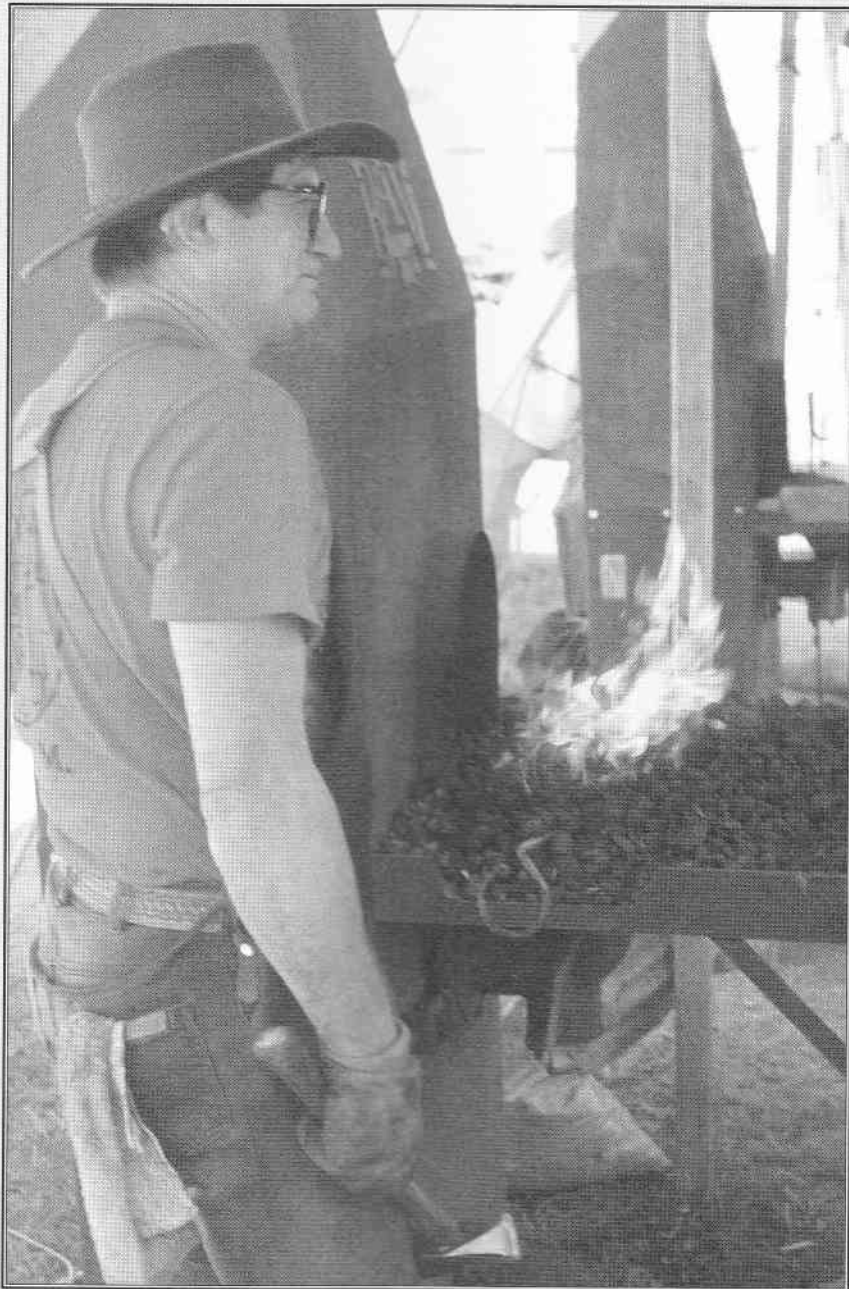


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July — August 2001

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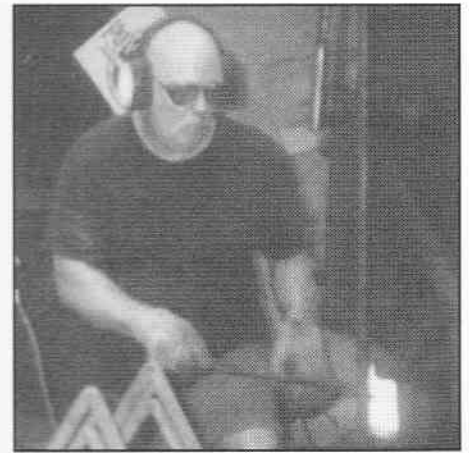
**16** We asked Walt Hull to design a grill for the conference auction and here it is.

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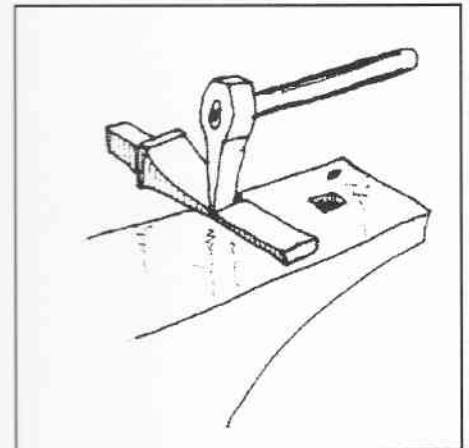
**19** Once every 6 years BAM's editor gets to make something in that shop out back.

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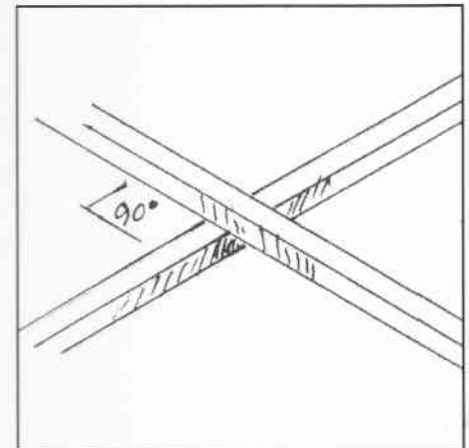
**23** Bob and Daniel Ehrenberger host the next meeting in Shelbyville.



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# Newsletter of the Blacksmiths Association of Missouri

*Volume 18 No. 4*

**July — August 2001**

**Our cover:** Don Birdsall was one of 20 or so intrepid BAM members who put on demonstrations at the Missouri State Fair in August. Photo by Jim McCarty.

## Editor

Jim McCarty

## Contributing Editors

Doug Hendrickson  
Walt Hull  
Pat McCarty  
Joe Wilkinson

## Mailing Labels

Bruce Herzog

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 \$20/year; a portion of this amount is for a subscription to this newsletter for one year. Editorial inquiries should be addressed to: Jim McCarty, 5821 Helias Dr., Jefferson City, MO 65110; (573) 395-3304 or you can send e-mail to jimmac@socket.net. BAM membership inquiries should be addressed to: Bruce Herzog, 2212 Aileswick Dr., St. Louis, MO 63129; (314) 892-4690 or send e-mail to bjherzog@msn.com. 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 be given credit.

## BAM Membership Application

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_

Phone: (    ) \_\_\_\_\_ Zip: \_\_\_\_\_

E-mail: \_\_\_\_\_

New Member     Renewal     ABANA member?

How did you learn about BAM? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Memberships are for one year from receipt of dues. Dues are \$20, which includes a subscription to the bimonthly BAM newsletter. Please make checks payable to Blacksmith Association of Missouri.

## ABANA Membership Application

Primary ABANA Chapter Affiliation: \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_

Phone: (    ) \_\_\_\_\_ Zip: \_\_\_\_\_

New Member     Renewing Member

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

Regular Member .....\$45 yr.

Senior Citizen (Age 65+).....\$40 yr.

Fulltime student .....\$35 yr.

Overseas airmail .....\$80 yr.

Overseas surface mail .....\$60 yr.

Contributory .....\$100 yr.

Full time student .....\$35 yr.

Public library.....\$35 yr.

*See reverse*



## Editor's anvil

Greetings, here we go with another issue of the BAM news. This one is a Labor Day project. When it gets too hot outside mowing grass, working in the shop etc. I have been ducking inside to cool off and work on the news. At this rate you should see this one in time for Labor Day 2002...

A lot is going on in the blacksmithing world. Big news from Tom Clark, he is closing his school for a one-year sabbatical and a much-needed rest. More details on page 7. I am betting Tom can't keep it closed for that long. Word is we won't be seeing Hofi much after that last class, so if you want to train under him you better get in line for that last unfilled class. I wonder how many people Tom has trained in the five years the school has been opened? No doubt blacksmithing has moved forward considerably in that time, hat's off to you Tom.

In the mail I received an interesting piece from our good friend Stephen McGehee, who it turns out is in exile in Indiana instead of Arkansas where he belongs. I guess this was inevitable but Stephen is launching his own blacksmithing publication "Irony". He has the most interesting drawing style, which he complements with interesting witticisms. You have seen his work a lot in the BAM news.

Most people don't know it but Stephen applied for the Hammer's Blow editor job, don't think he really got serious consideration from the board. So now he's doing it himself and I think you will like what he does. For more information write him at PO Box 925, Corydon, Indiana 47112.

If my count is right, there are now four for-profit blacksmithing publications in the world, Jerry Hoffmann's Journal, the Blacksmith's Gazette, George Dixon's Traditional Metal-smith and now Irony. That's a sure sign that blacksmithing is back.

Had to miss the July meeting again, wonder if I will ever get to take part in the sort-of-annual Pound and Float. Thanks to Doug for the meeting cover-

*At first, making swords for his boys seemed like a good idea to Jim...*

age, wish all the meetings I can't make get some coverage like that. Sounds like a good time was had by all. Coming up is a new shop to explore in Shelbyville. That isn't but a stone's throw from Bob Patrick's old shop in Bethel, perhaps we should all make a pilgrimage there to pay homage to where it all began so to speak.

Speaking of where it all began, I talked to Bernie Tappel, one of the crusty veterans who were in on the early meetings. Bernie still gets in the fire some, in fact he did an impromptu demo on the banks of the Current River during his annual blackpowder squirrel hunt.

But Bernie wasn't there to talk blacksmithing so much as grandkids. Yep, he says Patti is a grandmother (what's that make him?). Now you will remember how their kids used to sit on the anvil they used for a chair in the living room at that place in Henley...now they are having kids, does time fly or what?

Coming up is the Faust Park event, this time set for Sept. 29-30 (Septemberfaust?). Lou has some big plans for the event but they were not complete when I put this one together. He needs

some members to staff the forges so plan on coming.

BAM had another great turnout for the State Fair in August. Thanks to Peggy Williamson for organizing this and to the folks who brought extra coal when it looked like the supply was running out. I hesitate to mention names for fear I am forgetting someone, but here's a list of who came: Peggy and Mike Williamson, Jim and Pat McCarty, Doug Clemons, Kent Harbit, Ray Chaffin, Don Nichols, Fred Weisenborn, James Rumbo, Joe Wilkinson, Ed Harper, Bob Ehrenberger, Don Birdsall, Scott Stager, Kevin Gearhiser, Beckie Barringhaus, Dave Hoopes and Dennis Yates. Hope I didn't leave anyone out — you are all really appreciated!

In the future we will have a workshop to make brackets to hold banners for the 2002 State Fair, which will be the 100th fair. Maybe we can use the fairgrounds for our May meeting or just set a workday?? I'll get the word out.

Happy hammering,

— Jim McCarty  
Editor



# The Great BAM anvil purchase

BAM is sponsoring a group purchase of Czech anvils directly through the importer in Canada. These anvils are cast steel alloyed with manganese, heat treated, and milled on the face. They are reported to be of high quality with good ring and rebound.

They come in a two-horn Peddinghaus style as well as a conventional single horn style. The first has both a hardy and pritchel hole, the second lacks the pritchel hole. Below is a chart of details:

## Peddinghaus Style:

Model	Weight	Length	Height	Cost
50	110#	22.5"	9.5"	\$160.00
75	165	25	10.5	210.00
110	242	29	12.5	280.00
200	440	40	14.4	550.00

## Single Horn Style

50	110#	19.5"	9.5"	\$150.00
80	176	23.5	11	210.00
100	220	25	12	250.00
150	330	29	14	350.00
200	440	31	15	460.00
250	550	33	16.5	590.00

The numbers are converted from metric and rounded off. The Model 200 under the Peddinghaus Style has a clip and a built up shoulder that angles out slightly on the right side and an upsetting block, on the left side. The single horn models have the built up shoulders also. The prices are in U.S. dollars and DOES NOT include shipping or custom broker fees. The purchase is for BAM members only with a two anvil limit per member. Buyers must also agree not to sell one of the anvils for profit.

The money will be collected in two steps: the full price of each anvil must be received by Bruce Herzog by December 1, 2001, the shipping and custom fees will be paid when the anvils are picked up.

If interested fill out the form below and send it to Bruce Herzog, 2212 Aileswick Dr., St. Louis, MO 63129

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ E-Mail: \_\_\_\_\_

First Anvil

Style: \_\_\_\_\_ Model: \_\_\_\_\_ Cost: \_\_\_\_\_

Second Anvil

Style: \_\_\_\_\_ Model: \_\_\_\_\_ Cost: \_\_\_\_\_

Total: \_\_\_\_\_



## Joe's jive

We had a nice meeting at Doug Hendrickson's on July 21st. It was a little warm (about 97 degrees) but a nice crowd showed up. Thanks Doug and Bonnie for hosting. A special thanks to Pat McCarty, Walt Hull and John Murray for agreeing to work over a hot fire on a 97 degree day doing the demos.

If you missed the meeting you missed some pretty good techniques and ideas.

One of the things we discussed at the business meeting was an invitation to all chapters to join in a ring project for the 2002 ABANA Conference. Those rings accepted will be made into a grill honoring Francis Whitaker and sold at the ABANA auction. This will be similar to the ring projects we have participated in before. This project is being hosted by the New York State Designer Blacksmiths Chapter.

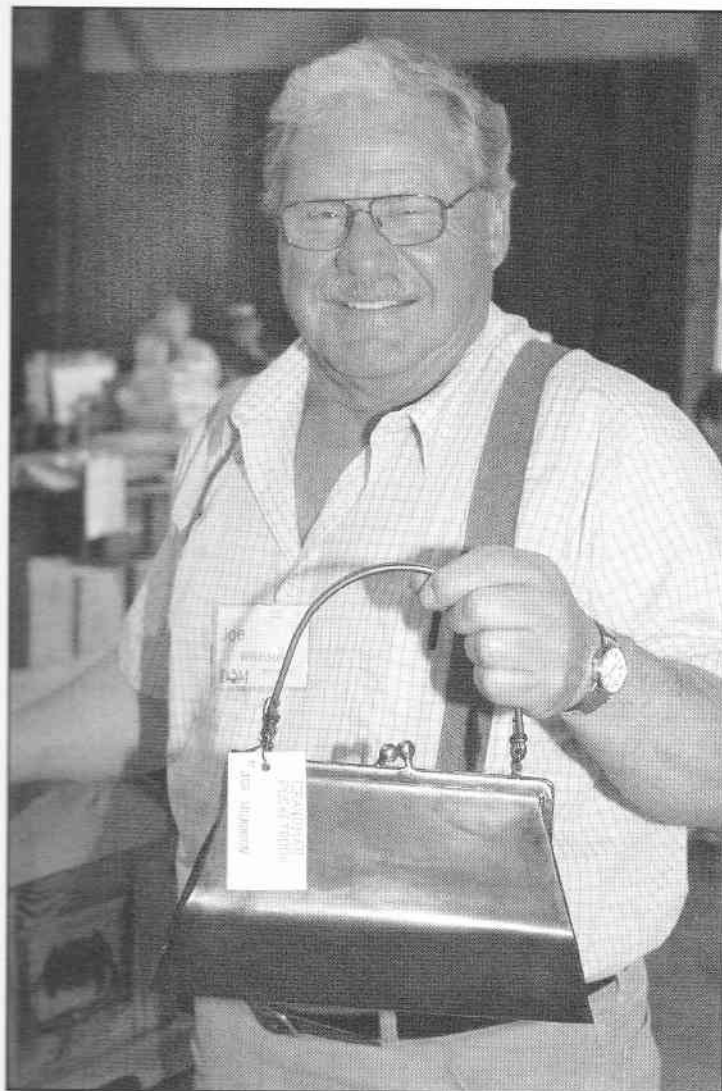
In addition this same chapter has been granted gallery space at the ABANA Conference to display chapter flags and all chapters are invited to design and present a flag and flag holder for this display. They have included in their letter a rough sketch of the dimensions so as to give the display some uniformity.

I particularly like the flag idea. We could also display it at the State Fair, Faust Park, etc. We as a group need to decide if we would like to participate. So give it some thought and we can talk about it at the next meeting at Bob Ehrenberger's shop in Shelbyville.

Happy hammering,

— Joe Wilkinson

*Right: This is our fearless leader with his latest "book", forged for the auction at the last BAM conference. Give him grief if you want, it fetched a hefty price.*



## Ozark School of Blacksmithing to close — temporarily

This is to announce that after this year's schedule the Ozark School of Blacksmithing will be closing for one year. After five years of running the school, Thelma and I need a break.

Remaining classes this year include two Hofi basic classes, Sept. 24-28 and Oct. 1-5 and a three day toolmaking class starting Sunday, Oct. 7. There is also a weekend 25-pound Little Giant power hammer class with Phil Cox Nov. 10 & 11, two six-day farrier classes with Richard Ellis Dec. 3-8 and 10-15 and a forge welding class with Bob Patrick Dec. 17-21.

The Ellis classes are designed to prepare farriers for the 2002 National Championship in Lexington, Ky.

While there are no openings in the Sept. 24-28 class, there are spaces available in all other classes.

I would like to give you the opportunity to make any suggestions you may have concerning new class ideas or programs you might be interested in seeing here at the school when it reopens, so please give us your input.

With the success of my hand tools and air hammer sales I am looking forward to spending more time at the forge and traveling.

Additionally, I am pleased to announce that I have entered into an agreement with Centaur Forge to do a cooperative design of tongs and tools that will carry the trademark of both "Centaur Forge" and "Tom Tongs."

Thelma and I want to thank you for your support during the past five years and we look forward to serving you in the future.

Personal regards,

Tom Clark

# BAM

## JULY MEETING

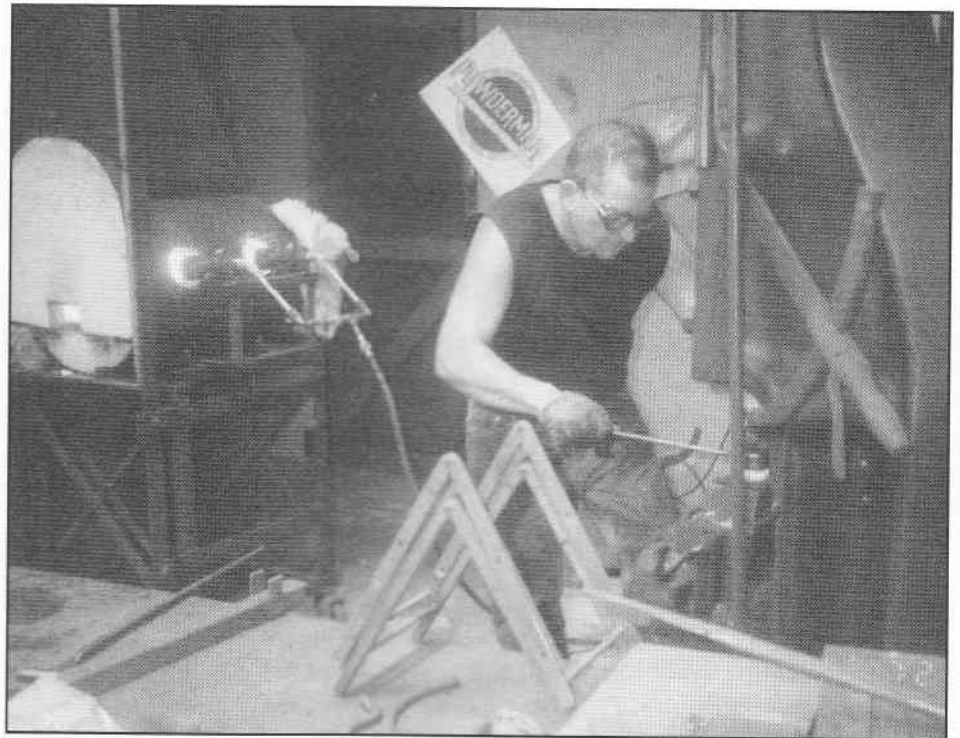
by Doug Hendrickson

It was hot and muggy in Lester-ville as 40 BAMsters gathered for the July meeting at Doug Hendrickson's forge. Doug had the demo site set up like a mini conference with chairs and fans for all. Walt Hull, of Lawrence, Kansas, was our first demonstrator. He presented the hows and whys and wherefors of punching holes in bar stock.

It's safe to say most of those in attendance were aware of how to punch and drift holes. However Walt took it to the next level by explaining the dynamics of the process, applications and calculations. Walt had several trick tools to assure consistent spacing of punched holes — simple but very cool. They got the job done with very little fuss. As I said earlier most of us understand how to punch and drift a hole. Walt's demo used the punched hole as a point of departure to achieve a number of other ends. By hot cutting into one side of the drifted hole and spreading the other side he achieved some beautiful forms again proving you do iron work with your head. The hammer just makes it visible to others.

Walt didn't give his audience any cool projects to do, rather he demonstrated an attitude toward dealing with hot iron always searching for those wonderful secrets contained within.

Pat McCarty, our second demonstrator, has a totally different approach to making stuff. Pat has as much fun at the anvil as you could



*Above: John Murray wows 'em with a demo under Doug's big hammer.*

possibly have without involving other people. He loves moving metal, is very efficient at it and makes really fun stuff.

Pat's first piece was an iron and copper no-nonsense mosquito which he claimed was to scale. I guess up on the Missouri River and its backwaters they grow them pretty big. The beauty of Pat's bug was really just watching him do the job. No wasted energy just doing what had to be done and have a good time doing it. Pat, the ever accommodating guy he is, agreed to make a wizard from a railroad spike at Doug's request. "God I love those wizards," Doug was heard to utter as Pat began. Many of us in the gallery just wanted to know how to do it. Others marveled at just how Pat could push, punch and cut the spike into a visage of a guy with a golf hat and big mustache. If you did not learn something from Pat about moving metal then you were not paying attention.

After Pat's demo the Lester-ville Lion's Club put on a fine feed, BBQ, taters, slaw, beans and homemade dessert. Way good chow.

President Joe held a membership meeting while Doug set up a big

hammer demo for himself and John Murray. Doug, first up, blew everything, screwed up his piece and forge welded his punch in a 7-pound block of iron. It's a good thing John was waiting in the wings to salvage the afternoon's program. The trade item was a dipper and John brought the tooling he developed to forge his dipper. The 300-pound Chambersburg and John did their dance and forged a dipper. John and tools get along very well.

Nearly 100 degrees and 100 percent humidity sent most of the surviving smiths and their families down to the Black River to cool down. It worked. Bonnie, the consummate hostess, invited the survivors back to the house for food and drink. Doug and John did a little banjo duet while Walt backed them on the guitar. All I can say about the music it's a good thing that they are blacksmiths. 10 to 15 people who were prepared to camp crashed on the floor as even at 10 pm it was still too hot to even think of crawling into a tent. Patty Mac was the only one tough enough to do the tent thing. The rest of us wallered in the luxury of Doug and Bonnie's AC. Black River is a zoo on



Saturday but Sunday is ours. A small flotilla of blacksmiths paddled a 5-mile stretch of the Black, picnicked, enjoyed a rope swing and generally just chilled. Hey, let's do it again sometime.

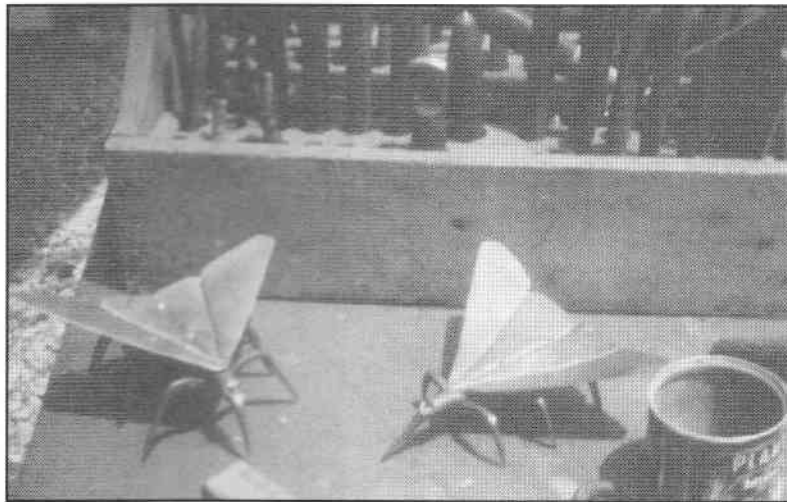
Trade items were made by Joe Wilkinson, Doug Hendrickson, Don Grammond, John Murray, Don Nichols, Dave Shepard, Randy Carrier, Pat McCarty and Dan Williams. Iron in the hat was donated by John Sherwood, John Murray, Ray Scott, Joe Wilkinson, Don Nichols, BAM, Fred Weisenborn and Walt Hull.

### Minutes

- Thanks to Bonnie and Doug for hosting us and thanks to the Lion's Club for a great lunch.
  - It's hot!
  - Minutes approved as published.
  - Joe spoke on a ring project for ABANA 2002 Conference. Also a project wherein each chapter would design a flag.
  - Joe gave us a synopsis of communications regarding Alabama Forge Council getting booted out of ABANA because of an anvil shoot.
  - Joe also spoke on chapter responsibilities to ABANA and ABANA's responsibilities to it's various chapters.
  - A lively discussion ensued.
  - Pat mentioned a bid on decals to put BAM's name and logo on our two trailers.
- Motion made and approved to get the decals.
- Bruce Herzog gave us a treasurer's report. We gave out three scholarships, bought shirts, patches, hats, etc.
  - Currently we have 469 members.
  - Bruce also spoke on Octoberfaust,



*Above: The crowd put up with a hot day to see some good demos at Doug Hendrickson's shop in Lesterville. Below: The end result of Pat McCarty's mosquito demo.*



Sept. 29-30 2001. Lou Mueller is seeking demonstrators, gallery exhibits, etc. More to come.

- Bruce mentioned the gas forge workshop. It will probably be October or November 2001. More to come.
- Walt spoke on demonstrators for our BAM 2001 conference. Walt also spoke on a rosette and grill project (possibly October) to be done at Tom Clark's shop. More to come.

- Fred Weisenborn spoke on some Czech anvils available to us. Check with him, it sounds interesting.

- Fred will send info to Jim to publish, this may be a great deal.

- Meeting adjourned.

Respectfully submitted,

John Murray, treasurer



# ABANA

## ABANA Chapter Liaison Letter

July 2001

### Get ready for the 2002 ABANA Conference!

*Less than a year away-June 5-9, 2002, La Crosse, Wisconsin.*

#### **Here Are Some Of The Highlites Of The Conference**

##### **From Other Parts Of The World**

A team of up to 12 blacksmiths from Europe will continuously demonstrate throughout the conference. You will hear more about this event in future Chapter Liaison Letters.

You will be pleased to know that Angelo Bartolucci from Italy will again be with us for the 2002 Conference. Those of you who attended the 2000 ABANA Conference will remember this delightful and skilled gentleman.

You won't want to miss this one! From Japan you will see a carpenter plane maker, chisel maker, saw maker, swordsmith, high relief chaser and a knife maker all demonstrating in the traditional manner.

##### **From Closer To Home**

Tom Latané will head up a team of Pete Renzetti, Carl Close, Tina Chisena, Paul Spaulding and Kevin

Clancy. You remember their wonderful Gothic sculpture from the 2000 ABANA Conference. Just wait and see their classical master clock at this conference!

The Colonial Williamsburg blacksmiths led by Peter Ross are again back with us demonstrating Colonial-era gunsmithing and black-

smithing.

Ric Dunkerly is lined up to demonstrate mosaic Damascus knife making.

Steve Schwarter will show us how to make powder mosaic Damascus.

##### **An Extra Attraction**

The New York State Designer Blacksmiths are sponsoring a Ring Project much like the ring projects from the 1994 and 1996 ABANA Conferences. I highly recommend that you get involved in this excellent project. Those of us who participated in the past found it to be a stimulating activity for our chapters. If you need more information contact Al Butlak, 1351 Walden Ave. Buffalo, NY 14211, or [butlak1@mindspring.com](mailto:butlak1@mindspring.com).

Bob Fredell, Chairman  
Member Services Committee  
3525-45 Ave. So.  
Minneapolis, MN 55406-2927  
(612) 721-2298  
[fredell@frostbit.com](mailto:fredell@frostbit.com)



# BAM

## Bulletin Board

For Sale: 198-pound Hay-Budden anvil in great condition \$350. 99-pound AP Ranger wide face anvil like new, \$250. 15 inch post vise \$200. Several other smaller post vises also. Horseshoeing equipment, hoof stand. If you're interested give me a call or e-mail. Rick Scarlet (417) 764-3000 or rscarlet@townsq.com.

John Ledgerwood has a complete shop for sale: anvil, not sure of weight...guess 100-125 pounds in perfect shape, hand crank blower, hand crank drill press, 6" post vise, forge, hammers, hardy tools, axes, chisels, coal box with about 100 pounds of coal, lime box, and lots more. Would like to sell it as a complete shop. Asking \$1,000 for everything. Contact jmledge@fidnet.com

For sale: I have two anvils I would part with, both Peter Wrights. 150 pounds, \$250, 130 pounds, \$200. Both need some work. Jim McCarty, (573) 395-3304 or e-mail to jmccarty@socket.net.

For sale: Two Little Giant trip hammers. Both in excellent condition. Serial No. K 7335 Purchased new in 1969. Serial No. K 7351 Purchased new in 1977. Call Doug Cook, Lowen Corporation (620) 665-2810. Photos available, e-mail me back if interested and I will send them to you — doug@lowen.com

Anyone needing Ceramic Fiber Insu-

lation for forges, fire places, etc., I have come into a large quantity. For BAM members, it's free for the asking. It's 1-1/2 and 2 inches thick, 12 to 24 inches wide and in 25 foot rolls. Contact Jim Thomas at (573) 782-3433 or e-mail AustinT42@aol.com.

Smithin' Magicians — as featured in the Blacksmith's Journal. Includes mild steel tool blank, \$275. Call Bob Woodard at (618) 692-6508.

Ray Chaffin has a new computer operated plasma cutting system that can cut anything out of metal. Mail, call or e-mail your design for a price quote. Also hardwood blocks 2-2 1/2" x 12-14" are \$5 each in curly maple, straight maple, English walnut, birch laminated in brown and white and blue and white. Ray Chaffin, (660) 438-6720 or Ray's Welding, RR 3, Box 279, Warsaw, MO 65355.

Heavy duty frying pan blanks: Steel, approximately 9 inch in diameter with 2 inch sides. 12 gauge thickness. Available with or without two 3/16 inch holes for handles. Now tumbled clean. 1-4 \$9 each; 5-9 \$8 each; 10 or more \$7 each. Shipping \$2.50 plus \$.50 for each pan. Contact: Bob Tuffee, 3855 Aspen Hills Dr., Bettendorf, IA 52722.

Custom-built air hammers. 6-pound table top model \$1,300; 20-pound table top model \$1,900; 20-pound floor model \$2,200; 40-pound floor model \$2,600. Some modifications to the basic hammers can be made to your specifications. Also custom metal spinning in copper, brass, pewter, and steel. Contact Maurice L. Ellis, Route 1, Box 1442, Belgrade, MO 63622-9709. Phone: (573) 766-5346. E-mail: mbellis@misn.com.

BAM members, I have a CNC plasma cutting system in my shop in Columbia and will offer my services to BAM members at a 10 percent discount. From art to parts I do it all. Call (573) 474-8749 and ask for William Irvin.

Kayne and Son Custom Hardware, 100 Daniel Ridge Road, Candler, NC

28715. (828) 667-8868 fax (828) 665-8303, email: kaynehdwe@ioa.com, website: www.kayneandson.com. Offering Big Blue 100 ram air hammers, Peddinghaus 2 horn anvils, Offcenter tongs and swages, etc, hammers, tongs, the Blu Crusher rolling mill and Forgemaster gas forges. We ship and accept Visa and Mastercard.

Tom Clark has expanded his line of hand forged Hofi style hammers to include a nice rounding hammer and punches, drifts, tongs etc. He's also importing a new line of air hammer, the Sayha from Turkey and just got a shipment of punches, shears and gas forges. For more info on the tools and his Ozark School of Blacksmithing contact him at (573) 438-4725.

Power hammer history! *Pounding out the Profits — A Century of American Invention* by Douglas Freund (hard-bound, 317 pages, profusely illustrated) is available for \$32.50 plus \$4.50 shipping and handling through Minguo Mountain Machine Works, PO Box 532, Jerome, AZ 86331.

For blacksmithing books contact Norm Larson, 5426 E. Hwy. 246, Lompoc, CA 93436 or call (805) 735-2095. Ask for his catalog.

George Dixon is starting a new blacksmithing publication called "The Traditional Metalsmith". For \$28 you will get four issues of how-to information. Contact him at 1229 Bee Tree Lake Road, Swannanoa, NC 28778.

Wanted: the down feed lever (handle) off a Champion post or floor drill press, this is the hand lever that feeds the drill bit into the work, it has a ratchet device where it connects to the drill press. Steve Combs, 636 797-9093, or e-Mail at : bigsmoke@jcnl.com.

Wanted: 25-pound Little Giant, any condition; 3-foot cone mandrel; hand-crank post drill. Allen Ray Cromwell, Arc Forge, PO Box 179, Grand Chain, IL 62941.

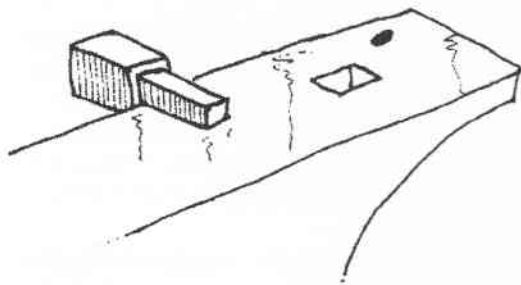
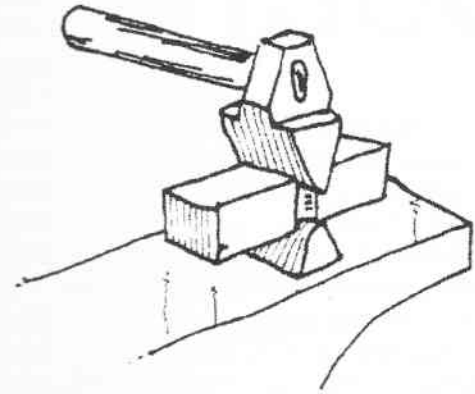
# Hot Cut Hardy

By Mike George, *Saltfork Craftsmen*, January 2001  
Illustrations by Mike George and Jim Richey

This procedure was demonstrated by Amnon Erlichman, Amit Harlev, and Tom Clark at the 4th Annual Saltfork Craftsmen Blacksmithing Conference, Guthrie, OK, October 2000. The narrative and drawings are from the later attempts of Mike George and Darren George to duplicate the professionals' demonstration. The procedure was quite a bit harder for us to do than it looked when watching the professionals, but still well within the capabilities of two rank amateurs. If I say so myself, our hardy came out pretty darn good and a second one will be easier.

The first thing is to obtain some suitable high carbon steel. We used junkyard material and don't really know what the composition is. We acquired a 1-1/4 inch square bar from a heavy duty equalizer trailer hitch. On a band saw, we cut off a 5 inch piece. Take a good white heat and 1/2 inch fuller all around about two inches from one end. (You can do this by yourself but it sure is a lot easier with a helper/striker or a treadle hammer. The drawings show us using a handled top fuller and a bottom hardy fuller. There are several alternatives to these particular tools. Heavy tong reins, spring fullers or just two pieces of 1/2 inch mild steel round rod are all suitable substitutes.) The depth of fullering

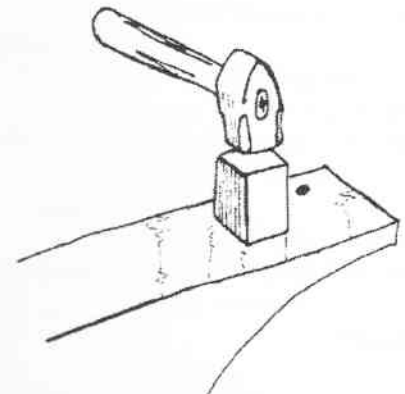
depends upon two things: size of original material and size of the hole the hardy is to fit. Take pains to fuller evenly and square to the bar all the way around. It may take several heats to get this done. Fairly big material, and high carbon to boot, moves kind of hard, even at a high heat.



Draw out the hardy shank until it fits your anvil. In our case we needed a 1 inch square shank. The professionals made an index mark on the hardy base at this stage so they could always orient the hardy exactly the same every time it was inserted in the anvil. Anvil hardy holes are never exactly square or perpendicular to the anvil face. By maintaining a particular orientation, you can make the shank fit the hole much tighter. Darren and I, on our particular anvil, didn't think we wanted only one orientation. We made the

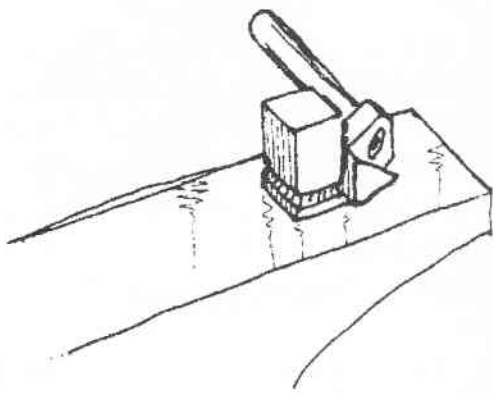
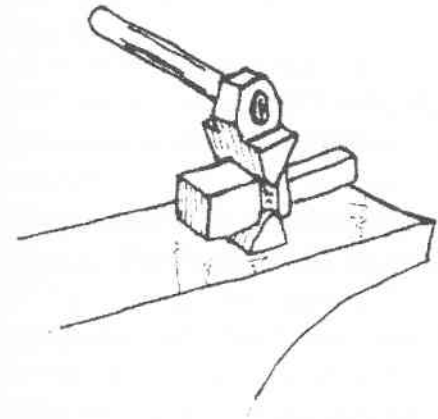
shank to fit in all four positions. Either way, by the time you get the shank drawn to size, it will likely be way too long. Trim it to a reasonable length. 2-1/2 to 3 inches should be about right.

Take a good, high heat where the shank meets the tool body and set the base of the hardy down to the anvil face. We hit it a couple of licks, rotated it a quarter turn and hit it a couple more until we had been all the way around. If you are going to index your hardy, you would not want to do the rotation, just set it down one way. This stage is to get that part of the tool near the shank to set down solid against the anvil face. The edges will not likely come all the way down to fit on the face at this point. We'll fix that next.



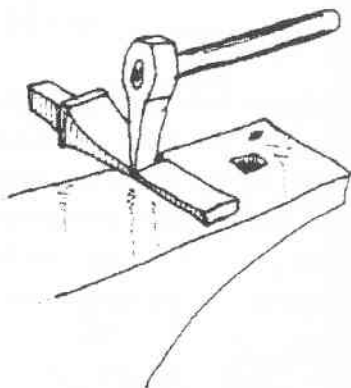
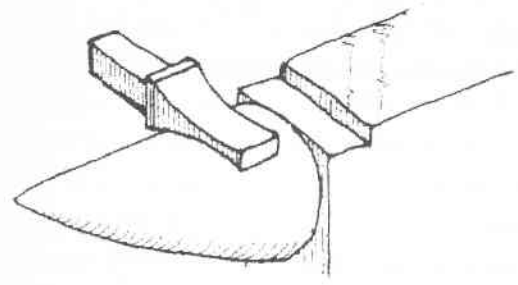
(Hot Cut Hardy cont.)

Fuller all the way around the tool body about  $\frac{1}{4}$  to  $\frac{3}{8}$ ths inch above the tool base. Again, keep this fullering square and even. It will not need to be quite as deep as the first time. We are just creating a place to get hold of the tool base so we can bring the edges down to fit the anvil face.



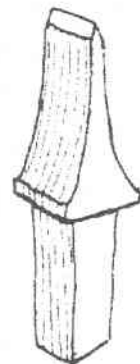
If you don't have a handled fuller you may have to improvise for this step. Grinding a half round radius on the end of a  $\frac{1}{2}$ " x  $1\frac{1}{2}$ " rectangular bar comes to mind, or welding a short bar to a piece of  $\frac{1}{2}$ " round would work too. Anyway, what you need is means to drive the edge of the hardy tool down to the anvil face catching in the fullered groove.

Draw out and shape up the business end now.



This will probably require some trimming too. Use a cutting plate or be really careful not to cut into your anvil face.

Bring it all into the final shape, a little grinding and/or filing is not a sacrilege. One thing, don't grind it really sharp now, you will just burn the edge off in heat treat.



(Hot Cut Hardy cont.)

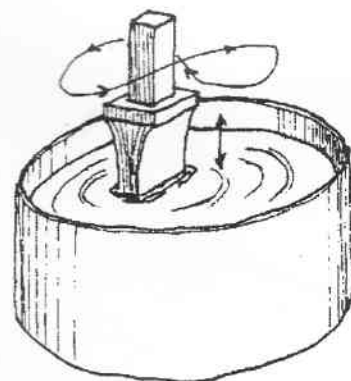
Very Important Step. Do Not Skip!

Prepare a container of ashes, or lime, or vermiculite, or even warm sand will be better than nothing. We use a bucket of lime. It's cheap and easy to get at any lumber yard. Take an even light cherry heat over the entire tool and quickly bury it in your annealing container. Go find something else to do for several hours (overnight would be better). Some folks recommend normalizing by heating to cherry red and then letting the tool air cool to room temperature. Our experience with junkyard steel has been much better if we completely anneal the tool in an insulating medium instead.

Now to heat treat. This is basically a two step process. We will first harden and then temper. There are any number of books and papers that address these procedures in more detail. You may want to read some of them.

This is how we do it. Sometimes there is a little trial and error involved when you are using junkyard steel. We first use, half and half, used motor oil and diesel fuel to harden in. If it turns out this mixture doesn't get the required hardness, we will do it over in water.

With a piece of grinder stone, or some similar abrasive, polish up the cutting end of the hardy. Heat to bright cherry red the cutting edge and back about 3/4 the way to the base of the hardy. Plunge the cutting edge into the oil about 1" to 1-1/2' deep. Move the hardy in a figure eight path and at the same time up and down about 1/2". The figure eight motion helps keep cool oil in contact with the hardy end and the slight up and down motion prevents a sharp demarcation line between the hardened tip and the relative soft body of the tool.



As soon as you think the end of the tool is well cooled to the point of being hardened, and while there is still pretty good heat (but not a lot of red heat) in the lower part of the tool, pull it from the oil and, with your abrasive, quickly polish the end of the tool again. You must have shiny metal to be able to see the heat oxidation colors run up the tool. As the heat remaining in the lower tool body runs up to the cutting edge you will see oxidation colors change from straw to brown to violet to purple and blue. When the colors get to bright blue right at the cutting edge, immediately quench the whole tool in water to stop the process.

If the whole thing worked as planned, a sharp file should just barely catch (mostly, it will skate) when pushed across the cutting end of the hardy. The next test is more critical. Grind a final bevel edge and put the hardy in the anvil. Try cutting a cold piece of mild steel. If it is right on, you will get a nice cut without any dulling of the hardy edge. If it is too soft, the edge will be destroyed and you will have to start over on the heat treating. If it is too hard, the tool will likely shatter and, if you haven't put your eye out, you can start over from scratch. I will say, however, this method of hardening and tempering has worked for us many more times than not. Good luck and be careful.

Remember to wear safety glasses  
and hearing protection!

## Hardy-Hole Bending Fork

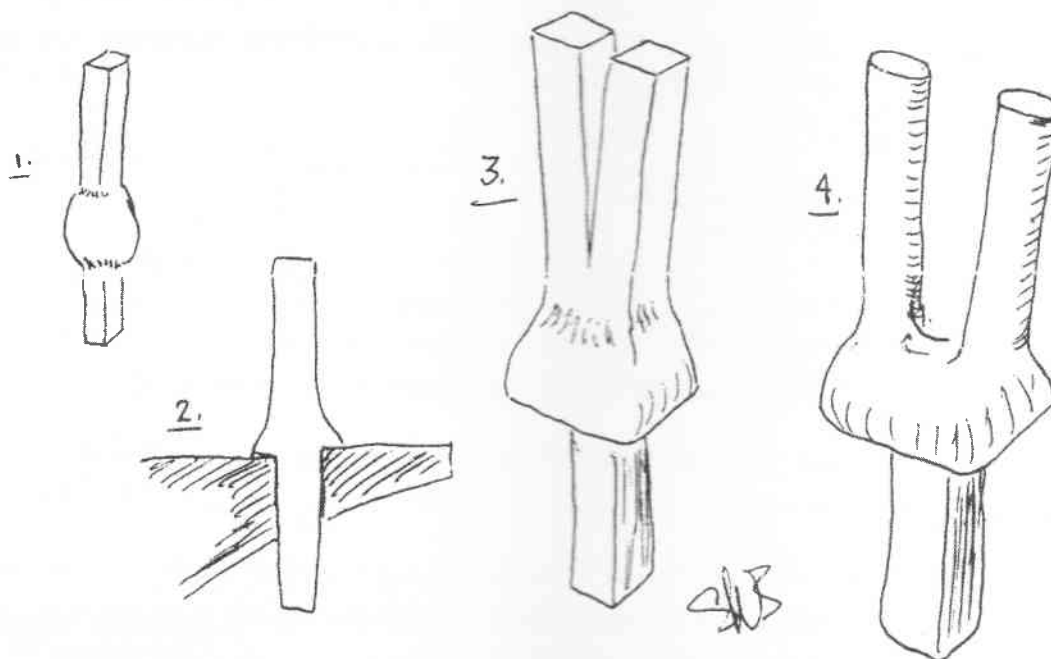
*Sam Shannon  
Montgomery Forge*

This bending fork design is generally based upon an impromptu demonstration Tom Clark and Uri Hofi did at the May 2001 Southeast Regional Blacksmithing Conference in Madison, Georgia. I say "generally based" on their demo, because I did not make any written notes at the time. I have sized the materials to be used to fit our local situation.

Take about 10 inches to a foot of 1-inch square mild steel. Heat and upset about 3 inches of the bar at least 3 inches from one end. Upset the heated part to form the beginnings of a lip to hold the tool in the Hardy hole. If a smaller size Hardy hole is to be fitted, fuller a shoulder on the bar and draw the steel out square to fit the hole. Heat the bar again and use a sledge to drive the bar down onto the anvil with the tang in the Hardy hole--thereby creating a more defined shoulder to secure and to fit the tool on the anvil. Mark the tool so it can be reinserted into the Hardy hole oriented the same way that the tool was made. This provides the proper fit and a tool that does not shift around in use.

Heat the upper end of the bar in the fire. Draw out the iron to a shape of about 3/4" by 1", at least 5 or 6 inches long. Reheat this end and use a hot cut to split the upper part of the tool down to about 1-1/2" above the anvil face. Reheat and use a fuller to spread the two arms slightly apart and to create a rounded shape to the bottom of the cut. Round up each arm and bend back parallel to each other. Heat and quench. Because we will be using mild steel I do not think it will need to be tempered. The sketches below indicate what we are trying to achieve.

Sam Shannon

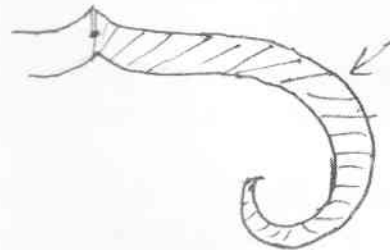


# Walt's Conference Grill

For **BAM 2002** Conference  
by Walt Hull

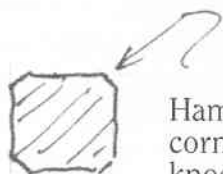
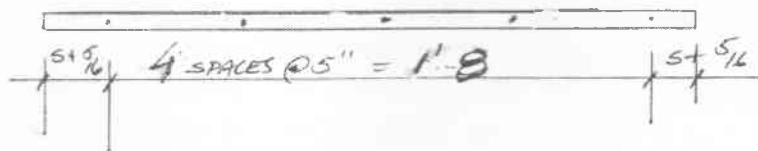
Grill is made from 8 identical pieces. To forge, proceed as follows:

1. Make a test piece for the scroll at the end, measured from the center of the upset corner. Take a little time and get the scroll just the way you want it, then use it as a pattern to make a form for the others.



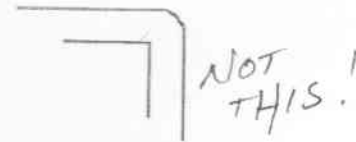
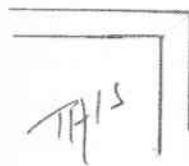
How much bar does it take to make this?

Let's call that length "S" for scrolls. Now take a piece of 5/8" square bar and cut it to 1'-8 plus 2x5 plus 5/8". Mark it thus:



Hammer all corners to knock the factory look off.

2. Next, make a test piece for the upset corner. Be picky. Make sure the corner is nice and full:



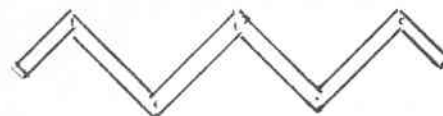
Then bend legs out to make this:



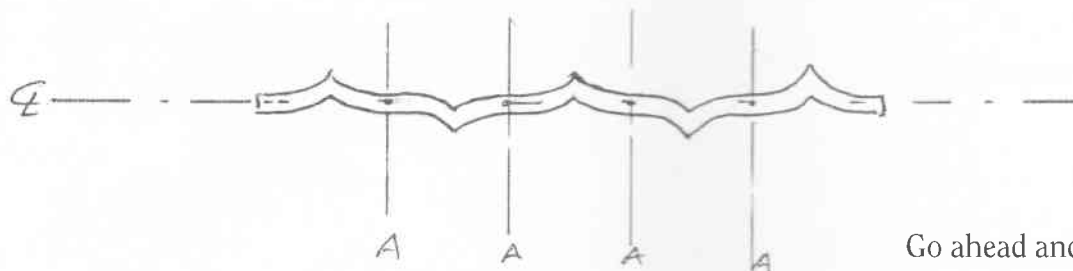
Make sure the ends are in line and that the curves are symmetrical. Use this as a pattern and make a form for trueing up the others.



3. Take your marked bar and forge an upset corner on each center punch mark. Take great care to keep the punch mark in the middle of the corner. You should end up with this:

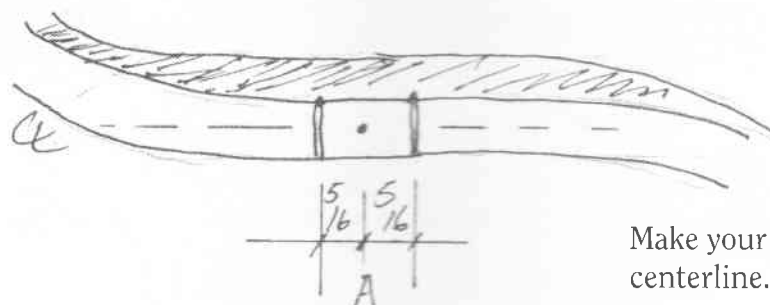


Stretch it out:



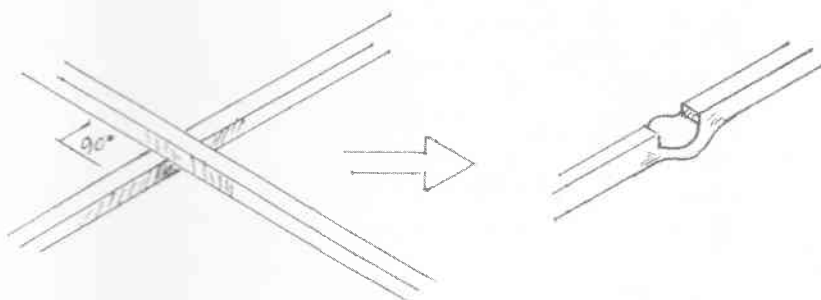
Go ahead and forge the scrolls.

4. Lay out points "A" EXACTLY centered between the corners. Mark them like this with a sharp chisel:



Make your marks 90 degrees to the centerline.

5. Take a heat on 2 pieces of 5/8" square and hammer them down together to make 2 tools:

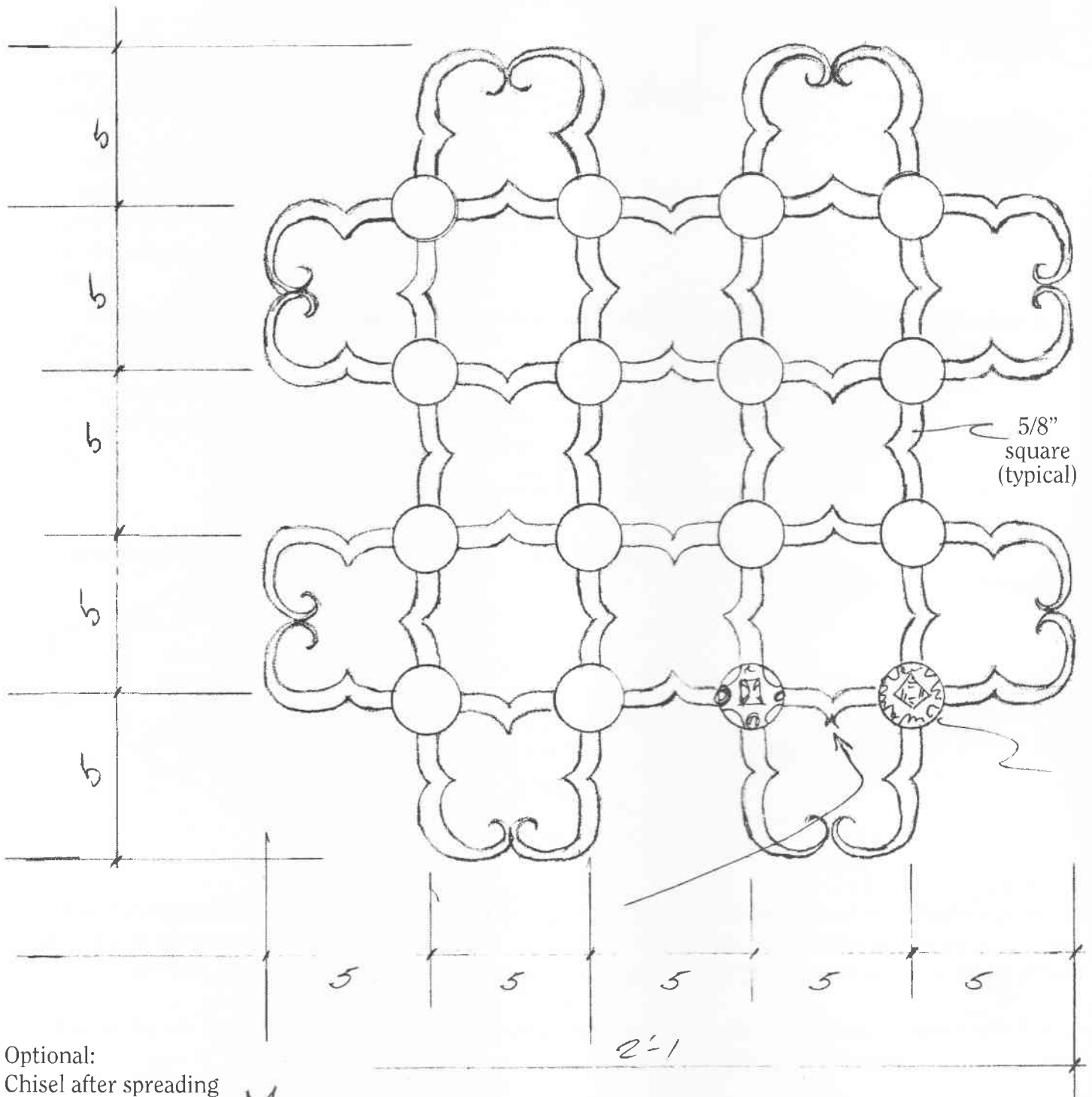


Use these to forge matching depressions at "A". Note: All on the same side of the bar. This operation will stretch the bar approximately as much as was lost to make the corners. It doesn't matter if the corners are exactly 5" on center as long as they are all the same. True up again, tweak as needed and assemble.

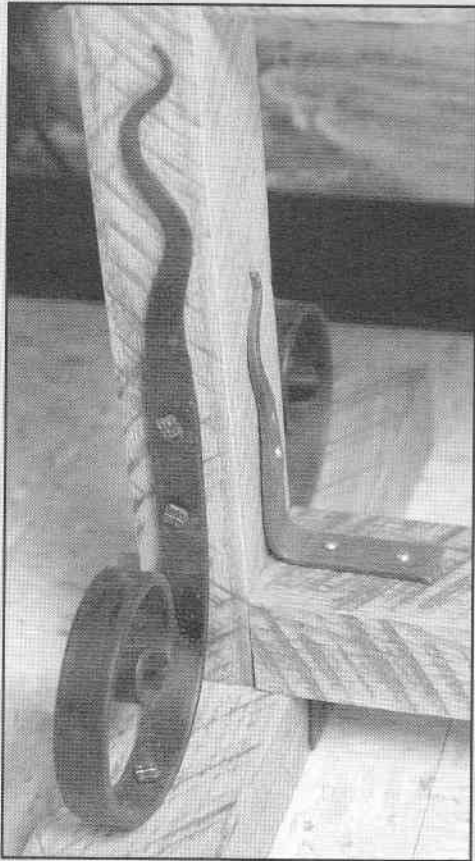
6. With the pieces assembled and clamped (you could tack them — the rosettes will cover the welds) drill holes for 1/4 inch rivets through the joints.

7. Get all your friends to make rosettes. Tell them to put a 1/4" round pin sticking out the back or a hole so you can put a 1/4" rivet through. Put em all together and sell at auction for big bucks!

# Walt's Grill



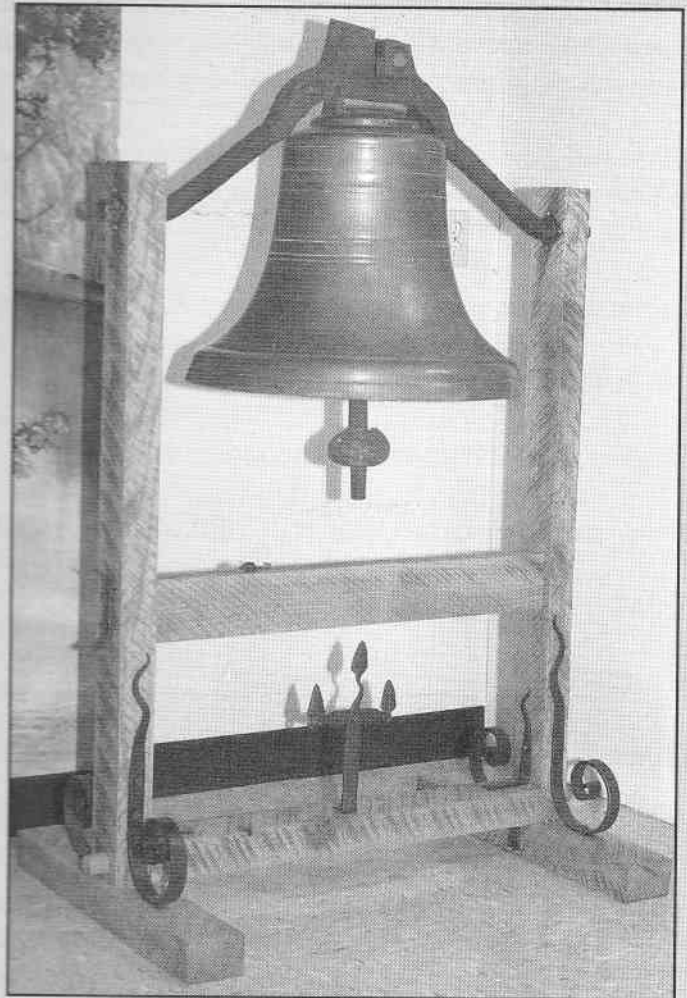
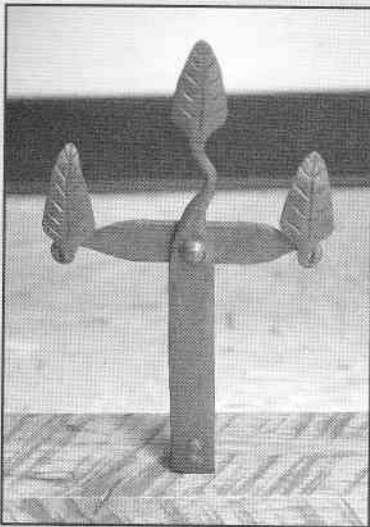
Rosettes are 2" diameter to be donated by BAM members. Design has room for 32 if we use both sides.



# A Stand for Father Helias' Bell

by Jim McCarty

When I moved to Taos 6 years ago I was asked to make a stand for this bell. Father Helias, the founder of Taos, used to ring the bell at noon to signal a moment of prayer called the "Angelus." He told his parishioners that as long as they heard the Angelus bell ring they shouldn't worry about him. One day the bell didn't ring and they found him dead in the church yard. The bell is on display in the museum under St. Francis Xavier church. The bracket is original and is forged with two forge welds. Clapper is original too. This stand only took me six years to complete!



# Jefferson County Historical Society 9Th Annual Blacksmithing Workshop

9:00 Am 4:00 Pm

October 27 And 28, 2001

At The Historic Village On North 27Th Street

Mt. Vernon, Il.

Cost - \$25 Both Days; \$15 One Day

Proceeds To Benefit The Blacksmith Shop And Village

**Saturday demonstrator** — Rick Smith. Assistant Professor in Blacksmithing/ SIU School of Art and Design will demo pattern lamination utilizing his accumulated knowledge of the history of industry and architecture, and their role in shaping the world around us.

**Sunday demonstrator** — John Medwedeff will take over Sunday and will forge a variety of scroll types while answering questions about any aspect of blacksmithing. Through drawings and examples, John will emphasize structural and aesthetic design considerations in iron work.

There will be an auction Saturday evening of donated ironware, tools, and supplies. The money raised will be used to fund the monthly open forge workshops held the second Saturday of each month year around.

Coffee and donuts and a wiener roast Saturday evening free to registrants.

Lunch will be available at a small additional fee.

Tailgate sales welcome and encouraged

Please pre-register by October 1, 2001 although walk-ins welcome.

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

PHONE: \_\_\_\_\_ AMOUNT ENCLOSED: \_\_\_\_\_

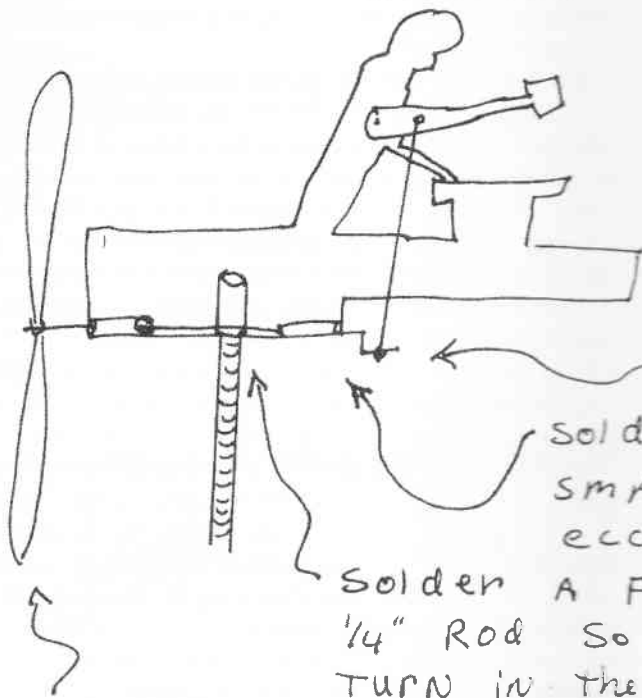
MAKE CHECKS PAYABLE TO: Jefferson County Historical Society  
MAIL TO: Wilbur Haley, 19 Rushton Dr., Mt. Vernon, Il. 62864  
QUESTIONS: Call Wilbur at (618) 242-1365 or John Lovin (618) 756-2331  
anvilman@hamiltoncom.net

# BLACKSMITH WHIRLIGIG

>BY LeROI PRICE <  
You're going to make  
AT LEAST ONE  
Whimsical Project  
in your career.  
This is one that  
will ATTRACT some  
ATTENTION AND  
Tells what you do.



ENLARGE SILHOUETTE TO ABOUT 12 INCHES  
CUT OUT OF SHEET METAL AND  
PAINT BLACK  
OFCOURSE.



Put ABOUT a 3/8" KINK in A 1/8" Rod to make the eccentric AND use ANOTHER 1/8" Rod to connect it to the ARM.

Solder 2 FERRULES OF SMALL TUBE FOR THE eccentric DRIVE SHAFT.

Solder A FERRULE FOR THE 1/4" ROD SO THE WHIRLIGIG CAN TURN in the wind.

use A BLADE OF AN old 6" Electric FAN, OR make one.

# BAM NEWS

## Oktoberfaust returns

BAM is once again sponsoring Oktoberfaust in St. Louis County's Faust Park. This time the event is set for September 29-30. BAM members are needed to work demonstrations during the event. Plans weren't complete when this news was put to bed but Lou was trying to line up SIU's cupola to cast part of a plow. The rest of the plow will be forged and made from wood during the event. The plow is the symbol of St. Louis County. It will be permanently mounted on a large limestone block on display at the historic park. For more information contact Lou Mueller at (636) 343-4223.

## E-mail to Bruce

In the last newsletter we listed the wrong e-mail address for Bruce Herzog. The one listed is his work address and sending him BAM stuff there is liable to make him permanently retired. So if you need to e-mail Bruce with any mail list changes or treasury stuff send it to [bjherzog@msn.com](mailto:bjherzog@msn.com).

## Gas forge workshop details

The long-awaited BAM Gas Forge Workshop is tentatively set for November 10 at Lou Mueller's shop in Valley Park, Mo. The workshop will be limited to 50 people. Bruce Herzog will be sending a letter in September confirming the date of the workshop and the details of the forge. Letters will be sent to the people he already has on the list. A deposit will be required. If there is enough interest, we will have another workshop next year.

## Coal situation

One of the many benefits of belonging to BAM has been access to high quality blacksmith coal at a reasonable price. For the past several years Bob Alexander has hosted the coal supply at his shop in DeSoto. Bob's business is demanding that he pay more attention to it and as he has fulfilled his duties under the agreement with BAM he would like to phase out the operation as soon as the latest supply runs out. We need to find another member who will let us build a coal bin on their place and who can bag the bulk coal. Criteria include someone who will be around most of the time. You must live on a road that allows access for a semi-truck. You must be able to house the supply for at least a couple of years. Bob says there is about 100 bags of coal left so we need to move on this fast. If you are willing to be considered for this much needed service let one of the officers know before the next meeting. BAM needs to extend its heartfelt thanks to Bob for filling this role in the past. Bob got almost nothing for his efforts and he even delivered coal to most of the meetings for nothing. We need more Bob Alexander's!

## Salt Fork conference time

The Salt Fork Craftsmen invite you to their 5th annual conference this year Oct. 13-14 in Guthrie, Oklahoma. Featured Professional Smithing Demonstrators are Doug Merkel & the husband / wife team of Jim & Kathleen Poor.

Doug's Conference Projects will show traditional smithing techniques and tool making. A few of the many items on Doug's agenda include making a nail header and making nails, a tomahawk, a saw-tooth type trammel hook, and metal finishes. Included also are Doug's version of the Uri Hofi style forging hammer, a handled hot cut, and two styles of bottle cap openers.

Jim & Kathleen Poor work as a team; they are internationally known for the tools they make, farrier competitions, and farrier clinics. Their Conference Projects will include 3 types of tongs, an eye drift and a flatter – both fitted with wooden handles. Included also will be forge welding reins to the tongs, making horseshoes, and making gargoyles using air chisels. As a team, they will be demonstrating striking techniques as these projects are made.

There will also be a basket weaving craft class, auction and tailgate sales. For more information contact Marideth & Mike George 1227 4<sup>th</sup> Street, Alva, OK 73717. (580) 327-5235 or e-mail to [jmgeorge@pldi.net](mailto:jmgeorge@pldi.net)

## Call for auction items

On the evening of October 20, 2001, the River Bluff Forge Council, the Memphis ABANA chapter, will sponsor a public auction. Proceeds from this Repair Days event will be donated to the National Ornamental Metal Museum's Capital Campaign for the restoration of an historic building to house the Museum's Library.

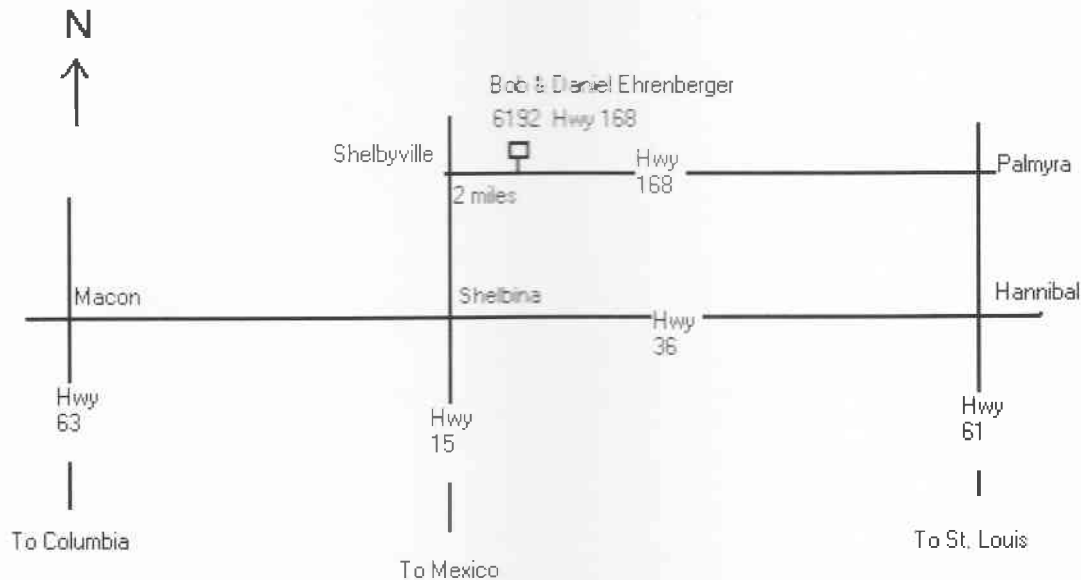
For the Museum, it's a double-your-money proposition in that the River Bluff Forge Council's donation of the auction proceeds will be matched by an anonymous charitable organization.

Please support the creation of a world-class library on all facets of metalworking by donating items for the auction.

Works/ objects should be sent to the National Ornamental Metal Museum at the above address to arrive by October 10. Repair Days volunteers may bring items they wish to donate if they don't want to ship them.

Thanks for your support.

# Next meeting: Sept. 22, Shelbyville



**B**ob and Daniel Ehrenberger are the hosts for the September BAM meeting. The date for the meeting is Sept. 22 — please note this is a change from what was published last year so you might have a different date on your calendar.

This will be our first visit to this shop. It's always good to visit a new shop as we usually get lots of unique ideas. Bob and Daniel are well-known tool scrounges so we should have some interesting rusty iron to see.

For demos, Ed Harper will start things off with a pot lifter shaped like a steer head. Doug Clemons will make a

dead-bolt latch and Daniel Ehrenberger will show how to make a leather sheath for a knife. If there's time our host wants to demo hinges for a fireplace door.

Bob says they plan to have a chili feed for anyone who is interested. He says there is one restaurant in Shelbyville but they seem to have strange hours and he can't vouch for the food.

Trade item is something sharp to go on the end of a pole. Think gig, spear point, arrow head, etc.

As usual please bring along something for the iron in the hat. See you in north Missouri Sept. 22.



## 2001 Meeting schedule

### September Meeting

Bob Ehrenberg  
Shelbyville, MO  
Sept. 22  
Trade item: Gig

### November Meeting

John Murray  
New Melle, MO  
November 10  
Trade item: Sun dial

### January 2002 Meeting

Japheth Howard/Alice James  
Salisbury, MO  
Date TBA  
Trade item: TBA



*Scott Stager makes things hotter at the Missouri State Fair. In the background is one of our two BAM trailers with the new decals in place.*

**BAM**  
2212 Aileswick Dr.,  
St. Louis, MO 63129

First Class  
US Postage  
**PAID**  
Jefferson City, MO  
Permit No. 266

PRESORTED

## **Address Service Requested**

Please send changes to Bruce Herzog, 2212 Aileswick Dr., St. Louis, MO 63129 or e-mail to [bherzog@sunnan.com](mailto:bherzog@sunnan.com)