This month’s Traditions article (page 16) is on nail making, an important function of most blacksmith shops and the primary article of trade for many smiths. The photo above is of the nail-making station at the blacksmith shop in Colonial Williamsburg. The station features a heading tool that takes several different die sizes, a small anvil block, a cut-off hardy, and a trip-lever (called a “whimsy”) that can be struck to pop out the finished nail, all mounted on an iron-bound block of wood. The Colonial Williamsburg blacksmith shop is a living history museum focused on the importance of the blacksmith during the revolutionary period.

Although Colonial Williamsburg artifacts are historical re-creations, their historical accuracy can be seen by comparing with the archival documentary footage below.

Historical 1923 footage of a Swedish nail maker (Spiksmide) at work on his nail-making station. The footage also includes blacksmiths making special shoes for draft oxen (oxskosmide) and a waterwheel powered sawmill. Compare this nailmaking station to the Colonial Williamsburg recreation above.

Click on the picture to be taken to the video.
SAFETY FIRST! QUENCHING IN OIL

Different alloys need to be quenched in different mediums. Many high-carbon steel alloys require quenching in oil to harden them during the tempering process. Obviously, red hot metal and oil are a dangerous combination. But you can reduce the danger by following a few simple safety guidelines.

First, make sure there’s a fire extinguisher in your shop. Remember that spraying oil fires with water just causes the burning oil to spread, so don’t depend on a water hose or quench tank. You need an ABC extinguisher (things that burn to Ash, things that go Boom, and things that have Current— for oil fires, you need the B part). A fire requires fuel, oxygen, and heat. When you introduce hot metal to the oil and it flares up, the best thing to do is to push the hot metal under the surface of the oil—don’t take it out and wave it around!

Second, make sure you do your quenching in a well-ventilated area away from flammable stuff (kids and animals are flammable, by the way).

Third, make sure your quench tank is made of metal, has a sealable lid, and is welded, not soldered. Dale told me of a story he read in the Hammer’s Blow about a group of smiths using a metal bucket as a quench tank while reforging dies for a power hammer. When the oil became so hot that it would flash as soon as the lid was lifted, they decided to go to lunch. While away, the accumulated heat in the oil melted the soldered seams and released the oil. When the smiths returned, the shop had burned to the ground.

I recommend using a military surplus ammunition can. The army surplus store in Little Rock has a stack the size of a car selling for $14 each. They are heavy gauge steel, have a gasket to keep oil in and debris out, and have welded seams. They have handles and the lid locks shut. Really, for the price, you will be hard pressed to find a more perfect quench tank for your oil.

“When the smiths returned, the shop had burned to the ground.”

LETTER FROM THE EDITOR

When you think about the iconic image of the American Blacksmith, odds are you think of the “village smithy,” plying his trade beneath the big chestnut tree on the town square. He was, in more than one sense, the center of a community.

While a blacksmith may spend many hours working alone, he is nonetheless always an integral part of a larger community. The village needs the smith to make and repair things, and the blacksmith needs the trade that the other villagers supply.

Even today, we blacksmiths don’t forge in isolation—we are an integral part of a larger community of people.

This is why we are all impacted by the loss suffered last month by one of our community when Ron and Bertie Wells unexpectedly lost their son Jacob (details on page 5). This tragic loss obviously had a profound impact on Ron’s family, but, in a very real sense, we are ALL part of that family, and Ron is a part of ours. We feel Ron’s loss as our own.

There is nothing we can say, nothing we can do that will stop the grief, but we can let Ron know that he is not alone. He is part of our community, our family. If there is nothing else, we can simply stand by our friend Ron, letting him know we are here with him.

Ron, your friends at BOA have leaned on you for years. It’s time you leaned on us for a while. Let us help carry some of the weight.

You can reach Ron at rbwells@eritter.net

Robert Fox, Friend of Ron
LETTER FROM THE PRESIDENT

December 2, 2014

I would like to thank Sonny and Judi Sartwell for hosting the November 8th meeting for the Northwest Chapter at their home in Springdale. Sonny demonstrated his power hammer and CNC controlled plasma cutting table. I am happy to announce that the club is moving forward with several projects: New business cards have been ordered with the website and the club email address, we are back in the t-shirt business, new sandwich boards have been ordered so each chapter can have two, we are moving ahead with getting signage designed and produced for the trailer and upgraded tires were approved for the trailer following a flat tire that left only about half of each sidewall and no tread. Sonny took on the tire project and between him and Clyde Foster will see that the trailer is at Clyde’s for the next meeting. The trade item was a forged flower, and I must say there were several very nice ones. The next NW chapter meeting is at Clyde’s on December 13th. The trade item is a set of tongs. The January meeting will be at Ed Osrois’ shop in Springdale on the 10th. The trade item is a door knocker.

The November meeting for the Central Chapter was at my shop in Little Rock on the 15th. The trade item was a spring fuller. Five members came from more than an hour away; Ross Wilkinson and his son Albert came from Greenwood, Keith Heffelfinger and his wife Lynda drove from Timbo and Ron Wells resupplied the Central Chapter with coal. Robert Fox presented an interesting idea for the club to sponsor a blacksmithing internship at the University of Central Arkansas. As Robert works out the proposal to present to the board, I’ll keep everyone updated. After the business meeting the Central Chapter got to experience the bagging of coal that the NW Chapter does almost every meeting.

The December meeting is at Herman Ginger’s near Pine Bluff on the 20th for the Central Chapter’s annual Christmas Party with gift exchange. Gifts are something forged by the giver. Members of all chapters are welcome.

The meeting in January will be at Larry Lane’s shop near Sheridan. It is worth the trip just to walk around the shop and look at all of the things that Larry has collected. The trade item is a forged replica of something alive.

I know we were all saddened to hear of Ron Well’s tragic loss of his son Jacob. Ron asked that instead of flowers that we give to a charity that Jacob supported. Once we have this worked out, I will share the details with the club. Our thoughts and prayers go out to Ron and his family.

The date for the Iron Smelt has been set for January 21st to the 24th, at the Eureka Springs School of the Arts (ESSA). The Director is checking into lodging options. So far, discounted hotels (it is the off season), RV parking (no word on power and water), tent camping and being a guess at someone’s home have been discussed. Stay tuned for all of the details.

I know the past three presidents have discussed having a statewide convention, a meeting of all three chapters. Details are still fluid but I have found a site that is centrally located to the three chapters. I think it would be a good thing for all of us to get to know each other better. If anyone has any suggestions of activities, please let me know.

Dale Custer, BOA President

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NEWSLETTER DEADLINES

Submissions for articles, meeting minutes, announcements, events, and classified advertising are due to the editor before the last Saturday of the preceding month.

Members will receive an electronic edition by email by the first Saturday of the month. Those receiving hard copies will be mailed the next Monday.
As usual, we will have demonstrations at the 2015 meetings in April and September (Tired Iron) and June and October (Rusty Wheels).

The Faulkner County Museum folks also want us back in November, 2015, and we will be demonstrating at the Harvest Homecoming in Harrison.

Let us know of any other planned events!

**NEXT EVENT**—TIRED IRON ANTIQUE TRACTOR AND SMALL ENGINE SHOW

April 18th, 2015
13344 Taylor Orchard Road,
Gentry, Arkansas

The members of Tired Iron of the Ozarks have developed 17 acres in Gentry, including a 1907 log cabin, a blacksmith shop, a clubhouse, an early 1900s sawmill, and a 60 ft x 32 ft antique home exhibit building.

BOA members demonstrate in the blacksmith building at the Gentry event, which also includes antique tractor pulls, a tractor parade, and antique engine demonstrations.

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**BOA MEETINGS**

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JACOB WELLS

The Light that Burns Twice as Bright Burns Half as Long -- Lao Tzu

Jacob was a runner. On November 1, 2014, he was in the 19th mile of his 156th career marathon when he collapsed and suffered cardiac arrest. Several minutes passed before he was revived and his brain suffered oxygen deprivation for several minutes. He had massive brain trauma and the Doctors gave us very little hope. Jacob died at 2:04 PM November 7, 2014.

Jacob was not an elite runner, but he was a good runner, having run in the Boston Marathon twice. He loved running. He had a passion for running.

Jacob was a certified public accountant. He graduated in 1991, Magna Cum Laude as the top graduating senior of the Sam M. Walton College of Business at the University of Arkansas with a Bachelor of Science in Accounting. He had 23 years of public accounting experience with significant experience in the nonprofit and governmental industries.

Jacob was a volunteer. He served on the board of several Arkansas nonprofit organizations serving as treasurer on some of them. He was a keynote speaker for many CPA functions. He conducted workshops and seminars for the same. One of his favorite subjects was the proper use of the English language. He claimed that the ability to communicate was as important as numbers in the relationship with a client. He was recently awarded the 2014 Public Service Award by the Arkansas Society of CPAs. Jacob volunteered in his running as well. He willingly offered counsel and encouragement to runners and race committees alike. He particularly liked to encourage new runners. He led blind runners and pushed quadriplegics to the finish line in many races. He was Race Director of many races. Jacob was recently selected Volunteer of the Year for 2014 and also Race Director of the Year for 2014 by the Arkansas Road Runners Club of America.

Jacob was an organ donor. His organs would only be viable if death came within fifty minutes from the time of extubation. Jacob finished his last race in nineteen minutes. Recipients were already prepped and waiting in the operating rooms. By five PM the surgeries would be finished and within a few hours the recipients would begin to feel the effects of Jacob’s last gifts. Jacob’s organ transplants were successful. A man in his late 60’s received Jacob’s right kidney and is doing well. His left kidney was received by a lady in her early 60’s and she also is doing well. Jacob’s liver saved the life of a man in his late 40’s.

Much has been written and said about Jacob’s selfless giving. I want to share a story of mine. Jacob and I were alone together one day when he was around thirteen years old. It goes like this:

“Dad, are we rich?”

“No, not really. Why do you ask?”

“Well, I just always have some money in my pocket to jingle, and whenever we need something, you and Mom always get it for us. It just kind of seems like we are rich.”

A few seconds pass and Jacob continues:

“Dad, when I grow up I’m going to be rich. I’m going to get the best job I can. I’m going to make the most money possible. Then I’m going to give most of it away.”

Jacob was my son.

Ron Wells, BOA Treasurer

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**Editor’s note:** Knowing many of our members would be asking for more information, I asked Ron if he would take a moment to share some details about Jacob’s life.

**Memorial donations will be used for Jacob’s last expenses and to improve facilities at the Little Rock base of the Two Rivers Bridge in Little Rock’s River Mountain Park, Jacob’s favorite place to start a run, and may be mailed to JPMS Cox, PLLC – Jacob Wells Memorial, 11300 Cantrell Road, Suite 301, Little Rock, AR 72212 or made online at [http://www.youcaring.com/JacobWells](http://www.youcaring.com/JacobWells)
COAL IN YOUR STOCKING?

After seeing Harold’s cartoon (next page), I became curious about where the whole coal thing started.

There doesn’t seem to be a clear consensus. Most speculation centers around the fact that Santa enters through the chimney, so if he finds no present in his sack for a child, he grabs a coal from the fire or bin so that the child at least has something in their stocking.

This makes sense, especially since, in the 19th and early 20th centuries when this part of the legend seems to have originated, most home fireplaces in America and western Europe burned coal, not wood, for heat.

The earliest stories of Santa Claus seem to agree that an elderly man had three daughters and no money for their marriage dowry. Passing by and hearing the man’s prayers, Saint Nicholas himself threw three bags of gold through the window—one bag into one of each girl’s stockings which were hanging on the fireplace to dry. Hearing of this, many people began to hang their stockings by the fire, hoping for gold. Saint Nick was apparently so upset by their greed that he filled their stockings with coal instead.

My favorite Christmas coal connection, though, comes from Italy, where families make a traditional Christmas candy called “Carbone Dolce.” The picture at the top of this column is actually a photo of that candy, not actual coal. Apparently, in Italy, good girls and boys get Carbone Dolce in their stockings, while naughty ones get actual coal. They look so similar that you don’t really know until you bite in. Those crazy Italians!

Knowing that some of you twisted sickos would want to whip up a batch of sweet coal to mess with the minds of your loved ones, I included a recipe on the next page.

PROJECT NOTES: TONGS

Author: Patrick McIvor, based on a demonstration by Mark Pearce. Reprinted with permission from the March, 2006 issue of the Clinker Breaker, the newsletter of the Florida Artist Blacksmith Association (FABA).

Materials: two flat bars 3/8” x 1” x 9”

1. Do the following steps for both bars, making both sides identical. Mark with center punch 1 1/8” and 3 1/8” back from front of bar, then heat and neck down between the marks. Use an edge of your anvil with a decent radius to stop potential stress break points. Do not thin down the jaw.

2. Upset the jaws to create a thick area to split. This split will hold the round and square stock.

3. Draw out the reins with a power hammer if possible. Make sure you finish with a hand hammer to remove all sharp edges.

4. Bend the jaws at 90 degrees to create an “S” shape. Use a bending jig made of 5/8” rod with a 1 1/8” gap to help you make consistent bends.
5. Chisel open jaw shape. Make a center line down the jaw with a cold chisel, then heat and cut open with a hot chisel. Keep the jaws on your vice approximately 1/4" deep to prevent cutting to deep.

6. Open jaws when hot in vise with a flat bar, and a hammer, tapping from side to side to open. Keep each head and jaw side even. Make sure the bar you use spans the length of the cut, to open it evenly.

7. Hot punch holes to rivet the tong halves together (3/8" holes). Locate the hole position by measuring or by eye, and center punch. After punching, drift hole to 3/8". Flatten reins and hole for smooth operation when together.

8. Rivet the tongs together

9. Adjust the jaws and reins for evenness and for ease of operation. Do this by heating the jaw area and tapping the jaws so they meet in the middle. Put size of square stock in the jaws then put in the vise and squeeze the handles to the comfortable size of your hand. Chop the ends of the jaws and reign to make them even, if necessary. Heat and cool in water while moving to get the even action you want.

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**CARBON DULCE RECIPE**
adapted from Fragrante Delicia

- 1 egg white
- 3/4 cup powdered sugar, plus more if needed
- 5 drops lemon juice
- black food coloring
- 2 1/2 tsp almond extract
- 3 cups sugar
- 1 cup water

Mix the egg white with the powdered sugar. The mixture should be thick enough that when cut with a knife, a visible cut remains, so add more powdered sugar if necessary. Then add the lemon juice, almond extract, and black food coloring (enough so the mixture is black).

Measure out 1/3 cup of this egg white mixture and set aside for later; discard the rest of the mixture. (Editor’s note: that’s what the recipe said—“discard the rest”. I think it’s an Italian thing...) Spray a baking pan with nonstick spray and line with parchment paper. Set aside for now. Place the 3 cups of sugar and water in a medium saucepan. Place over medium-high heat and let it boil to 260°F, stirring occasionally. Remove the pan from the heat.

Add the reserved 1/3 cup egg white mixture to the pan and stir until it begins to foam. Then keep on stirring until it becomes thick and grainy. At this point, pour the mixture into the parchment lined pan. Let it harden and dry. Then break the candy apart. You may want to put it in a plastic bag between paper towels and use a hammer—this is indeed “hard candy.”
NEXT NORTHEAST MEETING

The December NEAC BOA meeting will once again be held at Jim Soehlman’s shop. His address is

462 Greene 731 Road
Jonesboro, AR 72401

The meeting will be held on the second Saturday of December (the 13th).

The meeting will start at 8:00 am, and end at 3:00 pm.

From Lake Frierson State Park entrance (about 12 miles due north of Jonesboro on Hwy 141), continue north on 141 for one mile, then turn right (east) on Greene 731, go 1/2 mile. You’re there!

Jim Soehlman—NEAC BOA

NE ARKANSAS NOVEMBER 2014 MEETING

November was a busy month for most of the NEA Chapter and we only had 2 members able to attend the meeting, myself and Dusty Elliot. Although Jim was unable to attend he still graciously allowed the use of his shop. I would like to thank Jim for allowing the club to use his shop for the last several months. He has a great set up that is just getting better. The December meeting will be held on the 13th, from 8 AM to 3 PM, and will be at Jim’s shop again. I would also like to thank Jim for the great job he has been doing photographing and submitting the minutes from our monthly meetings.

Dusty and I made the most of the situation and spent quite a bit of time at the forge. I have a forge at home and since several of the other members do not, I normally do not forge at the meetings giving them the time at the anvil. Since there was not much competition at the meeting this month I took the opportunity to forge a pair of box jaw tongs. I have been in the bladesmithing mode of late and needed a new pair. I made these by upsetting ½ inch square stock, a technique I hadn’t used for this application before. Dusty also got to spend quite a bit of time forging making leaves. She is improving each month, and I am sure will do so even more once she gets her forge set up at home.

“I would like to thank Jim for allowing the club to use his shop for the last several months”

With Glen Owen’s recent move, the club is definitely left with big shoes to fill. Glen was the teacher in the club and now I am trying to help in that role as best I can. Dusty fell
victim to this at the November meeting since she had no alternatives LOL. I did show her a new technique for making leaves that she picked up on quickly, so perhaps I didn’t do too badly as an instructor.

Mentioning Glen reminded me that I would like to extend a big thanks to him for his efforts with the club, and more specifically with me. If not for his time spent helping me, I would not be at the point I am today. Hopefully I can do the same for others new to the craft.

Since this is my first submission, I thought I would provide a quick introduction. I started forging in March of 2013, so am still pretty new and still learning at each session at the anvil, something I hope never stops. My first attempt forging was done with assistance of a hair dryer in a backyard campfire and that was all it took – I was hooked. I bought a welder, built a forge and have not looked back. I had the good fortune to meet Glen within the first couple weeks and he gave my skill level a big jump start, and even helped me find my anvil. I only wish I didn’t wait until I was forty to get started. My forging projects range from jewelry to knives, from tongs to camping gear and all points between. Traditional joinery and forge welding are a particular current interest. Since I failed to take any pictures at the meeting, I have included a few pictures of my recent projects, don’t be too harsh on them : ) . Pictured are a hatchet and spoon knife along with my first carved spoon, a pair of strikers used for flint and steel fires (thanks to Dan Davis for my primitive fire introduction), my first attempt at a small fry pan, which still needs to have a handle added on a grill I designed for my squirrel cooker and a couple of in process knives.

I hope everyone had a great Thanksgiving, and wish you all a Merry Christmas!

Eddie Mullins—NEACBOA Steward

A PORTABLE FORGE

Now that’s a portable forge! I’m thinking maybe my old riding lawn mower...

Then again, you have to question the wisdom of having a coal forge operating inches away from a gasoline tank. And the guy in the top photo must have a hot leg. Notice how he’s leaning?

Still, these pictures remind us of a time when a blacksmith was essential to many households and businesses, to the point where there was money to be made providing “house calls.” These fellows appear to be re-pointing a pile of pickaxes in the third picture.

These photos, originally published in LIFE magazine, are now in the public domain. They were unearthed by Tom Kennedy, and reprinted with permission from the February 2010 edition of the Clinker Breaker, the newsletter of the Florida Artist Blacksmith Association (FABA).
The Northwest Area BOA November meeting was hosted by Sonny and Judi Sartwell. We enjoyed a fine day of forging in the Sartwells’ nicely accoutered shop. The day started out brisk, but was warm and sunny for most of the late morning and early afternoon. Judi and Sonny served up a fabulous lunch of beans, rice and cornbread, with gooey, yummy gluten-free brownies for dessert.

BOA members in attendance at this November 8 meeting included Dale Custer, Bob Lock, Jimmy Owen, Tom Bates, Steve Low, Samuel Bollman, Ken Sartwell, Judi Sartwell, Cheryl Miskell, Ervin Potter, Harold Enlow, Clyde Foster, and Hardy Todd.

Dale Custer called the meeting to order after lunch, first welcoming our newest member, Samuel Bollman.

Old Business:

Dale noted that our next meeting is at Clyde Foster’s in Marble (December 13), and the trade item is tongs. Our January meeting (January 10) is at Ed Osoris’ in Springdale, and the trade item is a door knocker.

Dale reminded everyone that the Central Chapter meeting will be next weekend (November 15) at his home, and the trade item is a spring fuller. The December meeting of the Central Chapter (December 20) is at Herman Ginger’s and the trade item is a Christmas gift. Herman has said that members can arrive early. He has a mill, a plasma cutter, welders, a gas forge, a power hammer, and all manner of tools to keep our members busy.

The January meeting of the Central Chapter (January 17) is at Larry Lane’s shop, between Sheridan and Pine Bluff. The trade item is a replica of something living—can be mythical.

Richard Ross will host our February meeting on Valentine’s Day (February 14)—bring your touch mark.

Dale announced the date for processing the iron ore, December 27, the Saturday after Christmas at his shop.
The smelt will take place on January 21st though the 24th at the Eureka Springs School of the Arts (ESSA). The Director of ESSA is checking on lodging options.

Our printer is up and in operation. Robert Fox should be able to get hard copies to the post office on the Monday following the deadline. (Please submit items for the newsletter!)

Central Chapter did a demonstration in Conway last Saturday, November 1st. Central Chapter “sold” some pieces to the museum director, and signed on two new members.

New Business:

T-shirts are back on track. We now have 3X, 4X and tall sizes. Hats are available, too. If you want a blue collared shirt with our logo, you will need to provide the shirt.

Sam Hibbs has said we can get signs on the trailer for $80. Bob Lock made a motion to get the signs, and Tom Bates seconded. All present voted aye, so we’ll be getting the signs.

New sandwich board signs were discussed next. All present voted aye for getting additional sandwich board signs.

Since we have almost run out of business cards, Dale suggested that we get new ones to hand out. He recommended that the names of officers be replaced with the permanent email address of the president and the web site. This netted unanimous ayes.

Bob made a motion to purchase two trailer-rated tires (since there was a blow-out on the trailer on its way to this meeting). New tires should be ten-ply, at least. Sonny and Judi volunteered to get the tires and bring the trailer to the December meeting.

Tragically, Ron Wells’ son has passed. Bob made a motion to send a spray of flowers to the Memorial Service in Little Rock. Dale agreed to make sure this happens.

Bob is doing a raffle on an 80# anvil, for $10 per ticket. Any profit from the raffle goes to BOA. Hardy moved that the meeting be adjourned.

Cheryl Miskell, BOA Member

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**ORIGIN OF THE WORD “NAIL”**

Etymology is the study of the origin of words. According to the Online Etymology Dictionary, the origin of the word nail is the proto-German “negel.”

What I find more interesting is the fact that the original word meant “fingernail”, and the modern meaning of a spike came much later.

Originally those proto-Germans used the word for both human finger and toenails and for animal claws.

When building techniques began to include sharpened wooden spikes, you can imagine why they might have been called “wooden claws.” Actually, they were known as “tree-nails.” In post-and-beam construction, the large dowels that are driven into pre-drilled holes in the joints are still known as “trunells.”

When these spikes finally began to be made from metal, they were naturally still called “nails.” Now you know!

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**GOT A STORY IDEA?**

Do you have a story you would like to see in the VOICE? Would you like to write it, or is it something you want to read?

Let us know—send an email to editor@blacksmithsofarkansas.org.
CENTRAL BOA NOVEMBER MEETING MINUTES

The November meeting of Central Arkansas Chapter of the Blacksmith Organization of Arkansas (CACBOA) was held on unseasonably cold 11/15/2014 at the forge of Dale Custer in Little Rock.

The morning demonstration was making a top set tool from a ball-peen hammer: preparing the tool, a discussion of appropriate tongs and hammers, forging the desired shape with the assistance of a striker, finishing and tempering. CACBOA members had the opportunity to make their own top set tools after the demo. Tim Huddleston made a nice heavy punch.

The demonstration gave me several ideas for more top set tools I “need.” I had told my wife that I had enough garage-sale ball peen hammers, but I think I may need to retract that statement.

As is often the case when discussing top set tools, there were passionate words exchanged on both sides of the argument regarding whether the handles should be set in with a wedge to keep them secure, or left un-wedged to facilitate the inevitable re-tempering. No blood was lost, but no opinions were changed, either.

In the business meeting, Dale gave us an update on the plans for the ore smelt. It looks like all the details are finally crystalizing. A lot of us are really looking forward to participating.

We also spent sometime talking about an interesting request we had from Lynita Langley-Ware, the director of the Faulkner County Museum where we demonstrated November 1st (see article, next page), and Dr. Kimberly Little, professor of History at the University of Central Arkansas (UCA) in Conway. Dr. Little asked if we would be interested in putting together a blacksmithing internship program for a history student next year. The program would need to involve the student in 6-9 hours a week of work throughout the fall semester. Just attending one of our meetings a month would be six hours, and I have a whole list of topics I would love to have a history student researching and writing up for me that could easily fill another 12 hours a month.

But the most interesting turn of events happened when Lynita started talking with BOA members Scooter and Larry Lane. All three of them participate in the same historical re-enactment group that recreate the lifestyle and events of Americans living 200 years ago. Their time period is moving forward all the time, keeping a steady 200 years behind our own.

Through that organization Lynita knows that Larry is the demonstrating blacksmith at the Grant County Museum in Sheridan. I overheard Lynita asking Larry when he was going to build her a blacksmith shop for her Faulkner County Museum. When I asked about this, Lynita showed me the location she is hoping to build the shop, and talked about how it would fit into her charter of preserving local history for public education. Lynita is hoping to convince her board of directors to fund the project.

Having just finished talking to Dr. Little, it occurred to me that we could ask some energetic young college students, in addition to the tasks above, to go take measurements of the Grant County Museum blacksmith shop, interview Larry Lane about his recommendations for construction, safety guidelines, etc., and talk to a professional construction contractor about the cost of building a shop in Conway. This could be put together in a grant proposal which Lynita could take to her board.

The student would get blacksmithing experience, would get to say they were a published author, and would have the creation of a grant proposal on their resume—and course credit to boot. Lynita would get the draft of a grant proposal she could use for her board. BOA would get the goodwill of the community and a great place to have meetings and demonstrations. Win, win, win.

After hearing my passionate appeal, Dale suggested that, if this were to be done under the BOA name, the next step would be to write up the proposal to present to the BOA board. I plan to do just that!

After lunch, we helped Ron bag coal. If you have empty coal bags, bring them back to your next meeting, we sure could use them.

Robert Fox, CACBOA Secretary
BOA was asked by the director of the Faulkner County Museum in Conway to participate in their open house this year on November 1st. It was a beautiful day, with over 500 people dropping by. The Museum also had demonstrations of basket weaving, butter churning, Dutch oven cooking (free samples!), and many other crafts. Many of the demonstrators were in period costume, including some of our blacksmiths!

Tim Huddleston and Larry Lane manning the forge

The Museum did not allow us to sell items, which was a good thing because the Harrison event in October depleted our inventory!

Some of the other nearby crafts, many manned by UCA college students, several of whom forged with us in the afternoon

Anyone want to take a guess at how many people told us that their grandfather was a blacksmith?
Elizabeth Brim has served on the ABANA board and demonstrated at several ABANA conferences as well as at other event across the world. She is well known for reproducing familiar items such as hats, shoes, and purses in steel. Her work has astounding realism. Her work “explores the plasticity of steel,” and she does it very well in many creative ways.

At recent ABANA conferences, she has demonstrated her process for forming realistic “pillows” from textured steel.

While neither Elizabeth or her work are what spring first to mind when you think “blacksmith,” she is a talented artist and master of her craft.

If her work is good enough for an ABANA conference, then the Christmas ornament project on this page should be good enough for the VOICE!

PROJECT NOTES: CHRISTMAS ORNAMENTS

By Tim Mann. Photos and Illustrations by Eden Sanders. Used with permission from the April 2008 Hot Iron News, the newsletter of the California Blacksmiths

Several years ago I was looking for a simple project to introduce artsy iron to the students of the welding class at Columbia College.

Remembering a demo by Dorothy Stiegler of Elizabeth Brim’s blow-up technique, I found the perfect project. It used little material and few tools—easily made. It requires some welding and has the thrill of doing something unexpected with really hot steel. Why not make steel Christmas ornaments?

Materials: 6 1/2” x 5” 22 gauge mild, un-galvanized steel, and a 12” length of 1/4” steel brake line.

Tools: 4 1/2” angle grinder, swivel pad vise-grip, oxyacetylene outfit or TIG welder, soft jaws for vise, simple repousse tools, opener (long, round taper with a chisel tip), pitch or lead.

1. Make a half-pattern on folded paper to ensure both sides are the same. I use a 3” diameter circle with the bottom drawn out to a point and the top curving up to an 11/16” flat edge where the blow up tube fits and the ornament cap and hook will go.

2. Unfold your pattern and trace onto the metal. If you like the pattern and plan to use it again, trace it onto 26-28 guage galvanized sheet metal and cut out with tin snips. The galvanized sheet is for the stored template only—never heat galvanized metal in your forge. Rough cut to a little beyond the line with whatever you use to cut 22 gauge stock.

3. Mark one side of each piece “in” so the rest of the steps will be done with the two pieces in the same orientation.

4. Stack the two pieces with the “in” sides facing each other. Align as best you can, paying close attention to the top flats. Grip in the center with the swivel pad vise-grip. Grind both pieces simultaneously down to the line. Split apart, and clean up the burr left from grinding.

5. On the “in” sides, draw your design, keeping 1/4” to 3/8” away from the edge to make the weld easier. Fast and easy is a snowflake, but I have also done logos as gifts for suppliers. Technically, this makes it repousse, but I consider this more of stamped from the inside.

6. Follow your design with repousse tools onto an appropriate backing medium. I use two layers of sheet lead cut to fit like a saddle over an anvil that works well for simple designs and is available from roofing suppliers and sheet metal shops. For more elaborate designs, I would use pitch (www.nothwestpitchworks.com), but that would increase cost and time for what is supposed to be a simple project, and deep designs are likely to be distorted by the inflation step.
7. Realign the two pieces with “in” facing “in”. The stamping process has undoubtedly bulged out the middle, but this is OK. What you need to look for is how tight the edges come together. Flatten by putting the “in” side on the face of the anvil and pressing on the center with the palm of your hand, or give it a few whacks with your fist. When you have a reasonably good fit, clamp lightly in the vice grips. Fine tune the edges by tapping any gaps closed with a hammer.

8. The weld. If you know how to TIG weld, I don’t need to tell you how to weld this up. For the rest of us, an oxyacetylene torch works just fine. A 000 tip in a regular torch or a half-tip in a Henrob will do the job. Set the acetylene and oxygen pressure at 4 psi for both types. An edge weld without a rod is one of the easier welds to make, but if you have never done one, practice on some scrap 22 gauge first.

**TIP 1:** Always work from thin to thick—thin being the corners or points, thick being the middle of the piece.

**TIP 2:** Keep the bead moving. Increase your speed as you push more heat ahead of the weld. Try to keep a consistent bead size and weld depth.

**TIP 3:** Watch ahead of the weld pool for a developing gap. If you see a gap, stop the weld! With material this thin, if the sides separate, you will have a very hard time making a good weld and will most likely burn off one side or the other. Take the time to tap the edges together before continuing to weld. (This is a tip I need tattooed on my forehead. I get cocky and figure I can make it work. Boom! Two hours of prep work lost to save one minute.)

Do not weld across the flat. Lightly grind any inconsistencies off the weld to smooth the edges and fair the curves.

9. Place the ornament between soft jaws in a vise, taking care not to mash the design. Heat the area at the top flat to a red heat and work the chisel tip of the opener between the sides. Then drive it down to create the opening for the brake tube.

10. Weld the brake tube in place. This weld requires welding rod. Heat the parent metal to just where it starts to sweat and add a drop of rod. What you are trying to do is plug holes, not weld for strength. The weld does not have to be pretty, but must be air tight. Check to see if it is adequate by putting air pressure into the ornament. The side should move a little as you squirt the air.

**SAFETY NOTE:** because the brake line appears to be coated, take care not to breathe the fumes.

11. Now comes the fun part. Heat the entire ornament to a red heat and inflate. Setting the compressor at low pressure gives me more control of this process and keeps me from overinflating the shape. Lightly wire brush off the scale.

12. Leave the tube on for the next couple of steps as a handy handle. With a wire wheel in the grinder, take off the rest of the scale. I normally reheat to a red heat and let cool to get a consistent coat of scale. As it cools, you can highlight the design by lightly brushing with a brass brush. Finish with a couple of coats of clear gloss finish.

13. Now remove the tube. If you make a crummy weld (desirable), you can rock the tube out. If not, place the tube end in a vise and cut it off with a hacksaw.

14. Insert the ornament cap with a hook and enjoy!

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**Editor’s note:** While this project skirts the very edge of the definition of “blacksmithing,” it is seasonal, interesting, and it involves heating and shaping metal, albeit using an unusual method. I’ll try to stick with projects that reflect more traditional blacksmithing techniques in the future, but thought this one was worth bending the rules a little. I hope you agree.
BLACKSMITH TRADITIONS: NAILMAKING

Nail Making in Antiquity

It is unclear when the first nails might have been made. Certainly it was before the iron age—bronze nails found in Egypt have been dated 3400 BC. But for the purpose of joining substantial pieces of wood into large, weight-bearing structures, softer metals would not have been practical. This is why, soon after the secrets of working with iron were discovered, smiths began being asked to make iron nails.

The Bible provides a number of references to iron age nails in the middle east, including the story in Judges of the woman who drives a nail into the temple of a Canaanite commander while he is sleeping, the provision of iron for nails by King David for Solomon’s Temple, and the crucifixion of Christ.

The Romans used large quantities of nails throughout their empire. Any sizeable Roman fortress included a ‘fabrica’ or workshop where the blacksmiths would fashion the metal items needed by the army, including nails. Romans soldiers even used nails in the soles of their sandals for traction—the original hob-nail boots!

When the Romans retreated from the British Isles, they abandoned the fortress of Inchtuthil in Perthshire, Scotland, including a stockpile of 7 tons of nails in a concealed pit!

Interesting fact—the iron nails from Inchtuthil have been extensively examined by atomic scientists studying the corrosive effects of time on various materials used to store nuclear waste.

Another interesting association between the Roman Empire and nails is the penny weight system. A 16 penny nail is so called because it cost 16 pennies to buy 100 of them. It cost 20 pence to buy 100 20-penny nails. But have you ever wondered why a 16 penny nail is abbreviated 16d? Why not 16p? Because the Roman penny was called a “denarius.” The British used “d” to denote pence up until “Decimal Day,” February 15, 1971.

Nail Making in Europe

Blacksmiths in Europe through the middle ages made nails essentially the same in shape and manufacturing technique as had the Romans. The blacksmith heated several nail “rods,” square or round stock in three to four foot lengths, in his forge. He would take one out, taper it quickly to the desired size, cut it almost off using a hardy, then twist the nail completely off the rod using a nail header, and put a head on it with a few quick blows. A competent nail maker could make a nail in about 30 seconds. Some nail makers were said to produce up to four nails a minute.

A stamp bearing the picture of a nail from a keg found on the Mary Rose, the flagship of King Henry VIII, sunk in action off Portsmouth in 1545, recovered by archaeologists in 1971. The nails were packed in tar, which preserved them remarkably well, showing that nails of Tudor England were identical in design to the Roman nail.
While there were many styles of special purpose nails, the typical Roman nail and the nail of the Middle Ages had a square cross section, tapered on all four sides, with a “rose” head (a short four-sided pyramid). This design was actually much better than our modern nail. A wrought nail cuts fibers in the wood, which then hold against the nail like barbs. The taper means that the wood is pressed tightly to the nail, generating friction along its entire length. The wire nail we use today is designed to slip “between” wood fibers, and once the point is in the wood, the rest of the nail doesn’t continue to press more tightly against the wood. Tests have shown that a forged nail will hold four times stronger than a wire nail of the same size. It is nearly impossible to remove a forged nail with a claw hammer, not because the metal is weak, but because the nail holds so strongly. About the only way to recover nails was to burn down the wooden structure and sift through the ashes.

A typical nail shop was 10-12 feet square with a central forge. Unlike many other specialty blacksmith trades, as many as six “nailers” worked around the fire at once, often members of the same family, including the wives and children. A nail maker who had no shop of his own could rent a “standing” from a fellow nailer and carry on making nails. Nailers would typically provide their own tools, which were few and easily made: a forge and bellows, a small block anvil, a cut-off hardy, sharpening tools, a hammer, and, for nailers making large nails, a tredle hammer known as an “Oliver.”

In the 17th century, the water-powered “slitting mill” was invented, most likely in Belgium. The mill flattened and slit iron into uniform bars, automating the labor intensive creation of nail rod.

England made more nails than any other nation, and the river Stour was its center of nail making during the industrial age, with more slitting mills per mile than any other country in the world. This Stour industrial complex began when a nailer named Richard Foley (known as “Fiddler Foley”) went to the slitting mills in Sweden pretending to be an idiot. He made himself well liked by the mill workers there, playing his fiddle for them, and through this access discovered the workings of the mill. He returned to England and set up his own mill, the first on the river Stour.

By the middle of the 18th century, wealthy men known as “nailmasters” set up warehouses in the nailing district, buying rod from the mills and distributing it to the nailers. In the early years, nailmaking was a profitable business for all, mainly due to the demand for nails in America. (The American colonists were not allowed to manufacture their own nail rod.)

William Whitehouse giving evidence before the English Parliament, said "Any person who knew the quantity of nails required in America would be surprised unless he saw the immense number of houses built of wood in that country."

After the American Revolution, the loss of trade hit the nailmaking regions of England quite hard. Prices for nails dropped steadily, forcing many nailmakers to sell their homes, which were often bought by the nailmasters and rented back to the nail makers. In many regions, nailmakers rioted for better pay, often coming into conflict with British troops. There are reports of the nailers using small caltrops called “tiswas” made from three nails welded together to cripple cavalry horses, throwing off their riders, where the nailers attacked them with their hammers.

The “hungry forties” (1840’s) were the low point of the nail making trade in England, due to the large numbers of nail-makers, the low demand for nails, and the influx of cheap labor due to the Irish Potato Famine. During this period a type of middleman known as a “fogger” began to take great advantage of these desperate laborers. The fogger would supply nail rod to the nail maker on credit. This was also the practice of the nailmasters, but the nailmasters, for the most part, paid in turn for nails in cash at an agreed-upon price. If the nail-maker could not get credit from the nailmaster (due to back-debt, missed deadlines, poor workmanship, etc.), the nail maker would be forced to go to a fogger. The fogger, unlike the nailmaker, paid the nailmaker in credit vouchers which could only be used at the fogger’s public house or general store (called a “tommy shop”). This was illegal even at that time, but nailers desperate for work would take the credit in order to provide for their families. The merchandise in the foggers shop or public house was generally inferior or adulterated, a practice known as “tommy trucking.”

Sad to say, by 1850 the nail trade in England was dominated by women and children. Men either left to find better work, or spent their days drinking the fruit of their labor at the fogger’s public house. It was common to see children of seven or eight making nails all day long in order to help provide for the household. A medical officer reported in 1883 that the high death rate among children under five “was due in great measure to the habit of mothers leaving their children unattended while they were engaged in the nail shop.”

Continued on page 18
A rare few were able to rise above this poverty. Elisa Tinsley was the wife of Thomas Tinsley who died in 1851 leaving his widow little more than the stock and tools of his trade. Rather than selling out, she took over the business, and eventually became a nailmaster herself, known locally as “the Black Widow.”

**Nail Making in Colonial America**

Prior to the American Revolution, nails were expensive and difficult to obtain in America, because the nail rod had to be imported from England. America had the raw materials and industrial capacity to make nail rod, but England had passed the Iron Act in 1750 to prevent the development of colonial manufacturing in competition with industry in Britain by restricting the growth of the American iron industry to the supply of raw metals. Americans could smelt iron ore, but they could not work it. To meet British needs, pig iron and iron bar made in the colonies were permitted to enter England duty free, but were not permitted to be shipped outside the British Empire. The colonies were NOT permitted, however, to establish furnaces that could produce steel for tools, or to build rolling and slitting mills and plating forges. Colonial nail making was permitted, but the nail rod had to be imported from England, where it was often being manufactured from American iron! Few colonists became nail-makers before the revolution due to the high cost of these materials.

Even after the revolution, there were not enough nail makers to meet the demand. It became common for families moving westward to intentionally burn their own perfectly good homes to the ground in order to recover the nails. This was so common, in fact, that the original arson laws enacted in Virginia were intended, not to prevent burning down another’s property, but to prevent people from burning down their own homes, thereby risking fire spreading to the neighborhood and the loss of real estate value.

Nails were so necessary to early American life that, after the revolution, families often had small nail manufacturing areas set up inside their homes. During bad weather and at night, the entire family might work at making nails for their own use and for barter.

**Machine-Made Nails**

The production of wrought iron nails was ultimately replaced for most purposes with cut nails and, eventually, with wire nails. Wrought nails were used only in cases where the softer cut nails were not suitable, such as horseshoe nails.

Arguably, the first machine for making nails was the Oliver, the treadle hammer which replaced the blacksmith’s hammer on larger nails and spikes, but otherwise left the nail making process unchanged. The introduction of the slitting mill also automated what was a manual process, the making of nail rod, but again, nails were still made one at a time.

Cut nails were invented in America and England about the same time. The first version of the cut nail machine worked by slicing thin tapers off a flat sheet of iron whose width determined the length of the nail. Because the sheet was flat, the cut nail only tapered on two sides. In the first generation, the nail still had to be headed in the traditional manner. The machine basically replaced the drawing out of the taper and the cutting to length. The taper was formed by first angling the stock a little to the left for one cut, then to the right for the next cut. Because the angling and heading were done by hand, they vary from nail to nail. This can make it difficult to distinguish one of these cut nails from a wrought nail if the nail is not in pristine condition. When new, you can see that the taper of a first generation cut nail is only on two sides, and that there is a burr on both sides where the nail was cut. In this generation of cut-nail manufacturing, the burr would point one way on one side, and the other way on the other side (see picture above).

The second generation of cut nail manufacturing was a marked improvement in that, rather than relying on the operator to angle the stock, the machine flipped the stock between cuts. Also, these machines included a mechanism to grip the nail and form the head, making them extremely uniform. These nails can
also be identified by the burr, which, because the stock is cut from alternating faces, faces in the same direction on both sides of the nail.

While the cut nail dramatically improved the efficiency of the nail making process, the metal used had to be softer, and because it only tapered on two sides, it did not hold as strongly. Also, though the throughput per person was much higher, each cut nail machine required a human operator, still making nails one at a time.

By the 1920’s manufacturers discovered how to cheaply make long coils of steel wire, and machines were quickly designed to mass-produce cheap “wire nails” completely without human intervention.

The fact that the wire nail had four times less holding power was not relevant to most uses, as thinner timber made of softer wood were being used, and other forms of fastening were available when stronger holding power was needed.

Today it is possible to date historical buildings by the types of nails that were used in their construction. Those seeking historical accuracy in reproduction furniture or buildings can determine which type of nail would be appropriate for the period. The dates above hold for larger, established areas, but these improvements took many more years to reach the frontier.

Most professional blacksmiths today would have little interest in producing wrought nails in commercial quantities, because the cost would necessarily be so much higher than wire nails. However, there are still a handful of manufacturers that still produce cut nails in the traditional manner today using machines that have not changed in 200 years.

One such company is Glasgow Steel Nail Co which can trace its business roots back to 1870. In addition to working with these old machines, the process also involves preserving the blacksmith’s skills to form cutting and heading tools. Glasgow Steel Nail Co has been involved in many interesting projects, including providing nails for the Globe Theatre in London and restoration work on many castles. The nails are generally used for doors, floors, gates and other areas where a nail will be visible, and therefore needs to be “in period.”

Robert Fox—BOA Editor

PROJECT NOTES—MAKING NAILS

Author: Skeeter Prather. Reprinted with permission from the January 1997 issue of Hot Iron News, the Newsletter of the California Blacksmiths.

1. 1/4” round or square stock
2. Square taper, working only two sides
3. Shoulder those two sides
4. Nick stock 1/4” above shoulder on both sides
5. Place in nail header and twist off
6. Flatten with 4 facets (short pyramid)
7. Quench and remove

FOUNDING FATHER AND NAIL MAKER

It has been reported that nail making is the only business venture at which Thomas Jefferson ever made money. Jefferson wrote in a letter, “In our private pursuits it is a great advantage that every honest employment is deemed honorable. I am myself a nail maker.”

In 1794 Jefferson added a nail making operation to his blacksmith shop on Mulberry Row at Monticello. He hoped it would provide a source of cash income while he restored the depleted soil of his farms. Nail rod was shipped from Philadelphia and hammered into nails ranging in size from six-pennies to twenty-pennies. In 1796 Jefferson acquired a nail cutting machine, which made four-penny brads from hoop iron.

In his Farm Book Jefferson wrote: “Children till 10. years old to serve as nurses. From 10. to 16. the boys make nails, the girls spin. At 16. go into the ground or learn trades.”

Up to fourteen young male slaves, aged ten to twenty-one, worked at the forges of the nailery. From 1794 to 1796, when he was retired to Monticello, Jefferson calculated the efficiency of the nailers, each day weighing their nail rod and the nails they produced.

The nailery was quite profitable for almost 30 years until it closed down in 1823 due to management problems and cheaper competition.
**CLASSIFIED ADVERTISING**

**COAL FOR SALE**
50 pound bags.
BOA Members price $8/bag
Non-member price $10/bag
Contact Coal-Meister Ron Wells, or see your chapter steward.

**FIREPOT AND POST DRILLS**
Daniel Casey (see sidebar, page 19) has one nice firepot with clinker breaker, and two post drills left to sale. His phone number is 501-858-9757 (Searcy).

**COLECHESTER LATHE**
Danny Rob Sr. has a fully outfitted machine shop that he intends to downsize over the next several months. The first item he is offering is a Colechester metal lathe with a 17” swing (28 inches in gap) with 80” between centers. It has a 3 1/2” spindle hole and cuts both English and metric thread. It is in full running condition (3 phase power), and comes with both 3 and 4 jaw chucks and a quick-change tool post. Call (870) 565-3918 for information.

**HIT-AND-MISS ENGINES**
Bryan Parsons sold that 350 lb bridge anvil, but is looking for hit-and-miss engines. If you have a lead for him, call 479-957-5498.

**ANVIL FOR SALE**
Bob Lock has an Arm and Hammer anvil for sale. Call him at 417-847-6708 if you’re interested.

**BOA T-SHIRTS ARE BACK!**

BOA t-shirts are only $10 ($12 for 3x and 4x sizes). You can’t beat that with a rounding hammer! Get the black if you are worried about coal grime, or the grey if you are worried about the heat. Or get both for the winter, and layer up!

The silk screening process requires that we save up orders until a minimum number is reached. Fill out the form below, but send no money. You will pay when the t-shirts arrive.

**Enter the quantity of each color and size below. White is also available with black ink.**

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- [ ] With Pocket
- [ ] Without Pocket
- [ ] Tall Sizes (additional $2.00)

Indicate if you are interested in getting a cap. [ ] Yes [ ] No

Your Name___________________________________________________
Address______________________________________________________
City, State, Zip________________________________________________
Phone # {in case we need to contact you}___________________________

Pay when T-shirts are delivered
BLACKSMITH ORGANIZATION OF ARKANSAS
MEMBERSHIP APPLICATION

Name*: ________________________________
(Plus Family Members)
Address: __________________________________________
Primary Phone: ____________________________
Email**: _________________________________
Email: _______________________________________

Special areas of interest:
☐ Knife making ☐ Gunsmithing ☐ Architectural
☐ Restoration ☐ Buck Skinning ☐ Medieval

Membership dues are $25 per year, due in January***.

Make checks payable to “BOA (Blacksmith Organization of Arkansas)”
Mail to:
Ron Wells, BOA Treasurer
HCR 32 Box 141
Mount Judea, AR 72655

Or bring to the next meeting and give to the Treasurer or Steward

*BOA’s membership is a family membership. For the payment of one membership, all the members of a family would be afforded all the benefits and privileges of full membership. They would, however, have ONE vote on BOA business per family membership.

**BOA’s Newsletter is available as an electronic newsletter. It is only distributed to active email addresses. Please make sure your email address and those of your family members are entered correctly above.

***Membership dues are paid with the submission of this application; thereafter, they are due each January. If the dues are paid in the last three months (October, November, or December) of the year, membership is paid up for the following year. If dues are not paid within the first three months (January, February, or March) of the year, the member is removed from the membership.

ARTIST-BLACKSMITH’S ASSOCIATION OF NORTH AMERICA
259 Muddy Fork Road
Jonesborough, TN 37659
Phone: 423-913-1022
Fax: 423-913-1023
Email: centraloffice@abana.org

BENEFITS OF BOA MEMBERSHIP

BOA members continue a tradition of educating our members and the public in the techniques and history of blacksmithing, the king of crafts.

In addition to our monthly meetings, newsletter, and email chatter, our members are active in their communities with many interesting events and demonstrations.

Members also receive discounted prices on coal and stylish BOA apparel.

BOA membership is a family membership. For one membership fee, all the members of the family are considered active, and each may receive an electronic newsletter.

BENEFITS OF ABANA MEMBERSHIP

With your ABANA membership, you receive a subscription to both The Anvil’s Ring and The Hammer’s Blow. As well as discounted conference registrations and discounts at many web sites.

The Anvil’s Ring, devoted exclusively to the craft of blacksmithing, is the association’s quarterly magazine which presents articles on topics such as architectural iron, decorative design, hand forged tools, historical references, advice to beginners, etc.

The Hammer’s Blow, also a quarterly publication, is a black and white magazine full of “how to” tips and techniques for professionals and beginners alike.

MEMBERSHIP APPLICATION

Also available online at: www.abana.org

Name: ____________________________
Address: __________________________
City: ____________________________
State: ______ Zip: __________

Credit Card Information:
☐ Visa ☐ Mastercard
Card#: ____________________________
Expiration: ________________

Type of Membership:
☐ Regular .......$55 ☐ Overseas ........$65
☐ Student .......$45 ☐ Contributing ......$100
☐ Senior ......$50 ☐ Library .............$45

There is a $5 discount for 2-year memberships and renewals

The Blacksmith Organization of Arkansas (BOA) is an ABANA Chapter Affiliation
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THE BLACKSMITH ORGANIZATION OF ARKANSAS (BOA)

BOA is an affiliate of the Artist-Blacksmiths Association of North America (ABANA). We are exclusively for the education of members and other interested parties in the skills, techniques, and traditions of blacksmithing. We aspire to expose the art of blacksmithing to the public, to serve as center of information about blacksmithing and its tradition, and to do so in cooperation with and as an affiliate of the Artist-Blacksmiths Association of North America.

Information on when and where we meet and how to join can be found within the pages of this, our monthly newsletter.

If you’re not already a member, we hope you will be soon!

BOA MEMBER SHOWCASE—BOB PATRICK

One of the best things about taking a class with Bob Patrick is having the opportunity to see all the amazing bits of blacksmithing just laying around, propped up in odd corners. This is one of my favorites, just something Bob whipped up to hang his shingle above his shop door. It’s actually up pretty high—I didn’t even notice it until late in the second day.

If I made something this nice, it would definitely be hung where I knew everyone would have to see it!

Nice work, Bob, as always!