

RAM

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NEWSLETTER of the BLACKSMITHS ASSOCIATION OF MISSOURI

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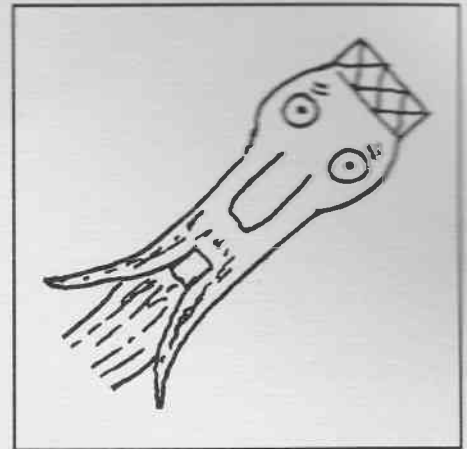
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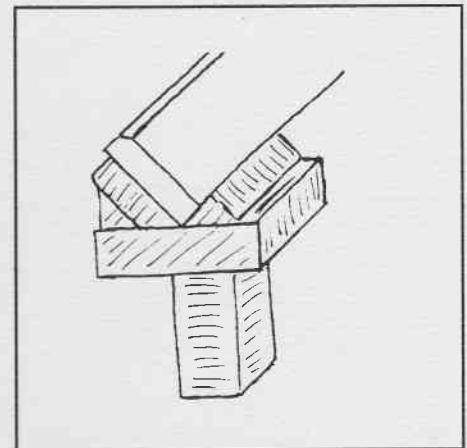
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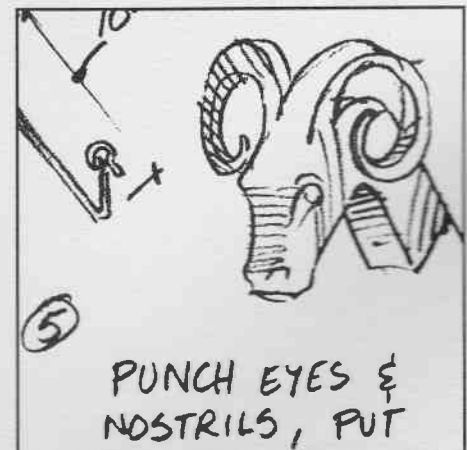
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**Newsletter of the
Blacksmiths
Association
of Missouri**

**September — October
1998**
Volume 15 No. 5

Our cover: Tom Clark watches over his shoulder as Paul Zimmermann works some iron into a leaf shape under the 25-pound Little Giant. Paul was the lead demonstrator at the first Oktoberfaust held in October at St. Louis. Faust Park.

Editor
Jim McCarty

Contributing Editors

Mailing Labels
Maurice Ellis

The Newsletter of the Blacksmiths Association of Missouri is published six times a year and is mailed to members of BAM. The annual fee for regular membership is \$20/year; a portion of this amount is for a subscription to this newsletter for one year. Editorial inquiries should be addressed to: Jim McCarty, 5821 Helias Dr., Jefferson City, MO 65101; (573) 395-3304. BAM membership inquiries should be addressed to: Maurice Ellis, Rt.1 Box 1442, Belgrade, MO 63622, (573) 766-5346. Occasionally some material will be copyrighted and may not be reproduced without written consent by the author. BAM welcomes the use of any other material printed in this newsletter provided the author and this organization be given credit.

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How did you learn about BAM? _____

Do you need any tools? _____

Memberships are for one year from receipt of dues. Dues are \$20, which includes a subscription to the bimonthly BAM newsletter. Please make checks payable to Blacksmith Association of Missouri.

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See reverse

BAM

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I _____ hereby apply for membership in the Artist-Blacksmiths' Association of North America and enclose \$_____ as my annual membership dues for one year.

MasterCard VISA Check/Money Order

Card Number

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Checks must be in U.S. currency

SEND RENEWAL TO:

ABANA

P.O. BOX 206, Washington, MO 63090 (314) 390-2133

Dues Distribution:

1 year subscription Anvil's Ring: 68.5 % \$24

Adm. offices & other ABANA projects (Conferences, etc.): 31.5% \$11

The Blacksmiths' Association of Missouri is a chapter of the Artist Blacksmiths' Association of North America, and is devoted to the preservation and advancement of blacksmithing and to communication among blacksmiths in Missouri and surrounding areas. BAM's newsletter's goal is to support these aims. Letters to the editor, tech tips, tools for sale or anything else which furthers these ends will be considered for publication.

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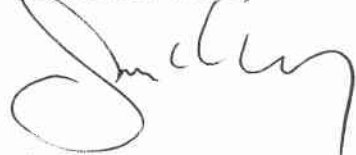
Dear BAM Members,

Having gotten way behind on newsletters this year I was trying to think of a way to redeem myself and get things back on track. What I came up with was to do an all-project issue. None of the boring meeting stuff, news items or presidents/editor's messages — just stuff to make and do. Now why didn't we think of that before?

I pretty much cleaned out my file of available material so things are going to be pretty scarce down the road. That's where you come in — Grab pencil and paper and send me some more stuff! I have another great idea and we need to get this done before conference time. Let's do a BAM's greatest hits book. I'll pick up that wonderful stuff from past issues — but let's put some new stuff in it too so everyone will want one of these. Then we'll get it printed and have it to sell at the Ozark Conference and all the other chapter conferences too. What a great idea...now we just need some stuff.

You know the address — get out those T-squares, compasses and drafting machines.

Till next time,

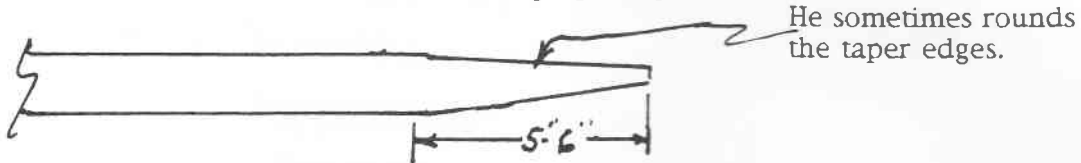


Jim McCarty, editor

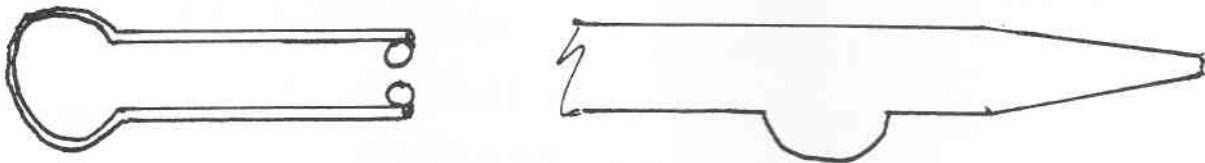
Wizard Head Candleholder

By Steve Williamson, Appalachian Area Chapter

1-Using 1/2" x 1/2" square rod, taper one end to a long square point.



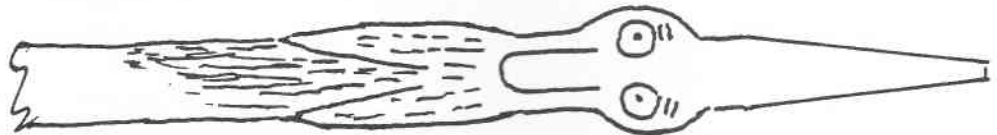
2-Next, flatten a section about 3 inches below the taper using the anvil horn to provide for nose. Then to complete nose, Steve uses a double ball fuller and treadle hammer.



The nose is then accentuated using anvil edge.

3-This is followed by flattening space just above the nose (on anvil edge) to provide for eye locations.

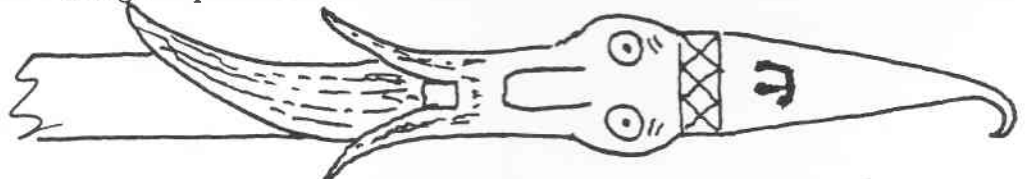
4-Then with round punch eyes are formed: A straight chisel is used with remaining heat to form eyebrows and markings for mustache.



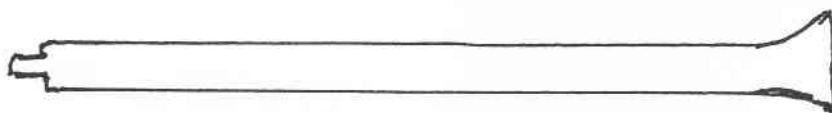
5-With new heat, the mustache is cut and spread and a beard below is formed.



6-Next, the mouth is punched in (this can be any one of a variety of styles), eye pupils are punched in and (optional) wizard design is placed above forehead.



7- For the remaining portion, Steve takes about a 28" piece of 3/8" round rod and upsets one end and forms an 1/8" tenon on the other end using a circular fuller and monkey tool.



8-The upset end of this piece is scarfed and the Wizard head is scarfed about 4-5" below the beard. Then these two pieces are forge welded together.

9-With a "good" weld, Steve uses a properly sized scroll to form the 3/8" portion around without using any of the welded section which has been rounded up to insure a complete weld.

10-Then the head section and tenon section are bent through 90 degrees to form the candle stand.

11-The piece is completed ;by adding a wax collector and peening the tenon down using torch heat.

Completed piece looks something like this:



DEMONSTRATION OF BRAIDED HANDLE

Steve explained his method of forming a chevron braided handle for various tools.

1-Take four pieces of 1/4" round 16 inches long. Mark centers at 8" and cold bend thru 90 degrees.



2-These pieces are then heated and bent through 90 additional degrees



3-These four pieces are again heated and allowed to cool slightly so that the heat is uniform throughout.

4-Then, the free end of each is placed tightly in vise and with twisting tool, each piece is given three full twists: Two are given clockwise twists and two are given counter clockwise twists.

5-All four pieces are then nested to provide a chevron braid and wired tightly in preparation for end welding.

6-Each end is heated, thoroughly brushed, fluxed and returned to the fire to be brought to welding heat. Steve uses a half-round fuller such as in a swage block and lightly taps all around the end then using heavier blows completes a perfect weld for each end of the braided handle.

7-To attach to tool, one end is scarfed to match the tool scarf and another forge weld is completed.

8-The other end of handle can be finished in a series of different designs. Steve forge welded a 5/8" hex nut to it, rounded this out then with an acorn double fuller and 50-lb. hammer finished into an attractive acorn.

The finished piece looked something like this.



Steve Williamson is an excellent demonstrator who clearly describes and performs each operation, making it look easy for anyone to do.





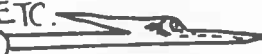



HOT TIP: by DON KEMPER, NWBA President

BLUE HERON PLANT STAKE

"AN OLDE... BUT GOOD'E"

STOCK... $\frac{1}{4}$ ϕ

1. DRAW 2" TAPER AT END 
2. FOLD 4" OF END BACK ON BAR - 
3. FLUX AND FORGE WELD 2" AT END - 
4. REDUCE 1" OF END TO $\frac{1}{2}$ BAR DIMENSION WITH HALF FACED BLOWS... FORGE END TO ROUND TAPER 
5. USE EYE PUNCH, CENTER PUNCH, FULLER & WALKING CHISELS FOR EYES, NOSTRILS, EYE BROW, BILL, ETC. 
6. HEAT... TWIST & SCROLL CREST, ROLL GRACEFUL BEND IN NECK 
7. CUT OFF AT 18" (OR DESIRED LENGTH) AND TAPER END - APPLY FINISH -

THIS MAKES A NICE INDOOR HOUSE PLANT STAKE... OR USE LARGER STOCK FOR FIREPLACE TOOLS... OR??

HELPFUL HINT... "EYE PUNCH" IS EASILY MADE BY DRIVING THE HOT PUNCH ONTO A BALL BEARING OR A "BALL END PUNCH"..... DRILLING THE DEPRESSION MAKES A POINTED EYEBALL... WHICH MAKES ADDING A CENTER PUNCHED "PUPIL" HARD TO DO! ALWAYS GRIND DOWN SIDES OF EYE PUNCH LAST... EASY TO COMPENSATE FOR SLIGHTLY OFF CENTERED DEPRESSION -

— NORTH WEST BLACKSMITH ASSOCIATION —

TRIVET of the MONTH



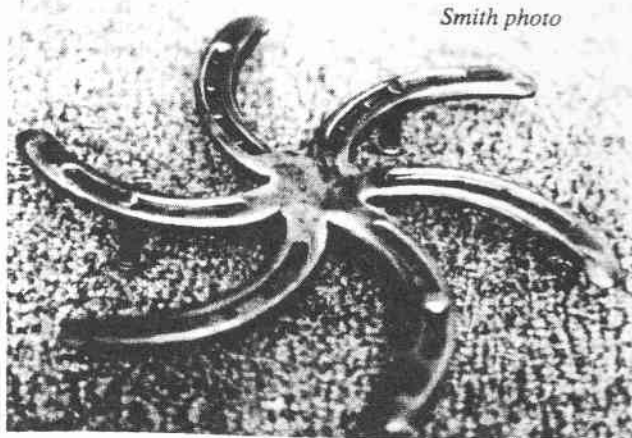
"Reuse the Shoes"
by Doug Merkel

Don't throw away those used horse shoes. Instead of using plain bar stock for small items consider using new or used horse shoes to add a little texture and meaning to those forged items many of us give away during shows or as gifts. Here is a trivet that is made out of horse shoes.

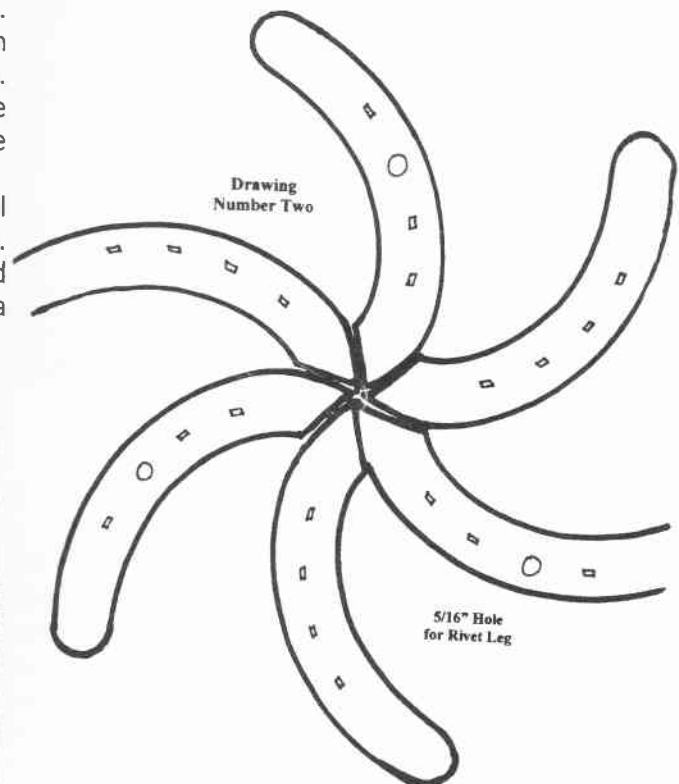
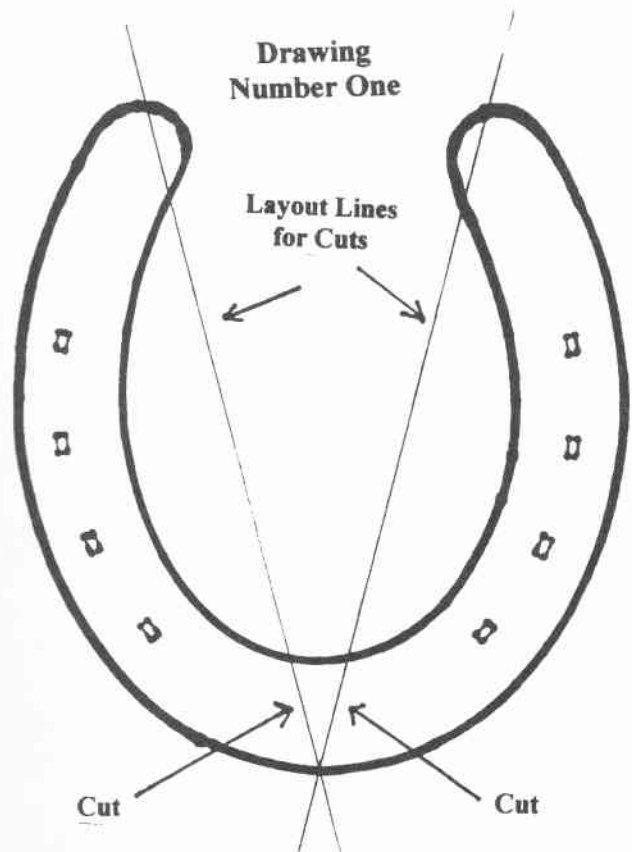
You need six (6) shoes all of the same size and six (6) 5/16" x 1 1/2" rivets. Cut the horse shoes in half by removing a small wedge of metal with your saw, hot cut or cold cut. The right halves make one trivet while the left halves make a second trivet. See drawing one. Line up the pieces as shown in drawing two to make a pin-wheel. Clamp to table, weld together the centers on both top and bottom, grind level and wire brush.

Pick out the same nail hole on three of the arms and drill a 5/16" hole through the shoe from the back (side of shoe without the crease). Go slow so that the drill bit does not catch on the edges of the crease as it comes through. Put in the rivet from the back and weld in place from the back. Turn it over and peen over the edges of the rivet.

Wire brush, use a torch to color the metal and apply a wax finish or finish of your choice. Do the same with the other halves and you end up with two trivets. One for you and one as a gift.



Smith photo



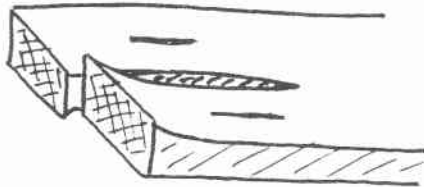
Some Sign Bracket and Tooling Details from Dereck Glaser's Spring Meet Demonstration

(See p. 6 for a picture of the bracket.)

Frame Joint



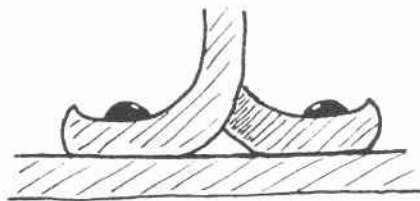
Split the end of the horizontal bar.



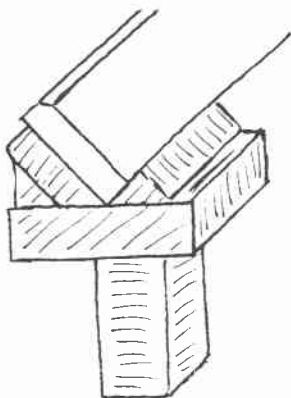
Upset ends together, but one up, one down. Slit for rivet holes.



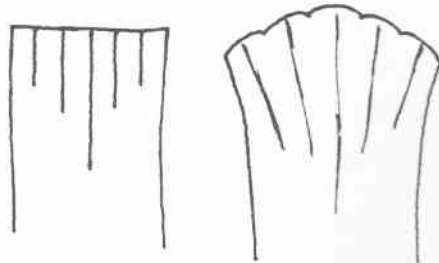
Upset to open rivet holes. Bend with fork to 90 degrees (below).



Hardy for supporting bar at 45° while breaking edges with hand hammer or treadle hammer.



Fluting in Bar Ends



Working from center out, lightly flute bar end 1/16 inch deep. Stagger flute lengths.

Switch to heavier fuller with flat teardrop shape

as above. This produces the scalloped edges.



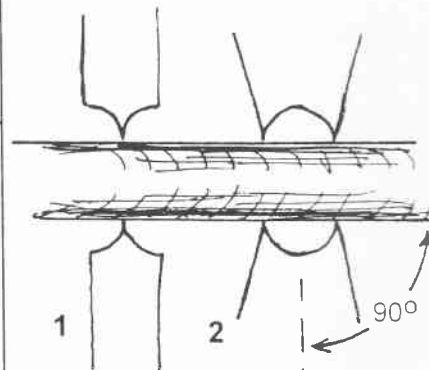
Side view

Clean up by moving tool along groove. Keep a heavy hand on tool to hold it in the groove. Hold at a slight angle and tool will move along, producing a smooth groove.

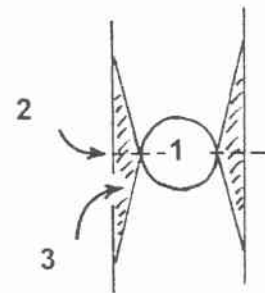
Tooling for "String of Pearls"



The chisels required for this are made from square bar stock as shown below. They are most easily used in a guillotine fuller, if you don't have a striker.



Lightly establish the path of the cuts with chisels #2, carefully maintaining the 90° angle. Switch to chisels #1 and rotate the bar to make uniform deep cuts. Chisels #2 will cause flashing if used at this stage. Finish with chisels #2.

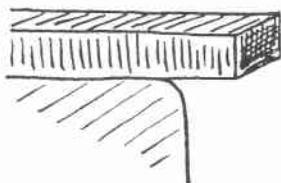


To make the chisels (#2 is shown):
1, Drill a hole the diameter of the desired sphere;
2, Cut the bar in half through the center of the hole;
and 3, Grind or cut the sides away.

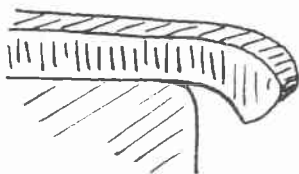
continued on p. 14

Glaser Bracket and Tooling Details (from p. 13)

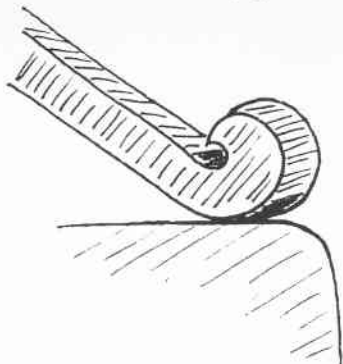
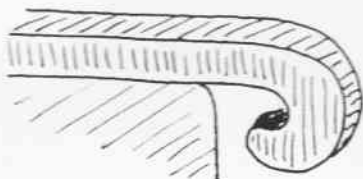
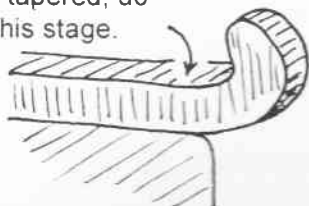
Snub-End Scroll



This first step is key for success. Get bar to a high heat, and don't let it extend too far over the anvil's edge. Try a test piece.

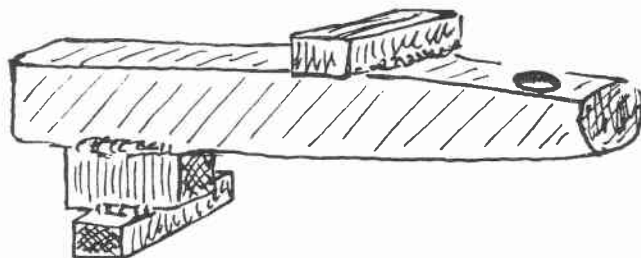
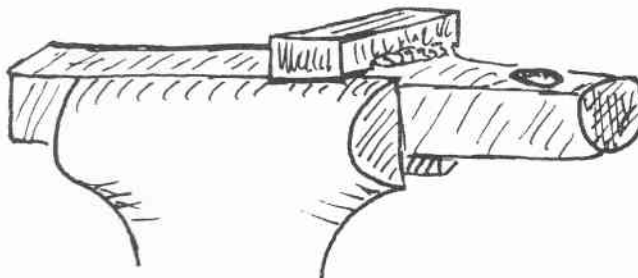


If scroll neck is to be tapered, do it at this stage.

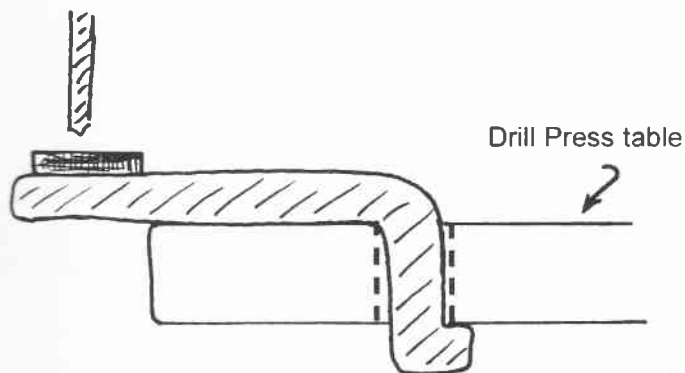


Forge the snub end tight. It will spread, but resist the temptation to bring to width till later. This upset material is useful for later adjustment.

Rivet Tool Fits Leg Vise

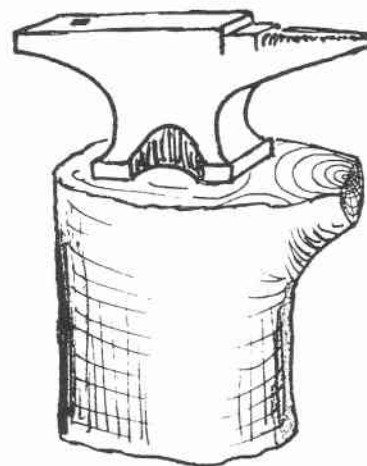


Drill Press Support Tool for Drilling Scrolls

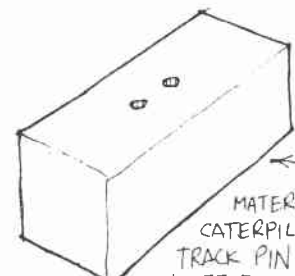
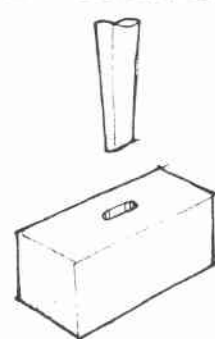

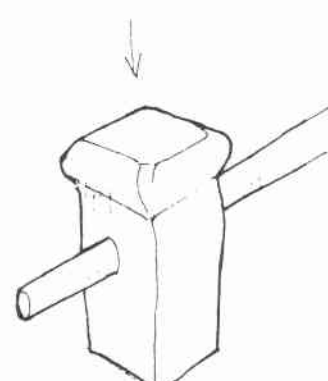
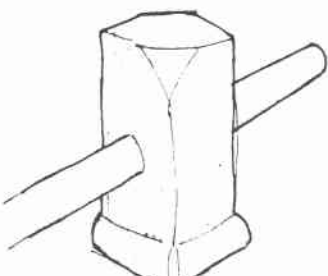
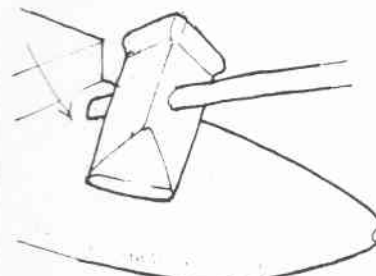
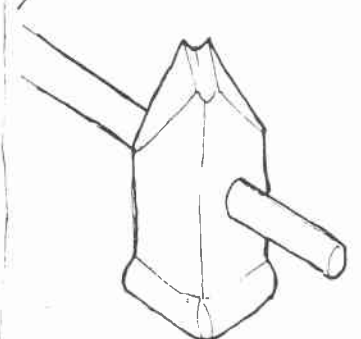
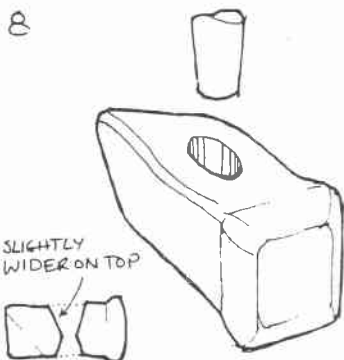
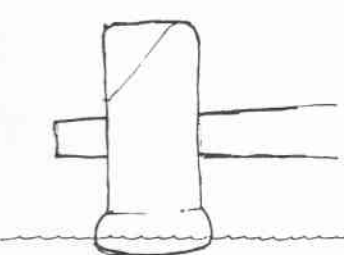


Tree Crotch Anvil Stand

The crotch grain resists cracking and checking as the wood dries, and the side branch provides a shelf for tools.



ROBB GUNTER'S HAMMER HEAD

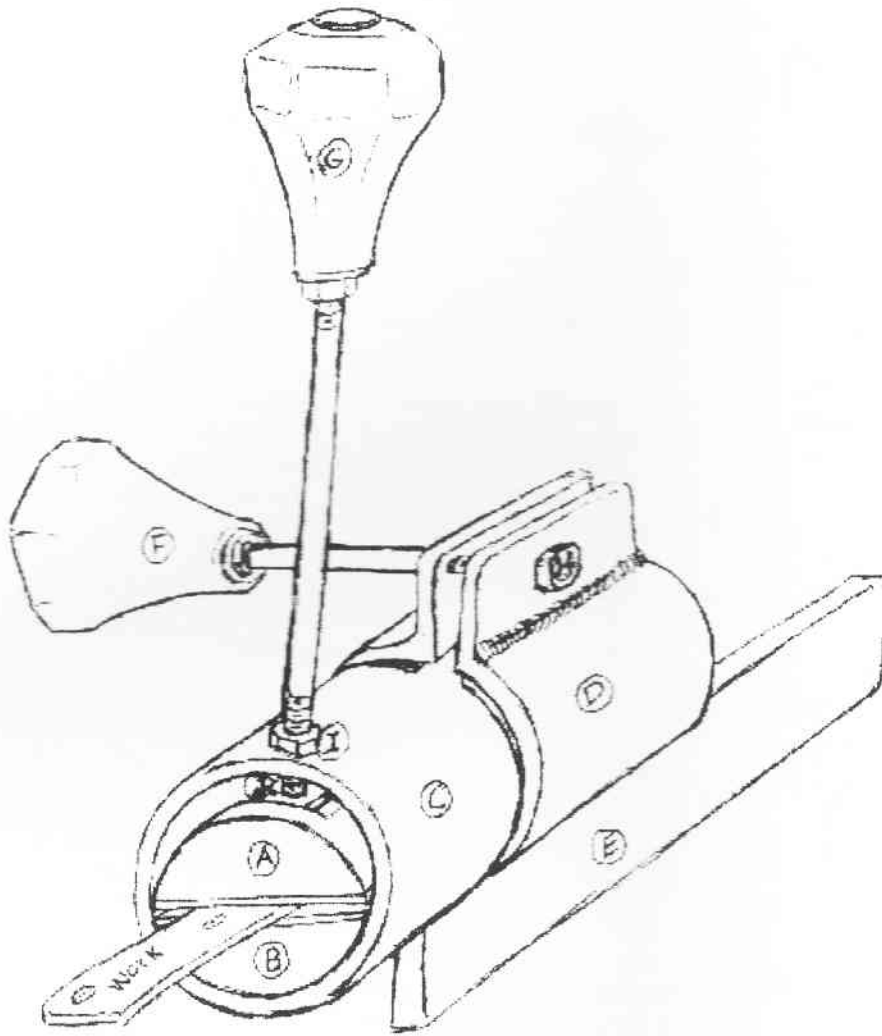
<p>1</p>  <p>MATERIAL: CATERPILLAR TRACK PIN - 10-55 TOOL STEEL, 1 1/4-IN. SQ X 5-IN.</p> <p>PREDRILL LOCATION OF SLOT. CENTER SLOT ON BLANK</p>	<p>2</p>  <p>SLOT PUNCH BOTH SIDES</p>	<p>3</p>  <p>LONG DRIFT ELIMINATES NEED FOR TONGS</p> <p>DRIFT EYE</p>
<p>4</p>  <p>UPSET FACE</p>	<p>5</p>  <p>ROUND OVER CORNERS OF PEEN TO MINIMIZE "LIPS"</p>	<p>6</p>  <p>UPSET PEEN ON HORN. NOTE PEEN IS 45° TO HANDLE</p>
<p>7</p>  <p>DEAL WITH LIPS DURING FORGING OF PEEN. GRIND OR FILE FLAT</p>	<p>8</p>  <p>SLIGHTLY WIDER ON TOP</p> <p>EXPAND EYE</p>	<p>9</p>  <p>FINISH ON GRINDER. HEAT TREAT. QUENCH 1/4-IN., ROTATE END TO END</p>

VIM RICHY

FILING VISE

AS MADE BY BUSTER GRUBBS

ARTICLE AND ILLUSTRATION BY DONNIE FULWOOD



Buster made a vise attachment for filing knives, a design that he got out of one of the knife magazines. By modifying the wooden blocks (Items A and B) by cutting various sized channels or depressions down their lengths, a tool of this sort could be used for various blacksmith filing projects.

A thin piece of leather glued to the inside surface of the barrel D provides friction to lock barrel C when the tapped rod on handle F is tightened on the bolt H (welded to the tab on the split tube D). A 1/4" gap between the tabs allows for loosening so that C can be rotated to position the work (between the block A & B) to the desired position.

The fixture can be mounted in a vise either horizontally as pictured here or vertically.

The dimensions of the parts on Busters version of the design are as follows:

A&B= 2-1/4" wide 7/8" Tall x 4" long oak Vise Blocks with thin leather glued to the flat surface to protect the work.

Appears to made by turning 2 1/4" round wooden shaft, splitting, and planing down flat 1/8-1/4.

C= Rotating Tube 4 1/2" Long/ 2.86 Outside Dia./ 2.46 Inside Dia./ .20" thick.

D= Stationary Tube 2 1/2" Long/ 3-1/2" Outside Dia./ 3.065 Inside Dia./ .222 thick - with two 1.5 x 2.5 x .25 tabs, drilled in center to receive Bolt H welded to one tab.

E= Mounting Flange 7" Long x 5/16 Thick x 1.5" Tall Mild Steel Plate for clamping in bench or post vise.

F= Barrel locking assembly. Threaded rod, Large Wooden Knob, tubing or rod tapped to receive the Bolt H.

G= Vise block Locking Assembly. Threaded rod and Large Wooden Knob for tightening against 1/4 plate J sitting in groove in Block A. This penetrates Tube C through the nut I welded to the tube, and compresses the blocks A&B.

H= High grade bolt with head welded to tab.

I= Nut to match threads on Vise Block Locking Assembly G.

J= 1/4" thick plate sitting in groove in Block A to prevent damage to wood from Vise Block Locking Assembly.

ORG

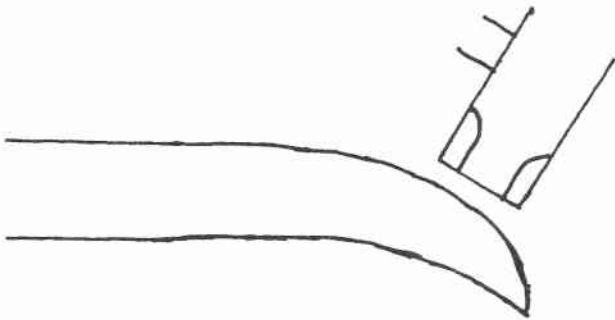
Forging a Knife Blade

As you hammer in the bevel you will find



that the point will start to curve upwards.

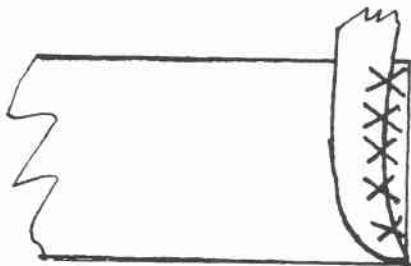
Unless this is the blade shape desired, you can compensate for this tendency to curve away from the edge by bending the blade in



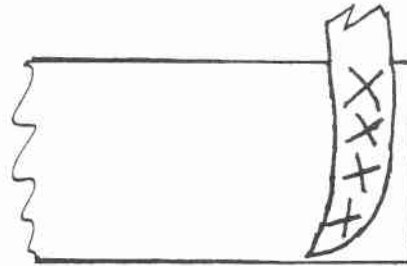
the opposite direction.

Using the horn of the anvil bend the blade lengthways into a curve with the edge of the blade on the inside of the curve.

Determine where you want the bevel to begin and place this spot on the edge of the anvil



nearest you. Hammer the lower third of the blade with overlapping hammer blows from the ricasso to the point.



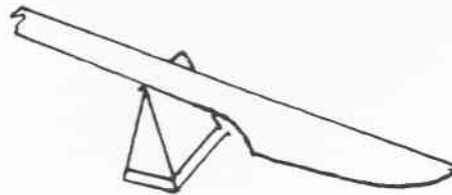
On the next heat turn the blade over and hammer down the center. This rotating back and forth from side to side and edge to center will help greatly in keeping the heels angled equally and the edge centered.

The blade will straighten out as the bevels are



forged to shape. Continue this until the edge is down to approximately 1/16th".

When satisfied with the blade cut the excess steel off with the hardy. How much steel to leave will depend on the type tang you're

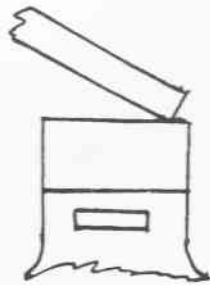


Forging a Knife Blade

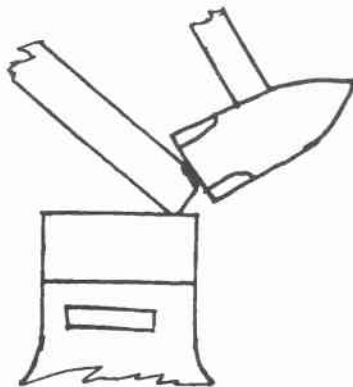
Len Howell sent in this article after taking a class at John C. Campbell Folk School with Chuck Patrick.

Select a piece of high carbon steel large enough to give you the size blade you desire.

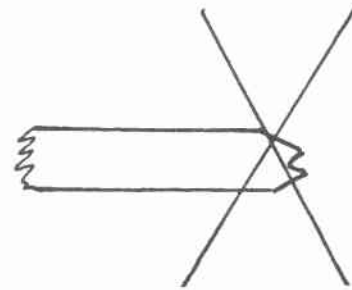
Place the end of the steel in the forge and leave it until the end two or three inches is a cherry red.



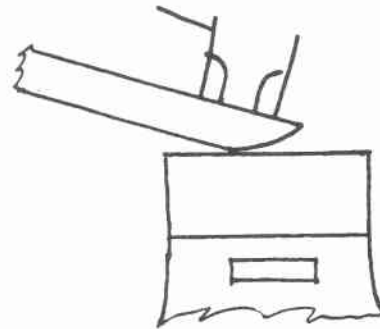
Working on the far side of the anvil begin to form the point.



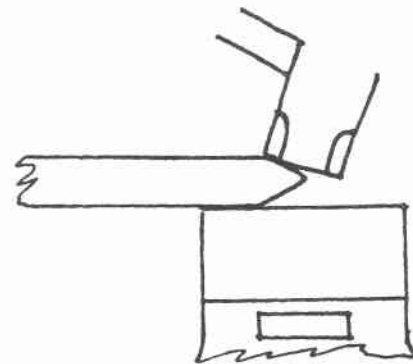
Strike the end corners at an angle back towards you as you taper the point with the hammer.



This helps avoid a fishmouth



Don't be overly concerned about the position of the point as you taper it. The point can be easily moved up or down after you have



completed tapering it.

After you are satisfied with the point it is time to hammer in the beveled edge.

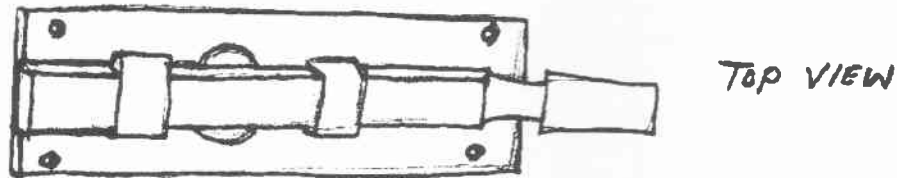
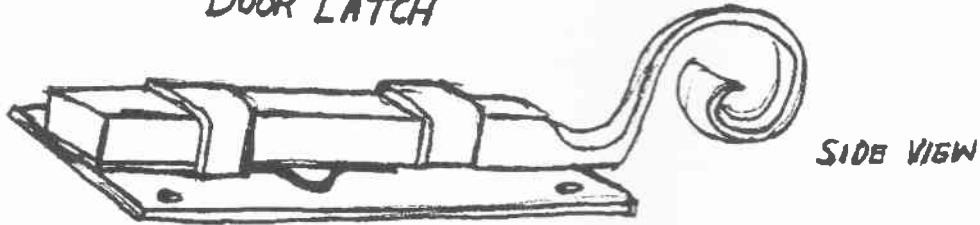
©1998 Alabama Forge Council

THE WILLIAMSBURG SMITHS MAKE A DOOR BOLT

REPORT FROM THE ABANA '98 CONFERENCE

DRAWINGS BY RICK HARTLINE

DOOR LATCH



BOLT SLIDE STOCK $3/4 \times 3/8$



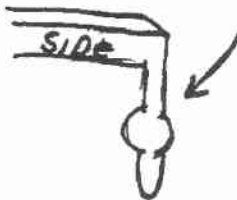
WORK OVER EDGE OF ANVIL AND LEAVE BULB AT THE END FOR SLIDE STOP



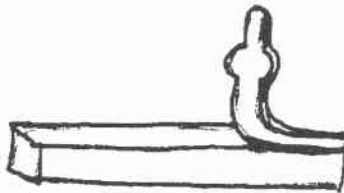
FLATTEN BULB



FINISHED SLIDE STOP



HAMMER SQUARE TO SIDE OF ANVIL



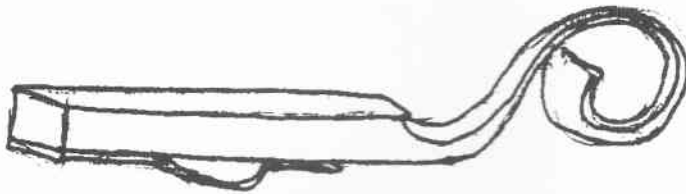
CONTINUE BENDING AND LEAVE STOP IN THIS POSITION, REHEAT AND CUT TO LENGTH.



WORK OVER EDGE OF ANVIL
AND LEAVE BULB.



SPREAD BULB INTO A
FISH TAIL



BEND STOP OVER
AGAINST LOCK. THIS WAS
HAMMERED COLD TO
PROVIDE SOME AMOUNT
OF SPRING IN THE STOP

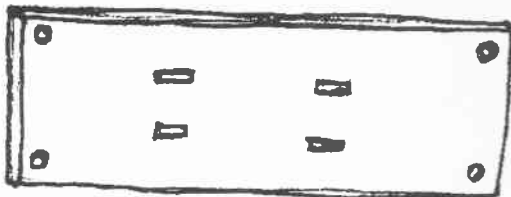
STAPLES

FLATTENED FROM 1/2" ROUND AND FORMED AROUND SLIDE BOLT

1/2" O



HACKSAW STAPLES TO
FIT SLIDE AFTER THE
SLIDE HAS BEEN FILED
SMOOTH



ALIGN SLIDE AND LOCATE
STAPLES TO PLATE. PUNCH
STAPLE HOLES AND HOLES
FOR PLATE SCREWS.

GOOD LUCK! THIS PROJECT REQUIRES A LOT OF FIXING
AND FITTING

THANKS FOR AN EXCELLENT REPORT, RICK.



A NAPKIN RING - An Exercise in Drawing Out

By DONNIE FULWOOD

Here's a project to practice the drawing out covered in the previous "Basic Blacksmithing" article.

Start with a piece of 1/2" round stock about 3-1/2" long (actually you use a piece a foot or more long so that you have a handle and cut it off after fullering and drawing out the stem shown on the anvil face at right).

Fuller the center of the stock and draw it out so that there is a 1/8" diameter stem about 4-3/4" long between two masses (A) and (B) in the drawing at Figure 2.

Flatten and draw out mass A to form a leaf with a somewhat irregular edge profile as shown in the drawing.

With a dull chisel, mark a center vein and 3 or 4 radiating veins as shown in figure 4.

Using a small round file like a chain saw file, cut notches in the edges to form an oak leaf.

Round the end of mass B (which will become an acorn) with the hammer by hanging it over the edge of the anvil as shown in Figure 2 and Figure 5B. Cut a shallow line about 2/3 to 3/4 of the way from the end forming the "cap" of the acorn. You may use either type of hardy shown, but the straight (H2) type makes a better looking acorn in my opinion). You may mark the cap cold with a sharp chisel to form cross hatching if desired or it can be left plain.

Bend the forging into a circle of about 1-1/2" diameter around the anvils horn or around a piece of pipe.

These can be made of mild steel or from stainless steel fir the more experienced smith.

Finish by applying clear paint. Don't use an oil finish or your wife or other customer will shoot you between the eyes when they find the oil ring it leaves on their fancy linen napkins.

DF



Figure 1

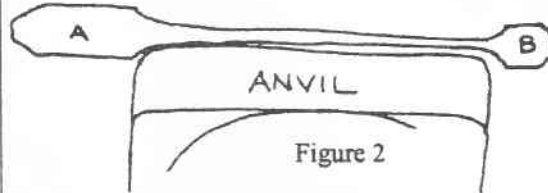


Figure 2

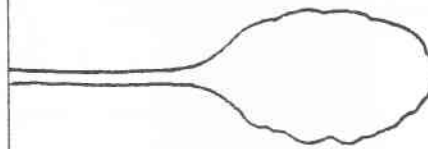


Figure 3

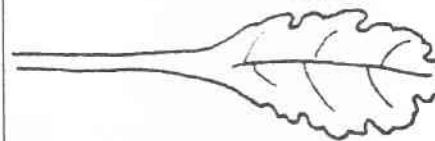


Figure 4

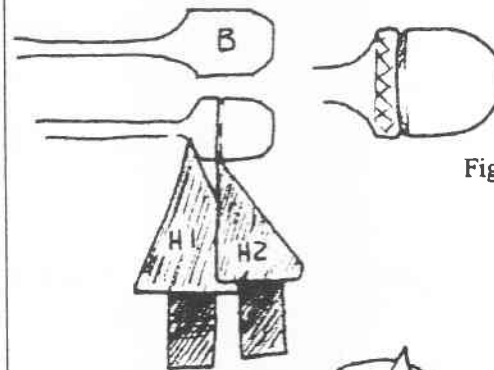


Figure 5

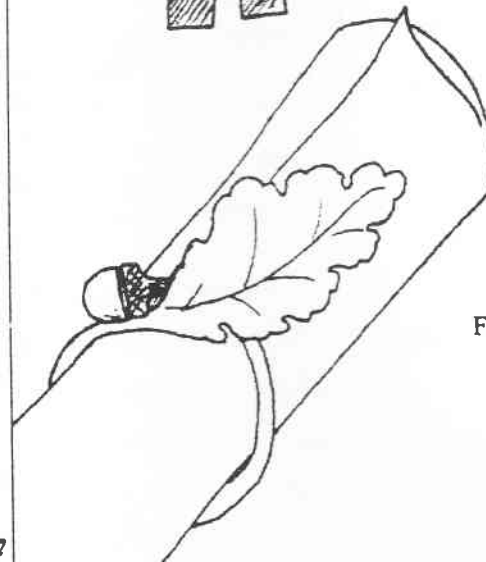
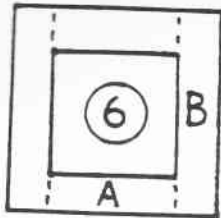
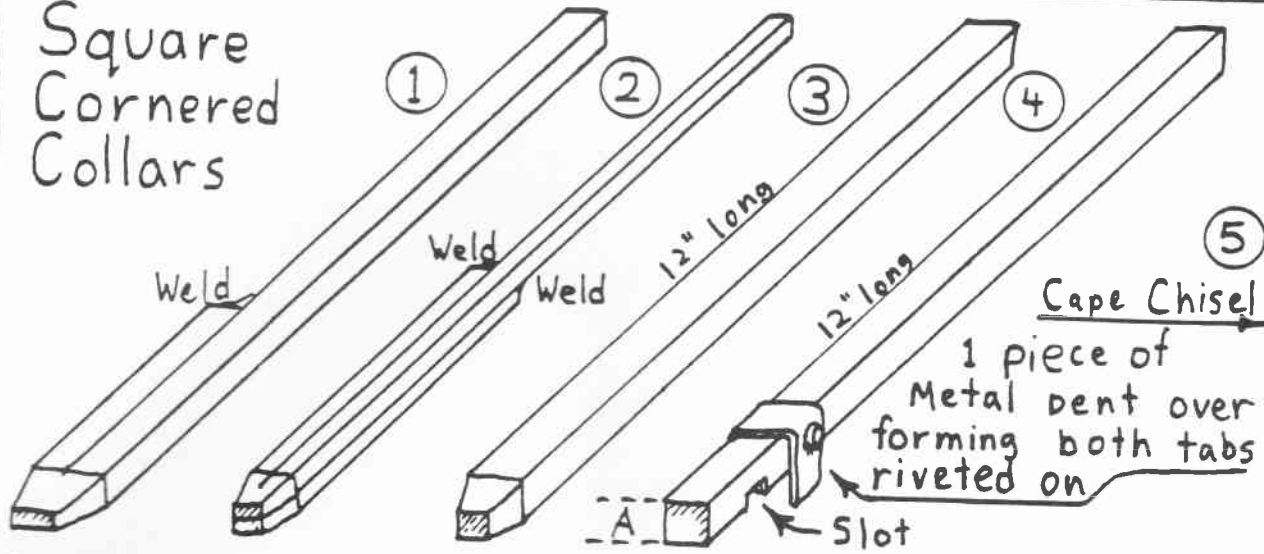


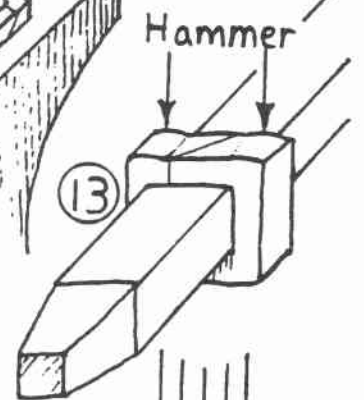
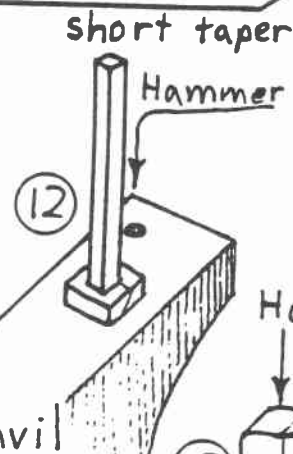
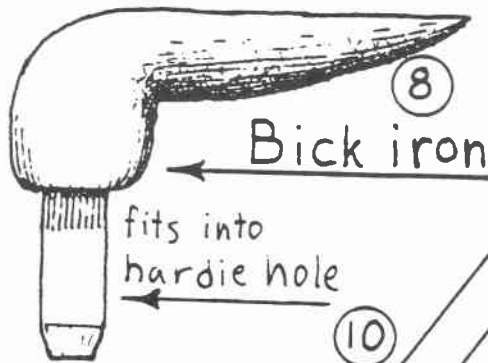
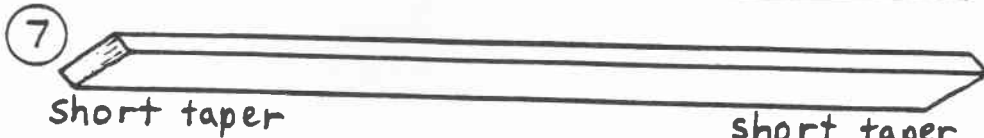
Figure 6



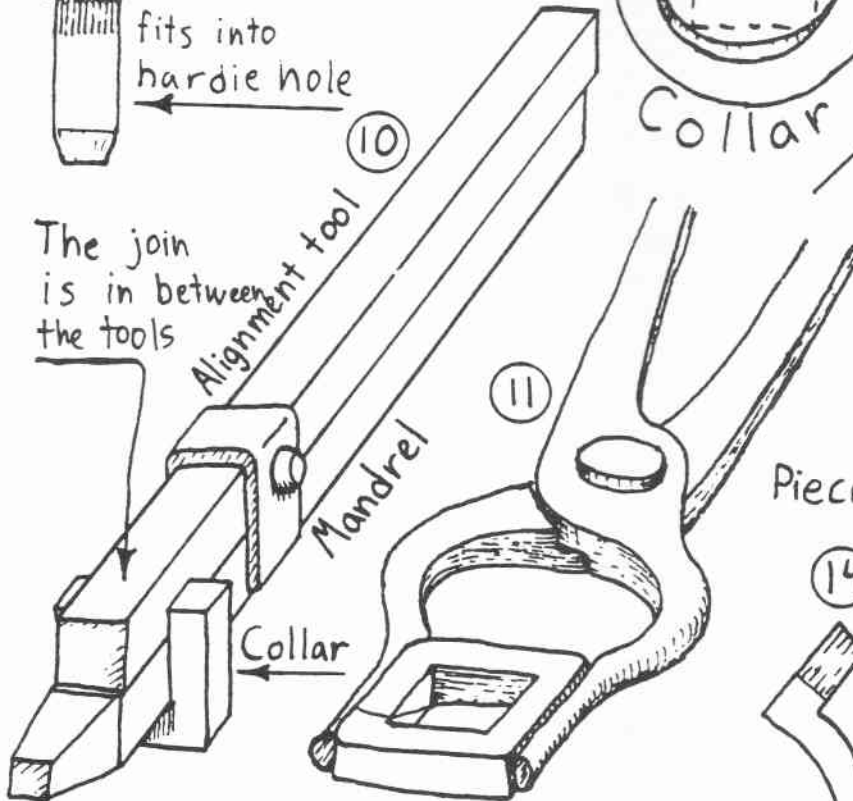
Square Cornered Collars



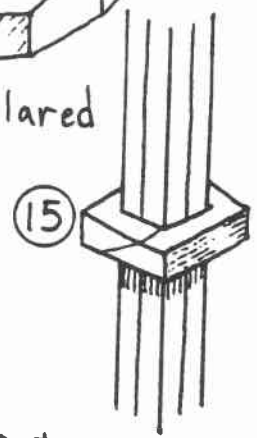
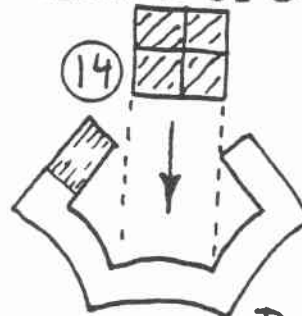
$2A + 2B + \frac{1}{8}''$ for loss of material = length to be cut



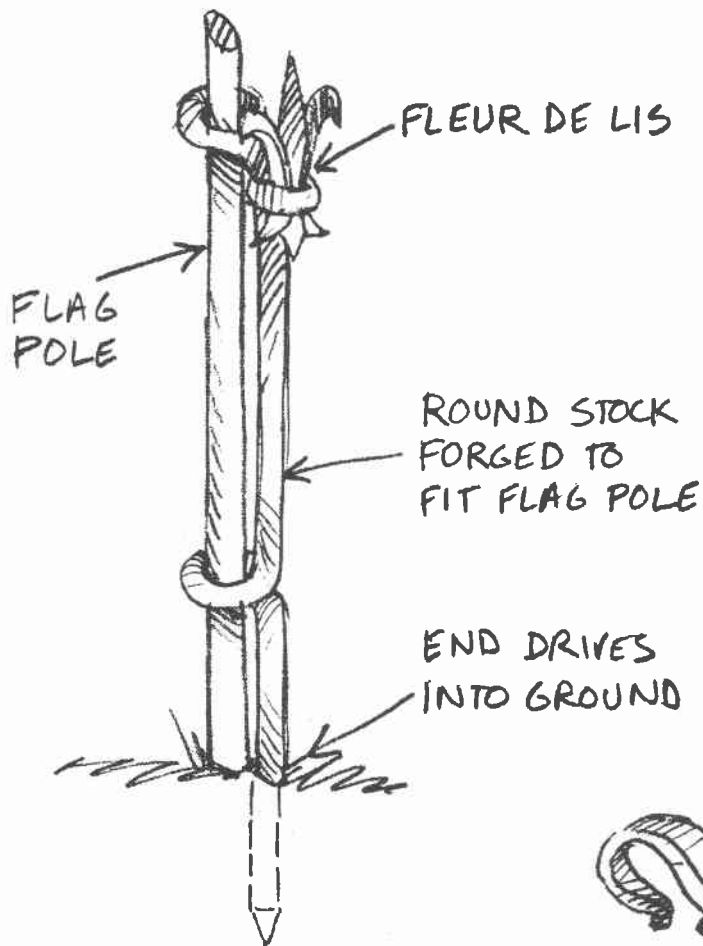
The join is in between the tools



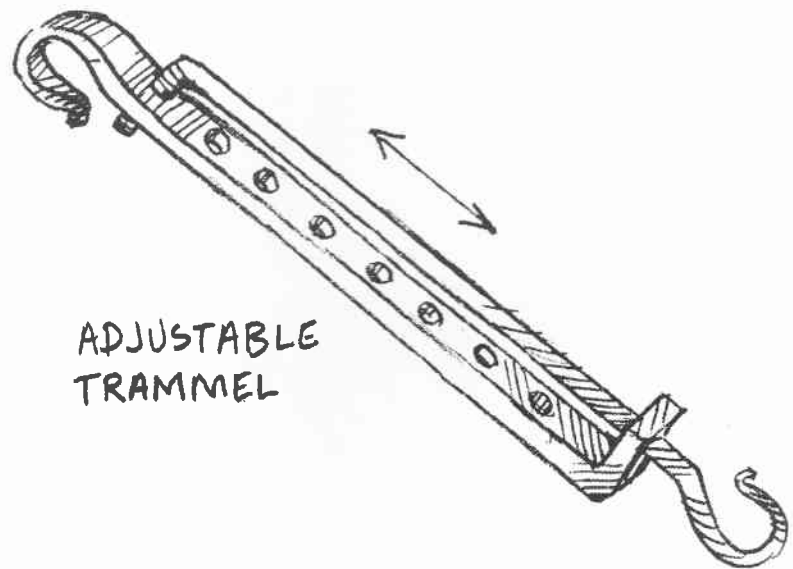
Pieces to be Collared



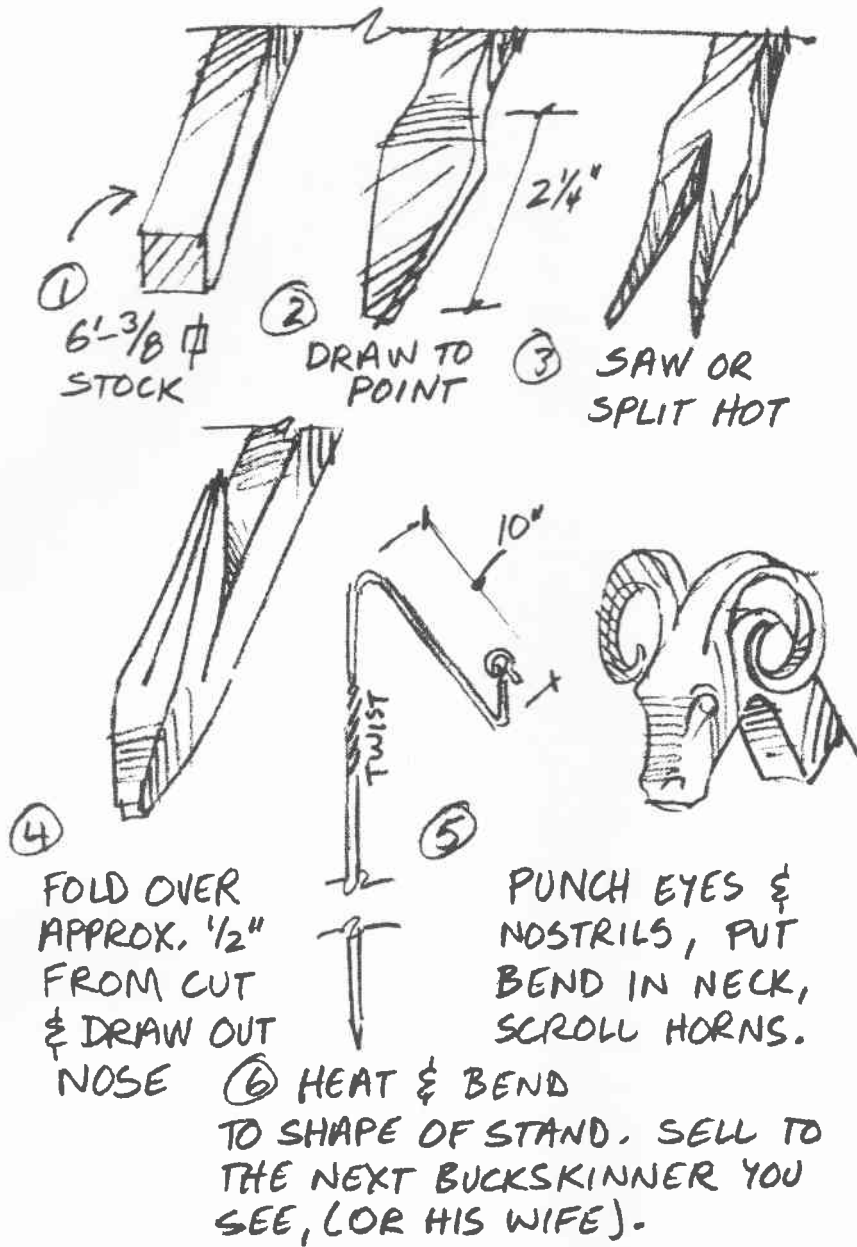
D. Orton / 97



Ken Valdejo's Fleur-de-Lis Flagpole Holder

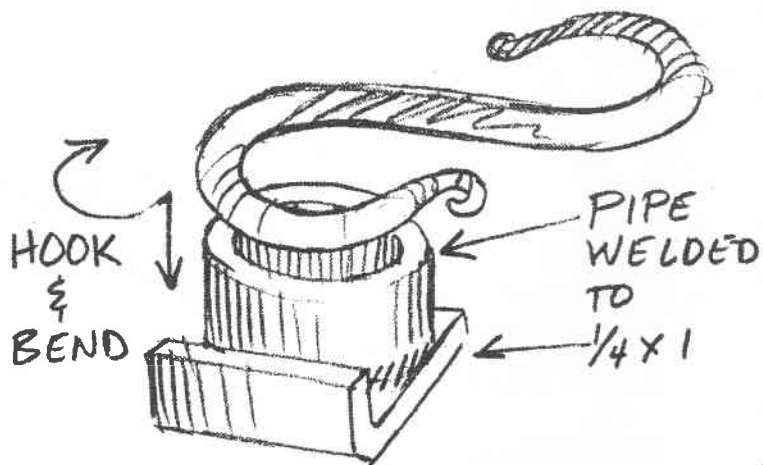


Worth Repeating



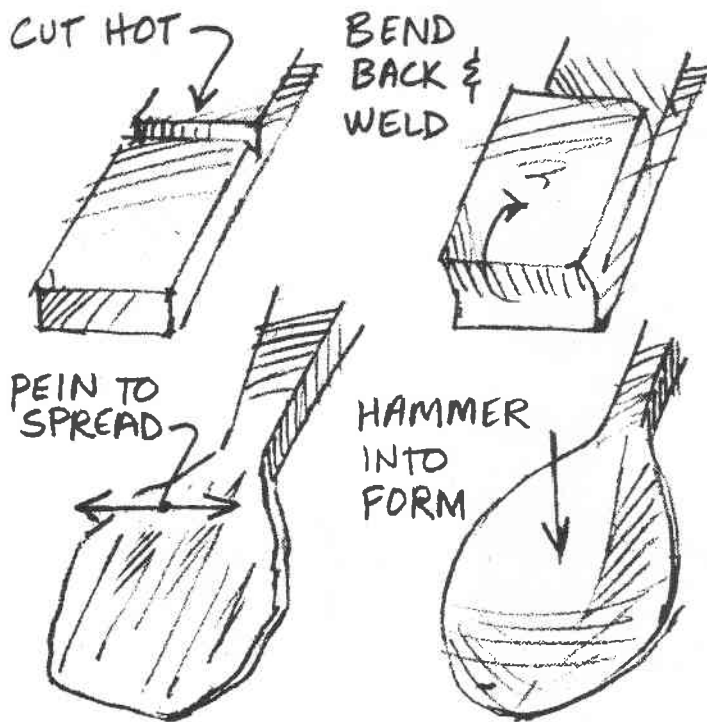
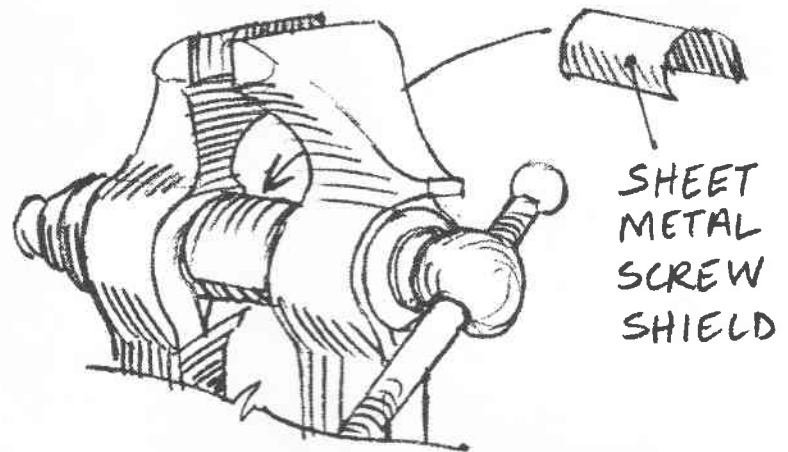
From Pastor
McHaffie
came this
idea for a
rams head

From way in the past comes these three pages of stuff. Thanks to Jerry Hoffmann for sending me the art and to the original contributors for the material.

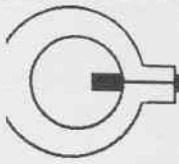


S-Hooks the way Maurice Ellis makes 'em

Here's how Grady Holly keeps his vise screw clear.



Another Ken Valdejo original, this time how to make a spoon for when you're really hungry.



Tongs for Round or Square Stock

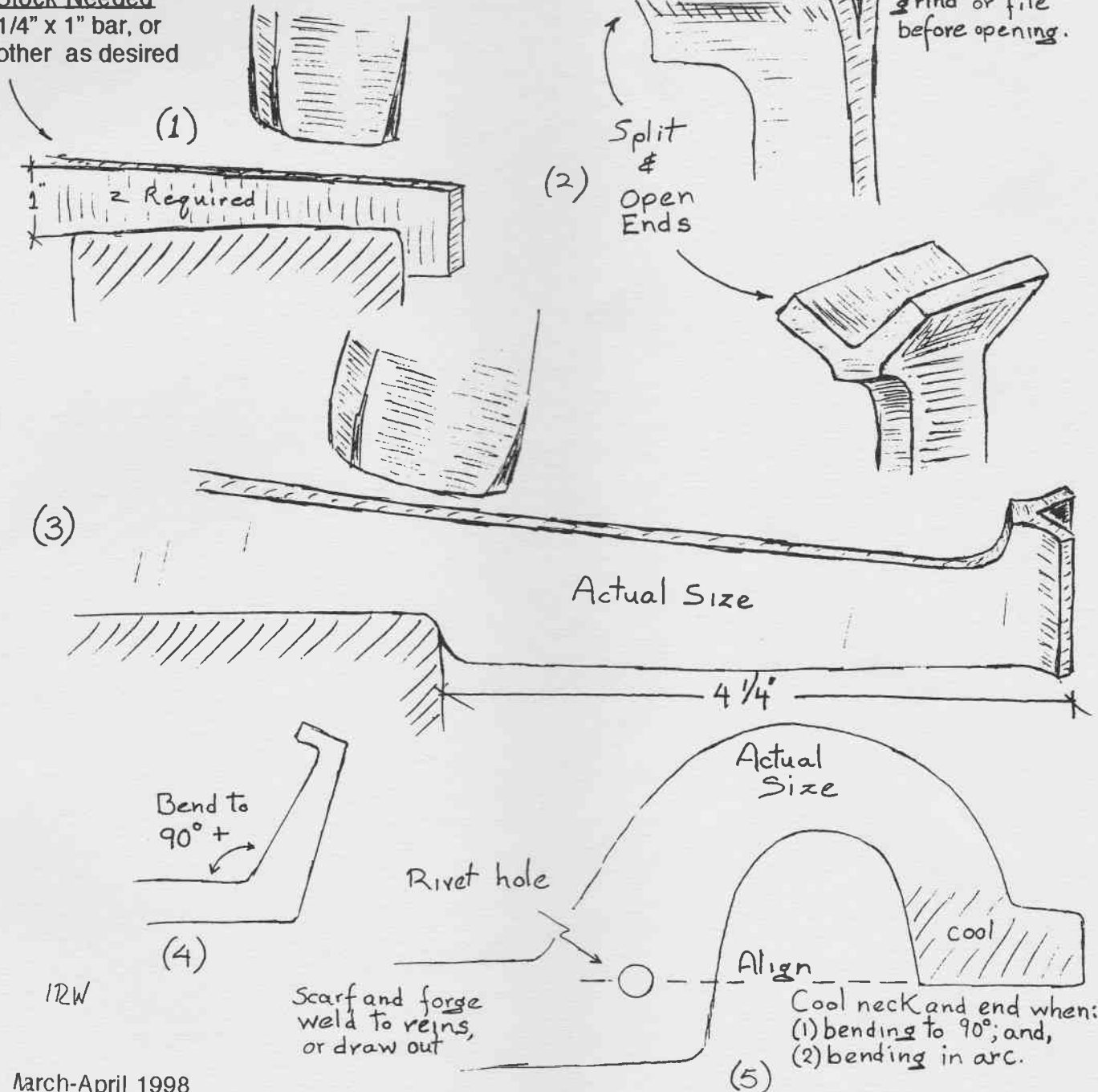
Demonstrated by Doug Wilson

Bradley, Maine, October 1996. David Court produces a nice pair of tongs for round or square stock. I wanted to make a similar pair for my shop, so I devised a forging sequence that I'd like to share.

-Doug

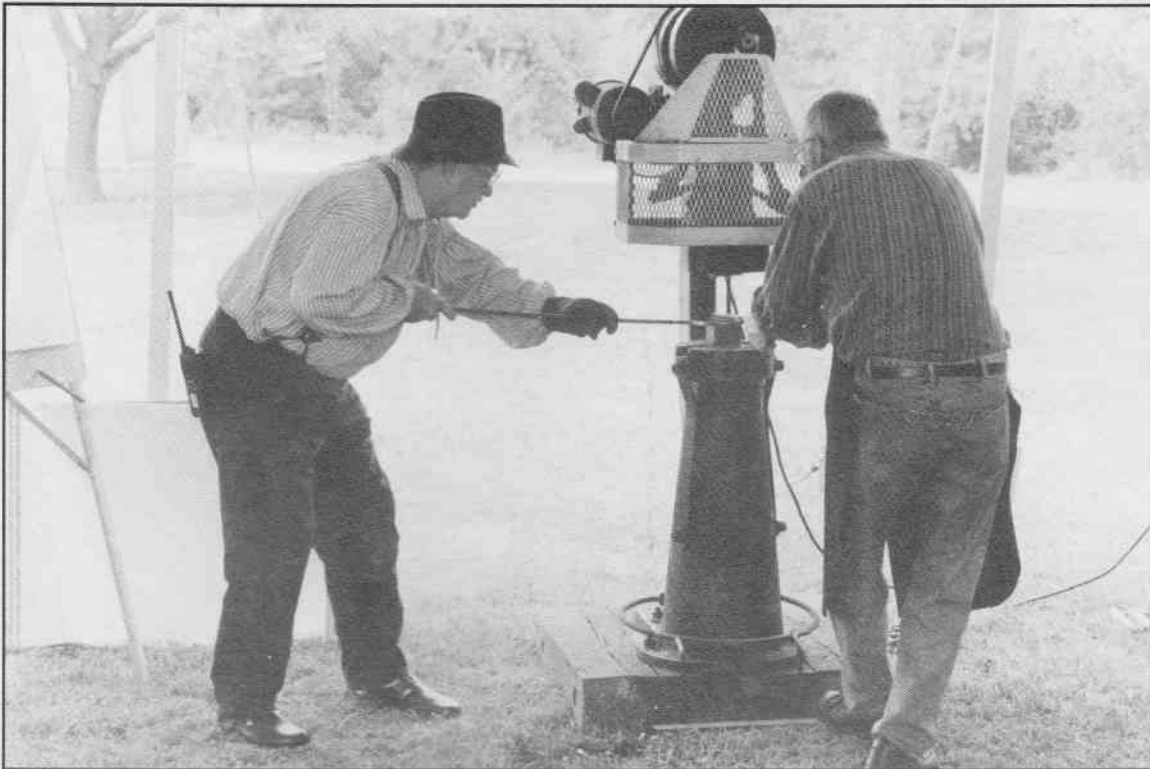
Stock Needed
1/4" x 1" bar, or
other as desired

If split is
not centered
grind or file
before opening.



12W

March-April 1998



Lou Mueller feeds stock into the 25-pound Little Giant while Paul Zimmerman works the flatter during Paul's demo at the Oktoberfaust event. Lou put the whole thing together under ABANA's banner.

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Address Correction Requested

Please send changes to Maurice Ellis, Rt. 1, Box 1442, Belgrade, MO 63622