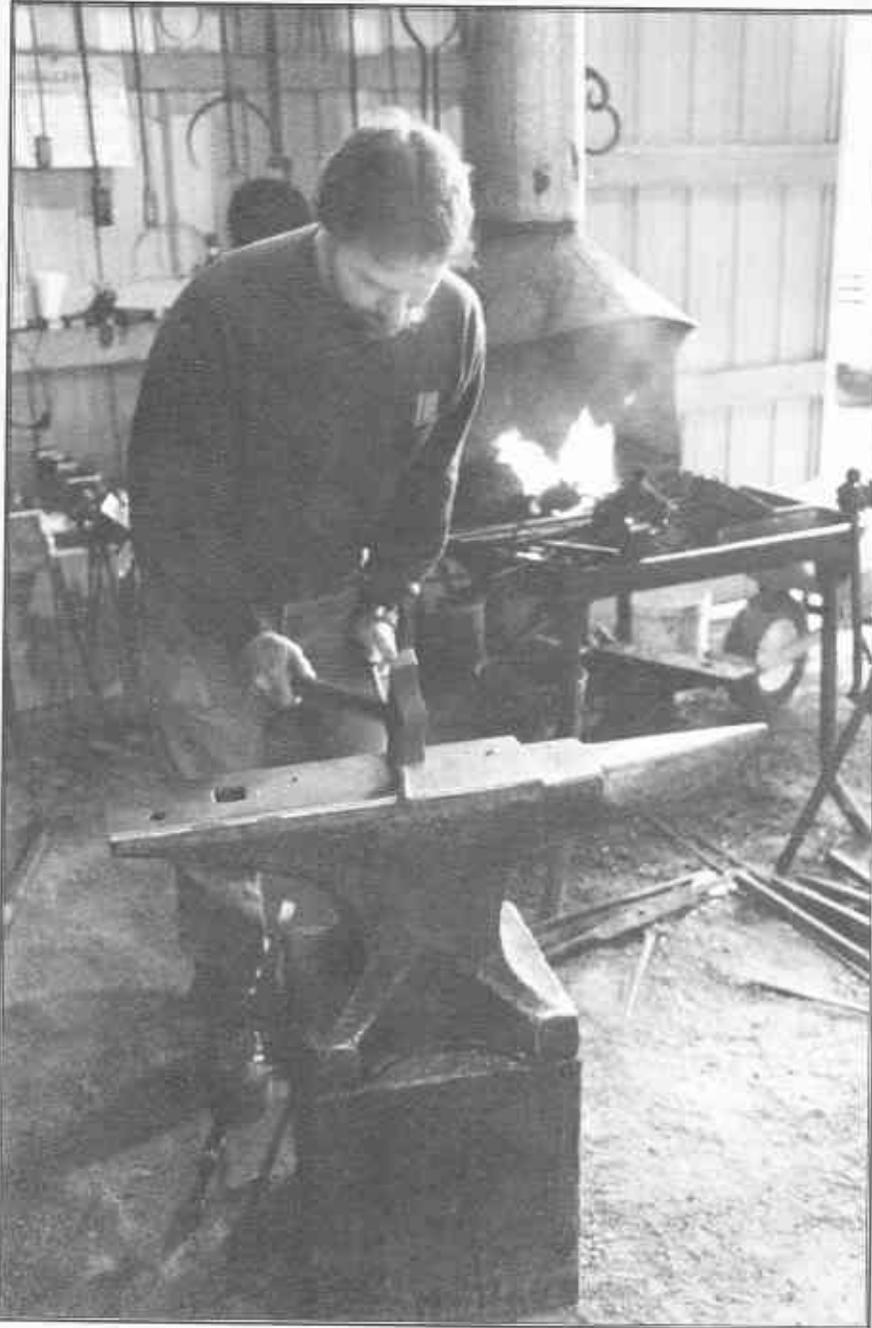


BAM

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NEWSLETTER of the BLACKSMITHS ASSOCIATION OF MISSOURI

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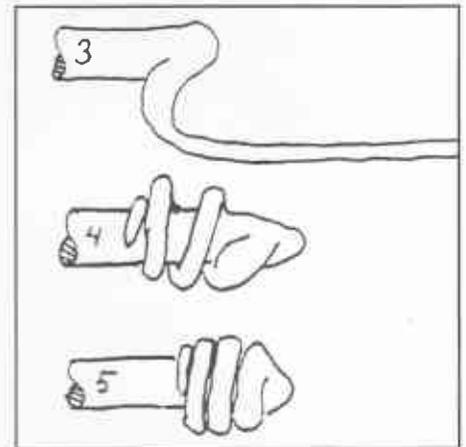
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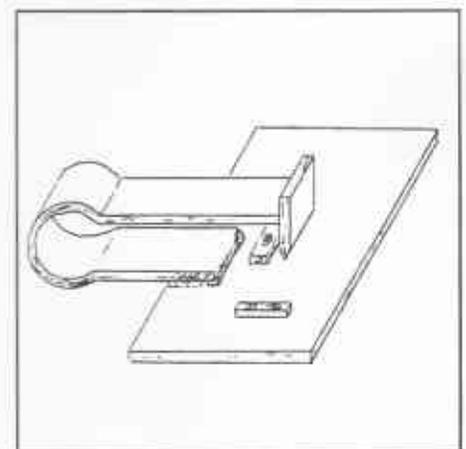
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Newsletter of the Blacksmiths Association of Missouri

Volume 10 No. 5

Our cover: Jim Waller waited until most folks had left the September meeting before he picked up a hammer and showed how to make a thorn twist.

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Art Director

Jerry Hoffmann

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Maurice Ellis

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, Rt. 1 Box 20, Loose Creek, MO 65054 (314-897-4111). BAM membership inquiries should be addressed to: Steve Austin, 44 N.E. Munger Rd., Claycomo, MO 64119 (816) 781-1512). 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: _____

New Member Renewal

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

Name: _____

Address: _____

City: _____ State: _____

Phone: () _____ Zip: _____

New Member Renewing Member

How did you learn about ABANA? _____

- Regular Member\$35 yr.
- Family Membership (One Vote).....\$40 yr.
- Senior Citizen (Age 65)\$25 yr.
- Overseas Membership.....\$45 yr.
- Contributory\$100 yr.
- Library\$25 yr.

See reverse

Editor's Anvil

With a membership around the 300 mark, you'd think BAM had reached every corner of the state and found all those smiths forging away surrounded by their own obscurity. That's why I took great pleasure in discovering Daniel Floyd (not to be confused with ace anvil shooter Floyd Daniels) on my latest jaunt to the northwest corner of Missouri.

Daniel lives in the tiny town of Fillmore and he farms for a living when the Nodaway River lets him. When the crops are all in and winter settles on the landscape he's taught himself some pretty neat tricks on the forge.

An antique dealer in Mound City told me about Daniel and I quickly signed him up for BAM. He has all the tools that Tom Clark was unable to locate, literally barns full of blowers, forges, weird drills and a power hammer or six.

I saw some pretty neat iron he has made, including some dragon headed candleabras and a nice pair of spurs with horse heads on them. He is a buckskinner and makes Damascus knives to carry with him.

Meeting Daniel, who taught himself everything he knows from reading books and talking to old timers, makes me wonder how many other people are out there who don't know about BAM. No telling the skills they have mastered on their own because they were unaware that couldn't be done. I'll make a point of seeking these folks out as I journey across rural Missouri.

Working my way north, I stopped at Steve Austin's to drop off a sheer I sold to Bud Redmond who lives in Kansas. Steve showed me the working plans for a house he is doing the ironwork on. Boy does Steve have his work cut out for him! Don't know who dreams this stuff up, much less where they get the kind of money to hire a Steve Austin to build it, but I hope it continues.

Send us some pictures when it's done, Steve.

With winter approaching and my wife deciding we should stay put for

awhile, I made an all-out effort to get my side draft forge going. I had some help getting 10-foot of Tom Clark brand stove pipe up in the loft, but was all alone when it came time to stand that sucker up.

This pipe must weigh 400 pounds, and I must be an idiot for trying it by myself, but a man's got to do what he's got to do. I bear hugged it on top of the forge, and now I pray Ray Chaffin's welds hold on the forge and the damn thing stays up there.

With 14 feet of pipe on top of it, the draft sucks so hard that I've had to tie my anvil down to keep it from going up the chimney. I can't get the fire to go out unless I block the opening. Jerry did a great job of designing these things. Except for a cloud of smoke while the pipe warms up, everything goes up and out.

It's taking some getting used to flipping a switch instead of pumping on the ratchet forge, but it's nice having electricity run the blower. I am using the little furnace blowers from Hoods and I can report that they bolt up perfect and do a respectable job. I don't forge a lot of big stuff but I suspect it would be pretty slow heating a piece of 1 inch.

Myself and about five other

BAMers took home most of the contents of the old blacksmith and carriage shop in Fredericktown, Mo. last month. It must have been quite a place in its day, with a full complement of metal and wood working machines. Pat picked up a Beverly sheer, I bought a lifetime supply of 5/16 round and Tom as usual filled his truck to capacity with neat stuff, including a big pile of wrought iron.

We couldn't touch the two anvils for sale, both Trentons. They went for way too much money, as did the lonely swage block. Todd did get another 8-inch post vise.

We also got a new old member, whom most of you will remember. He is James McHaffie who lives down by Patterson, which is just a little southeast of Gnome, Alaska. Glad to have you back, Jim. I'm looking forward to hearing what he has been up to.

For the first time I received no contributions for this issue from anyone except Tom Clark. I didn't even get a letter to the editor! For this reason I've decided to offer a prize for the first member to send me an article. To that lucky person goes a lifetime supply of stainless steel. You can pick it up along the riverfront in St. Louis. You can't miss it — it's a horseshoe sort of shape.

Seriously folks, I need new stuff — photos of your work, shop tips, new ideas, even just a letter telling me your frustrations and successes. It's easy to do, it doesn't have to be well-drawn, grammatically correct or even typewritten — just received. Thanks in advance.

This issue has a schedule for the next year's worth of BAM meetings. While I will do my best to get the newsletter out on time to tell you when and where, it wouldn't be a bad idea to clip this out and post it in a spot where you will be reminded of the dates. If you are hosting a meeting, please get me a map and your trade item ASAP.

Nuff ced — see you at Todd's.

—Jim McCarty



Welcome New Members

James G. McHaffie
PO Box 97
Patterson, MO 63956
(314) 856-4201

Tom Berryman
Rt. 2 Box D-10
Ferrelview, MO 64163

Jack Stevenson
Rt. 2 Box 127
Cole Camp, MO 65325

Dan Hart
6279 Reber Place
St. Louis, MO 63139

Nathan Allen
301 Mesa Dr.
Neosho, MO 64850

Harold Mazingo
Rt. 10 Box 160
Meridian, MS 39301

H. Tim Reynolds
4029 Santee Way
Lexington, KY 40513

Warren Groves
PO Box 211431
Martinez, GA 30907

Glenn Gilmore
P.O. Box 57, Pine Log Rd.
Brasstown, NC 28902

Russell Cashion
720 Bell Rd.
Antioch, TN 37013

Daniel Floyd
P.O. Box 74
Fillmore, MO 64449
(816) 487-3725

Stan Winkler Fund: \$200
Coal Money: \$140
BAM Newsletter sales: \$30

Frank talk about forge fires

by Russell O'Dell

I would like to discuss a topic with you and other members that I feel has been neglected: the fire. Blacksmithing has been the largest part of my living for 20 years now. In the past year I have seen many demos, lectures, etc., but seldom do I hear how to build and maintain a good working forge fire.

The first thing the individual must learn is that the fire should be looked upon as a tool. The best anvil, power hammers, swages, fullers, etc. are all useless unless the smith has his metal hot enough to work with it. I have seen fires built from charcoal, lump coal, green coal; I have seen fires that spread all over the top of the forge and occasionally I see a nice, well tended forge fire.

I generally start by cleaning out the fire pot and dumping any ash that is in the ash dump. Usually a couple of pages from your newspaper's society pages produce enough hot air to start the fire. I begin by wadding a couple of pages into a fairly tight ball, placing that into the duck's nest, and lighting it. Then I scoop generous amounts of green coal and coke around the burning newspaper. Provided that a nice side draft hood has been installed all that thick yellow and black smoke will ease right up the chimney. When my fire has started nicely, I begin to pull more green coal around the burning mass. I have a sprinkler which is dome shaped. The top has a few holes in it, but the bottom is left solid and is attached to a handle. This is a tool that all of you can simply make: it's a century ahead of the tin can attached to an iron rod. I call it a turtle and I can safely sprinkle my fire, keeping it in a well-maintained proportion. Sprinkle lightly and only around the diameter of the fire. This will help your coal to coke and pack.

Depending on the job for the day, I prefer a cavern fire or a trench fire. Something else I have found that really helps is — when you buy coal, try to get some of the slack. This is

usually almost powdered coal.

I find that it really works well to take a 5 gallon bucket, fill it with slack and then fill the bucket with water, letting it soak overnight before using it the next day.

When your fire is getting to the stage where you are almost ready to work, place some of this wet coal around the perimeter of your fire, which should be kept at about 6-8 inches in diameter; unless you are working on a large, awkward piece of work. General rule of thumb: small work — small hot fire. . . large work — large hot fire. Please add coal and sprinkle as needed. I have seen beginners or intermediates working over an unbearably hot fire that has simply been poorly neglected, or else one that's so poor that it wouldn't cook a half-done hamburger!

Fellows, if the fire isn't hot, then neither will your iron be hot. Anyone that comes to my shop with intentions to learn will receive my entire philosophy on building and maintaining a well-kept forge fire before any other introduction is given.

In this article I have not discussed clinker problems in depth. When you're trying to forge iron at a blood red heat, and your air blast shuts down for lack of air, or coal, then it is quite evident that you probably have a clinker the size of Texas.

To some of you, this may seem to be a long ritual to go through, but really it's not. 1. Build your fire. 2. Add plenty of coke and damp coal. 3. Keep fire size proportional to size of work. 4. Add coal according to need. 5. Watch for clinkers. 6. Sprinkle lightly as needed.

My forge runs 12-14 hours a day, six days a week. I am a production blacksmith and metaspinner. The items outlined above work well for me; there is no time for cold metal and a poor fire. I hope that perhaps this may be of some help to you.

(Editor's note: This article was reprinted from the Appalachian Area Chapter Newsletter. Russell will be the featured demonstrator at the 1994 Ozark Conference.)

Tom's Turn



Our September meeting at John and Lisa Murray's was a near wash out. Rain along the upper Missouri and upper Meramac rivers caused flash flooding and a week of rising waters where these rivers meet the Mississippi.

Thursday night and early Friday morning, Sept. 14 and 15, 12 inches of rain fell at my house on ground that was already soaked. It takes rain water that falls here about a week to reach the Mississippi. On its way it brought the Meramac out of its banks at Valley Park, home of Lou Mueller. Lou felt he was fortunate to only have 6 inches of river water over the floors. Six inches of river water leaves about 1 inch of mud (better described as muck). Lou and family have it all cleaned up now. This time there was no time, supplies or energy left to protect Stan Winkler, however the water only reached his yard. Will it ever end?

John and Lisa had prepared for 100 people, but the rains washed out Highway 47 (again) and it was still raining the morning of the meeting. The 40 or so people who showed had a good time (plenty to eat). John gave several demos on his 400 pound Nazel. A good business meeting was held and Lou conducted the meeting on the 1994 ABANA Conference. It

seems everything is on track and as the event draws near fine tuning is being done.

Travels these last two months included a visit with Charlie Schultz of Eastam Forge, Beaumont, Texas. They had broken a piece of the anvil on the 10,000 pound hammer and were making repairs. To do so required cutting about 9 inches off the top — that's 9" x 42" x 66" — of the anvil face. That comes to about 7,000 pounds removed from the anvil. Sounds like a lot until you consider the total anvil weight is 150,000 pounds. They were also inspecting their boiler. That boiler might be 15 feet high and 20 feet long and they had it torn apart. A two day job for half a dozen men. Everything inside looked like new.

I attended the Tannehill Conference in Alabama. Jerry Hoffmann was one of the demonstrators. Jerry continues to improve his skills as a demonstrator and he dazzled the group with one forge weld after another and did them as part of a job in progress. They had a two-man team nail contest that was very popular. Having not made small nails before, I teamed up with Ellis Cameron who was also a demonstrator. He had no experience making nails either. So we went to school together and finished somewhere very near to last place. However, we learned a little and plan to stay as a team next year. The other contestants didn't seem to be terribly concerned about that news.

On the way home I picked up a 300 pound Chambersburg air hammer I had bought for Todd Kinnikin. That is just about a load for my pickup.

Todd also has a 100 pound Bradley, several large anvils and the mother of all post vises and other goodies that can be seen at our Nov. 6 meeting which will be hosted by Todd and Marian.

Next stop Tipp City, Ohio to attend the Quad State Round Up, at the Studebaker Frontier Village. Emmert and Jane have housed the largest regional conference of all since its beginning. On another note, that was the last conference to be

held there. SOFA is moving their Quad State Round Up to another location in 1994. I'm sure it will be great, but the atmosphere of the Studebaker Village will be difficult to match.

The tailgate sale at the conference was an event in itself. Todd Kinnikin and I spent most of our time visiting here and asking everyone to come to the 1994 ABANA Conference in St. Louis.

It pushes the limits of one truck when Tom and Todd travel to an event like that together.

One of the main highlights of the conference was the chain making contest. Two men teams went at it for an hour to see who could forge the longest chain. Links that didn't have a good weld or proper shape were not considered. I was disappointed that the winners of last year's event, Bob Bergman and Nol Putnam, were not allowed to participate.

Our first Sunday of the month hammer-ins continue to draw a small but energetic group.

The sale of the old blacksmith shop in Fredericktown on Oct. 2 found Todd, Tom and others like Pat and Jim McCarty, Bob Alexander, Andrew Macdonald with more rusty stuff to take home with them.

Don't forget to work on your ring for the ABANA Ring Project and items for the 1994 Ozark and ABANA Conferences.

"Shut up Tom." See you at the next meeting soon.

— Tom Clark

BAM

SEPT. MEETING

John Murray was the host for BAM's last meeting, held Sept. 25 at his shop near New Melle. About 45 people turned out on a nasty rain-swept day that kept us all close to the coal fire.

Step into John's shop and you get the feeling he likes things on a little larger scale than the rest of us are used to. When most of us decide to use the "big" hammer we reach for a 4-pound sledge. John has at his command a 400-pound Nazel and is about to hook the air to a battleship-size Chambersburg.

Everything else is similarly sized, including his band saw, drill press, disc sander (20-inch) and the stock — we could find nothing smaller than 1-inch in the square stuff.

The host put on a super demo on the Nazel, showing off a wide range of tools for the big hammer. He showed a nice touch on the air hammer, wielding it the way most of us would the lightest ball pein.

Maurice Ellis hooked up his VCR and TV set to show us his latest pride and joy, a home-made air hammer. The video showed it making easy work of a piece of 1 1/2-inch round stock. For those who want to make their own, Maurice has copies of the plans. He says he has less than \$1,000 in it.

The trade item was some kind of twist, and while there weren't a lot of trade items made, we did get to see some new techniques. Jim Waller even took to the forge and showed off his prowess at the thorn twist (also called the mystery twist by some BAMers). Jim didn't stop there — he added a dragon head to the end of the stock, proving he really does know how to blacksmith.

Not to be outdone, Todd Kinnikin followed him with a twist made in round stock, even though we told him you can't twist round stock. Using a long piece, you can twist round stock by bending it 90 degrees and rolling it up coil style, sort of.

We pondered some other ideas, including variations on the Rubicks Twist theme, but didn't get these forged.

At the business meeting we tossed a lot of other ideas around, including

a plan to build 10 new forges for the ABANA conference and sell them or keep them for our own use. Date for their construction is tentatively set for Feb. 5-6 at Lou's shop. Welders are especially needed.

Lou followed the meeting with a conference committee meeting. He has things going smoothly but really has his work cut out. Please be quick when he calls for help.

John Murray will be calling on members for tools such as anvils, vises and hammers for the conference.

In other news, Tom Clark reported that the Ozark Conference is still on for 1994, despite the close time frame with the ABANA Conference. While plans aren't complete, block off the end of April for it. Russell O'Dell from Tennessee will be one of the demonstrators. He spins copper and brass to complement his blacksmithing techniques.

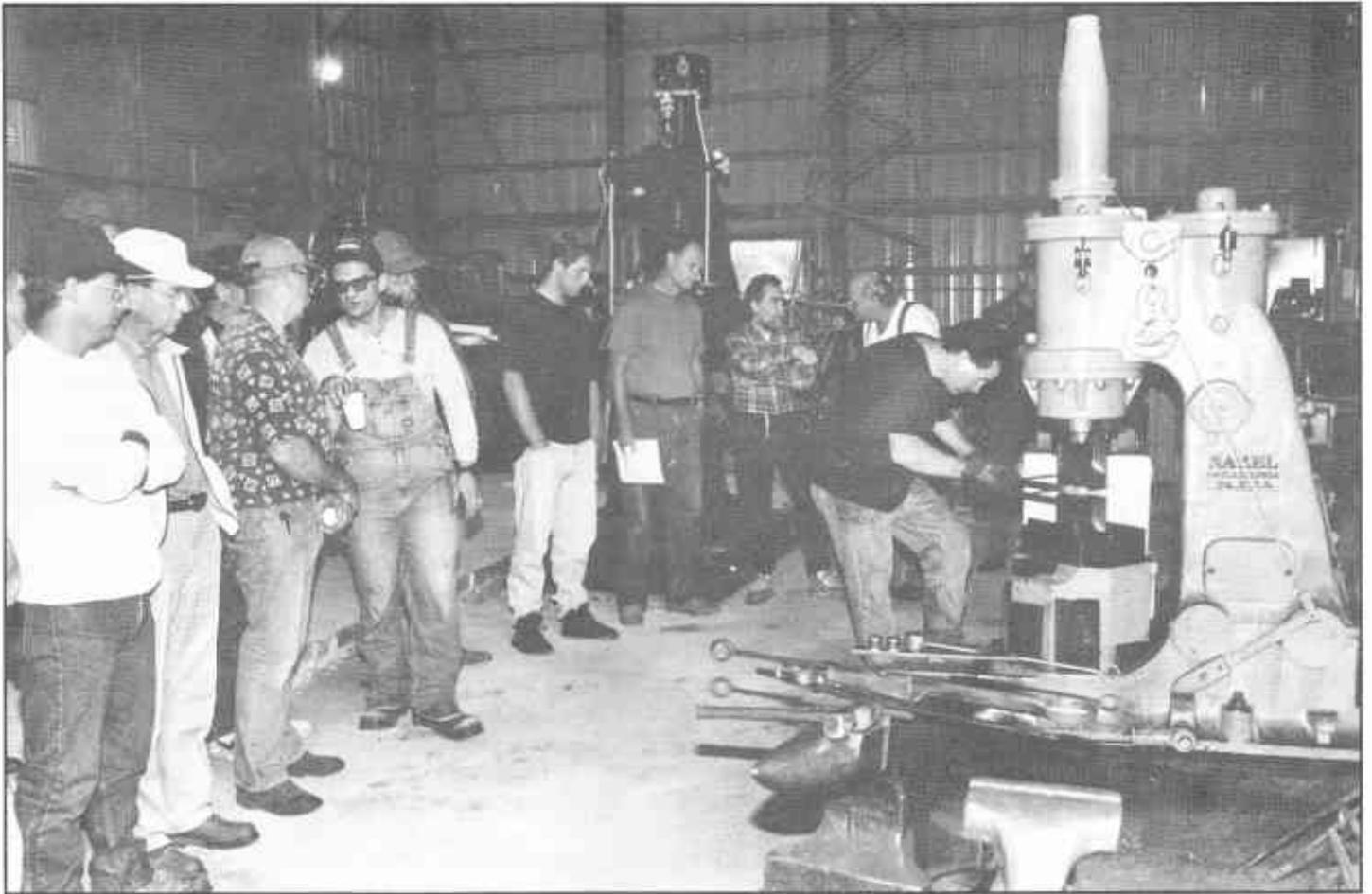
Treasurer Steve Austin reported a balance of \$6,693. He said the coal has been paid for and the rest is profit.

Tom gave an update on Stan Winkler — the river is coming back up but he's not going to worry about it. Stan sends his thanks to all who lent a hand last time.

We also learned that Lou Mueller, who took on some of Stan's forging projects, is about to be swamped by the Meramec River, which behaved itself in July. Lou said he has the motors yanked from most of his machines and anything that didn't like water was above the expected crest.

We discussed the scholarship fund: BAM will give three \$500 scholarships to members each year. Todd Kinnikin, who will chair the committee is the first winner. The money is for use at any educational school you choose. Tom stressed that even experienced smiths should apply. He noted they may want to apply it towards a European experience or something like that. All scholarship winners must give a demonstration and submit an article for the newsletter.

Look for an application in the newsletter when the committee gets



Above: John Murray wowed us with his pinpoint control of the 400 pound Nazel air hammer. Big was emphasized all over John's well-organized shop. Below right: Doug Hendrickson tries to hatch a 480 pound anvil during the business meeting. We decided John has the world's largest power hammer tool rest, since that's what the big anvil does most of the time. Don't think Doug ever got the job done.

the rules in order.

One other item came up — Tom made a suggestion that BAM contribute funds towards the rebuilding of ABANA's birthplace in Lumpkin, Ga. We discussed the matter and Doug Hendrickson moved we table it until we all had time to read the article in the *Anvil's Ring*.

Before we adjourned Joe Wilkinson suggested coming up with name tags for members so we could quit calling each other the wrong thing. Having opened his mouth, Joe was promptly appointed to a committee of one to look for something suitable.

With that we adjourned to more of Lisa Murray's vittles and Lou's committee meeting.

Thanks John and Lisa for a good time. Sorry about those muddy tire tracks in the fields — Doug had to bring his Dodge truck!

Hoffmann, Pat McCarty, Doug Hendrickson, Ed Harper and Maurice Ellis.

Iron in the hat went as follows: Leaf cup holder made by Pat McCarty went to Tom Clark; Hammer donated by Bob Alexander went to David Bulk; Monkey wrench donated by Bob Alexander went to Andrew Macdonald; Tongs made by Andrew Macdonald went to Lou Mueller; Twisted snake made by Ed Harper went to Dave West. The iron brought in \$47. Thanks to those who participated.



Trade items were made by Jerry

ABANA President's Message October, 1993

Dear ABANA Chapters,

Autumn is one of my favorite times of the year. This is a time of year when other outside activities are coming to a close. People who engage in these various activities, both inside and outside the craft, might start looking around for something else to do. Why not invite people who are outside our honorable craft to come join in the good times and camaraderie that can be found in a typical chapter meeting?

Advertise! While speaking with an officer of one of our Chapters, he told me that they advertise each of their meetings in no less than three newspapers! This exposure has helped to keep the craft alive in the minds of the public, as well as reinforce the notion that they truly are welcome. Certainly, anyone who might be interested in starting in the craft would feel more at ease with an open invitation of this kind. A meeting notice also has some indirect benefits — if the public keeps seeing blacksmith related information in their local paper, they may be more inclined to come looking for one when they need something special. Any way you slice it, this is a good idea.

In a recent conversation with 1994 ABANA Conference Site Chairman Louis Mueller, he assured me that all the terrible flooding in America's heartland has not significantly affected the planning and work toward the conference. Likewise, I have heard from several Chapters around the country that efforts on the various rings for the conference Ring project are well under way.

The 1994 ABANA Conference may very well be the largest conference of its kind ever assembled, and will definitely showcase some of the finest contemporary foreign and domestic blacksmithing to be seen anywhere, period.

To those of you who have attended ABANA Conferences in the past: please bear with me while I speak to those who haven't. If you have never attended an ABANA Conference, I can assure you that the 1994 Conference will be an inspiring event you won't ever forget. You will be among the superstars of the blacksmithing world, from around the world, and they will show you step by step how they do what they do. Now is the time to make plans to attend. I'll see you there!

Yes, eye protection is of utmost importance. But just as important is hearing protection. Did you know that hearing damage is cumulative? That is, when you assault your ears with real loud noise, the harm you do to your hearing is added to previous damage you may have done.

It creeps up on you. Did you know that an increase in noise of just three decibels means that the noise has doubled in loudness? Unfortunately, the "Average Joe" has no method to measure noise, therefore he may have no idea when it is appropriate to wear hearing protection. Well, maybe I can help: Wear hearing protection every chance you get!

I am living, breathing proof that you CAN damage your hearing with prolonged exposure to noise. I have since jealously guarded what is left of my hearing by wearing hearing protection anytime I think I might be exposed to loud noise, up to and including while traveling on airplanes. Very comfortable foam ear plugs may be purchased at your local welding or safety supply store. I keep a large box full of them at all times in my shop, and encourage visitors to wear them as well. Do yourself and your family a huge favor: wear hearing protection!

Here's hoping you enjoy the beautiful fall weather!

Warm regards,



Clayton Carr
ABANA President

ABANA Liaison

Atta boy

As the new Chapter Liaison Chairman I am suddenly receiving the newsletters from most of ABANA's Chapters including those who do not participate in the exchanges among editors. I didn't really have a feel for how active this thing has become. Weekly there are teaching/learning demonstrations across the USA and Canada followed by periodic letters full of tips, techniques, projects and encouragements. It isn't the blacksmith schools that are the primary teachers of blacksmithing skills, it's the Chapters. ABANA's purpose is to perpetuate blacksmith skills and our Chapters are doing it . . . BIG TIME.

Congratulations to the Chapters and atta boys to all those demonstrator/teachers known and unknown who have and are sharing their hard earned skills to perpetuate the craft.

Cheers to:

Roger Carlsen, Kerry Berry, Bill Kauffman and Roger Lawrence who purchased new blacksmithing books and donated them to the Illinois Valley Chapter Library.

Alabama Chapter for getting a Governor's Citation for creative work is PR at its best.

Former ABANA President Jim Batson was (finally) formally awarded Master Bladesmith by the American Bladesmith Association.

David Mudge, President of the Louisiana Chapter on the Silver Alpha Award in the New Orleans Show.

Ontario Chapter for the Government Certificate of Appreciation for contributions to tourism from work on the Mooretown Bellow Building.

And . . . Happy Birthday (late) to Judd Nelson of the Appalachian Chapter who turned 82 years old on June 26 1993.

Does it really matter whether the bulk of your public join ABANA or even your chapters? As long as we have enough money to keep our doors open we're doing our jobs to preserve and improve the art. When the water goes up all the boats rise. To keep our doors open however we both need dues paying members. Thanks for including ABANA membership applications in your newsletters. Please run a bunch of our applications along with your own when you deliver them to local teaching schools or lay them out at your hammer-ins.

The Hammer's Blow

The ABANA Board will be holding its annual board meet-

ing in November. The new interim newsletter from ABANA is a very expensive service with no offsetting income. You know the bankers on the board are going to want to reevaluate *The Hammer's Blow* before the budget vote.

If your members like it and want to keep it coming make it known to your ABANA board members now and in the fall chapter calls. Fall chapter calls are coming in October. Presidents survey your members so you can be prepared to tell us what we need to know.

Scope of this Liaison Letter

I resist using this monthly mailing to repeat schools and conference schedules that the editors already have from their newsletter exchanges and the members have through the *Anvil's Ring*. So I'm thinking about dropping that traditional column. What do you think?

Change of Officers?

Send your Chapter Presidents and Editor changes in to the ABANA Office or the Chapter Liaison Committee.

John Pollins III
Chapter Liaison Committee Chair

Jere Kirkpatrick's Valley Forge & Welding

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NEW!

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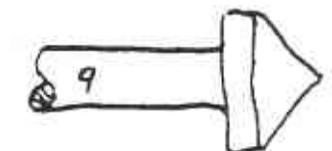
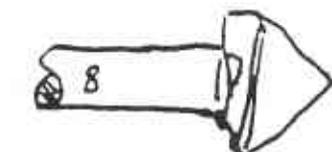
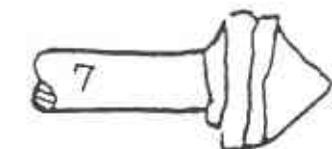
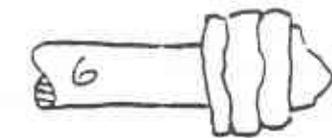
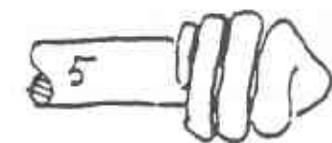
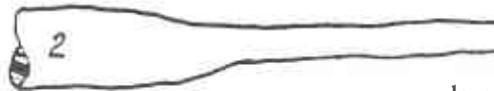
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The use of a nail header to form a small head on a nail by upsetting the shank requires limited effort, as does the practice of drawing out a short tenon from a

large bar when making a rivet. However, if a large head is needed for a long, thin bar, drawing out or upsetting becomes tedious. Would you form a large ball on the middle of a fence picket by upsetting or drawing

--out? At the 1992

ABANA Conference in San Luis Obispo, James Austin of San Francisco demonstrated a method of forming a large head. (So it seemed to me as I watched his effortless performance.) Although all-American, he apprenticed three years in Bavaria and was a journeyman for two more years. He came up the hard way. He is one of our youngest smiths.

His method is illustrated in these sketches. The bar is fullered over the edge of the anvil as in Figure 1, leaving enough metal to the right of the notch to form the desired head. The long tail of Figure 2 is bent back on the bar as in Figure 3 and then wrapped around it as in Figure 4. No hard blows are struck, as the turns are tightened by rolling along the anvil face in the direction that tightens the coil under light hammer blows. The bar is then again rolled along the anvil face with the coil positioned beyond the anvil face and with the tip of the tail against the side of the anvil. Light blows at a 45 degree angle collapse the coil as seen in Figure 5. At this stage welding flux is applied. Welding occurs under light blows as the coil is alternately rolled along the anvil face and overhangs the face. The metal gradually consolidates into the shape seen in Figure 9. The head produced by Austin was so smooth and even that it somewhat resembled a machined part. The rod had to be long enough yet thin enough to go through a hole in the clevis and then be formed into one of the two rings of the swivel.

To answer the question of the first paragraph the ball could be built up

by rolling a tapered strip around the picket. The strip should first be cupped lengthwise so the edges of the strip meet the picket first before the middle is forced against it. If not cupped, the edges will curl away from the picket during winding.

The strip is cupped against the step of the anvil using the cross peen. The amount of cupping is not critical, and a 30 degree bend is ample. Enjoyable forging to you.

Put a head on it

An alternative to upsetting or drawing out when forging a thin bar with a large head

by H.K. Saalbach, Blacksmiths Guild of the Potomac, by way of the California Blacksmith. This article was inspired by James Austin of San Francisco, who forged a pair of rings held captive by a swivel.

Best of both worlds

New member Daniel Floyd shares this idea. If you want the convenience of an electric blower and the control of a hand crank, get a downspout divertor and connect the two via the same inlet pipe on your forge. On Dan's the electric blower sits on the floor and the hand crank is mounted up high. The electric motor is hooked to a reostat which is mounted near the hand crank. When he wants to switch blowers he turns a little handle on the Y-shaped divertor and the other blower is ready to go. It seems one of these would work as a blast gate too.

Note on noise

I have been using in my shop as a blower a medium sized shop vacuum controlled by a light dimmer switch and a standard wall switch. The main problem with this is the noise level which is higher than is good for your ears. I solved that problem by putting the vacuum on the other side of the wall in the garage. It has been in operation 8 or 10 years and is still going strong. Even a new shop vac costs less than an electric forge blower and as far as I can tell gives as good a blast.

—Everett Browning, *The Prairie Blacksmith*

Bearing down on it

Try taking a ball bearing and welding it to a handle to make a thumbprint in hot metal. You'll find it's a lot of help when trying to fix a hole in round stuff to put on the wall or whatever. Put a small bearing on one end and a large one on the other — you get the idea. Get the iron hot and hit the ball bearing a good hard blow and you make a neat and clean impression. Some call it a thumbprint. Works great with a power hammer.

—Hot Iron Sparkle

Meet Chem-O-Lene

Earlier this summer I was introduced to Chem-O-Lene by my Merriam-Graves sales rep. Chem-O-

Lene replaces acetylene, except for ferrous iron welding. Matching cutting tips are required. It is far safer to use than acetylene and is an excellent heat source. Cutting and brazing work goes smoothly and without effort. The gas lasts longer than acetylene and burns hotter. It costs a little more but it seems the overall savings are worth the change. There is no carbon in Chem-O-Lene so keep the black tank around for iron gas welding.

—Edwin Grove, *New England Blacksmiths Association Newsletter*

Leave a little gap

Also from the New England Blacksmiths comes this: When welding a collar around a bar leave a gap equal to the thickness of the collar stock. This will close up when welded and eliminate a poor fit.

Upsetting advice

David Stasiak demonstrated this method of upsetting using steel pipe sleeve larger than the stock to be upset. After heating the end to be upset, insert the hot end into the pipe and then, while allowing the pipe to slide down onto the anvil, drive the cold end of the stock from the pipe, reheat, and repeat the process with a larger pipe if required. The pipe helps keep everything nice and straight and directs the force of the blow toward expanding the stock instead of turning it into an accidental art form.

—Paul Sperbeck, *Upper Midwest Blacksmith Newsletter*

Hands off

If you use a grinder powered wire wheel to clean up small pieces, use tongs, vise grips, etc. DO NOT hold in your hands. If the machine grabs and jerks a pointed S-Hook through one of your fingers, like I did to one of mine, you'll understand! It is very hard to do much work at the anvil when the index finger of your hammer hand has an ugly hole through it.

—Don Dunbar, *NW Ohio Blacksmiths*

BAM

Shop Notes

Got a tip to share? Jot it down and send it to the editor, Jim McCarty, Rt. 1 Box 20, Loose Creek, Mo. 65054

Practical letter openers

by Bill Curry, Placerville, California

There are hundreds of ways to make letter openers. Most of these turn out to be a way the blacksmith can demonstrate his artistry and/or skill in shaping metal into a valuable collector's item, but which are very unwieldy and too heavy for the use of opening letters or other correspondence. I would love to be capable of duplicating some of the beautiful openers I have seen created; however, I would never be able to get my wife interested in using one for its intended purpose.

Therefore, over the years, I have worked out a relatively simple, yet attractive and very practical letter opener design. The butt end of the handle can be made into an infinite variety of shapes limited only by the maker's skills, while design of the functional portion of the opener is essentially standardized. (See sketches).

In order to keep the heft, or weight, within acceptable limits, I start with only a 1/4 inch square bar, 6 inches long. Of this length I dedicate 2-3/8 inches to the blade, 2-1/8 inches to the handle, and leaving 1-1/2 inches to express my creativity in the ornamental work at the butt of the grip. (Obviously, my creativity is limited when I can only use 1-1/2 inches of 1/4 inch stock for its expression).

The first step in the working of this piece is the grooving of the handle section down the middle of each of the four sides. The grooving can be put in using a cold chisel while the material is hot, or if you plan to make several, you might want to make a grooving tool. I use a special tool to accomplish this in short order. (See tool drawing). This tool consists of a chisel with a wide angle cutting surface (like a cold chisel) mounted on a U-shaped flat bar. The chisel is made from a short piece of automobile leaf spring which is welded to one end of the U-shaped section. The other end of the U-shaped piece is welded to a flat plate which also holds the guide blocks to position the letter opener blank bar for the grooving step. The cutting edge of the chisel is also 2-1/8 inches wide. Once the opener blank has been heated, it is possible to impress the grooves on all four handle surfaces before it has cooled. This can be done using either a large hand-held hammer, or by using your treadle hammer to strike the spring grooving tool.

The next action is to twist the handle one full turn while at a good cherry heat. The grooves already incised in the handle section make the twist much more attractive than it would be otherwise.

Now is the time for you to exercise your artistic ability in forming the decoration at the butt end of the handle section. I usually start with a 1/8 inch fullered indentation on one side just beyond the end of the twist, and then draw out the end until it is approximately 2-3/4 inches long, 1/16 inch thick and 1/4 inch wide. This gives you some material to form into a simple scroll, a hook, a circle, a diminishing wave, or whatever you like. The end may alternately be drawn down to a point several inches long, then wrapped back around the handle, or the end can be

Reprinted from the California Blacksmith

split and drawn so that two graceful fern leaf-type curls can be formed. Every opener you make can be a little different in this area.

Now the blade is drawn out approximately 4 to 5 inches long and about 3/4 inch wide. This can be done with your hand hammer, by a treadle hammer or by a power hammer, as long as it is fullered. The blade is much more attractive if you can manage to maintain a diamond-shaped cross section throughout its length. A belt sander is great for shaping the blade and putting an appropriate edge on it.

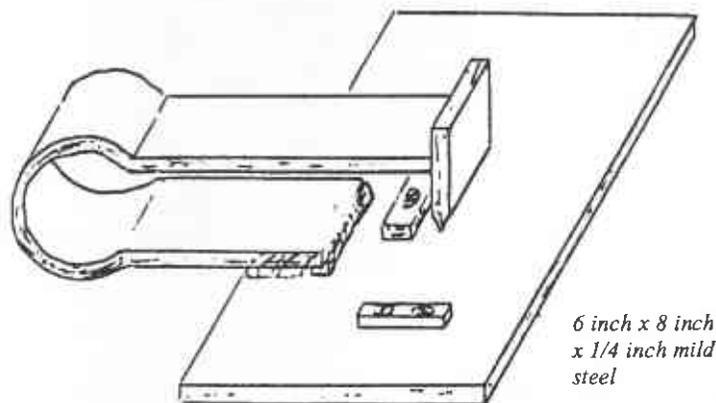
The type of final finish is discretionary; however, I like to clean them up with a 50 percent solution of muriatic acid for 20 minutes, followed by wire brushing and a coat of paste wax.

The above steps produce an excellent small, attractive letter opener which is very appropriate for any businessman (or woman), or any home correspondence desk. They are so easy to make that you don't mind giving them to all your friends or potential customers, or even your relatives. In my case, I have found that whoever gets one is always delighted, and finds a practical application immediately.

Grooving tool to mount over anvil hardy hole or treadle hammer

2 inches x 3/16 x 14 inches mild steel short leg welded to base plate

2-1/8 inches wide x 2 inches x 1/4 inch leaf spring material welded to U-shaped piece



6 inch x 8 inch x 1/4 inch mild steel

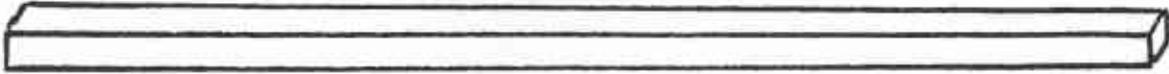
1/2 inch x 2 inch x 1/4 inch positioning guides (bolt or weld to base)

Use $\frac{1}{4}$ " x $\frac{1}{4}$ " x 6" mild steel.

1½" shank

2½" handle

2¾" blade



Groove handle section on all four sides.



Twist handle one full revolution.



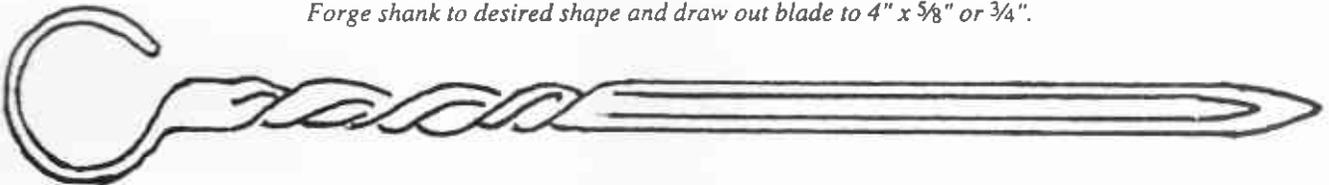
Fuller $\frac{1}{8}$ " slot at left end of handle section.



Draw out shank to $2\frac{3}{8}$ " x $\frac{1}{4}$ " x $\frac{3}{32}$ ".

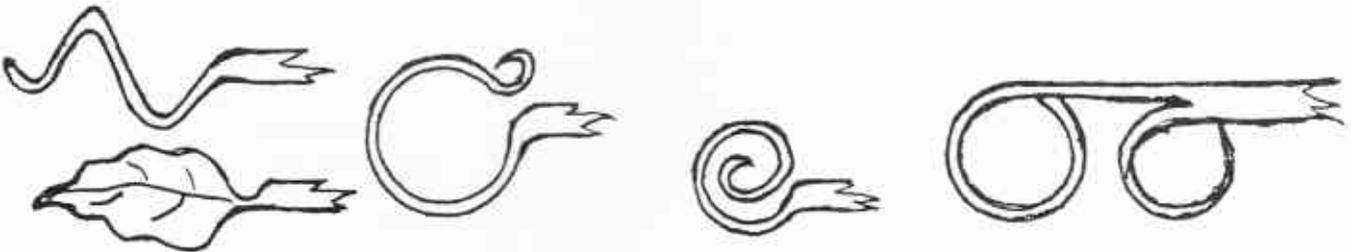


Forge shank to desired shape and draw out blade to 4" x $\frac{5}{8}$ " or $\frac{3}{4}$ ".



Shape blade with grinder or belt sander, then sharpen the same way.

A few alternate shank shapes.



This one requires splitting the shank.

BAM NEWS

Classified:

For sale: Powermatic floor model drill press, 15 inch, call Andrew Macdonald, (618) 549-1954.

Used equipment, sheet metal machinery repair, contact Bill Haines, Haines Machinery Service, 402 Joe, Kirkwood, Mo. 63122; (314) 965-6123.

Two sources for low-cost tools: Harbor Freight Tools, 3491 Mission Oaks Blvd., Camarillo, CA 93011-6010; 1-800-423-2567. Tools On Sale, 216 W. Seventh St., St. Paul, MN 55102-2599; 1-800-328-0457. Both have complete lines of all kinds of equipment at really good prices. Best of all, you skip the state sales tax! Note: If you get the Tools on Sale catalog, call for current prices. They are always cheaper than what is listed in the book.

Need a forge? Give me a call, I may have just what you are looking for. Jim McCarty, (314) 897-4111. Also I have a large (too heavy for me to lift) shear. It's a Winner brand, looks like an Edwards. Great shape except for a crack in top blade. \$125, includes arm.

Classifieds are free to all BAM members and anyone who has something to sell to a BAM member. Send them to Jim McCarty, Rt. 1 Box 20, Loose Creek, Mo. 65054.

Letter from Stan

Dear BAM,

The flood of 1993 was an emotional and stressful time for my family and myself. Thanks to much hard work and many words of encouragement we kept our home dry. At this time our life is as normal as can be expected.

I want to sincerely thank all the BAM members for their help and support during the Summer from Hell. Hope to see you at the next meeting.

— Stanley Winkler

Editor's note: Stan stressed that he wanted to deliver this in person at the last meeting but things didn't work out for him. Stan has a contract on another house located high and dry and with any luck he will be moving in early in November.

Our sympathy to Walt

BAM would like to express its sympathy to Walt Hull on the death of his mother, Ruth Switzler Hull, on Aug. 25 of cancer. She lived to be 79 years old and died knowing she had a loving son in Walt who was determined to take care of her to the end.

We all know Walt has been somewhat scarce because he wanted to stay nearby her. Some of us got to know her at the meeting Walt hosted. She was a nice lady and we know you will miss her, Walt.

Library Rules:

Ray Chaffin is the caretaker of BAM's growing library. If you want something from the library drop Ray a line. Here's how it works:

1. The user pays postage both ways.
2. Video Tapes due back in 15 days.
3. Books due back in 30 days.

This is from the time they are mailed until they are received back. The videos are sent first class plus insurance and the books are sent fourth class. Here's a listing:

1. The Blacksmiths Cookbook, by Francis Whitaker
2. Samuel Yellin, metalworker, by Jack Andrews
3. Treasury of Ironwork and Designs, Arranged by Carol Grafton
4. Blacksmithing Shop & Iron Forg-

ing, by Lindsay Publications
Books Donated

1. Windmills and Motors
2. Correspondence School Manuals
A. Hammer Work, B. Iron Forging, C. Babbiting Manual
3. Illustrated Catalog of the Champion Blower and Forge Co.
4. Volume I & II of Precision Measurement in Metal Working Ind.
5. Business Mathematics
6. 4 volumes of Sweet's Catalog File
7. Carpenter's Tool Steel Manual
8. Steel Construction Manual
9. Modern Metallurgy for Engineers
10. Design Manual for H.S. Steels
11. Wrought Ironwork
12. Decorative Ironwork
13. The Blacksmith's Craft
14. The Making of Tools
15. The Modern Blacksmith
16. New Lessons in Arc Welding
Video Tapes

1. Ozark Conference 1993, (Daryl Meier)
2. Ozark Conference 1993 (Events and Demonstrators)
3. Illinois Valley Conference 1993, (Clay Spencer)
4. Hubbler Hammer-in 1988/89/90, (Plus demo by Jobslov Valec)
5. 1990 Metalsmiths Madness (Dorothy Steigler, Dan Butt, Monte Bygd, Kitty Lantane)
6. BAM's Greatest Hits (Roberta Elliot-Francis, Jerry Hoffmann, Stan Winkler, Doug Hendrickson)
7. Ozark Conference 1993 (Doug Wilson)

Eastside Hammer-in

John and Sarah Lovin invite you to a blacksmith workshop to be held Saturday, Oct. 23 at the newly constructed blacksmith shop at the Jefferson County Historical Society's Pioneer Village on N. 27th St., Mt. Vernon, Ill. John Smith, nationally recognized bladesmith from Centralia, Ill., will demo in the morning. He will make knives from old files and demo forging, grinding, quenching in oil and water and tempering. BAM's own Kenny Valdejo will take over in the afternoon. Lunch is potluck — please bring a dish. Also bring your safety glasses. For more info contact John Lovin at (618) 756-2331.

Next Meeting Nov. 6, 1993 at Todd Kinnikin's

Todd Kinnikin is hosting BAM's next meeting, which will be held Nov. 6, come Hell or High Water!

The editor's never seen Todd's forge, but rumor has it he has most of the neat junk in the state, including a fabled 300-pound vise with 8-inch jaws (OK, he has two of these.)

Can't wait to see this stuff — Todd promised me he would let us talk him out of something. Tailgating should be brisk so bring a wad of dough and your unneeded rusty iron.

Rumor also has it that Todd is planning a surprise that will require your wrought iron stomach, so bring it along.

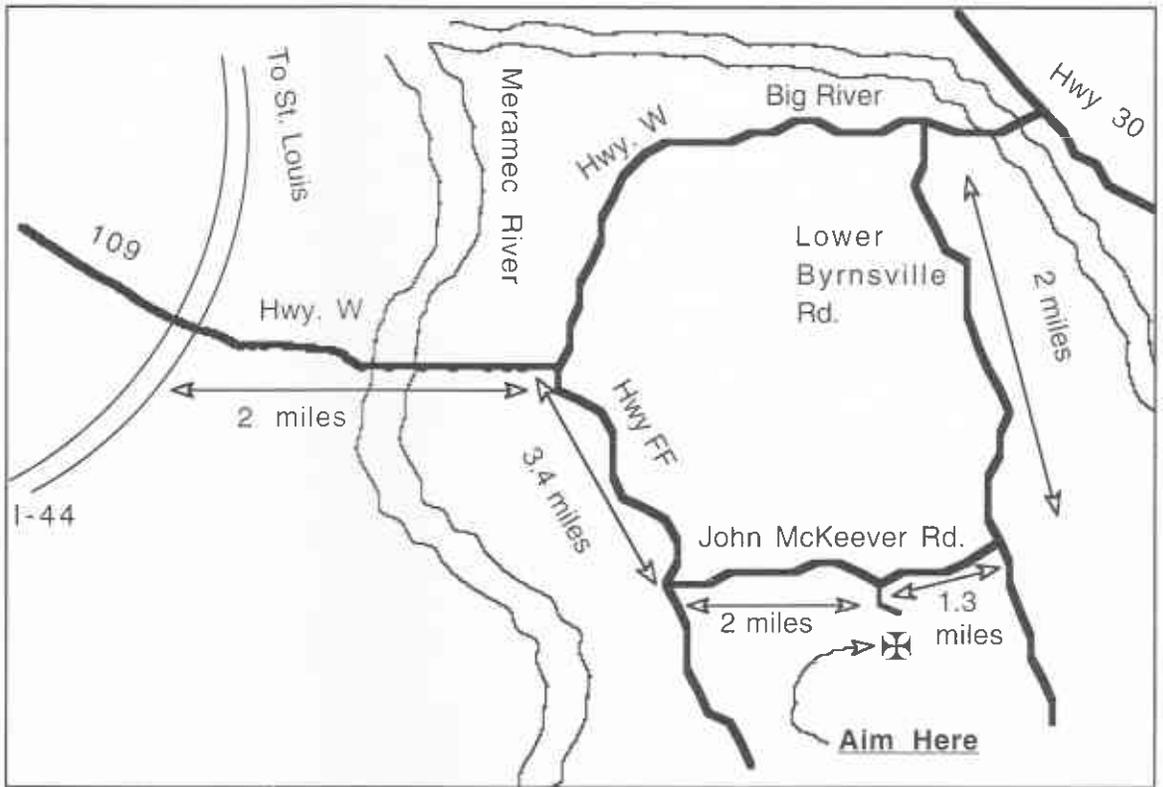
Todd says he will have a representative from CeeKay Welding on hand to show off the latest gadgets in the welding world. He says to bring your questions and they will provide some hands-on answers.

He's also planning to weld up some Damascus so if you've never seen this here's your chance.

I'm still waiting for the map so if it arrives in time follow the directions shown here. If not, call Todd at all hours of the night and say, "Where's the meeting?" His number is (314) 938-6248. He lives at 8356 McKeever Rd. near House Springs, Mo., which is just south of St. Louis in Jefferson County.

Trade item is any kind of handle — you can let your imagination run wild and you can even put something on the end of it if you want (though that might take the fun out of it for the winner.)

Also, as usual forge something nice for the Iron-in-the-hat. Last month we only brought in \$47 so let's make up for it this time.



January meeting:

The January meeting will be held at Stan Winkler's forge in historic Ste. Genevieve. This is always a great one so don't miss it! Trade item will be a bottle opener.

1994 BAM Schedule

January Meeting

Stan Winkler, Ste. Genevieve, Mo., January 22.

March Meeting

Pat McCarty, Washington, Mo., March 12.

Ozark Conference

Potosi, Mo., Date to be announced (Sometime near the end of April.)

May Meeting

Steve Austin, Claycomo, Mo., May 21.

July Meeting

Vernon Fisher, Rocky Mount, Mo., July 25

September Meeting

Ken Markley, Sparta Ill., Oct. 1

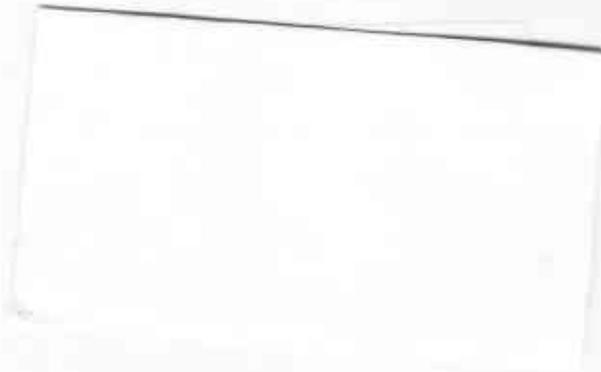
November Meeting

Hank Knickmeyer, Cedar Hill, Mo., Nov. 5.

Please mark these dates on the calendar just in case the newsletter arrives a little late!

B.A.M.
Rt. 1 Box 20
Loose Creek, MO 65054

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