$2.00

NWBA

Hot Iron News

CHAPTER OF ABANA

April, 1986 -- Voice of the Northwest Blacksmiths Association

SPRING MEET

NWBA Special Event '86

Washington County Fairgrounds
Hillsboro, Oregon
May 2nd, 3rd and 4th

See Page 3

MAY IS RENEWAL TIME

Dues are Due

Form on Page 15

It's Nomination Time For NWBA Board

Members will be nominated at Spring Meet

N. W. B. A.
Box 81041, Seattle, Wa.

1985 Officers and Board Members

President:	Darryl Nelson Rt. 2, Box 292-C Eatonville, Wa. 98328 832-6280	Jack Slack 214 First Ave. So. Seattle, Wa. 623-4085
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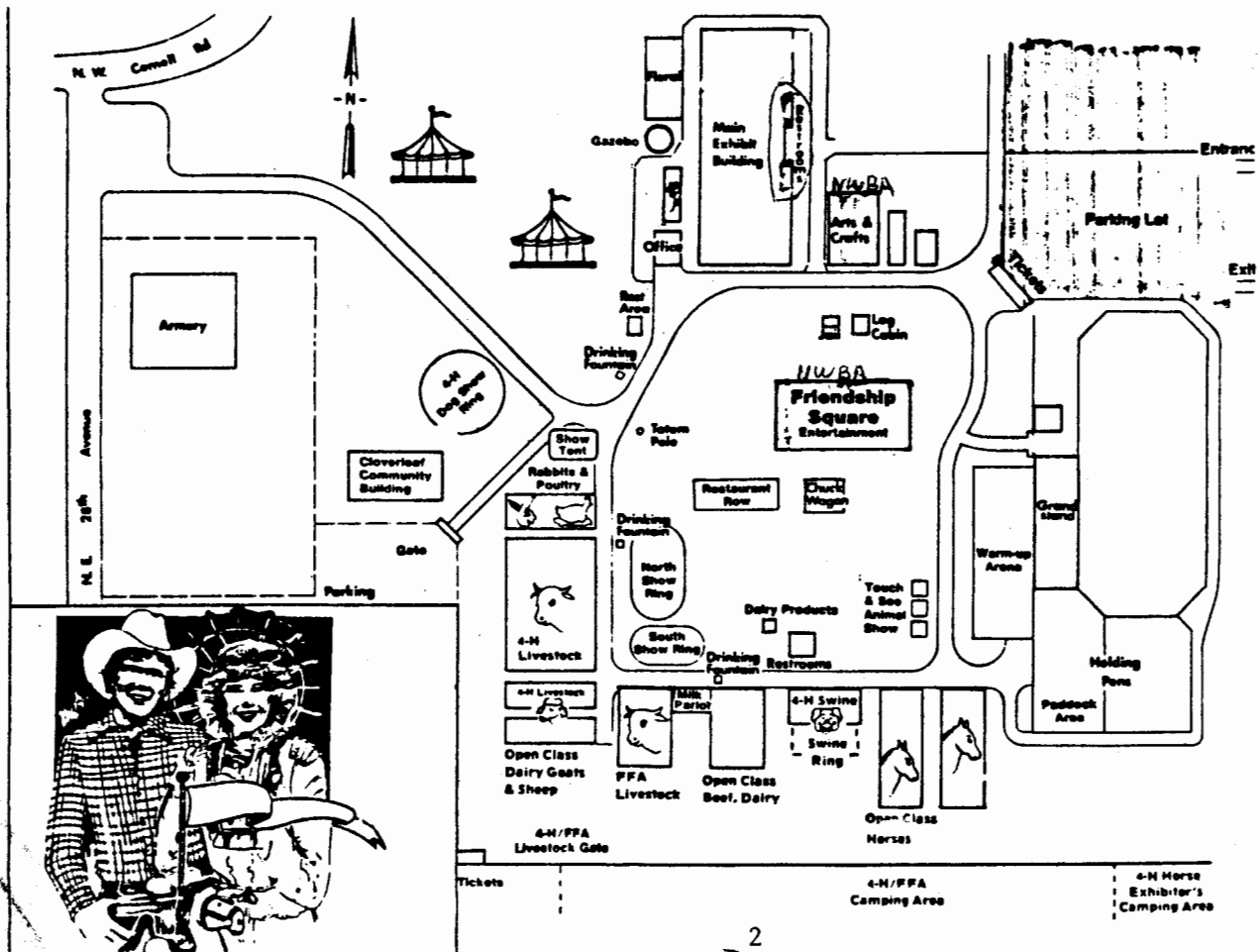
Editor:	Terry Carson Rt. 2, Box 292-C Eatonville, Wa. 98328	Corky Storer 19709 Maxwell Rd. S.E. Maple Valley, Wa.



NWBA-SPECIAL EVENT - 86'

Hillsboro Fair Grounds (16 Miles West of Portland)

"Growing thru Knowing"

Williamsburg Weekend: Three days of instruction on Blacksmithing and Rifle Building for the "professional" and "amateur" alike.

GUEST DEMONSTRATORS ARE:

Peter Ross, Master of the Blacksmith Shop Colonial Williamsburg, Williamsburg Virginia.

- -

Gary Brumfield, Master of the Gunshop Colonial Williamsburg, Williamsburg Virginia.

Potluck dinner on Saturday evening centered around a whole roast pig, provided by Northwest Blacksmith Association.

This is a rare opportunity to advance your learning and skills. This is a combined program with instruction in both areas, going on simultaneously. Overnight parking available.

REGISTRATION FEES:

$35.00 per person for three days of instruction.
$18.00 for wives and kids.
$15.00 single day rate for Sunday only*

*Sunday is a special day...we will feature the welding up of a barrel from bar stock. We are expecting over 200 hundred paid attendees to this event. We will shut off registration when attendance looks to exceed the space we have. Please register now and ensure your participation for this once in a lifetime event.

**** ****

REGISTRATION FORM - WILLIAMSBURG WEEKEND
Hillsboro Fair Grounds (16 miles West of Portland)
May 2,3,4 (Fri, Sat, Sun) 1986

NAME (s): _____

ADDRESS: _____

_____

_____

NUMBER OF PARTICIPANTS: $35.00 _____ $18.00 _____ $15.00 _____

TOTAL ENCLOSED: _____ represents full registration fees for three days of first class instruction and pig feed. Yes____ No____ I plan to bring something for the potluck.

MAIL TO: NWBA SEATTLE, PO BOX 81041, Seattle, WA 98108

Fire Brick Supply - Seattle Pottery Supply

3000° S Cadle Cask - Chigo weldville

2600° KAOwool - Heavy

2600° Blow iron

PROPOSED SCHEDULE
NWBA BLADESMITH WORKSHOP
May 31, June 1
Instructors & Areas Covered

Wayne Goodard - American Bladesmith Society Journeyman--Blade Forging, Heat Treating, Blade Testing.

Larry Nielsen - Knifemaker--Belt Grinding Blades, Knifemaking.

Gene Chapman - Bladesmith--Home Built Equipment (Grinders, Propane Forges, Fixtures, Etching, Forge Welding in Propane Forge.

Joe Druin - Knife Collecting

SCHEDULE

Saturday - 9 a.m. - Propane Forge Use

9:30 a.m.- Blade Forging & Heat Treating
-Goddard-
Student Hands-on After Demo.

Noon - Lunch

1:00 [illegible]llecting
[illegible]ruin-

2:00 p.m. - Knifemaking
-Nielsen-
Student Hands-on
After Demo.

4:00 p.m. - Home Built Equipment
-Chapman-
Student Hands-on
After Demo.

Sunday - 8:00 a.m. - Damascus Forge Welding Demo
-Goddard & Chapman-
Student Forge Weld a small 2-layer billet after demo.

10:00 a.m. - Etching Demo
-Chapman-Goddard-
Students hands-on etch after demo.

11:00 a.m. - ABS Blade Test
-Goddard

Noon - Lunch

1:00 p.m. - Collecting
-Druin-

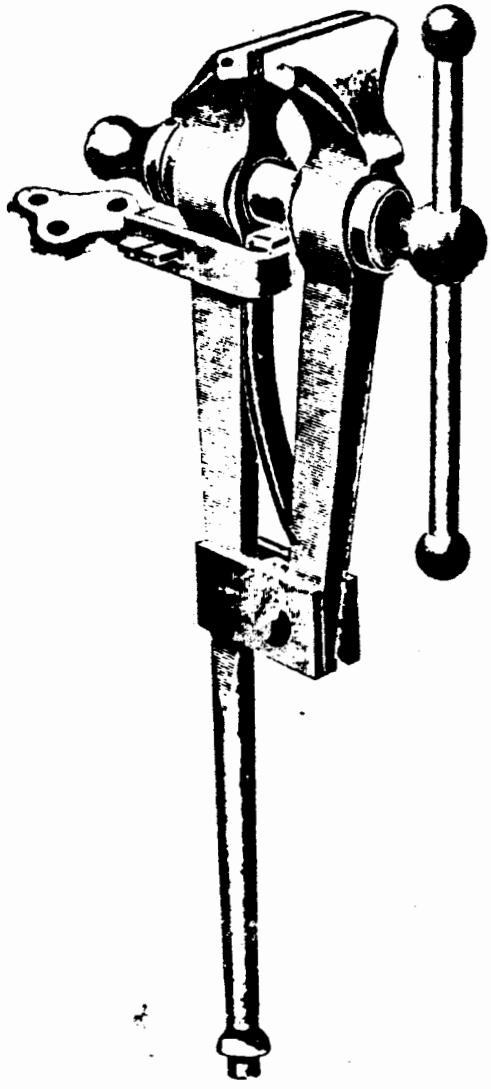
2:00 p.m. - Knifemaking
-Nielsen-
Student Hands-on
After Demo.

3:30 p.m. - Cleanup

4:00 p.m. - Graduation Pictures

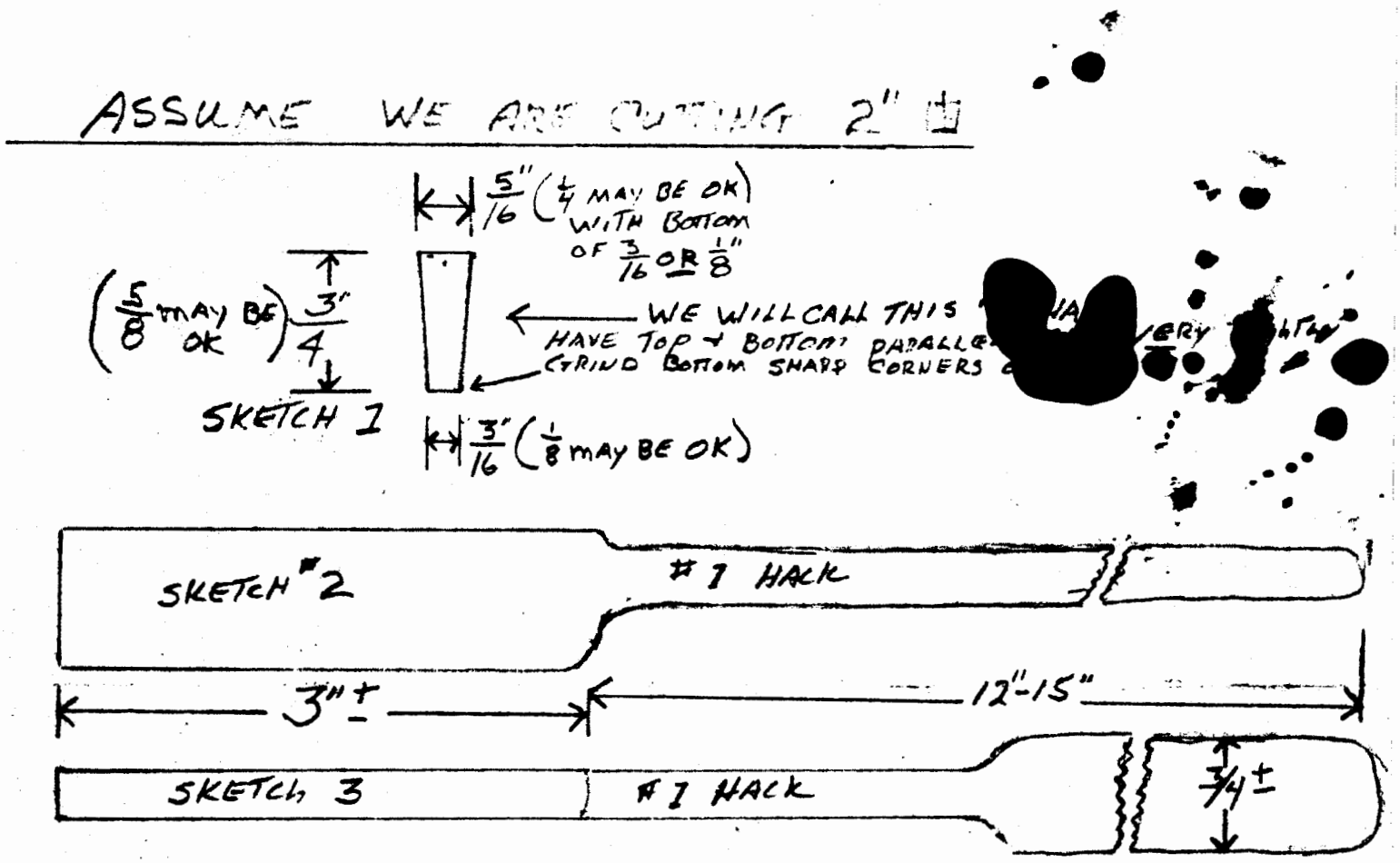
Students will need safety glasses, favorite tools, smooth or 2nd cut 10" mill file with handle, 320 grit emory paper, old files for forging practice.

Gene Chapman



The following letter was written by Don Hawley. Don worked his entire life as an industrial blacksmith, forging ferrous, non-ferrous and elemental metals on 250# to 16,000# hammers. I requested some specific information regarding basic forging practices. In this article he talks of cutting was a hack. Regardless of what type or size of hammer, a hack could be utilized. I have asked Don to write something expressly for the newsletter in the future. This stuff is good to sit on.

Sincerely,
Russell Jaqua

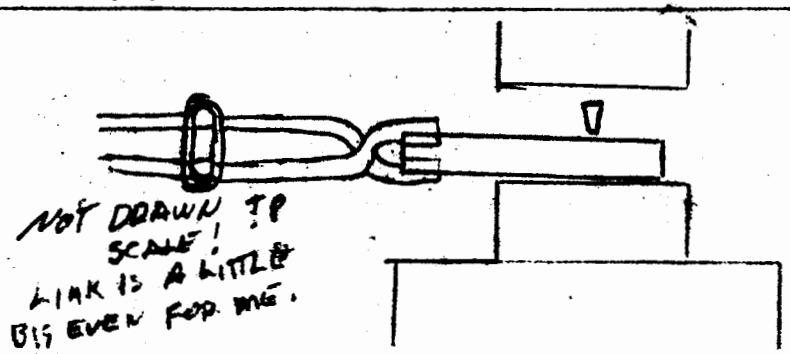


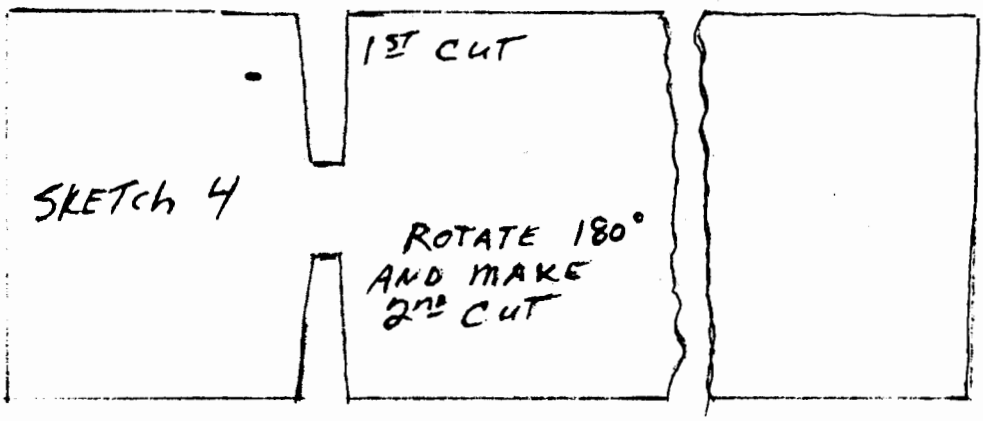
THERE ARE SOME VARIABLES - FOR EXAMPLE HOW MANY BLOWS ARE USED TO DRIVE THE HACK - THE MORE BLOWS, THE MORE FULLERING ACTION IS GIVEN THE PIECE BEING CUT. THIS "OPENS" THE CUT AND DOES NOT GIVE SUCH GOOD RESULTS.

I ~~MAKE~~ MADE MY HACKS (AND AN EXPERT TOOL SMITH THAT WORKED FOR ME) DIFFERENT THAN "THE BOOK". I FORGED MY HANDLE THE SAME THICKNESS AS THE BLADE FOR A COUPLE OF INCHES. THIS PERMITTED THAT AREA TO ENTER THE CUT FOR REASONS WE WILL NEED TO DISCUSS NOW. THEN I FORGED OUT WIDER THE AREA I WOULD HOLD. FORGET ABOUT FORGING "SPRING" INTO THE HANDLE.

MAKE TWO HACKS - LETS MAKE THE FIRST #1 USING $\frac{3}{4} \times \frac{1}{8} \times \frac{3}{16}$ AND #2, $1\frac{3}{8} \times \frac{1}{4} \times \frac{3}{8}$

THIS HACK WILL FOLLOW USE OF #1 HACK.

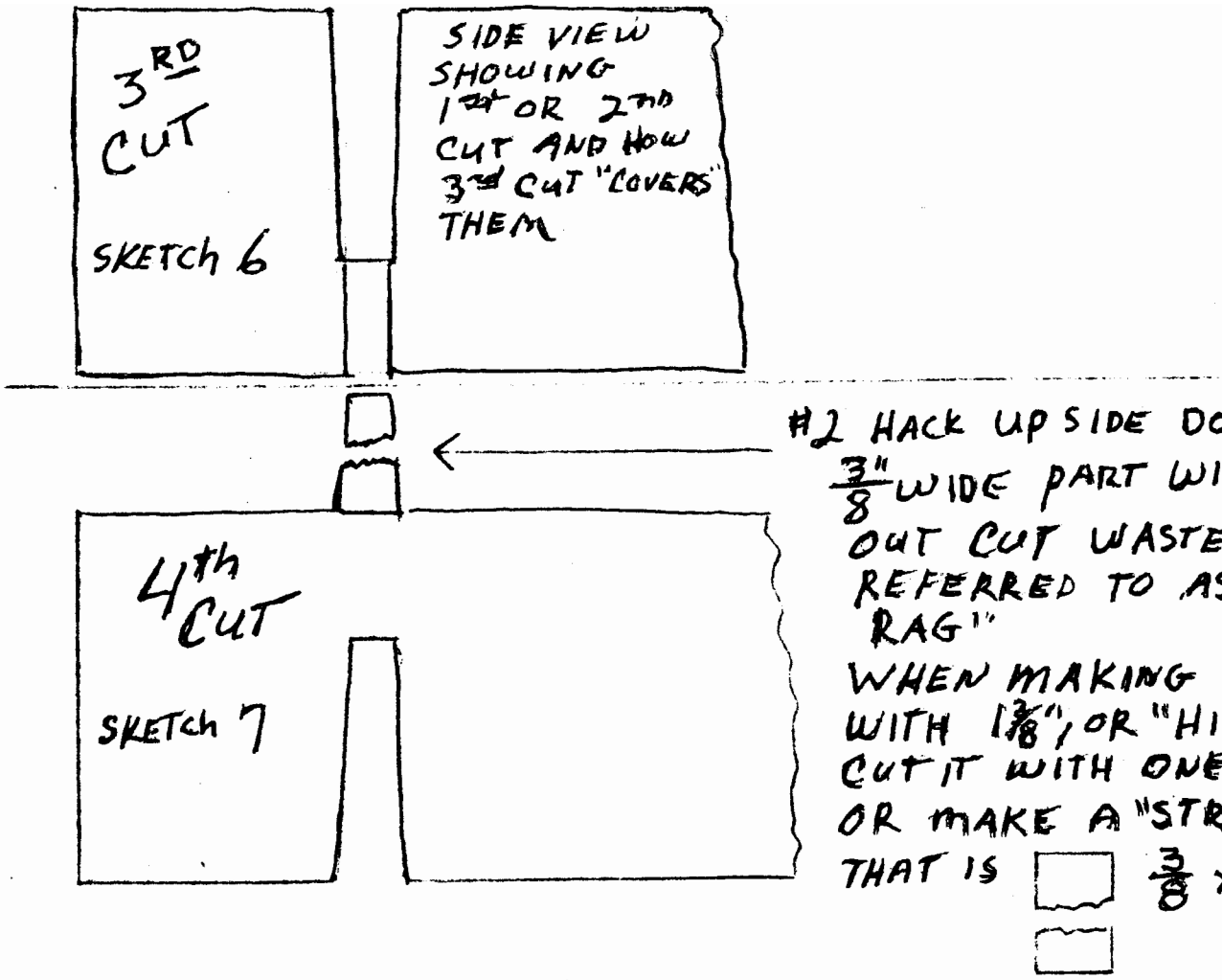




SKETCH 4

SKETCH 5

THEN ROTATE 90° AND GIVE LIGHT BLOW TO FLATTEN DOWN PROTRUSIONS (?SP.) CAUSE BY HACK, IN MOST CASES.



ON THIS 4TH CUT NEVER USE A HACK THAT IS AS HIGH AS THE STOCK IS THICK.

YOU WANT TO MAKE FINAL CUT IN ONE BLOW (I'VE USED 2 MORE THAN ONCE)

THE STRIPPER IS NICE AS NOT BEING TOO HIGH MAKES IT EASIER AND THE TOP DIE HITS A WIDER PIECE THAN AN UPSIDE DOWN HACK - ALSO IT ISN'T SO FAR FOR THE TOP DIE TO MOVE TO KEEP FORGING LEVEL.

WHEN, FOR EXAMPLE, CUTTING 3/4 x 4 STOCK (NEED A LONGER HACK IF LOTS OF CUTS TO BE MADE) YOU CAN USE A 3/4" HIGH HACK - JUST DON'T DRIVE IT MORE THAN 1/2 OR 9/16 DEEP. TURN PIECE OVER AND USE A 3/4" HIGH STRIPPER. IF YOU MAKE YOUR 1ST CUT TOO DEEP, THE HACK WILL FULLER OUT THE RAG SECTION SO LONG IT WILL NOT MAKE A NICE CLEAN CUT.

IF YOU HAD A GAS FURNACE AND 2" □ WITH A GOOD PAIR OF TONGS, WITH A LINK ON THE REINS, AND YOU GOT 12" + OF 2" □ HOT, YOU SHOULD HAVE NO TROUBLE CUTTING OFF 3 OR 4 PIECES 3" LONG IN ONE HEAT.

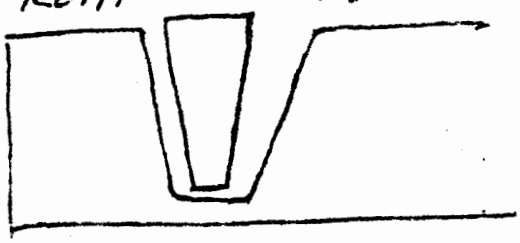
I MADE MOST HACKS OUT OF 4140 — OIL QUENCHED — WHEN USING IT, A QUICK DIP IN WATER IS OK — BUT NOT IF YOU USE 4340. A REAL GOOD HACK IS MADE FROM ATHA PNEU. IT HAS A LITTLE TUNGSTEN IN IT. ALSO SOLAR IS OK. FOR THE SOFT STUFF YOU CUT, 4140 IS FINE.

IN USING YOUR HACK, TAKE IT EASY AT FIRST. MAYBE 2 BLOWS ON 1ST + 2ND + 3RD CUTS. IF YOU USE A HELPER TO HANDLE THE 2" □ — BE SURE THE HACK DOESN'T "FLY" — WHEN CUTTING HOT IT "DOESN'T HAPPEN" THAT THE CUT PIECE WILL FLY — BUT IT IS A GOOD IDEA NOT TO LET ANYONE STAND AT THE END OF THE DIE TO WATCH.

A GOOD HEAT WHEN HOT CUTTING IS NOT TOO HOT — I MEAN USE 1950 — 2100 ON MILD STEEL — LIKE 2300° DOES NOT USUALLY PERMIT CLEAN CUTS.
WHEN YOU GET TECHNIQUE AND CORRECT HACKS WORKING — YOU SHOULD CUT A RAG OUT EVERY TIME — THEY ARE "ART" OBJECTS — IF SOMEONE WHO WASN'T FAMILIAR WITH USING A HACK WAS GIVEN ONE "MAKE ME SOME OF THESE" — HE WOULDN'T KNOW HOW TO DO IT.

IF HACKS ARE TOO HIGH — DON'T DRIVE THEM TOO DEEP — YOU CAN'T HAVE A MATCHED SET FOR EVERYTHING YOU CUT.

IF YOU DRIVE THEM TOO DEEP — INSTEAD OF NICE CUTS AS IN 4 OR 6 — YOU GET SOMETHING LIKE THIS FROM THE FULLERING ACTION. — IT IS NATURALLY GOING TO DRAW OUT A LITTLE EVEN WHEN DONE RIGHT.



Don Hawley

BEFORE THE ANVIL RINGS

by

Jerry Hoffman

As artist (or designers) we must take our inspirations through a process that refines the fragments of a composition untilit becomes a complete design. Putting thought on paper in the form of sketches brings clarity to what we have imagined. A blacksmith with drafting skills can greatly increase his or her potential for transforming ideas into reality; recording these ideas leads to futher inspiration so that successive layers of design can mature into new concepts.

A designer/blacksmith has the ability to see and move towards a complete composition. This gives him or her the motivation to work towards that end. however, details that are unclear need to be worked out through a series of drawing before work can begin.

First, ideas are quickly recorded in sketches showing mostly structure. Once an idea has been satisfactorily worked out, more detail and embellishment can be added to the sketches. These sketches can be shown in third dimension to capture the look of the finished product. Engineering details can be worked out at this point by showing cross sections and relevant views of the object. Once the design comes together, a rough mechanical or architecural drawing can be made. It is drawn to scale within the framework sceeified by the project requirements. It also enables the designer to view the composition in it's entirety, and correct errors not seen in previous sketches.

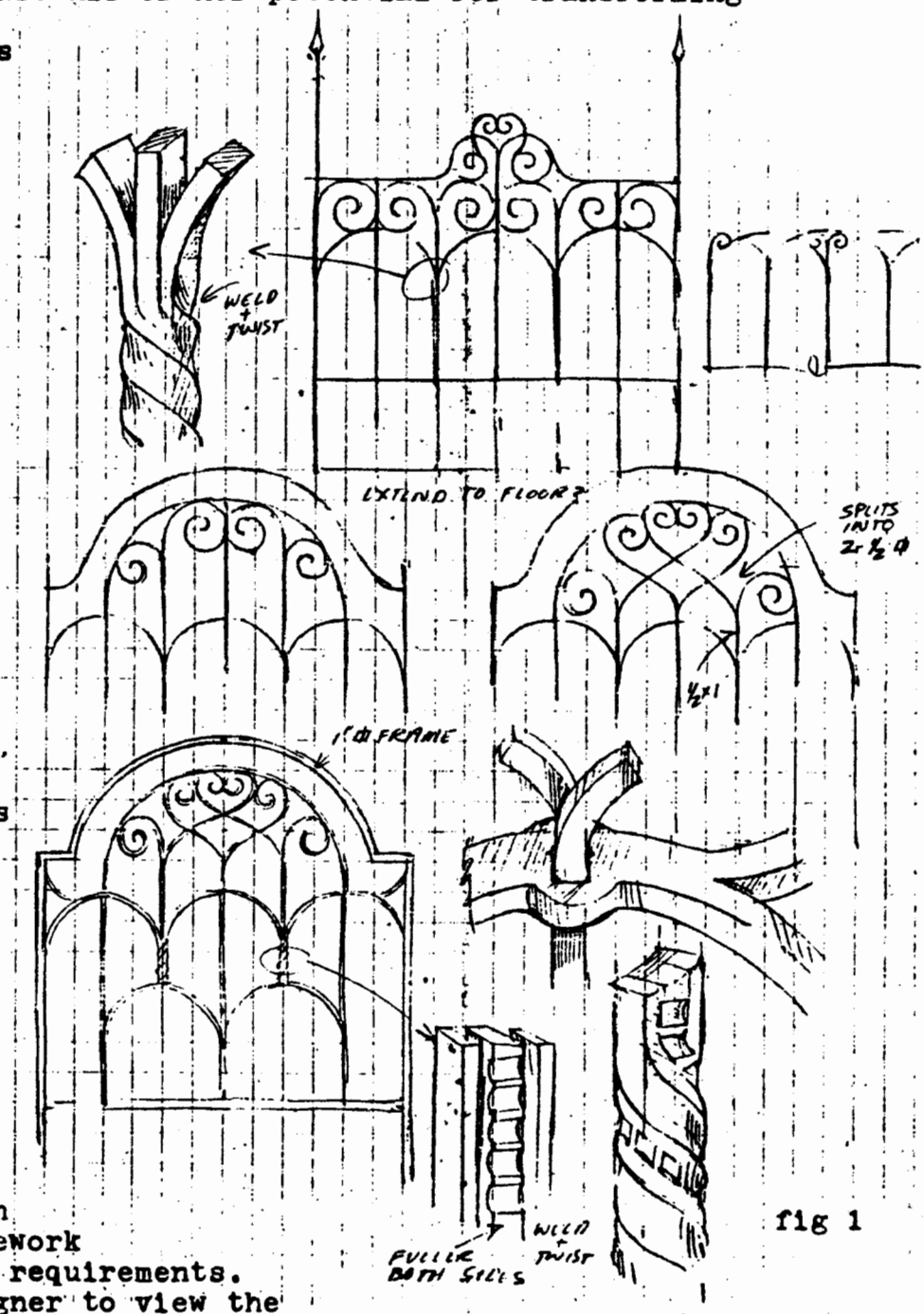


fig 1

For the artsmith, sculpture or traditionalist, drawing need not always be as exact as those used by the architectural smith. The number and accuracy of drawings depends on what works best for each individual. However, one must stay within specific guidelines when

drawings are required by architects, contractors or clients.

To illustrate the process of taking an idea from concept to completion, I have shown reproductions of drawings used on a recent project. The job was to design a forged single bed headboard.

DESIGN CONCEPT

Generally, our composition in ironwork stem from technique. It is the way in which various elements interweave and fit together that make a piece unique.

The first sketches are like "test pieces" made in the shop. They are made quickly with little detail and show a variety of possibilities. Fig. 1 shows some of the possibilities explored for the headboard. These sketches were redrawn from the originals and show some of the ideas that worked. The concern here is not to make a fine drawing, but to show the trial and error progression of ideas that lead to the final design.

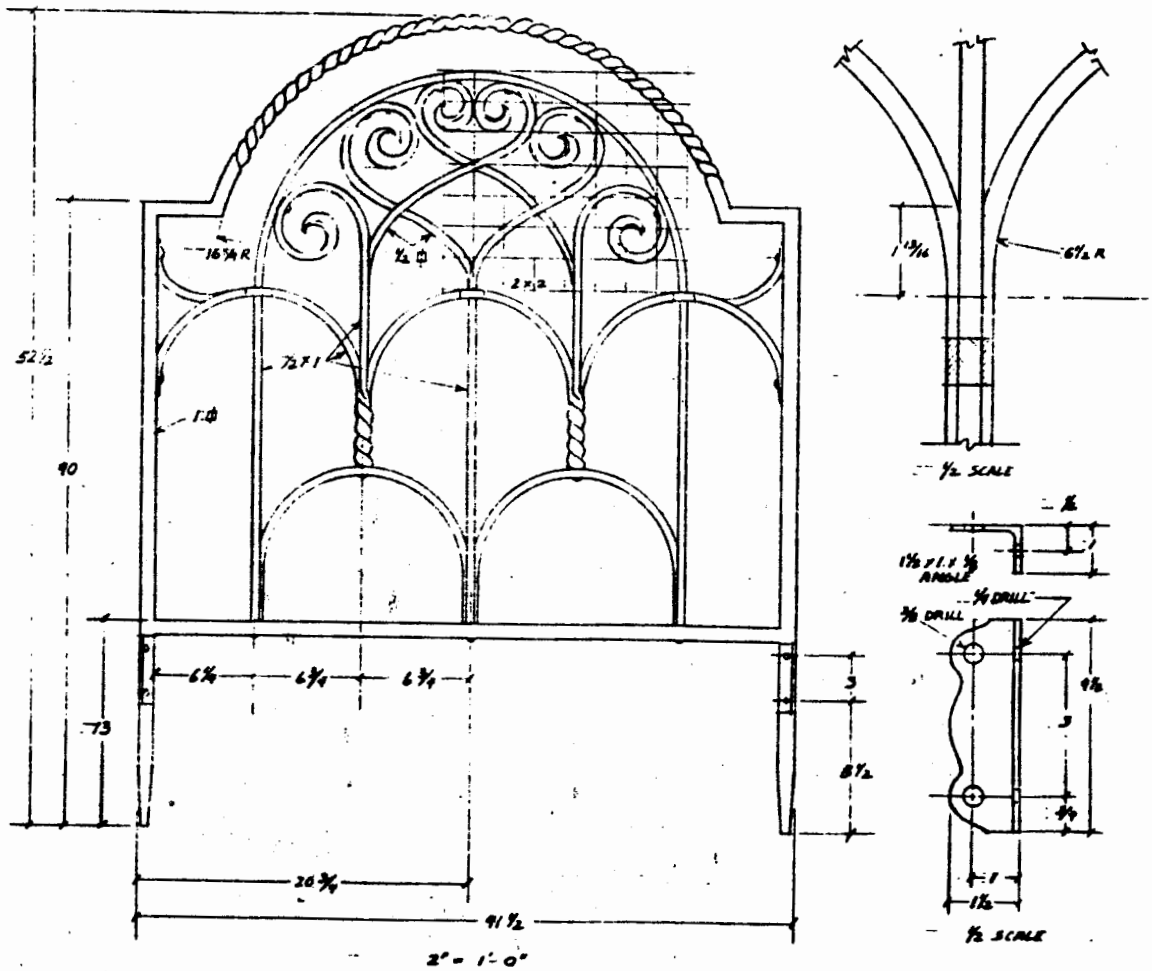
DRAFTING

A rough drawing is made to scale at this point in order to work out the final details. These drawings are made on a drafting table using architects'(divisions in feet and inches) or engineers' (divisions in inches and 16ths of an inch) scales. They may be used as shop drawings if finished drawings are not required by others.

The finished drawing is shown in fig. 2. All of the curves and shapes are accurately drawn so that they may be easily transferred to full scale on the layout table. Dimensions are kept to a minimum so that only those necessary for completion of the project are shown.

Most drawings show one or two views of the assembly, and detailed views of various parts. The assembled view gives general dimensions and is void of hidden lines and excessive detail. The detail drawings show parts and assemblies requiring detailed information.

fig. 2



ASSEMBLY SKETCHES

It is sometimes helpful to sketch the order and way in which a piece will be assembled. (fig 3) These sketches are for the blacksmith to refer to during forging and assembly. They make it easy to keep track of progress and minimizes confusion and error. Notes can be recorded on these sketches during assembly and used for future reference.

FULL SCALE DRAWING

Drawing to full scale on the layout table marks the official beginning of a project. Light colored pastel pencils work very well for this - they make very consistant lines on steel, and are easy to resharpen. Square grids transferred to full scale from shop drawings makes plotting curves easy.

This brief outline is not intended to be a step by step guide to drawing, but rather an example of one way to organize project drawings.

The fundamental purpose is to explore media of expression that help us to become artists, and move blacksmithing towards acceptance as a true artistic technique.

It is aptly stated in a quote by Otto Schmirler:

"WHO IS AN APPRENTICE?
EVERYONE.
WHO IS A JOURNEYWORKER?
ONE WHO HAS SKILL.
WHO IS A MASTER?
ONE WHO CREATES.

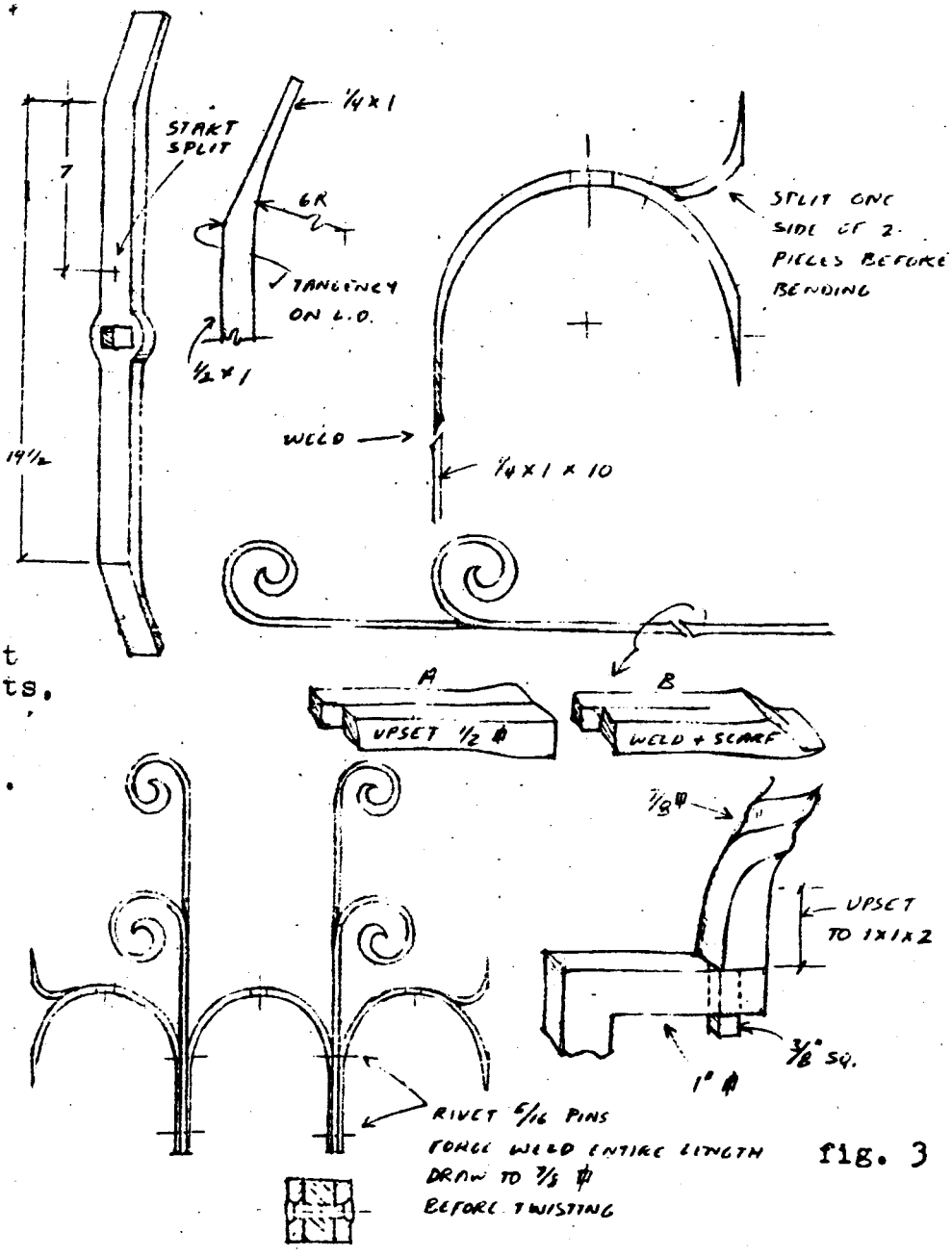


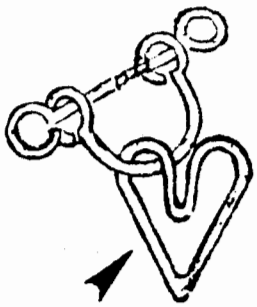
fig. 3

The headboard featured in this article won 1st place in the Birmingham Blacksmithing Festival Exhibition 1985, with 2nd place going to Thomas Latane, Pepin, Wisconsin, and 3rd place going to Jim Batson, Huntsville, Alabama.

Courtesy BAM Newsletter

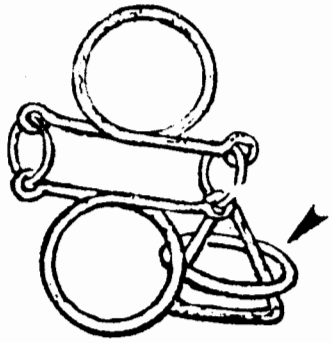
(Taken from the Michigan Artist Blacksmiths News Letter)

Designs available:



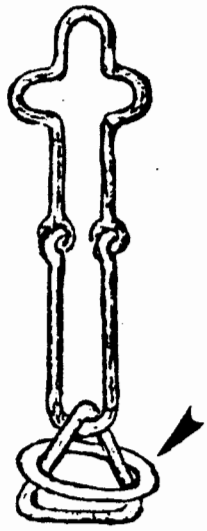
Iron Heart

One of the earliest and most common forms of hand-forged puzzles. The heart motif is from the Pennsylvania Dutch influence.
Object: Remove heart.



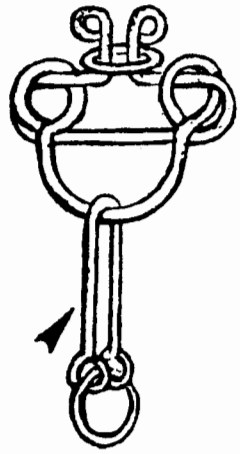
Lyon's Loops

Original found in private collection, Philadelphia, PA. Named after famous 19th century blacksmith, Patrick Lyon, c. 1840.
Object: Remove large ring.



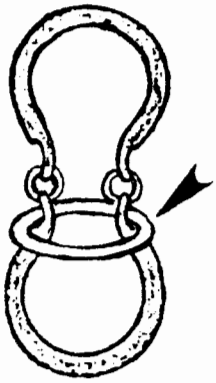
Conestoga Playmate

Original artifact is in the collection of the Pennsylvania Farm Museum at Landis Valley, PA, birthplace of the Conestoga covered wagons.
Object: Remove ring.



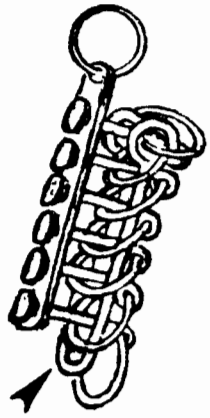
Satan's Stirrup

Developed by a contemporary Long Island blacksmith. Only a fiendish mind could develop something like this!
Object: Remove long, U-shaped round-stock bar.



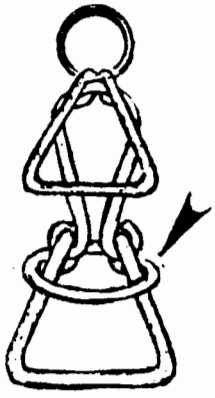
Shackled Ring

Patterned after simple leg irons once produced by blacksmiths. This puzzle is not as simple as it looks; the real test is getting the ring back on.
Object: Remove large ring.



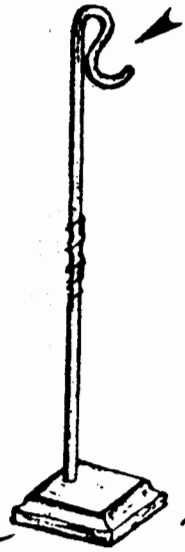
Patience Puzzle

Centuries old, probably of Chinese origin. A real challenge; the name implies what is necessary to solve this puzzle.
Object: Remove long, U-shaped bar.



Iron Maiden

According to 18th century harvest customs, the last bit of wheat from the fields was shaped into the figure of a girl and was called "the maiden of the harvest." Here she is in iron.
Object: Remove large ring.



Display Stand

The mahogany base stand can be used to highlight individual puzzles as interesting examples of American folk art. The stand is compatible with all the Tavern Puzzles.
Object: Hang any puzzle from hook.

The Above are available From Blacksmith Dennis Sucilsky
Tucker-Jones House 9 main St Setauket N.Y. 11733

Forging

From *Appleton's Cyclopaedia of Applied Mechanics - 1893.*

In forging iron or steel the metal is in almost every case heated to a greater or less degree, to make it softer and more mallable by lessening its cohesion. Pure iron will bear an almost unlimted degree of heat; hot, short iron bears much less, and is in fact very brittle when heated; other kinds are intermediate. Of steel, shear-steel will generally bear the highest temperature, blistered steel the next and cast-steel least of all; but all these kinds, especially cast-steel, differ very much according to the processes of manufacture, as some cast-steel may be readily welded, but it is then less certain to harden perfectly.

The smith commonly speaks of five degrees of temperature, namely: The black-red heat, just visible by daylight; the low-red heat; the bright-red, when the scales may be seen; the white heat, when the scales are scarcely visible; and the welding heat, when iron begins to burn with vivid sparks.

Steel requires, on the whole, very much more precaution as to the degree of heat than iron. The temperature of cast-steel should not generally exceed a bright-red heat, and that of blistered and shear-steel a moderate white-heat. Although steel cannot in consequence be so far softened in the fire as iron, and is therefore always more dense and harder to forge, still from its superior cohesion it bears a much greater amount of hard work under the hammer, when it is not overheated or burned; but the smallest available temperature should always be employed with this material, as in fact with all others.

When a piece of forged work is required to be particularly sound, it is common practice to subject every part of the material in succession to a welding heat, and to work it well under the hammer, as a repetition of manufacture to insure the perfection of the iron: This is technically called - "taking a heat over it" in fact, a heat is generally understood to imply the welding heat.

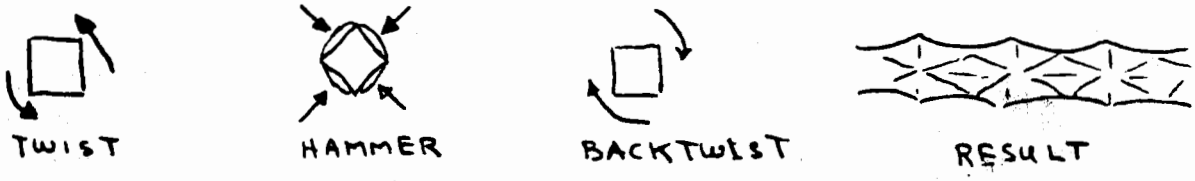
Submitted by Jerry Foster, Four Mile Historic Park.
Courtesy of Forge Facts

THE THORN TWIST

(Reprinted from the Newsletter of the Mid-Atlantic Smiths, September 1985)

To make the thorn twist as illustrated below:

1. First twist in a conventional manner with a 45 degree pitch.
2. Hammer until the new flats touch one another.
3. Backtwist slighly until "thorns" line up along the axis.



Just eyeball the whole effort.

CLASSIFIED ADS

S-2 Chisel Blanks - 3/4" octagon by 8" long - $ 2.00 each.
Contact Fire Mtn. Forge
1-206-832-6280
Rt. 2, Box 292-C
Eatonville, Wa. 98328

Please send pictures of your work to include in future editions. Include an addressed envelope to insure prompt return.

For Sale
Well constructed with 50# head power hammer with 3/4 H.P. motor $250.
Large 100 yr. old Forge base with coal or water trough, with electric blower. $95.00
Excellent post drill $75.00
Call me at 503-364-0858 Ask for Ed.

Lost at Timberline
1 pair square jaw tongs
Stamped Jim Wallace & Phil Baldwin
Please return to Phil Baldwin
3623 12 ave. W.
Seattle Wn. 98119

Safety Glasses:
Welding and Grinding protection glasses - lenses - safety frames. Dididium - yellow-brown-gray.
Call for price quotes.
Richard M. Kenyon
503-824-6961 - after 5 & weekends

For Sale
2x2x26 pieces of wrought iron weighing approximately 28lbs for sale at $20.00 each.
Contact:
Michael Linn
4127 Meridian Ave. N.
Seattle, WA 98103
(206)547-3104

Classified Ads are free to members.

NOTICE: THOSE INTERESTED IN THE ENGLISH TOOL BUY
PLEASE CONTACT TOM GRAHAM 206-523-5334.

NORTHWEST BLACKSMITHS ASSOCIATION
PO BOX 81041 SEATTLE WA 98109

Jerome Culberson
Old Cedar Forge
E 220 Cronquist Rd
Allyn, WA 98524

Northwest Blacksmith's Association
P.O. Box 81041 • Seattle, WA 98108

CALENDAR OF EVENTS
Spring Gathering
May 2nd, 3rd & 4th
Washington County Fairgrounds
Hillsburo, Oregon

Pratt Art Institute
An open forge will be held at Dean Jonasen's shop at Pratt Art Institute, located at 1902 S. Main, Seattle, WA. on May 17th from 10:00 A.M. until 4:00 P.M.

op

11/18/2005