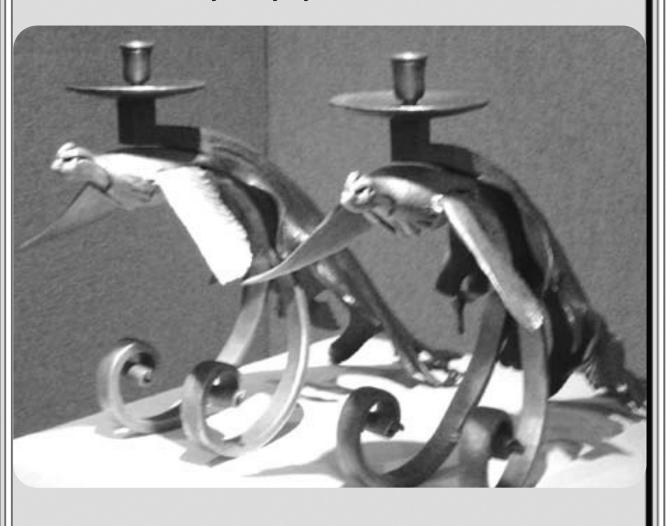


Holiday Items that you can make in the next two isues. Send entries to bameditor@ktis.net or mail to Editor

2004
July - August
Issue
www.bamsite.org

**ABANA Gallery Entry by BAM Member Alice James** 



# **Editorial Comments**

Congratulations to President Don Nichols for bringing some order to the Life Member process in BAM. See the minutes for the July 31st meeting.

The criteria for becoming a "BAM Lifetime Member" appears to have been non-existent. It is well known that it takes a vote of the membership, but beyond that, there seems to have been a void of information. BAM has national recognition and numerous members with national reputations, so there is certainly no scarcity of deserving people.

BAM By-Laws, published in June 2003 makes no mention of the term "Life Members". Apparently the award and status was created outside the By-Laws to honor deserving members. The central question then becomes, who determines the criteria and recommends giving special recognition to deserving members?

This is a timely subject. Our President has established a committee, consisting of the BAM board members to make recommendations. It is a proper time for the members to express their desires to the President and committee members and to recommend deserving members who have made major contributions to BAM and it's legacy. *NPD* 

## FAQ's: BAM Newsletter

Q: Why don't all photos have the name of the person(s) in the photograph?

A: If the name is known, it is put as a caption or title by the photo. It is not unusual to have 75-100 photos to select from. For the last issue, photos were provided by David McCord, Linda Stevens, Bob Stormer, Bob Alexander, Lou Degginger, John Bouchilon, and Doug Hendrickson, as well as those taken myself. The contributors don't always know the name of the person they photograph. Sorting and selecting the photos to publish is very time consuming, the photos come up on the computer monitor as an icon and a number. Each photo must opened, identified for possible use and the process continues by viewing, perhaps several times for elimination or selection. The BAM computer places all photos, not just those selected for the newsletter, in a slide show for viewing at the annual conference.

Q: Why don't we get the newsletter at a set time before each meeting?

A: The BAM goal is to get the newsletter to members at least 2 weeks prior to the next meeting. That doesn't always happen, due to several factors, in addition to Murphy's Law. Experience is showing that to be reasonably assured to achieving this goal, the newsletter must be at the printer six (6) weeks in advance of the next meeting. That alone is tough as our meetings are not always much more than 6 weeks apart. The printing company makes an effort to accommodate our schedule, but we are a small customer and they sometimes have orders of higher priority.

Q: Why have we changed from the thicker cover to a thin paper cover on the newsletter?

A: The thicker cover was attractive, but cost approximately \$240 more per issue than regular paper.

Q: Why has the postage on the newsletter changed from "first class" to "pre-sort standard"?

A: That change saved BAM approximately \$250 per issue. The Post Office claims that media mail (bulk mail or pre-sort standard) is delivered within the State of MO, within 3-10 days. Remember the Post Office does not forward pre-sort standard, so it is important that you keep Bruce Herzog informed of address changes.

Q: Should we change printing contractors to save money or time.

A: Printing is a competitive business, with prices about the same for comparable service. Our printing contractor accepts the draft issue on a CD disk and returns a "blue line proof copy", usually the next day. In order to save time, I deliver the CD to the printer and go back there to review the proof at their office, two 70 mile round trips. The printing contractor prints the mailing addresses on the newsletter and mails the finished product. An editor from another state recently told me of their cheaper printing cost which was significantly less than BAM's, but requires the editor to make and attach mailing labels, sort by Post Office rules, and deliver the bundles to the Post Office. **They print 350 copies:** for the May-Jun issue, BAM printed 750 copies.

Q: What kind of hardware and software is used for the newsletter.

A: BAM owns an eMac Macintosh computer, purchased in May 2003. The software used is Quark 4.1 and Adobe Photoshop 6. Indesign was recently purchased to eventually replace Quark. BAM has two printers: an Epson C62 (heavy cartridge consumption) and a Samsung Laser ML 1450 printer for routine work. BAM also owns a Sony Camera 3.2 megapixels. Your photos are welcome and needed: send via hard copy, email, or CD disk.

Q: How can members make suggestions for newsletters changes, corrections, and improvements?

A: Send a letter to the editor for publication in the newsletter. Share your thoughts with the membership. Remember: Ed Harper is now posting the newsletter in pdf form on the BAM website: www.bamsite.org

Q: How are people selected to write articles for the newsletter?

A: Several people have graciously volunteered (Ruth Hull, Linda Stevens, and George Lewis), but all are welcome and in routine BAM conversations, the editor asks (begs) for members to write articles for the newsletter.

# **ABANA - 2004**

A host of BAM members were present in Richmond, Kentucky for ABANA 2004. It appeared that BAM had at least seven (7) life members in attendance: Bill Gichner, Jerry Hoffmann, Bob Patrick, Tim Ryan, Clay Spencer, Sid Suedmeier, and Lou Mueller. Both the regular gallery and the walk-in gallery had numerous entries by BAM members. Photos of some will be included in this newsletter with the hope that proper credit is given by naming the correct originator or artist. If errors are noted, please send a letter to the editor for correction. Pat McCarty was in Richmond, Kentucky for about 3 weeks and was in charge of the outdoor display area. This was a demanding and thankless job, with never enough support from the University trash collection people or the portable toilet contractor. Pat's crew had portable air conditioning units at every demo site, with cool success.

# Oops!

Many people, including the volunteer workers were housed in university dormitories. Bathrooms on each floor were designated either male or female and residents of the opposite sex gender had to go to a floor with the properly designated bathroom. A lady on the shuttle bus was overheard to say that as she was about to step out to the shower, a naked man with towel in hand walked by after exiting from the next shower. Upon seeing the lady, also in her birthday suit, he said "oops, I guess I got the wrong floor". The lady said "oh, my god, I hope he didn't recognize me"!





A Trio of BAM Life Members (at ABANA)
Bill Gichner at left, Bob Patrick below,
& Sid Sudemeier at bottom left. No photos of the
other four in attendance.



# **Newsletter Feedback** (compiled by the editor)

- 1. When visiting Walt Hull's shop recently, he asked if I would accept some assistance with formating. Response: Anytime, Walt, you assistance will be appreciated.
- 2. While at ABANA, Andrew MacDonald suggested less borders and frames.

Response: OK, Andrew, I have tried in this issue to avoid the frame and border option. Better? Let me know! 3. After the last issue, I received a call from Tom Clark and we have exchanged hard copy letters as well. Tom says I violated my own rule by only publishing his ad once rather than twice as my rule stated. I really thought Tom had called to thank me for the mentions on pages 23 and 26, but as I told him "life is full of surprises".

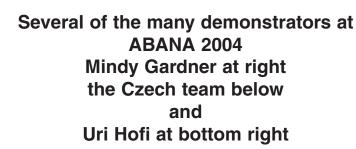
Editor Comment: Being an editor is sometimes like the Maytag repairman on TV. Your letters, comments, even constructive criticism is welcome. There must be zillions shop tips out there that need to be shared with our members, please send them in for publication.



# **BAM Focus on Youth at ABANA**

The only BAM youngster observed at ABANA was Cyrus Howard in his wagon, pulled by Mom Alice James. Our honorary BAM young guy, William Pieh was also present and a number of the ladies who met William at the BAM Conference again spent time with him, to the delight of his Mom Amy Pieh.

Cyrus will join Mom and Dad in hosting the BAM meeting on November 20th at Salisbury, Missouri. If you have not seen the shop of Japheth Howard and Alice James, this is one meeting that you do not want to miss. Their Shop "Flicker Forge" is housed in a former school building, immense space that will be envied by all.









**BAM - Blacksmith Association of Missouri** 

# Artist Unknown

# **Another Sullen's Artwork**

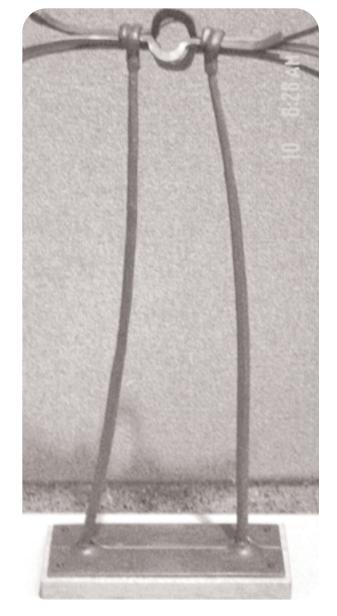


**Artist Unknown** 

Entry below by BAM member Dave Edwards, is made of a combination of steel, copper and brass.

Dave will demo at the Sept 25th meeting at Ham's Prairie with his reduced size treadle hammer.





July - August 2004

**BAM - Blacksmith Association of Missouri** 

### From President Don Nichols

### A note from What's His Name

Well ,where do I start? This organization never ceases to amaze me. In the minutes, you will see there was a motion made and carried to send Bob Patrick, one of our founding members, a gift of \$250 to help out with expenses for his recent illness. We also set out a bucket if anyone at the meeting wanted to give a gift. Kirk Sullens counted it and there was another \$250 for Bob. So a BIG thanks to all the BAM members!

Once again what a great organization and a caring group of people make up BAM.

Jeff Willard and his wife did a bang up job of making us welcome and providing so many things for us to watch and do. Yes, he lined up great demos. One blew an owl up and I mean he really blew it up. There was a horse head made, a tomahawk demo, and a cowboy hat made for a little cowboy. There was an armor maker for the Renaissance period and those that wanted to learn how to make rope got a chance. Big and small ropes were made by groups of people helping in different stages of the process. Thanks to Jeff and all the demonstrators.

If you didn't make it to the meeting, you missed a good time. Dave Smith and his conference committee are really on the ball. They have things pretty lined out for next years conference. Keep up the good job guys!

The Mobile Training Station is teaching a new group of smiths for the future. Don Birdsall said the schedule for the MTS goes through the middle of next year. So they are going to start planning what to do in the next phase of teaching. If you have any ideas of what needs to be taught in Phase II please contact Lou Mueller or Don Birdsall.

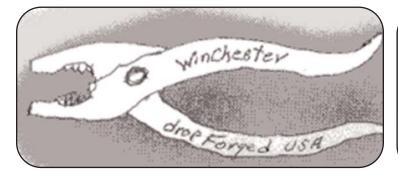
Everyone did a good job on trade items this meeting. It is so interesting to see all the different ideas how one item can be made. Someone even suggested making a trade item for the conference in May. If this would be of interest to you, please let me know.

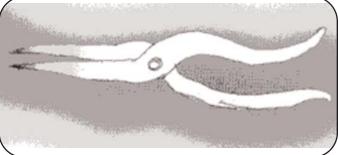
Remember I'm the only one with a Rusty Hammer. Don

**Shop Tip:** 

A fast and easy way to make scrolling pliers! Use eight inch gas pliers.

Make sure they are dropped forged steel. Normalize them in the forge, then draw out the jaws to round. Heat treat, these will turn your crank. Tip and narrative by Mojave John and reprinted from the Northwest Blacksmith Association Newsletter "Hot Iron News", 2004/2 issue.





# **More ABANA Gallery Entries**

# **Auction Item**

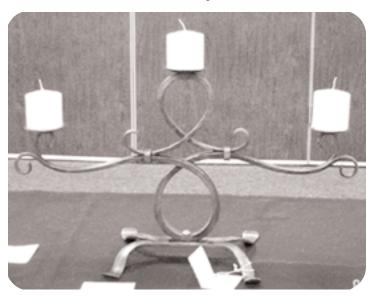




Rhino Head by Kirk Sullens



**Candle Holder by Don Nichols** 



# A Visit with Clay Spencer By Esther Digh

Clay Spencer is at home in a blacksmith shop, not only forging but also teaching. Currently he spends much of his time teaching others in the shop at the John C. Campbell Folk school (JCCFS) or in shops across the country. He specializes in traditional joinery and the making of treadle hammers, tools for the treadle hammer, and wizard heads. Clay says that his interest in metal started at any early age. He remembers around age nine his fascination with being about to take a bit and drill a hole through a piece of metal. In those younger years, he was known to build lawn mowers and other yard tools.

Clay was born in Alabama and grew up on a farm near Meridianville, AL. His initial intent was to get a degree in Agricultural Engineering but soon discovered Mechanical Engineering for which he received a BS degree from Auburn University. He spent two years at Ft. Sill, Oklahoma, as an officer and instructor in the Department of Gunnery. In 1959 he went to work for the Chrysler Missile Division at Redstone Arsenal and retired from his position there in 1988.

The interest in metal remained and in 1987 Clay begin taking classes in blacksmithing; one of his first classes was taught by Tom Joyce of Penland. He also has taken classes under Francis Whitaker and considers Francis, along with Jim Batson and Walt Scadden to be the major influences in his blacksmithing career. It was Francis who mandated him to takeover the classes in ornamental iron at JCCFS, which Clay considered to be an honor, and to work on improving the shop. He now teaches both advanced classes in blacksmithing at JCCFS. Clay credits Francis for helping to establish his name in the blacksmithing community. Francis had Clay and other new and upcoming blacksmiths to demonstrate their skills at ABANA in New York. It was there he demonstrated his tools for the treadle hammer which were different than those commonly used. This was the beginning of his teaching and travels around the country.

Clay is humble about his awards; he is probably the most awarded blacksmith in the United States. He has received the Alex Bealer Award for service to ABANA and has been named a life member of The Alabama Forge Council (AFC) and The Blacksmith Association of Missouri. He was the newsletter editor for the AFC for 10 years and has edited the "Best of the Bits" for the past four years. Clay received the first newsletter editor award from ABANA. He has served as Forge Master for the Huntsville Forge and Conference chair. He was on the ABANA board for 2 1/2 terms.

Clay and his wife, Jackie, moved to Murphy in 1995. Jackie has been the coordinator of women's and children's programs for the AFC. She is a Resident Artist in Enameling and Hot/Warm Glass at JCCFS.

His dedication and contributions to the blacksmithing craft are legendary and Clay Spencer has left his distinctive mark on this craft.

# Clay - A Teaching Demonstration Demonstrating on a 25 lb Little Giant at JCCFS. Ronnie Glover from AL at left



# Clay, always the Teacher

Left to Right: Clay Spencer, Joe Wilkinson, Tracy McCarty, Maurice Ellis, and Pat McCarty



**BAM - Blacksmith Association of Missouri** 

# A Visit to the Big Blue Manufacturer by Ned Digh



The Big Blue power hammer is manufactured in Morganton, NC, the town where I grew up, looking at the North Carolina Table Rock Mountain. At ABANA, I met Dean Curfman and his Son -in- Law, Josh and wrangled an invitation to visit the manufacturing facility while visiting nearby relatives.

My wife Esther, and I arrived mid-afternoon, Dean was a gracious host, spending time with us touring his shop, explaining various pieces of custom work for upscale homes. After we were satisfied with all but seeing the Big Blue in operation, we were in for a real operational treat. Zevik Gottieb, a Uri Hofi protege, began several extensive demonstrations on the Big Blue. He made several pieces, using the well known Hofi freehand forging method and presented the finished pieces to Esther as a gift.

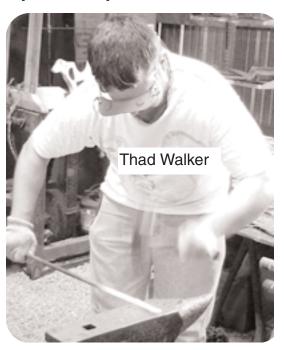
The Oak Hill Ironworks story was featured in the "Anvil's Ring" (ABANA publication), Winter 2004 issue. Dean is currently working on recruiting a number of blacksmiths to go to Israel with him and actually work for a period of time in Uri Hofi's blacksmith shop. Anyone interested should contact Dean Curfman at the address or phone number shown in the ad at left. Learn more about Big Blue and power hammer school at www.BigBluHammer.com

# MTS Classes at Ed Harper's Shop











# Piercing with a Chisel as Opposed to Slot Punching

The last BAM newsletter had an article about slot punching as opposed to piercing with a chisel. I value Doug Hendrickson's opinion and friendship, but in this case some of the information in the article is wrong. A chisel does not neccesarily leave a "lemon" shaped hole. The easiest way to prove this is to make a variety of punches and chisels and some modeling clay. Make the clay into a bar the size you want to make a slot in. Experimenting a short time will show that it will make no difference what so ever what the shape of the front of the chisel or punch is in creating a slot in so far as the outline of the hole is shaped. That is entirely due to the contour of the outside of the chisel. What will be affected is how much the metal is mashed down in making the hole through the material. The interior of the hole may have differences in smoothness, though this is a factor of skill; whether there is a "rag" left in the hole by either chisel piercing or by slot punching will depend on the skill of the smith.

There are a variety of chisel shapes that are used in piercing. There are also a variety of punches that may be used. In making a round hole in a piece of bar, whether or not there is a "lemon" shape or not is more a factor of the relationship of the length of the hole made by the chisel or punch and also of the edge of the chisel or punch than anything else. If the slit or slot in the metal is longer than the drift will open up the ends of the slit or slot will not be formed into a round opening. If the slit or slot is too short the metal will tend to mash down when opened up into the hole.

Some piercing chisels have a flat, sharp, chisel tip. Some piercing chisels will have a rounded tip or corner. Some will come to a point. Figure 1 shows these differences. There are more possibilities, I am sure. Figure 2 shows different possible sides to the chisel. These will be what determines the shape of the hole after piercing, not the tip. If slot punches are made with the same sides as the chisel the finished holes may appear to be identical to the hole made by the chisel.

Punches may be flat on the bottom, rounded, pyramidal in shape, or pointed. the flat shape is most common in slot punches hit by hand. Under a power hammer this shape punch may skate to one side or the other. The cure for this in thicker stock is usually to round the tip of the punch. Brian Brazeal did some experiments he showed me where he made the shape of a square or rectangular punch a shallow pyramid, and it held up very well to the stresses of punching. Though we are not used to this in hand blacksmithing, experiments show that it punches a slug out in thicker stock and leaves a hole as nice as a flat bottomed punch. Under the power hammer this shape as well as a rounded end will tend to punch true rather than skating to one side. However, neither the pyramidal or rounded end works well in thin stock, and in this material a flat ended punch is best.

Piercing and slot punching to pass one bar through the other is similar to any other facet of blacksmithing. Learn it well from somebody competent. Then, if possible, learn other methods from other skilled people. The best person I have watched pierce with a chisel by hand is Tsur Sadan, a fine smith from Israel, who has done many thousands of pierced holes and does a superb job at it. The techniques he uses are those Uri Hofi taught him and who learned in turn, from Alfred Haberman Sr.. The best person I have watched doing it under a power hammer is Tom Clark, who has made thousands of hammers and other tools. In both their cases the holes pierced and opened have no lemon shape.

My original training in this was from the COSIRA books from Great Britain, and was upsetting and slot punching, but over the years I have learned chisel slitting as well. All have their place in blacksmithing. Each can produce equal results in the hands of an expert.

Whether the bar has a slot punched or pierced, the bar can be pierced and opened without upsetting, upset pierced or punched and opened up, pierced or punched, then upset and opened, or upset, pierced or punched and upset and then opened. Each step affects the appearance of the finished piece, each can be done ranging from poorly to superbly, and the esthetics of the finished piercing are judged by the person viewing the finished work.

To say one method or another is the right way and one leaves a "lemon" end on the piercing and the other does not is a simplification and will lead to misunderstanding the way that metal behaves. The variations in technique are great, as are the results using any of the techniques.

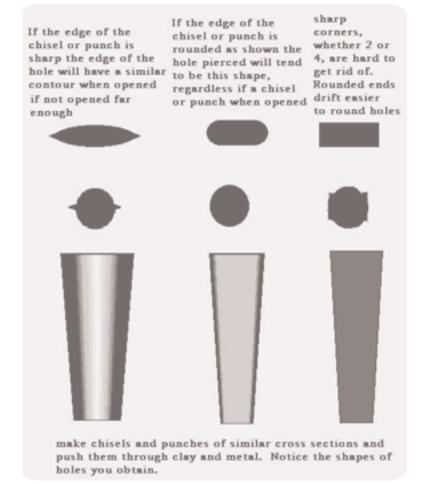


Page 2 of Bob Patrick's Letter to the Editor See Explanation on preceding page.

Sharp cornered chisels tend to burr over at the corner when they get hot. Rounding the corner will help precvent that. Making the front pointed and then sharpening to a chisel makes it easy to place the chisel in a center punch mark. The use of steels such as H-13 and S-7 make it quicker to punch holes as they do not have to be cooled as often as chisels of simpler carbon steels. Home treatment of H-13 and S-7 in a forge will not produce a chisel that will hold up under work conditions as well as proper heat treating in a temperature controlled furnace. Even so, these steels will perform much better than simpler steels. In my personal experience 5160 holds up better than simpler carbon steels such as 1084. In using scrap spring steels you take the chance of getting a simpler steel such

Bob Patrick is a Life Member of BAM and was instrumental in the founding of the Blacksmith Association of Missouri. He and his wife Mary reside in Everton, Arkansas. Bob keeps a busy schedule with teaching and demonstrations.

When using scrap steels you take the chance the steels will not perform as well as you expect. None the less, work of the highest quality can be done with scrap steels. On the other hand, tools made of alloys such as H-13 and S-7, will last longer than tools made of simpler carbon and alloy steels not intended for high temperature work, and by many are considered a better investment of time when making tools. In the long run the cost of steels is not as important as the time lost in remaking and repairing tools that do not hold up well to the work.





# **Mobile Training Station (MTS) Schedule**

# September 11th and October 4th at Warsaw, MO

Host: Ray Chaffin, RR 3, Box 279, Warsaw, MO 65355 Phone: 660-438-5720 email: rayzwelding@aol.com

# November 6th and 13th at Mexico, MO

Host: Ned Digh, PO Box 765, Fulton, MO 65251 Phone: 573-642-8332 email: bameditor@ktis.net

Classes will be conducted at Mexico Voc-Tec School, 905 N. Wade, Mexico, MO

# **November & December Classes at Fulton, MO (Ham's Prairie area)**

Dates: TBA (The only open dates are Nov 27th, Dec 18th, subject to change if BAM can get a treadle hammer tools workshop going. If you are interested contact Ned Digh and he will keep you updated on dates of the classes.

# January 8th and 15th, 2005 at Willard, MO

Host: Jeff Willard, PO Box 416, Willard, MO 65781 Phone: 417-742-4569 email: v837@juno.com

# February 26th and March 5th, 2005 at Eminence, MO

Host: Ray Scott, HCR 2, Box 196, Eminence, MO 65466

Phone: 573-226-5541

# MTS at Ed Harper's Shop in Browning, MO

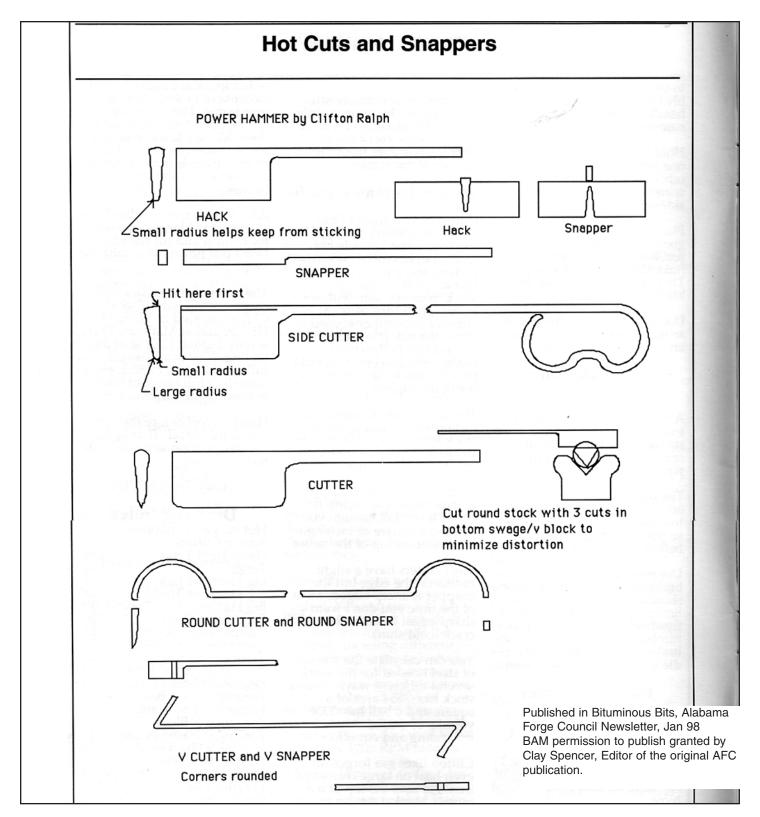
MTS classes were held at Ed Harper's shop on July 17th and August 7th, with 8 people attending. Ed was assisted by Doug Clemons, Dan Files, Bob Ehrenberger, and Ned Digh. Ed's shop with the pea gravel floor provided ample space for all work stations and forges to be inside the shop.

Most of the students said that they would be attending the September 25th meeting.



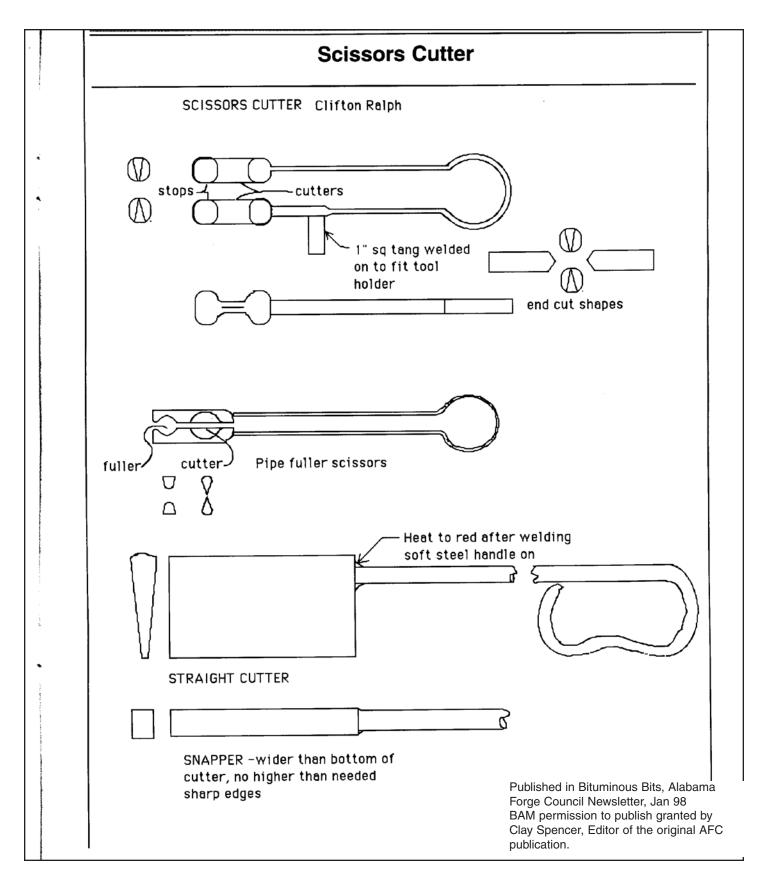


The two VP's as instructors. Doug Clemons on left and Ed Harper, left person of photo on right.



**Shop Tips** by Don Grammond

- 1. **Marking Punch for Hot Metal**: By grinding 3 or 4 facets on the point of a center punch the mark is more easily seen when at forging heat.
- 2. Swedge Blocks: Design your own and have a Fab Shop burn them with an automatic burner.
- 3. **Annealing to Medium:** Granular (clay base), floor dry (oil absorbent material) is good for slow cooling a forged or welded item.



Shop Tip from Ray Scott

When your old files are worn out and dull, they are probably just loaded with filings. Soak them in white vinegar for a day or so and you will be surprised at the difference.

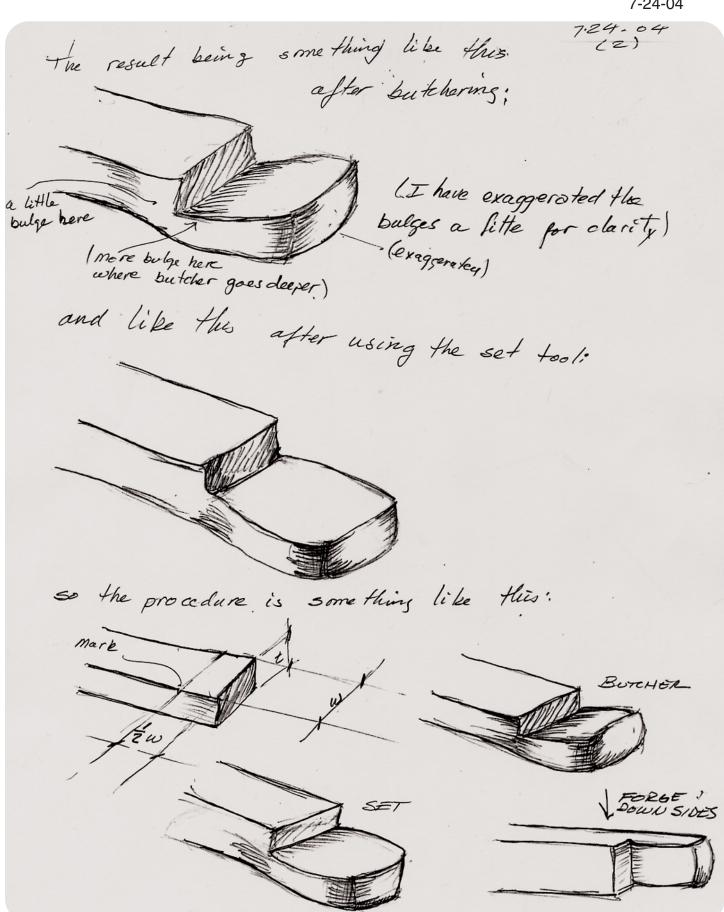
THIS, not this > This material moves away from

The butcher actually upsets the muterial a little.

DOWN BY HAIMER AWAY BY WORK PIECE - MAT'L PUSHED BACK

THIS UPSET IS PUSHED BACK INTO THE BAR WHEN THE HAMMER DIE HITS IT.

ALSO, the material is not simply pressed Down under the butcher (and then the set tool) but away in all directions,



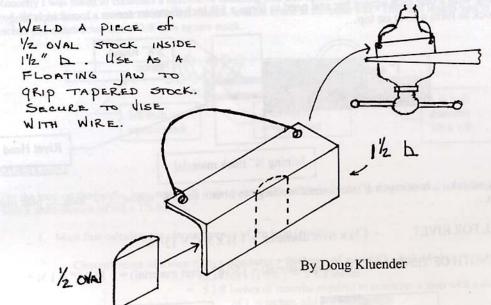
Note that after you forge down the sides, (3) you'll need to go back in with the set tool, because some of the bulge from the sides has gone back into the area you just forged down. From the side it now looks like this:

rew bulge

Finally, square up the end with the hand hamme hithing first the end, then the sides, then the end till it all comes out even. Hopefully this will happen just as you run out of heat, and you'll leave a nice, smooth surface. Submitted Walt Hull, Lawrence, Kansas

# **Shop Tip**

# Vice Tool for Tapered Stock



From The Anvil's Horn & Reprinted in Fire & Iron, NE Blacksmith Assoc, Fall 2004 Issue

# Joe Wilkinson's Scholarship Report Photo by: Tonya Holcomb, Roanoke Rapids, N.C.

Joe at his work station in the Francis Whitaker Blacksmith Shop

My first BAM Scholarship and my first trip to John C. Campbell Folk School, and what a pleasant experience. I think the place is beautiful. There are about 20 buildings scattered about in a peaceful Blue Ridge Mountains valley. Lots of green grass and silent little pathways to lead you through the woods to this place and that. The student population is extra friendly and the accommodations are fine. You could fall in love with a place like this.

The blacksmith's shop is in an old dairy barn with ten forging stations, each with its' own forge, anvil, etc.. Our challenge was to make tooling for both the treadle hammer and the power hammer. Both hammers can use the same tools. Clay Spencer and Allen Kress were our instructors, both capable men. As it turned out, Allen and I had taken Uri Hofi's advanced blacksmithing class at Tom Clark's school, together, back in the 90's. It was nice to get reacquainted again. Allen is now President of the "Alabama Forge Council".

Classes started at 9:00 A. M. – 1 hour off at mid-day for lunch – back to class again until 5:30 – evening meal at 6:00 P. M. then back to the shop at 7:00 for more smithing until 9 or 10:00 P.M.. This seems to be the blacksmithing tradition, as most classes I have attended behaved this way. I mentioned to some of the non-blacksmith students that blacksmiths don't have enough sense to quit work in the evening. However, when you love what you're doing the time passes too fast. We made more tools than I can describe here – including open and closed face dies and all sorts of punches, slitting and cutting tools.

Clay and Allen were always thorough to give us a lesson in metallurgy as it would apply to the tool being made. I would say we couldn't have picked two better men for instructors. Very capable and always willing to answer any of our questions.

I loved the whole week and recommend it to anyone wanting to pursue this interest. Joe Wilkinson

Cartoon by Tom Lupton and reprinted from the "Balcones Forge" Newsletter, Blacksmiths of Central Texas, July 2004 Issue



# **Ned Digh's Scholarship Report**

Having been raised in Western North Carolina, it is always a treat to go to John C. Campbell Folk School, either as a visitor or student. The beauty and atmosphere of the Carolina mountains always excites me and brings back memories and nostalgia. Brasstown is a jumping off point to proceed on to the East through the Smoky Mountains and to the foothills of the Blue Ridge Mountains, to visit relatives and where my wife says my Southern accent suddenly reappears.

The instructors for the class were BAM Life Member Clay Spencer and Alabama Forge Council President Alan Kress. Alan has been blacksmithing for about ten years and could be described as a protege of Clay Spencer. The title of the class was "Tools for Power Hammers and Treadle Hammers" and could be described as a seamless team teaching effort. Both instructors appeared to have a keen perception of what the other one was teaching and immediately assumed a supporting role. It is obvious that Clay and Alan are close personal friends and Clay was no doubt instrumental in Alan's formative years as a blacksmith in Alabama. Alan Kress is a talented blacksmith and will no doubt be active in the teaching and demonstration circuit for many years to come. I plan to return to John C. Campbell Folk School in December to take his class titled "Holiday Trinkets in Iron".

In the mid 70's, Francis Whitaker heard about the John C. Campbell Folk School and upon visiting he realized the potential for adding a blacksmith teaching program. The former dairy barn was available and modifications were begun to create a teaching environment. The floor was initially dirt, but has since been covered with brick which is much less tiring than concrete. The old dairy barn has somewhat a Bavarian look, with some stucco panels along the bottom of the exterior walls. At some point, it was obvious the barn was falling and according to Clay Spencer, volunteers installed an exterior frame of treated 6" X 6" timbers, along with an interior steel beam just under the roof peak.

The former milk room occupies one corner of the shop as a tool room. The files all have handles and are hung neatly, per the shop tip by Clay Spencer shown elsewhere in this newsletter. New stock, for student use is kept in an adjacent building and old steel is piled in a silo behind the shop. This program at JCCFS teaches more students per year than any other course there. Fifty (50) classes per year is normal, usually with 10 students in each class. Joe Wilkinson was also in the class. Joe was on the opposite side of the shop, flanked by Ronnie Glover from Alabama. Ronnie is a helicopter electrical technician, so he and Joe talked about blacksmithing and aircraft systems. My side man was Anthony Goodrum, a blacksmith and auctioneer, also from Alabama. I have known Anthony for several years and was well entertained by his friendly banter and humor.

I would be remiss to not mention Clay's Corner. This is a small country store near JCCFS. Much of the store's theme or decor is built around possums. Each New Year's Eve, a possum is lowered in a cage, much like the ball is lowered in New York City. The event has had national publicity, but last year's event was modified as a representative of an animal rights group threatened legal action, because the locals were terrorizing a live possum. (Continued on next page)

BAM Membership Application	Mail to: Bruce Herzog, 2212 Aileswick Dr. St. Louis, MO 63129	
Name		Check One:
Address		☐ New Member
Phone		□ Renewal
City		Zip:
Phone:	E-mail:	

Volume 21 No. 4 July - August 2004 (Correction: May - June issue was incorrectly numbered as # 2. it is Vol 21, # 3)

The Newsletter of the Blacksmiths Association of Missouri is published six times a year and mailed to members. The annual fee for membership is \$20/year; a portion of this amount is for a subscription to this newsletter for one year. Editorial inquiries should be addressed to: Ned Digh, PO Box 765, Fulton,MO 65251: 573-642-8332 (email: bameditor@ktis.net). Membership inquiries should be addressed to: Bruce Herzog, 2212 Aileswick Dr., St. Louis, MO 63129; 314-892-4690 (e-mail: bjherzog@msn.com.) Occasionally some material may 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 be given credit.

# **Ned Digh's Scholarship Report (Continued)**

Mountain people are very resourceful and a dead possum was located to lower in the cage. Some of the participants tell convincing stories that the possum was a road kill! On Friday nights, a number of locals crowd into the small back room for a music jam of mountain picking and singing. Sometimes an additional group forms outside on benches in front of the store and as the night wears on, some group members switch groups. The store has an ample supply of canned possum, labeled: "Possum, the Other White Meat".

Clay Spencer has developed 30 tools, or more, to use with the power hammer and treadle hammer. The class did not specifically deal with all 30 tools, but many were available for the students to copy. In addition, Alan Kress brought a van load of dies, forms, and tools made for use with power hammers and treadle hammers. Both Clay and Alan were always helpful to students who wanted to copy their tools or dies. I spent a good deal of time one day, learning to make a die with an anvil imprint and then make a positive image. Alan Kress helped me with this or I might still be there trying to succeed. We learned to make a jig for the handles for the treadle hammer tools, so all would be uniform. In addition, a jig was made to form the loop which holds the top die in the treadle hammer. The chisels, punches, and other tools were made from W-1 steel which is water quenched. Some other miscellaneous tools were made for use with the treadle hammer, ie: a hack (essentially an straight razor looking hot cut) and a snapper (a rectangular bar to snap off the piece, after using the hack). These will be demonstrated at the next meeting on September 25th.

I appreciate the scholarship grant from BAM to attend this course at JCCFS. Having been there before, I always depart with a feeling of missed opportunities to have done more and learned more. The courses there are total immersion in blacksmithing so perhaps the true benefit is not what is accomplished in a week long course, but the learning we take with us to enhance our skills in the craft.

Photos below: Blacksmith Shop on left, Spring House (bath) on right.





ABANA Membership Application Mail to: ABANA, PO Box 816, Farmington, GA 30638			
Name	New Member: Renewal:		
Address	<ul> <li>Annual Cost: Regular \$45; Senior \$40; Student \$35</li> </ul>		
Phone	Contributory \$100; Library \$35 Includes subscriptions to		
CityState	Anvil's Ring and The Hammer's Blow magazines ABANA Phone: 706-310-1030 (For Credit Card Charge)		
Zip:Phone:			

Blacksmith Association of Missouri

President: Don Nichols 1st VP: Doug Clemons 2nd VP: Ed Harper Treasurer: Bruce Herzog Secretary: John Murray 660-862-9252 660-595-2257 660-946-4460 314-892-4690 636-398-4640

 $cclemons@cdsinet.net \qquad aramed@grm.net \qquad \qquad bjherzog@msn.com$ 

Librarian: Mike Williamson 870-445-2779 Editors: Ned Digh 573-642-8332 & Lou Degginger 573-657-4555 sabforge@bullshoals.net bameditor@ktis.net loudegg@century.net

The Blacksmiths' Association of Missouri is a chapter of the Artist Blacksmiths' Association of North America, and is devoted to the preservation and advancement of blacksmithing and to communication among blacksmiths in Missouri and surrounding areas. BAM's newsletter's goal is to support these aims. Letters to the editor, tech tips, tools for sale or anything else which furthers these ends will be considered for publication.

The Newsletter of the Blacksmiths' Association of Missouri and its members do not manufacture, distribute, sell, test, warrant, guarantee, or endorse any of the tools, materials, instructions or products contained in articles or features in the Newsletter of the Blacksmiths' Association of Missouri disclaims any responsibility or liability for damages or injuries as a result of any construction, design, use, manufacture or other activity undertaken as a result of the use or application of information contained in any articles or features in the Newsletter of the Blacksmiths' Association of Missouri. The Newsletter of the Blacksmiths' Association of Missouri assumes no responsibility or liability for the accuracy, fitness, proper design, safety or safe use of any information contained in the Newsletter of the Blacksmiths' Association of Missouri.

Website: www.bamsite.org

### **BAM WORKSHOPS**

# Possible Gas Forge Workshop

Larry Hults is considering holding another gas forge workshop. Don Birdsall is assisting Larry in determining the demand for a workshop. In addition, they want to know what area has the most members interested and where appropriate shop space is available. If you are interested contact either Larry Hults (Ikhults@yhti.net - 636-629-7411 or Don Birdsall (djbirdsall@networkusa.net - 573-422-3283) Note: Don has been recovering from the shingles, which has significantly restricted his blacksmith activities and the house building efforts. Our best to Don for a speedy recovery.

# **Potential Treadle Hammer Tools Workshop**

Clay Spencer has agreed to come to Missouri to conduct a Treadle Hammer Tools Workshop. With an anticipated 30 members participating in the workshop, a 3 day weekend is needed. To make 30 sets of 30 tools, experience has shown that it is best to have available: 2 coal forges, 2 gas forges, 4 welders, and a significant amount of grinding capability. Lou Mueller has offered his shop, providing that the workshop does not interfere with his normal operations. The only 3 day closing for Lou's shop in 2004 is Thanksgiving weekend and Clay is not available for that time period. It appears that this workshop may need to be scheduled for 2005. Some discussion with Clay has explored the possibility of a two weekend workshop, with enough preparation work being accomplished in advance of the workshop, which Clay Would attend and supervise. This will be resolved prior to the September 25th meeting and the members will be given an update at that time. It was reported that Bob Alexander is considering offering a treadle hammer tools workshop, but that has not been confirmed by Bob. In addition to the information promised for the September 25th meeting, all update information will be posted on the website www.bamsite and on the BAM Immediate Internet Digest Around the Anvil (sign up for this free information digest about BAM activities at Yahoo Groups). Contact Ned Digh, if you have any suggestions on shop space in any other area for this proposed workshop. BAM seed money funds has been requested through President Don Nichols.

The following list was provided by Clay Spencer as the 30 basic tools that each Member will come away with at the

completion of the Workshop:

Mounted fullers, pair, 1/2" dia. spring/axle Mounted fullers, pair, 3/4" dia. Spring Mounted fullers, pair, 1 1/2" dia. axle V-block, 2" x 2" x 1/4" angle in 3" channel Flat dies, pair, any good steel, 3/4" x 3" x 3" Mouse Die, mild steel, handled Nose fuller, 2 balls, 1" diameter, 1/4" x 1" Hack, spring or tool steel Fuller/flatter, 1 1/2" dia. axle, handled Flatter, flat spring, 2" x 3" x 1/2", handled Angle rest, 2" x 2" x 1/4" angle + 3/8" x 2" x 5" Heart Punch, 5/8" dia. W-1, handled Square set, 5/8" dia. W-1, handled 1/4" & 3/8" round punches, 5/8" dia W-1, handled 3/8" square punch, 5/8" dia. W-1, handled Small curved hot cut, 5/8" dia. W-1, handled

Eye punch, 5/8" dia. W-1, handled Center punch, 5/8" dia. W-1, handled Cold cut, 5/8" dia. W-1, handled Veiner, 5/8" dia. W-1, handled 3/8" Fuller, 5/8" dia. W-1, handled Hot Cut, cross, 3/4" H-13, handled Hot Cut, straight, 3/4" H-13, handled Hot Cut, Curved, 3/4" H-13, handled Slitter, 5/8" wide, 3/4" H-13, handled Spring fuller, 9/16" round spring

Special Opportunity!
Clay Spencer will be holding a workshop in
Tallahassee, Florida, October 22-24, 2004.
Some spaces may be available, contact Jim
Dunmire, Coordinator, FL Artist Blacksmith
Assoc, jim.dunmire@prodigy.net or 407-9775095

# 004 ABANA CONFERENCE

# PROPANE SAFETY

By Michael Porter

Blacksmithing and other crafts are being enriched by innovation in fuel gas burners and the equipment they power. New tools create new hazards and the need to refine our understanding of existing ones. Awareness of what safety codes apply must also be sharpened. The craft worker needs to actively pursue a thorough understanding of, and compliance with, safety codes today, because their enforcement will necessarily increase. Local authorities should always be consulted before building or operating any gas-fired equipment.

Propane safety rules begin with what cylinders can be filled. They must be in good physical condition, have overflow protection devices, and be less than 10 years old (age limitations vary). They cannot be transported within passenger areas or trunks of vehicles. They must be carried in the upright position and restrained from moving.

The Department of Transportation and other governing bodies require propane cylinders to be kept outdoors and well away from all ignition sources. Local authorities often add their own requirements. These thin-walled containers depend on a spring-loaded pressure relief valve to keep them from bursting in elevated temperatures, which means that the valves may dump flammable gas that must be safely dispersed. Gas barbeques must also be used outdoors, and their fuel cylinders stored outside. As to the close proximity of their fuel cylinders to the hot coals, this is controlled under a separate set of safety codes. Propane cylinders must always be kept in the upright position in order to insure that, in the event of a pressure release, only gas exits them. The top of the cylinder is a dedicated air space below the pressure relief valve. If the liquid propane from an overturned cylinder exits the valve instead of its gas form, the liquid will expand 270 times the liquid content, making your situation 270 times worse.

In a shop environment, OSHA safety codes also apply. Fuel and oxygen cylinders are supposed to be kept a minimum of 25 feet from hot work and also from each other, unless a physical barrier separates them. This sets the accepted standard of safety practice, which you may be required to answer for in a court of law, even if you aren't an employer. So you want to keep propane cylinders outside and use an approved

hose or piping system to bring the fuel to your work area. You may start out using a long fuel hose, but it becomes a hazard over

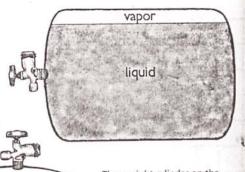
Your best choice is black pipe, connected by a short length of flexible hose to a regulator (mounted on the cylinder), and run through a wall into the shop. It should be kept high on interior walls or run across the ceiling. Using threaded connections, sealed with gas-rated (yellow) Teflon tape or gasrated pipe dope is the most practical assembly method. One or more tees, with ball valve and quick disconnects at the end of vertical pipe sections, will allow short lengths of fuel hose to be attached to the piping system for ease in connecting equipment to it. The ball valves allow each quick disconnect to be isolated from the rest of the system for change out or maintenance. Pressure testing the piping system for leaks with soap and water (liquid dishwashing soap or shampoo) must be done before using it. Borrow or rent an air compressor, and temporarily replace one of the gas-rated quick disconnects with an air fitting. Even tiny leaks will show up as bubbles on freshly soaped joints.

Gas-powered equipment presents some novel hazards of its own these days. The latest home-built burners can bring forge

and furnace interiors far into the incandescent range. The same precautions against "weld flash" burns that must be taken with traditional electric and oxy/fuel welding equipment are needed with today's propane burners and the equipment they power. You will want safety-rated dark glasses when looking into a forge, furnace, or using these burners for brazing torches.

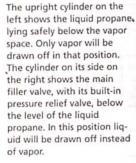
Improperly constructed or improperly run gas equipment creates obvious fire hazards, but the danger from carbon monoxide poisoning is stealthy. Long-term exposure to minor amounts of CO can be bad for health as well. These problems are not new. But ignorance of obvious physical indicators can aggravate them. Blue exhaust flames exiting a forge or furnace are a definite indication of incomplete combustion, which is the primary cause of carbon monoxide present in shops. Green flames indi-

The end of a typical hard piping run set up with the fuel hose connection on its end: (1) 1/2-inch threaded black wall pipe, (2) pipe coupling, (3) 1/4-inch to 1/2-inch bushing, (4) 1/4-inch 90-degree elbow fitting with short nipples, (5) typical 1/4-inch gas rated ball valve, (6) gas rated female quick disconnect, (7) male quick disconnect, (8) 9/16-18 LH thread to 1/4 MPT outlet bushing, (9) fuel hose with 9/16 LH fuel nut. Propane hoses also use flared fittings in some configurations. In such a case, part number 8 would change to a flared fitting. The close nipples between parts #3 and #4, #4 and #5, and parts #5 and #6 are not numbered.



vapor

liquid



cate massive CO formation, caused by a highly reducing flame. Red flames indicate an oxidizing flame, which will also produce some CO, but are unlikely unless oxygen enrichment is used with the equipment. Yellow flames can indicate a totally reducing flame, but only if the burner choke is left in the closed position. Normally, vellow flames indicate a clean burn of the fuel,

Continued on Next Page

# Propane Safety continued from preceding page.

with a catalytic reaction from overheating the equipment's interior. While far less serious than incomplete combustion, they may indicate increased nitrous oxide emission (smog), especially if accompanied by an ozone smell. Their cure is simple: turn the heat down.

An economical carbon monoxide detector, and a clean shop environment to maintain it, should be considered just as basic to shop safety as your fire extinguisher. Their popularity has made them easy to find at home-improvement centers. You want a fan-powered exhaust hood over the gas equipment area, and fresh air coming into the shop.

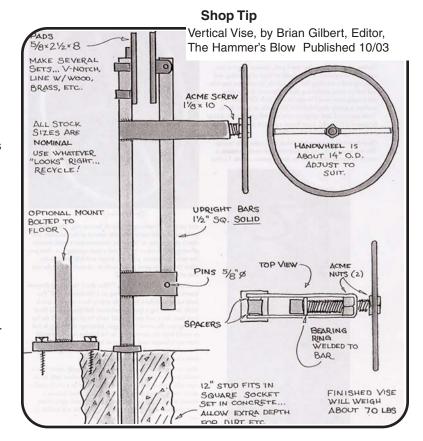
Technology marches on, bringing new equipment and increased responsibilities. But as always, safety is founded on a clear understanding of your subject and a calm, sober attitude. Fear is just as dangerous as recklessness or ignorance.

Permission to publish granted by Michael Porter & Jack Andrews

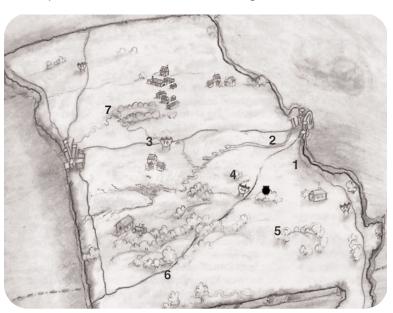
Michael Porter's recent book "Gas Forges, Furnaces, & Kilns"; 198 pages is available from Hoffmann Publications

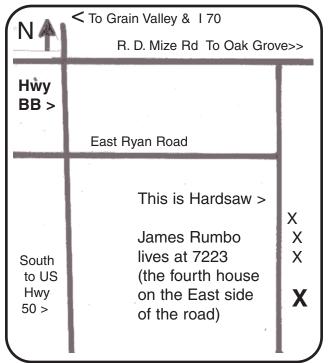
www. blacksmithsjournal.com

800-944-6134



James Rumbo recently became a coal distributor. A map to his house is shown at right.





# **Coal For Your Forge:**

- 1. Bob Alexander, DeSoto, MO 14009 Hardin Road, 63020-5586
  - (636)586-6938
- Ken Jansen, Moscow Mills, MO 2257 Carter Road, 63362
- (636) 366-4353
- 3. Doug Clemons, Malta Bend, MO (660) 595-2257 (RR 1, Box 124, 65339-9801
- Jerry Rehagen, Rich Fountain, MO (573) 744-5454
   Rt. 1 Box 97, Freeburg, MO 65035-9714
- 5. Doug Hendrickson, Lesterville, MO (573) 637-2576
  - Rt. 1, Box 16D, 63654
- 6. Jeff Willard, Willard, MO P.O. Box 416, 65781
- (417) 742-4569
- 7. James Rumbo, Oak Grove, MO (816) 625-8675 7223 Hardsaw (PO Box 215) 64075-0215

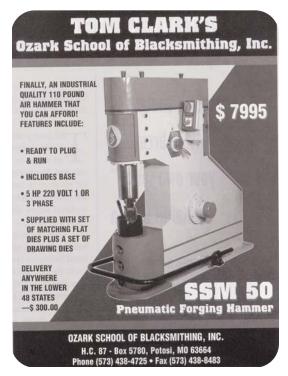
### Tom Clark at ABANA - 2004

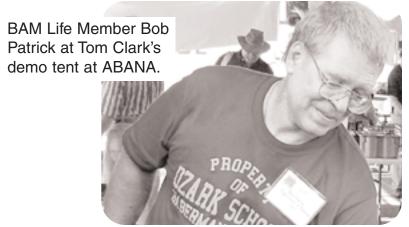
### KRISTANA HABERMAN

# TOM CLARK AND ALFRED HABERMAN, Jr.









# Classes at Ozark School of Blacksmithing

HC 87, Box 5780, Potosi, MO 63664Phone 573-438-4725 website: www.ozarksch.therural.net

September 13 - 17 Forge Welding Instr: Bob Patrick
October 18 - 22 Basic Blacksmithing Instr: Tsur Sadan
October 25 - 29 Basic Blacksmithing Instr: Tsur Sadan
November 1 - 5 Power Hammer Instr:Bob Patrick

# **Shop Tip** from Bob Ehrenberger

I don't do much sheet metal work and am not very good at identifying stock sizes. I have collected samples and cut them in to 1 inch X 2 inch tiles. I measured the tiles and stamped the thickness and gage on each one. After drilling a hole and putting the tiles on a wire hoop as a handy reference, I can get close to identifying an unknown piece of scrap or salvage material.

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# **Ad Page**

**From Ray Chaffin:** I have a computer operated plasma cutting system that can cut anything out of metal. Mail, call, or email your design for a price quote. I also have hardwood blocks (2-2.5" X 12-14"), for \$5 each. Blocks are available in curly maple, straight maple, english walnut, birch laminated in brown/white and blue/white. Call Ray at 660-438-6720 or email: Rayzwelding@aol.com Ray Chaffin, RR 3, Box 279, Warsaw, MO 65355

**For Sale** Craftsman Contractors Compound Sliding Miter Saw. Cuts 2" X 12" lumber, used less than 10 hours \$250. Pexto Stat\ke Plate, on table w/ 1 large stake and 4 small stakes. \$325 Joe Wilkinson 573-943-6779

For Sale: <u>Custom-built air hammers.</u> 6# table-top model #1400; 25# table-top model (redesigned 20# air hammer) \$2000; 20# floor model \$2300; 40# floor model \$2800. Some modifications to the basic hammers can be made to your specifications. Contact: Maurice L. Ellis

12486 Sutton Road, Belgrade, MO 63622-9197 Phone: 573-766-5346 E-Mail bellis@misn.com **NOTE**: Maurice has sold his spinning equipment to Ken and Kathy Markley. contact them for copper, brass, or steel spun items. 7651 Cabin Creek Lane, Sparta, II 62286 Phone 618-443-5284

**Zoller Forge**, 4312 Lahnna Dr, Louis, KY 40216 has stainless steel burners to fit the Reil Sidearm, Mongo, & T-Rex & a full line of gas forge supplies, ie: insulation & refractory coatings. email: zman59@earthlink.net see his website at: www.geocities.com/zoellerforge

### Wanted by the Editor of the BAM Newsletter!

The next two issues will feature holiday items that you can make. Our response last year from a few members was good, but we need more for this year. Start planning and send plans or photographs to share with our membership. This notice should give you plenty of advance notice. Several members have promises to fulfill from last year!

141 Peter Wright Anvil in good condition for sale. This anvil has been in my family for about 75 years. I will bring it to the September 25th meeting at Ham's Prairie. This is really a good anvil and will bring market value. Jack Crump, 2718 Hwy B, Warrenton, MO 63383 jcrump@socket.net

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### Message from Fred Weisenborn

Fred Weisenborn has forwarded a seemingly pregnant idea, to maintain a roster of BAM members that are capable and willing to do demonstrations. Several members have recently posted notices of the need and invitation for demonstrators at fairs, festivals, and historic events. Fred has volunteered to take charge of this and his future plans are to get Ed Harper to post this information on the website. If you would like to be on this list, please contact Fred Weisenborn at 417-589-2497 or by email: jweisenb@llion.org

### From Clay Spencer:

Inline (rollerblade) treadle hammer for sale. \$1200, loaded at my shop in Murphy. Treadle hammer plans for sale — Inline plans \$9.00, includes postage. Beverly shear blades sharpened, \$35 plus shipping, bring the shear to the Folk School or ship the blades to me. Clay Spencer, 934 Partridge Ln, Murphy, NC 28906



Pine Bluff, AR 71611 (870) 540-014:

Email: irony@epowerc.ne

# Minutes of Meeting July 31st, at Willard, MO

Submitted by Don Nichols

Thanks to Jeff Willard and his wife for having us to his shop and feeding us a great BBQ brisket lunch.

We had one new member. Welcome Joe Brooks.

Financial Report: Last meeting \$16,774. We spent \$8,403. Took in \$3,506. New balance \$11,877. Membership: Started out last meeting 580. New members 10. Dropped 26, Now 564. Bruce wasn't able to attend so Don What's His Name read the report.

Fair Report: Peggy has around five or more signed up every day to demo for the fair and to talk to anyone who will listen. Good job in helping her out this year.

M.T.S. Don Birdsall said we have had around 100 beginners to take the classes so far. Nothing but good comments have been heard about this training and all those that help.

No old business.

New business: A motion was made to send Bob Patrick \$250 to help out with ambulance and emergency room expenses. He had an infected leg at the ABANA conference and it will take him some time to recuperate. Good luck and we are thinking of you Bob?

Don Nichols brought up the subject of Lifetime Members. It seems like there is no criteria for this. After discussion, a motion was made to select one person each year at the May Conference. But Don N. would like to do two people this next year. Don made the five officers of BAM as the committee. If anyone has someone they feel deserves this, put their name in writing and why you feel they should get this and send it to Don.

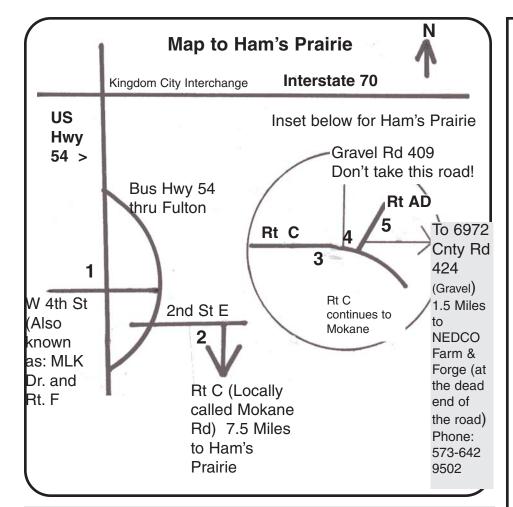
Conference Committee: Dave Smith and Larry Hults both talked about the conference. Most of it is OK to go. They have demonstrators, the place, catered meal, and others things ready to go. They talked to someone about a Scrimshaw class. This would be limited to 20 people. So you will need to sign up early.

Next meeting. Sept. 25th Ned & Esther Digh

These meeting minutes were submitted by What's His Name.

# Buster Grubbs, of Shady Rest Forge in Macon, Georgia, demonstrated these quick little gems at the FABA Statewide Meeting at Payton Forge. He uses them in his public demonstrations, and sells them for about \$3. Use a #7 horseshoe nail. He attaches an "historical note" to each, as follows: These spoons are made from a horseshoe nail. They are said to be very good luck because of their association with the horseshoe. Women of medieval times used the spoons to measure out spices and such for cooking. Gypsies in Italy and Europe made them in different forms as good luck charms. To guarantee good luck the owner must really believe but not let the spoon do all of the work. If the spoon is stolen, the thief should expect bad luck.

The article at left has been reprinted from the June 2004 Florida Clinker Breaker



Westminster College 2. Westlakes hardware 3. Ham's Prairie Fire Station
 Ham's Prairie Store 5. Ham's Prairie Christian Church
 Ham's Prairie has a grill and serves breakfast.
 Lunch will be provided at the BAM meeting

Note !!! Following the September 25th Meeting:

<u>Bluegrass music jam after the business meeting.</u>

<u>Bring your musical instruments!</u>

September 25th Meeting Start Time: 9 AM Demonstrators: Ned Digh, Joe Wilkinson, and Dave Edwards

September 25th Meeting
Hosts: Ned & Esther Digh
6792 Cnty Rd 424
(Off Hiway C at Ham's Prairie Store)

Fulton, MO
Trade Item: Deck Rail Holder

for Plant or Bird Feeder

**Lunch Provided** 

November 20th Meeting Hosts: Japheth Howard and Alice James Salisbury, MO

Trade Item: Candle Holder
Lunch: Brown Bag

**Meeting Dates for 2005** 

March 27th

Hosts: Maurice and Bess Ellis Belgrade, MO

May

Annual BAM Ozark Conference Warrenton, MO

June 5th

Host: Dale Gilman Booneville, MO

July

Tentative: Bass Pro Hosts: Kirk & Mona Sullens

September

Hosts: Bob & Jan Ehrenberger Shelbyville, MO

November - Open
Call Kirk Sullens, if interested!

Fulton, Missouri Information Downtown Fulton has a number of antique shops, a quilting fabric store, restaurants, and other vendor stores

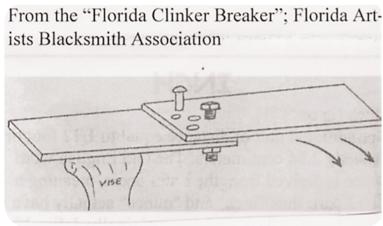
The Winston Churchill
Memorial & Part of the Berlin
Wall: on the Westminster
College campus 4 blocks West
of downtown

January 22nd 2005
Hosted by: Don Nichols
and Ken Harbit
at
State Fair Comm College
Sedalia, MO

Trade Item: Ice Cream Scoop
Lunch Details: TBA

# **Shop Tip from Bill Robertson - Applecross Forge**

Rivets are like your collection of bar stock. It doesn't seem to matter how many sizes you have on hand, you never seem to have the size that yo need when you go to get it. Here is a rivet cutter that Richard Shepard demonstrated at a class we took with him recently at the Touchstone Center for Crafts in South Central Pennsylvania. With this tool as long as you have a selection of long rivets you can always cut to size what you need. It can be made with spring steel, lawn mower blades or any other kind of high carbon steel. Several holes of various sizes are drilled through both flat bars near the overlapping center to accommodate different rivet diameters. One bar ha a vertical bar welded to it on the bottom side so that it can be clamped into a vise. When pulling on the other bar you create a sheer that cuts the rivet like butter. A whole lot better then trying to cut a rivet with a hack saw.



# **BAM**

2212 Aileswick Drive St. Louis, MO 63129