksmith, George Basinger gained a reputation for making masonry tools, especially his specialty, the brick hammer. Up to a year before his death, masons would call Basinger and offer to pay him top dollar if he would make them one of his hammers.

In 1966, the family moved to Rowan County, where Basinger bought a house on Webb Road and set up his Basinger's Blacksmith Shop on the same property. For many years, the shop was distinguished by an 8-foot, 446-pound oak wheel out front.

Basinger found his niche making tools and shipping them to various places in the country. At his busiest, he had up to five men working for him.

Basinger worked as a blacksmith for 39 years and sometimes called himself "the last real blacksmith."



George Basinger with Jud Nelson at the SBA Conference in Madison, GA



George Basinger with then NC Agricultural Commissioner Jim Graham, who was also a native of Rowan County



George Basinger at his shop in Concord, NC

Regional Reports

Wilkes Teaching Forge

Report from Lyle Wheeler

The Wilkes Teaching Forge (WTF) has met consistently for the past three months at the Wilbar Forge, graciously hosted by forge master Gary Roath.

WTF met on the 16th of September with a good turnout. John Freas demonstrated a circular towel holder with a twist, an interesting piece. Lyle gave a report on the Q3 meeting featuring Jerry Darnell's demonstrations at Roger Barbour's shop in Clayton. Announcements were made about the Q4 meetings. David Baker showed his horse head key fob and a long horned steer, commenting that it is important to fold the horns back so as not to end up with a Polled Herford!

WTF met on 11th October with the usual characters present. John demonstrated 2 towel bars from 3/8 round. Dudley struggled thru a leaf fob. Gary demonstrated another oyster knife/bottle opener with various twists. Reports were made on the demonstrations at Stone Mountain State Park and the Brushy Mountain Apple Festival. Lyle had a show and tell on a cooking trivet.

WTF met on 11th November. W.C. Scroggs started the work with a spear head forging. David Baker worked on a bottle opener from 5/16 Square. He also showed his new mason jar holder from the HIS vol.35, No.1. Gary and Lyle reported on Gary's recent class at JCCFS. Lyle reported on the Q4 meeting and the Blacksmith's auction at the Folk School.



Copper bracelet detail



Rebecca Margo's amazing lunch spread

Southern Foothills Blacksmiths

Report and photos from Ray Clontz

The November meeting was a great learning experience since Lauren Madison had agreed to do a demo on making a bracelet from 3/4 inch copper tubing. Lauren brought all her tooling and holding jigs and fixtures and demoed. After Lauren completed a bracelet which included the forming of the bracelet flat, annealing the copper as the bracelet work hardened and the forming of the curvature shape, and polishing the completed bracelet; a number of the members tried their hand at making one. I guess you could say that the bracelets were forged, as they were hammered out on an anvil, heated and quenched. As promised, Rebecca Margo brought barbecue, slaw and cake.



Members try their hand at forging sheet copper



The vice is an important tool to utilize when folding copper

Avery Pierce brought a couple visitors, one who worked at a blacksmith shop that she said had 3 tire hammers that they used in the production of items they furnished to retail shops. David Stitt has been working on a very large bowie knife forged from a leaf spring.



Avery Pierce hand forging a railroad spike knife

Normally, our meeting consists of members working on their own projects, but having Lauren Madison do a demo that interested many members that tried their hand at making their own bracelet was a welcome change.



Fred Connell helping David Stitt heat-treat his bowie knife



Lauren Madison demoing copper folding techniques

The below picture shows a new tool that Steve Barringer had purchased. Since all blacksmiths are looking for tools that make our work easier, I included the tool and a picture of the package. The tool is a self-adjusting vicegrip that makes moving it from different thicknesses of work, a one handed job.



Self-adjusting vicegrip with packaging



3 firepokers forged by Tyler Rasche under a Big Blu power hammer

Triad Area Blacksmiths

Report from Marshall Swaringen & Keith Roberts

The fourth quarter started with the Dixie Classic Fair. See the special article on our fair activities. If you want to join us in future fairs, just let me know and I will get the information to you. Andy Phillips opened the shop for Thanksgiving week (see his article later).

The fair covered our first meeting in October. Our second October meeting was the Saturday after the fair. We had a full house of members and a couple of visitors joined us from the fair invites. A couple may become new members.

One couple from Germany, Alex and Severina Langs, came to pick up some chain that was made for them. Also, we got Severina to make a couple of links and add to her chain. During the fair, Keith Roberts had each demonstrator make a link and add it to the fair chain. Well, we would have a picture of the fair chain, but the fair chain has traveled to Germany also. Sorry Keith.

November was just normal meetings with newbies being shown the basics. December has nothing planned but our normal meeting.



(from left to right) Richard Howard, Keith Roberts (kneeling), Severina Langs, Marshall Swaringen. If you look really closely, you can see the chain in Severina's hand.



The forge the Langs' bought upon returning to Germany. They had so much fun, they had to get their own forge.

Triangle Area Blacksmiths

Report from Dick Snow

Pictures by Amy Hinson, Ben Harris, Randy Stoltz,
& Dick Snow

The latest meeting of the Triangle Area Blacksmiths was held December 6, 2014 in Durham. We met at the historic Golden Belt Manufacturing building just off Main Street. A special thank you goes out to building manager Nick Cordoba for allowing us to use the space. This facility houses a number of art related businesses so it seemed like a good place to meet to make the blacksmithing community more aware of local resources. Randy Stoltz and Dick Snow set up three forging stations and the meeting got started around 9:30 with over 60 people in attendance.

The blacksmithing forges were silent at the start of the meeting as we adjourned to the FireFly Hot Glass Studio next door. FireFly partners George Ann Greth and Paul Vernon were gracious hosts and explained the working of a hot glass shop. George Ann proceeded to demonstrate several techniques by making a spiral wrapped cup, a solid color overlaid crackle vase, and an ornament. George Ann was assisted by local NCABANA members Marion Campbell, Colin Eckhart, and Dick Snow. There are at least 5 Triangle Area Blacksmiths who have been playing with hot glass for the 1-2 years since FireFly opened. 18 additional NCABANA members signed up to blow their own ornaments after the demonstrations and I heard a number of people inquiring about lessons and additional workshops.

After the glass blowing demonstration was over, the propane forges were fired up in the warehouse space. Randy Stoltz and Eric Campbell got the hammering started. We had no specific project for the event so it was an open project hammer in. I saw a number of nails, hooks, leaves, decorative S hooks and other items being made over the next 6 hours. The final forge was turned off around 4:30pm. We had a lot of kids at the meeting and I think most of them got to try their hand at hammering. Pallets were placed in front of the anvils to compensate for the height differential of the smaller ones.

Many attendees also visited the other areas of the building that were open during our meeting. Brian Allen, Artisan and Printer, is located in a room in the back corner of the warehouse. He houses several antique printing presses with trays of metal and wooden type along with other tools of the printing trade. The main press on display is an 1850's Albion

Hand Press. He is extremely knowledgeable about the history of printing and loves to talk about printing.

Liberty Arts is in the front of the building and is a local artist's collective. There are metal, casting, wood, and ceramic artists working from the space. There was a clay class going on during our meeting and at least one lucky young man was gifted with a piece of railroad rail for his first anvil. Thank you Christian Vagn Hansen for not only donating the piece of rail, but cleaning it up and polishing it before handing it over to the young man from Burlington. Jackie MacLeod is one of the artists in Liberty Arts and she worked with Jimmy Alexander in his shop at the old tobacco warehouse. There is a picture of Jimmy posted on the wall at Liberty and some of Jimmy's equipment is in use by Jackie.

The Dueling Sloths micro-brewery is in another part of the warehouse and they started brewing a batch of beer at 7 am. They had their doors open several times during our meeting and a number of people toured their small brewing cubicle. They are still in the recipe and equipment testing phase of their operation and are not currently selling their product. That does not keep them from passing out samples and I hear at least a few NCABANA members may have been given a taste of the 3 brews on tap.

Special thanks also goes to my wife Teepa Snow for all the cooking and preparation she did before and during the meeting. She had numerous baked goods and tacos, sloppy joes, barbecue chicken, and pulled pork for lunch. George Ann from the glass shop also contributed a macaroni salad.



Eric Campbell demonstrating at the anvil with many spectators



Tom Watkins heating the glass



Ornament detail



George-ann molding the glass while Tom blows



Randy Stoltz's special pig forge



Amy Hinson adding color to her ornament



Teepa Snow's awesome lunch spread. That's a lot of food!



Eric Campbell assisting a young, future blacksmith



The old printing press



More young smiths working hard and taking turns



Lots of spectators enjoying the glass blowing

Tool Steel for Sale

After supplying the materials for a recent tire hammer & tool build, I am now offering competitively priced tool steels to the local blacksmithing and horseshoeing communities. I have a small inventory of S-7 and H13 rounds in stock. Other sizes, shapes, and tool steel types can generally be delivered in about a week.

Contact *Walt Beckwith* for a quote or more information c/o

Woods Edge
3745 Swarthmore Rd.
Durham, NC 27707
1-919-309-5667 or by e-mail at: wbeckwith@mindspring.com

Event Reports

Dixie Classic Fair 2014

Report & Photos by Marshall Swaringen

The Triad Area Blacksmiths completed a successful ten day run of the Dixie Classic Fair. There were thirty two different demonstrators. Keith Roberts was in charge of the forge scheduling and he moved people in and out on a regular schedule. Both forges were demonstrating almost all of the time. The demonstrations included leaves, arrow heads, snakes, rings, hooks, tri pod sets, camp fire tools, twist of all kinds, and many stories by our master story teller, Keith Roberts. Most days we had more than fifteen members present and lots of family members also.

Not only do we make and display campfire tools, we use them to cook our meals. This the only place I can go and work hard and gain twelve pounds in ten days. Ronnie Nifong likes to cook as much as me, and he made sure there was plenty to eat. Not all cooking was with period utensils. Ronnie brought a deep fryer and a new toy that makes long fries from whole potatoes. Yes twenty pounds of French fries was eaten in one night. Not all by me. I had some help! We thank all the wives and bakers for keeping the supply of cakes, pies, cookies, candies, and cobblers fresh every day. Here is some of the food we had:

Friday – on you own

Saturday – sausage gravy, country ham, camp fire biscuits, fresh pinto beans, French fries

Sunday – BBQ, slaw, rolls, hush puppies, French fries

Monday – country ham, biscuits, pork roast with potatoes, carrots, and onions

Tuesday – country ham, biscuit, fish fry, hushpuppies, slaw

Wednesday – hot dogs and all the trimmings, rabbit stew

Thursday – hot dogs and trimmings, meat balls, Brunswick stew

Friday – French fries, chicken stew, bacon, eggs

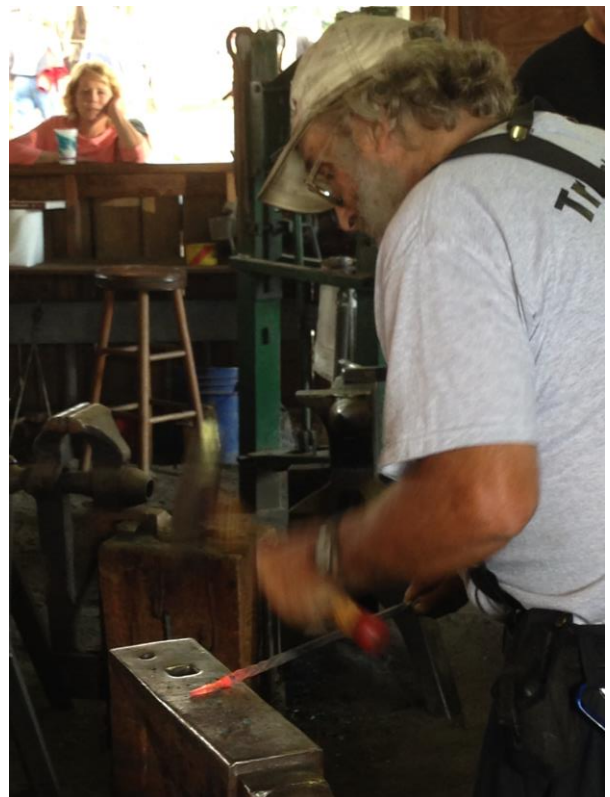
Saturday – Brunswick stew, French fries, pork roast

Sunday – just sweets

I may have over looked some of the food and not mentioned it here, but we did not miss any when it was ready to eat. I just remembered one: stuffed peppers.

The Dixie Classic Fair is a time to demonstrate or craft. It is also a time to see old friends and make new ones. We have used the fair as a way to grow our membership. We have added new members to the club from each fair. Some have stayed and some have moved along. Repeat customers are becoming more frequent.

I have to add a little about a future blacksmith. My grandson Austin Howell was eighteen months old during the fair. I gave him a four ounce hammer and the edge of the swage block. He watched Ian Thomsen hammer at the anvil and copied his hammering. Austin hammered for forty five minutes matching Ian stroke for stroke. He did not want to leave, but moms always get the last word. It is time to make some small hammers and tongs.



Keith Roberts, lead demonstrator, showin 'em how it 's done!



Marshall & his grandson Austin beating the swage block



Ian Thomsen forging at the Blu anvil



Paul Spainhour & Roger Abrahamson cooking dinner over an open fire



Bernd Mergener swinging a hammer with the best of them, then taking a break at the end of a hard day forging.

NCABANA 3rd Quarter Meeting

Report & Photos by Doug Wilson

NCABANA met 13 Sept at the shop of Roger Barbour in Clayton, NC just southeast of Raleigh. Many made the extra effort to attend from the western part of the state boosting attendance to more than 40.

The principal demonstrator was noted Colonial lighting expert, Jerry Darnell, from Seagrove, NC. Jerry's morning demonstration was a three-legged, adjustable candle holder.



Jerry introduces his first demo with a dimensional drawing



For details of Jerry forging this lovely candle holder, look later in this issue



Garret Dunn calls the number for a lucky Iron-in-the-Hat winner



Lyle Wheeler chaired a brief business meeting

Following lunch, Iron-in-the-Hat, and a business meeting; Jerry demonstrated forging a kettle tilter for use in a fireplace.



Jerry sketches details of fittings for hanging a kettle tilter while host Roger Barbour looks on



Jerry demonstrates the mechanism for the kettle tilter that he just forged for the afternoon demo

Tire Hammer Plans

Send check/money order for \$30 to

Clay Spencer
73 Penniston Pvt. Drive
Somerville, AL 35670-7013

Includes postage to US and Canadian addresses. Other countries e-mail clay@tirehammer.com for price. **256-558-3658**.

Tire Hammers for sale contact me for current price.

Beverly Shears Sharpened

\$41 includes return shipping in US. Remove blades and ship to address above. Extra cost for deep nicks or blades sharpened at wrong angles.

Gift Making Workshop

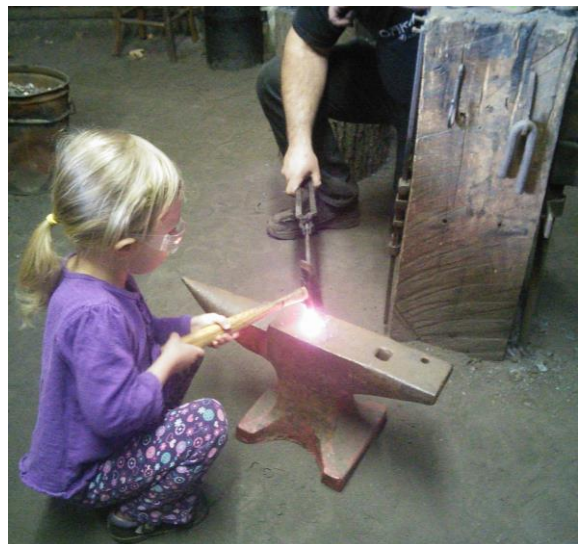
Report & Photos by Andy Phillips

Yet another year of a successful thanksgiving work shop. The workshop lets people get into the Dixie Classic Fair shop for a few extra days leading up to the holidays to work on Christmas presents and long term projects. This year wasn't quite as busy as years past but the forges still kept rolling along as we saw some cool stuff made throughout the week.

We were joined by Lenny Moore & his friend Carlos, Dannie Bingman Sr. & grandson, and the whole Phillips family. A special thanks to all who came and especially the Triad Area Blacksmiths for the use of their wonderful shop.



Dannie Bingman Sr. and grandson both working hard



Ferrous Phillips (above) forging using a 1.2 pound hammer as a sledgehammer while Daddy Andy holds the hot metal. Pictured below is Aeris, Ferrous, & Jennifer Phillips waiting to forge.



NCABANA's 4th Quarter Meeting

Report by Lyle Wheeler

Photos from Julie Hailey Clark

Things got started Friday evening in a festive mode at the Spencer Forge at John C. Campbell Folk School October 31st in Brasstown. Upon arrival folks were able to acquire a portion of some of Tim Ryan's infamous chili/stew. Not sure what all was in it but it was good. Shortly thereafter the shop was ablaze of activity with most of the forges lit and several projects underway with various groups working together. The result of all this activity was a fireplace set with stand, a 30" x 60" gate panel, a set of tools for a pizza oven, a set of fire cooking utensils and various hooks and racks, all to be donated to the Blacksmith's Auction the following day. This lasted the rest of the night and all those so inclined got to work in the forge.



Completed gate panel for the SBA Conference in 2015



Tim Ryan, Clay Spencer, & Chester (the dog) making chili



Fireplace tool set made for the John C. Campbell annual blacksmithing auction. Last year's fireplace tool set was the highest selling piece. I bet this one went for even more!

On Saturday morning Paul Garrett, resident blacksmith at the Folk School, did a very interesting demonstration on making tooling from race car axels. His explanation of this material, its evolution and use in auto racing was well delivered. A tech sheet was passed out and Dave Smucker was on hand to provide even more technical information. Paul made a bottom tool and for the finale' a two-pronged bending fork using both the Big Blue and hand hammers. This demo was well received and very informative on the working and use of this rather exotic material.



Paul Garrett demonstrating at the forge.



Paul Garrett and Chester working at a Big Blu power hammer.

This meeting was in conjunction with the Appalachian Area Blacksmith's and a good opportunity to meet and work with folks from that group. The Friday night hammer-in was Paul's second time to open the shop for this activity and a lot of fun. Thanks to Paul for organizing this meeting and we look forward to making it an annual event.



This photo is courtesy of the Folk School and shows the spread of fine art available at the start of the auction.

NC State Fair 2014

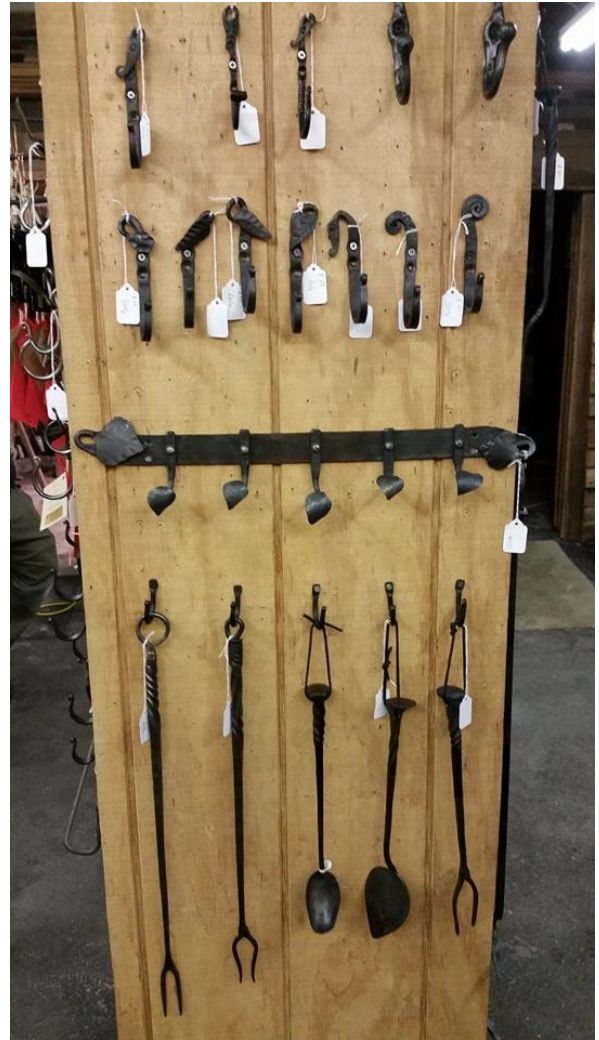
Report & Photos by Eric Campbell

This year's fair ran for ten and a half days with better weather than we could reasonably hope for. Our total sales were \$34,327.75 with the portion going to NCABANA totaling \$3,806.77.

A special thanks goes out to Al Andrews and Roger Barbour for working with the fairgrounds and building the mounting hardware for the new sign on top of the shop.

Our volunteers this year were Al Andrews, John Fluke, Tom Watkins, Al Andrews, John Fluke, Tom Watkins, Chris Dietz, Laura Abt, Randy Stoltz, Erika Price, Eric Campbell, Marion Campbell, Jeanette Low, Alan Green, Amy Hinson, Andy Phillips, Colin Eckhart, Dan Ritchie, Dexter Langley, Dick Snow, Doug Merkel, Garret Dunn, Henry Bunn, Jeep Sabo, Jerry Langdon, Lanny Moore, Lucas House, Nancy Remark, Paul Tooley, Randy Betchel, Rick Morrison, David Clement, Aaron Maxwell, Larus Maxwell, Amanda Avery, Matthew Hux, Jason Craft, Robert Timberlake, Cindy Alexander, Roger Barbour, Parks Low, and Lyle Wheeler. If I missed anybody I apologize, we had so many great demos and volunteers, it was hard to keep track of everyone. We had 25 people bring items out for sale this year.

I would like to thank everyone for their participation and encourage everyone to make stock for next year for personal sale as well as donating items to fund the scholarship program.



Hanging inventory at the State Fair in Raleigh



New sign at the Heritage Forge



Andy Phillips demoing a wall hook with flower



Angels, pans, and hearts line the shelves waiting to be sold



Dick Snow (foreground) and Eric Campbell (far forge) demonstrating to an attentive audience at the Heritage Forge



Rows of knives are displayed behind glass at the NC State Fair



Setting up shop with Laura Abt & Chris Dietz

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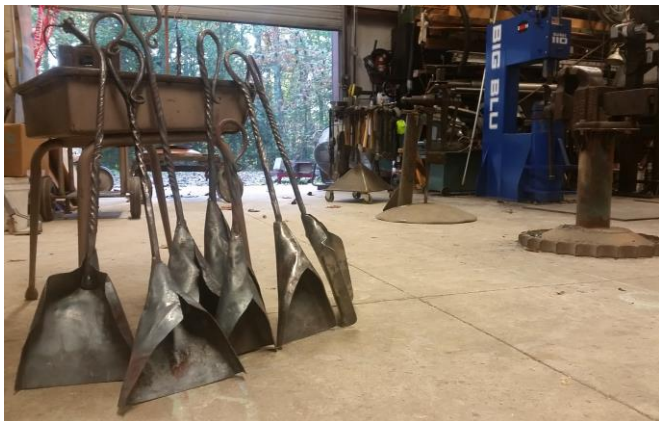
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Featured Articles

Photo Gallery

Assembled by Jennifer Phillips

This is the second installment of the NCA-BANA photo gallery. After last quarter's gallery being such a success, I decided to expand the search parameters to include even more blacksmiths from all over the world but still mostly in the US. There are a few NCABANA members included and I hope even more in the future. Some pictures are of huge sculptures while others are of everyday items that even beginners can focus on making. If you would like to have some of your work featured, you can message my Facebook account (NC ABANA) or send an email to northcarolina.abana@gmail.com. I can also scan and upload any pictures mailed to my address (on Page 2). I hope you enjoy these pictures as well and happy forging.



This first picture is from the shop of Eric Strauss. Eric is a full-time sculptor in Ellijay, GA. Pictured above are several shovels of an interesting design. Pictured below is a closer view of the shovel faces to get a better idea of their creation.



Also, by Eric Strauss are these fireplace tools sets. With winter definitely being upon my area, fireplace tools and the holders to go with them are in high demand in the High Country. The design above is oak leaves and the one below is rhododendron.





Also hailing from Ellijay, GA is Burnt Whisker Forge, owned by Lance Zeigler. The above picture gives a nice overview of a fireplace screen, andirons, and a fireplace tool set.



This picture above shows just how much time went into the fireplace tools and holder. Note the long twist along the centerline of the stand. Below is a better detail of the shovel's flare and riveted ends.



Here is a better detail of the andirons. Note the twist on each tip and how absolutely huge the whole set up is.



Pictured above is a more comprehensive view of the fireplace screen. Note the elegant detail on the handles. It is the little things like this that turn good work into great blacksmithing.





Switching gears a little now, we have Aggressive Metalworks out of Albany, NY. This Games of Thrones style dragon came from the mind of owner Mike Cataldo.



Aggressive Metalworks also makes the typical blacksmith items like railroad spike bottle openers. But to call the beauties pictured above typical is a real disservice to the craftsman.



Another favorite of mine from Aggressive Metalworks is this American flag. It is amazing the work that can be done with mostly chisels.



Check out the chain tail and ribbed talons.



Here's one more picture of the dragon. Look at that wingspan!



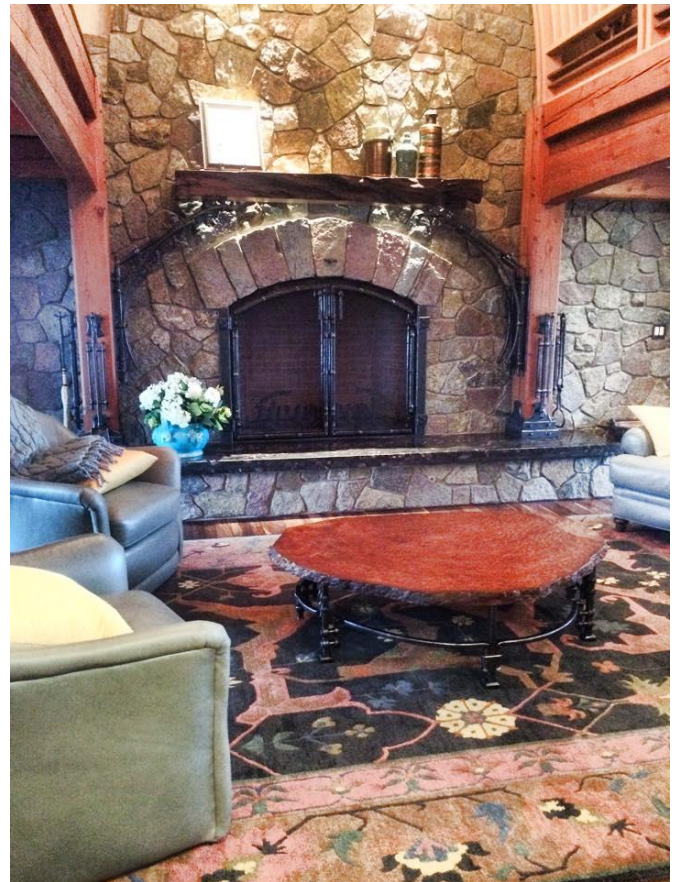
The above rocking chair comes all the way from Resita in Romania and the shop of Forjart fier forjat. Note the hammered texture of every piece of metal.



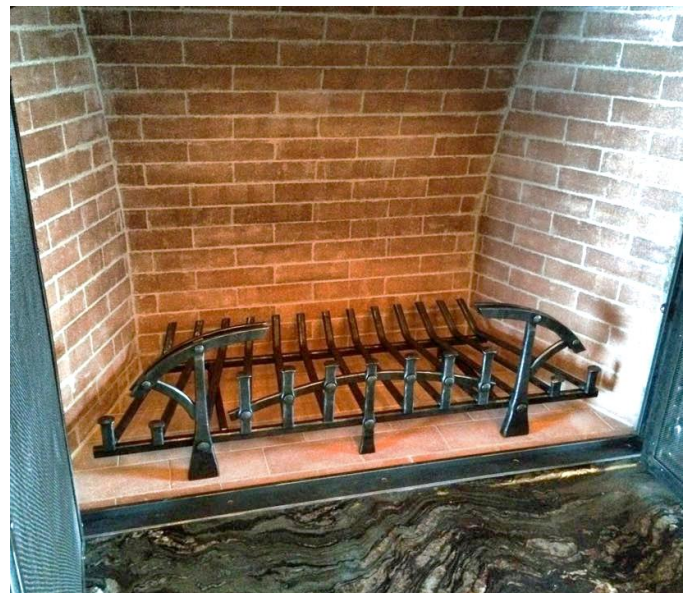
Also from Romania is this intricate gate. I personally love scrollwork and this is the motherload.



Shop signs say a lot.



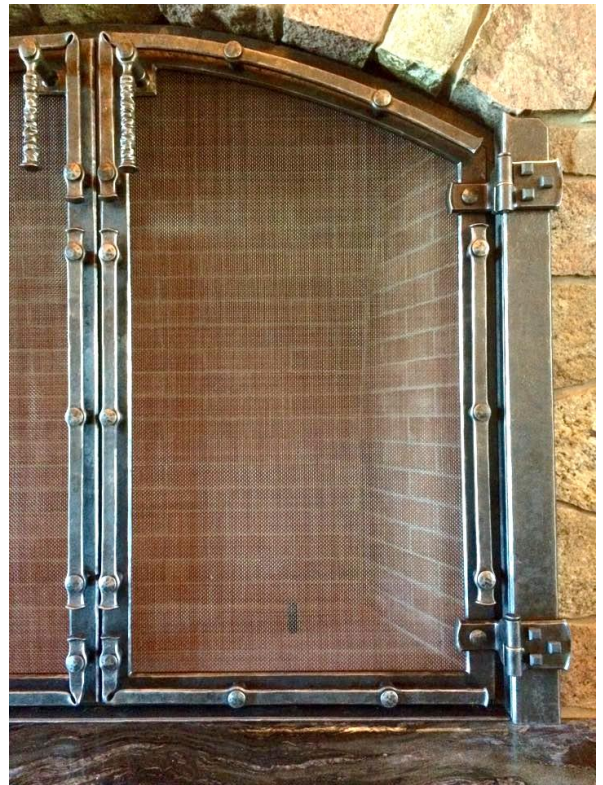
There are so many things in this room that are beautifully created but I will focus on those done by Arc Iron Creations out of Buffalo, NY. Andrew R. Chambers, Jr. is the owner and craftsman behind this and many other elegant furniture pieces.



Look at these beautiful andirons. The partial arc theme is all throughout this room. I really love the rivet details.



Next up are the fireplace tools. There is so much to be impressed by from the mounting plates to the textured handles.



Here is a better view of the fireplace screen as a whole.



This picture really brings the whole arc theme into scope.



Last but not least is the hand-made table.



It is not just the original texture on the handles that is impressive but also the large rivets and folded corners.



Check out this skeletal pic!



These next few forged items are from Mike Miller-Imperiale, co-owner of Wasatch Forge in Salt Lake City, UT. This first picture is of a belt buckle. I know a lot of you can appreciate the horseshoe resemblance to the design.



I know there are a lot of bottle openers out there but how about this one with a music theme?



Next up is a railroad spike spoon. That's a new one for me!



Just a twist is all it takes to turn an everyday coat rack into a work of art.



This little beauty is a simple but elegant wine bottle opener.



I think I'll end the photo gallery with a little bit of fun this quarter. Talk about a slingshot that will last.

SBA Announcement

Provided by Cindy Alexander

The 17th bi-annual Southeastern Blacksmith Association (SBA) Conference will be held at the Lion's Club Fair Grounds in Madison, Georgia from Thursday May 13th through Sunday May 17th of 2015. This conference has been held since 1983 in order to promote and maintain a strong blacksmithing tradition in the Southeast.

The demonstrator lineup is outstanding! Come see "The Wizard" himself, Peter Ross, internationally recognized Master Bladesmith, Jason Knight, applied draft horse shoeing with Billy Ridgill, and large-scale forgings for public sculpture with Michael Dillon and his massive power hammers!

Other conference events include Green Coal and Cold Coal with Brian Brazeal and his International Young Smiths (this will be a seminar for kids, teaching kids, without the use of fire), Family Programs, the Local Talent Forge, Iron in the Hat, Forge and Tool Box Raffles, a variety of vendors, our Friday night Dinner Banquet, Auction, and Forging Competitions – plus other surprise events along the way! Camping is encouraged (plan on bringing your own firewood) and tons of amenities are provided just a stone's throw away in Madison, Georgia.

The Ocmulgee Blacksmiths Guild of Georgia is hosting this four day event, with volunteers from all eight SBA Chapters and the ABANA Board. The conference theme explores the language of metalwork (what we call *blacksmithisms*) that our society

uses in everyday speech. "Get on the horn! Catch my drift? Everyone speaks smith!" celebrates the timeless influence of the blacksmith's art, language, and expertise.

These *blacksmithisms* have been compiled into what we call *The Blacklist*. This list will be unveiled at the 2015 SBA Conference and will be of use to all who demonstrate the craft and educate the public about the trade. This list will act as a free tool that can be taken or mailed anywhere, and can be used to easily communicate to non-smiths that they already, unknowingly, use blacksmith vocabulary!

The 2015 theme was chosen in celebration of Ivan Bailey, one of the founders of ABANA and very big supporter of our SBA. Ivan passed on September 9th of 2013. He was an immeasurable proponent of teaching not only future smiths, but of educating the public in order for them to appreciate our trade and to create the necessary client base to help keep blacksmithing alive and well. His willingness to relentlessly engage the public and openly teach techniques to other smiths set an example for all of us to follow!

To receive a conference mailer and/or registration form, send your address or email address to: Sean O'Shea at mailinglist@sbaconference.org or to: SBA Mailer: 3591 Stewart Rd Doraville, Ga. 30340 – and we will add you to our mailing list. We look forward to seeing you there!

Coal for Sale & Blacksmithing Set Up for Rent

I now have coal for sale. It's the pea size sewell coal Fred Pugh used to sell. It's \$10.00 per 5 gallon bucket, you bring the bucket, or \$100.00 per 55 gallon barrel, you bring the barrel. Delivered and dumped is \$110.00 per barrel plus \$2.00 per mile from my shop to yours. I have a source for metal barrels with lids and easy open latches for \$25.00 each should you want to keep the barrels.

Complete Blacksmithing set up for rent. \$75.00 a month. Offered to those who want to scratch the itch of forging but don't want to invest a lot up front. Comes with forge w/blower, anvil w/hardie, leg vise, and bucket of tools. I sell the coal as well, by the bucket or the barrel. Have 4 of these to rent out.

Amos Tucker's cell is (252) 289-7317 and his address is 8172 Renfrow Road, Kenly, NC 27542.



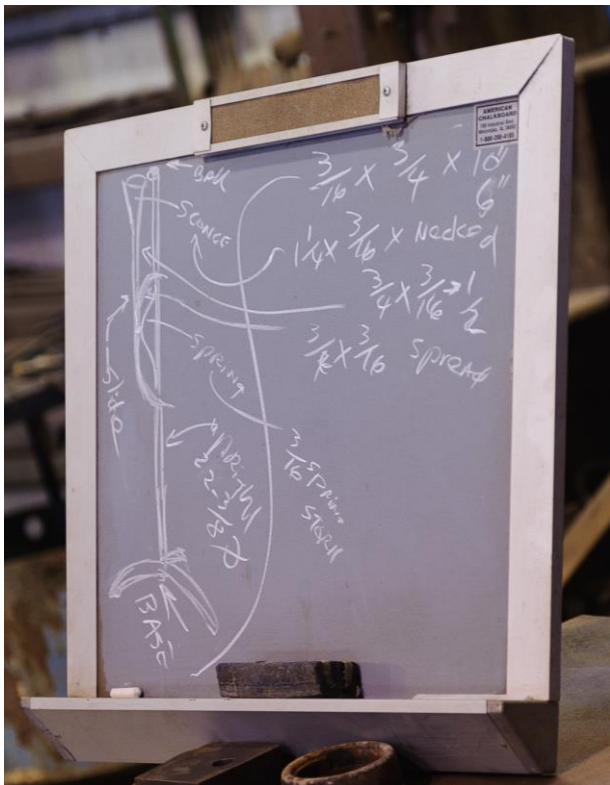
Forging an 18th Century English Table Light

Article & Photos by Doug Wilson

Jerry Darnell from Seagrove, NC, demonstrated this piece at the 3rd quarter NCABANA meeting. I have captured many of the steps in photos as Jerry forged an 18th Century English Table Lite. The detailed sketch for this along with forging notes can be found in chapter 1 of *Forging Colonial Ironwork* written and published by Jerry.



Jerry Darnell lays out the plan for forging the light



A nice summary of materials for the project



Setting up the two scarfed pieces for a drop-the-tongs weld of the tripod base



He sticks the weld



Jerry uses dividers to mark for cutting all the legs to 5"



Taper the ends and chamfer the sides



Finish the feet up as you would an upset corner



Turn the feet $\sim\frac{3}{4}$ " and upset to $\sim\frac{1}{4}$ " thick



Jerry upsets the upright from $\frac{3}{8}$ to $\sim\frac{1}{2}$ "



Jerry's great hammer control was demonstrated in hand forging a ¼" tenon on the upset stem of the upright



A small mass is left after tapering the top end of the upright and a small ball is forged on the end. Here Jerry uses the edge of the anvil as a backup to help forge the ball.



He uses a plate with holes as a monkey tool to square up the shoulder of the tenon.



To start forging the candle cone, about 3" is isolated on the end of a 3/16" x 1 ½" bar.



The bottom end of the cone is tapered on the anvil.



The blank is evened out and refined on the anvil.



The form for the cone is then spread on drawing dies on the power hammer.



The rough cone form.



The end is evened up.



Applying the final touches to the cone form.



Cut to length.



Forge the cone blank stem down to 5/16" in preparation for forge welding the slide.



Ready to scarf for the forge weld.



Forge weld the cone form to an 8" piece of 3/16"x3/4" tapered to 5/16" and scarfed.



Upset the end of the slide.



Round the end and smooth the taper into the forge weld.



The completed weld giving an overall length of about 16".



Start punching the end for the 1/4" upright.



Punch through over a hole in a backing plate



Forge a tongue from 5" of 3/16" x 3/4" stock starting by rounding the end



Widen the hole to size with the back end of the punch.



Spread the end to 1"



The finished hole.



Punch for the 1/4" upright.



Test the fit with the upright to make sure the hole is large enough.



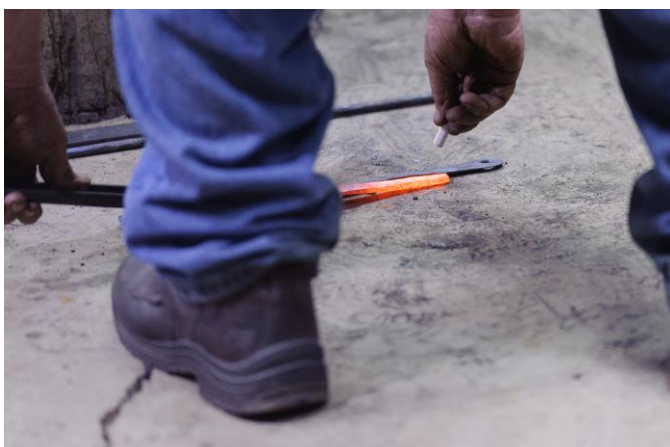
Scarf the tongue for a Jump weld.



Taper the tongue to 5/16".



Align the tongue on the cone form and grasp in the tongs in preparation for the jump weld.



Mark and cut to length to give about 12" from end to end of the tongues.



Heat and flux while still keeping the pieces in position in the tongs.



Stick the weld; speed to the anvil and a light touch as needed.



Forge to finish.



Flux again.



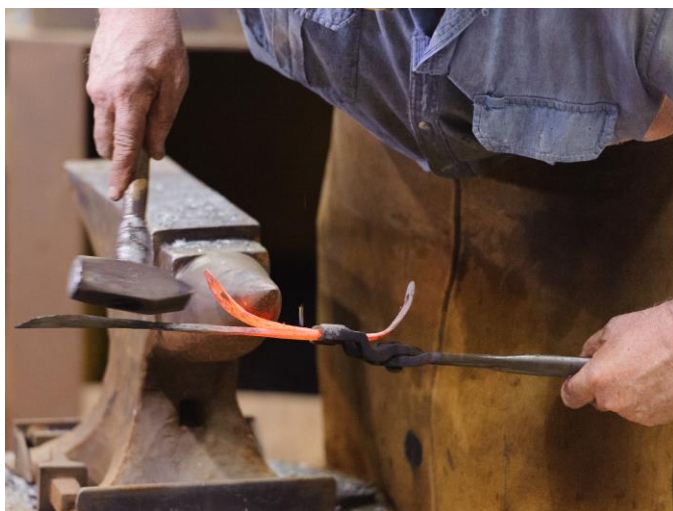
The result should be a smooth tapered connection of the tongues.



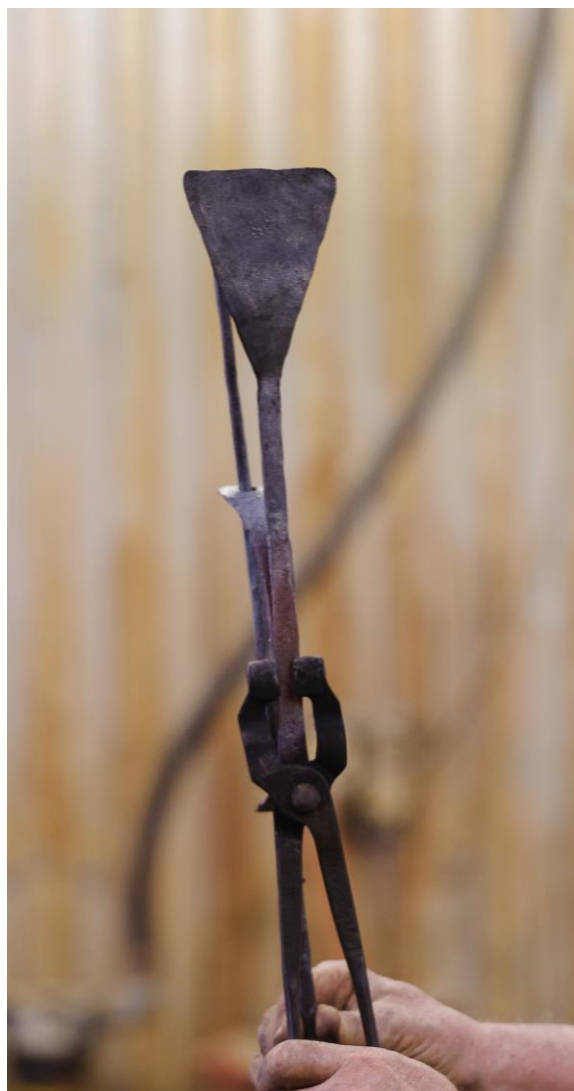
Start curving the tongues to align.



Jerry checked against his upright to see that it all would line up.



Finish alignment of the holes in the tongues.



A test fit of the candle cone assembly to the upright and everything lines up.



Roll the candle cone in a swage.



Continue rolling the cone to its base.



Even and straighten the cone on the horn.



Final touches to get an even and smooth cone.



Close and even the cone with light hammer work on the anvil.



Forge the spring from 3/16" spring stock. Here Jerry is flattening 6" of stock to ~1/2" under the power hammer.



Cut to ~6".



The final taper



Forge a tongue on each end and shape the spring to a pleasing taper.



The final curve



The ends are then curved in a swage.



All the pieces ready for assembly



Jerry center-punched the base, and had a ¼" hole drilled and countersunk on the bottom for riveting a flush tenon.



Adjusting the hole in base to fit the tenon.



Cleaning the tenon on the upright with a file



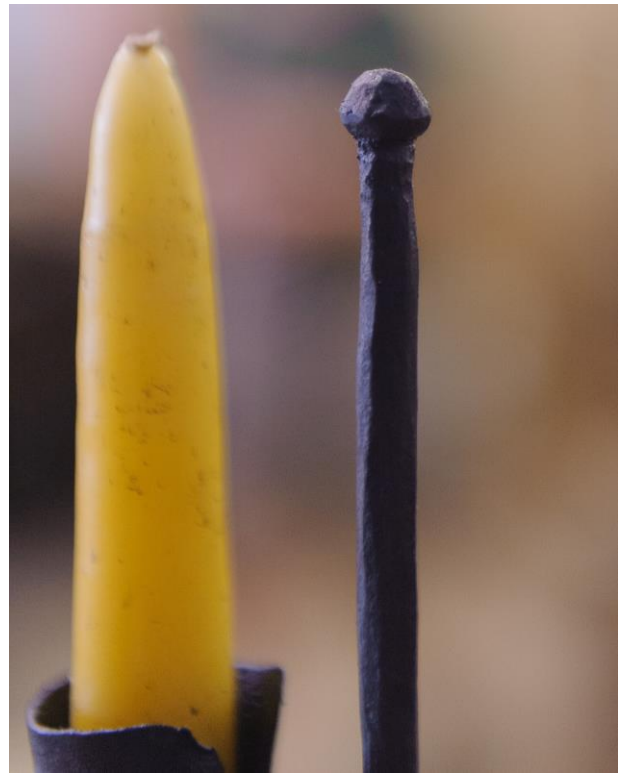
Setting the tenon to fasten the base to the tenon.



The spring and candle holder have been drilled and Jerry is setting an eighth inch rivet to hold them together.



Jerry is adding a beeswax finish to the hot piece.



Detail of the ball on the end of the upright.



The finished working part of the light.



The finished light.



Iron Concept: Keeping a Fire

Article & Photos by Andy Phillips

This series is named in honor of a long gone blacksmith's shop in East Bend, NC. Iron Concepts was one of the first large blacksmith shops I had ever seen and to this day serves and an inspiration to me. I find myself still referencing what I learned there at NCABANA meetings years ago. It still holds a special place in my heart, hence an iron concept.

You are doing it wrong. But it's ok because so am I. The difference between a skill (in this case) and an art form is that a skill can be acquired and executed, with limited variation each time, while an art involves the artist creatively overcoming ever-changing obstacles.

There are so many variables to lighting and keeping a good coal fire to forge in. It's not just the fire but how you treat it at each stage, the forge and the iron you put in it. There is no $A+B=C$ formula for keeping a good fire, in fact there are just too many variables for any one method to work every time no matter what. The only given is that no fire is kept perfectly and in this there is always room for improvement. So today I would like to discuss the art of maintaining a coal fire for forging.

The only think I can hope to achieve in this, however, is to give you an insight into the way I think about keeping a coal fire so that you may take away tools to add to your own method. Likewise, I would love to know what your thoughts are on keeping a fire. If you read this article shaking your head declaring that "this is wrong" take comfort in the fact that I agree in that I have never kept the perfect fire, but neither have you. However, it is suspect that you have come close as I have. A day where the stars aligned and the distant singing of angels could be heard every time you removed a blinding yellow piece of work from the fire without a single spark to be had. You most likely felt the urge to grab your camera and take a picture, but then you thought to yourself "that would be stupid". But you were wrong, while a picture can't do your hearth justice, in its finest hour, you should still snap a shot and submit it with your choice of pros because who better to appreciate your art than your peers.



First things first, cleaning:

So you walk into your cold damp shop ready to feel the heat of the fire and use a hot piece of steel to drive back the cold darkness that has taken residence in your shop while you slept. You rush to your forge only to find that your fire pot resembles more a long-dead meteor crater than the warm glowing coals you left behind. If only there was an easy way to breathe life back into your forge. Alas, the scattered coal, coke, clinker, and ash assure you that there is only a 30 minute cleaning session ahead of you now. There are many ways around this, but more often than not I find myself as many of you most likely do in the Zen of cleaning the forge first thing.



There is no shame in this and many of the greats have remarked on the importance of getting your hand dirty first thing in the morning. Whether you like it or not you have to clean the forge. Most coal forges let you clean as you go but even so you always end up with more ash at the end of the day than you started with. For me, I sift out the ash as I make a pile of clinker, one of coal and one of coke. I

usually take the time to sweep out the hearth and empty the ash bucket (most of the hot embers are dead by this time). I am a bit of a neat freak, at least I like to start out with everything in order letting my workspace slip into chaos rather than starting out that way. Once I have two nice piles and I can see the bottom of the fire pot clearly, then it is finally time to light the fire.



Next up, lighting the fire:

Next up lighting the fire. Pine cones dipped in paraffin, Fat wood, charcoal starter bricks, when you are out of all those you will find yourself wadding up newspaper hoping this seemingly impractical fire-starter work again.

With circulation at an all-time low and recycling at an all-time high, you wouldn't think you could still find stacks of newspaper around but you would be wrong. The way I look at it is, as long as fine and progressive publication such as TIME, MAKE, and "The Hot Iron Sparkle" is still in print, there will be stack of paper around to start a fire with, though I wouldn't burn the Sparkle (it makes for a really bad clinker).

I like to start by taking a sheet of newspaper and twisting it into a string, then tying it into a knot. This lets it burn without puffing up. If I'm feeling confident I will throw three of these into the fire pot and light them, then put a little air to them and pile on the coal. But for me some days, this can be hit or miss. It takes a bit more time but roll say 10 of these knots, then light the first one and add a couple of pieces green coal and a couple pieces of coke with each following knot as the preceding one is burning well. The few choice pieces of green coal will light and help get our fire going without clogging it or making a lot of smoke while constantly adding paper insures you have a progressively hotter tier. It also gives the fire and all its surroundings time to warm up, dry out and light. I think that even though this

method takes a little more time and when it comes to starting out your day, simple and foolproof is a good way to go.



Getting from coal to coke:

Coal serves many purposes outside of just becoming coke. I have forged with only coke before and find it to be a blunt instrument compared to the diversities of a coal fire. It can be inconvenient to have to work your coal into coke but it can also help to contain and insulate your fire. Using coal to form a bank on either side or on the back is very common. Even building a cap over the top while leaving only a hole in the front of the fire. The disadvantage is that the coal clumps together and must be broken up from time to time. As well, if you use a coal wall as a barrier, oftentimes ash will build up on and under it. If I am forging in an open fire, I often place coal on either side of the fire but often find it hard to keep the coal broken up and the fire clean. Often though, I work in a coal for that has a coke oven and will feed the coal into the fire only from the side of the coke oven.



This tends to help make sure you don't end up with a lot of smoke in your shop because the coal is pulled out into the fire on the side closest to the draft while the far side is only coke smoke, there is no smoke there. Also I like the coke oven because if I have an excess amount of lit coal from some possess, I can use push it back into the coke oven once I'm done with it. If I build a cave to forge-weld in, after I'm done I just break it up instead of letting it degrade. Likewise, if I know I'm going to need a lot of coke, I just drag some coal onto the fire until it lights and then push it back into the coke oven and let it burn off.



Wet or dry:

Now that you have made all this coke, it would be a shame to let it just go to waste by letting it turn to ash. Thus, I use a lot of water on my fire. It is entirely possible to keep a good fire and never add a drop of water to it, when I am using someone else's forge I tend to go easy on it. I have never found it to be the case but I would hate to be accused of cracking someone else's fire pot. That being said, I think there is truly little risk of damage to the forge when watering down the fire. Although, you should always keep a positive air flow and stay clear of smoke and steam.

Adding water serves three purposes. First, the water is used to extinguish the fire in the unused coke that is in the fire pot. Second, the mass added to that coke allows it to act more like coal as an insulator without the smoky side effects. Third, the water helps the coal to make its way to coke.

Keeping it clean:

It is all too easy to end up with a firepot full of ash. You must keep the fire moving and keep cycling out the ash. Most firepots have a clinker breaker but if they don't, you have to drag out the fire from time to time. It is possible to keep your fire up to par through the day and nothing is worse than watching your fire get worse and worse throughout the day. If this happens to you, chances are you're just building up ash.

The cycle of air and heat:

Wide open just doesn't work for coal. Low heat doesn't make for a good fire but high heat doesn't make for making coke. You can't just set your air blast to a certain setting and leave it. A coal fire does best when cycled on and off, both for the longevity of the fire and the production of coke. This may come naturally to many of us but it is a very important part of keeping a good fire.

How to kill it:

When you're done at the end of the day. How do you kill the fire? You can just cut the air and let the fire slowly die but then when you come in the next morning you will have all that ash to deal with. Normally, I like to drag the fire out onto the hearth so that it loses its heat very fast. Sometimes I'll even dowse it with a little bit of water but not so much that it won't dry by the next morning.

There you have it; that is how I get my perfect fire. Now it's your turn, snap a shot of your perfect fire and let us know how you got there.

Blacksmith at School

Article & Photo by Joe Allen

The third grade at Millennium Charter Academy went on a field trip to Old Salem in Winston Salem on November 24, 2014 as an extension to learning about the thirteen colonies. The next day, they had me come and demonstrate to further their education about historic trades.

The school put this in its newsletter. The school wrote: "Ms. Cummings assisted Mr. Joe Allen, Savannah's dad, an expert blacksmith. The children were able to enjoy just how valuable a craft this was in colonial days. They asked a lot of great questions. Big Thank You to Mr. Allen!"

Below is a picture of me demonstrating for the kids and truly enjoying this amazing experience!



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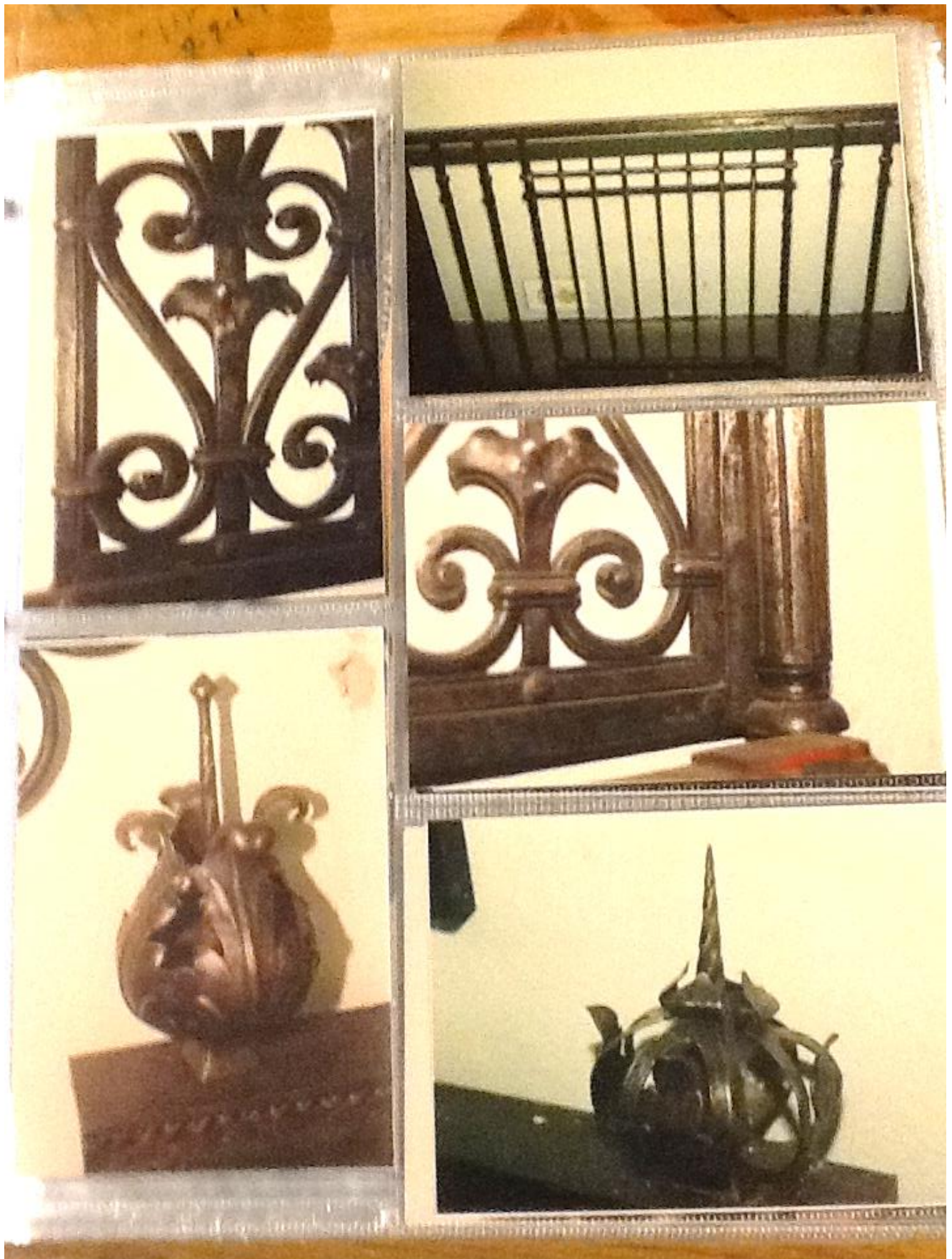
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From the Shop of Samuel Yellin

Article by Doug Wilson, Photos provided by Clay Spencer

Recently, I received a CD of images from Clay Spencer. On that CD, were over 2000 photos of works from Samuel Yellin's shop. These had been taken in the early 1970s by Jeff Graves who was apparently working for a summer with George Dixon in the last days of the Samuel Yellin Metalworks shop. I will be sharing these photos in the coming issues of THE HOT IRON SPARKLE. The quality of the photos is not always the best. However, they are in many cases the only available documentation of Samuel Yellin pieces.



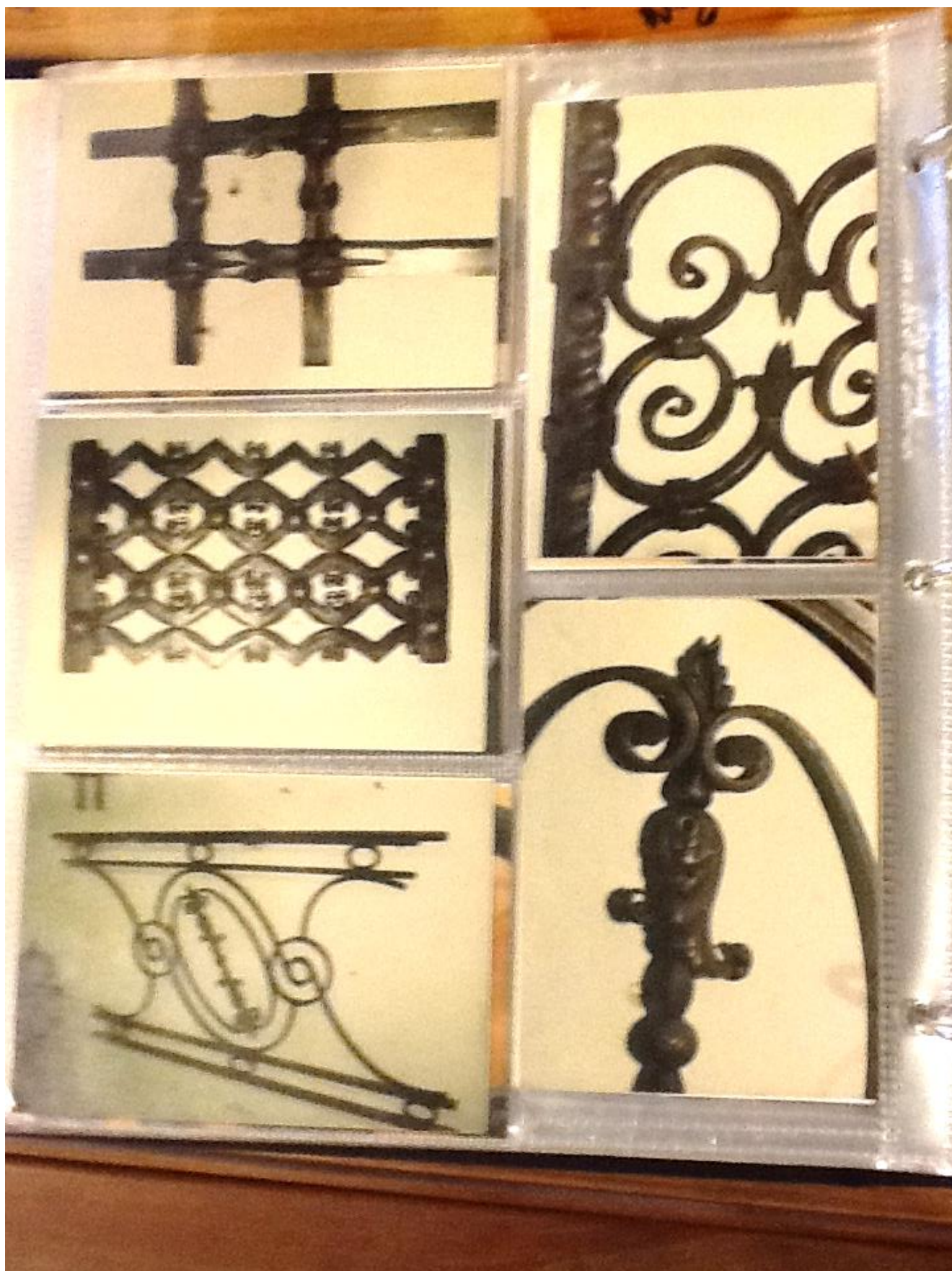














Quarter Corner

Steel of the Quarter: 4140

The steel for this quarter is 4140. When people talk about using 4140, they are using an alloy steel, as designated by American Iron and Steel Institute (AISI) use of a four-digit number. AISI 4140 alloy steel is chromium, molybdenum, manganese and contains low alloy steel. It has high fatigue strength, abrasion and impact resistance, toughness, and torsional strength. In the oil and gas sector, 4140 is typically used for connection rods, collets, conveyor pins, gears, stem assemblies, pump shafts and tool holders. So blacksmiths and metalworkers take these leftovers and make tools out of 4140.

Most blacksmiths know that steel is made when carbon is introduced to iron. 4140 has quite a few elements in it besides carbon that help give it its strength like chromium, manganese, silicon, molybdenum, sulfur, and phosphorus. The chromium in it thus gives it a lot of properties that are similar to stainless steel.

If you would like to forge 4140, the best temperature is between 1700-2200°F, just don't go below 1500°F and you should be fine. To anneal 4140, keep it at around 1600°F followed by slowing cooling it in the furnace. After you have annealed the steel, 4140 will work well to machine or form (although more pressure is required for forming because it is tougher than plain carbon steels). It is also best to cold work 4140 after it has already been annealed. For tempering, the range to use is between 400-1200°F. An interesting property is that the hardness of the steel can be increased if it has lower tempering temperatures. Other ways to harden 4140 is with cold working or quenching.

Overall, 4140 is good tool steel, but price makes it a little more because of the alloys; hence why "used" is usually the best option. It can be used to create power hammer dies but it is probably not best to make radical dies with it like a narrowing fuller or crown. To the right are some examples of tools created using 4140 (all or in part):



Center punch tool created with 4140. Punches one of the best uses for this steel.



These Hardy tools were also made with 4140. The sharp edge for cutting mild steel makes 4140a great option for hot cuts.



This Hofi style hammer head was made with 4140. It is also great for other things that go on the end of a handle like tomahawks and axes.

Tool of the Quarter: Ball Fuller

I recently had a conversation with a beginner blacksmith, who didn't know what a fullering tool was. While I would like to go over all the various fullering tools, this particular newsletter is already 60 pages so I will stick to just one: the ball fuller.



Pictured above is a good-sized fullering tool set complete with tongs for holding the tools. Pictured below is the ball fuller.



Also called the ball punch, the ball fuller is the fullering tool most often used in my household. This particular fullering tool along with the set pictured above is a top tool in that it goes between your work and the hammer whereas a bottom tool goes between your work and the anvil, like a Hardy tool. The best definition I've found on fullering tools comes from the *Smith Courtney Co. Catalogue* and defines a fullering tool's purpose as "used for necking and grooving forgings, and also for drawing down a forging to a smaller size". So basically a fullering tool can move stock faster than just a hammer because of its narrow or angled face.

While there are lots of fullering tools with handles or ones that utilize a Hardy hole, this particular one is my favorite because it works best with team forging, which is my preferred approach to blacksmithing. For those smiths without an apprentice, a treadle hammer is also a valid approach.

I absolutely hate drilling holes and this is where the ball fuller helps out. You can use it to reduce the width of a piece where you will eventually drill a hole.



A ball fuller was used on the wall hook pictured above where the two screws are placed.

Ball fullers can also be used for beauty not just function. Some designs include flowers using the negative space and peas in a pod using the positive space. The pictures below illustrate this better. Also note that the material that was forged is silver for the peas in a pod and mocha may for the flower.



Any way you use the ball fuller, whether for function or art, it is a very useful shop tool.

Anvil Surfing Pic of the Quarter

As promised, here is a little bit of fun to end this issue. This picture comes via Stephen Feinstein. Taken at the 2011 SOFA Conference in Troy, OH; these pictures truly represent the fun side of anvil surfing. I don't have everyone's name but to name the ones I do have: Kim Thomas, Jamie Tyree, Alan Flashing, Deanna Arlotta, Mike Roberts, and of course Stephen Feinstein. And just in case you haven't been to SOFA, they have many anvils for sale as evident by these pictures. Enjoy!



1st Quarter Meeting at Oak Hill Iron

Saturday, March 14th, 2015

Starts at 9am with lunch at noon

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Morganton, NC



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Local Group Meetings

Triad Area Blacksmiths (Winston-Salem, NC)

Marshall Swaringen
marshall@swaringen.com (336) 998-7827

1st Tuesday at 6:30PM for demos
3rd Saturday at 9AM for business and all day forging
Dixie Fairgrounds, Winston Salem, NC

Southern Foothills Blacksmiths (Mooresville, NC)

Steve Barringer
steve@powerhammerschool.com (704) 660-1560

2nd Sunday each month

Triangle Blacksmith Guild (Raleigh - Durham, NC)

Randy Stoltz
rhstoltz@gmail.com (919) 481-9263

1st Saturday in even # months at various locations

Brasstown Blacksmiths (Brasstown, NC)

Paul Garrett
pdg86@hotmail.com (828) 835-8441

1st Tuesday in even # months; 5 to 8 PM

Wilkes Teaching Forge (WTF) (Millers Creek, NC)

Lyle Wheeler
ncchairmaker@gmail.com (336) 838-2284

2nd Tuesday of each month, 7:00 PM

Blue Ridge Student Blacksmith Guild (Flat Rock, NC)

John Matthews
john.knox.matthews@gmail.com (828) 645-2109

You are welcomed to attend any of the local group meetings. Please contact the host to confirm date, time and location.

NC ABANA Meetings

1st Quarter 2015 – March 14

Oak Hill Iron
Morganton, NC

2nd Quarter 2015 – June 27

Dixie Classic Fairgrounds
Winston Salem, NC

Other Events

Southeastern Blacksmith Association (SBA)

Conference

May 13 - 17, 2015

Lion's Club Fair Grounds, Madison, GA

Fire on the Mountain Festival

Downtown Spruce Pine, NC
April 25th, 2015

For the most current meeting and event information go to the NC ABANA website,

ncabana.org

North Carolina Artist-Blacksmith's Association of North America



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First Quarter Meeting of NC ABANA

March 14th, 2015

Oak Hill Iron

3308 Frank Whisnant Road

Morganton, NC