# SOFA SOUNDS

THERN OHIO FORGE SANVIL

DECEMBER 1987-JANUARY 1988

Artist-Blacksmiths Association of North America

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#### NEWSLETTER EDITOR:

Ken Scharabok (513-529-3967)

#### 

MARK YOUR A.B.A.N.A. 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.

December 5th, 1 PM

BUSINESS MEETING followed by a demonstration by Hans

Peot on making a two-piece baluster.

January 9th, 1 PM

BUSINESS MEETING followed by a demonstration by Ken Scharabok on making a Francis Whitaker-style fire-place log fork and perhaps, time permitting, a dragon head poker.

#### IMPORTANT NOTICE TO ALL MEMBERS:

I will be out of town on business from early January through early March, 1988. I will put out a double length, February-May issue upon my return to compensate for not putting out a separate February-March issue. There will be meetings on February 6th and March 5th, but no further notice will be provided due to the logistics involved.

In order to pay back other newsletters for material reprinted in <u>SOFA SOUNDS</u>, the June/July 1988 issue will consist almost entirely of original material submitted by SOFA members. Submissions can be handwritten as I can edit and type as necessary. If no material is submitted, expect a very short June/July issue. Everyone has some tip or technique to share so put pen to paper and send them in.

#### MEETING NOIES:

There was no SOFA meeting in October due to Quad-State being the previous weekend.

At the November 7th business meeting, the following items were discussed:

- We still have a few lengths of the 3/8" square left. Cost is \$5.00 per 20' length while they last.

### Chapter of ABANA

- Emmert announced he had received a shipment of  $\infty$ al from West Virginia. It is from a different mine than the last batch but seems to be as good judging from comments by the few who have tried it thus far.
- Hans Peot said he was planning to attend the ARANA Board of Directors meeting in Tennessee on the 14th as the representative of the chapter. Along this line, Emmert spoke of the renewed emphasis within ABANA to concentrate on assisting the chapters.

The newsletter support raffle brought in \$52.00. Art Wolfe (from Cleveland Heights, OH) left a number of items at Quad-State for the raffle and these were won as follows: Brian Thompson, toy car; Jim Leistner, small washboard; Ed Rhoades, large padlock; and Ed Witzler, blower. Further items will be in future raffles. Winning other items were: Ham Hammond and someone else won tongs donated by Hans Peot; Dave MacDonald won a blacksmithing picture donated by Ray Armstrong; Carey Alexander, Joe Abele and Art Wolfe won blacksmith-motiff christmas cards donated by Robert Morris; Phil Sturr won a tape donated by Ralph VanBuskirk; Bob Zeller won a bottle of peanuts donated by Ham Hammond; Jim Paulson won a handfull of welding rods donated by Bob Wilson; Emmert Studebaker won a anvil tool holddown device donated by Brian Thompson; Ken Scharabok won a block of beeswax and a caulk stick also donated by Brian; and Bud Rolston won a piece of stainless steel donated by Emmert Studebaker.

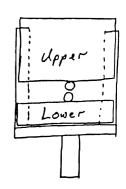
While on the subject of the raffle, I'm inform that it is not unusual for me to misidentify a winner, donator or item or to not record it at all. In this case, let me know and I'll print a correction. All I can say is that it is hard to take notes and keep the raffle moving at the same time.

Following the business meeting, Doug Fink gave a super demonstration on forging square tubing. I know of at least one member already at work making a headboard like his using his techniques. Notes taken were:

- Doug uses mostly 1" square tubing 1/8" thick. He would like to find some 3/32" thick to try it.
- He noted that heat will travel up the tube, heating the part being held. To reduce this he stuffs the back end with wet newspaper. If you quench an open tube or pipe a blast of steam can shoot out the upper end, scalding the arm.
- To get a square pointed taper, he hits only on the corners, turning  $180^{\circ}$  where possible to the next section to be forged.
- He uses a smaller hammer (about 20 oz) as he feels it gives him better control while working the material.
- He keeps turning the tube in the fire  $90^{\circ}$  to get all four sides equally heated.
- He noted he watched Peter Happny work his square tubing and double walled gas pipe while full of sand. Peter had us weld a plug on one end, pack it with dry sand, and then weld a plug on the other end, leaving a very small air hole for any moisture to escape. Without the hole, the tube could split at the seam due to internal pressure. He has not tried this method yet but could see the obvious advantages, especially when bending the tubing to keep it from crimping.
- He noted that square tubing can be stronger than solid bar in certain applications. Dave MacDonald has used tubing in some of his gates to reduce the weight while still retaining the strength.

- He noted that tubing already comes with nice rounded edges, unlike solid barstock.
- While forge welding he uses gas forge welding compound available from Centaur Forge (P.O. Box 340, Brulington, WI 53105, catalog \$1.00). Those of you experimenting with gas forges may want to give this welding compound a try.

A tool Doug had brought along caught everyone's attention. It was a guillotine fuller with removeable upper and lower dies. The sides were made out of channel iron welded to a bottom plate with a hardy hole shank. In this manner Doug could use several different dies. The one illustrated to the right was for fullering a groove in the center of the tubing. If the rods were welded on in the opposite direction, they would fuller sideways rather than lengthwise. Doug noted they only real problem he was having with this tool is that upper die tended to get hot since it had to be picked up each time the tube was turned 90°. A handle like those on welding hammers may be a solution here or putting on a "U" shaped spring which would still allow the upper and lower dies to be exchanged.





#### HEAR YE! HEAR YE! HEAR YE!

Christmas cards with a blacksmithing-motiff (three different scenes) are available for \$5.00 postpaid per dozen from R.L. Morris, Box 85-A, Mingo Church Rd., Findleyville, PA 15332.

Tom Ziegler obtained the following A-36 steel analysis for the group from Benjamam Steel: ASTM Z-36 - structural quality carbon steel shapes for use in riveted, bolted, or welded construction of bridges and buildings, and for general structural pruposes. Typical properties: Carbon (max) - .26; Manganese - 0.85/1/35 percent for shapes over 426 LB/FT; Phosphorus (max) - .04, Sulfur (max) - .05; Silicon - 0.15/0.30 percent for shapes over 426 LB/FT; Copper, if specified (min) - .20, Tensile strength, PSI - 58,000-80,000; Yield point, psi (Min) - 36,000; % Elongation in 8" (min) - 20; % Elongation in 2" (min) - 21; Weldability - good; Formability - good. Now we need to get Ron Thompson to tell us what all that means.

The Traditionalist is the quarterly publication of the Rural Smiths of Mid-America. They have joined together to embark on an in-depth study, preservation, and recreation of all early rural farm and home items made by the local general blacksmith. Their publication is quarterly and contains write-ups of projects undertaken by students at the Josh' School of Forging. Membership cost is \$25.00 per year to 3602 S. 800E, Zionsville, IN 46077 (which is also the site of the school).

FOR SALE: 80lb Bradley helve hammer with 5 hp 220 electric motor and extra dies. Forge complete with hood and stack. Vulcan 200 lb anvil with 1" hardy hole. Drill press and lot of miscellaneous items. All for \$1,500. Contact Ron Chomic, 211 Blackman Rd., Jackson, MI 49201 (517-750-2896).

Am informed by the editor of the <u>K.B.A. News</u> that in transcribing a tip and technique on determining anvil weights in the <u>last issue</u> I butchered it to the point it should not have been attributed to them. In particular I said the weight markings on the side of some anvils were part of the British stone weighting system where one stone equals 112 pounds and a quarter stone (the second number in the series) was one-quarter stone or 28 pounds. He rightly pointed out a British stone weight is 14 pounds. Thus 8 stones would equal 112 pounds. He noted the anvils were marked in the "hundredweight" system with 112 avoirdupois pounds being one hundred-weight. My apologizies to the K.B.A. News.

Following Quad-State, I received the following note from Dr. Carl Van Arnam, "(At Quad-State) I had several question about U/V protection and didymium lenses. Seems difficult to get hard, specific info. Hope this is some help". The info was a 1985 article in Annual of Ophthalmology (October) titled "Ultraviolet Absorption of Commonly Used Clip-On Sunglasses" by David B. Ober Magnanta and David Miller, MD. I have not see it documented but understand many retired blacksmiths had/have cataract problems. For a copy of the article send me a 22¢ stamp.

I received the following in a note from Russ Swider in regards to his accident which prevented him from demonstrating at the last Quad-State, "A Dodge C-500 started up accidently in front of my shop and ran me over (driverless) before crashing into the corner of the shop. Between the front wheel and the back duals it broke almost everything from the hip down on my left side, and caused muscle and skin damage which required grafting. I'm not in serious pain anymore, but it will likely be last Spring before I'm productive in the shop again." Earlier reports indicated he was working under a truck when it fell on him.

FOR SALE: Several Little Giant Power Hammers, both modern and older styles. Other miscellaneous blacksmithing equipment. Will sell outright or trade for heavy-duty leather sewing machines. Neil Borwn, Rt. %, Box 63, Decatur, IN 46733 (219-724-7554).

FOR SALE: 751b Nasal hammer, EC, including motor - \$3,500; lathe - \$1,600; large drill press with motor - \$125; and large tank for tempering tools. Glen Harman, 615-266-4863 days or 615-629-9671 evenings. (Tennessee area)

FOR SALE: Excellent wire cable - extra improved for \$1.10 per foot, extra extra improved for \$1.20 per foot and super improved for \$1.50 per foot. Will trade for blacksmithing tools and equipment. Nelson Berbline, P.O. Box 323, Tamms, IL 62988 (618-776-5714).

Elsewhere in this newsletter is an ad for a handcranked blower. The same company also carries a 12 volt, 100 cfm or 150 cfm blower. Appears to be suitable for operating a forge off of a battery. Price is \$19.05 plus UPS.

QUOTE: When you do a job for someone and they are well satisfied, they will tell their friends. Sometimes you will get jobs because of a good recommendation. If you do a job and the customer is not satisfied; he or she will tell many people. You will never know how many potential customers stay away. (By Ollie Juaire from the newsletter of the Guild of Metalsmiths).

SOFA meetings are usually held on the first Saturday of the month as a matter of custom. If enough people cannot attend, due to recurring committments (e.g., National Guard meetings), and it didn't cause a problem with other members, we would consider moving the meeting to the second Saturday. Please let us know your thoughts on this.

Paul Keller (513-864-5411) is looking for a 100-120 lb anvil in good condition.

FOR SALE: T-shirts. Themes: There Goes the Neighborhood (blacksmith shown using a powerhammer while buildings shake), Trenton Anvil, Conehead and Blacksmiths Have Bigger Vices (blacksmith shown beside very large postvise). Red or blue, all cotton, sizes - medium, large and extra-large. \$11.00 postpaid from Ben Stain, Box 304, South Lyon, MI 48178. These were some of the T-shirts being sold at the last Quad-State.

FOR SALE: 8,000 lb winch used very little. Cost \$800, will take \$350. Contact Dan Weise at 812-275-7026.

FOR SALE: Upper and lower dies for 50 lb Little Giant powerhammer. New, blank upper and lowers, medium carbon steel. \$180 set. Contact Jim Flemming, Box 1212, Breckenridge, CO 80424.

FOR SALE: 120 lb and 150 lb old swage blocks, 14"x14"x4" and 14"x14"x4½", your choice \$150.00. Contact Mike Magee, 6149 Hiddenbrook, Toledo, CH 43613, 419-472-7811. I believe these were the swage blocks for sale at the last Quad-State. They have been broken out of a concrete floor where they were used for decoration.

FOR SALE: Champion forge 104 with blower, 18"x20" groutlined firebox, 23" groutlined round forge, handdrill press with keyless chuck, 110 lb anvil (new). Contact Jim Crow or Jeff Seaman, 3655 Webb Rd., Ravenna, OH 44266 - 419-626-4325.

#### UNDERSTANDING THE TWIST DRILL:

There is evidence the Egyptians used drilling dating back as early as 4,000 BC. Twist drills, as we know them today, are the most common and widely used metal cutting tools. Little did Stephen A. Morse realize the twist drill he patented in 1863 was going to become as successful as it is today. It is believed that 80% of the metal chips made in the world today are traceable to drilling.

Approximately 250 million twist drills are used annually in the U.S. indisutry alone. This means close to 700,000 drills being used, dulled or broken, and thrown away every day. More than 98% of these drills are under 3/4" in diameter.

A drill begins to wear as soon as it is placed into operation. The maximum drill wear occurs at the corners of the drill cutting lip. The web, or chisel point edge, begins to deform under the heat generated during drilling.

The increase in wear at the corners travels back along the lands resulting in a loss of size and tool life.

Outer Corner
Cor Trickness

FIG. 1

FIG. 2

Wear occurs at an accelerated rate. When a drill becomes dull it generates more heat and wears faster. In other words, there is more wear on the twentieth hole than on the tenth, still more on the thirtieth, and this continues. As wear progresses the torque and thrust required increases. In addition to the accelerated wear, drill breakage due to excessive torque is one of the most common drill failures. In comparison, running a drill beyond its practical cutting life is like driving an automobile with a flat tire - both drill and tire are headed for total destruction. Consequently, sharpening a drill more often will increase its efficiency and life.

Geometrically, the twist drill is one of the most complex metal cutting tools in general use today (see Figure 1). They are designed so the thickness of the web gradually increases from the point down. This provides added strength and rigidity. The web at the point does no actual cutting, but pushes the metal out of the way. When about a third of the useful length has been ground away, the web will become widened to such an extent it needs to be thinned. Equal amounts of material must be ground from both sides of the web. The web should be thinned to approximately 1/9th the thickness of the drill diameter.

Possibly the most efficient of all twist drill point geometries is the split point (see Figure 2). Splitting the drill point is usually a perferable alternative to web thinning. The split point drill greatly reduces the thrust required while it minimizes the risk of drill walking. These benefits are most noticeable where free hand drilling

is done. Another distinct advantage is the self-centering characteristics. It often eliminates the need for a pilot hole. When drilling sheet metal and wood, the drill should be ground so that the outer corners of the drill cut through the material first. Sometimes called a brad point, this style of drill will produce a perfectly round hole while reducing burrs and eliminating drill walking.

The most commonly used drill point is the conventional 1180 point. It will give satisfactory results in a wide variety of materials and applications. To meet the special demands of today's drills, here are some general rules to follow when resharpening.

- 1. The harder the material, the steeper the point angle: Soft plastics and metals generally are drilled with an included angle point of  $60^{\circ}$  to  $90^{\circ}$ . An increase in relief (clearance) angle is helpful here.
- 2. The harder the material, the flatter the point: Tough materials like cast iron and high alloy steel require a flat angle point of 135° to 140°. Less relief angle used here will reduce the risk of the drill point chipping or breaking.
- 3. Increase the relief angle on smaller drills, and reduce it for larger drills. Suggested lip relief angles for various sizes are (drill size range /lip relief angle):  $1/16" 1/4"/15^{\circ} 25^{\circ}$ ;  $1/4" 1/2"/10^{\circ} 15^{\circ}$ ;  $1/2" 3/4"/9^{\circ} 13^{\circ}$ ;  $3/4" 1"/7^{\circ} 11^{\circ}$  and over  $1"/6^{\circ} 8^{\circ}$ .

With the complex geometry required on the cutting edges of drills, it is very difficult to resharpen them correctly. The use of a good sharpening machine is almost a must necessitating taking your dull drills often to a professional sharpener.

(Adapted from sales literature for the Foley/Belsaw Company. Reprinted by permission)

#### SAINT ELIGIUS - PATRON OF BLACKSMITHS

Courtesy of Tom Joyce

(Feast Day: December 1; Name also Eloy or Eloi)

The son of a working man, Eligius was born at Chaptelat and became famous as a gold-smith. Clotaire II made him master of the mint and was so impressed by his honesty and holiness that he gave him land on which to build the first of his several monastic foundations. Court life did not spoil him, and it was said that a stranger might always recognize his house from the crowd of poor people who were received at its doors.

In 641, he became bishop of Noyon. He is the patron of all smiths and workers in metal. Eligius was described as being "tall, with a fresh complexion, his hair and beard curling without artifice; his hands were shapely and long-fingered, his face full of angelic kindness and its expression grave and unaffected." Eligius made the reliquaries for many known saints.

Eligius is also patron of Jewelers, Metalworkers, Goldsmiths, Silversmiths, and Farriers. He is invoked on behalf of horses.

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Studebaker Family host to blacksmiths

from 10 states and Candada

By Rhoda Hausfeld

Though the invitation to the Quad-State Blacksmiths' Round-Up only indicated the four state groups who make up SOFA (Southern Ohio Forge and Anvil), there were artist blacksmiths from at least 10 states and Canada on the grounds Sept. 26 and 27. The "grounds" were located on the historical complex on State Route 201 and Studebaker Road where Emmert and Jane Studebaker offered hospitality in the name of the Indiana, Michigan, Ohio and Kentucky who are the Quad-States.

This was the ninth annual event of this kind and more than 300 blacksmiths came to spend the weekend with seminars, demonstrations and displays of their particular "return-to-the basics" hobby. They came from Arizona, Florida, Illinois, North Carolina, Pennsylvania and Wisconsin as well as from SOFA group and Canada. There were items for display in the museum set up in one of the buildings which told of other artists in metal from other states.

The beautifully-crafted gates, which separate the family residence and the Process Equipment Plant No.1 from the historical buildings, opened wide to welcome those who started to arrive Friday evening. A few could be housed in the several cabins prepared for visitors; some stayed with friends in the area; some at motels; and there 100 camping units on the grounds — all kept neat as a pin and left that way according to committee reports.

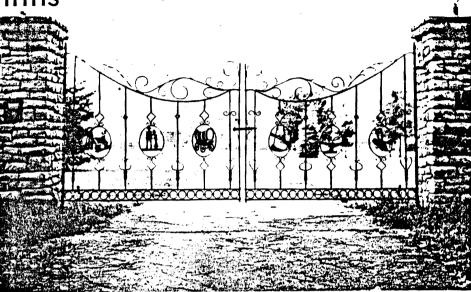
The gates were of special artistic interest, the work of the locallybased chapter of ABANA (Artists' Blacksmiths' Association of North America). The area chapter, which meets monthly at Studebakers' have incorporated symoblism in the gates, with medallions depicting a frontier home, a pioneer (Old Order) couple, a covered wagon, a gun and powder horn, an anvil and blacksmith's tools and a plow. Wings, newly-added, have silhouetted metal pictures of a touring car, a ship, an open Bible, and a deer. Many of the things depicted refer to Studebaker activities, as well as to other pioneer families.

The Artist Blacksmiths are glad to return to the Studebaker complex year after year. Their host always has three major areas ready - year round for the John Studebaker Blacksmith Shop and the early day Wagon Shop. The long garage, which usually houses the Studebaker car collection, makes a good registration area - a place to purchase some souvenirs, such as calendars and tiny silver anvil charms - and, best of all to house a showplace or museum.

On Saturday evening, a dinner was served by the West Charleston Church of the Brethren, by a men's crew famous for their barbecued chicken, done outside on specially-forged grills.

With eight previous events behind them, the committee had no trouble lining up the schedule. By tradition, the event starts at 8:45 a.m. on Saturday morning with the playing of the National Anthem; the raising of the Stars and Stripes on a tall flagpole atop one of two knolls at the east end of the camping area; and the firing of a salute from the Studebaker cannon which tops the

Reprinted by permission.



STUDEBAKER GATE — A curtain of fog, mistily softening the outlines of the frontier cabins in Studebaker's Historic complex, provides the needed background to show off this beautiful gate. Wrought by the artist blacksmiths of the host group, Southern Ohio Forge and Anvil, it welcomed almost 300 blacksmiths to the annual Quad-State Round-up.

other knoll. (The cannon originated for usage at major family events and was just recently rejuvenated with new "firing" devices, according to Emmert Studebaker.)

Demonstrations of the blacksmiths' skills continued through the two day event. There were special programs throughout the conference for the wives who attended with their husbands - though some of them are artist blacksmiths themselves.

One of these was an official demonstrator, Cathy Morgan of Clarksville, Ga. who did craft items in non-ferrous metal. She surprised the men watching her by working with hot copper, skillfully handling the tricky stuff to form beautiful objects. Ruth Studebaker, Emmert Studebaker's secretary, said she tried for a lily formed by this method when the session ending auction was held, but was outbid - at a considerable price - by another

olacksmith.

Another beautiful piece of copper was one entered in the show by 15-year-old Paul Gregus - a phoenix mounted on a rough piece of marble (symbolically risen from its own ashes as was the mythological bird). A 16-year-old Peter Caudy of Midland, Michigan, had a chain mail vest on display. One of the women members from ABANA, Dorothy Steigler had a pair of twisted chopsticks on display, but a bystander said he had also purchased a Hippocratic symbol of medicine made by her, the intricately turned caduceus.

On diplay were many samples of the work that various craftsmen members had produced. There were door knockers, knives, candleholders, gates, bookends, kitchen utensils, campfire tools, flowers and fireplace tools. An obviously old statue from Nova Scotia, whose history had been lost, was a real "museum piece." From a display showing the way a flat piece of metal went through various stage to become a leaf to a portable forge, property of Joe Abele, there was

plenty of contrast.

In addition to Ms. Morgan, other demonstrators included Ed Small of Keyser, W. Va.; Peter Happny, Portsmouth, N.H.; Paul Kuenle, Beavercreek, and Hans Peot, New Carlisle. While other demonstrators worked with tongs and hot fires, Peot, who is president of the Southern Ohio Forge and Anvil group, had a very modern piece of machinery on display. Using a very small motor, he had built a "pattern follower for a cutting torch." He also had a set of cutlery on display.

Saturday evening, four teams competed in a tong making contest.

The appreciation of the people who attend has been expressed to their host in several ways. For instance, last year a circular plaque, highly embossed, represented winged cherubs working as blacksmiths.

This year's gift was a most interesting crucifix, complete cross and corpus done in metal. It now holds a place of honor over Mr. Studebaker's desk in the "Trading Post" at the Studebaker historic center.

# BANA

Artist-Blacksmiths' Association of North America



#### MEMO

Dorothy Stiegler 4642 180th Way, S.W Rochester, WA 98579

1st Vice President Michael Bondi 1818 Shorey Street Oakland, CA 94607 2nd Vice President Ken Hamble P.O. Box 1152

Basalt, CO 81621-1152 Secretary Joe Pehoski P.O. Box 84 Salado, TX 76571

Susan Showalter

R.R. 2 Box 102-A Nashville, IN 47448 Jim Batson Jack Brubaker Bill Callaway Jim Fleming Joe Harris Doug Hendrickson Joe Humble Leonard Masters **Bud Oggier** 

**Executive Secretary** Janelle Gilbert PO Box IISI Nashville, IN 47448 TO: ABANA Chapter Presidents & Editors

Dorothy Stiegler/ABANA President October 13, 1987 FROM:

DATE:

RE: President's Message to the Membership

Dear Fellow Blacksmiths,

Well, Fall at last! We are having a drought here in the West and the new name for our area is "Washington, The Everbrown State". I never thought I would here my lips say, "Come o-o-oo-n rain"!

As we prepare for the November budget planning meeting, every board member is working overtime to insure that we have a good, sound budget to present to you for 1988. We feel that far too little time has been spent managing ABANA's money. As we round into the final quarter, we find that ABANA is solvent and financially sound. This is certainly exciting to us all, but it was a monumental task and we of the board want to continue to do everything that we can to insure that ABANA remains in the black.

We look forward to meeting your Chapter President or representative who will be taking time from their own busy schedule to attend the Saturday late afternoon session. appreciate your understanding that the board realizes we could easily spend all three days discussing the improvement of chapter relations. We thank you for coming prepared to fit into this fairly narrow time slot, thereby allowing the board to cover all areas of business and to prepare a balanced budget for 1988.

Bill Manly and his hard working team of conference people are discussing ways to promote articles for the "Iron In the Hat Drawing" and the "Saturday Evening Auction". Both events are exceptionally good money raisers for ABANA. The conference committee would like to request the ABANA Chapters donate items In this way, all ABANA Chapters and for the two events. Members can help provide some financial support. Donated items could be sent to Sloss Furnace, c/o Randy Lawrence, or brought to the conference.

I'll get back to you again next month to let you know what went on at the meeting. My mail box is always ready to receive suggestions from anyone. Please let me hear from you.

Most sincerely,

Dorothy Stiegler ABANA President

## FORGING A SHEET METAL ROSE

Traditionally, roses have been forged by master smiths from a single piece of heavy iron. This was a show of their mastery of smithing. Alex Bealer shows one method for making a rose in this manner in his book "The Art of Blacksmithing." A simpler method using sheet steel can give very realistic results without requiring great skill.

Obtain 18 ga. maleable sheet steel from a steel supplier or use auto body panels. Use a scratch awl to lay out the rose petal blank on the sheet metal. Use compound action aviation snips to cut out the blank. 18 ga. steel is heavier than aviation snips are designed to cut. Use caution so as to not spring the jaws of the snips. Aviation snips come in both "rights" and "lefts". It is easier to use both for curved cuts.

Cut out a large set of five outer petals, three smaller sets of four petals each, and a bud of three petals. A five-leaved sepal is made for the bottom of the rose.

To forge these blanks, tie your oxyacetylene torch to your anvil's waist with wire. Adjust the torch for a small neutral flame. Hold the blank with ordinary pliers. Heat a petal and hammer with short rapid blows at a rate of 3-4 per second using the ball peen of a 1 lb. hammer. Hammer from the inner part of the petal outwards, making the outer edges thinner than the center. As the petals thin and enlarge, they should overlap.

Thin the leaves of the sepal and trim the edges to the correct shape. To shape the bulbous part of the sepal, a punch and die is required. A 1/2" rod, ground to hape, makes the punch. A piston pin from a Chevy engine makes a perfect die for the sepal or use 1/2" ID pipe.

The rose stem can be made from heavy wire or 3/16 round that is forged thinner. A hole is drilled in the center of each petal section the size of the stem.

Before assembling the sections on the stem, heat the edges of each petal and tap with a hammer to roll the edges over. Examine an opened rose to match appearances. The two inner sets of petals should not be rolled.

Assemble each section on the stem. Peen the end of the stem. Force the sections tight against the enlarged stem end and clamp. Then braze the sepal to the stem and file smooth. An alternate method is to form a tenon on the end of the stem. Compress the petals against the shoulder and rivet by peening the tenon.

At this point, the petals should be in a flattened state, with edges curled, and each petal staggered in relation to those above and below. They should be compressed tightly together.

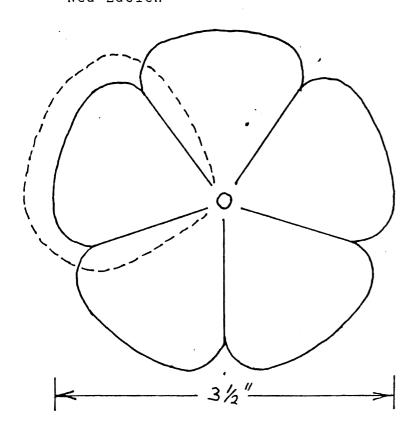
To fold up the petals, heat the small petals and shape with needle nose pliers to form a tight bud. Heat and fold up each succeeding section until you have what looks like a rose. It is easier to do this if the stem is clamped in the vise, and you hold the torch in one hand and shape the petals with the pliers using your other hand. After you shape the petals, fold down the sepal leaves around the stem.

Bend the stem to a natural shape. Cut out leaf blanks from sheet metal. Rose leaves are usually grouped in sets of 3, 5 or 7. They should all vary in size according to their place on the stem. You only need to forge the leaf edges thinner. This can be done cold.

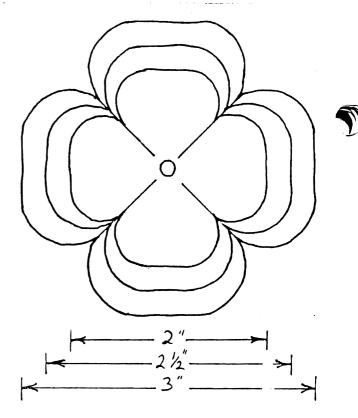
File serations in the leaf edges using a triangular file. The veining is done cold on a wood or lead block using a rounded chisel edge. Lightly hammer each leaf to impart a natural shape. Weld or braze each leaf to a wire stem. Braze the set of leaves to the main stem. Three sets of leaves on the stem will give a natural appearance.

Cut off the oxygen on your torch and blacken the rose with acetylene soot. Melted parafin wax will hide defects and protect the metal. Your rose is finished except for the thorns. If you can put those on the stem, you have more patience than I do!

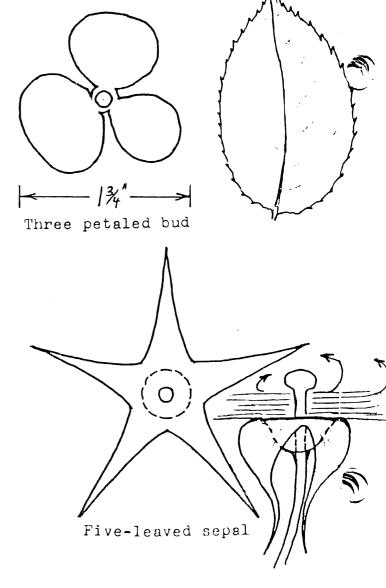
Ned Edelen



Outer Petals
Forge each petal blank until it
overlaps adjacent petals, and its
edges are thinned. Curl petal edges
before final assembly of rose.



Three sets of inner petals



#### 1987 QUAD-STATE ROUND-UP COORDINATOR'S REPORT: by Ken Scharabok

If the Round-Up had to be summarized in two words, it would have to be "extremely successful". We had early indications of its success when people started arriving Friday afternoon and the camping area whas already over half full Friday night. In all, there were 305 total registrants (principal and family members) with over 360 people on the site.

The newspaper article contained in this issue is a good summary of the event. The tongs competition was won by the Northwest Ohio Blacksmiths (Don Witzler and Gary Ameling), the Michigan Artist-Blacksmiths Ass'n (Scott Lankton and Ron Bishop) took second. The Indiana Blacksmithing Ass'n (Ron Porter and Mark "The Human Powerhammer" Amick) took third and S.O.F.A. (Ron Thompson and Ron VanVickle), in our continuing tradition of being congenial hosts, took fourth. The N.O.B. not only took first but finished in about 38 minutes. They indicated they intend to be back next time to defend their title. We are considering expanding the competition to include other groups such as those in the Pennsylvania, Illinois and Kentucky areas. The Ladies Rolling Pin Throwing Contest was won by Keith Sommer's daugther Heidi. Emmert indicated here winning throw of over 100 feet was one of the longest every witnessed by him, including those held at family events. I forgot to record who took second and third places.

I would like to thank all those who pitched in to help on Friday, acted as gofers for the demonstrators, and helped put everything in its right place on Sunday evening and Monday morning. Those helping received a refund on their registration fee. The primary reason these events seem to come off so smoothly is the number of members willing to do whatever is asked of them. If you incurred expenses in support of the event, please submit your annotated receipts for payment as soon as possible.

As a result of the event, an additional \$6,185 was deposited in the chapter's Building Contingency Fund.

As the newspaper article indicated, the term "Quad-State" has become somewhat obsolete. I believe S.O.F.A. was the first blacksmithing group formed in the OH, MI, KY and IN areas and the Round-Ups were intended as an event to include these areas. However, these areas now have strong chapters and we draw consistently from beyond these states, including participants from Canada. Perhaps it's time to change the event's name to the "Mid-West Regional Blacksmithing Conference?

A 1988 Round-Up is not being planned since the 1988 National Conference will be in Birmingham, AL on June 15-18. It is a joint effort by about a half-dozen of the Southeastern chapters and I understand they are getting together an excellent program. I plan to attend and hope to see a sizeable S.O.F.A. representation there.

- BLACKSMITHING HINTS: (By Joe Humble from the newsletter of the Appalachian Area Chapter - ABANA)

Many times we get involved with our work and forget basics which will make our work easier. Below is listed some basic points which we either don't follow or have forgotten:

- <u>Punching Round Stock</u>: If you have trouble punching round stock on the anvil while center punching, rest the round stock against drop end table of the anvil.
- Sharpening or Pointing, etc.: Always hold the piece at the proper angle with the end or point at the extreme edge of the anvil. Use the rounded corner. Otherwise, you will nick the edge of the anvil. Use the hammer at an angle and use drawing motions with the hammer.
- Bending: A common mistake is to hit the metal where it bends over the edge of the anvil. Hit below the bend. (11)

- Holding Heat: To hold the heat when punching a hole in a thin piece of metal, such as a knife handle, heat a flat piece of metal and place it on the anvil.
- The Anvil's Ring: We still hear complaints about the loud ring of the anvil, which as we know, will eventually cause hearing problems. Many, including myself, want the anvil to ring and not give off a dull thud. The anvil should be on post oak or other hard wood and set well in the ground in concrete. Fasten your anvil to the stand with railroad spikes on each corner. The harder you fasten down the anvil, the less it will ring. Drive the spikes down until you get the loudness you desire.
- Steel for Swages, Hardies, Tools, etc.: I am still receiving quite a few calls requesting information about steel to use in the shop. The best all around source is moil points, from jackhammers, etc. They come in various sizes and are easy to get. Most contractors throw them away when too short to use. They have a collar which makes an excellent collar for anvil hardies, make excellent small hot cutters, etc. The best way to temper a moil point is, after forging the tool, heat to a cherry red and let air cool. This will take out the stress. Then reheat to a cherry red, quench the tip in warm water (cold water will crack the metal), use a piece of stone, etc. and polish the metal so you can see the colors. Then use a sharp mill bastard file on the edge. When you can just file the tip, quench in oil.

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