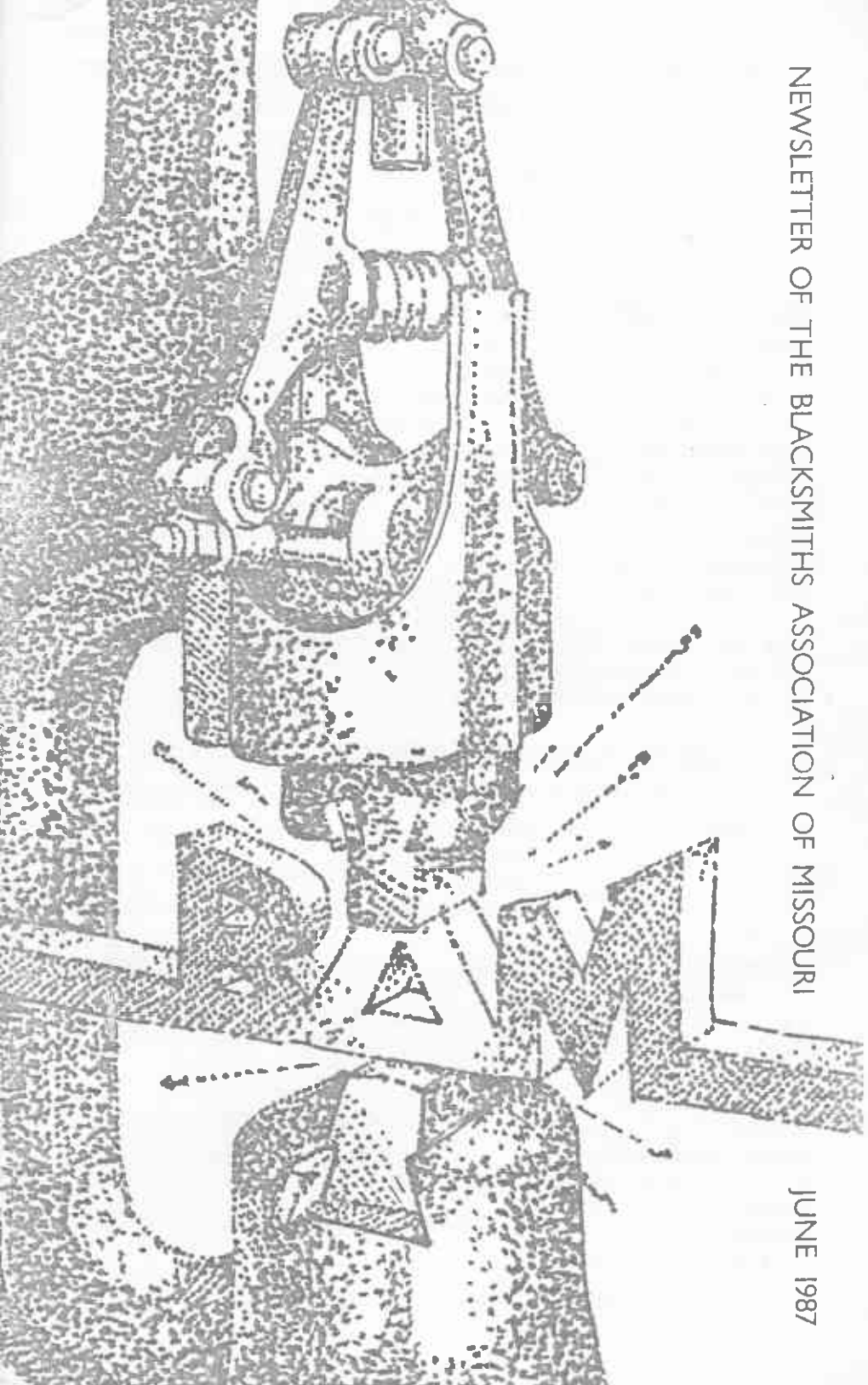


NEWSLETTER OF THE BLACKSMITHS ASSOCIATION OF MISSOURI

JUNE 1987



NEWSLETTER OF THE BLACKSMITHS
ASSOCIATION OF MISSOURI

VOL. 4 NO. 3
JUNE 1987

The Blacksmiths' Association of Missouri is a chapter of The Artist-Blacksmiths' Association of North America. This organization is devoted to preservation, advancement, and communication between blacksmiths of Missouri and surrounding areas. BAM's newsletter's goal is to support these ideas. Letters to the editor, tech tips, tools for sale, or any ideas which further these ends will be considered for publication.

BAM welcomes the use of any material printed in this newsletter provided the author and this organization be given credit.

OFFICERS

President
Bob Patrick
Box 205
Bethel, MO 63434
(816) 284-6687

Vice-President
Don Asbee
Rt. 2 Hwy. 28
Bland, MO 65014
(314) 646-3657

Secretary-Treasurer
Steve Austin
44 N. E. Munger Road
Claycomo, MO 64119
(816) 781-1512

Editor
Doug Hendrickson
R.R. 1 Box 16 D
Lesterville, MO
63654
(314) 637-2576

Assistant Editor
Bernie Tappel
Rt. 1 Box 81
Henley, MO 65040
(314) 496-3793

BAM MEMBERSHIP APPLICATION

Name: _____
Address: _____
City: _____
State: _____; Zip: _____
Telephone: _____
New Member: _____; Renewal: _____

Memberships are for the calendar year, January 1 to December 31. Dues are \$15.00, which includes a subscription to the bimonthly BAM newsletter. Please make checks payable to Blacksmith Association of Missouri.
SEND CHECKS TO: Steve Austin
44 N.E. Munger Road
Claycomo, MO 64119

MEMBERSHIP APPLICATION

Membership in ABANA includes a subscription to the Anvil's Ring New Member Renewal

Name _____
Address _____ Phone () _____
City _____ State _____ Zip _____

PRACTICING SMITH ARTIST TEACHER STUDENT AMATEUR

Fulltime Student \$25.00 per year
Regular Member \$35.00 per year
Family Membership \$40.00 per year
Senior Citizen \$25.00 per year
Overseas Member \$45.00 per year
Contributory \$100.00 per year
Library Subscription \$25.00 per year

(Please remit in U.S. currency)

mail to: ARTIST-BLACKSMITHS' ASSOCIATION OF N. AMERICA
P.O. Box 303
Cedarburg, WI 53012

CHECK MUST ACCOMPANY APPLICATION

APRIL MEETING

by Bernie Tappel

Austin's Ironworks in Claycomo was the site of our April meeting.

When I arrived, the demonstrations were already in progress. Don Asbee was at the forge, demonstrating his spiral firetool handle. After finishing his firetool handle, Don then forged a hammer eye punch.

As soon as Don had finished, Jerry Hoffman stepped up to show us some different ideas in scrollwork. Jerry made three different scrolls with added material welded to the end.

Steve Austin then took center stage with a demonstration of some his power hammer dies. Steve has a 100 lb. Mayer and a 75 lb. Beaudry, both of which he has equipped with a variety of jigs and dies.

After Steve's demonstration we took a quick break for lunch and then on to a slide show.

First Steve presented slides he had taken of the gallery at the ABANA conference in Albuquerque. Then Don Asbee took over the projector and showed us slides of the BAM Culver-Stockton exhibit and some of his recent projects.

After the slide show Don Asbee called the business meeting to order.

The first item of business discussed was the American Royal Barbeque on October 10. As mentioned in our last newsletter, BAM is considering manning a booth at the barbeque to demonstrate and sell souvenirs (dinner triangles) stamped with the American Royal logo as a money making project. Nothing

definite was decided at this time.

The treasurer reported a balance of approximately \$950.00 in our coffers. This does not include money prepaid by members for the bulk coal purchase.

Jerry Hoffmann has agreed to lend his talents to the production of the newsletter in the capacity of Art Director.

We have 11 tons of the bulk coal purchase spoken for. We still need orders for about 10 tons. If you haven't gotten your order in yet contact Steve Austin as soon as possible. The coal is \$120.00 per ton. There will NOT be an additional \$50.00 dumping charge to be split up among the participants as originally reported in our last newsletter. The coal will be dumped at a different location in Ste. Genevieve that will not charge us a dumping fee. There will be a \$1.00 weighing charge.

There has been no progress yet on the Blacksmithing Contest.

Mark Birchler will be at the next meeting at Doug Hendrickson's to discuss BAM's involvement in the Old Appleton Bridge Restoration Project near Cape Girardeau.

The Turley Workshop has been set for Nov. 7th and 8th. The site of the workshop has been changed to Tom Gipe's shop at Edwardsville, Illinois. We will coordinate this workshop with blacksmith organizations in surrounding states to increase the participation. The charge for the workshop will be \$25.00 for one day or \$40.00 for both days. Frank charges \$300.00 per day plus travel and lodging so we need to come up with about \$1000.00 to cover expenses.

The next meeting will be at Doug Hendrickson's. We will attempt to assemble the circle screen at this meeting. We could still use a few more circles so if you haven't made yours yet or if you want to make another bring it to this meeting. There will be a float trip on Sunday so bring your camping gear. Doug will reserve space in a nearby campground.

The Southeastern Conference was discussed. The conference will be held May 15 & 16 at Madison Georgia.

Photos of the Culver-Stockton exhibit are being forwarded to ABANA with the possibility of these photos being published in the ANVIL'S RING.

There being no further business the meeting was adjourned.

Then it was back to the forge where I welded up a damascus billet from one of Steve's slightly used files and a piece of mild steel.

After this the meeting gradually broke up and everyone headed home. Thanks to Austin's Ironworks for their hospitality and the use of their very well equipped shop.

FOR SALE - One 160 pound Peter Wright anvil.
Tom Nichols
#8 Antique Ct.
Arnold, MO 63010
(314)296-6422

ABANA MEMBERSHIP DRIVE

The Artist Blacksmiths Association of North America is the national organization of which B.A.M. is a chapter. ABANA needs members and their dues to continue the services and programs which support our craft. Many BAM members are not members on ABANA. Do join, the ANVIL'S RING alone is worth the price of membership. Other services and programs from ABANA include:

Work Study Programs - Both abroad and in the U.S.

The ABANA Switch Board - This is a hotline to help you solve blacksmithing problems. Rumor has it that one ABANA member was actually talked through a forge weld on the phone. And they say that sort of thing only happens in the movies!

ABANA Library - Slides, video tapes, and films.

The International Conference

Demonstrators from across the U.S. and several foreign countries discuss and show many aspects of this fascinating craft. Both beginning and advanced programs are part of this fine conference.

If you need more convincing about the value of belonging to ABANA send a self-addressed stamped envelope to:

Ruth Cook
P.O. Box 303
Cedarburg WI 53012
(414)375-0278

Ruth will send you and informational packet. Just do it, OK?

THE NATIONAL ORNAMENTAL MUSEUM

The National Ornamental Metal Museum is the only museum of its kind in the United States. Unique in its dedication to preserving the best in fine metalwork from the past, and in encouraging the work of contemporary artists, the Metal Museum offers visitors an inviting potpourri of changing exhibits. Though initially focusing on ironwork, Museum exhibitions have expanded to include both historic and contemporary pieces ranging from bronze sculpture to jewelry. Theme exhibits, such as "Damascus, the Magic Steel" and "Enamelling: Art and Industry" illustrate developments in specific processes and transitions which have come about through technological advances. To augment the exhibits, a strong lecture/demonstration program has been established.

The Museum is located on a beautiful three acre site overlooking the Mississippi River, with a view described by Mark Twain as "the finest between Cairo and New Orleans." Once a part of the United States Marine Hospital, the compound was leased by the City of Memphis to the Museum Foundation in 1976. Renovation of the buildings, which had been abandoned since 1964, began in the fall of 1978, and the Metal Museum opened its doors to the public in February, 1979.

Since that time, the Museum has acted as consultant with other museums around the world in curating and organizing major metal exhibits including the Victoria and Albert Museum in London, American Craft Museum in New York City, and the Renwick Gallery of the Smithsonian Institution.

Dear BAM Members

This Museum is a very important entity, the only one in America devoted entirely to exhibiting and promoting our craft. The operating expense, like all things, are on the rise. I strongly encourage you to join the museum and mail in your support.

Sincerely,

Doug Hendrickson

TURLEY WORKSHOP

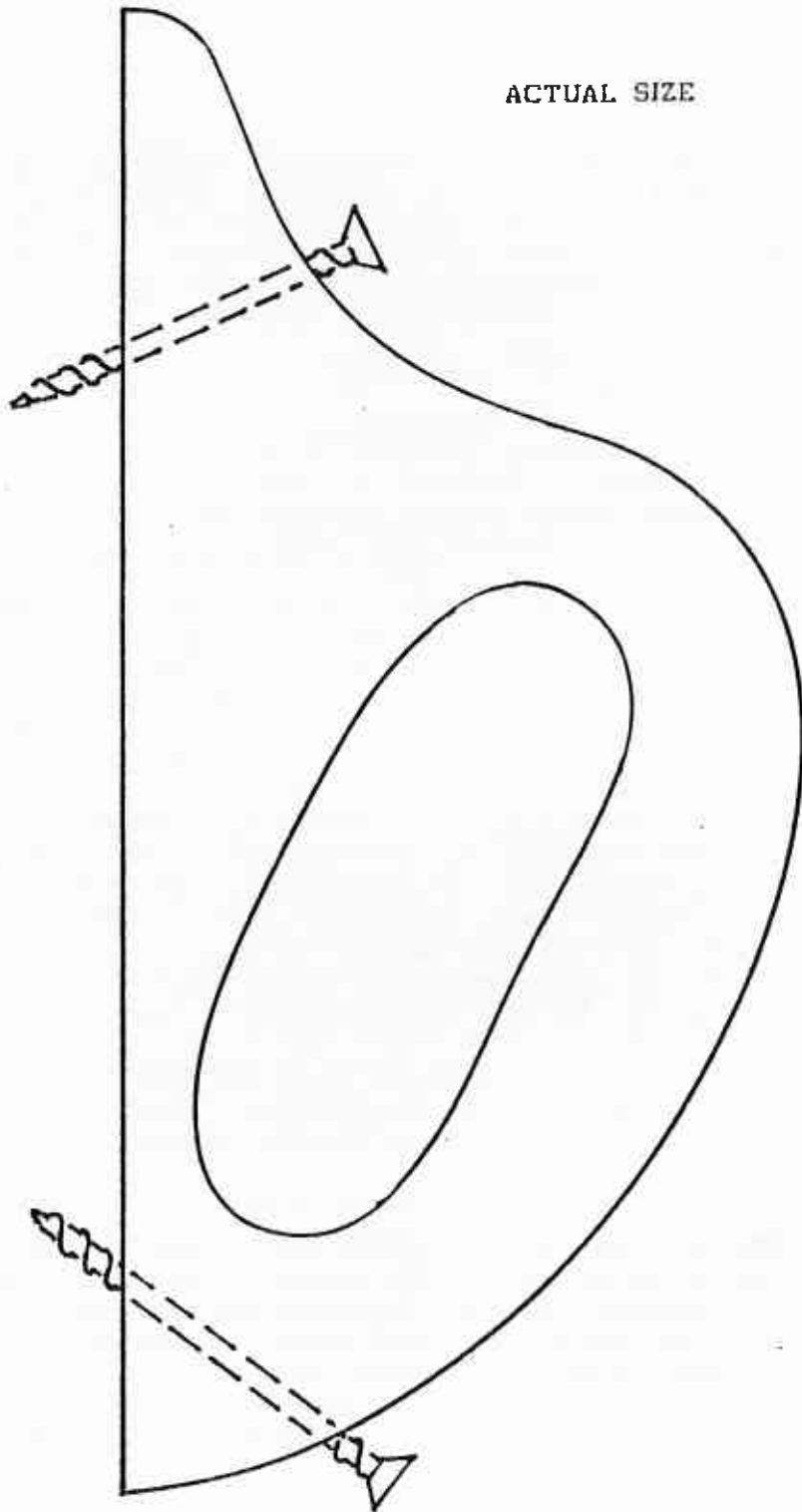
The Frank Turley Workshop will be held in Tom Gipe's sculpture studio at Southern Illinois University at Edwardsville on November 7th and 8th. The title of this two day event is BLACKSMITHING: THE PHYSICAL AND THE METAPHYSICAL. For several years Frank has been dealing with the "Dance of Work", movement and meditation and it's relationship to blacksmithing. This workshop will surely be educational, inspirational and entertaining. Frank has been teaching blacksmithing at his school in Santa Fe for close to 20 years and has been one of the major forces in the advancement of our craft.

The fee for Frank's visit will be \$25.00 for one day or \$40.00 for both days. More on the details of this event in future newsletters.

Handle for butcher block brush (next page), copied from an old wood plane. It can be made from any type wood including plywood. I think a hardwood like oak, maple, walnut, or fir would be best.

by Colin Campbell

ACTUAL SIZE

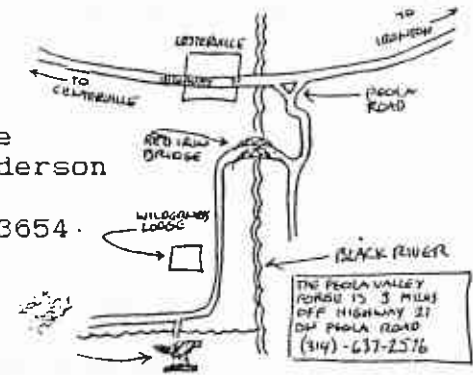


NEXT MEETING

The July 11th meeting will be in Lesterville at:

Peola Valley Forge
Doug & Bonnie Henderson
R.R. 1 Box 16 D
Lesterville MO 63654.

(314)637-2576



At the July meeting we will assemble our fund raising project we have been working on for the last few months. Instructions for your part in the "Circle Screen" project are in the last issue of our newsletter. This meeting will be a working session so bring your hammer and safety glasses. Doug has put in a second forge - two forges - no waiting.

The trade item will be a divider. This is a wonderful tradition we have going, do participate!

The Sunday float trip on the Black River has also become a BAM tradition. If you plan to camp Saturday night and float on Sunday drop Doug a card so he knows how many canoes to reserve and how large a camp site will be needed. It will cost about \$20.00 per canoe and \$4.00 a head to camp.

The Black River is just a short distance from the forge so kids, wives, husbands, and anyone else can play while the rest of us work on Saturday. Don't hesitate to bring the family.

ANVIL WEIGHT

Have you ever wondered how much an anvil weighs? Check out the numbers on the side, here is what they stand for:

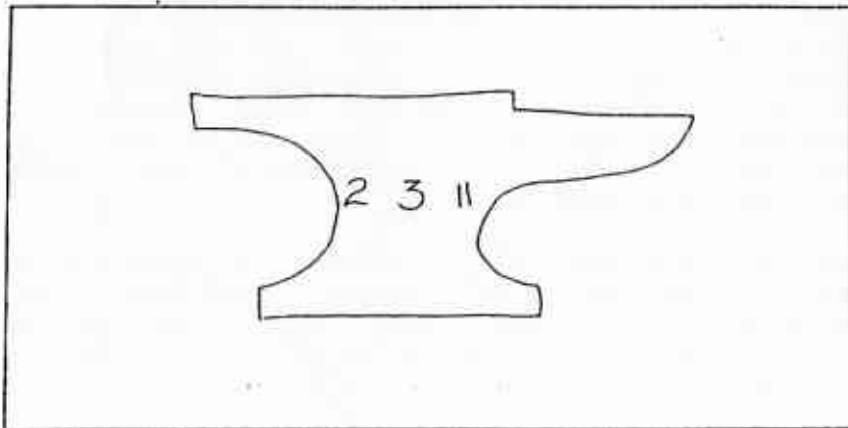
1st number is the number of hundred weights, which for some strange English reason equals 112 pounds.

2nd number is the number of quarter hundred weights. One quarter hundred weight is 28 pounds.

3rd number is the number of left over pounds that are not accounted for by the first two numbers.

For example if 2 3 11 is stamped on the side of an anvil it weighs 319 pounds.

1st number	-	2	=	224 lbs.
2nd number	-	3	=	84 lbs.
3rd number	-	11	=	<u>11 lbs.</u>
Total				319 lbs.

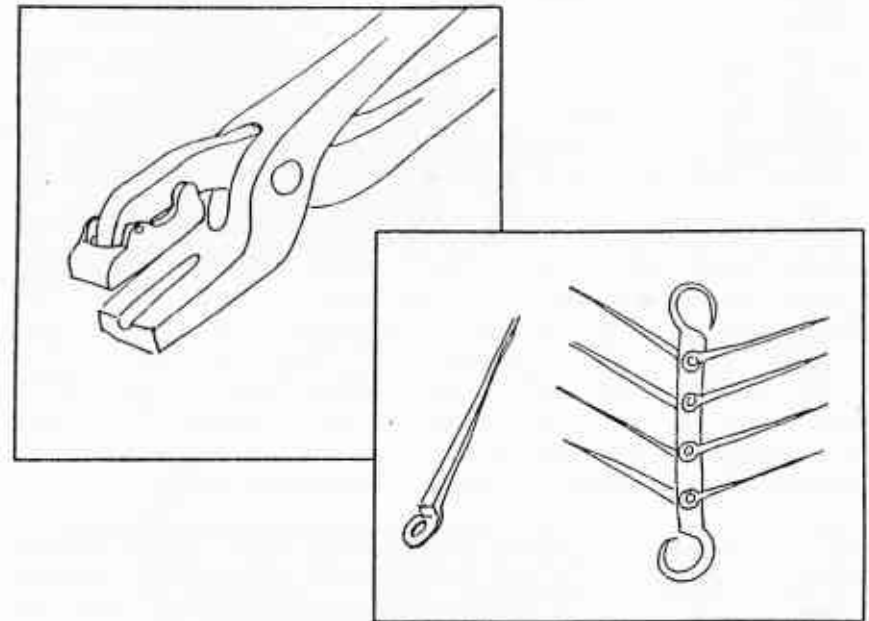


SELF ADJUSTING TONGS

by Bob Schantz

Some BAM members may be interested in this type of self-adjusting tongs, I recently came across. This pair had the Chinese Box style boss, but a traditional style will be functional.

This is the first adjustable tongs that I have seen that actually hold stock of various thicknesses securely.



Nick Vincent of the Mid Atlantic Smith's Association has a couple of good ideas for some production items. Nick advises "My most popular items are corn dryers and my variation --- apple dryers. Historically, corn dryers were used in farming communities to dry seed corn for planting. Now they are great decorating items for country interiors, especially the Autumn season". Nick's dryers are "heavy duty" with the center rod made out of 1/4" x 3/4", the spikes are 1/4" square and riveted on.

TIPS ON BUYING A POWER HAMMER

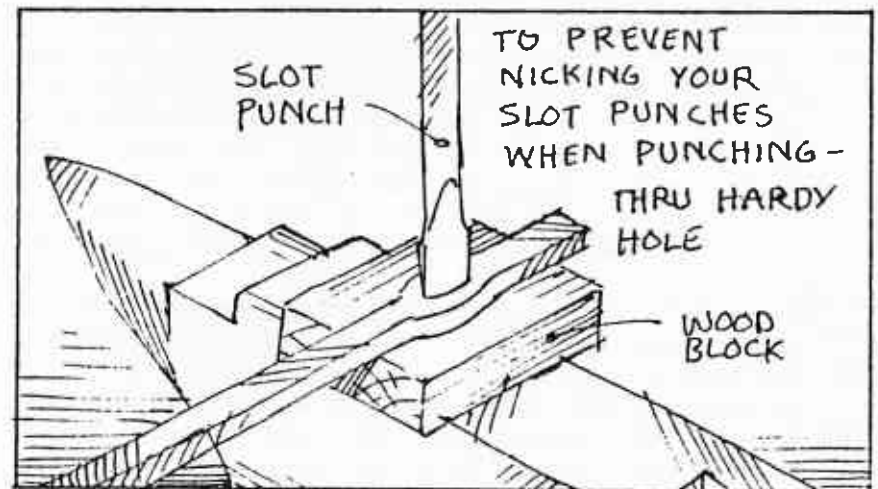
By Fred Caylor from the newsletter of the Upper Midwest Blacksmith's Association.

1. If you don't know what to look for, take along someone who does.
2. Don't worry about the condition of the babbitt in the shaft journals or clutch pulley, unless they are so bad there might be wear in the shaft. Follow directions in a back issue of The Anvil's Ring and pour your own.
3. Check for wear in the toggle pins and look for elongated wear in the arms and toggles. If elongated they will have to be bored out and oversized pins made.
4. It is very common for the upper arms to have been repaired. If done properly they will function as good as new. But if they have been put back together in a slight twist, this will cause the toggle holes to not line up properly and will wear the pins as fast as you can make them. Remedy - ream the holes through arm and toggle while in correct position. Make oversize pins.
5. Check for wear inside of the ram where toggle cross pieces ride. We recently found one which was so badly worn they had to be filled with weld and remilled to size. This calls for hours of work and special machinery.
6. Check for wear in the vee guides on front and rear ram guides. These control the path of the ram and it would take a lot of work to correct. The aforementioned hammer had the front guides worn almost through and had to be rebuilt and reshaped due to warpage from welding heat. This hammer was worn out from lack of lubrication.

7. Last, but not least, don't let your desire to own a hammer at a bargain price induce you to buy one which needs work you can't do yourself or afford to have done. A poor hammer is worse than no hammer at all. Save your money and buy one which you will enjoy using and can make money with. Price should be secondary if you have work for it.

8. One thing I would like to suggest is that when you acquire your hammer, take the time to strip it down completely. This way you can inspect it throughout. As you are cleaning it, make repairs right then and there. This is a good time to repaint the parts before you reassemble. When you are finished, you will have a piece of equipment you will be proud of and it will give you years of service. After all, it did take years for the hammer to get in such a sorry condition.

NOTE: Fred reconditions and repairs power hammers and is an acknowledged authority on the subject.



FLUXES

reprinted from SOFA SOUNDS.

Frank Turley (Turley Forge, Santa Fe, NM):

I started with borax as flux and have stuck with it for 21 years. I find it leaves the surface of the iron less roughened than proprietary fluxes which have iron filings. I sometimes use "E-Z Weld", but then I have the surface to clean afterwards.

Francis Whitaker (Aspen, CO):

I have used E-Z Weld flux for over fifty years. It gives me the best, longest lasting welding heat of any flux. Some notes on its use: I flux almost always right in the fire, it is a waste of time and heat to remove the pieces from the fire and flux them. Apply the flux when it will stick quickly to the scarf and the heel of the scarf. Do not turn until the flux has turned the color of the iron. Turn, flux the other side, and then the other two sides. An envelope of flux, with a higher melting point than the iron, gives the sticky, lasting welding heat. Bring the heat up slowly, watch the small iron particles in the flux, if they look like pepper on an egg, the heat is not ready. If the small iron particles are not melted, then neither is the iron to be welded. Be sure to get the welding heat back on the heel of the scarf, so the tip of the other scarf will have a welding heat to make a good weld.

Recently, I have been using Crescent Flux, same manufacturer, for faggot welds, welded collars, basket handles, etc. It cleans up better than E-Z Weld. It takes a bit of adjusting to get used to a different flux. Try the touch system, if

the pieces stick in the fire, they will stick on the anvil. Watch the sparks, if no sparkler sparks are above the fire, it is not ready.

Clem (Malot) Mellot (Harrisonville, PA):

I use E-Z Weld or just plain 20-Mule Team Borax. I have also welded with sand and powdered glass. E-Z Weld or borax give the best results. More important is a clean piece of steel properly scarfed and a clean, neutral fire. Clean fire can only come with a good, low sulphur, low ash coal, coked well and free of ash as this creates cold spots in the fire. You must be prepared to weld the instant your piece is ready, as speed is important. It may take more than one heat to finish the weld completely.

Steve Kayne (Kayne & Son: Custom Forged Hardware, Candler, NC):

I use anhydrous borax or just borax dried out in an oven at 300 degrees for an hour or so. I find it's easy to use, it's cheap and readily available. When I miss a forge weld, it's not the flux or the coal, it's simply that I broke too many of the rules.

Dimitri Gerakaris (North Canaan, NH):

For 90% of all welding I use "E-Z Weld" by the Anti-Borax Co. of Fort Wayne, IN. For very thin metal (like 16 ga.) welds, I use "Crescent" (also by Anti-Borax). Health note: Never use borax - it's fumes are bad for your health.

James Wallace (Memphis, TN 38106):

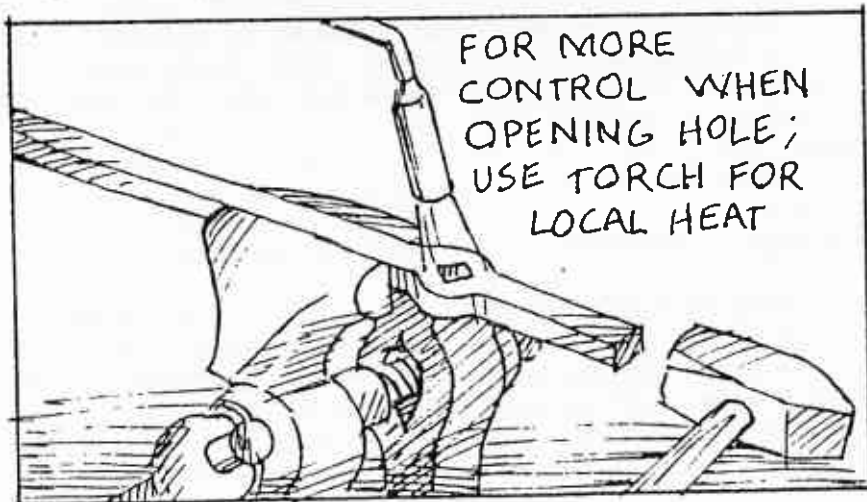
I use both "Crescent" and borax, both for different welds. The Crescent is my standard for almost everything. Borax is used only when I run out of Crescent or to re-weld a cold shut. NOTE: When using borax, you must really clean up afterwards or some time later a white fuzz may appear.

Nol Putnam (White Oak Forge, The Plains, VA):

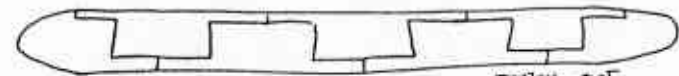
We use E-Z Weld, purchased through Centaur Forge in 25 lb. drums for the most consistent welds. Especially good as pieces to weld do not "slip" apart so easily as with say borax. Highly recommend E-Z Weld.

Paul Boccolucci (Five Acres Blacksmith Shop, West Valley, NY):

I use borax exclusively. I have tried Cherry Heat and others with iron filings, but always return to plain borax. It works fine for all my welding.



DOUG HENDRICKSON'S VEGGIE CHOPPER
MADE FROM THE MOST COMMON RESOURCE OF THE OZARKS -
LEAF SPRINGS FROM ABANDONED PICK UPS, GARS AND JEEPS.



TORCH CUT THIS PATTERN



GRIND THE BURNED EDGES OFF



DRAW EARS OUT TO A POINT



FORM BLADE USING CROSS PEEN TO SPREAD AT CUTTING EDGE



TURN TAPERS TO TASTE, ANNEAL, WIRE BRUSH AND GRIND FINAL EDGE.

THE ANNEALED EDGE IS JUST FINE FOR THIS TYPE OF TOOL. A FILE OR STEEL WILL SHARPEN IT NICELY.

I GOT TO BEAT IT NOW
Henry

ARC WELDING ELECTRODES

by Peter Sevin

(Reprinted from The Anvil's Horn, newsletter of the Arizona Artist Blacksmith Association.)

We all know that real blacksmiths do all their welding in the forge. Most real blacksmiths don't even own an electric welder and some of them don't even know what one looks like! However, there are a few of us anvil owners who are interested in arc welding for its own sake and it is for that small group that I have collected the following information.

All welding rods are classified by the American Welding Society (AWS), according to their applications and characteristics. We are concerned here with the electrodes that are used for welding mild steel and its alloys. All of these welding electrodes are marked with a four digit number near the grip end. On the box that these electrodes come in this four digit number is preceded by the letter "E". This designates that the rod is designed to carry electrical current. (Remember there are gas and Tig welding rods that do not carry electrical current.) The first two digits tell us the tensile strength of the deposited weld bead. Tensile strength is defined as the amount of force required to pull apart a bar measuring one square inch.

Let's take for example an electrode with the digits 7014 stamped on the rod. The first two digits are 70 and this means that the deposited weld bead has a minimum tensile strength of 70,000 lbs. p.s.i. Thus, a rod marked 60xx has a tensile strength of 60,000 lbs. p.s.i.

The third digit tells us what position the electrode can be used in. The number 1 means

the rod can be used in four positions: flat, horizontal, vertical, and overhead. The number 2 means the rod can be used only in the flat or horizontal positions, and number 3, flat only. Thus, whereas a rod marked 7014 can be used in all positions, a rod marked 7024 can be used only in flat or horizontal positions.

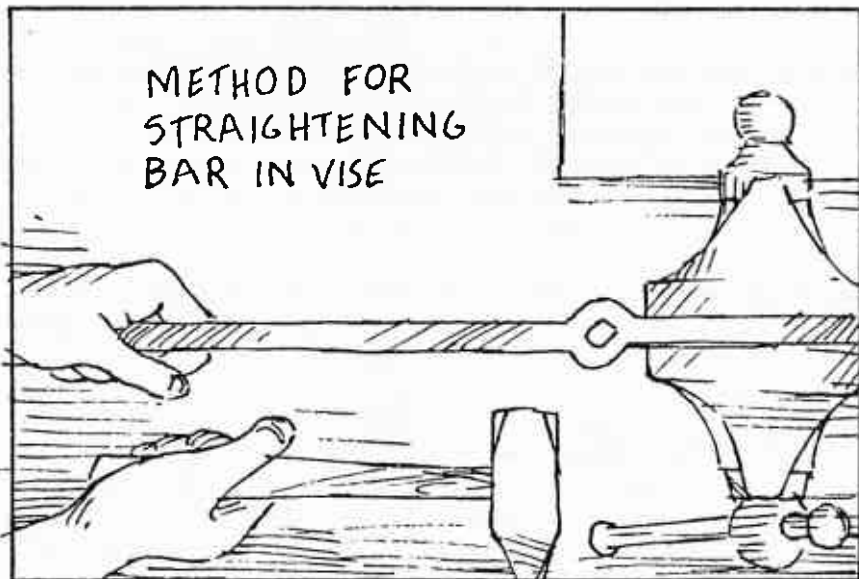
The fourth digit tells us a special characteristic of the electrode usually dealing with the flux, the type of current, and penetration. There is a table available which interprets this last digit but being somewhat complex and superfluous, we'll forget about it. Here is a rundown of some of the most commonly used electrodes:

- E 6010 - DC only, this rod gives very deep penetration and high quality welds in all positions. Requires considerable operator skill.
- E 6011 - Same as E 6010 but can be used AC or DC.
- E 6013 - AC or DC, shallow penetration, nice looking beads, easy to use.
- E 7014 - AC or DC, high deposition rate as rod coating contains iron powder, low penetration.
- E 7024 - AC or DC, same as E 7014 but higher deposition rate, flat or horizontal only. Called "drag rod".
- E 7018 - Called "low hydrogen", hydrogen bubbles in weld bead cause cracking and these rods are used for welding high sulphur, high carbon, or low alloy steels. Very high quality welds.

MURPHY'S LAW IN THE FORGE

As compiled by Brad Silberberg of the Blacksmith's Guild of the Potomac.

- (1) The phone will always ring at the exact moment a welding heat is reached.
Corollary:
If you don't answer it will be an important call. If you do answer it will be someone speaking a foreign language calling the wrong number.
- (2) When using your 160 lb. swedge block the side you need will always be facing down.
- (3) The amount of time spent talking with a client is inversely proportional to the dollar value of the work discussed.
- (4) No matter what time you decide to eat lunch it will coincide exactly with the arrival of a steel shipment.



BAM
R.R. 1 BOX 16D
LESTERVILLE, MO 63654

ADDRESS CORRECTION REQUESTED



B.A.M.