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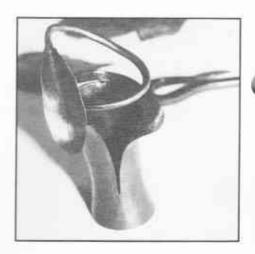
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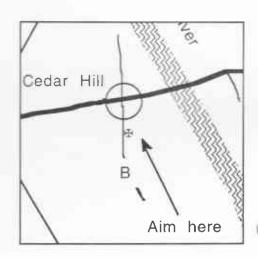
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Newsletter of the Blacksmiths Association of Missouri

Volume 12 No. 5

Our cover: Scott Stager takes care to not burn the tines off the fork he is making under the watchful eye of Walt Hull at BAM's June meeting. Photo by Jim McCarty.

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The Newsletter of the Blacksmiths Association of Missouri is published six times a year and is mailed to members of BAM. The annual fee for regular membership is \$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 65101; (314) 395-3304. BAM membership inquiries should be addressed to: Gary Kobermann, 2337 Whitshire, St. Louis, MO 63129; (314) 892-2527. 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.

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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 A	ffiliation:
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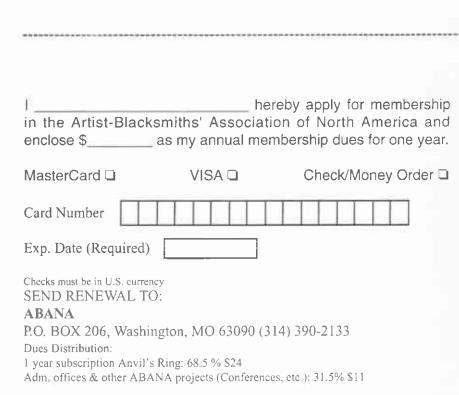
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Send this form in an envelope with your payment to:

BAM,

c/o Gary Kobermann

2337 Whitshire,
St. Louis, MO 63129





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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. The Newsletter of the Blacksmiths' Association of Misouri 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.

Editor's anvil

In case youy haven't heard, I've moved from Loose Creek to Taos, which is about 6 miles closer to Jefferson City and close enough to Bernie Tappel that I can borrow a spoon full of flux should the need arise.

My new address is 5821 Helias Dr., Jefferson City, MO 65101, phone is (314) 395-3304. I thought you might like that information because I know you are about to send me something for the next issue.

Moving is a tough job for normal people. But how do you box up a cone or the left over coke that is in the firepot? One thing's for sure, I will be leaving behind all the spiders, snakes and bumble bees that inhabited my old shop. At least I hope I did...

Has it been too hot for you to forge this summer? Most folks I have talked to lately have said no way. I haven't managed much forge time, with most of my time tied up in moving and getting some projects finished at the old place, like the doors that have been missing from the cabinets for the past year.

I did manage a July 4th demo way up in Rock Port, Mo. for the Star Hill Prarie Art Institute. Clarence Shaffner, who runs the place, is a blacksmith at heart and hopes to start teaching life skills like blacksmithing through the center. Waiting for your membership dues to come in, Clarence.

One disapointment came my way this summer: The folks who run the state fair said they couldn't work us in this year. I had phone calls from at least a dozen people saying they wanted to take part, so that is too bad. The fair has a lot of new folks this year and they are still trying to figure things out.

I still think we can get something going here but I hate to beg. Seems like they should be beating down our doors instead of the other way around.

Pat and I did a demo at the big balloon festival in Columbia thanks to Don Asbee, who sent them my way. We demonstrated in the kid's area along with other historical crafters, which was real interesting. The most asked question was, "What's he cooking?"

We ran into a lot of blacksmithing wannabes and found the location of a forge for sale and in general just spent a real enjoyable day forging stuff. The person setting this up works for the state parks, so it might lead to a lot of other stuff. Last year Tom Clark did a demo at Big Oaks state park.

Seems like we should get a list together of the folks who would like to do demos. We are getting a lot of calls from fairs, festivals and the like. If you want to get in on this drop Pat a line so he has some contacts to pass on when the phone rings.

I am still taking part in the Artmetal computer connnection and it has been a lot of fun. I still don't have access to the World Wide Web portion but I understand it is real interesting.

What I am doing is exchanging email with other blacksmiths. I have heard from Charlie Orlando, Steve Bloom, Helmut Hillencamp, George Dixon, Jack Andrews and hundreds of others from around the world. Even ran across Kenny Valdejo. I am getting some good material for this newsletter and also am learning a lot.

Now ABANA is getting ready to put their own Web site online. Should offer lots of information for us on those days when it is too hot or cold to forge.

If you have an e-mail address send it to me and I will publish them. While you're at it, make sure your address is correct. I have been getting a lot of returns lately and that will delay your newsletter considerably, plus it costs me \$1.01 for each one I forward. If you have a change of address send it to Maurice at the address on the back cover.

Gotta go so I can get this one out. Before I do I have to correct something I printed in this space last month. In that issue I reported that Donnie Fullwood of the Ocmulgee Chapter and myself tied in the voting for the Joe Humble Award. That part was true. But I had been told that the committee broke the tie and gave the

award to me. That part wasn't cor-

In printing that info I violated one of the cardinal rules of journalism, which is: If your momma says she loves you, check it out.

My apologies to Donnie. Never did get an official word on the award from ABANA. Just know the story from what I read in Joe Harris's monthly column.

See you at John Stovesand's in September.

-Jim McCarty, editor

Do you know these people?

The following people joined BAM at the Ozark Conference but either left no information or incomplete information to get them on our roster. If you know any of them please let Gary Kobermann know their address so we can get them taken care of: Edgar Stephens John Jordan Lee Griffith Bill Wonning Joe Medlin Robert Davis David Denny Wayne Ferguson

Gary's address is 2337 Whitshire, St. Louis, MO 63129, phone (314) 892-2527. Thanks.

Dear BAM

Dear Jim,

In the May/June 1995 issue of your newsletter on page 5, you wrote that the Northwest Blacksmiths Association "has the distinction of being the first newsletter to run color on their cover." If you will refer back to the July, 1994 issue of the newsletter of the Bonneville Forge Council you will see a color photo of the treadle hammer that our chapter raffled. This photo gives the Bonneville Forge Council the distinction of being the first newsletter to run color on their cover! Granted it is not a full page color photo, but it is color nonetheless and I felt it was quite an accomplishment for a smaller chapter such as ours. I ran a color photo of the treadle hammer so that the other chapters could observe the nice paint job that was done by my husband, Paul on this tool that was skillfully built by our members.

Sincerely, Joan Venema, Newsletter editor, Bonneville Forge Council.

Dear Jim,

I have just returned from a trip to Europe, studying and photographing the marvelous old ironwork, particularly the great altar screen in the Seville Cathedral. It was disappointing on my return to read that one of my best students demonstrated the making of a diamond pattern for a railing using the arc welder. There is, in my opinion, a much better way to do this without the arc welder. It is clearly illustrated in The Blacksmiths Cookbook on pages 94 and 95. I hope you have a copy, and I would appreciate your using that as a news item. Walt knows better.

The second article by Bob Patrick is on the use of axles for tools. Like spring steel, axles are made for a specific purpose, torsion, spring steel for springs, neither of them for impact. Both are subject to fatigue, and the chances are good that either one of them gotten from scrap have this fatigue. Bob notes the possibility of cracking, and that may be due to fatigue, not overheating. Considering the length of this article, I wonder why, with such a long process, any-

one would use a questionable material to make tools. Good tool steel is not that expensive, so why use a somewhat unknown material for a tool?

After many years of driving the drift through the steel, I have in recent years, worked out a much simpler method. Incidentally, I have used the same water hardening tool steel, equivalent to W1, for 50 years. All my tools are of the same material, and I know exactly what they will do and how to heat treat them.

For making hammers, I have tool steel 1" square, 1-1/4" square and 1-1/2" square. They will make hammers from 1 pound to 2-1/2 pounds. First I anneal the steel in lime. Then, where I want the eye, drill two 7/16" holes @ 1/2" centers. That leaves a little Hilton O)(O to remove with the punch. The punch is shaped to fit the opening exactly, with rounded ends. There is very little distortion of the steel in the process, and best of all. I can forge hammers without a striker. The eye comes out perfectly true.

I might not be able to do it now, but when I was Walt's age, I could do my diamond my way and beat Walt with his way.

Cheers, Francis Whitaker

A cordial reply to Francis:

I totally agree that a blacksmith should use the best steel he or she can obtain for tools. I created what was printed as an article for use as a handout, not an article on what I recommend for use by the professional smith. There is another side. . ..

One of the traditions of blacksmithing is being able to master the use of whatever is available. I feel it is very important to be able to use what is available locally to make tools when the very best commercial steels are not available. It is not as if axles are totally useless, poor material. As I always stress, they are not the best material one can find, but they will make tools for which no apology is necessary. I know Francis favors W1 steel, and it is very good. There are steels that properly worked and heat treated will far outlast W1. I encourage smiths to learn to use these steels, find one that suits them and make all similar tools in their shop out of the

same steel, as over a period of time it becomes impossible to remember what tool is made of air hardening steel, what is oil hardening, etc.

But the purpose of the hand out, and the work shop was two-fold. First, to teach how to make a basic tool using a basic process with a material that everyone could find upon returning home and afford. Second, to teach people attending, most of whom were not professional smiths and could not afford to stockpile tool steel, how they could make useful tools that would let them further their skills. Smithing is a hobby and avocation for them. The number of modern steels and figuring which one to use is bewildering to a beginner learning how to work on his or her own. It is important for smiths to develop self confidence, and the use of commonly available steel can contribute to that.

Those attending the workshop could see for themselves that the tools worked well. Taken care of and used properly, these are good tools. Again, I stressed that better steel makes better tools. But truly, the tools need no apology. They have one redeeming feature: they work.

In regards to Walt's balusters, as one who loves forge welding it is true that it would be hard to beat the time and beauty of a forge-welded diamond. But in doing it for a living Walt may have decided that for himself the certainty of his skilled electric weld was necessary, or that he just prefers doing it that way. That is for each to decide. I know Francis has used arc welding for economic reasons or because he felt it best on certain work.

Francis's criticisms have one valid point: taking short cuts and avoiding using smithing skills will mean that we are lesser smiths. Whenever possible we owe it to ourselves and our ancient trade to do the very best work we can with the very best materials we can obtain and never give up on preserving the many ancient hand techniques available. In his concern for quality and preserving our trade we all owe our respect and thanks to Francis.

-Bob Patrick, Everton, AR

Pat's place

Our summer meeting has come and gone. Doug really outdid himself putting together the "work shop" meeting. Everything was well planned, not just a hit and miss, spur of the moment thing. If anyone would like to host a meeting let one of the officers know and start planning.

This is your chance to hit on someone for a demo or to teach a favorite technique.

It was hot in Lesterville, but not unbearable. The river was close by and felt real nice after a day hammering hot iron.

New member Gay Wilkinson was at the meeting to perform an anvil shoot. He donated two of his beautiful carved miniature anvils to the Iron in the Hat. Thanks to all who donated an item to the Iron in the Hat and to all who participated in the trade item. A picture of the fine trade item leaves was published in the Lesterville newspaper along with an article about our meeting.

We still have some conference T-shirts and coffee mugs left for sale, \$6 each. I'll UPS them to you if you won't be at the next meeting.

The float trip was the perfect end to a great weekend. Even Andy made it down the river in one piece.

Oct. 7 and 8 is the date for the Fall Festival at Faust Park. Anyone wanting to help us demonstrate let me know. Hopefully they'll let us use the shop this time and not a tent.

Jerry Hoffmann is working on a design for our chess piece for the ABANA conference. This piece will be BAM's donation to the '96 ABANA Conference Project. We will be making two castles for a chess set. They will be 7 1/4 inches tall on a 2 inch square base.

Don't forget to do a project for the auction at the ABANA Conference. Get your item to me and I will UPS it to Alfred.

Our next meeting is at John Stovesand's. He promises an exciting meeting so plan now to attend. I'll see you in Cedar Hill.

Everything you ever wanted to know about railroad spikes ... but never asked

by Pat McCarty

Lately there has been a lot of discussion about our favorite source of rusty iron — the rail road spike! No one is sure just what type of steel they're made of so I made some calls to find out.

I first looked up forging—railroads in the Thompson Registrar at the library. This source lists all types of manufacturers for just about anything

I found the J&J Rail Sales Co. They don't manufacture spikes, they just stock them. They gave me the name of Spike Industries in Youngstown, Ohio.

Here's what I learned from them about railroad spikes:

They come in either high or low carbon steel. The low carbon is an A-36 steel or a C1011 to C1017 steel. They range from .11 to .19 points carbon.

The high carbon spikes are marked HC on the head along with a manufacturers mark. Spike Industries uses an X for their mark. The steel must have at least .30 points carbon. The amount varies according to the customer's specs. Spike Industries standard is a C 1035 steel with .35 carbon. It is a water hardening steel.

The standard size is 5/8 inch square by 6 inches long. They also make a 9/16 inch square x 5-1/2 inch spike.

They have offered to ship us 100 spikes in trade for a couple of finished knives. If any knifemakers are interested let me know and I'll have them send us some.

Welcome new members

BAM JULY MEETING

Our annual June/July meeting is generally a time to have fun, with a chance to quench ourselves in either the Black River or Lake of the Ozarks. This time around it was held at Doug and Bonnie Hendrickson's Lesterville Oasis and a good time was had by all.

Doug took it upon himself to organize workshops for anyone who wanted to step up to the anvil and try something new. On hand were Stan Winkler, Maurice Ellis, Walt Hull. Tom Clark and Pat McCarty each leading a forging station. Stan did handles, Maurice shovel blanks, Walt forks, Tom tongs and Pat creature heads.

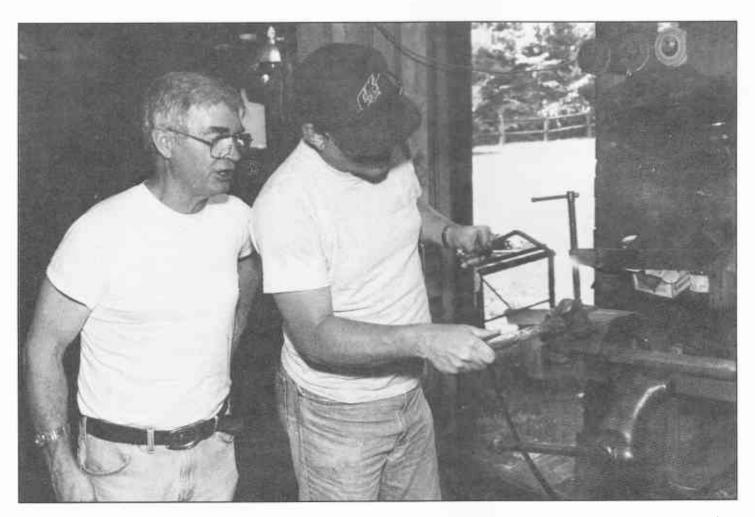
It was a very successful effort, with folks who had never forged a thing in their life turning out work that looked like it came from old pros. Wish this could be the model for all our meetings!

We had an excellent turnout, with

too many people to get a really good count. Of special interest was the prescence of Farmington Mayor Gay Wilkinson, master anvil carver and shooter. Gay touched off his matched set of Mineral Area anvils to announce the arrival of the noon hour.

Along the way we elected new officers. They are: Pat McCarty, president; Bob Alexander, first vice president; Vernon Fisher, second vice president; John Murray, secretary; and Gary Kobermann, treasurer.

Many thanks to all of you who mailed in your ballots. This was no doubt the largest number of ballots we've ever had cast. If you liked the way the election was conducted let Pat know. Thanks also to those who agreed to be candidates: Todd Kinnikin and Joe Wilkinson. The best organization is one where everyone agrees to be a candidate but no one minds if they don't get elected.



Above: Maurice Ellis (left) guides Gary Kobermann through the fine art of making a fireplace shovel blank. Maurice was one of five BAM members who led forging stations at the last meeting held at Doug Hendrickson's shop in Lesterville.

While conducting the business meeting, Pat noted that BAM is now 10 years old and that Steve Austin served as treasurer for all 10 years. With Steve stepping down, Pat presented him with a token of our appreciation. Good job, Steve.

We had a good feed, got back to work after a mercifully short business meeting (Pat just keeps getting better) and then folks started drifting off to soak in the river.

On Sunday the annual float trip/yearly bath was held. I am told all members survived though some are being questioned by DNR about their role in a major fish kill downstream. (Maybe we should make the bath twice a year?)

Judging by all the good comments I heard about the meeting, we will no doubt be doing the workshops again in the not-too-distant future. Everyone learned a lot and it really helped the confidence of those who weren't sure they had it in them.

It sure is nice to be able to put the ABANA forges to use while we wait for the 196 conference to roll around. Thanks again Doug and Bonnie for being our hosts.



Above. Trade new 12. a leaf and turn out was good, as it was for the Iron in the Hat, Below: A surprise for the new 12. was Gay Wilkinson's anvil shoot. Gay, who is the mayor of Farmington, Mo, also donated to 10. its hand carved miniature anvils for the Iron in the Hat. He also paid his membership a 2. to we can claim at least one resident anvil shooter.





P.O. Box 206, Washington, MO 63090 Executive Secretary, Janelle Gilbert Franklin Office Hours: 9 a.m. — 5 p.m. Phone: (314) 390-2133

President's Message August 1995

Dear ABANA Chapters,

The good old summer time! Right? Well maybe but right now I have some reservations. Lately it has been so hot in my neck of the woods, and a lot of other places too, I am told by the weather channel, that you can almost work the steel without firing up the forge. That's stretching it a bit but record high temperatures are being recorded in quite a few places.

With the results of the News Letter Editor of the Year recently in I expect the editors are already watching each other to see who comes out at the top next time around. As you know the recent vote count gave us two winners: Donnie Fulwood and Jim McCarty. Don't let my reference to winners lead you astray, there are no losers. We have a great team of editors and I urge you to read as many of the chapter news letters as you can. They contain a wealth of useful information.

Check all of your sources of dates for upcoming events that involve or are related to blacksmithing and plan to attend the ones you can. Even during this, the hottest time of the year, a lot is happening and with the coming of fall the events will pick up quite a bit. Many of these events offer great opportunities to spread the good word about our chapters and about ABANA. Many of our rock solid members had their interest in blacksmithing sparked by a chance attendance of a smithing get together.

Not much has been said lately about ABANA finances. The only thing I have to report right now is that our financial stability has not faltered. Next month I will give you a condensed review of our financial activities for the first six months of 1995. Our committee heads will soon be starting work on their 1996 budget requests. With the continued efforts of the ABANA board members we look for ways to expand member benefits to the extent they can be supported by available income. Your membership dues are our biggest source of income and we want you to receive value for those dues.

One more time I sincerely request that when you receive your ballot you vote for the candidates of your choice to serve as ABANA director for the next three years. I hope we have the largest number of votes cast in the upcoming election that we have ever had. Your support is needed and will be appreciated. Please vote

Getting back to the subject of the first paragraph, the hot weather, do what you can to offset its ill effects. Remember, proper dress, proper ventilation, protection from the sun if outside and drink plenty of fluids. Don't let the heat end your forging. Without due care it could happen.

Sincerely,

Joe Harris ABANA President

Atta boy

Congratulations BAM (Blacksmiths Association of Missouri) on your 10th anniversary as an ABANA Chapter.

New Chapters

Welcome to two new chapters. Please add them to your newsletter exchange:
South Carolina Artists and Blacksmiths
President Robert Hill
Star Route 1, Box 642
Georgetown, SC 29440
(803) 546-5483

Blue Grass Artist Blacksmith's Guild President Greg Biddle RR1 Box 172 Berry, KY 41003 (606) 234-9672

If any chapter has not joined the newsletter exchange among the ABANA chapters because of a lack of funds to cover the extra 50 copies of your newsletter and postage, call or write to me. The Chapter Liaison Committee is considering supplementing the income of our small chapters for this purpose from the ABANA budget.

Election

The nominations for Director of ABANA for a three year term are closed. Here's an advance list of the candidates. ABANA members will be receiving ballots between Aug. 25 and Sept. 25 by special mailing. Elizabeth Brim, Penland, NC Max Gray, Asheboro, NC Ed Grove, Brownfield, ME Eric Moebius, Hubertus, WI Jim Patton, Springfield, IL Hans Peot, New Carlisle, OH Clay Spencer, Murphy, NC Tim Ryan, Gordonsville, TN Charles Schultz, Woodville, TX

It had to happen

A news report from the Cumberland (Penn.) Times reports that a lawyer was seriously injured by a spud gun. The report reads as follows: A homemade missile made of a potato, plastic pipe and flammable aerosol spray exploded in a lawyer's face, taking out his left eye and fracturing his skull and eye socket.

J. Christian Ness, 48, a former York County district attorney, was injured when he picked up the potato launcher, which had been sitting in the sun in a back yard for several hours.

Ness was in surgery more than 15 hours Monday at the University of Maryland Shock Trauma Center in Baltimore to rebuild the left side of his face. He was in serious but

stable condition Tuesday afternoon, said a nursing supervisor.

Christian Ness and his friends were playing with several potato guns Sunday morning, said his sister-in-law, Cheryl Ness. After riding motorcycles in the afternoon, he tried to make an abandoned gun work again. As he looked down the barrel, the gun's trigger — a push-button igniter from a gas grill — hit the ground, propelling the potato into Ness' left eye.

Change of Officers?

If your chapter has had a change in the president's office or newsletter editor, please let us know so we can keep our ABANA Chapter List up to date. Just drop us a postcard or call the ABANA office, PO Box 206, Washington, MO 63090, (314) 390-2133.



The Diamond Demo He Didn't Do

by Walt Hull

Yo, Jim Bob,

Great issue, perhaps best yet. So good I'm not going to say any of those nasty things about your spell checker. You deserve any and all awards.

Just for grins, I thought I'd give the procedure I didn't demo for making the diamond with only forge welding. Francis Whitaker has a very workable approach (see the Cookbook), making the diamond first out of flats $(5/16 \times 1/2, I \text{ think, for a})$ 1/2 inch square baluster) and then welding this to square bar at each end. This approach takes four welds but can be done singlehanded. If you have a helper or treadle hammer or power hammer you can do it with two welds as follows (the example is for 5/8 inch square):

First lay out the diamond full scale and measure along the inside. The sides of the diamond should be just thicker than half the thickness of the baluster, so for a 5/8 inch baluster I figure the sides at 3/8 by 5/8, rather than 5/16 by 5/8.

Calculate the amount of baluster material needed to make this much of the diamond material plus one thickness of the diamond material (for the upset corner). Measure off this distance on two pieces of the baluster material and mark with a chisel. Heat, butcher down and draw out.

In our example we needed 2-1/8 inch of 5/8 inch square to make 3-9/16 inch of 3/8 by 5/8. I don't draw the very end all the way out, but leave a lump where I'm going to scarf to save upsetting.

Alternately, don't cool the end when you make the upset cor-

ner, and you'll get enough upset for the scarf.

Upset the corner in the usual way, bend to approximate shape of diamond and then scarf. If you do it in the other order, of course, you'll ruin the scarf when you make the corner. Adjust bend in a jig.

Now stand each piece up in the vice and upset the shoulder with a butcher or a small cross peen. If you don't do this the weld will come out thin and the whole piece will be ugly.

When you go to weld, you will see right away why you need a helper on this one. I was able to do it under the hammer, taking one end of the diamond with light blows, then welding the other, and finally returning to the first.

But this makes three welds out of two, and they're fairly tricky because of the danger of getting too far under the dies and messing up the diamond.

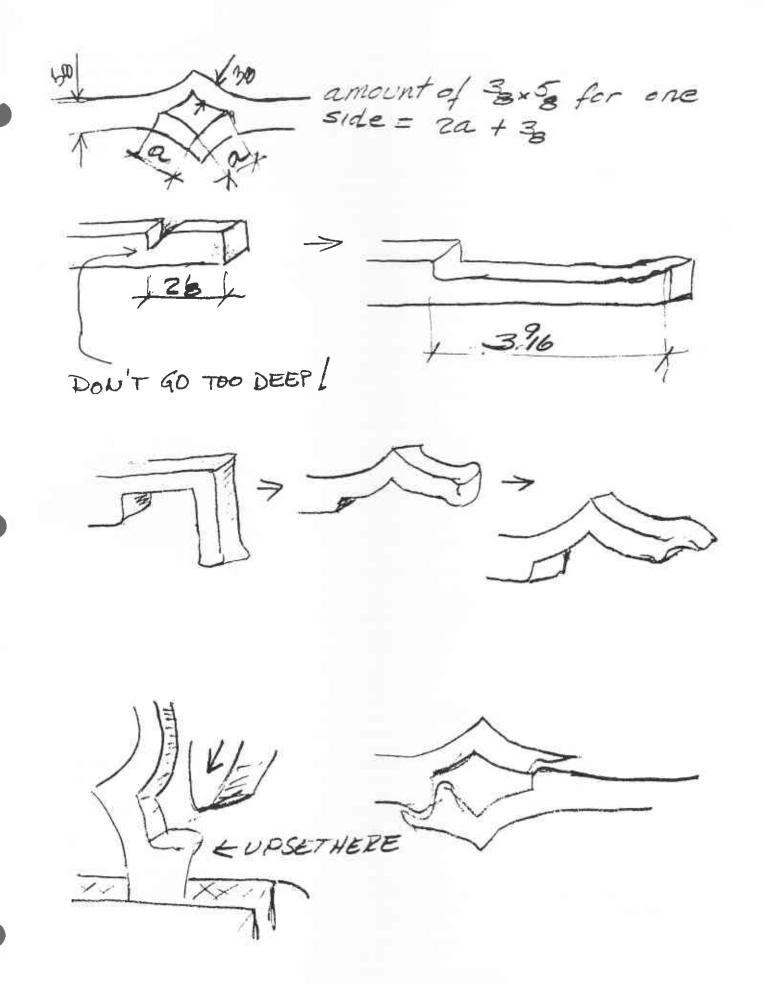
You see why Francis' way makes sense.

I finally decided that a carefully made and finished arc weld is the most efficient solution. After carefully grinding and filing I take a good heat and level on the anvil or under the hammer, going long-ways on flat dies.

Thanks again for the great work, and for showing up at the meeting. It was great to see all of you. . .too bad about Brother Pat and the others who were far away and couldn't make it. Maybe next time.

And, oh, what did you say you wanted for the negatives of those harem pictures?

Later, Walt.



A workshop with Jay Burnham-Kidwell

(Time well spent)

by Kenny Valdejo

Lou Mueller and I drove up to Jim Patton's shop to catch Jay Burnham-Kidwell demonstrate furniture making with hand tools. It was a rewarding trip, well worth the drive.

Jay was an engaging demonstrator with a lot of material and an easygoing manner. He made a running gag of his excuses: the anvil is too low, not used to the coal, jet lag, the humidity is too high, etc. Excuses aside, he did a creditable job with an anvil that was too low. Future promoters take note: find out the proper height for your demonstrator's anvil.

20 years teaching experience at the collegiate level is one reason Jay is so effective. He is familiar with the give and take between instructor and student. He has been formally trained in goldsmithing and that also helps.

He trained with Manfred Bredohl in Germany for a year. He has lot of information about the differences between German smiths and their American counterparts. He mentioned that he was wondering about the watering cans the German smiths used. Every shop in America has a different design for these, some elaborate, others plain and utilitarian. He was set for these killer watering cans made by old world craftsmen. Instead, he found them using dog food cans, no handles, no holes in the bottom, just a plain can with the top pinched to make a spout.

Maybe we can have a watering can as a trade item some month. See what the new old world craftsmen could come up with.

When Jay comes to demonstrate, he comes prepared. He had handouts of his demo, which were passed out to the audience. This is something every paid demonstrator should be required to do. It makes the whole process much easier to follow. If you pay to watch someone demonstrate, the least that they can do is provide you with a handout to make following them easier. There are smiths who never picked up a pencil in high school that now take more notes than a third year medical student. If you are listening future demonstrators, make it easier on us guys, give us a Xerox of your demo.

He also had the multiple processes finished before hand. If a smith has to work 4 or 5 pieces, all but 1 or 2 of these should be done ahead of time.

This bring up another point about demonstrators. Most of the processes that take place at these events are generally able to be performed by most smiths, not always as quickly or as skillfully as the paid demonstrator but they are within the grasp of those with some experience. The difference is the demonstrator's ability to entertain and engage the audience while doing what are often basic procedures. A good demonstration is somewhere around 60-40 percent to 50-50 percent smithing and show business. Think of the really good demos that you have watched and the ones that are more like studying for a quiz on sentence diagramming. Jay gives a good demo on all accounts.

Of course it helps to have Jim Patton as your straight man. Jim has a wry, dry sense of humor and loves puns. For two days Jay Burnham-Kidwell and Jim Patton had a cabaret act going. Jim is able to anticipate better than anyone I have ever seen what a smith needs next in a demo.

One of the things that Jay stressed was to get away from tin foil. He meant to beef up your projects, keep them in proper proportions, but get away from the 1/8, 3/16, and 1/4 stock, do not be afraid to venture into the realm of 1/2, 5/8, or 3/4. The smaller size stock often makes articles look cheap or poorly made.

Hammer marks are another of the things he talked about. You either have them or you don't. He doesn't believe a piece will flow from point to point unless it is uniform. We all know that there are some smiths who

turn out work that looks machined, and others who leave hammer marks. Nothing wrong with either method, just be consistent. He would reheat a piece and walk the hammer down it to give it a consistent texture. He wouldn't beat it to death like the fake reproduction hinges that look like they've been worked over by a chimpanzee with a ball peen. It had a cohesive surface that made the eye flow from one point to the next.

Jay stresses drawing and planning what you are going to do. Some of us call it "porch" research. You may just sit on the porch and have a cold one, but think about what you are going to do with the iron. Where will you hit it, which way will the metal go, what will happen to the reverse side when you do this to the top? Draw it on paper, draw each process individually, it may save you some time and wasted steps not to mention a lot of burned up iron. It will often signal dead ends or problems that you have not considered.

Darryl Meier told Jay it only took him 10 minutes to do a procedure on the anvil, but he had thought about it for an hour beforehand.

When he began smithing, Jay had a very limited budget, so he learned to make do with the tools he had available. That helps enhance his demos in that they are not tool driven. He was going to buy a monkey tool but realized sockets come in four sizes and you can make tenons to fit one of those sizes. On the subject of tenons, he recommends you use square tenons because the square will not shift or turn.

A few more tips that were picked were to make a T split from both sides as this prevents it from going wedge shaped by being struck too much on one side. Chalk out long measurements on your forge, it is bigger than your anvil. Learn to do the simple basic stuff by yourself. Then as you progress the basic procedure will always be there for you to build on. Crawl before you walk, but don't be afraid of trying to run.

Last of all Jay says to pass it on. Don't keep it a secret. Take what you learn and help someone else. Keep the stream of knowledge flowing.

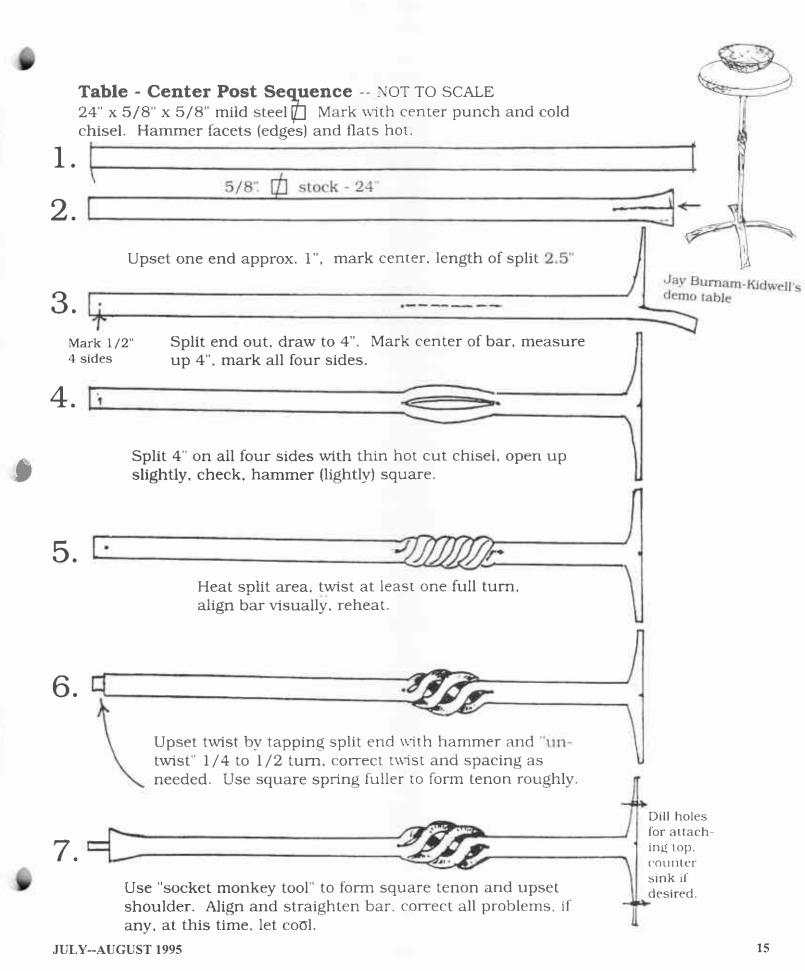
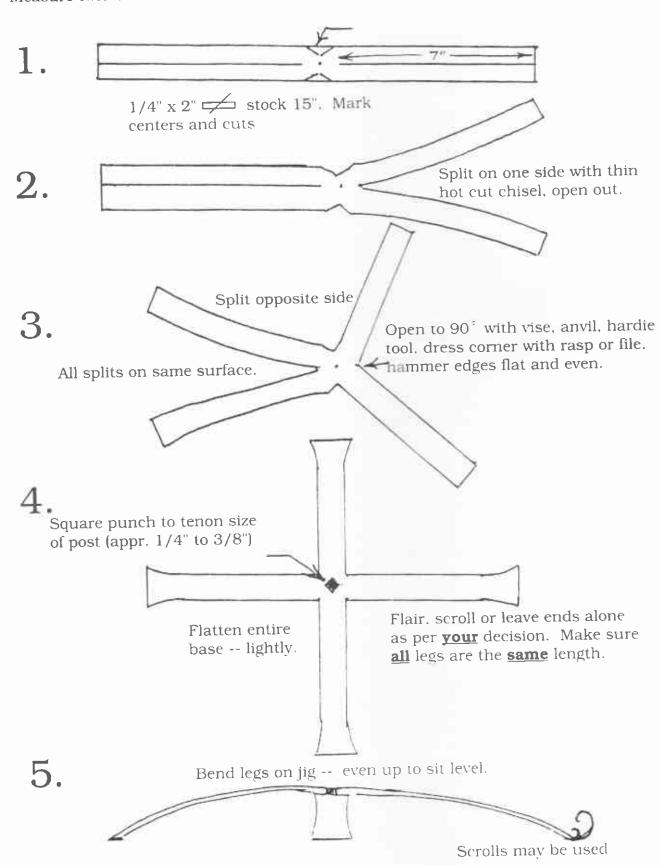


Table - Leg Sequence -- NOT TO SCALE (obviously)

1/4" x 2" x 15" mild steel ______ , mark with center punch and cold chisel. Measure twice, cut once.



For sale: Craftsman (Atlas) metal lathe. Gear change. Excellent condition. 12 inch swing, 36 inch bd. 1 4-jaw and 1 3-jaw chuck. Drill chuck and some tooling. \$1,000 firm. 2 wheel trailer for a welder with two side boxes. Needs paint. \$175. Colin Campbell, (314) 583-3512.

Pot of Gold, a pawn/flea market shop in Stockton, Mo. has two items that might be of interest to BAM members. The first is a round forge, looks like about 18-20 inches with a pretty decent blower attached to it. The second is a foot powered grinding wheel with a large stone, good shape. No idea about price but for info call (417) 276-7726.

Announcing: New how-to Manual for beginning blacksmiths titled: 101 Metal Projects for the Novice Blacksmith, by Al Canella. This is a how-to shop manual for beginning blacksmiths with step-by-step explanations and clear drawings to insure successful completion of each project. Available postpaid for \$29. Write to: Al Cannella, 1310 Watlter Reed Rd., Cookeville, TN 38501.

For sale: 70 pound ram air hammer. Total weight 1,000 pounds, 180 blows per minute. Requires 5 hp 2 stage air compressor. \$2,500. Also 25 pound ram air hammer. Total weight 400 pounds, 180+ blows per minute. Can be operated with small air compressor (3 hp, 20 gallon tank). \$2,000. Contact Maurice Ellis, (314) 766-5346.

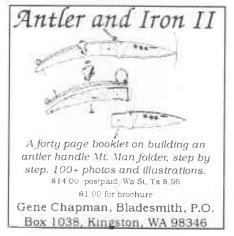
I have a 3-day beginners tinsmithing class that I taught at Ft. New Salem in West Virginia for several years in a 2 hour VHS video. This video, plus shop drawings of everything built during the making of the video and a few more, punching/piercing patterns, simple instructions in electric soldering, a list of books on how-to and history of tinware (all illustrated) and suppliers of materials and tools that I believe will be of help to beginners and any living history museum contemplating starting a tinsmithing department. This video is for sale for \$48, which includes packaging, handling, postage and sales tax. Write to Dale the Tinker, PO Box 21, St. Albans, WV 25177.

For sale: 1 Powermatic drill press, 15 inch, \$400. South Bend Lathe, 9 by 38 inch, \$1,000. Atlas lathe, 10 by 54 inch, \$800. Swage block (nice) \$275. Peter Wright Anvil. 135 pound, \$225. Champion hand crank blower on cast iron pedestal, \$75. 4 leg vises, 4 inch-\$40, 5 inch-\$50. 2 post drills, \$25. Forge with wooden hand crank on blower, \$150. Call Andrew MacDonald if interested at (618) 549-1954. May trade for 100 pound or bigger hammer. No reasonable offer refused.

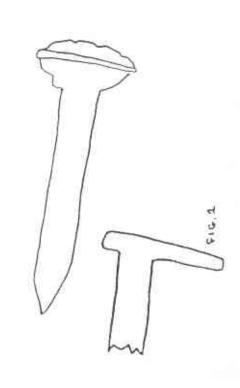
A California company called Boggs File Sharpening uses an interesting method called liquid honing. They claim the process can resharpen old tools once considered too difficult to salvage, for example a rotary file with hundreds of teeth. For more information call 1-800-547-5244.

Offered for sale: Collection of works by America's finest smiths. In total 10 piecesof work by T. Joyce (1), A. Paley (1), F. Whitaker (3), N. Putnam (1), C. Jennings (1), D. Court (1), T. Latane & crew (1). Bob Becker (1). Serious offers only. Will send photos and description on request. Please contact Walt Scadden, PO Box 8116, Manchester, CT 06040 (203) 646-8363.

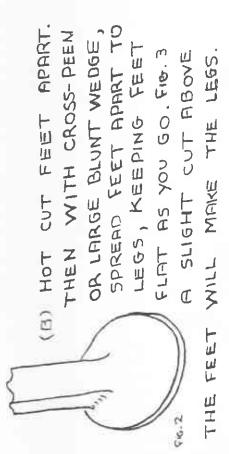
Need something, want something, gotta get rid of something? Just drop the editor a line at 5821 Helias Dr., Jefferson City, MO 65101 and I will get it in the next issue. I will also keep my eyes out for items for sale as I travel around the state.

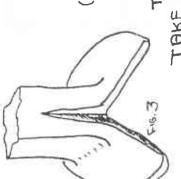


BAM Bulletin Board

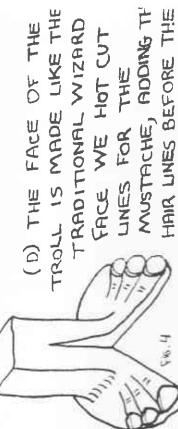


PLACE A STOCK R.R. SPIKE IN OF HARDIE HOLE. HAMMER HEAD FLAT SIDE EDGE DOWN AROUND WITH HAMMER, FIG. 2 DRESS FEET Œ

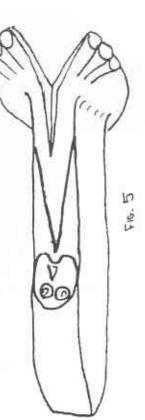




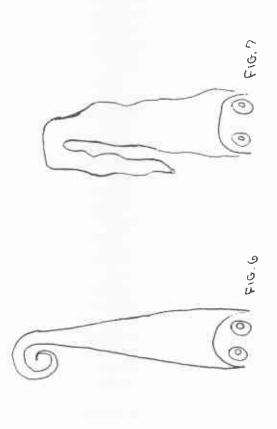
TO CUT IMMOUSED (c) NEXT, HOT CUT 3 EACH FOOT 上oN FORM THE CAREFUL トクリ PRE USED TO FORM NUCKLES Z SMALL MEDIUM HEAT AND BEING TOES F10.7 TAKE TOENAILS, AND A



CUTTING AND SHAPING THIS WORKED WELL FOR US, FIGS OWN DESIGN ON THE TROLL FINAL YOUR



POINT, THEN CURLED TO ONE SIDE. FIG. 6 A NIGHT-CAP. FIG. 7 BY LEAVING BLUNT END, THEN FOLD IT OVER THE SPINE CAN BE DRAWN TO A LOOK (2) THE SPIKE CAN BE FULLERED NEXT IS THE TROLL CAP. THIS FULLER MARKS, IT WILL FOLDS IN THE NIGHT-CAP CAN BE DONE TWO WAYS. TO P Ξ し「大币 THE し、大田 (E)



(F) HOT CUT A 360° GROOVE AROUND BOTTOM OF CAP, JUST ABOVE THE FACE. THIS DETAIL REALLY SETS THE CAP OFF. FIG. 8

F16.8

THIS COMPLETES THE BASIC TENNESSEE TROLL.
GARY & I HAD FUN COMMING UP WITH THIS. HOPE YOU HAVE FUN ADDING & DESIGNING YOUR OWN.

GARY SCASBRICK CHOO CHOO FORGE CHATTANOOGA, TN.



BAM Shop Notes

Got a tip to share? Jot it down and send it to the editor, Jim McCarty, 5821 Helias Dr., Jefferson City, MO 65101

Solution for pickling problem

As the editor of an ABANA chapter newsletter, I have the pleasure and privilege of reading most of the ABANA chapter newsletters from around the U.S.A. and Canada. In several recent issues I have seen mention made of various recipes for pickling solutions, also known as de-scaling solutions.

Many types are mentioned, but nobody lists a commercially available product called Sparex No.1. Sparex is essentially sodiummetabisulfate, a salt of sulfuric acid. It is a granular powder, so storage before use is much easier and mixing it is much less hazardous. There is no concentrated liquid acid to splash or spill and the fumes are almost non-existent, unlike sulfuric acid.

Sparex keeps indefinitely, I used a 5 gallon bucket of the stuff for over a year and ran over 1000 small pieces through it. Diluted acids like sulfuric, hydrochloric (muriatic) nitric and acetic acid (vinegar) oxidize relatively quickly and thus do not remain useful for very long. They smell bad too. The Sparex is almost odorless, works very well on any ferrous metal, stainless included, and leaves a clean, flat gray finish.

The speed of descaling is dependent on the age, temperature of the solution and the amount of use it has seen. I buy it in 2 1/2 lb. cans for around \$5 a pop. Each can makes up a gallon, I make up five gallons at a time and store it in a plastic bucket with a sealable lid. It is available from a company in Troy, New York, called Redco. They also sell a WIDE range of jewelry making supplies and engraving tools. Their phone number is (518) 283-TOOL.

Make certain to specify Sparex No.1 for ferrous metals, Sparex No.2 is for non-ferrous metal. This is really good stuff, if you use a pickling agent you should give it a try.

- Franklyn Garland, UMBA

Rendezvous catalogue

A lso from Franklyn comes this source for stuff. These folks are a

supplier of re-enactment equipment. They have a catalog that includes books, clothes and "stuff" like flint for stikers. The flints are large and sharp and cost a meager 50 cents. James Townsend and Son, Inc. 133 North First Street P.O. Box 415 Pierceton, IN 46562

1-800-338-1665 (orders only) 219-594-5852 (information)

New shop tips

Editor's note: since I am working on a new shop, I thought I would ask the experts for some advice on floors and the peaceful coexistance of wood and metal. Here's some of the response:

When I built my shop, I faced the same questions. My solution was a concrete donut. The shop is a 30' x 50' pole-barn structure (w 10' tall walls, 32' trusses on 4' centers, using a 1 in 5 slope). I divided the shop into a 20' section (0..20'-ending on 1 truss), a 4' unit (ending on the next truss) and a 26' unit. I blocked off a 16'x16' area (4' from the north wall. 10' from the south wall, 5' from the west wall and 5' from the end of the 4' wide section), and had the concrete poured around the 16 x 16 area. The 'extra' concrete was poured along the south wall in a 21 x 12 area which has since become a side room.

I poured a base for my power hammer in the 16x16 area, embedded a couple of post for post vises, buried some water pipes with a couple of spigots protruding above floor level, then planked over the area with 2x8 pressure treated planks spiked to 4x4's layed over the dirt. This scheme gives me a wooden floor in the smithy (and it's a lot easier on my knees than concrete), the ability to change and/or rearrange heavy equipment bases, a surrounding area of concrete (with cabinets built along the walls). The 20x30' area has become a wood shop, the 4x30 a storage zone, and there is a sliding door which closes off the two main zones from one another. Overall, I'm pleased with the arrangement and

haven't missed the dirt floor of my first smithy (no more rusted equipment and/or dirt up to the knees).

- Steve Bloom (IronFlower Forge)

The best tip of all

The very, very, best tip I have is one I have heard from number of demonstrators, but was really hammered home by Randy McDaniels at the Guild of Central Maryland meet at the Carroll Co. Farm Museum. A tool that Randy recommends every blacksmith have is a simple lump of modeling clay costing a little over \$1. It is available in the toy sections of stores or in hobby shops. Try to get modeling clay that doesn't dry out, rather than Playdough. Take a lump of it and shape it to the size stock you are using. Then use a hammer or other tools to shape it into what you want to make. When making something new, it saves a lot of energy to make a mistake in clay rather than to sweat over a hot fire for an hour and then make a mistake you didnt foresee.

For beginners, use the clay while you are reading through blacksmithing books. Make everything you read about so that you really understand the processes. Do the upsetting. Do the scarfing. If you are in the shop, use the tools to do each step with the clay. In your home, use your fists, fingers, pens, pencils, or a knife. Use a desk, table edge, or a 2x4 as an anvil.

-- Ned Edelen, Blacksmiths Guild of the Potomac newsletter

Clifton's comments

A v block is a very valuable tool in a blacksmith shop. In the industrial shop I worked at we probably had a hundred or more different shapes and sizes. Most of the V blocks were 90 degrees, some were more than 90 degrees and some less for special jobs like making a pin for a five-sided fire-plug wrench. You can swedge a pipe down a lot faster and better in a V block than on a flat die hammer or anvil. We welded a lot of 3/4 inch pipe between the scrapers or hook on coke plant push and pull tools. The V block

causes the force to come from three points instead of two. This collects the object much better and the energy spent is not wasted by causing more distortion than forging. It works very good when welding a group of pieces together.

-Clifton Ralph. Indiana Forge Fire

Magic measure

o to a fabric store and buy some Jwhite elastic tape or band material. Get some that is 1 inch wide. Mark it with lines and numbers in even spacing. The exact measure you use is up to you. It could be 1/2, 1 inch or 2 inch spacings depending on your needs. Use it to divide work into equal increments such as laying out railing pickets, bolt holes, etc. Clamp one end to the work with vise-grips and stretch the other end. You can quickly mark off each spot evenly spaced from the next without making a bunch of odd measurements with a ruler or calculator.

Clay's steel keys

Isaw a neat wrinkle that Clay Spencer came up with at the BAM conference in April. He had a piece of wire with all the different grades of tool steel that he could come up with on it, ala a key chain. The name of each was stamped on it. Then all he had to to was a spark test comparison. Talk your buddies out a of a 2 or 3 inch piece and start your own tool steel key chain.

This would also be a good idea for assorted gauges of sheet metal and different sizes of stock. Of course Clay probably has enough experience that he doesn't need to use it that much. There is no substitute for experience, in any line of endeavor. Remember, don't pick up the pretty end.

- Kenny Valdejo, Bittersweet Forge

Freeze treating

Many bladesmiths like myself freeze treat their knife blades to bring out the full potential of the steel. I use liquid nitrogen which is kept in a sperm storage tank. (Contact a veteri-

narian about getting such a tank.)
Each blade is #1 Hardened #2 Drawed
#3 After reaching room temperature,
placed inside a cylinder which I then
immerse in the liquid nitrogen for several minutes #4 Drawed for a second
period. There are many arguments
both for and against this process. I
firmly believe it does improve the
quality of the finished blade. For further info on freeze treating, see JuneJuly issue of *The Blade Magazine*.

Blade Magazine 700 E. State St. Iola, WI 54990

—From Raysmfg@aol.com

Wire brushes

n important factor in the life of wire brushes is how hard the work is pressed into the brush. The harder/farther the work is pressed in the SHORTER the life of the brush. Most people have a tendancy to think that if you press it in hard the brush will work faster. This is not true; only the ends of the wires do the work; if you press to hard the sides are trying to work, but they are ineffective. So only feed enough to start the material removal. Hint #2: Turn the brush over on a regular basis. This will expose new, sharpened edges with improved material removal capabilities.

- Dan Nibbelink, RedHawk Forge

How much stock?

When I was a young apprentice and making my first link one of the smiths in the shop said, "Remember, boy, when you are making a link, measure the outside length of the pattern link and double it, measure the inside width and add it. Cut to this length and you will have the right amount of stock to make your link." So I always remember by using this phrase. "Twice the outside length and once the inside width."

It's amazing the skills of the old time smiths who had little or no education.

— The Iron Trillium



Beginner's class

Plans are in place for the BAM/ABANA Beginner's Workshop. Lou Mueller will be the host for the big event which will be held Dec. 2 and 3 at his shop in Valley Park.

In addition to the Beginner's Workshop, there will also be a pattern welded steel/Damascus demonstration. The Beginner's Workshop will be a hands-on event similar to the one BAM hosted last year. BAM will supply the instructors, who will teach up to 24 students from a class outline put together by Lou.

Any other chapter that wants to host a similar event can use the course outline and supply their own instructors. This will be the first test for what Lou hopes will be many more around the country.

At the same time as the workshop, Hank Knickmeyer will be teaching Damascus with assistance from Todd Kinnikin and Al Dipold. While there won't be any hands on training, those attending will go home with the info needed to start or advance in pattern welding techniques.

Cost will be \$35 for the Beginner's Workshop and \$30 for the Damascus Workshop. For more information and registration materials contact Lou Mueller, 224 Benton, Valley Park, MO 63088 or call (314) 225-3252. Registration is limited so don't delay!

Ozark Conference update

Ozark Conference Chairman Maurice Ellis has set the date for the 1996 conference for May 3, 4 and 5 at the Potosi Lions Club, Potosi, Mo.

Demonstrators who have already committed for the conference include Dorothy Stiegler, Jay Burnham-Kidwell and Bob Haverstock.

Dorothy is a past president of ABANA and is well known for her flux slinging forge welds and roses. Jay is an expert on design, forging furniture and more. Bob, from Sullivan, Ill., makes knives in a traditional style we can all appreciate.

We will again have Tim Ryan for the auction and tailgate sales will be encouraged. Maurice says to get started on your auction items for next May!

Whitaker scholarship

Whitaker Scholarship for experi-Lenced students will be awarded in two blacksmithing classes at the John C. Campbell Folk School. One "tuition only" (\$450) will be awarded for the Fall class 1995, Garden Gates. Oct. 29-Nov. 11, which is taught by Bob Becker in the traditional methods of Francis Whitaker, A second scholarship of "space available" tuition will be awarded by the Folk School. Tuition scholarships will also be awarded for the one-week Spring Class of Whitaker traditional methods taught by Clay Spencer, April 14-20. 1996.

Need of the applicant will be considered and applicants must be above the beginner level. Apply by sending the following items to: John C. Campbell Folk School, Blacksmith Scholarship, Rt.1 Box 14A, Brasstown, NC 28902.

- 1. Name, address, phone number.
- 2. Resume of your blacksmithing experience. Include training, classes taken, apprenticeships, blacksmith and related work experience.

 Describe type of work, products, your part of the work, length of time, etc. Can you forge weld, turn a smooth scroll with hammer and anvil and forge an upset square corner?

 3. Pictures and description of your
- 3. Pictures and description of your present work.
- 4. Reason you need scholarship.5. Goals of your blacksmithing
- 6. Project you propose to make in the class.

Blacksmith benefit

The annual Blacksmith auction to benefit the John C. Campbell Folk School teaching faculty is Nov. 11, 1995. There will be a demonstration by Bob Becker in the morning, followed by the auction in the afternoon. come join with friends for a great day of blacksmithing activities at the Folk School. Look for more info at a later date but mark your calendars (and make something to donate) now.

Blacksmithing workshop

The Jefferson County (Ill.) Hstorical Society will host the 3rd annual blacksmithing workshop on Oct. 28-29 at their Pioneer Village on N. 27th St., Mt. Vernon, Ill. The guest demonstrator will be BAM's own Jerry Hoffmann of Blacksmiths Journal fame. He will be deomonstrating some of those projects you've read about in the Journal. He will also be showing off the many uses of the Smithin Magician which he manufactures. If you've ever had the opportunity to see Jerry in action, you won't want to miss this one.

Jerry will be demonstrating on Saturday only. Steve Parker, president of the Illinois Valley chapter will be joined by BAM President Pat McCarty and others on Sunday.

Cost of the workshop is \$15 per day or \$25 for both days provided you preregister. All proceeds benefit the blacksmith shop and the Pioneer Village.

There will be a table for display items. There will also be an auction so bring something to donate. Tailgate sales are encouraged.

Coffee and donuts and a weiner roast Saturday evening are free to registrants. Saturday and Sunday lunch are available for \$5 donation per meal per day. Please register by Oct. 7 to help us get a count for food.

Send name, address, phone and amount enclosed with checks payable to Jefferson County Historical Society, to: Andrew MacDonald, 401 W. Kenicott, Carbondale, IL 62901. For more info call (618) 549-1954.

Next Meeting September 23, John Stovesand's

John Stovesand will be the host of BAM's next gathering on Sept. 23. You might remember John from the Ozark Conference. He spelled Tim Ryan and together the two took us for a lot of money!

John lives just off Hwy 30 in Cedar Hill at 8330 Hwy. B. If you found Hank Knickmeyer last fall, just follow the route you took to Hank's but take B south instead of NN north.

Cedar Hill is in Jefferson County southwest of St. Louis. If you're coming from the south take I-44 to St. Clair and Hwy 30 to Cedar Hill.

From St. Louis take 270 to 30.

While the meeting officially takes place on Saturday, John says early birds will be at it Friday night and everyone is welcome to join in. He says he has space on the floor but bring a soft blanket.

He has something a little different planned for us. He has a crew assembled to show us how to do casting in a coal forge.

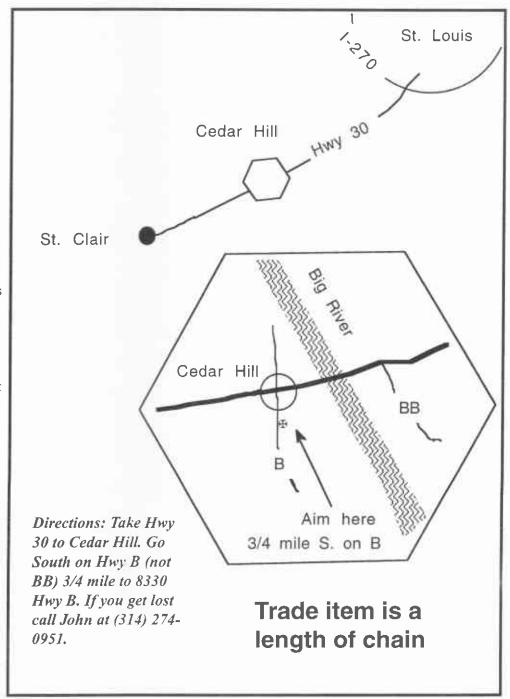
John says they will pour several types of metal from a casting made of one of Bob Alexander's tulips. The pours will be made using red, white and yellow metals for an entire bouquet!

He will have several crucibles for melting metal on hand for those who want to buy one.

The trade item will be a piece of chain. We all learned how to forge chain at the Ozark Conference so no excuses on this one. Make as many links as you want, but try to join at least a couple. No doubt John Murray will use 1 inch round or larger!

Also, don't forget to bring something along for the iron-in-the-hat, which will probably be conducted as an auction considering the many auctioneers that will be around. Anything you forged or that can be used by blacksmiths — tools, supplies, small children, bottles of homebrew with chili peppers, soap and deoderant, for example — are welcome.

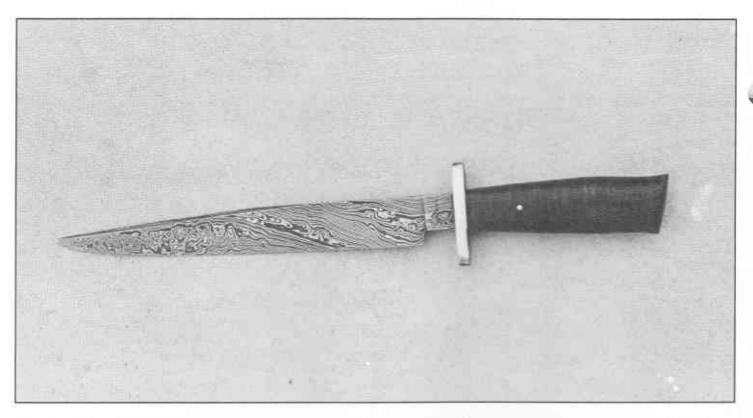
See you in Cedar Hill on September 23.



September 1995 November 1995 January 1996 MeetMeeting Meeting ing John Stovesand, Joe Wilkinson, Hope, Cedar Hill, Mo., Mo., November 11 Genevieve, Mo. Date

September 23

to be announced



Once again V.J. McCrackin adorns our back cover with another of his beautiful Damascus knives. This one is a Bowie made of 203E and 1095 twist pattern. It has a 9 inch blade, is 1 inch wide and measures 13-1/4 inches overall. That's a brass guard and a maple handle. Nice work, V.J. Photo by Kevin McCrackin.

BAM 5821 Helias Dr. Jefferson City, MO 65101

(Note New Address)

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Address Correction

Please send changes to Maurice Ellis, Rt. 1, Box 1442, Beigrade, MO 63622