

SOFA SOUNDS

DECEMBER 1985/JANUARY 1986



SOFA
SOUTHERN OHIO FORGE & ANVIL

Artist-Blacksmiths Association of North America

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NEWSLETTER EDITOR:

Ken Scharabok (513-252-3001)

MARK YOUR ABANA CALENDAR: Unless otherwise noted, all meetings will be at the Studebaker Homestead on Rt. 202, four miles north of I-70. Members are encouraged to bring quests and items or tools they have made for display.

Hey folks, how would you like someone driving across your lawn after a couple days of rain. If this makes you cringe, then put yourself in our host's place. When you come to the meetings, please don't park or drive on the grass whatever the weather. There is ample paved parked around the production plant. Please park there.

December 7th, 1PM

BUSINESS MEETING followed by a double demonstration. Dow VanArnam will give a talk on the Physiology of Hammering (or How to Hammer Without Blisters or Strain). Following this, Ken Scharabok will demonstrate how to put facial features on a ram's head poker, including forging the head and bending it over (see the Apr/May 85 newsletter).

December 14th, 9AM

Work on the homestead gate. Bring your forging hammers and come prepared to work. Lunch (sandwiches and soda) to be provided by SOFA. In order to know how many to plan lunch for, please RSVP to the Editor at the previous meeting or to 252-3001 evenings/weekends no later than the previous Thursday.

January 11th, 1PM

BUSINESS MEETING followed by a demonstration of poker handles by Dick Franklin.

January 18th, 9AM

Work on the homestead gate. See the entry for Dec. 14th.

February 1st, 1PM

BUSINESS MEETING followed by a demonstration of sand casting by Ron Thompson. Ron will be trying a technique which may be useful for casting by the average smith.

February 8th, 9AM

Work on the homestead gate. See the entry for Dec. 14th.

April 28 - May 2nd

WHITAKER WORKSHOP. See article in this issue.

August 13th-17th

1986 ABANA National Conference at Flagstaff, AZ.

Creative & Friendly

1985 QUAD-STATE BLACKSMITHING ROUND-UP:

The consensus on the Round-Up is that it was the best one yet. All of the demonstrators were excellent and ranged from beginners skills to specialized tool making. Larry Wood conducted the beginners class with skills ranging from starting the fire to power hammer work. He produced several fireplace pokers during the demonstration. Ted Tucker demonstrated several projects from his book, Practical Projects for the Blacksmith, with the philosophy that these type projects should be simple enough to do in an evening without extensive blacksmithing skills or tools. Peter Ross made a pair of factory-produced looking pliers, including the tooling necessary to complete them, and a pair of calipers with a similar finished look. Bruce Washington demonstrated repousse work and, in conjunction with Berry Wheeler and Ron Thompson, produced cast iron using a homemade furnace. They poured a small pan (which didn't pour properly) and a small anvil. Jim Rubley produced a knife blade while giving extensive background information on the history of blademaking.

We had almost almost 350 present including paid family members with 93 camping spaces requested for all or part of the event. We are already planning for next year and are particularly interested in any improvements which can make it even better than this year's. Let any group officer know of your suggested changes.

If you took comprehensive notes of any of the demonstrators, please provide a copy to the Editor. We hope to put out an issue of the newsletter of tips and techniques learned from the demonstrators. Please write out your shorthand notes so the Editor will understand them.

At the close of the event, Ron Thompson was presented with the knife blade made by Jim Rubley as a token of the group's appreciation for the job he did in putting together the Round-Up. Emmert Studebaker was also presented with the small anvil cast on Saturday evening in appreciation for his letting us use his fine facilities for the event. I doubt any other blacksmith group has the facilities available which Emmert provides and his generosity is greatly appreciated by all.

Following the Round-Up the group received very nice thank you notes from ABANA President, Stan Strickland, and Executive Secretary, Ruth Cook. Stan also spoke highly of the event in his President's Message to the Chapters.

As previously mentioned, we expect to hold another Round-Up next year providing it does not conflict with the 1986 ABANA National Conference. We are sure we can work around this aspect.

WHITAKER WORKSHOP FOR SOFA MEMBERS:

Emmert Studebaker pulled off, in my opinion, a real coup by arranging for Francis Whitaker ("Mr. Blacksmithing") to conduct a five day workshop at the Homestead from April 28th - May 2nd. We also hope to have Mr. Whitaker be the demonstrator at the May 3rd meeting talking about tips of the trade rather than an actual demonstration. Perhaps, by this time, the book he is writing for ABANA will be published and he can go through amplifying/clarifying the book for the group.

The workshop will be limited to not more than eight SOFA members and will be, at this point, to build a gate or something similar for the City of Dayton Beautification Program. Cost for the participants will be \$250, which will include lodging in one of the log cabins if desired. Meals will have to be worked out by the participants - perhaps each participant being responsible for cooking/preparing a meal for the others.

If you are interested in participating in the workshop, which should be considered an opportunity of a lifetime, submit an application to SOFA (via the Editor) containing, as a minimum, your work (documented by photographs wherever possible - gate-

related items recommended) and your background/experience no later than January 11th, 1986. Workshop fee will be collected at the time of selection. Application material will be returned.

We do not expect to limit the workshop to only highly skilled members but will most likely be looking for a mix of skilled smiths to keep the work moving, backed up by those who the workshop, and this extended exposure to Mr. Whitaker, would best benefit. Be prepared for lengthy days.

Also let the Editor know if you would be willing to take comprehensive notes of the workshop for subsequent distribution to the membership. A registration fee discount may be given for this contribution.

1986 ABANA NATIONAL CONFERENCE:

At the 1984 DePere Conference, the Arizona Artist-Blacksmith Ass'n vowed to out do that conference and it appears they are certainly trying to achieve that goal. So far the tentative American demonstrators include: Smokey Adams, Keith Austin, Cathy Borthwick, Mike Chisham, Eric Clausen, Bill Fiorini, Jeff Funk, Toby Hickman, Russell Jaqua, Claudia McCue, Tom McLane, Judd Nelson, Ron Smith, Dorothy Stiegler, Dave Thompson, Jim Wallace, Bob Walsch and Berry Wheeler. Tentative foreign demonstrators include: Renato Ferrari (Italy), Vaclov Jarox (Czechoslovakia), Tommy Tucker (England) and Mexican Coppersmiths. Tentative slide and film presentations on: Art Adams, Mike & Steve Bondi, Dan Dole, Albert Paley and Wally Yater.

In addition, they will have an exhibit hall on a variety of items. I plan to make attendance part of a month or so vacation out West. Plan to pack up the family for this conference. Flagstaff is just south of Grand Canyon National Park.

MEETING NOTES:

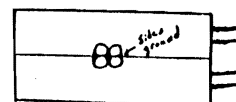
The October 4th meeting was sparsely attended, most likely due to its closeness to the Round-Up. During the business meeting the following items of interest occurred:

- The group voted to order 25 copies of the 1986 ABANA Calendars for resale to the group. If you have a blacksmithing-related photo (8" x 10", b&w, glossy preferred) which you would like considered for a calendar photo, please send it to Bill Callaway, 3646 W. Lawrence Lane, Phoenix, AZ 84020 as soon as possible. This late, I suspect, it would now be considered for the 1987 calendar.

- The group also made a bulk purchase of copies of the 1915 Sears Tools, Machinery and Blacksmithing Supplies Catalog from ABANA. These are being resold for \$6.50 each at the meetings.

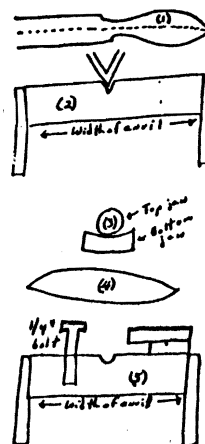
- The group has obtained additional didydim len safety glasses and these are for sale at \$15.00 each at the meetings.

- For the raffle, the fire poker made and donated by Sidney member Bud Rolston was won by Emmert Studebaker. The log tongs made at the September meeting were won by Kettering member Ham Hammond. The dog-shaped foot scraper cut out and donated by Emmert was won by Beavercreek member Dave Englesman. On the poker, Bud did most of the work on his power hammer. To form the bundle-twist effect, he made a die with four 1/4" holes drilled as illustrated. He does one pass and then turns the stock 90° to form the other sides. The bundle comes off ready to twist. He also uses an acorn-shaped die to finish the handle.

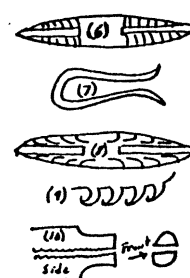


Following the business meeting the group's President, Hans Peot, demonstrated several types of leaves using jigs he had made. His philosophy is to make a jig or tool to do the work whenever possible.

The first leaf was made by bandsaw cutting a leaf shape at the end of a piece of 3/4" x 3/4" angle iron as illustrated (1). This was then placed over a jig as illustrated (2), and the leaf sides were hammered flat, leaving a triangle-shaped impression on the bottom and a slight groove on the top. Side veins were then added to both sides of the leaf with a sharp chisel while the stock was hot. Hans noted that the veins need not match on both sides of center to give them a more realistic effect. Hans used this technique to make an outdoor lamp. In this case, leaves were put on both ends of the angle iron with the lamp glass between in the original angled area. To hold the angle iron Hans made a pair of tongs with the jaws in the shape illustrated (3). The round area goes in the inside angle of the angle iron.



The second leaf demonstrated was cut out of 1/8" mild steel flat stock about 10" long x 1/4" wide in the shape illustrated (4). To put a convex vein on the bottom Hans used the jig illustrated (5) and used a blunt (fuller) chisel to hit down from the top. This put a concave groove on the top with the convex groove on the bottom. The groove was about 4" long from both ends. Side veining was then added (6) and the leaves bent over using a bending jig into the shape illustrated (7). The leaves could then be cut in the middle to produce matching shaped leaves or used as is with a center flower.



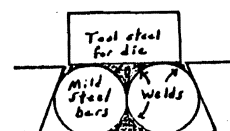
For a variation of the second leaf, Hans used a bandsaw to cut the slices illustrated (8). These were then bent over to produce an interesting, serrated (wilted fern) edge to the leaf as illustrated (9). For the bending Hans used a pair of large pliers which had the jaw ends ground down as illustrated (10). These allowed him to easily and consistently make the bends. He commented that unless you make a lot of scrolls, making a jig to produce them is far easier than by hand.

Other tips or techniques offered by Hans were:

- He avoids buying new metal. He uses a lot of scrap rebar for punches and chisels and uses the spark test to judge the carbon content since it varies widely in rebar. He grinds a piece of known carbon steel (such as a file at about 1% carbon), noting the spark stream, then a piece of mild steel (about .2 - .3% carbon), noting the spark stream, and then a piece of the rebar to see where the spark stream indicates it is in terms of carbon content, referring back to the other pieces as necessary.

- Hans does not temper the tools he makes if they are to be used on hot steel. He feels that tempering is not necessary in this case. If the tools are made out of high enough carbon steel, tempering will not affect their performance enough to justify tempering. However, he would still avoid quenching high carbon steel to make it brittle.

- When he was building his power hammer, largely from scrap material, he machined out his upper and lower dies out of tool steel. He noted he had difficulty in heat treating the dies and that Steve Wooldridge (from Indiana) recommended another method to make dies as illustrated. The bottom mild steel bars are welded together leaving room for side shims. A piece of tool steel is then welded to the top of the rods with stainless steel welding rods to form the dies. In this manner, no machining is required on the dies. Hans' power hammer was praised in the October ABANA President's Message and encouraged Hans to send in photos of it to The Arvil's Ring.



- Punch and chisel handles should be long enough to keep your hand away from the hot metal.

At the November 2nd, well attended, business meeting Emmert Studebaker read a portion of the October ABANA President's Message on the Round-Up. It appears we did a pretty good job. Just wait until next year!

In other business, the Treasurer reported that we have sufficient operating funds at the present time. Almost all of the net proceeds of the Round-Up were put into a brokerage account as a building/land contingency fund to be added to in the future. SOFA membership is now at 106 members, for a 100% growth since March 1983.

The raffle brought in \$32 to support the newsletter. A wooden mallet (hickory head) made and donated by New Carlisle member Hans Peot was won by visitor Boyd Maxwell, the 3/8" hot punch head was won by Troy member Daryle Painter, the twisted handle poker made by Dayton member Duane Wegley was won by Sidney member Ron Thompson, Huber Heights member Ray Montgomery took home a souvenir horseshop donated by Emmert, Hans Peot took home a pair of vice jaws and Duane Wegley took home a half-dozen rivets. Art Holz, Owen Vance and Ron Van Vickie have donated some rather nice items for future drawings so be sure to put in your 50¢ worth on the raffle. Donation of items for future drawings are always welcome as this is how we are offsetting about half the cost of this rag.

Following the business meeting Larry Wood demonstrated techniques of hinge making. I was only able to take partial notes of his demonstration but here are some techniques I did take down:

- When vertical tapering a piece of flat stock, draw it out from the sides first to one-half the original width. When drawing it out (flattening it to the original width), start with the back of the taper first so you don't have to worry about burning a thin point.

- When looked at directly, hot metal appears wider than it actually is due to heat radiation. To check width, look down the sides from the back.

- When doing a faggot weld (folded back on itself) start with the bend first and progress towards the end of the folded over piece. In this way, flux is forced out of the weld.

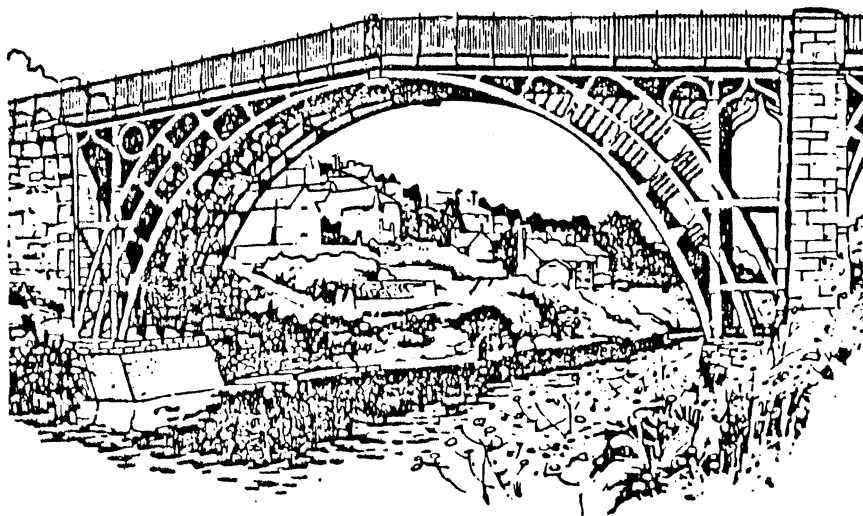
- On a large forge weld, once you have lost your welding heat, don't continue to try to complete the weld. All you are doing is forging out the welded area. Reweld as necessary to complete the weld.

- When drifting out or truing a hinge barrel, hold it in the vice in case the weld wasn't completed at that point.

- When making a self-supporting hinge pin, first make a square corner with a short end to be drawn out into the pin. If you tried to round the short square end at this point, you would have to hold the piece vertical which would be awkward. To overcome this, bend the longer piece over so you can hold the pin end horizontal while rounding it. When the pin is properly rounded, straighten the longer piece, cut off the length of the wall bolt, taper it and then put in burrs to help it stick in a drilled, slightly undersized hole.

- When cold cutting off a long bar, put the longest length over the anvil. That way it is not flopping around in back of you and its weight will help cut the bar by opening the cut.

(Continued on Page 7)



Ironbridge

FORGED IRON '85, B.A.B.A. Ironbridge, England

Twenty-seven Americans attended "Forged Iron '85" in Ironbridge, England, 11 of whom were from the greater Washington, DC area. Our very good British blacksmith friend, Mike Roberts, worked diligently to keep all the wheels of the conference properly greased and working smoothly. The 109 registrants were housed, fed and looked after with care. A very interesting and full program of demonstrations and lectures was held on Thursday, Friday, and Saturday, September 5-7, with a "Happening" of barbeque and Welsh musicians on Saturday evening. Sunday included the annual meeting, firing of the anvil and a tour of Ironbridge.

A Master Class throughout the conference was given by Alan Dawson. Team demonstrations, European demonstrations, as well as open forge and competitions were held. The men who shared their skills included: Alan Dawson, Mike Malleon, Tim Fortune, David James, Henry Pomfret, Oska Hansen, Guergen Maurach, Terry Clark, Charles Normandale, Alan Puddick, Peter King, Daniel Miller, Manfred Bredohl, Jim Horrobin, Steven Lock, Steven Zydek, Peter Duis, Kurt Lange, and Tom Joyce.

Lectures were presented by Richard Quinell, Manfred Bredohl, Charles Normandale, David Peterson, David Lyle, as well as an introduction to Ironbridge by David de Haan, the Director of the Ironbridge Gorge Museum Trust. Slide shows were given by Oska Hansen and Guergen Maurach as well as some of the above.

Items were installed for exhibition in a large tent which had been erected for that purpose. Other items by the blacksmiths were for sale in a separate area of the museum shop. Judges for the exhibition were Manfred Bredohl and Tom Joyce.

A humorous competition was held in which the blacksmiths were charged with the challenge of each making a musical instrument to be played and judged at the Saturday night party. A surprising variety of playable examples were produced.

The Gorge is an historic area known as the birthplace of the Industrial Revolution. Iron has been produced here in one way or another for over 400 years. All the necessary ingredients are close at hand: iron ore, coal, limestone, water, etc. At one time several thousand were employed in the various works that also included china production, tiles, and brick. There were markets all over the world for these products. The iron pots have been found in the most remote areas of the world, including a 400 gallon whale oil rendering pot in Hawaii marked "Coalbrookdale."

The successful continuity of all these various enterprises over the years was due to the ability of the owners to adjust, develop, invent, and constantly meet demand and changing conditions at home and abroad. The successor to all this history is the present Glynwed Foundries.

The restoration and preservation of the historical evidence of the past was begun in 1959 and is continuing. A prestigious European award has been presented for the quality and integrity of the preservation.

To adequately see and study the area could take days or however much time one can spend. Many tourists are constantly passing through. Lodging is available in numerous "Bed and Breakfast" places.

The Ironbridge Gorge Museum Trust includes the Iron Bridge itself, started in 1777 and opened in 1781, the Coalbrookdale Furnace and Museum of Iron, Bedlam Furnaces, Blist Hill Open Air Museum, Coalport China Works Museum, Tar Tunnel, and Maws Tile Works, plus research facilities for serious students.

Here in 1709 the ironmaster, Abraham Darby, first smelted iron using coke as a fuel, thus paving the way for the first iron wheels, iron rails, iron steam engine cylinders, cast iron bridge, iron boat, iron aqueduct, iron framed building, and first high pressure steam locomotive. In tribute to these achievements, the Ironbridge Gorge Museum has been created around this unique series of industrial monuments spread over some six square miles of the Gorge.

We thank all on the committee of B.A.B.A. for the outstanding conference, and their gracious and attentive hospitality.

Eleanor Saalbach



((Judging by comments from several people who attended, the American contingent enjoyed themselves. Asked to compare it to the last ABANA National Conference, the consensus seems to be that they cannot be directly compared since those attending the BABA Conference were predominately full-time smiths while those attended the ABANA Conference were predominately part-time or amateurs. - ks)).

Pivot Hook & Hasp - Demo BY JOHN GRANEY

THIS HOOK IS USED LARGELY FOR SECURITY DOORS

MATERIALS:

FOR HOOK - IRON BAR $\frac{1}{8}$ " OR $\frac{7}{8}$ " SQUARE
FOR HASP - IRON STRAP 1" X $\frac{1}{8}$ "

- START BY FULLERING THE CORNERS OF THE BAR

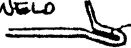
- DRAW OUT A TAPER FROM FULLERED EDGES

- TAP INTO A SHOULDERING TOOL TO FORM A SHOULDER & EVEN OUT TAPER

(THE SHOULDERING TOOL CAN BE MADE FROM STEEL BAR W/ HOLES DRILLED $\frac{1}{8}$ " $\frac{3}{16}$ " $\frac{1}{4}$ " $\frac{5}{16}$ ". IT CAN ALSO ACT AS A BUSTING TOOL)



- CURVE THIS END BACK ON ITSELF IN PREPARATION FOR FORGE WELD



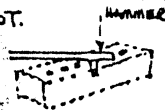
REMOVE SCALE FOR WELD W/ WIRE BRUSH

CAN PLACE TIP INTO SHOULDERING TOOL TO BRING BAR TOGETHER FOR WELD.

- JOHN APPLIES THE WELDING FLUX WHILE HOLDING THE HOT IRON OVER THE FLUX POT INSTEAD OF APPLYING IT WHILE IN THE FIRE.

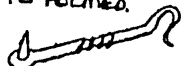
- PLACE IRON IN FIRE & BRING IT TO A WELDING HEAT.

- PLACE THE TIP OF THE ROD INTO THE PROPER SIZED HOLE IN THE SHOULDERING TOOL & WELD TOGETHER. THIS FORMS THE PIVOT.



- A DECORATIVE TWIST CAN BE DONE IN THE CENTRE OF THE HOOK BEFORE THE HOOK IS FORMED.

- TAPER HOOK END & FORM.

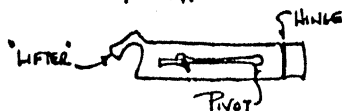


- THE HASP: A HOLE IS PUNCHED IN THE HASP & THE PIVOT HOOK RIVETED IN PLACE.

- THE HASP IS ALSO SLOTTED FOR A STAPLE TO PROTRUDE THROUGH. THIS SLOT LOCATION IS DETERMINED BY THE LENGTH OF THE HOOK.

- A DECORATIVE "LIFTER" CAN BE FASHIONED ON THE HASP.

- THE FINISHED HOOK LOOKS LIKE THIS WHEN POSITIONED W/ HASP.



BY LYNN

FIELDHOUSE

(Meeting Notes contained from Page 5):

- To hold the hinge end Larry took a pair of flat tongs and, using a bottom swage, formed one side like a chainlink tongs jaw. That way he could hold the barrel part of the hinge while working the end to be decorated.

- For smaller width hinges, a sturdy hinge is to make the middle part one-half the width of the hinge and the two side pieces each one-fourth the width.

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OHIOANA



His Pride and Joy: Emmert Studebaker considers his namesakes, human and metallic, extended family

EMMERT STUDEBAKER AND HIS ONE THOUSAND COUSINS

The sleek polished Studebaker gleams proudly in the sunshine. A distinctive hood narrows to form a nose looking like an airplane in search of a propeller. A heavy, clunky car despite its smooth lines, it is definitely earthbound. Head-on, it looks like it can't wait to leave the immaculate garage, yet it appears content to bask in the attention of its owner and perhaps separately venture out for a Sunday drive. It is a car of contradictions.

Not coincidentally, it is owned by a man of contradictions. He runs a multimillion dollar engineering firm, yet is happiest working as a blacksmith with foot-powered machinery.

Emmert Studebaker not only shares the car's surname, he shares its heritage and its restlessness. A distant relative of the man who began with developing the Conestoga wagon and brought the idea to a climax with more than a generation's worth of automobiles, the seventy-seven-year-old man jumps from project to project, task to task, claiming to be the master of none.

He describes himself as a happy man whose most important role has been that of husband and father. As with everything he does, he took the importance of his family a step further and formed the Studebaker Family National Association, headquartered on his Tipp City acreage on the northern fringe of Dayton. He is president of that organization, edits its quarterly newsletter and oversaw the production of the SFNA bible, a massive book tracing the family's roots and cataloging many of the quarter-million Studebaker descendants living in the United States.

From State Route 202, which zooms past the Studebaker home, the buildings appear to be part of an aimless menagerie. Especially prominent from the road is a wrought-iron dinosaur-type creature and an old Studebaker dealership sign, which look like elements of an eccentric's collection. But the sanctuary is far from being aimless and Studebaker is far from being eccentric. Everything there has the family's history as its heart and Studebaker's logic behind it. Even an Indian Mound-like hill has a purpose. "There was no hill here," Studebaker reasons. "So I built one." The farmer in him

would never have gotten rid of perfectly good topsoil that had been moved during the construction of his engineering firm across the road and, besides, it makes the wheelbarrow races at the family reunions more interesting.

Log buildings in a neat circle below the hill form what could be a small village, but each building is filled with Studebaker antiques, handicrafts and other memorabilia and practical Mr. Studebaker has designed all of them to be guest houses for the more than one thousand "cousins" brought together periodically for reunions. Although there is a gift shop and paved walkways, this place is not a tourist attraction by any means. And Studebaker plans to keep it that way. He looks at it as a retreat, a workshop and a Sunday dinner table to gather the family around.

It is quiet and still, except for the distant rumble of a saw splitting a tree on one of the many farms surrounding the compound. Studebaker tools about the area in a golf cart.

As he demonstrates the equipment in his blacksmith shop, a wide smile breaks his face. Next to it is a windmill-operated pump and the first of the garages built to house his collection of vehicles. In one is a Conestoga wagon like the one his ancestors built, and several carriages. In another is one of the largest collections of Studebaker cars, including the long-nosed line, and the sleek roadsters.

Completing the circle is the engineering shop, with huge rings of steel and girders and pieces of machinery crowding the driveway.

Studebaker's proud commitment to his family motivated him to build this living tribute to the Indians who built the roadsters and their hundreds of relatives. His family is what makes him happy, he says in his gravelly voice, and his work is what keeps him going. He laughs as he says there are no poor Studebakers and few lazy ones; his family is a successful lot. Like the Studebakers who preceded him, he wants to keep going, always doing something.

Ironically, he sees the development of the automobile as leading to the downfall of the family as it separated children from parents, roots from branches. Of the development of the car, this Studebaker says, "We'd be better off if we hadn't."

—Julie Kemble

- To make the top and bottom portions of the barrel, hold the barrel in the vice and cut down, the width of the hinge barrel, to the jaw surface. Then use a chisel to knock off the inside portion. If you are making the hinge for a box, you can fold the inner piece out to let it be a backrest when the top is opened.

- Most pieces should be held horizontal in the fire for an even heat and protection from burning. An exception would be when doing square corners since you want it hottest in the corner.

THIS & THAT:

It has been brought to my attention that the book, The Practical Handbook of Blacksmithing and Metalworking by Percy Blandford, is listed in the 1985 Centaur catalog (P.O. Box 340, Burlington, WI 53105) for \$12.95 (see page 95). I consider this an excellent book for beginning smiths.

Speaking of excellent books, during the Round-up, Ted Tucker said that his book, Practical Projects for the Blacksmith, is being discontinued by Rodale Press (33 East Minor St., Emmaus, PA 18049). If you would like to see this book continue in print please drop a note to Rodale Press to that effect. If they receive enough comments/inquiries, they may change their mind.

I have received a analysis of the coal which was for sale at the Round-Up. It is from Sewell Coal Co., Nettie, WV 26681, (304) 846-2525. The analysis (followed by what I have been told is an excellent reference point) is in percentages: moisture, 4.0 (2.5-3.0), ash - 3.5/4.0 (3.0-8.0), volatility - 29.0/30.0 (30.0-40.0), sulfur, .75/.80 (1.0-2.0) and BTU/lb - 14,000 (13,500-14,500). Thus, it is low in ash and sulfur while a bit high or low in other areas. The local members who have used this coal seem to be pleased with it and compare it to the Brazil, IN coal usually available at the annual I.B.A. conferences.

QUOTE FROM FRANK TURLEY - "Machinists work to tolerances, blacksmiths work to snug." (From the newsletter of the Upper Mid-West Blacksmith's Ass'n).

If you know who was selling two 20" turbo-blowers with 1 1/2hp electric motors (NA Manuf. Co. #1-374) at the Round-Up, please contact Larry Jones at 513-788-2258. He bought one them and is now interested in buying the other.

The Arrowmont School of Arts and Crafts 1986 Spring Workshop program will include two on blacksmithing: March 10-14, 86 - Jim Wallace on beginning blacksmithing (including hand engraving, and March 17-21, 86 - Tim McCreight on knifemaking (fixed and folding blades). For further information contact the school at P.O. Box 567, Gatlinburg, TN 37738. They also offer summer internships and scholarship programs.

ANABA President, Stan Strickland, announced that Robert Owens has been appointed Editor of The Anvil's Ring and Kathleen Hogue the Designer. Both have impressive credentials for these positions. All correspondence to our national publication should be addressed to them at 615 Second St., Petaluma, CA 94952. There is an ANABA application form on the back page for non-members.

For those who watched Albert "Freddie" Haberman (of Czechoslovakia) at the 1984 National Conference, and were touched by his sculpture to the spirit of freedom, Freddie and family have been permitted to immigrate to West Germany. He has taken a teaching position at a university in Augsburg and has settled there in a home on campus.

The book Samuel Yellin in Context (9 1/2" x 6 3/4", paperback, 35 pages, 17 B&W photos, \$5.00 postpaid) is available from Flint Institute of Arts, 1120 East Kearsley St., Flint, MI 48503.

How's this for a demonstration: At the California Blacksmith Ass'n Octoberfest '85, Jay Kidwell, having put on a 1930ist double-breasted suit (complete with fedora and tie), after demonstrating various types of forge welds, wired together some odds and ends (like a revolver, a few odd wrenches, hacksaw blades, bottle opener, piece of chain, piece of wrought iron, files and other other assorted items) and proceeded to forge weld them together into a billet subsequently turned into a Damascus-patter knife blade with pieces of the individual items for the handle. Sort of like a patch-work, memory quilt.

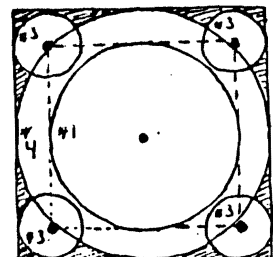
There is a legend that during the building of King Solomon's Temple, that wise ruler decided to regale the artisans employed with a banquet. While the men were enjoying the good things which his bounty had provided, the King moved about from one table to another in an endeavor to become acquainted with his workmen. To one he asked; "My friend, what is your trade?" "A Carpenter", he replied. "And who makes your tools?", the King asked. "The Blacksmith", replied the Carpenter. To another, Solomon spoke, "What is your trade?" and the reply was, "A Mason". And again Solomon asked, "And who makes your tools?" Again the answer was the Blacksmith. A third worker stated that he was a Stone Cutter and the Blacksmith also made his tools. The fourth man who the King addressed was the Blacksmith himself. He was a powerful man, with bared arms on which muscles stood out in bold relief; almost as hard as the metal he worked. "And what is your trade, my good man?" the King asked. "Blacksmith", laconically replied the man of the anvil and sledge. "And who makes your tools?" "Make 'em myself", replied the Blacksmith. Whereupon King Solomon immediately proclaimed him the King of Mechanics, because he could not only make his own tools, but all other artisans were forced to depend upon him for their tools as well. (From the newsletter of the Florida Chapter - ABANA).

Cast tomahawk drifts are now available from Wendell's Iron Mountain, 180 Marks Ave., Lancaster, OH 43130. The D-1 size fits small belt axes handles and is \$12 plus \$2.24 S&H. The D-2 size fits the throwing axe or the Hand-B handle and is \$15 plus \$2.32 S&H. They are made from #8 ductile iron. These were for sale at the Round-Up.

Reminder that elections to replace several ABANA Board Members is coming up. Our group President, Hans Peot, is running for one of the positions. As an incentive to vote this year, those voting will be entered into a raffle with the winner receiving a large anvil stake, estimated value of \$200 - \$250.

SHOP TIPS AND TECHNIQUES: These tips and techniques were predominately extracted from other ABANA chapter newsletters. In most cases they have been paraphrased for consistency of format. Where an item was reprinted in another newsletter, the original newsletter is cited as the source. While all of these items are believed to be accurate, neither SOFA or ABANA bear any responsibility to any adverse effects with may result through their use.

- HOW TO DRILL A SQUARE HOLE: 1) Drill a hole 3/4rds the size of the square, 2) punch four set holes in line with edge of circle, freehand, 2) drill out four holes using a bit 1/4th the size of the square (e.g., 1" square hole - use 1/4" bit), 4) drill final hole the same size as intended square, and 5) remaining material to be filed out is only 1/10th of original material. (By Bill Gable from the newsletter of the Illinois Valley Blacksmith Ass'n).



SOFA member Paul Kuenle has purchased acreage in Beavercreek and is building a more permanent shop. I understand he made his forge table top by building a form, positioning one of Bob Zeller's firepots in it upside down, and then filling the form with concrete. It is temporarily sitting on concrete blocks.

- Baffled by your hood? Let's assume you seem to have a good design for the hood over your forge and a good size chimney (Francis Whitaker recommends 12" diameter) which is tall enough so it should do a good job. But now and then you seem to have more smoke than your hood wants. Perhaps you really have too much crosswind in the shop, but it feels good. However, that smoke does get to you at times. This was my problem, but I was lucky enough to ask George Tiura, Medesto, CA, for his thoughts. (George is an agricultural smith and has designed and built innovative agricultural equipment. Seed and grain are generally separated from the chaff by air). "Try a baffle in the hood", he said. My hood is about 26" above the forge, 24" x 30" opening and tapers to a 10" diameter chimney, which is about 26" above the hood opening. The back and one side (between the forge and hood) is closed. George suggested trying a vertical baffle running from side-to-side through the mid-section of the hood. To test the affects of the baffle, roll up and light a few sheets of newspaper. This gives a fast heat, enough smoke, then quickly dies out. If the baffle doesn't quite do the trick, move it and retest. Don't know if I placed my baffle in the optimum location. It tested so well (and has worked well for over a year) that I didn't try another location. The bottom of the baffle is about 5" below the bottom of the hood. Baffles can also be used to direct most of the fly ash or cinders (those that don't make it out of the chimney), to one side of your forge so you can clean them out. In my case, having the chimney over the corner of a rectangular hood, most of the ash falls to one side of the forge. George also suggested opening up a slot in the side wall to let the ash drop out. You might also consider catching the ash. Look at the "Practical Blacksmithing" by Richardson, page 41, last paragraph. Figure 19 shows the catcher in place. If you don't know where the cinders are falling, you can get an idea by pulverizing a charcoal briquet (I happened to have 'Kingsford') and throw the dust into the fire. Gives a beautiful display. Incidentally, both my hood and baffle are aluminum. The baffle is cut from the wrap-around support from a portable pool and the hood is a lighter gauge. (By Bob Thomson from the newsletter of the California Blacksmiths' Ass'n). ((If you have problems visualizing the baffle I will send you a full sheet sketch for a self-addressed, stamped envelope. - ks)).

- An interesting twist on twisting bar stock goes like this: Twist a portion of square stock. Forge flat two opposite sides of the twisted portion. Reheat and twist in the opposite direction the original twisted and flattened section. The results are an interesting blocky-looking twist. Use good steel as the reverse twisting will open any seams or shuts in the original bar stock. Try it! (By Jeff Fetty from the Blacksmith's Gazette, March - June 1985).

- One of the shop tips in the June/July 85 issue mentioned floating oil on water for temper quenching. Percy W. Blandford in The Practical Handbook of Blacksmithing and Metalworking also noted, "Another way of using oil as a quenching bath is to float it on a container of water. This can be mineral oil, vegetable oil or even grease. As the hot tool is lowered through the oil, it gathers a layer of this surface film and takes it through into the water. This is claimed to produce a tougher steel with freedom from cracks."

- Since much smithing is done with steel which has been salvaged, it is not always easy to know if what you have is mild steel or high carbon steel. The ability to produce tempering colors is not a reliable guide as even mild steel will produce them with no affect on the metal itself. Heat will not harden mild steel so a sure check is to go through the motions of hardening, by heating to redness and quenching. Then try to file the steel. If the file slides over the surface without cutting, it is tool steel. If it can be filed, you have mild steel. Since the hardened tool steel will blunt the file, an alternative is to grind the end of the file across so that it makes a cutter and try to scrape the steel. If it will not produce a scratch on the heat treated steel, you are dealing with tool steel (high carbon steel). It should easily make a mark on wrought iron or mild steel after it has been heated and quenched. (By Percy W. Blandford in The Practical Handbook of Blacksmithing and Metalworking).

- When tempering a piece of tool steel of unknown quality, first heat the material to about 1500°F and quench it in oil. Check the material with a file for sufficient hardness. If not hard enough, anneal, heat again and quench in water. (From The Anvil's Horn, newsletter of the Arizona Artists-Blacksmith Ass'n).

- When folding sandpaper for hand use, always fold it into three parts. That way it won't slip on itself when in use. (From Metalsmith, newsletter of the Guild of Metalsmiths).

- When shrinking on collars, if for some reason you have one which is not tight, squeeze it tightly with a C-clamp. This is done while everything is cold. Now with a torch, heat rapidly across the face of the collar, then quench with a wet rag. This yellow heat forced the collar to expand but since the C-clamp restrained expansion in the one direction, the collar expanded in the other three directions upsetting itself, then when quenched, it contracted from all four directions pulling it tight. This collar is now slightly upset in the heated area (unnoticeable). This process should be done keeping the pieces collared as cool as possible or they will expand, giving you a false dimension. (From Metalsmith, newsletter of the Build of Metalsmiths).

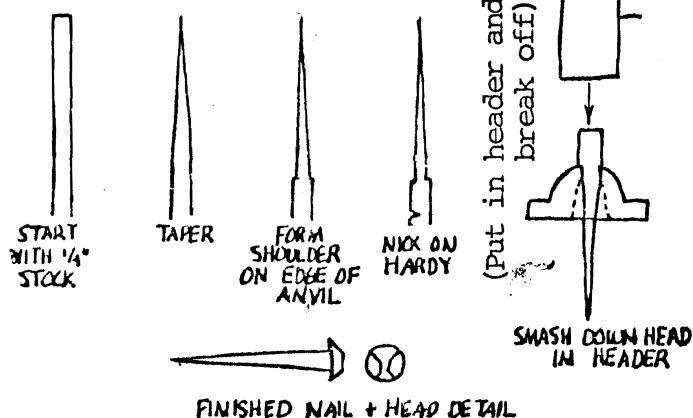
- Why buy expensive quenching oil when all you have to do is go to a heavy equipment company and ask them to save you their hydraulic oil? This is often changed whether it needs to be or not, and the oil is light and clean. I have never heard of any company charging a blacksmith for this oil. (From the newsletter of the Appalachian Area Chapter - ABANA).

- When hot punching hammer eyes, be sure to add a piece of fresh coal to the hole when it is 1/2" deep. Fresh coal not only provides gas to keep the punch from sticking, but also carries a thin layer of carbon which insulates the punch from the hot metal. As each blow is struck, using the punch handle for leverage, wiggle the punch in the hole so as to be sure it is not about to be stuck. When the punch can no longer be wiggled ever so little, immediately turn the steel over, with the punch underneath, and strike a hard blow or two with the hot steel on the anvil edge. Such a blow has the tendency to open the hole a little and allow the punch to come free. When the hole is punched 2/3rds to 3/4th of the way through, turn the steel and start the hole from the other side. Punch only about 1/16" deep, then turn the steel on its side. Hold the punch in the newly started hole and, from the side, see if the two sides are aligned. There seems to be an almost automatic tendency to hold the punch for the second half of the operation towards oneself, which results in a crooked eye. By using this technique it is easy to correct an error. Any deeper than 1/16" will be difficult to correct, as the punch will follow an incorrectly started hole. All this must be done in far less time than it takes to either read or write this. Quick, strong, decisive blows are the answer. As my old mentor, John Catlin, used to say, "Nobody never got nowhere pettin' iron". (By Francis Whitaker from the newsletter of the California Blacksmith Ass'n).

- A produce called "Hot Steel" can insulate surfaces from heat to 3,000°F and beyond when welding, brazing and soldering. A 1/8" layer will protect human flesh from direct application of a butane torch. It can isolate heat to the precise area being processed, dissipating the excess and preventing transmission of heat to immediately adjacent materials or components and protecting from either radiated or transmitted heat damage. There is no need to disassemble the produce being repaired or processed. The produce is non-toxic to the skin, produces no fumes or odors, contains no materials of harmful nature and even prevents torch blow-back. Portions not scorched or blackened may be removed with a damp cloth and reused. This produce is available from Ward International, P.O. Box 3628, Granada Hills, CA 91344. (From the newsletter of the California Blacksmith Ass'n).

SEQUENCE FOR MAKING NAILS

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



Nick
Vincent

((Nick shows a hardy nick on only one side. My limited experience is that this causes the nail head to form to one side. I recommend nicking from at least two sides to produce a more evenly spread head. - ks)).



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How did you learn about ABANA? _____

SOFA SOUNDS is the bi-monthly newsletter of the Southern Ohio Forge and Anvil (SOFA) Chapter of the Artist-Blacksmiths Ass'n of North America (ABANA). Other ABANA chapters may reprint non-copyrighted material as long as proper credit is given. Unless otherwise indicated, the material herein was provided by the Editor. Membership in SOFA is \$5.00 per year payable to S.O.F.A. in care of the Editor.

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NOTE: Your SOFA membership expires 10/26.

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