

BAM

Sept / Oct 2016

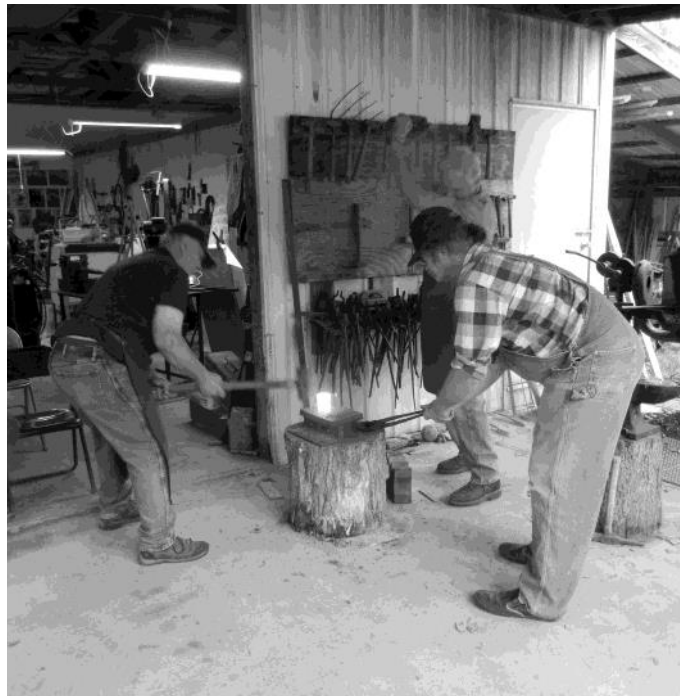


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Blacksmith Association of Missouri

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The Newsletter of the Blacksmiths Association of Missouri is published six times a year and is mailed to members of BAM. The annual fee for regular membership is \$30/year; a portion of this amount is for a subscription to this newsletter for one year. Editorial inquiries should be addressed to : Jon McCarty 815 Miller Street, New Haven, MO 63068; (636)359-1246, or send an email to: bameditor2015@gmail.com BAM membership inquiries should be addressed to: Bruce Herzog, 2212 Aileswick Dr. St. Louis, MO 63129 (314) 892-4690 or send email to bjherzog@charter.net. Occasionally some material will be copyrighted and may not be reproduced without written consent by the author. BAM welcomes the use of any other material printed in this newsletter provided the author and this organization are given credit.

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City: _____ State: _____

Phone: () _____

Zip: _____

E-mail: _____

New Member Renewal ABANA member

Are you interested in taking a class?

How did you learn about BAM?

ABANA Membership Application

Primary ABANA Charter Affiliation: _____

Name: _____

Address: _____

City: _____ State: _____

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New Member Renewing Member

Includes a Subscriptions to the Anvil's Ring and The Hammers' Blow magazines

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Overseas surface mail -----\$65 yr.

Contributory-----\$100 yr

From the President

By Phil Cox

What a busy summer this has been!

Labor day weekend we went to Illinois for our Grand daughters wedding, then on to Tanneyhill in Alabama. What a cool place to have a blacksmith event. First day there I repaired their air hammer. Next day, I had time to tour the Tanneyhill State Park. Tanneyhill is on the national historic register for the site of the iron smelting furnace. The Civil war era furnace has been restored and a museum on iron smelting has been built. The Alabama Forge Council has it's buildings at the north end of the park. They hold 2 events a year there, a blade symposium in the spring and the AFC conference the weekend after Labor day. It's a nice quiet place with plenty of camping space. They put Marg and I up in a restored 1890s log cabin, full kitchen, air conditioning and 5 or 6 deer visiting the cabin every evening. I caught a summer cold and really struggled with my voice both days of my demos but made it through. My demo was on repairing Little Giant hammers. I poured Babbitt, adjusted the ram, and shimmed the main shaft bearings on another hammer. I also installed a brake. The biggest part of the demo was a long Q&A session each day. I must have answered a hundred questions each day. It was hot both days but 40 or 50 people stuck with me for 7 hours in mid 90's heat for both days. Eddie Rainey, the ABANA president, was the other demonstrator, but I did not get a chance to watch his demo as we both went all day both days. I did buy his demo piece at the auction. It is a nice hand vise. I also bought a Clay Spencer toilet paper holder made from a RR spike. Maybe I can put these in the gallery at the next conference.

The meeting at Fred Arnolds had forty or so in attendance, several new members or future members were there. Nice to see we still have new people joining. Fred and Jack Nettleton, made a flatter with a good round of team striking. Mark made a profile of Mel Robinett then added an LED light to it, kind of a cool project. Mel then took over and gave a very interesting talk on the hand made bows he has been making for 30 or so years. I had no idea Mel was into bows but I learned a lot about makings bows, arrows, bow strings, arrow heads, and quivers. It seems to me patience is the most important ingredient it this endeavor. Think I will not be making bows.

We had only been home from Tanneyhill a week when we left for Quad States Round Up. It was bigger than ever. The whole fair grounds was covered with tents and tail gators. Anvils were everywhere. Must have been at least 200 used anvils from a few oz. to 900#. Prices seem to be in the \$6 per # range. With a pristine 700# Fisher with an asking price of \$7,500. I don't think it sold. Lots of other stuff no way to remember it all. Had a few BAM members there, and lots of out of state friends I only get to see once a year. Marg and I had a great time.

Nathan was there with his banged up fingers. Very lucky to still have them. For those of you who haven't heard he got them in his power hammer dies. He broke the tip of one and 8 stitches and several wounds on another but no stitches, lots of swelling. He said working tired and in a hurry is not a good thing, so lets learn from him and be safe. Quit when your tired, slow down, and keep our finger where God put them.

Till next time keep you anvil bright and your fires clean.

Phil

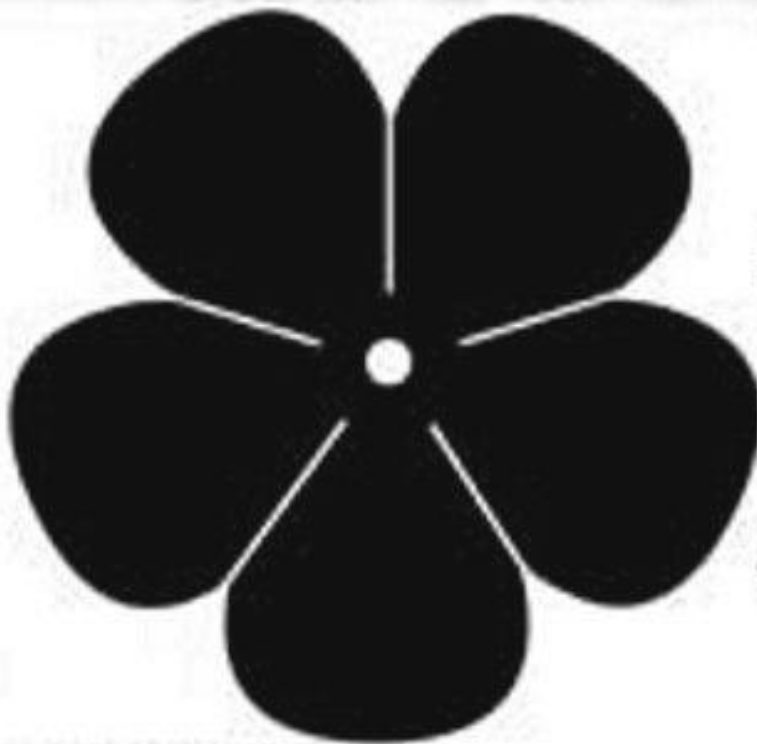
Editorial

By Jon McCarty

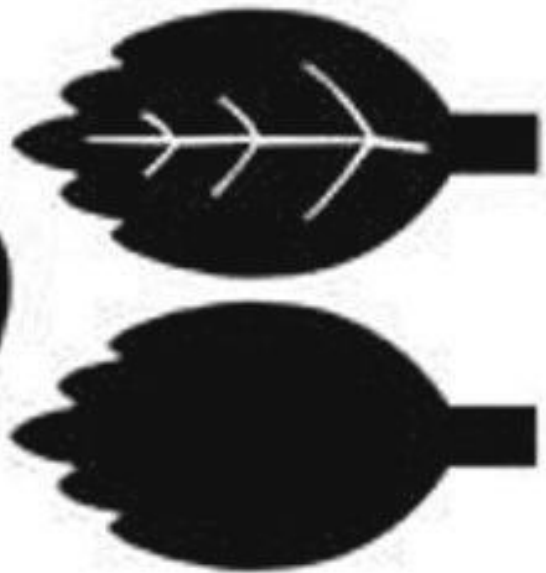
Hello everyone, I hope this finds everyone doing well. This issue I have an interesting project I found in Utah at the ABANA conference. Gaylan Veater donated a very nice hand forge hack saw to Pat McCarty's BAM Box this year. I liked it so much I found Gaylan and after introducing myself and asking several questions about the hacksaw I discovered he had written an article about it for the Hammers Blow. From there I hunted down Mark Aspery to find out if he had a copy of if I was going to have to dig up a hard copy so I could try this on my own. Mark had a digital copy so here it is for all to enjoy.

We are in need of someone willing to step up and take on the role of President. Phil has done an amazing job but it is now time for someone else to take up the torch. If you are interested contact Ken Janzen or Chris Miller

Jon



INNER SHELL

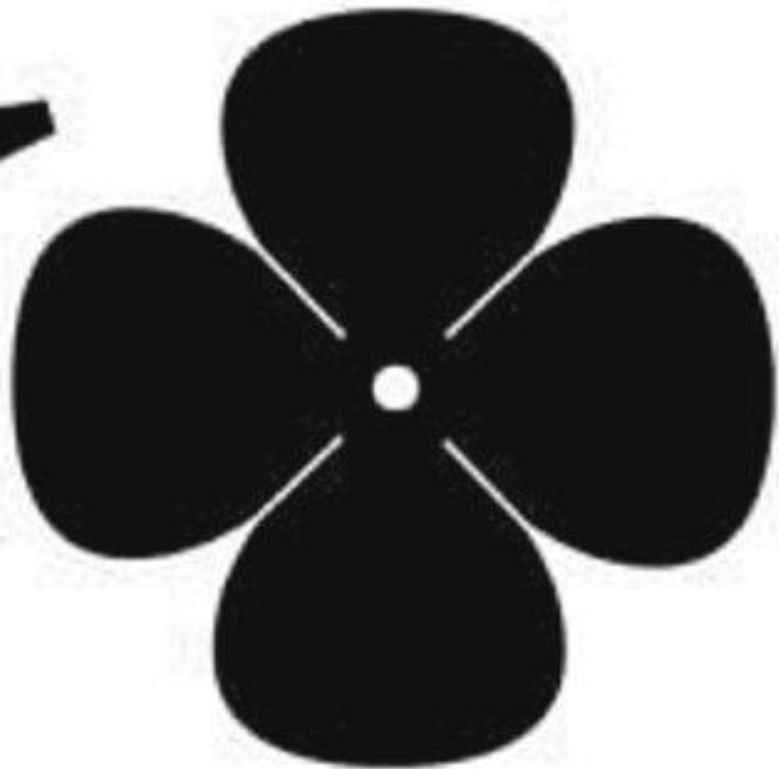


LEAVES



SEPALS

OUTER SHELL



Lorelei Sims
Rose Pattern

Gaylan Veater's Group Project Hacksaw Frame *-Part-one-* Gaylan Veater and others: Bonneville Forge Council, Utah

As an ABANA affiliate, the Bonneville Forge Council of Utah used this hacksaw frame project as a group workshop with excellent results.

We saw 12 novice smiths complete at least one frame each within an 8 hour day and made a few frames extra for our yearly auction.

The new smiths had to taper to fixed dimensions, conduct some basic scrollwork and control the area of heat on the bar. There was some bench work thrown in to boot.

While wrapping a bar around a jig might not be everyone's cup of tea, it did get some new smiths leaving with a completed project, dirty hands, and a smile.

The project employed a couple of the more experienced smiths to build some of the jigs beforehand and provide expertise on the workshop day.

My ambition with this article is to provide other active ABANA affiliates with the information needed to attempt this project with their own novice smiths.

There are two main issues with any hacksaw frame:
1. It must be able to hold a hacksaw blade securely.
2. It must have a handle that the user can use.

With this particular design there is a third issue; the user must be able to get their hand comfortably inside of the 'D' shaped handle.

I will start this article with the handle. The handle is comprised of an inner and outer 'D' shape. Fig. 1,2,&3.

Once an inner 'D' handle is formed it can be used as a jig to form the outer 'D' shaped handle. Both fit together to make the hacksaw frame. Figure 3.

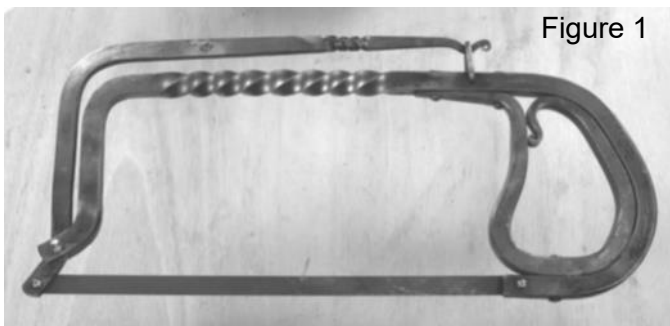


Figure 1

To prevent a lot of different inner 'D' handle/jigs from being made, we, as a group, decided that it would be best to create a form around which all the inner 'D' shaped handles could be made. This way parts would be interchangeable.

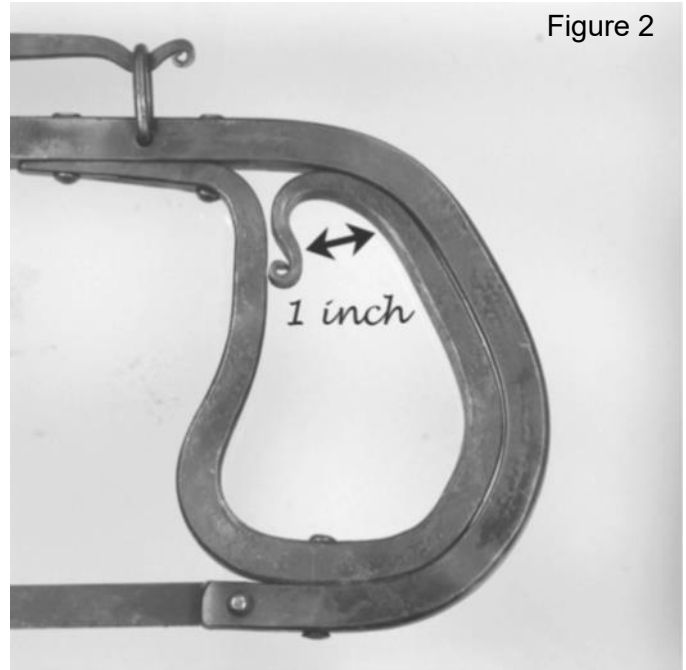


Figure 2

Figure 5. Unfortunately, we had to go two steps further back in the process and decide what we wanted from the inner 'D' handle and build a jig to accommodate those needs.

Our main concern was that the handle accept a large hand without discomfort and that the gap, top to bottom, be about four inches tall inside measurement.

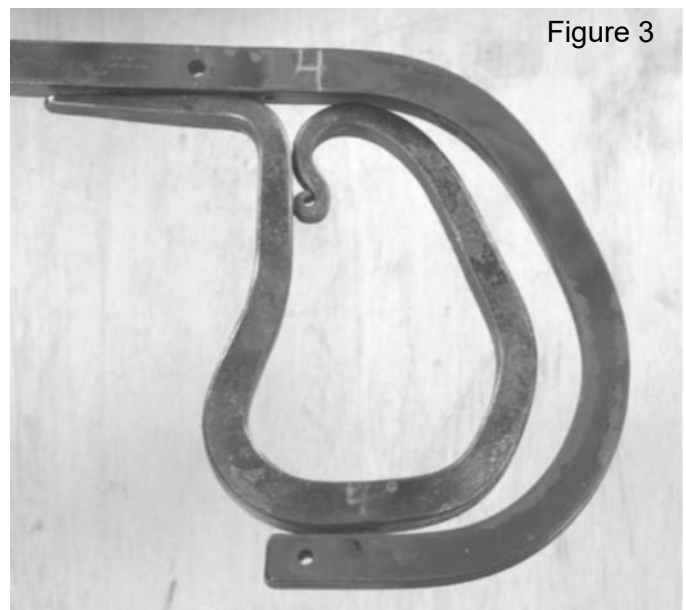
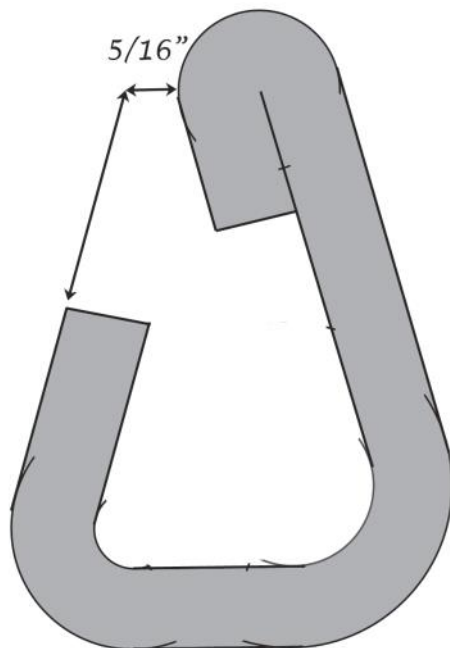


Figure 3

Figure 4



To make this project repeatable in other workshops around the state, we decided to build a primary jig around which the other jigs would be made. This would be our 'alpha' jig.

The alpha jig was used to create all the inner 'D' shaped jigs (not the inner 'D' handle). Having such a jig would hopefully allow for parts made in different workshops around the state to be consistent.

Figure 4 shows the general shape of the jig to make the inner 'D' handle. The jig was made from .75 square bar. We felt that the doubled back bar at the top of the jig offered sufficient clearance for the first finger of the user during the saw's use. This is shown in figure 2.

The layout and dimensions of the alpha jig are shown in figure 5. The lower smaller circles represents the blocks in the alpha jig and the outer lower circles represent the material bent around the alpha jig.

A note about the photography.

The photographs (left page) were taken with the handle laying on a piece of flat glass about 4 inches (a brick width) from a background. In most cases the background was plywood, but in the case of figure 2, a piece of light brown paper was used. The elevation of the object from the background help to prevent shadows and illuminate the object from underneath with the reflected light.

Mark Aspery
Figure 4

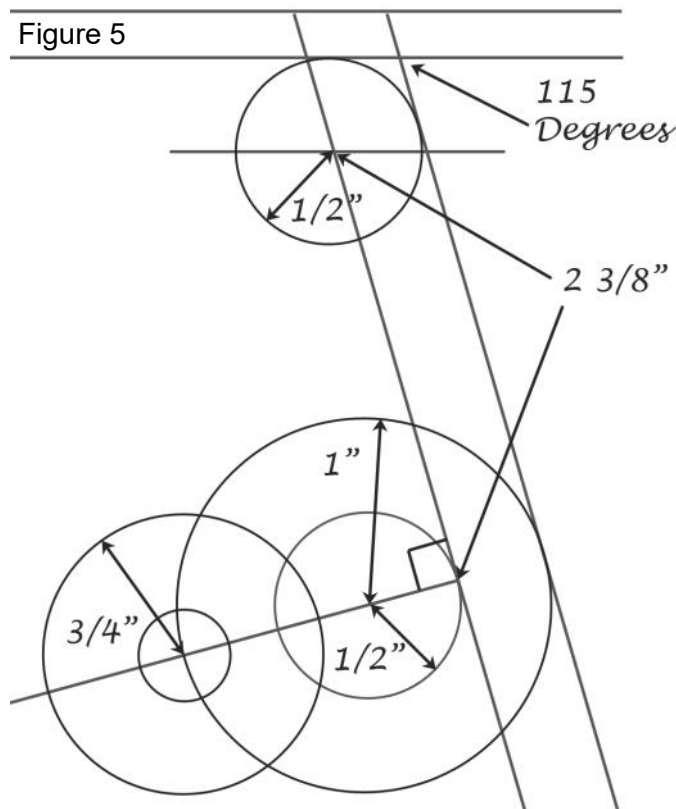
Figure 6 shows the layout of the alpha jig in black with the jig made for creating the inner 'D' in gray.

All the blocks are one inch tall allowing for spacer bars to be used. The spacer bars keep the 'D' shaped part away from the backing plate allowing the use of tooling to accomplish the bending and also full perimeter welds of the blocks without affecting the jig performance.

The parts labeled 'B' & 'C' in figure 6 were made removable in case you wanted to weld the secondary jig in place if you were only interested in making one inner 'D' jig.

The round shapes on blocks 'B' and 'C' are either .75 diameter pin/bolt holes or pins/bolts respectively, with the backing plate drilled to suit.

Figure 5



Whether this alpha jig is used with the secondary jig welded in place or a second jig created to make the inner 'D' handles, two other removable blocks need to be added. Figure 7 shows one with figure 8 showing the other.

In figure 7, I show a small, round removable pin that is used to capture the scrolled end before you pull the handle material around the jig.

We went with a one inch round block with a half-inch

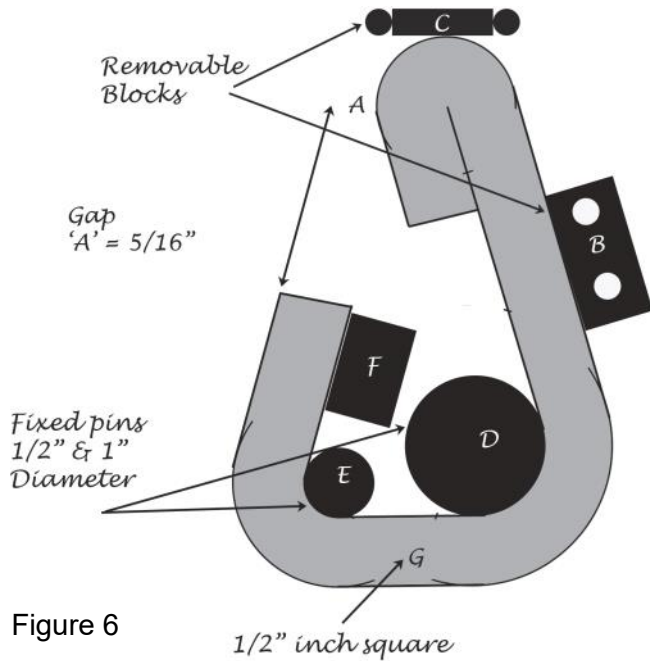


Figure 6

hole drilled through it to accept a half-inch bolt in figure 8. A corresponding half-inch hole was also drilled through and threaded in the backing plate.

This jig fixture is removed as the stock for the handle is wrapped around the jig initially, up to the point where the stock touches the first scrolled end.

The fixture is then added to the backing plate to allow for the second end of the handle to be bent with the use of a set hammer or the like.

Stock requirements:

Starting at the doubled back end, about one-inch of material was doubled back.

Following the neutral axis of the top bend, about . - inch of material was used for the doubled back material. $2\frac{3}{8}$ " of material was used for the long, straight run.

We estimated that the two lower bends were one-third of a circle each. The neutral radius of the largest circle is . making the diameter $1\frac{1}{2}$ " and the total circumference $4\frac{1}{2}$ " ($\pi=3$). This was divided in thirds to arrive at the stock requirement.

The second, smaller circle is one-inch in diameter with the circumference being three inches. Again this was divided into thirds for the stock requirement.

The straight stock between the two $\frac{1}{3}$ bends is one-inch and the stock requirement after the last bend is about $1\frac{1}{4}$ " long.

Combining these requirements all together gave us a stock length of $8\frac{7}{8}$ ".

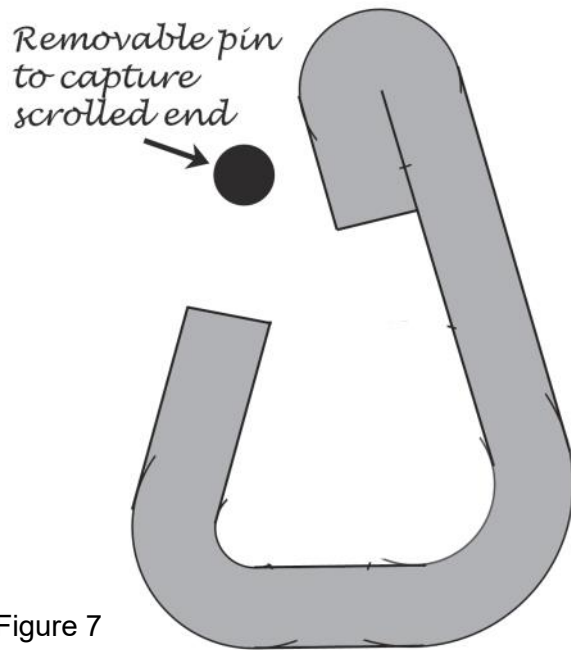


Figure 7

We cut a bar that was about three times that length plus an $\frac{1}{8}$ " in order to make a jig on each end, with material left in the middle for a third.

In this way, the bends could be made using a longer length of material to pull against for an easier way of going for the first two anyway!

To be continued in the next issue .

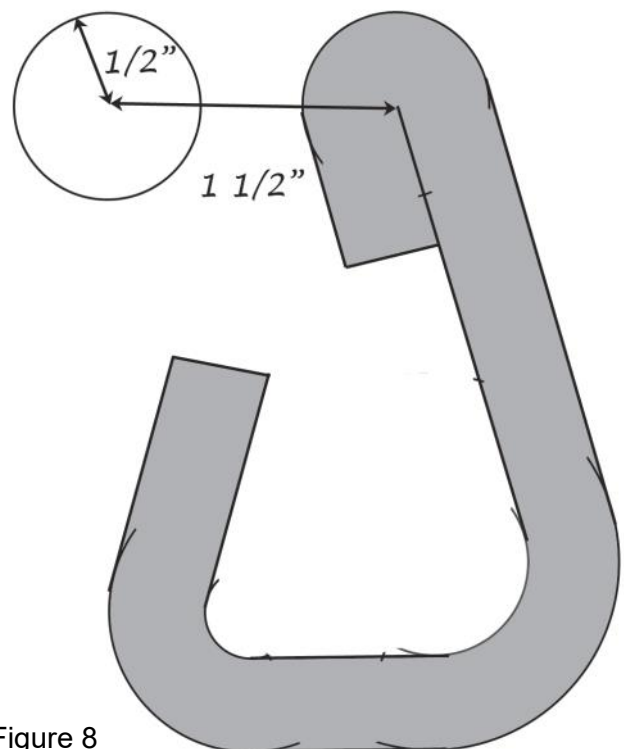


Figure 8

September Meeting Minutes

By Bob Stormer

Phil Cox opened the meeting by thanking Fred Arnhold for hosting the meeting. He also thanked all the demonstrators Fred Arnhold, Mel Robinett, Jack Nettleton, and Mark Sampsel. Phil also recognized a number of guests and new members.

Mike McLaughlin gave a brief report on the 2017 BAM Conference. The conference will be Thursday, May 4th through Sunday, May 7th 2017. The demonstrators will be, Lyle Wynn, Allan Kress, Howard Clark, and Matthew Burnett. Mike is looking for volunteers to help with all aspects of the conference from helping demonstrators and helping with setup and cleanup. Please support the auction by making something for the auction, buying something, or both. Iron-In-The-Hat needs donations. Display something in the gallery. The boutique needs moderately priced blacksmith items as well as baked goods for sale. After Bernie posts the tool list on the BAM website you can volunteer to make tools for the BAM Tool Boxes that Mike Gentsch is making. If you will be needing a motel room you should call early since there will be military events at Whiteman AFB that same weekend. Phil mentioned that he and Ken Jansen are still working on the chain project for the conference. More information will be provided when specifics have been determined. Don Nichols suggested making two chains, one of which would be put in the auction.

Phil provided the treasurer's report and noted we now have more than 640 members.

The blowers in the two BAM coal forges are making a lot of noise that is being picked up by the demonstrator microphones. The suspected problem is that they spin faster than required, 3450 RPMs, and they are rigidly mounted in the cavity of the forges, which echoes the sound. The blowers are also getting old and a motion was made, seconded, and passed to get new blowers at an approximate cost of \$200 each. The new blowers would likely be mounted outside of the forge.

Karen Bouckaert talked about the conference vendors who are either conference sponsors or site sponsors. She proposed they receive a one year membership to BAM so they will get the BAM newsletter. A motion was made, seconded and passed to provide the sponsors with a BAM membership retroactively to the 2016 Conference.

The scholarship program was discussed with a reference made to the scholarship details in each copy of the BAM Newsletter. Phil specifically addressed it because of the number of guests and new members at the meeting. He did, however, note there is a two year membership requirement before applying for a scholarship or grant. Don Nichols suggested that BAM might consider giving a scholarship at the conference. Phil said the scholarship committee would have to address that potential.

Phil noted that the insurance company required participants to be at least 18 years old. An alternative might be to have paid demonstrators periodically throughout the year, similar to the ones at Lou Mueller's shops with Bob Patrick and Frank Turley in the past.

The next meeting will be at Chris Miller's facility in Doniphan, MO on November 5th.

The meeting was adjourned.

Conference Update

The Conference is Thursday May 4th – Sunday May 7th. Demonstrators are Lyle Wynn, Allan Kress, Howard Clark, and Matthew Burnett.

Don't forget it's never too early to start making tools for the raffle tool boxes. Start selecting those items for the gallery.

And make something for the auction.

Mike McLaughlin

Trade Items ~ September Meeting

Trade Item – Any blacksmith shop item

Made By:	Item	Traded To:
Bob Stormer	Chisel	Fred Arnhold
Mark Sampsel	Light Hanger	Yuval (UV) Awazy
Yuval (UV) Awazy	Hammer	Mark Sampsel
Mark Lawson	Dividers	Jack Nettleton
Randy Carrier	Nail Header	Bob Stormer
Don Nichols	Twisting Wrench	Mark Lawson
Jack Nettleton	Hardy Tool	Caley Steker
Caley Steker	Hardy Bending Fork	Randy Carrier
Fred Arnhold	Hammer Head	Don Nichols

Iron in the Hat ~ September Meeting

Donated by	Won By	Item
Don Davies	Mark Sampsel	Hoe Wheel
Karen Bouckaert	Don Davies	Plastic Buckets
Drew Johnson	Dale Hamilton	Grader Blade
Fred Arnhold	Samuel Spring	Coil Spring
Jack Nettleton	Don Davies	Demo Twist
BAM	Doug Clemons	BAM T-Shirt
Don Davies	Mark Sampsel	Metal Brace
Don Nichols	Mike McLaughlin	Steel Disc and Pins
Don Nichols	Cory Knisely	Anvils Ring
Karen Bouckaert	Don Davies	Plastic Buckets
Fred Arnhold	Caley Steker	Jack Hammer Bit
Chad Gillihan	William Blansit	Horseshoes & RR Spikes
Don Davies	Don Nichols	Oxy Orange
Jack Nettleton	Mark Lawson	Demo Twist
Harold Wilburn	Mark Lawson	5160 Steel Stock
BAM	Fred Arnhold	BAM T-Shirt
Mike McLaughlin	Rinda Cooper	Copper Ladle Bowl
Don Davies	Mike McLaughlin	Disc

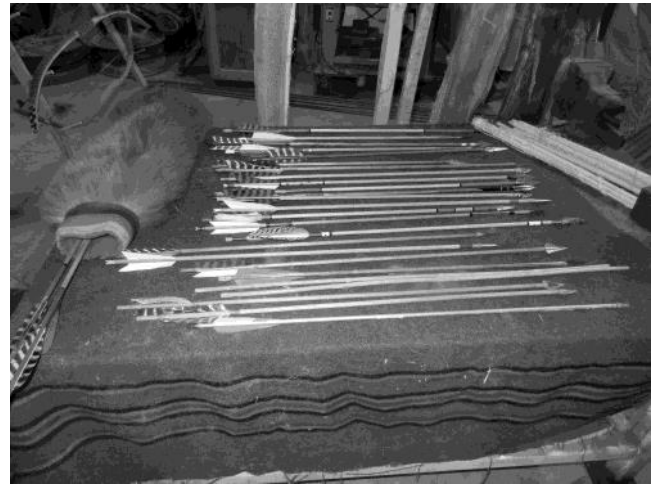
September Meeting Demonstration

By Bob Stormer

The weather was near perfect for the September 17, 2016, BAM meeting at Fred Arnhold's shop near Bates City, MO. Fred had set up four demonstrators who are part of his "Thursday Morning Play Boys" group, who meet every Thursday morning at Fred's shop to work on individual or common projects. There is a good variety of talent within that group, as evidenced by Figures 1 through 6, which are some of their projects. The four members of the group who demonstrated are Fred Arnhold, Mark Sampsel, Jack Nettleton, and Mel Robinett.



number of demonstrations scheduled for the meeting and the time limitations, the rest of the hammer project will have to wait until the group gets together again on Thursday.



Fred, Jack, and Mark started the meeting by making a hammer head by using a homemade swag block to shape it. They started with a block that I think was about 2 ½ inches square and about 4 inches long. The swag block opening appeared to be about 2" square. See Figure 7. They continued the striking operation to the shape shown in Figure 8. The next step was to begin punching the eye. They started by using a handled chisel to start slitting operation, as shown in Figure



9. The next demonstration was the "cold" bending of 1/2" square stock in various configurations. Nick Berardi designed the fixture/jig and provided the 20:1 right angle reduction gearbox. Jack Nettleton fabricated and demonstrated it. Figure 10 shows the jig with a piece of 1/2" square stock mounted. There is a handle on the back side of the gearbox where Jack is standing that he turns 20 revolutions to get one revolution on the work piece. Jack put very little effort into turning the handle. Figure 11 shows the work piece twisted on one end, then turned around to be reverse twisted on the other end. It also shows how the work holding fixture is mounted. The upright parts of the fixture are welded to 1/8" plate that slides back and forth in a channel to ac-

count for different length stock. There is a plate that fits over the two uprights to keep the uprights from spreading when the stock is twisted. Figure 12 shows the details of how the plate is made. Figure 13 shows the demo pieces Jack made. The rope looking piece started out as 4 pieces of 3/16" (I think) stock welded to 1/2" square pieces at each end then twisted; a quick way to make a rope. Jack said the advantages of cold twisting are twofold. You don't have to worry about getting an even heat to get an even twist, and if you want to un-twist it, it will return to it's original shape perfectly, as he demonstrated at one point. There are more pictures of Jack's demo and jig on the BAM website photos page.



The next demonstration was for Mark Sampsel to make a profile outline of Mel out of 3/16" or 1/4" round stock to match one he had drawn on the easel. He used an oxy-acetylene torch to heat the stock in very small sections for accurate bending. Figure 14 shows the finished product in front of the paper sketch. Mark added a hanger on the back of the sculpture on which to hang a candle type lantern.

The final demonstrator was Mel Robinett who explained the effort it takes to make bows, arrows, arrow heads, bow strings, quivers, and all the accessories needed to shoot. His favorite wood is osage orange, or "hedge" as I think Mel refers to it. The pieces he had on display were harvested from Fred's property. To be successful at making bows you need to be able to "read" the wood, which takes a lot of patience and trial and error. After

making the splits as seen in Figure 15, he starts by de-barking the piece, followed by removing the "whitewood" using draw knives and wood rasps. He then chooses a growth ring that will become the face of the bow. The tighter growth rings are best. The face has to follow one growth ring for it's entire length, which is the hard part. You can use Old English furniture polish to rub on the face to highlight where the growth rings are. Although Mel used a green magic marker as shown in Figure 16, the principle is the same. At this point Mel acknowledged that part of his soul is in every bow he makes. His Native American heritage is responsible for his feelings. Once the face is completed, he uses a draw knife to dress the belly, shape the grip and make any adjustments to the overall shape. He likes to use waxed linen to make the bow strings, and typically uses about 14 strands twisted together.



Mel said he makes his arrows mostly from dogwood trees. The shafts can be straightened somewhat by bundling them tightly together in groups of about 12 and leaving "cure" for a few months. Live cane and rose bushes can also make good arrows. Arrow heads can be made from many different materials. Obsidian is popular, but the dust created when knapping can be dangerous. The Native Americans would chew sinew, which makes glue when chewed, to fasten the arrow head to the shaft. Refer to Figure 17 for some of the arrows Mel had on display. Figure 6 shows the bows he brought. This write-up greatly over simplifies bow making. Mel mentioned that is not unusual to spend hundreds of hours filing and scraping a bow only to have it crack on the first draw, which is heartbreaking.

It sounds like a lot of good ideas and projects come from the "Thursday Morning Play Boys" sessions, and I suggested to Fred that submitting some of that information to the BAM newsletter occasionally would be well received. Once again I will encourage every small group that gets together to submit pictures or articles on their activities. That's how the new members know where you are and what you're doing. All of the pictures used in this write-up are also on the BAM website under "BAM Photos Page" and Fred Arnhold's meeting.



Figure 7



Figure 8

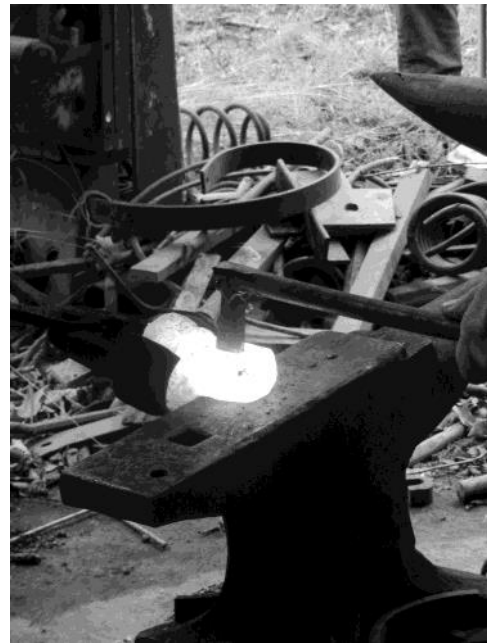


Figure 9



Figure 10



Figure 11

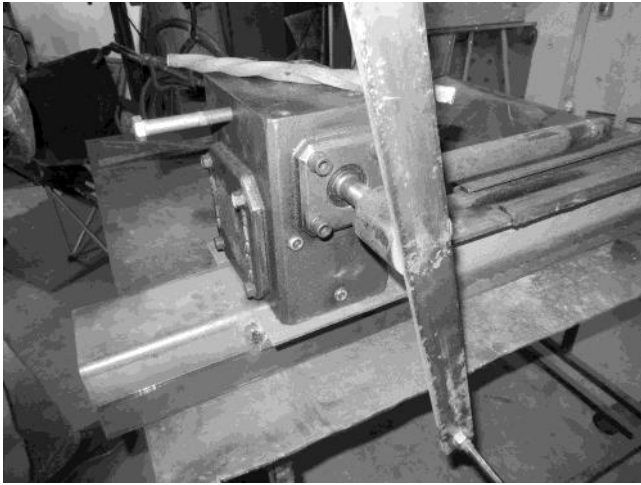


Figure 12



Figure 15



Figure 13



Figure 16



Figure 14



Figure 17

MTS ~ Boy Scout Camp

On Saturday September 17th and Sunday September 18th Michael Gorzel and I had the pleasure to teach a group of Boy Scouts the Metal Working Merit Badge at Beaumont Scout Reservation in St. Louis County, MO.

We had a full workshop and all the Scouts finished the project and earned the merit badge.

The weekend started off with a lot of rain on Friday. I was over 1-1/2 hours late in arriving cause of traffic accidents. We did manage to get the trailer unloaded and the equipment set up any way.

Saturday was dry and the weather perfect to do some blacksmithing.

Sunday was also a beautiful day and we were able to finish the requirements for the Merit Badge.

I had several Scout Leaders from other troops that were camping there also inquire about our program and Organization.

The following Scouts were from Troop 322, Eureka, MO.

Stout Mitchell

Matt Stout

Aaren Christinson

Colton David

Joe Kruessel

Kelby Birmes

Robby Jakcsy

The following Scouts were from Troop 997 O'Fallon, MO.

Sean Lavers

Tyler Hammerschmidt

Danny Stevens



Historic Forge

By Heather McCarty

Cole Dusst News
Newsletter of the Ocmulgee Blacksmith Guild
March / April 2007

Lewis and Clark War Axes
By: Eddie Rainey

The Lewis and Clark expedition was the first federally funded scientific expedition in the United States. Prior to their departure in 1804 Lewis and Clark spent almost one full year planning and gathering supplies for their journey across America. They had to be sure they had extra supplies and gifts to trade with the Indians they expected to encounter.

The first leg of the journey took them north to Bismarck, North Dakota. They reached the fort just in time to prepare for the worst winter on record. The fort was equipped with a blacksmith shop where the first trade axes were made to trade with the Mandan Indians. Because of a late run of the Buffalo the Core of Discovery found that trading with the Indians was their best source for food. The Mandan Indians were experienced farmers and were willing to trade food for metal objects. The Mandan village was located just outside the fort along the river and was the hub of trading activity. The population was the same as Washington, D.C.

These trade axes became the status symbol for Indian chiefs. Almost all photographs of Indian Chiefs shows the trade axe or tomahawks held across the chest. Below is the details of the construction of an authentic Lewis and Clark trade axe.

The length of the axe is 9"
The Cutting edge is 6"
The eye for the handle has a diameter of 1" - 1 1/4"

Start with 3/16" plate 9" in length and 6" in height tapered to 1 1/4"
The eye is made from 1/4" x 1" flat bar 5 3/4" in length. First find the center of the bar and measure 2" from center both directions and mark with a center punch. This gives you 4" for the eye and approximately 3/4" for the scarf.

From the center of the bar forge the bar to 1 1/4" width. As you widen the bar to 1 1/4" leave a ridge line in the center between the center punch marks.

Now form the scarf by forging the ends into a fish tail. Your piece should now resemble a bow tie. Heat and bend over the horn until your scarfed ends almost meet. Insert the 3/16" plate between the scarfs and line the plate up with the center punch marks. Now forge weld the 2 pieces together. Now you are ready to drift the eye. You want an hour glass shape to the eye. You should drift the eye round using a drift with a diameter of 1 1/4"

You may have some clean up around the eye to do from the forge weld. Hammer dress the edges and the taper to the eye making a smooth transition from eye to the body of the axe. Use borax to clean by heating until dull red and wire brushing. Forge the cutting edge to 1/2 inch taper. You can decorate the axe by punching round holes into the body of the axe. Some had weeping hearts which was a favorite for some tribes. Apply a good coat of wax and your authentic reproduction of a Lewis and Clark trade axe is ready for a handle. The handle can be decorated as well. Good forging and let your creativity soar.

Lee Sauder Style Square Corners

By Bob Ehrenberger

Lee produced a very nice YouTube video on his method of making square corners. If you have internet access it is worth your time (13 min) to watch. I took notes while watching the video because my memory isn't good enough to get from my computer to the shop without forgetting some detail. These drawings are a little crude, I miss the BAM editing computer that I used for so long.

Lee starts by making a 180 deg bend where he wants the corner using a bending fork in his hardy hole. He brings the two sides together but leaves a small gap at the inside of the bend to prevent cold shuts. See figure 1.

If you look at the corner from the side you will notice that the material is upset on the inside of the bend creating a slight bulge, and is stretched on the outside of the bend causing it to be a little narrower than the original bar. See figure 2.

Use your cross pien hammer to forge the bulge flat and force the material towards the end of the bend. This will partially fill in the stretched area of the bend. See figure 3. Be careful to not forge it past the original thickness of the bar.

Now with upsetting blows forge the thinned area back into the corner. Be careful not to hit the point on the end this will become your finished corner. See figure 4. There should be two nice flat areas and a point when you are done.

Before opening up the corner, round off the ridges where the flat sections transition into the main bar. See figure 5.

Take a good heat and pry the joint open. Now with the edge of the anvil supporting the inside of the corner, tap alternately on the flats to bring them into alignment with the main bars. See figure 6. If you have any thin areas you need to upset the corner to move material into them, but there will be a lot less upsetting than the usual method of making a corner.

When you have the corner the way you want it, do a slight chamfer on the edges to clean things up and hide imperfections.



Figure 1

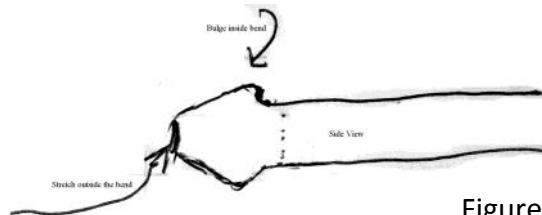


Figure 2



Figure 3

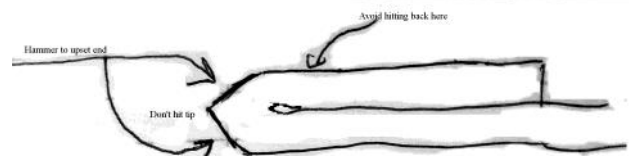


Figure 4

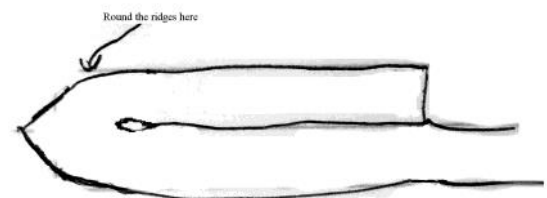


Figure 5



Figure 6

BAM Scholarship/Grant Program

- I. Scholarships and Grants will be awarded by the Scholarship/Grant Committee to BAM members in good standing and have been an active member of BAM for two years. Decisions of the Committee will be final.
- II. Scholarships up to the amount of \$1000 will be granted by the Scholarship/Grant Committee to an individual (1) to attend a recognized educational program or (2) to train under a recognized blacksmith craftsman (see notation on page 2) for the purpose of learning new and/or advanced blacksmithing skills. The submission of an appropriate application is required.
- III. Grants of \$250 or \$500 can be made by the Scholarship/Grant Committee to (1) fund a workshop in a member's own shop (2) train and/or share skills with fellow blacksmiths or (3) to complete a one on one mentorship with a skilled blacksmith craftsman for skill enhancement. The submission of an appropriate application is required.
- IV. The Committee is to consist of 3 members who serve rotating 2 year terms appointed by the BAM President. The President will appoint one of these members chairman of the committee.
- V. The Committee will be responsible for publicizing the Scholarship/Grant Program and for suggesting changes to these guidelines as may seem appropriate. Changes are to be approved by the Board of Directors of BAM.
- VI. The Committee will determine the number and amounts of scholarships/grants based on the amount of funding approved by the Board of Directors.
- VII. The Committee Chairman will have the responsibility of requesting funds from the Board of Directors for the calendar year.
- VIII. Eligibility: Only members in good standing in BAM may receive scholarships and grants and the scholarship committee members are not eligible to receive a scholarship/grant while serving on the committee. No member may apply for a scholarship within one year after receiving a previous scholarship. Applicants who have not received a scholarship within three years prior to their application will be given priority.
- IX. Applications must be received 30 days before the date of the award unless waived by the Committee Chairman and/or President of BAM
- X. **Scholarship Recipient:** Every Scholarship recipient, within three months after completing the event for which the scholarship is granted must submit a written description of the event to the BAM Newsletter (appropriate pictures and diagrams may be included). Within one year, the recipient must also demonstrate what was learned as a consequence of the scholarship either at a BAM meeting or on a video tape to be placed in the BAM Library.
- XI. **Grant Recipient:** One of the following four options can be selected: (1) chose to write an article for the BAM Newsletter describing the workshop they conducted or the skills taught to fellow members; (2) write an article describing the mentorship experience; (3) provide diagrams and directions of the items made during a sponsored workshop; (4) present a demonstration at a BAM meeting.
- XII. The Scholarship/Grant Committee will prepare an appropriate application forms for both the Scholarship and Grant Program. In addition, the forms will be published in the BAM Newsletter
- XIII. Scholarship and Grant applications must be submitted to the Scholarship Chairman, Esther Digh, 6792 CR 424, Fulton, MO. They will be shared with the other committee members and a decision will be made. The recipient will be notified in writing of his/her selection.
- XIV. Questions about Scholarships or Grants can be addressed to the Scholarship/Grant Chairman.

Please note: Members of the Scholarship Committee may contact applicant for additional information on the individual(s) teaching the selected event.

SCHOLARSHIP APPLICATION

Name:

Address:

Phone Number:

E-Mail Address:

The education program/workshop do you wish to attend:

The location of the event:

Individual responsible for the event and/or teacher for the event:

Identify the costs to attend the event:

Tuition

Travel

Lodging/meals

Other

Briefly, describe how attending the particular class/event will advance your blacksmithing skills and be helpful in promoting the craft of blacksmithing. Identify the specific skills you expect to learning during this learning experience.

I understand that as a requirement of receiving this scholarship, I will be required to submit an article about the education experience attended with appropriate notes and diagrams to the BAM Newsletter no later than 3 months after attending the event AND within 1 years of the event, I will present a demonstration of the newly learned skills at a BAM meeting or complete a video tape to be place in the BAM Library.

Signed _____ Date _____

Mail to Esther Digh, 6792 CR 424, Fulton, MO 65251

GRANT APPLICATION

Name:

Address:

Phone:

E-Mail Address:

Identify one of the two options for Grants you wish to complete:

Identify the objective(s) of the workshop to be conducted or the objective of the mentorship:

Identify the instructor of the workshop or the mentor selected for the educational experience:

Identify the expected outcomes or skills to be learned from this experience:

Identify the costs of this educational experience (materials, fuel, travel, handouts, propane, etc:

Select one of the following to complete after the educational experience:

- _____ (1) Write an article for the BAM Newsletter about the workshop conducted and the skills taught;
- _____ (2) Write an article describing the mentorship experience;
- _____ (3) Submit diagrams and directions for making the items made during the workshop;
- _____ (4) Present a demonstration at a BAM meeting.

Signed: _____ Date: _____

Mail to Esther Digh, 6792 CR 424, Fulton, MO 65251

Yuval Awazu
6120 N Oakland Gravel Road
Columbia, 65202-8581
573-303-4284

Brock Boland
17813 Custard Avenue
Sweet Springs, 65351
660-596-5741

J P Camp
1255 IL Rt 143
Greenville, 62246-3823
618-664-4781

Don Carr
29591 Backbone Road
Sedalia, 65301
660-827-1234

Bill Carroll
1567 County Highway 211
Chaffee, 63740-6136
573-264-3942

Ryan Davis
P.O. Box 65
Argle, 65001
573-728-6044

Thomas Dustin
280 West Ash Street
Verona, 65769
417-669-6965

Tom Eisenbeis
16304 Meadowside Ridge Lane
Wildwood, 63038-2337
314-852-5112

Phil Elery
13921 FM 548
Forney, 75126
972-345-1528

John Ites
P.O. Box 1530
Laurie, 65038
573-745-0647

Al Krysan
9700 161st S+W
Lakeville, 55044

Richard Mathena
12699 Union Road
McLouth, 66054-5020
913-547-0055

Andy D Reed
25819 Zane Avenue
Hamilton, 64644
816-617-8893

Daniel Reichow
404 Hawthorne Street
Harrisonville, 64701
816-769-8768

Geoffrey Richardson
P.O. Box 34
Barnett, 65011
573-480-2251

Jim Settle
9118 Settle
Henly, 65040
573-691-7406

John Thomas
401 SE Corder
Lee's Summit, 64063
816-500-3624

Allen Verman
3201 Turkey Foot Lane
Rosebud, 63091
573-259-1603

Jack Williams
3367 S State Hwy J
Rogersville, 65742
417-425-4224

Welcome our
New Members

Upcoming Events

November 5th, 2016--Meeting, Chris Miller, Doniphan, MO
November 15th, 2016--Newsletter Submission Deadline.
November 25th 2016-- Hammer In, Ken Jansen, Moscow Mills, MO
January 1st 2017--Hammer In, Pat McCarty, Washington MO
January 14th 2017-- Meeting, Andrews & Kirby Co , Higbee MO
January 24th 2017-- Newsletter Submission Deadline
September 23rd 2017-- Meeting, Ned Digh, Fulton MO

BAM Tailgate

Buy, Sell, Trade

Individual Classified ads:

For Sale: Brand new, unused, 440lb German style Double horn anvil \$1000, Swedge Block 16x16x4 150lb #300, Foot operated upsetting vise \$200, Contact Don Grammond 573-734-6585

For Sale: Anvil's Ring Magazine collection Sept '73 thru Present. \$350 Bob Woodard Edwardsville, IL 618-692-6508

Real slate chalkboards for your shop various sizes and prices call Matthew Burnett for details (816) 575-2798

Commercial / Resource ads:

Services:

Beverly Shear Blades Sharpened. Remove blades from shear and ship to Clay Spencer, 73 Penniston Pvt. Drive, Somerville, AL 35670 \$41 includes return postage, additional cost for deep notches or blades previously sharpened at angle.

Little Giant-- We can do repairs on any or all components of your Little Giant front assembly. Contact Roger Rice, Midwest Machine, 6414 King Road, Nebraska City, Nebraska 68410. (402) 873-6603

Roller Blade Treadle Hammers (Clay Spencer design) for Sale or Workshops led to build hammers. Bob Alexander, e-mail to scruboak4@netzero.com, or call 636-586-5350.

Information / Education:

Tong Making Class--Weekend Course, 4 people per class - \$125 per person. Contact: Charles Comstock, Rt.1 Box 20, Deerfield, MO. 64741 (417) 927-3499, or (417)-321-2286 cell

Back issues of Jerry Hoffmann's Blacksmith's Journal,
Call 1-800-944-6134 for more information.

Classes offered, The Ornamental Iron Shop
Contact the instructor to register and customize your class.
John D. Thompson – Metalsmith
3923 Hwy 25; Hodges, SC 29653 864-374-3933

Classes at Pieh Tool Company, Inc. - Camp Verde, AZ

The Bill Pieh Resource for Metalwork.
Call now for more information and to enroll:
(928) 554-0700 or (888) 743-4866.
www.piehtoolco.com.

Mathias Penn is offering introductory & beginning blacksmith classes. 417-543-2148
Tytheblacksmith@yahoo.com
oldschoolcrafts Blacksmith School, Joe Davis
12625 Lawrence 1175, Mt Vernon, MO 65712 phone
417-461-0387 on the web www.oldschoolcrafts.org E-Mail oldschoolcrafts@hotmail.com
David Norrie blacksmithing school in Colorado
David Norrie 303-859-0770 <http://www.forgewithintention.com>
or <http://www.davidnorrie.com>

The Upper Midwest Blacksmiths Assoc (UMBA)
video library. An index list can be viewed at
www.umbaonline.org
They are VHS or DVD-R Cost is \$5 each with \$2 per order shipping there is no return date, you keep the video for this price. All videos are made at group demos, no commercial titles.

Blacksmithing E-books on CD

Now eight titles are available on CD, \$4/each, or all eight books, \$24 postpaid. More books are in production and will be available soon- order on-line at www.blacksmithingebooks.com, or check/MO to Brian Gilbert, 3404 Hartford Dr., Chattanooga, TN 37415.

Ray Clontz Tire Hammer Plans by Clay Spencer
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

New England School of Metalwork

www.newenglandschoolofmetalwork.com 1-888-753-7502

Power Hammer page

I've taken some time to collect and post old info, catalogs and brochures on power hammers. The link of our NEB web page to this information is: <http://>

www.newenglandblacksmiths.org/
power_hammer_info.htm Ralph Sproul
Rochester Arc & Flame Center! Featuring Blacksmithing, Welding & Glass Blowing, over 30 classes available for all levels of interest, rocafc.com
585-349-7110

For Sale: Power Hammer instruction DVDs. \$125 per set. Clifton Ralph, 4041 W 47st, Gary, Indiana, 46408 (219)980-4437

Products:

Forge-Aprons offers seven different styles of leather blacksmith aprons; the Original bib, the Short bib, the Full-Cut bib which offers greater chest coverage, the Lap apron, two sizes of Kid's aprons, a Budget apron and our brand new, limited edition Flame apron which features flame imprinted buckles and an anvil engulfed in flames on the logo pocket.
www.Forge-Aprons.com

Heavy-Duty Fry Pan Blanks 9" diameter, tapered sides 12
Or 13 gauge steel (approx.2 pounds) no predrilled holes for the handle \$12.00 each..1-4, \$10.00 each.5-9, \$9.00 each...10+. Shipping: \$5.00 plus\$1.00 each frypan Bob Tuftee 563-332-4800 6 Hollows Court LeClaire, IA 52753

L Brand Forge Coke now packaged in 50 pound bags on pallets. Send your zip code for a quote on price including delivery.1-678-360-3521 or LBrandForgeCoke@aol.com.

Chile Forge- Next generation gas forges
www.chileforge.com David Starr 520/360-2141

Kayne and Son Custom Hardware, 100 Daniel Ridge Road, Candler, NC 28715. (828) 667-8868 fax (828) 665-8303, e-mail: kaynehdwe@charter.net, web site: www.blacksmithsdepot.com.
Offering a full line of blacksmithing equipment. We ship and accept Visa and Mastercard.

D.L. Schwartz Co. Blacksmith and Farrier supplies.
2188 S. US 27, Berne, IN. 46711, 1-800-955-3064

SOFA fire pots are once again available. For information contact Bob Cruishank, 1495 W. Possum Rd., Springfield, OH. 45506 Phone: (937) 323-1300 or www.creativeironforge.com or www.sofablacksmiths.com

USA Dealer for REFFLINGHAUS ANVILS, 77 to 1250 lb.

European 2 horn with or without upsetting block & side shelf.

Over 100 sizes and styles available. Guaranteed face @ HRC59

Dick Nietfeld www.blksmith.com Phone (308) 384 1088

Wanted:

Blacksmith business cards. I would like to put together a collage of Blacksmith business cards. Bring them to a meeting or mail them to me with your dues.

Bruce Herzog
2212 Aileswick
St. Louis, MO 63129

Demonstrator List

Fred Weisenborn has started a list of members available for demonstrations, fairs, historic events, and festivals, etc. 417-589-2497 e-mail: jweisenb@llion.org

Around the Anvil BAM has its very own E-Mail news group. If you would like to participate there is a sign up link on the bamsite.org or send an E-Mail to Bernie Tappel at bamweb@embarqmail.com and he will get you signed up.

Check out back issues of BAM newsletter on www.bamsite.org. It now has a search feature to help you find old articles.

Ad Policy: Blacksmith related ads are free to BAM members. Personal ads will run for two issues. Resource ads are ongoing at my discretion. Send to BAMeditor2015@gmail.com, or call 636-359-1246



Number 1 beginner workshop Saturday April 8th 2017

Number 2-beginner workshop Saturday April 15th 2017

Location:
Ray Scott:
20588 State Route V
Eminence, MO. 65466
No daytime phone number
Evening telephone number 573-226-5541

Start time 8:00 am. Sharp.
Students should be there and ready to go at 8:00 am. both days.

Students must wear safety glasses while instruction and workshops are being run.

Students need to bring a lunch both days.

Water will be available.

Students should wear cotton or wool clothing, no synthetic type of clothes.

Gloves and aprons are not provided.

Must be a BAM Member (Insurance requirement) \$30.00 dollars for a one year membership.

Cost of each workshop is: \$30.00 dollars per student per day.

Instructors are:
Ray Scott
Don Birdsall
573-364-7223

Directions to Ray Scott's Shop:
At Eminence, MO.
Go east on highway 106 five miles to highway V go north two miles. Look for a white fence on right side of the highway, turn at the gate and drive down to the shop.

If not a member sends membership dues (\$30.00 dollars) to:

Bruce Herzog
212 Aileswick Drive

St. Louis, MO.

Send payment for workshops to Ray Scott at the above address.

Any questions call:
Ray Scott or Don Birdsall

Thank you and hope to see you at the workshops.

Eagle Scout

I would like to add a special congratulations to David Harvey Pyle for earning the rank of Eagle Scout.

Over the last several years David has worked hard to learn the skill of blacksmithing. He uses a coal forge to create tools and knives to use around our farm. While he is far from being a master smith at this point he has a great love for forging and studies and works hard to improve his skills on a constant basis.

As his eagle scout project, David supervised the work to install a large flag pole and build and place picnic tables around an historic schoolhouse in his area making a visiting area for people to enjoy. Managing this project helped David hone his skills in leadership, gain a knowledge of project planning, and taught him to see the importance of even the smallest of details.

On August 23 2016, Having completed the requirements, and having been examined by an Eagle Scout Board of Review David Harvey Pyle was found worthy of the rank of Eagle Scout.

Please join me in wishing this young man the very best in all his future endeavors.



BAM Coal Stations

Price per bag:

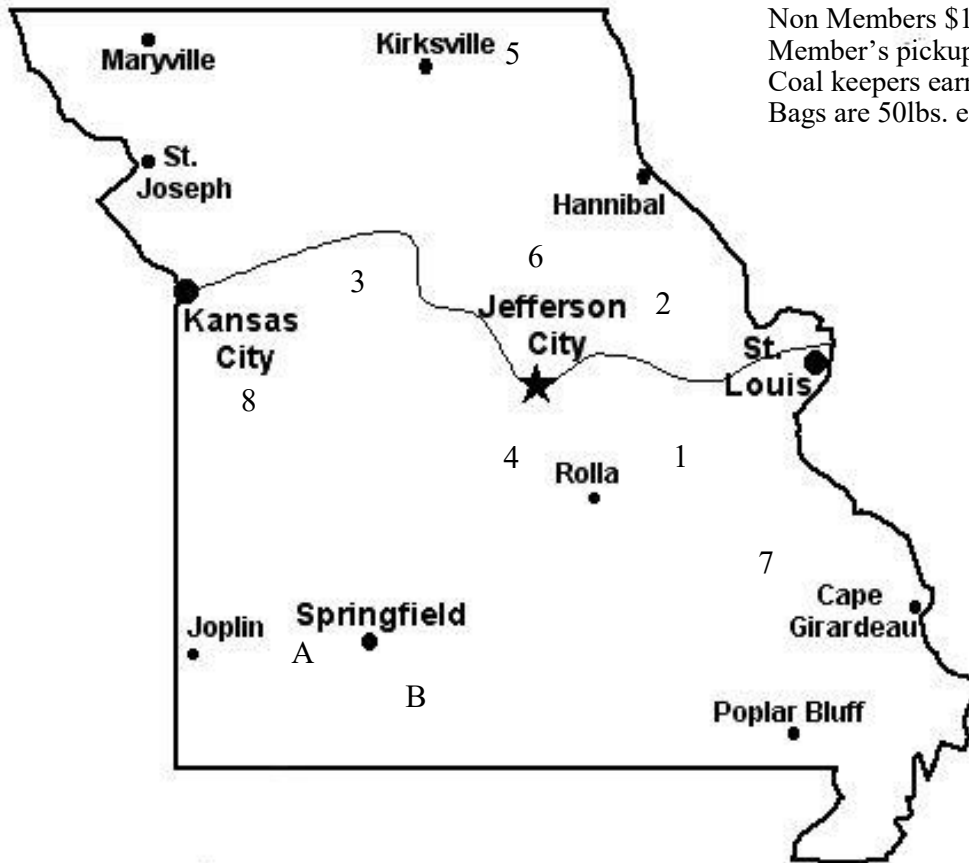
BAM Members \$14.00

Non Members \$19.00

Member's pickup at Bob Alexander's - \$12.00

Coal keepers earn \$3.00 per bag

Bags are 50lbs. each



1. Bob Alexander (636) 586-5350
14009 Hardin Rd.
DeSoto, MO 63020

4. Jerry Rehagen (573) 744-5454
390 Bozina Valley Trail
Freeburg, MO 65035

7. Bob Maes (573) 866-3811
Route 1 Box 106 K
Millersville, MO 63766

2. Ken Jansen (636) 295-5844
2257 Carter Rd.
Moscow Mills, MO 63362

5. Joe Hurley (660) 379-2365
or (660) 626-7824
Route 1 Box 50
Downing, MO 63536

8. Bryan Lillibridge (660) 638-4536
1545 NW 300
Urich, MO 64788

3. Doug Clemons (660) 595-2257
29377 Durango Ave.
Malta Bend, MO 65339

6. Paul Lankford (573) 473-7082
25849 Audrain County Road 820
Mexico, MO 65265

Non BAM Coal

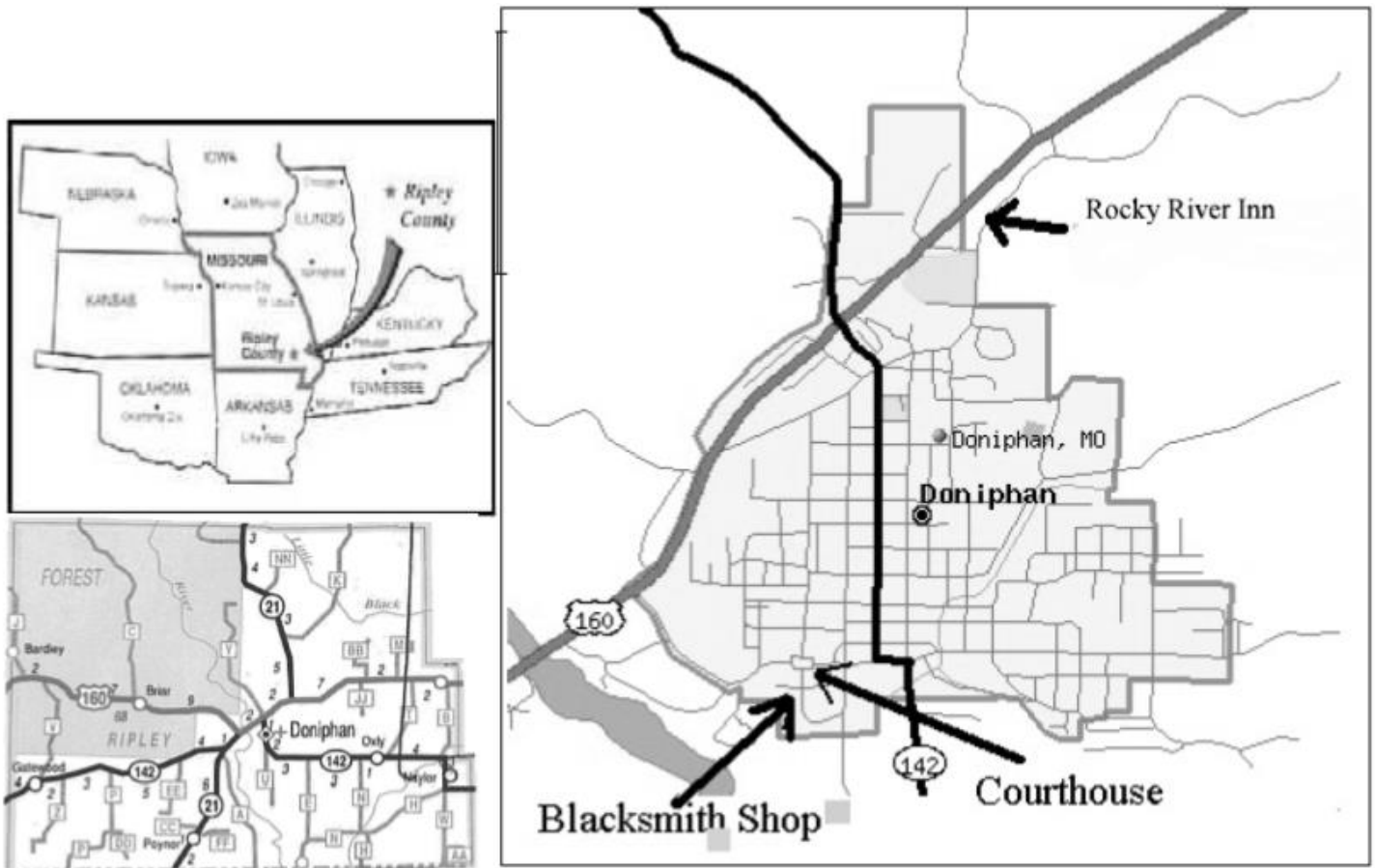
- A. Tim Johnson, Springfield, MO 417-886-8032 - \$.40/lb. check, \$.35/lb. cash. Bring your own containers.
B. Good blacksmithing coal for sale \$12 per 50# bag with bulk delivery available.
Matthias Penn Rt. 1 box 479-S Ava, Mo. 65608. (417)-543-2148.
Or e-mail tytheblacksmith@yahoo.com.

BAM
2212 AILESWICK DR.
ST. LOUIS MO 63129

Please send changes to Bruce Herzog, 2212 Aileswick Dr., St. Louis MO 63129 or e-mail to bjherzog@charter.net

Next Meeting: November 5, 2016

Tom Kennon Blacksmith Shop at the Pioneer Heritage Homestead, Doniphan MO



Trade item: Something with a Mortis and Tenon joint. Matthew Burnett will demonstrate.
Lunch will be served.