

SOFA SOUNDS



FEBRUARY-MAY 1988

(DOUBLE ISSUE)

BOARD OF DIRECTORS:

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Hans Peot (President)
Ham Hammond (Vice President)
Ken Scharabok (Secretary/Treasurer)

NEWSLETTER EDITOR

Ken Scharabok (513-429-3967)

MARK YOUR CALENDAR: Unless otherwise noted, all meetings will be held at the Studebaker Frontier Homestead on Rt. 202, four miles north of I-70 near Tipp City. Please don't park on the grass or block access to the production buildings. Donations for the newsletter support raffle are always welcome. Please bring your work to display. The public and guests are welcome.

April 2nd, 1 PM

BUSINESS MEETING followed by tentative demonstrator Calvert Marshall - an old-time blacksmith who will demonstrate items used with singletrees. At press time we have not be able to confirm his availability so we would like to have a stand-by demonstrator. If you can help, please call ASAP.

May 7th and 8th

Indiana Blacksmith Ass'n annual conference. For further information contact Danny O'Brien at 317-675-4807 (RR #4, Box 241, Tipton, IN 46072).

May 14th, 1 PM

BUSINESS MEETING followed by a demonstration by Ron Thompson and Ron Van Vickle. Demonstration subject to be announced.

May 21st and 22nd

Northwest Ohio Blacksmiths annual conference. For further information contact Don Witzler at 419-874-6576. (28943 White Rd., Perrysburg, OH 43551).

June 4th, 1 PM

BUSINESS MEETING followed by an open forge session using air-hammer bits to make hardy tools. Donation of air-hammer bits would be appreciated.

June 16th - 18th

ABANA NATIONAL CONFERENCE to be held at the Sloss Furnaces National Historic Landmark in Birmingham, AL. For a registration package write to P.O. Box 11781, Birmingham, AL 35202.

July 9th, 1 PM

BUSINESS MEETING followed by a demonstration T.B.A. DEMONSTRATOR NEEDED!!!! Call 429-3967 to volunteer.

Chapter of ABANA

MEETING NOTES:

During the December 6th business meeting, the following items were covered:

- Hans Peot gave a summary of the ABANA Board of Directors meeting held in Kingston, TN the weekend of November 14th during the portion for Chapter Presidents to participate:

-- Ruth Cook was offered continuation as Executive Secretary at her current salary (dispite cuts being made elsewhere in the budget) but declined since she felt the job required more effort than the salary justified. Janelle Gilbert accepted the position at the former salary. Hans felt Janelle would do a satisfactory job.

-- Susan Stowalter resigned as ABANA Treasurer due to other commitments and the work required for this unpaid position. Hans said ABANA is at the point where it has grown too large for volunteer effort in some positions but was not large enough to be able to afford professional help. Professional accounting may be required to receive some grants. Bill Callaway is the new Treasurer.

-- There is little which can be done to reduce the cost of The Anvil's Ring (the major ABANA expenditure) since most of the cost is associated with putting it together, having it printed and mailing. Reducing the quality of the paper stock would not be a significant savings. On the number and types of articles it contains, Hans related the old Editor's lament that they cannot publish what they don't receive. If you would like to submit an article to it, your Editor would be happy to provide assistance as required.

-- The cost of liability insurance for ABANA officers/activities is growing significantly. The organization must have this type of insurance.

-- The date for election of board members was moved so incoming board members would have a say in the budget in which they must operate under for the year. This was a logical move.

-- The possibility of having annual, but regional, national conferences was discussed, something on the order of having it one year east of the Mississippi and the next west of it. That way, more members would have a chance to attend at least biannually, instead of four years between attendance if the current biannual conference site was too distant to attend.

-- The possibility of requiring ABANA membership to join a chapter was discussed but no action was taken as it would be hard to enforce and may hurt the chapters more than it benefited A.B.A.N.A. Hans suggested to the board that they seek new members outside of the current chapters as well (e.g., classified ads in publications like Popular Science). The board will review this option and may try it on a trial basis.

- Bill Heileman was giving away large pieces of steel in assorted shapes cut out of equipment where he works.

- It was announced Francis Whitaker is selling the entire contents of his blacksmithing shop since he is retiring from active blacksmithing (but will still lead masters classes or project workshops).

- Ron Thompson praised the newsletter of the Tullie Smith House Blacksmith Guild (c/o 4600-D East Ponce De Leon Ave., Clarkston, GA 30021) as a bargain for their \$3.00 membership cost. I agree.

Coffee for the meeting was furnished by Owen Vance at his own expense, so thank him for it when you see him.

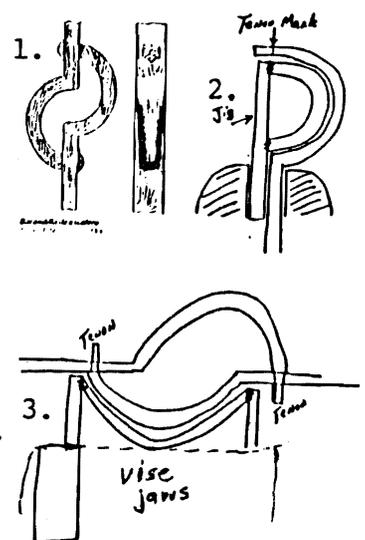
Richard Knopp brought along a dandy 1" belt sander he had made using an electric motor and two lawnmower tires for the guides. The top tire had the rubber removed to form a "V" pulley and the bottom still had the rubber on for traction. He also brought along a beautiful Wizard Head Letter Opener he purchased in Gatlinburg, TN. (See Tips and Techniques Section on how they are made).

Gary Ameling (who came from Elmore, OH to attend) brought along a very nice three candle candelabra he had made to celebrate the anniversary of his first year in blacksmithing. He made a bunch of us jealous.

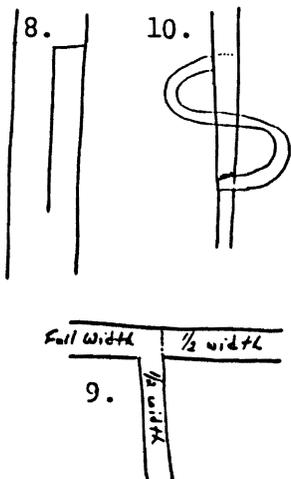
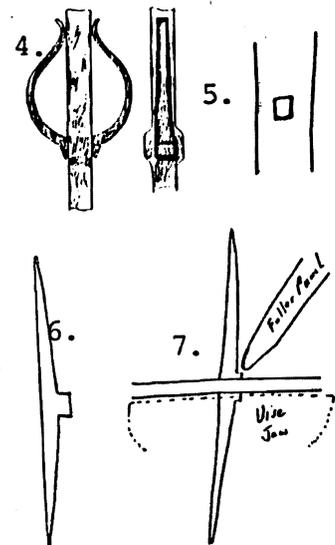
The raffle brought in \$65.00 to support the newsletter. Winners of items donated by Art Wolfe (of Cleveland Heights, OH) were: Ron Van Vickle - carpenter's plane; Bob Graham - Spanish (I think) knife; G.C. Mericle - brass jrab; Denny Bishop - brass hose nozzle; Bill Heileman - large ballbearing; Bige Campbell - fender washers; Bob Wilson - air tool safety chuck; and Gary Ameling - two welding strikers. Other winners were: Jim Leistner - anvil book ends donated by Ron Thompson; G.C. Mericle - tongs made by the IBA at the last Quad-State; Dick Franklin - C-clamps donated by Al Lorenz; Ray Montgomery - spatula donated by Hans Peot; Bob Cepluch - chain donated by Richard Knopp; Larry Gindlesperger - wrench donated by Bob Graham; Jam Leistner - O-ring assortment donated by Owen Vance; Ken Scharabok, small rivets donated by John Jacobs; Owen Vance - book donated by Ken Scharabok; Phil Sturr - two shop signs donated by Ron Thompson; Ham Hammond - RR spikes donated by Phil Sturr; Bill Fleckenstein - drive shaft part donated by Ralph Van Buskirk; and Joe Abele - magnets to deaden anvil sound donated by Bob Graham. Thanks goes to everyone who donated items.

Following the business meeting Hans Peot gave his usual excellent demonstration, this time making three different types of balusters which he was using to make window grills for his shop. Two of them were from the book Designs and Products for the Forge available for \$12.30 (postpaid) from Norm Larson, 5426 Hwy. 246, Lompoc, CA 93436. This is an excellent reprint of a European book on designs. It does not give the how-to steps, only sketches of the end product in most cases.

The first one was a double 'c' was shown in illustration 1 with front and side views. Hans used 3/8" x 1" stock picked up from the scrap pile at Patterson Iron for 15¢ pound. He started by forging down about 5" to a taper ending about 5/8". He then put a sharp corner about 4 1/4" back, placed it in the vise with a jig (I-2) and bent it around the jig. The jig was made by welding on a half section of pipe to a piece of stock about 1 1/2" wide. A mark for a tenon was put where indicated, the upper half bent back straight (without affecting the square corner) and a 3/8" tenon put on using four different swages in the power hammer. When the tenon was completed, the piece was again formed around the jig. To square up the tenon shoulder he used a monkey tool followed by a negative drill bit (one with a hole in the center so only the shoulder was squared). When two pieces were ready he drilled the tenon holes and assembled them using another jig (I-3). He had made the jig for the hardy hole in his anvil but had to use it in the post-vise. The actual riveting was done by heating the tenon with a torch. During construction of the gate we found it easier to continue to apply heat to the tenon as it was being riveted down. When assembled, he heated the joint area and rounded the 'c' shapes slightly by hitting down on one end while the other was on the anvil stand.



The second was a tulip-design as shown in I-4 with front and side views. Using the same size stock Hans started by drilling a 1/2" hole in the center at the desired spot and then drifted it square with a square punch (I-5). The bulb itself was made out of 1/2" square stock in the shape shown in I-6. When ready, it was inserted in the hole to where the center full width was centered in the hole, put in the vise, and a fuller (rounded) chisel used to fuller down the catch area on both sides to secure it in the hole. The center area was made by using the edge of the anvil and forging down to start the side pedals. The fullering process is shown in I-7. The bulb sides were then formed using the anvil horn and heavy-duty pliers to bring them to the shape desired.



The third design was apparently a Peot original. He started by hot cutting in a 4 1/2" slit from both sides (again using 3/8" x 1" stock) and hot cutting from one side (I-8). The chiseled out area was then bent to 90° perpendicular to the stock (I-9) and forged out to 6 1/2". The cut edges from the inside of the stock was also dressed up. The cut out area was then formed into a "S" shape with the bottom larger than the top and was spot welded where it come back to the original sideways cut mark (I-10).

During the demonstration, Hans mentioned he likes to wear welders gloves when forging as they are lined (so they can withstand handling hot metal) and have a nice cuff length to avoid scale burning your shirt cuffs. These gloves are available for about 3 pairs for \$10.00 from Harbor Freight Salvage Co., 3491 Mission Oaks Blvd., Cammarillo, CA 93011-6011 - 800-423-2567 - catalog on request).

* * * * *

For the January 9th meeting, your editor demonstrated a Francis-Whitaker style fireplace log fork (see article enclosed). One change which can be made is avoid step 3 of Figure 5 if the fork tines are close together. This split can be made as the tines are separated after forge welding on the handle.

I also tried to do a dragon-head on the end of a bar but it came out looking down-right ugly. I may try it again in the future after more practice. The up-setting step sure did prove to be upsetting. My excuse that I was rushed for time since I was driving to Alabama after the meeting didn't go over well for some reason.

Since I was at school (OK, OK on vacation) for two-months, I missed the February and March meeting. I understand Don Witzler did a great job on demonstrating making knife sheaths in February and Ham Hammond did us proud on making a knife from a railroad spike in March. Considering the material we had to work with, Ham has come a long way on blacksmithing. Now if we can just keep him at it!

I don't know what was in the newsletter support raffle for either month but both brought in sizeable funds. It would greatly help me if someone would volunteer to record who won what item during these raffles as I'm usually trying to do two or more things at once.

Start making your plans to attend the 1988 ABANA National Conference. Bill Manley and the Southeastern chapters have put together an excellent program.

A.B.A.N.A. President's Message

Man, I feel like a cheerleader at a football game—"Go ABANA! Go!". I'm so excited to be able to tell you that ABANA is now financially solvent, and is running on track and uphill one again. This was no small accomplishment, and slashing the budget really paid off. This board is extremely dedicated and has donated hundreds of dollars in out-of-pocket expenses for travel, phone, stamps—you name it. The unsung heroes are the families of these board members who are absorbing the bills and supporting the tireless efforts to turn the runaway train around. Our hats are off the them.

The newly formed Museum Fund now has \$1,900 in it to divide between the National Ornamental Metal Museum and the Yellin Museum.

The winter issue of the Anvil's Ring should contain the findings of the Audit Committee and will cover 1987, 1986, and hopefully 1985. The budget for 1988 will appear in a subsequent issue.

The '88 Conference Committee met in Birmingham, August 15. Michael Bondi attended as a representative for the ABANA Board and reports that the conference is on-line and well organized. The scheduled demonstrators and lecturers are top-notch. There is also a terrific program for the families of those attending, so plan on a vacation together if possible. The costs will be comparable to those of the Flagstaff conference. The food will be catered by a private firm, so you can leave your antacids at home and really enjoy yourselves at Birmingham. We will have a general membership meeting sometime during the conference, and the winter issue of the Anvil's Ring should contain an agenda for you to review. We encourage you to attend and take part in this meeting.

ABANA now accepts MasterCard and Visa. We hope this will make things easier for our members, as well as any interested outside parties, especially at conference time and for renewing your subscriptions.

The Board will hold its annual budget meeting in November of this year to prepare for the 1988 season. We will be guests of Mr. and Mrs. Bill Manly in Tennessee. This will allow the 1988 Conference Committee easier access to the ABANA Board as they finalize their plans and budget for the upcoming June event.

One topic we plan to address in November will be the role the chapters play in ABANA. Some chapters have lots of ABANA members and encourage their respective members to join and support ABANA. Other chapters do not and have very few ABANA members. We want to figure out what we can do to turn this around. All ABANA chapter presidents are invited to the November Board meeting. We will be contacting you with an agenda and personal invitation. The future of ABANA is resting in the hands of its membership. The more hands we have the greater the future.

In my last President's Message (Vol. 15, No. 1) I referred to Ruth Cook as "the 'Princess Di' of ABANA". Unfortunately, this was interpreted by some to be a less than positive reflection upon Ruth. I would like to clearly state that I meant nothing negative by this remark, rather it was in reference to an enormously popular person (Princess Di) who is loved by many. I would like to apologize to Ruth for any embarrassment this may have caused her and regret its occurrence.

I can't tell you how positive I feel about ABANA once again. We are so very anxious to return to the bylaws to make ABANA what it was originally intended to be: an organization designed for educational purposes; to encourage and facilitate the establishment of training programs for aspiring smiths; to disseminate information about sources of material and equipment; to serve as a center of information about blacksmithing for architects, interior designers, and other interested groups; and to expose the general public to the art of blacksmithing. ABANA is made up of blacksmiths interested in promoting and preserving blacksmithing throughout the world. Please help us accomplish this goal. If you aren't already a member, join up now and help out. There is no end to what we can do together as a team.

See you in Birmingham!



Dorothy Stiegler, president

the Anvil's Ring/Fall 1987

PRESIDENT'S MESSAGE
November 20, 1987

Dear Members,

Well I'm happy to tell you that the board meeting was a positive success. We had five chapter presidents attending for much or all of the meeting. They entered the discussion along with the board and asked questions and gave suggestions. We all felt this was one of the best things we've done to date and



I hope to continue the example. The political hoop-da-la that existed for the past few months is something none of us need and fortunately we feel it is now at its end.

A committee has been formed to boost membership in ABANA. The membership, of course, is our life blood. You will be hearing from Chairman, Nol Putnam, about The Anvil's Ring raffles and the other things that his committee has planned. The bottom line is to be able to get benefits to you, the members, for free or for very little money. To do this, we must get these programs self-funded.

Susan Showalter is stepping aside from the Treasurer's position to spend her time making the library self-supporting and will in time turn this position over to someone else. We need a good A.V. person to take over this volunteer position. If you know anyone interested or qualified, please contact:

Jim Fleming
P.O. Box 1212
Breckenridge, Colorado 80424
Phone: (303) 453-4477.

We also need an ABANA member who is a CPA to help with the 1987 audit. To get grants and NEA money for projects in the future, we need more than an Opinion Audit. If you know of anyone, please contact:

Michael Bondi, 1st Vice President
1818 Shorey St., Oakland, California 94607
Phone: (415) 736-1327 or 658-2409.

We also need an ABANA member who is able to give legal advice as we implement more and more programs. If you are interested or know anyone, contact:

Joe Pehoski, Secretary
P.O. Box 84, Salado, Texas 76751
(817) 947-5389 or 947-5740

These are the types of people who need to be running for the ABANA Board, so keep your eyes and ears open. We will all agree that we have grown too big to elect armchair advisors to the board. We need hard workers to keep ABANA going.

Bill Callaway is resuming the Treasurer's position and Joe Humble is taking the 2nd Vice President's spot. Mr. Bill Manly is advisor to the board for a long range plan for the board.

Our Executive Secretary, Janelle Gilbert, has done a phenomenal job in getting the ABANA Office organized and running smoothly on our computer system. She is starting a Visiting Blacksmith's Program. This will be designed for smiths on all levels of expertise to visit in the shops of other blacksmiths for a negotiated period of time. Helpful suggestions are welcome. Contact:

Janelle Gilbert at the ABANA Office
P.O. Box 1181
Nashville, Indiana 47448
Phone: (812) 988-6919

The American Society of Metals is celebrating its 75th birthday in October, 1988. Your chapter president will be receiving information about this and we hope that you will participate in the celebration.

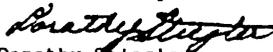
Please remember to set June 15 - 18, 1988 aside for the Sloss Furnace Conference. The committees are working hard to make this the best conference yet. We are still asking for auction

Items from each chapter. Please write:
c/o Randy Lawrence
Sloss Furnace, P.O. Box 11781
Birmingham, Alabama 35202

I will keep you posted every month through your chapter newsletters about the progress ABANA is making. Please feel free to call or write to me anytime:

4642 180th Way, S.W.
Rochester, Washington 98579
(206) 273-8670

Most sincerely,


Dorothy Stiegler
ABANA President

ABANA

Artist-Blacksmiths' Association of North America



Board

President
Dorothy Stiegler
6641 180th Way, S.W.
Rochester, WA 98579

1st Vice President
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1818 Sherry Street
Oakland, CA 94607

2nd Vice President
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Nashv, CO 81621-1152

Secretary
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Tulsa, TX 74371

Treasurer
Susan Showalter
R.R. 2 Box 102-A
Nashville, TN 37248

Jim Hanson
Jack Probasco
Bill Callaway
Jim Fleming
Joe Harris
Doug Hendrickson
Joe Hamble
Leonard Masters
Dorothy Nelson
Bud Ogger

Executive Secretary
Janette Gilbert
P.O. Box 1181
Nashville, TN 37248

November 28, 1987
(Received at ABANA Office for
mail - December 9, 1987)

Dear Chapter Presidents and Newsletter Editors,

First, let me introduce myself as Nol Putnam, a blacksmith for many years, but only recently elected to the Board of Directors to fill an unexpired term. And hence this letter, perhaps the first of several to you.

The conventional wisdom among people who collect that sort of information, is that organizations like ours have a very hard time with a membership below 3500 dues payers. Obviously to attract members there have to be services given in return. And at the magic number, we would then have enough resources to do training films, travelling exhibitions, collections, scholarships, and so forth. In short, to be a fully supportive national clearing house for the Chapter and individual needs.

Sounds wonderful, doesn't it! The problem is that over the past four years we have averaged around 2500 national members -- sometimes higher, sometimes a little lower. I don't think that 1000 new members can or will come entirely through people interested in blacksmithing per se. But I do believe that a goal of 1000 members is perfectly possible if we think of people who we currently get interested in blacksmithing and then all the allied areas -- farmers, machinists, metallurgists, back-to-the-land folk, readers of Popular Science, Popular Mechanics, Mother Earth News, Country Journal (have you got an idea of any other magazines?). I would love to have your thoughts on likely populations that we might introduce ourselves to -- doesn't do any good to hide our light under a bushel basket!

BUT, specifically for the Chapters: at the Sloss Conference we are going to offer a prize to that Chapter which gets the highest percentage of new ABANA members between now and the conference (the end of May, so it can be tabulated). And the Chapter that wins will get a plaque to hang in their collective

forge, and a cup to keep until some other Chapter wrestles the prize away from them the next year.

Actually, there will also be a second prize given to the Chapter that has the highest percentage of members at the Conference. While that will be weighted toward the Southeast this year, two years from now some other chapters will have a better shot. And some Chapters like the Blacksmith Guild of the Potomac always have a very large contingent.

But for now, membership in ABANA and your Chapter is the goal. There is soon to be published a new brochure with membership blank for information. Please let me know your thoughts or ideas or suggestions. I shall be out of the country until January 11th. But feel free to write: Nol Putnam, White Oak Forge, Ltd., P.O. Box 341, The Plains, VA, 22171; or after January 11th you can call me at 703/253-5269. And if it were possible, I wish each of your chapters could win!

So here's to us and our continued success.

Sincerely,

Nol Putnam

P.S. Bill Gichner has just informed me that he will be donating a real nice anvil of approximately 11"X 5" to the pot. Also, possibilities exist for the winner's name to be stamped onto the anvil. Don't pass up the chance to win this prize!

ABANA

Artist-Blacksmiths' Association of North America



PRESIDENT'S MESSAGE TO THE CHAPTERS January 1988

Dear Fellow Blacksmiths,

We are off and running and now that January is nearly over there is but a short time before the Sloss Furnace Conference.

I want to personally thank those of you who have called or written to me and expressed so many positive thoughts. Thanks! I never know if I am coming across the way I hope to and positive feedback is very important.

Susan Showalter is finishing up her year end commitment to ABANA and is resigning to pursue her artwork. Bill Callaway is the new Treasurer of ABANA and will conduct the financial end of the organization. The ABANA Board is going to fill Susan's vacated seat and you as members will have the opportunity to "okay" that choice at the General Membership Meeting in Birmingham in June.

We will have our regular 1988 Elections in the early Fall, so be thinking of who you want to represent you. Remember the tremendous workload that each ABANA Board of Director must shoulder. We need help with economic advice, legal, secretarial, audit or CPA information, A.V. and library skills, and leadership ability. If you know someone who is a likely candidate, get with your chapter and prepare to nominate him or her for the Fall Election.

The Conference Committee headed by Bill Manly is giving us a good report. We sent them the second half of the seed money so that they can mail your registration packets to you. Anyone who can send in an early registration want to do so, as you will find a savings in several areas.

Insurance for the conference is being handled at this time. To keep these fees as low as possible and still insure our conference-goers for the event, all in attendance must be ABANA Members. Therefore, the registration fees for non-ABANA Members will be higher but will include a family membership in ABANA. This will allow your wives and children to come in under our insurance requirements and also introduce you to The Anvil's Ring and the other fine benefits. It will also give you a voice in voting at the General Membership Meeting to be held at the conference.

Francis Whitaker is joining the ABANA Switchboard. Please add his name, address, and phone number to your list: Mr. Francis Whitaker, 1265 West Bunny Court, Aspen, CO 91611. Phone: (303) 925-3844. Francis and Portia are doing much better and send their regards to all of you.

Freddie Haberman had a trip hammer accident. He lost three toes but is otherwise, none the worse for wear. Thank you, Jesus! Well-wishers can send a note or card to: Alfred Haberman, Wilhelm Diess-Strasse 8, 8346 Simbach Am Inn, West Germany.

Manfred Brehdol spent the better part of the past three months in the hospital recuperating from a heart attack. Reports are that he is better and in good spirits. Well-wishers to Manfred can be sent to: Manfred Brehdol, Ritterstrabe 23, 5100 Aachen, West Germany.

Don't forget about the Saturday Evening Auction and the ASMI nearest your chapter.

Most sincerely,

Dorothy Stiegler
Dorothy Stiegler
ABANA President

(7)

ABANA

Artist-Blacksmiths' Association of North America



PRESIDENT'S MESSAGE TO THE CHAPTERS February 1988

Dear Fellow Blacksmiths,

Just an update to clarify my January letter before anyone comes to the wrong conclusions. As you all know, fees for non-ABANA Members attending the National Conference has always been higher than those of ABANA Members. That's part of your benefits when you join ABANA. We of the Board are obligated to protect the assets of ABANA and of the fifteen Board Members. To hold an event the size of our National Conference without insurance, would be gross neglect on our part. Accidents do happen, especially when we are not prepared. Insurance companies are not beating our doors down to insure the Sloss Furnaces Conference site. There are stipulations that we must meet and rules that we have to follow to gain the insurance at a cost the organization can afford. We can meet the insurance obligations and also give the non-ABANA Member a great benefit at the same time by giving the non-member a free family membership when they pay their fees.

To date, non-ABANA Members have paid the higher fee and received nothing in return. This year, you will receive a free ABANA Family Membership. The cost for non-ABANA Members to attend the Conference would remain the same with or without the membership, with or without the insurance benefit.

It certainly is not the intention of the ABANA Board of Directors to coerce anyone into joining our organization. We realize that this would be very unethical. Blacksmiths are notoriously independent and that's what we love about all of us and we don't want to tamper with that characteristic. Please see that we are attempting to do a good thing here. There are so many times that we of the board hear the phrase, "What is ABANA doing for me?" Please see that we have the best interest of the organization in mind and that we want to give the non-members a benefit for attending this fine conference.

This is going to be a great event. There are a lot of things to see and do at the Sloss Furnaces site, and the Conference Committee has worked very, very hard to have interesting things for the conference-goers and their families to do. Please give them your full support.

Something you can help me with is the age old concern - What do you as a member want to see ABANA doing that we are not? Also, as a Chapter of ABANA, what obligation would you like ABANA to assume in relationship to the ABANA Chapters? Also it would be a tremendous help to get suggestions from your Chapters as to what you feel the Chapters' obligation to ABANA should be. This current administration wants to close up the gap between the Chapters and ABANA, and I certainly would be very grateful if you would drop me a line with your suggestions.

It's terribly difficult to try to guess what to do when your personal suggestions would speed things up so much. ABANA does not want to compete with the Chapters. We want to do the things that you as Chapters cannot accomplish alone, and we want to help you serve your membership more efficiently.

See you at Sloss!

Dorothy Stiegler
Dorothy Stiegler
ABANA President

1988 ABANA Conference
Sloss Furnaces National Historic Landmark
Birmingham, Alabama
June 15-18, 1988

February 4, 1988

TO: ABANA Chapter Presidents
FROM: John Catchings, 1988 ABANA Conference, Iron in the Hat Committee
SUBJECT: Donations for the Iron in the Hat Drawings

I'm happy to report that the 1988 ABANA Conference plans are outstanding! Your chapter members should be receiving information and registration packets soon. The Conference should be memorable for all. Many thanks for your help and support!

As you know, the Iron in the Hat Drawing is an important fund raiser for ABANA. It helps generate funds to cover current conference expenses and helps provide future conference seed money. The Iron in the Hat will be an enjoyable part of the Conference. This year there will be six(6) drawings: two drawings each day for three days - one at the noon meal and one at the evening meal. I expect to have many quality items for each drawing.

Please solicit your members at your monthly meetings and in your newsletters for donations to the Conference Iron in the Hat.

They may wish to donate:

- Tools
- Handmade Ironwork
- Iron Collectables or Antiques
- Books or Literature about Ironwork
- Individual Services
- You Name It!

Also point out that all donations are tax deductible - receipts will be provided.
For those not able to attend the Conference, make a donation and be there in spirit!
Members may either: 1) send items to: Iron in the Hat

c/o Randy Lawrence/Sloss Furnace
P.O. Box 11781
Birmingham, Alabama 35202

or: 2) bring items to the Conference - directions will be posted
at the registration desk.

Let's have fun with this! May I suggest a group effort in addition to individual
efforts? How about an inter-chapter competition for the most interesting, original,
unusual, or spectacular donation? What can you and your chapter come up with?
Thanks everyone! See you at Sloss in June!

Sincerely,

John
John Catchings
3524 Jefferson Township Pkwy.
Marietta, Ga. 30066
(404) 587-4004

HEAR YE! HEAR YE! HEAR YE!



Stocking caps featuring anvils and hammers are available
from Sheri Stanaitis, Rt. 1, Box 171B, Baldwin, WI 54002
for \$13 postpaid. Black anvil and hammer on a white back-
ground with a black tassel and border.

FOR SALE: 25 lb Fairbanks power hammer. A real "Cadillac"
of a hammer, \$1,000. A foot powered treadle hammer similar
to ABANA plans - \$250. Anvils from 150 lb to 450 lb, with
stand, \$1.10/lb. Many other tools. Bob Bergman, Rt. 1, Box
25, Blanchardville, WI 53516 - (608) 523-4750.

JOB OPPORTUNITY: Excellent opportunity for a full-time,
skilled blacksmith to produce Early American Wrought Iron-
ware. Must be able to forge weld. Background in metal
fabrication helpful. Located 20 miles east of Madison, WI.
Send resume to: Rowe Pottery Works, 404 England St., Cam-
bridge, WI 53523.

Brass rulers are available from Woodcraft, 41 Atlantic Ave., Woburn, MA
01888 - catalog \$1.

Francis Whitaker (1265 W. Bunny Ct., Aspen, CO 30236) is selling out the com-
plete contents of his blacksmith shop. He wants to sell everything together -
which includes many tools made by Francis. If interested, contact him.

FOR SALE: Used heavy-duty industrial forging dies, 50¢ per lb, shipping
and handling extra. Contact Ray Larsen, 11126 Broadway, Hanover, MA 02339 -
617-659-7839.

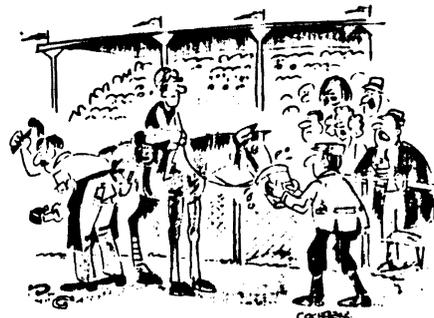
FOR SALE: 400 lb Chambersburg general utility powerhammer. EC, built in
1942, used very little in engineering program at a university. Contact Will
Stone, RD #1, Coburn, PA 16832 - 814-349-8232.

A selected listing of current buyers who purchase contemporary American crafts
is available from The Francisco Enterprise, 572 143rd St., Calendonía, MI 49316.

POSITION AVAILABLE. Full-time smith wanted, long-term position. Minimum two
years forging experience. Send resume to: Tom Joyce, Rt. 10, Box 92A, Santa Fe,
NM 87501.

BLACKSMITHING WORK AVAILABLE: Year around production work, using power hammer
to make clam and oyster tongs for fishing industry. Opportunity to develop market
for own work. For details contact Gloucester Forge and Steel, Box 308, Ordinary,
VA 23131.

FUN 'N' GAMES with COCHRAN!



"These pit stops are killing him."

POSITION AVAILABLE: Journeyman needed as assistant blacksmith for reproduction of early 17th Century English domestic and architectural ironwork. Will use period tools and "first person" interpretive techniques. Facilities include 17th Century forge and fully-equipped modern smithing shop. Full-time position, salary commensurate with ability and experience. Send resume to: Ron Geering, Interpretive Artisans Coordinator, Plimoth Plantation, P.O. Box 1620, Plymouth, MA 02360. This is the recreated village of the Pilgrims.

POSITION AVAILABLE: Living history blacksmith position in recently renovated shop. Must be proficient in smithing, good with the general public and sensitive to historical accuracy. Excellent opportunity. Send resume to: Old City Park, Attn: Curator of Education, 1717 Gano, Dallas, TX 75215 - 214-421-5141.

POSITION AVAILABLE: Well-equipped industrial blacksmith shop needs full-time blacksmith for open frame forging, tool redressing, upsetting and hot forming operations. Position has opportunity for advancement and full range of benefits. Send resume to: Max Weiss Co., Attn: Ray Weiss, 8625 W. Bradley Rd., Milwaukee, WI 53224 - 414-355-8220.

The Rural Smiths of Mid-America publishes The Traditionalist for blacksmiths interested in old time blacksmithing. Published quarterly. Membership is \$25 first year, \$20 thereafter. Contact Fred Caylor, 3602 S. 800E, Zionsville, IN 46077.

FOR SALE: Heavy-duty, cast-iron firepots. \$125.00. Contact Bob Zeller, 849-1771.

BEGINNING BLACKSMITHING CLASSES: Contact Larry Wood at 233-6751.

FOR SALE: 50 lb Williams-White power hammer, completely reconditioned, \$1,850. Wheelwright mandrel about 40" high, \$200. Contact Emmert Studebaker, 513-223-3202.

FOR SALE: Detailed and illustrated plans for a homemade 50 lb power hammer. \$4.00 postpaid. Contact Hans Peot (6425 S. Scarff Rd., New Carlisle, OH 45344).

OUT-OF-PRINT BLACKSMITHING-RELATED BOOKS. Send business size, self-addressed, stamped envelope to Norm Larson, 5426 Hwy. 246, Lompoc, CA 93436.

FOR SALE: Gas forge set-up including firebricks, insulated bricks, 6-gal propane tank, camper-type regulator and entry pipe. \$100.00. Contact Ken Scharabok at 513-429-3967 evenings/weekends. This is a good forge is see if gas forging will work for you..

Turley Forge (Rt. 10, Box 88C, Santa Fe, MN 87501) offers 3 & 6 week blacksmithing courses. Cost is \$626.25 and \$1,252.50, respectively and does not including room or board. He has trained many of the smiths working today.

NOTE: Several of our members are looking for postvises, anvils and basic tools. If you have any for sale or to trade, classified ads in this newsletter are free for items of this nature.

Lindsay Publications (P.O. Box 12, Bradley, IL 50605-0012, catalog \$1.00) specializes in reprints of out-of-print books in a variety of areas.

If you attend a festival at which you think a working and/or selling blacksmith would be appropriate, please obtain the name and address of the sponsor and send the info to me. I will contact them suggesting they advertise in this newsletter for their next event. I understand festivals can be a profitable outlet for our craft.

POSITION AVAILABLE: The National Ornamental Metal Museum has an opening for an exhibition technician/shop assistance who is willing to work 25 hours a week for a period of two years. The Museum will provide an apartment, utilities, studio space, medical insurance, and a modest salary. Primary duties will include constructing props, cases, crates, and assisting the artist-in-residence with demonstrations for visitors. Familiarity with both ferrous and non-ferrous metal techniques, carpentry skills, and good public relations ability are important. Previous museum experience is helpful but not required. A good sense of humor and the ability to work well with people are essential. The position will be open in February, 1988 and continue through January, 1990. Only single applicants will be considered. During off-duty hours the employee may undertake commissions, repair jobs, or attend classes at area colleges or universities. It is an excellent opportunity for exposure to fine metalwork of all types and for developing skills under the supervision of the director, artist-in-residence, and workshop leaders who come in regularly throughout the year. Please send a resume and letter of interest to: James Wallace, Director, National Ornamental Metal Museum, 374 W. California Ave., Memphis, TN 38106 - (901) 774-6380).

WORKSHOPS: May 1988 - study in Prague, Czech., in an intensive training workshop under Vaclav Jaros. Two 14-day classes will be offered with hands-on training as well as historical lectures and field trips. Five students per class. Contact: Luba Ruzicka, Luba Travel, 103 W. 5th St., Taylor, TX 76574 - 512-352-8595 or John Roby, 113 Lindell, #2, San Antonio, TX 78212 - 512-737-0239.

Robert Behrendt (10959 Middle Ave., Elyria, OH 44035) sent in the following question. If you any suggestions, please send them into me. "I am looking for an idea for storing iron (bars, sheet and small pieces) so they can be located and removed from the stack easily".

As a result of a train derailment in Troy, Emmert Studebaker and Hans Peot acquired some free coke to experiment with. Both were unhappy with it until they discovered they needed to break the clumps into thumbnail size pieces. The coke was added to the fire after it had been started and burned hot and clean.

NOTE!
IMPORTANT NOTICE: Your editor broached the idea of a local exhibit of hand-crafted ironwork with the Miami Valley Arts Council and they are very enthusiastic about the possibility. It would be in the their gallery on the second floor of Lazarus' downtown. However, before any committment can be made by either parties, I need to confirm we would have a sufficient number of quality items to display. If you would be interested in displaying your work (and possibly making sales as a result) please let me know the number, type and size of items you would be displaying no later than April 15, 1988. Once display dates are established, they will advertise the exhibit. Remember, the folks who usually go to exhibits of this nature are those with money to spend. This is a wonderful opportunity to present handcrafted ironwork in this area so I strongly encourage strong support by our members.

J. Campbell (225 Whyel Ave., Uniontown, PA 15401 - 412-438-5176) is looking for a 50 lb powerhammer for the Pioneer Craft Council Center near him. It should be in good working order. If you donate a hammer, or sell it below its fair market value, a tax writeoff could possibly be taken. Mr. Campbell also has four copies of a book on the manufacturing of wrought iron for sale for \$10.00 per copy. Contact him or the craft center (412-438-2811).

The Harvey S. Firestone Park Festival of the Arts will be held at Firestone Recreational Park in Columbiana, OH on Saturday, August 6th, from 10AM-6PM. They are looking for one or more blacksmithing demonstrators. If interested contact Becky Nery at 216-482-3070 or Pat Stacey at 216-482-4489.

Reminder that the June/July 88 newsletter will contain only tips and techniques or other information submitted by S.O.F.A. members. To date the response has been less than overwhelming. Thus, take pen in hand and send in some material.

The American Society of Metal is looking for technical speakers to be listed in their Directory of Speakers. For an application form, contact them at Metals Park, OH 44073 - 216-338-5151. SOFA has recently joined this society and their quarterly publication will be passed around at meetings.

FOR SALE: 25 lb Little Giant, belt driven but needs belt, 3/4 h.p. motor and foot pedal. \$1,200. Contact H. K. Barmitz, 7205 Kingston-Adelphi Rd., Kingston, OH 45644 - 614-642-3848 - 10 miles north of Chillicothe.

Small gas forges are available from NC Tool Co., 6568 Hunt Rd., Pleasant Garden, NC 27313 - 919-674-5654. One model is \$295 plus S&H. Claims to produce a uniform 2350°F heat. No blower required. Catalog on request.

POSITION AVAILABLE: Silver Dollar City, MO is currently looking for a master blacksmith and master knifemaker. Blacksmith position requires designing and creating products using traditional blacksmith tools and methods. Must have ability to perform entertaining demonstrations and explain the history of this craft as it relates to the Ozarks. Knifemaker position requires designing and creating knives characteristic of the 1800's and performing demonstrations. They are also looking for a master toymaker. That position requires designing and producing toys characteristic of the 1800's. Must have ability to operate antique woodworking tools and perform entertaining demonstrations. Contact their personnel office at 417-338-8121.

Tools, books, etc. for blacksmiths and farriers are available from Centaur Forge, 117 North Spring St., Burlington, WI 53105. Write for a catalog.

Robert Owings Metal Design, 615 2nd St., Petaluma, CA 74952 - 707-778-8261 sells imported blacksmithing tools. Send SASE for price list.

Reprints of old and some new books on blacksmithing are available from either Norm Larson, 5236 Hwy 246, Lompoc, CA 93436 or Jim Fleming, 156 Country Rd., Beckenridge, CO 80424. Send SASE for titles and price list.

WANTED: Working 3-hp, single cylinder, gas or steam engine to drive a line shaft in a period blacksmith shop. Also need a tuyere/firepot for use with bellows. Contact Doug Heritage, 1209 Brown St., Davenport, IA 52804 - 319-326-0530.

POSITION AVAILABLE. Blacksmith needed to operate the 1820's period blacksmith shop at Fort Snelling Historical Center, St. Paul, MN. This will be a full-time position with a nice salary and some additional benefits. Position will be soldier/blacksmith and will involve interpreting the blacksmith shop, assisting in research of period furnishing, hardware, tools and so forth. Contact Stephen E. Osman, Minnesota Historical Society, Ft. Snelling Historical Center, St. Paul, MN 55111 - 612-726-1171. Resume will be required.

Blacksmithing tools are available from the Cumberland General Store, RT. #3, Crossville, TN 38555. They have a full line. Catalog \$4 (but worth the money as they sell all kinds of turn-of-the century items.

WANTED: A source of high-grade wrought iron for use in making muzzle-loading guns parts. Contact Steve Gossett, Cherry Grove Forge, RT. 3, Box 260, Gaston, OR 97119 - 503-985-7167.

Blacksmith Hints

April means spring and spring brings to mind beautiful weather after a hard winter. Just the sort of stuff a terrific meeting of like-minded crafts people is made of. This is exactly what was experienced by the members of various chapters who attended our meeting at the Campbell Folk School on April 14. Our featured demonstrator was Francis Whitaker who graciously donated his time and energy to show us all how it is done. Attendance was lower than expected but the enthusiasm more than made up for it. Several members even stayed several days to soak up some more knowledge. The Folk School folks seemed to enjoy our invasion as well and have invited us back.

Members from Applacian Area and Tullie Smith Guild Chapters were also on hand as well as four members of the ABANA Board of Directors. These included Stan Strickland, present ABANA President Joe Humble, Floyd Daniel, and this editor. Former ABANA presidents include Joe Humble and Francis Whitaker.

DEMONSTRATIONS

Francis has been smithing for over sixty years and over the years has developed a number of techniques that save quite a bit of time. This can become important when you are trying to make a living at your craft. By carefully thinking through your project at the design stage and then employing an efficient, methodical approach to the construction stage by using well practiced techniques the work goes much faster. A good example is all the welds Francis made were done in one heat.

Francis started by taking requests for techniques that individuals would like to see. The first was a right angle weld such as would be used for a gate frame. Francis started with $\frac{1}{2}$ X 1 stock cut one third the width shorter than the finished dimensions. Cut the corners at 45 degrees leaving about one third stock width at right angles. Upset slightly the square and angled surface and scarf the angled section on the anvil edge. Draw the scarf to a feather edge with the cross pisen. Draw a welding heat on both sections concentrating the heat behind the scarf. This insures the scarf won't burn and will have a welding hot surface for each to stick to. Lay both pieces together and weld in one heat. Brush off excess flux and scale and square up on one corner of the anvil checking with a framing square. Welding and squaring should be done in one heat. Refer to Figure One.

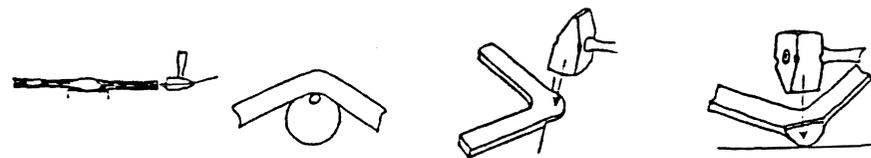
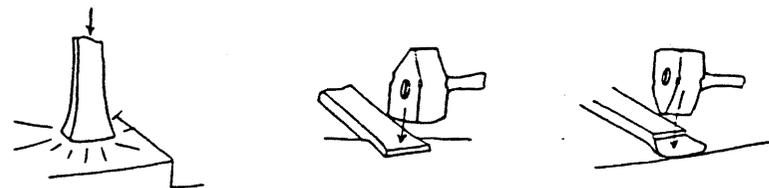


Fig 2



Being a red blooded blacksmith, Francis is always on the lookout for usable tools in whatever form or shape they come in. One such tool which he located at a flea market he reckoned was used by a cooper to set the iron bands on barrels. Being a handled tool meant to be struck by a hammer it became part of his collection. With it Francis showed us a twist on some one half square that produced some interesting results. See Figure 3. For a swaged groove such as this don't twist too tight or the groove will close up spoiling the effect.

(12)

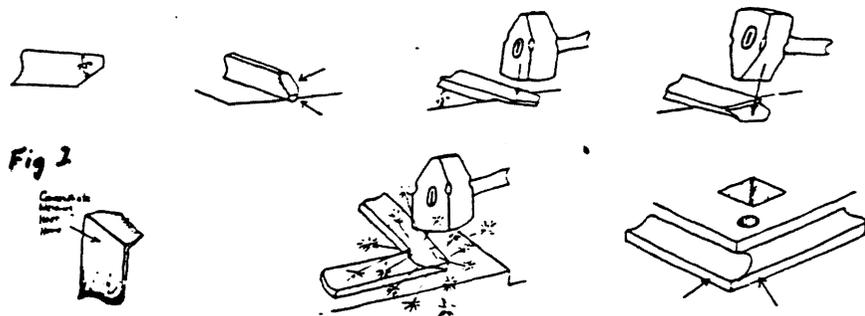


Fig 2

Three legs on a table or candle stand will always sit level on an irregular surface whereas four legs can present problems. Welding three legs starts with two pieces, one twice the length of the other. Upset the longer piece by heating it in the middle and cooling all but a couple of inches or so in the center by dipping each end in the water tub and striking one end with the hammer while holding the other. Put a sixty degree bend at the center over the anvil horn. Start the scarf on the edge of the anvil about one third the width of the stock used and feather the outside edge with the cross pisen. The third leg is upset on one end and scarfed in the same manner and the same amount as the first scarf. Draw a welding heat, again concentrating the heat behind the scarf. Francis recommends fluxing while the pieces are in the fire so no heat is lost by removing to flux. Remove both pieces and weld in one heat. Brush off excess flux and scale and sharpen welded corners over the anvil edge. Upsetting both pieces prior to welding should provide enough excess material to insure clean, sharp corners after welding. Refer to Figure 2.

Fig 3



While in the twisting mood, Francis showed us another one on round stock. He started by cold chiseling a line on opposite sides of a piece of one half round. After heating it the groove was deepened with a narrow angle hot cut while the piece rested in a bottom swage. This groove was spread with a broad angle cold cut on the anvil face giving a sort of figure eight cross section with slightly flattened peaks at the groove tops. By spreading the groove the diameter is increased in one direction and when twisted tight enough to close the groove a very attractive rope effect a little greater in diameter than the remaining stock is achieved. Straighten any irregularities in the vise. Refer to Figure 4.

Blacksmith Hints - Continued



Fig 4



Now that a twisted shaft is finished making it into a fork follows as the next step. Take a piece of stock the same diameter as the shaft and draw equal tapers on both ends to the desired dimensions for fork tines. Bend into a U shape and scarf in the same manner as for the three leg stand. With a little practice the scarf and U shape can be done in one heat. Clamp the twisted rod in the vise with about an inch of one end protruding and upset that end. Scarf in the usual manner. Then split the scarf with a hot-cut chisel and spread the split on the edge of the anvil. This split should lay up either side of the fork tines leaving no overhang into the bottom of the U of the tines that might require an extra welding heat to clean up. Weld shaft and tines together. Finally bend a graceful curve in the fork tines. Refer to Figure 5.

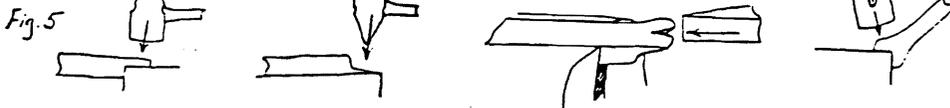
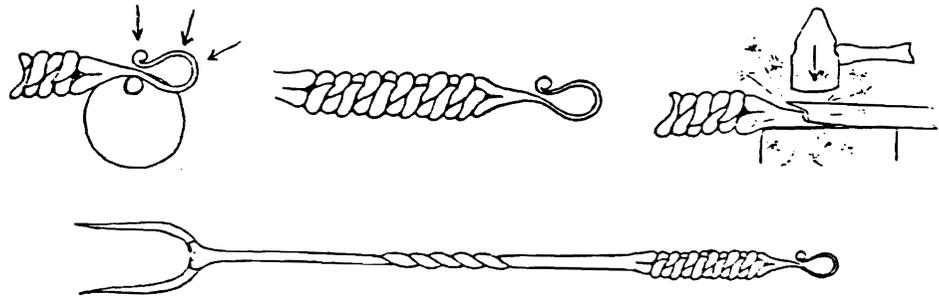
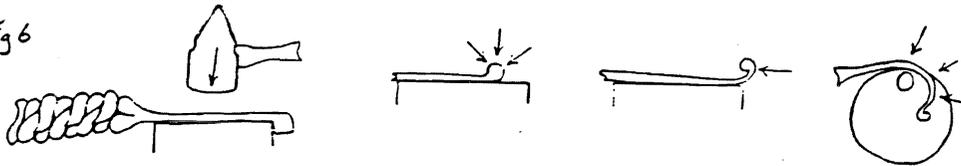
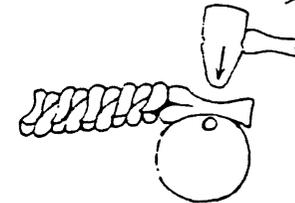
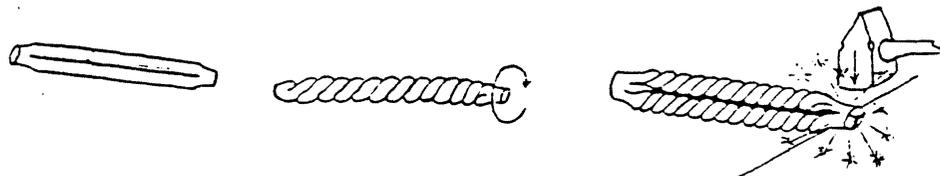


Fig 6



Francis showed two styles of handles for his fork. One was a traditional basket twist made with twisted square rods and the other was a braided twist which will be discussed here. Take pairs of rods of equal length and diameter and weld them on the ends. Twist each pair an equal number of times in the same direction. Use groups of three, four, five, etc. depending on the desired size of the finished handle and weld this group on both ends. For his demonstration, Francis used quarter inch rods about six inches long and grouped three pair. Heat the entire group evenly, clamp one end in the vise and twist from the other end until everything looks braided.

Forge a loop for hanging on one end by using the cross pie over the anvil horn starting in back of the end. This leaves extra material at the very end to forge a ball shape. This ball shape is square at first but is rounded by hammering the sharp, square corners round. Finish the loop over the anvil horn. The other end is scarfed as usual and welded to the forked shaft. The finished result is an attractive, comfortable and strong fork for those long cold winter nights around the fireplace. See Figure 6.



{taken from the North Carolina Chapter - ABANA - News Letter}
 as reprinted in the newsletter of the Appalachian Area Chapter - ABANA.

POWER HAMMER FORGING

Reprinted from the California Blacksmiths Association

Power Forging Hammers of the type shown in figure 57 are an invaluable asset to the shipboard blacksmith shop. If you've been on the business end of a hand or swing sledge, you know how much labor a power hammer can save. The control levers of the hammer are so arranged that the blows delivered can be either very light or very heavy. Many power hammers have a foot-treadle control device which enables the smith to operate the hammer while he works the stock.

Steam hammers should be operated with a steam pressure of from 75 to 125 pounds per square inch. The hammer is rated by the weight of the falling parts - rod, ram, and die - and a minimum of 50 pounds for each square inch of cross-section to be forged is required. Bar stock for shipboard forging seldom exceeds 4 inches square or 6 inches round; therefore, shipboard hammers rated greater than 300 pounds are not needed.

A power hammer does not eliminate the need of the anvil or hand tools. In fact, additional tools are needed to work metal under a power hammer. Tools of this type are shown in figure 58.

Your need for special tools and your ingenuity will be the only limit to the variations of power hammer tools illustrated. You'll have HACKS for cutting hot work, SHEARING TOOLS to cut cold flat bar, and ROUGHING TOOLS, TAPERING TOOLS, SPRING FULLERS and SWAGES to aid in drawing operations. These hammer accessories and other forging aids such as a 90-degree V-BLOCK for bending, or TAPERING DIES, are made in various sizes.

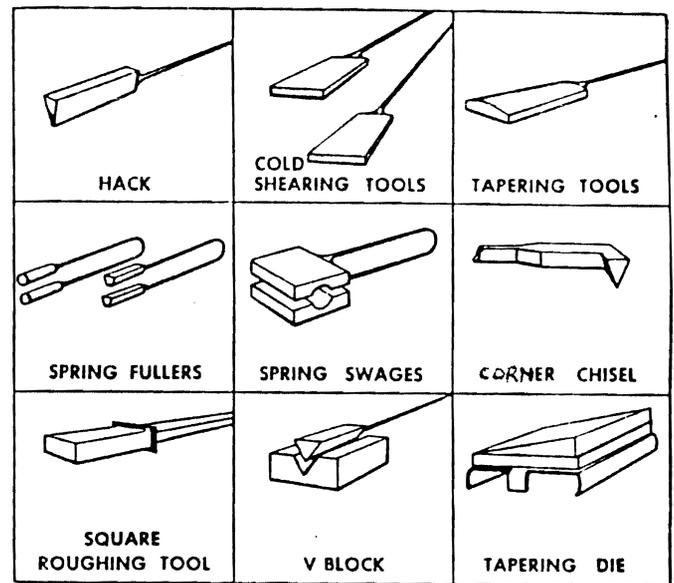
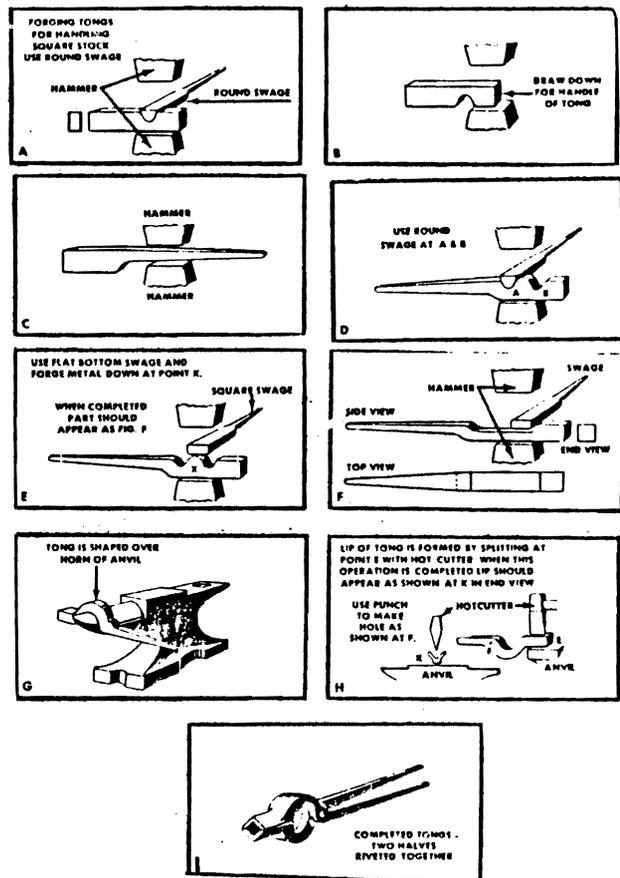


Figure 58. — Typical examples of power hammer tools.

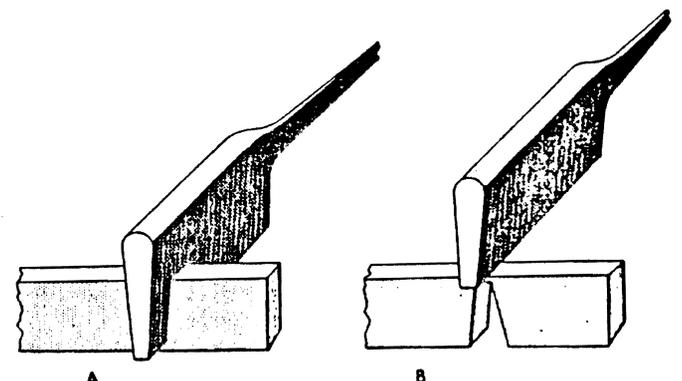


Figure 59. — Cutting off hot stock with a hack.

GENERAL SAFETY FOR METALWORKING

Safe work practices and safe work habits result when you use machines, tools and materials correctly. You also must follow commonly recognized safety rules and safety practices in order to avoid possible accidents or personal injury. The following safety rules, safety precautions, and safety procedures should be followed:

- 1) Always have proper first aid applied to minor injuries. Always consult a physician for proper attention to severe cuts, bruises, burns, or other injuries.
- 2) Safety goggles or a face shield of an approved type should be worn at all times in shop or laboratory.
- 3) Oil or grease on the floor is hazardous and can cause slipping; hence it should always be cleaned up immediately.
- 4) Place oil rags or other inflammable wiping materials in the proper containers.
- 5) Keep aisles and pathways clear of excess stock, remnants or waste. Store long metal bars in the proper storage area.
- 6) Return all tools or machine accessories to the proper storage areas after use.
- 7) Avoid needless shouting, whistling, boisterousness, or play when in the shop or laboratory. Give undivided attention to your work.
- 8) Never touch metal which you suspect is hot. If in doubt, touch the metal with the moistened tip of your finger to determine whether it is hot.
- 9) When you approach someone who is operating a machine, wait until he has finished that particular operation or process before you attract his attention.
- 10) Avoid touching moving parts of machinery.
- 11) Do not lean on a machine which someone else is operating.
- 12) Do not operate a machine until the cutting tools and the workpiece are mounted securely.
- 13) Be sure that all of the safety devices, with which a machine is equipped, are in the proper location and order before using the machine.
- 14) If more than one person is assigned to work on a certain machine, only one person should operate the controls or switches.
- 15) Never leave a machine while it is running or in motion.
- 16) A machine should always be stopped before oiling, cleaning, or making adjustments on it.
- 17) Always use a brush or a stick of wood to remove metal chips from a machine. Otherwise you may be cut by sharp chips.
- 18) Do not try to stop a machine such as a drill press spindle or a lathe spindle with your hands.
- 19) Do not touch moving belts or pulleys.
- 20) Always be certain that the machine has stopped before changing a V-belt.
- 21) Before starting a machine be sure that it is clear of excess tools, oil, or waste.
- 22) Request help from a fellow worker when it is necessary to lift a heavy machine accessory or other heavy objects. Always lift with your legs, not your back.
- 23) Learn the location of the nearest fire extinguisher.
- 24) Always place inflammable materials, such as paint thinners, lacquers, and solvents, in a metal cabinet away from open flames.

(From the newsletter of the Florida Artist-Blacksmith Ass'n)

**HELPFUL HINTS
for
HARMONIOUS HITTING**

A continuation of hints collected over the years by Nol Putnam that he willingly shares with us:

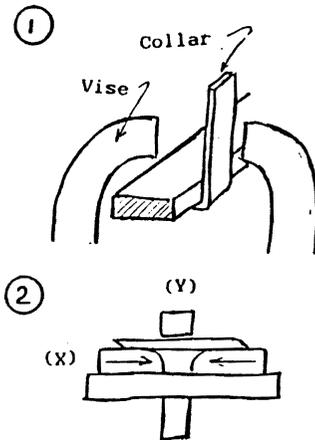
COLLARS: Sizing? For **RECTANGULAR** cut your collar material with the following formula: The perimeter of the iron to be collared plus $2\frac{1}{2}$ times the thickness of the collaring material. Then be sure to bevel the ends of the collar on opposite sides. For **ROUND** bars, the collar length is the diameter of the bar plus the thickness of the material times $3\frac{1}{7}$. Remember that when you cut a collar for a round bar it must look like this:

(16)



I have made up a series of forms around which I shape the collars. The first bend is easy to make by bending the collar 90° in the vise. On the second bend, the leg gets in the way. Hence the tool is as wide as the collar needs to be, but deep enough so that the jaws of the vise grab it and not the newly formed leg (see drawing 1). If there is a large run of collars it would be quicker to make a special jig, perhaps with a tail for the hardy hole. It is similar to the jig for making a latch keeper (see drawing 2). The second method has the advantage of being useable when placing the collars on the piece. Knock off the hardy hole tail, place on the layout table and use as a form to keep all the pieces together while closing the collar around the pieces. It is important that you not allow the collar to distort. When placing individual collars on your work, heat only that portion that needs to be bent down, use the cross

pein of a light hammer, and strike your first blows just above the corner to **PULL** the collar around the corner, being sure to use the heaviest backup hammer that you can get into the work.



X - Width of work plus collar Y - Width of work

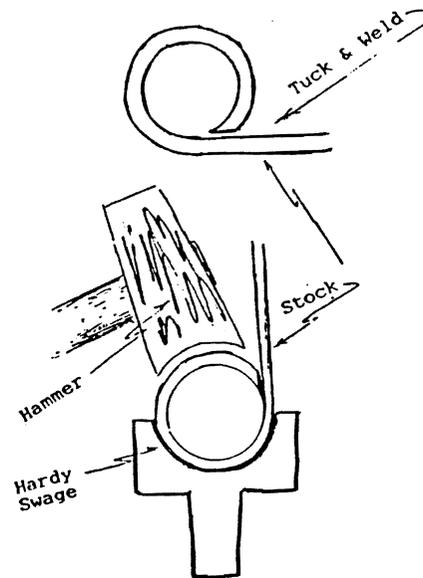
FULLERING: In making decorative fuller marks, use your small diameter fullers. Mark the iron cold first making a small "V" groove. If done too deep, it will be hard to follow with a rounded fuller. When done hot there is the danger of getting your line out of true.

Handled tools are always easier to work with than hand held. There seems to be more control, especially when hot. This is not possible when using the small tools for chasting or repousse.

HINGE EYE: Do the hardest part first... a sharp bevel on the edge of the eye. Start the roll of the eye from the same side as you have made the bevel. If the eye is more than 1" wide you will have to dish the piece from

the reverse, so that in rolling it the sides do not flair up. Roll out one half of the eye and then insert your pin/mandrel. Roll the rest of the way and true up. Take the pin out and close the eye slightly - nothing worse than floppy hinges! The eye can be reamed out with appropriate size drill or a three flute counter sink. For pins, use cold rolled stock. The size is truer and the stock smoother - less friction.

In doing a run of these eyes, Dave Munn found a bottom fuller of the completed eye size was useful for truing up. Dave also made a second tool that helped tuck the rolled bevel in place.



SQUARE BENDS: In sizing these or laying out, allow $\frac{1}{4}$ the thickness of the metal on each side of the bend in order to make the square. Remember to use a light hammer and sharp, rapid blows.

ON ANVILS: Much is made of square corners, of how to redress the anvil, of what rod to use, and how the devil do I get it true again. Yes? It is more important that the anvil be correct for you in size. That you feel comfortable around it. Take the time to make a good set of hardy tools. These should include a squared hardy tool - large enough not to bounce, with edges ground to different radii.

In our shop, each of us is now working on the Swedish Kohlswa. Mine is five years old, Dave's is about three, and Claudia's is brand new. We worked them very gently for at least two years; never with cold stock, for they tend to be a little soft from the factory, but work hardened very well.

We are all right-handed and all our horns point to the right. It drives traditionalists crazy. But it sure is easier to work things around the horn - you don't have to lean across the anvil and to the left to see where things are going. And second, with fear and trepidation I ground the leading edge of the far side of my anvil to a good $\frac{1}{4}$ " bevel back three inches from the "so-called" cutting plate. I did the same thing to the edge of the anvil above the "so-called" cutting plate. (This from Bill Gichner.) When putting a sharp bevel on a piece I need not fear if I miss, for neither the anvil nor my hammer will be dinged.



(From the newsletter of the Blacksmiths' Guild of the Potomac)

Tooling

Francis Whitaker
Aspen, Colorado

Courtesy of the Appalachian Area Chapter Newsletter

The following is a list compiled by Francis Whitaker of the essential tooling required by the smith for a well equipped shop.

Use lubricating oil for lubricating only, not for drilling, tapping or threading.

Use cutting oil only for drilling, tapping and threading. Rapid tap is excellent for tapping or hand drilling.

When drilling, tighten drill chuck from two holes.

Ease up when the drill comes through the bottom.

Clamp pieces to be drilled to table or hold with a good pair of pliers or tongs. Never hold small pieces with the hands.

<p>Tongs V tongs for square and round stock. Box tongs, various widths for flat stocks. Flat tongs for general use. Hammer eye tongs. Chain link tongs. Scroll tongs. Short length of chain to hold tongs jaws tight.</p>	<p>Striking Tools Eye punch Round punch Square punch Cold cut straight for cut off Cold cut radiused edge for grooving Hot cut straight for cut off Hot cut radiused for splitting Hot cut curved Butcher — one straight side for use with straight side hardie</p>
<p>Hammers 1 lb. cross pein 1½ lb. cross pein 2½ lb. cross pein 3 lb. cross pein 4 lb. cross pein 8 to 10 lb. cross pein sledge with short handle for striking. Ball pein — occasionally. (Both face and pein ground to eliminate any sharp edges. Pein should be ¼" wide)</p>	<p>Center Punches Sharp for punching drilled holes. heavy duty for hot marking.</p>
<p>Swages Small bottom swages — ⅜" up to 1¼". Spring swages — ⅝" to ⅞".</p>	<p>Vise Spacers To hold post vise jaws parallel.</p> <p>Auxiliary Vise Jaws Bent of ¼" and ⅜" mild steel.</p>
<p>Fullers Top and bottom ¼" to 1". Spring fullers ⅜" to ¾".</p>	<p>Wire Brush Bent handle 4 row brush. Use it frequently to keep scale removed.</p>
<p>Hand Tools Various hand tools as needed can be held in chain link tongs for hot works.</p>	<p>Drills High speed in case — ⅛" to ½"</p>
<p>Hardies Hot cut. Cold cut. Straight side.</p>	<p>Files Bastard cut is best. Flat, half round, square and round — 6" to 12" — others as needed.</p>
<p>Bending Forks Vise and hand tool ⅞" — 9/16" — 11/16" & 13/16" openings</p>	<p>Hacksaw Heavy duty frame — 12" high speed blades — 18 tooth and 32 tooth</p>
<p>Vise Grips</p>	

(This chart is from a backissue of The Anvil's Ring and was a handout at the "This is a hammer and this is an anvil" demo at one of the SOFA meetings.)

CBA and QUALITY DEMONSTRATORS

I have just returned from the Southern Conference of the C.B.A. Those of you who did not go missed a very good meeting. As a first effort, this conference was excellent: the organizers had a good plan, good physical facilities, and knowledgeable leadership. The turn out of smiths was as good as could be expected, and the C.B.A. ended up with quite a few new members. The food service was the best of any conference that I have attended.

The Demonstrators were knowledgeable, and on the whole were very good. I did notice one who was very outstanding. Mike Chism is, in my opinion, one of our best demonstrators. He did everything right to impart information and keep his audience interested. He worked fast, everything was pre-planned, and there were several pieces in the fire at once. This meant that there was no wait between heats, and people were not bored. He kept up a running commentary on what he was doing, and why. The audience was involved by being questioned about each step as he was doing it. He illustrated important points on a blackboard. Above all he kept his sense of humor and made the process seem like fun. Most important he did not waste the time of the audience with repetition in the process of finishing the piece. He tried to demonstrate steps, without the hours necessary to completely finish the piece.

I discussed the problem of poor teaching technique by C.B.A. demonstrators at length with Raffi Bedayn on several occasions before his untimely death. He told me that he had tried to get the C.B.A. to adopt guide-lines for our demonstrators. At that time there was little interest shown by the Board.

Perhaps it is now time to think about this problem again. Unfortunately many excellent smiths are poor teachers. In most cases they could improve by following just a few simple guidelines.

Pages are from the newsletter of the California Blacksmith's Ass'n.

HOW DO YOU PRICE YOUR WORK?

ROBERT OWINGS - Petaluma, CA charges a straight job rate (hours times shop rate) on his products. There are standard items that he does many times for galleries and shows -- fire place tools and the like. He keeps a 5" x 8" card showing the steps.

He compromises (lowers) his price for one of a kind items made either for a customer or on speculation. Not knowing just what is involved, the reduced price means he doesn't charge for his learning time. He would probably charge the same for a repeat order. However, if the item became popular, he would adjust the price - up or down - following his job rate. His reason for making an item for speculation is twofold; doing something he wants to do for his own satisfaction or doing something he doesn't know how to do - learning.

ERIC CLAUSEN - Oakland, CA

Time, material, what it will cost to sub out part of the work. If he is quite certain what will be involved, he will hold to his estimate unless he wants the job for his own satisfaction. However, if he is not certain what is involved, he will give a price range.

(Remember Bob Walsh's advice: REMEMBER the sales tax. Include or exclude it from the bid. Ed.)

Doug Carmichael - Willits, CA basically considers time and material considering the various steps and procedures. This gives him a ballpark price -- which he may adjust up or down. That is, he may do a job because he considers it valuable and he'll do it for less money. The usual reason for thinking a job is valuable, is that you think if you do this one job for the customer, he'll come back with more work. But this reasoning generally doesn't work. If you are not paid properly for the first job, you probably won't be paid properly for the next job.

Unknowns? Doug has put in enough time so that his guesses as to what's involved in a job are pretty close.

He doesn't keep job cards. He doesn't watch the hours because it bothers him. But in the end, he generally knows if he made or lost money. Once in awhile he does miss on a bid. Someone calls, wants a quote, but Doug doesn't think the caller is serious and gives a quick bid -- just to get the caller out of his hair. Then, maybe 6 months later, he finds the caller was serious and obviously wants Doug to do the work at his bid price. Bid seriously -- or high enough!

MONTE HABERMAN - Yorba Linda, CA

Never give a quick price.

Take job apart. Consider each operation - forging, welding, drilling, etc. - and add up the time. (A one man shop generally works 6 hours out of an 8 hour day.)

Estimate = computed time + 20% (up to 30% if there are a lot of snakes - or unknowns) plus material cost delivered + 20%.

Then, compare estimate with your previous cost/square foot. Jobs should fall in line. If there is a large difference, you may have made a mistake.

Keep a job diary to get feedback on your estimating.

Installation is always cost plus because there are too many variables. The building often charges after you took measurements.

Mike Chism - Steamboat Springs, CO

Customers always like to be charged less than your estimate (NEVER charge more). Make a sample piece. Double your time + 10% and materials.

If you make a drawing, include your name and the word copyrighted, i.e., "Mike Chism - copywrited." If you make a sample piece, mark your name on it. The customer may pay for your time to do the drawing or sample, but the drawing and sample are yours.

Paul B. Quyle
Murphys, Ca.

TECHNIQUES

MAKING A HEART FORK

In olden times in America a young swain would frequently make home utensils for his intended bride, many of them decorated with a heart motif to demonstrate his true love. One way of making a toasting fork with a heart motif on the handle is described below:

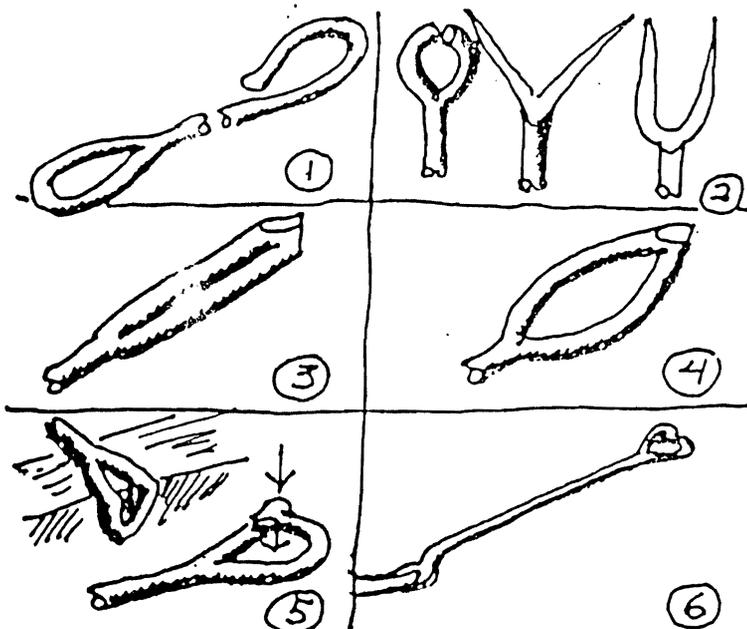
MATERIAL: An 18 inch length of 3/16 inch rod.

HOW TO MAKE:

- 1 - Scarf both ends of the rod. Bend each end about 2 inches from the end and weld to make loops.
- 2 - Cut one loop in the center of the arc and straighten each half. Each is then forged to a tapered square section to form the tines. After drawing out the tines, form them parallel to each other by setting the joint on the end of the horn and tapping down each time with a light hammer.
- 3 - Flatten the remaining loop and forge a chisel edge on the fold, being careful not to flatten the fold more than $\frac{1}{4}$ inch back.
- 4 - Open up the loop with a hot chisel enough to insert a large punch (or a small cone). Drive the punch through enough to make the opening to a width equal to half the length of the loop.
- 5 - Place the loop so that the edge of the anvil face is about $\frac{2}{5}$ of the length of the loop from the chisel edge. Tap it with a light hammer until a right angle is formed. Then, holding the loop on the anvil face, tap the chisel edge back toward the tines until it falls flat inside the loop. This forms the heart. Dress the heart shape or horn, anvil bick or small cone.
- 6 - Shape graceful curves in opposite directions in tines and in the shank just above where shank meets tines.

This same technique may be used to form hearts on fireplace pokers, latch keys; spatulas, foot scrapers or other items made of round stock.

ALEX W. BEALER



THE PROBLEMS OF ELECTROLYSIS

Whenever you use 2 dissimilar metals next to each other on a piece that will be exposed to weather, careful precautions must be taken so that electrolysis, a severe form of corrosion (caused by the exchange of ions) does not occur where the two metals touch.

The trick is to not really let them touch; e.g., if you are making a weather vane of copper and steel, you may wish to rivet the two metals together. Drill the holes for riveting as usual and then coat the two metals with solder at all points where they will come in contact with each other (including the insides of the holes). Then rivet and resolder around all edges of contact.

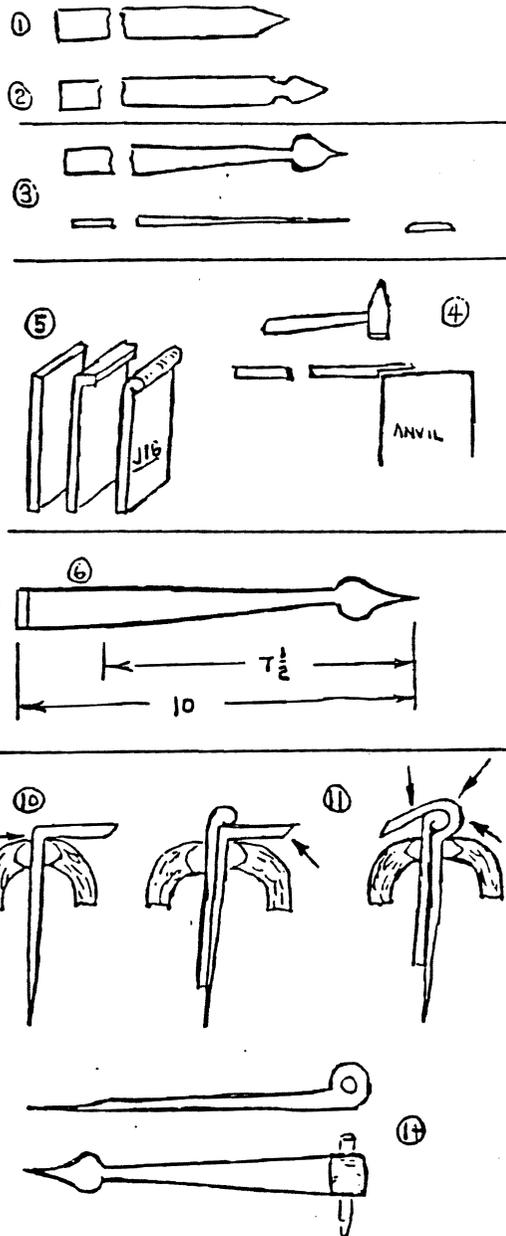
Whereas, electrolysis is a threat to exterior work, it poses no threat to items to be used indoors.

DIMITRI GERAKARIS

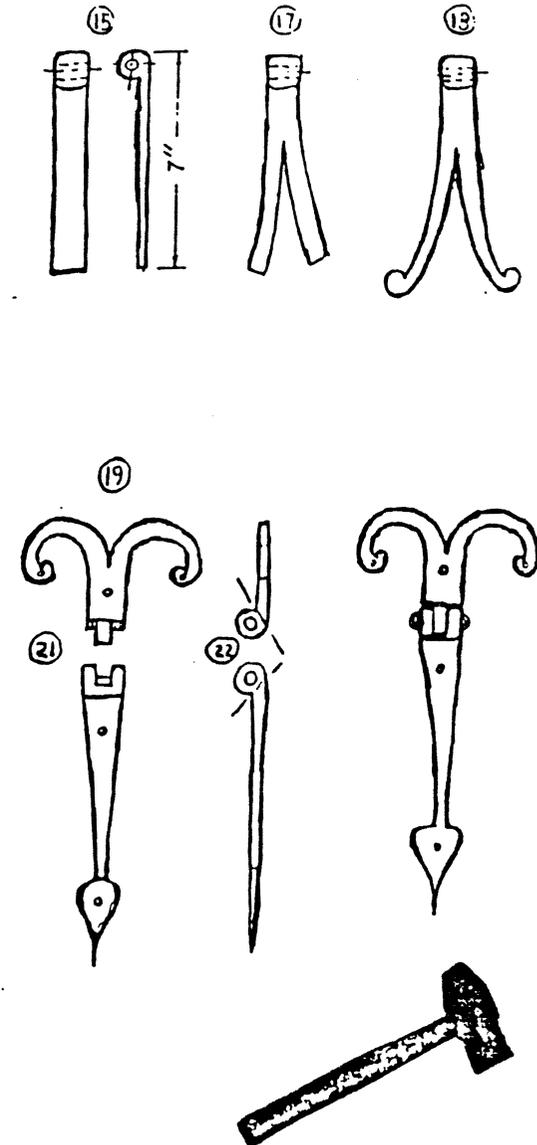
Door Hinges

Stock: 3/16 x 1 1/4 x 30 inches
5/16 x 10 in. Round

1. Draw out the end to an edge taper, keeping the thickness of stock same.
2. Use fullering tool behind the finial to neck down stock to half the width of bar.
3. Start tapering strap part of the hinge, keeping the thickness of the stock the same, or slightly tapered toward the finial.
4. Start shaping finial with hammer blows 1/2 off and 1/2 on the edge of the anvil. This will form the step where the taper narrows and the base of the finial begins. When spreading finial, work from the center out and from the back side.
5. Make a jig out of some scrap stock thicker and wider than the hinge material. This jig will be used to start rolling the eye of the hinge. Make the barrel on the end of jig equal to or slightly larger in diameter than the diameter of the pin of the hinge.
6. Allow approximately 2 1/2 inches of stock for forming and welding the eye of the hinge.
7. Form a steep taper on end of hinge with the bevel part facing the front of the strap.
8. Center punch a mark 2 1/2 in. from the end of the stock. This is to locate the 90 degree bend in hinge where the eye is started.
9. Make a tapered drift pin out of the same diameter of stock as pins for the hinges. 5/16 in. Dia.
10. Heat strap hinge and place in vise with center punch mark at the top of vise and bend a 90 degree angle toward the top of the hinge.
11. Heat again and place 90 degree angle up against barrel of jig and fasten both of them in a post vise. Now start forming the eye of hinge around the jig.
12. Remove jig and continue to close up eye of hinge. Install drift pin and finish up forming eye; when done remove the drift pin.
13. Weld up eye of hinge.
14. Heat up eye after welded and drift out the eye of hinge to size the hole for the pin.



15. Now make the other leaf of the hinge by forming and welding up an eye as before.
16. Cut the stationary leaf off at 7 inches. Make sure end is cut off square.
17. Hot cut the leaf down the middle lengthwise to within 1 1/2 to 2 in of the barrel of the hinge.
18. Spread and form a finial on end of both parts of the leaf. The finial on the end can be started by hammer blows 1/2 off and 1/2 on the edge of the anvil. Keep in mind the finial must be big enough in diameter to provide a hole for installing a nail or screw to mount the hinge.
19. Taper both parts of leaf and bend over horn for shaping the ram's horn curve in the hinge.
20. Once both sets of hinges are completed. Layout carefully where cuts are to be made for assembling the two parts of the hinge.
21. Layout is started off in thirds of the width of hinge and then adjusted so that slightly more than one third is in the middle and less than one third is on both sides.
22. Hacksaw the cuts at an angle to the back, but do not cut too deep into the back. If you do cut sq to the back, once the hinge is assembled a gap will show and hinge will not be as tight. Always cut on the waste side of the line.
23. Chisel out waste part of barrel on both pieces.
24. Use a file and fit both parts together.
25. Use 5/16 diameter stock and make the pins for the hinges. Length of pin = W. of hinge + 3 x Dia. Length of stock needed to form head on a rivet is equal to 1 1/2 x dia. stock.
26. Install pin into hinge. Make sure hinge works freely before peening over last head on pin.
27. Layout, center punch and drill holes in hinges for mounting the hinge.



SOME THOUGHTS ON CRAFT SHOWS

By Lauren Elaine Giebel

The best advice I can give on picking out a craft fair to exhibit in is to thoroughly check out all aspects of a show before you consider applying to it. For example, you should be curious as to: Is admission charged? Is there security provided if items are left overnight? Will the show be well advertised? Is it a show that is well-established or relatively new? Is enough time and space allowed for set-up and take-down? Is there food and beverages available, and will they be to your liking? And so forth...

The most obvious consideration is if the show is an outdoor or indoor show. Each pose different problems. With an indoor show, you should have a backdrop to your display to cut out unnecessary distractions, from the buyer's point of view. Lighting and types of displays are another important area to do some hard thinking about. Usually, you must specify on your application that you want electricity and pay extra for it. Booth space and location are other important aspects to both indoor and outdoor shows. Corners make you more visible, so they cost more. If you have a lot to display, you might think about purchasing multiple spaces. A good promoter will not put artists in similar media next to each other, for it is a temptation to the customer to compare too easily.

Weather can be your enemy at an outdoor show! Consider protecting your products with a heavy plastic drop cloth and a canopy to protect your customers. Of course, a rainy day means fewer prospective customers, but we must admit that some things are truly out of our hands. A very bright, hot sunny day sometimes discourages buyers. Wear some sort of sun protection if you are prone to sunburn.

Ask yourself: What kind of show is it? A good guide - albeit not faultless - is if it is an established show with a loyal following of buyers for many years. A couple of examples are Corn Hill, the Clothesline Show, both in Rochester, and the Allentown Show, in Buffalo. These are shows that people plan on attending, and they plan on spending money. In contrast, a one-day show at a town fair or festival might be satisfactory for the sale of very inexpensive items, but be wary of those shows that represent mostly dried flowers, stuffed animals, and the like. You know what I mean - the kind of thing you see in "crafter's fairs" in shopping malls. (I don't really mean to disparage anyone's handywork, but everything has its place. Enough said!)

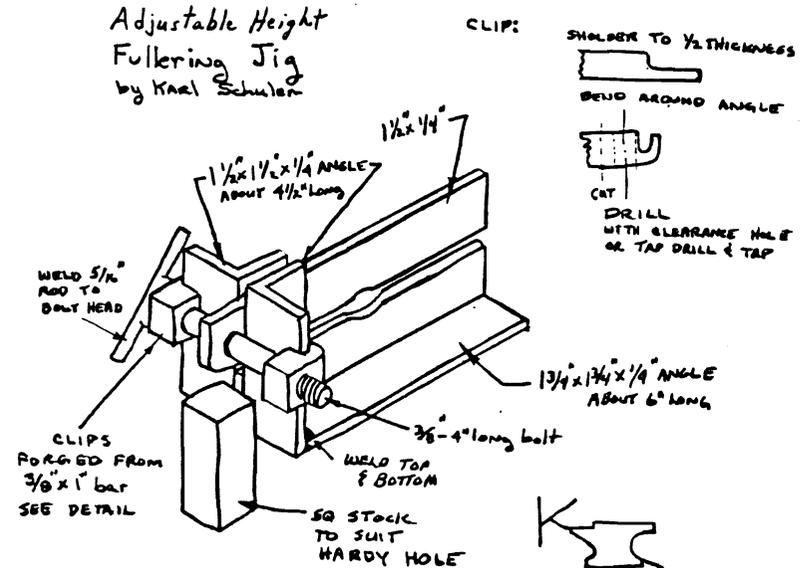
A good quality show is juried. You must send slides representative of your work that a panel of craftspeople will view. This ensures that quality and variety remain consistent in a show. A judged show provides a various cash awards as selected by judges who peruse the booths and vote on their choices for the best works.

It has been stated to me time and time again by many veterans of high-quality craft shows that to make a show worthwhile sales should equal 8-10 times your total expenses for the show. If the fee for a 2-day show is \$100, don't be fooled

by hoping your will make \$1000 to make it worth your time. Don forget about the less obvious costs - meals away from home, gas, accomidations if the show is away from home, and so forth. Of course, you will need a sales tax number to enable you to collect taxes wherever you sell - be it in your hometown or out-of-state. If you are a New York State resident exhibiting at a show in Pennsylvania, you must obtain a PA tax number form the PA State Sales Tax Comission, since the sale occurs in PA regardless of where the item originated. You will not be accepted into any shows without these numbers. Of course, if you have established yourself as a business, all of your expenses for shows are business deductions for tax purposes.

Watch out for shoplifters, and those who pass counterfeit money at shows. Since you are usually in a hurry making sales at shows, it is a good idea to have a friend or relative helping you. If you take Visa, Mastercard, etc., find a telephone to call in accounts over your floor limit, while the customer shops around. Or you can break up the charge into smaller amounts if multiple items are involved. Always take the time to look up the customer's card number in the Card Recovery Bulletin, or you will be responsible for losing the value of the item.

What else can I tell you about exhibiting at a craft show? Relax, enjoy the new faces, talk to people to make them more knowledgeable about what you sell. Good luck to all of you who take the "retail route"!



NOTE: TO PROVIDE CLEARANCE PUT A SHIM BETWEEN THE BLADE AND THE ANGLES BEFORE WELDING.

(From Southwest Artist-Blacksmith's Assn News/Letter)

(From the newsletter of the New York State Designer Blacksmiths)

FORGE WELDING AND BRAZING: At the last meeting Joe Staley gave us a very complete demo on forge welding and brazing. I asked him to give me a synopsis of it and here it is. It is a great piece of work in covering everything about the subject.

Forge Welding (From the newsletter of the Upper Mid-West Blacksmith Ass'n).

- The Fire: -it must be clean
-deep
-well coked
-you must have a hot reducing region at the top of the fire
- The Metal: -must be cleaned and scarfed for the weld
-must be clean of scale, burned areas, old flux, crud, clinker, garbage, or other graddo
-must be brushed at an orange heat to remove graddo and fluxed at this heat
- The Flux: -must be clean and dry and free flowing, no chunks, I use 20 Mule Team borax in an old shampoo bottle with a flip up spout to sprinkle on the weld surfaces
-must cover the weld surface and beyond to prevent burning any other area
-must not be in excess, just cover the weld area so it will melt and flow like glass, don't cake it on
-flux is not a glue, the metal must weld
-Flux allows the metal to reach a higher temperature than usual without burning
-comes in many types to fit different purposes - check Centaur Forge catalog for various types
-combines with scale or other oxidation that may form
-is molten at welding, can drip off, be flung off, splatter out of weld when struck. is hot, is dangerous, burns your body, makes you do strange dances when in your shoe. CAN BLIND YOU AND INNOCENT BYSTANDERS - wear safety glasses with side shields, pant legs over high top shoes, please, long sleeves, leather aprons, hats, or whatever else that will protect the tender spots, run the kids out of the shop, holler and make bystanders turn around etc. (Good tip - hot flux in non-believers back pocket makes quick converts.)
- The Heat: -must be taken in reducing region of fire (at the top of a well banked forge
-metal must be covered with coke in fire to heat metal on top
-must have peep hole to see metal. (Don't stare into fire too too long as radiation is damaging to eyesight. I use Didymium glasses that help.)
-weld area must not be disturbed - keep clean as possible
-turn weld over to heat evenly
-determine what your first heat should be (full welding - lots of sparks, light welding - a few sparks, or sweating - surface of weld is molten but not sparking
-welding heat determined by sparklers above fire, color of metal is same as fire, observing metal through peep hole in molten state on weld surface

FORGE WELDING CONTINUED:

Air Blast: -must be slow or moderate and at an even rate, not fast or slow
-weld must be brought to heat on a rising heat, descending heat makes scale
-must not blow ash and graddo into weld - deep fire. A thick layer of coke helps this (don't rush)

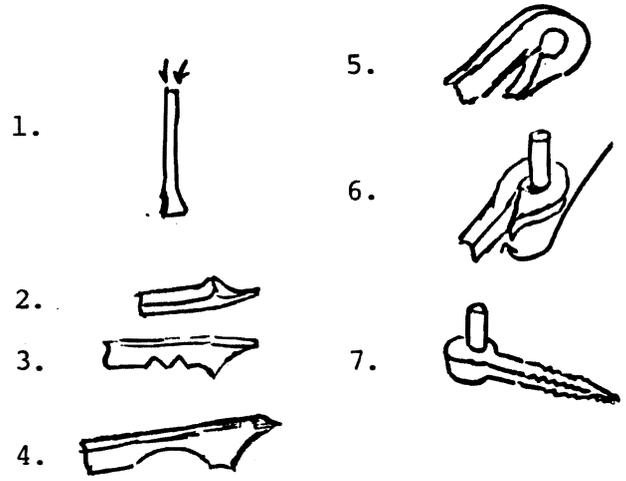
The Weld -must be accomplished with attention to detail, determination, and some rapidity, since metal will be at welding heat for just a few seconds
-practice with cold metal two or three times to get orientation of metal correct for fire and anvil, manipulation of tongs, picking up hammer, correct order of blows, and to install some calmness
-brought out of fire when ready, shaken with a snap to fling off excess molten flux, crud, or whatever might have gotten on the weld. Excess molten material keeps metal from welding
-laid on anvil while hammer is simultaneously being picked up
-blows struck on weld surface that are light to moderate depending on size of stock, to push metal together, that will also force flux out of weld surface
-feel of hammer will be soft and plastic at first and then become firm, hammer blows can increase in force as weld area firms up
-areas that have seams or cold shuts or did not weld can be brushed quickly, refluxed and returned to the fire for subsequent welding heats - I usually bring the metal to a sweating heat to work out seams or cold shuts
-will not take if not laid on anvil and welded immediately. the anvil is a heat sink and pulls the heat out of weld very quickly - cold weather tip - anvil can be kept warm over night by putting a cardboard box over the anvil and a light bulb under box next to anvil.
-will not take if following problems exist: metal is burned, metal is too cold, too much flux, no flux that causes scale, scale caused by descending fire, dirt in weld from dirty fire, clinker in fire (can't get hot-blows clinker pieces into weld,) not shaking off excess flux, not getting both pieces together quickly and striking quickly, one of the pieces not at welding heat, not paying attention to details, getting excited!

Suggestion -practice on some metal from the scrap pile first!

((For the beginning blacksmith I recommend learning to forge weld by doing faggot welds on 1/2" x 1/2" mild steel stock. Use a hot cut hardy or hand-held hot cut and cut about 3/4rds of the way through the stock about 1" from the end. Turn the stock over and fold over the end to where it leaves a gap about 1/4" at the end. Now forge weld this end, cut it off, and practice again. Once you have mastered control of the fire, etc., progress on to lap and other types of welds. - ks)).

SHOP TIPS AND TECHNIQUES:

- PINTEL MAKING: (Note: For 3/8" pintle, use 3/8" square stock. for 1/2" pintle, use 1/2" square stock, etc.) Start by upsetting end of about 18" of stock (Fig. 1). Scarf end (Fig. 2). Fuller twice over edge of anvil (Fig 3). Smooth out fullered area over horn (Fig. 4). Turn over horn until about desired size pin opening is achieved (Fig. 5). Cut off about 2" of round for pin (same size as square stock used) and insert it into opening, hammer to fit, you should have about 1/4" to 3/8" opening left (Fig 6). Flux and weld, closing scarf, allowing no space around pintle.



Place in proper size bolt header, at second welding heat, forge down and to shape. Cut off, forge spike, cut bards with hot set (Fig 7). (By Jerry Darnell from the newsletter of the North Carolina Chapter - ABANA).

- WIZARD HEAD LETTER OPENER: 1. Taper a section of 1/2" square bar. 2. Fold over tapered section and prepare to forge weld. 3. Forge weld and use remaining heat to punch facial depressions and nose bridge. 4. Lift nose with chisel and use chisel and fuller for form upper lip and mouth. 5. Use punches to form eyes. Fuller in eyebrows and lower lip. Chisel in beard markings. 6. Twist bar and forge blade bland (if for letter opener). Grind and polish.



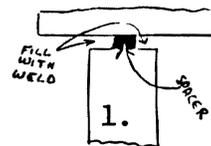
(By Ray Spiller from the newsletter of the Appalachian Area Chapter - ABANA).

- HOW OLD IS YOUR LITTLE GIANT? (From the newsletter of the California Blacksmith Ass'n. I believe the year is the initial model production year).

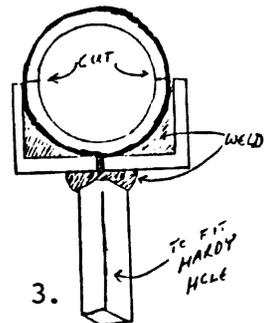
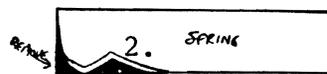
Model	1919	1927	1929	1935	1940	1945	1947
25#	2709	4079	4496	4723	5065	6770	7746
50#	3990	5178	5467	5650	5800	6345	6795
100#	503	797	871	899	1015	1232	1283
250#	121	321	332	341	355	478	510
500#	51	525	526	527			547

- TIPS FROM THE SHOP OF JOHN BABCOCK (From the newsletter of the Western Canadian Blacksmiths' Guild):

1. To save a lot of grinding of bevels when arc welding large rounds or squares, use a 1/8" spacer and fill with weld.



2. To make a good tool for cutting thin metal (e.g., the tops out of barrels), use about 15" of the tapered end of a 1 1/2" to 1 3/4" leaf spring. Grind out and sharpen a notch, then strike on the opposite edge.



3. To make a large bottom swage, use heavy wall pipe and 3/8" - 1/2" angle iron. Cut off the top half of the pipe and fill spaces with weld.

MEMBERSHIP APPLICATION

ARTIST-BLACKSMITHS' ASSOCIATION OF NORTH AMERICA

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Comments:

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