

Newsletter ^{of}
Blacksmiths ^{the}
Association
of Missouri

THE

PETER ROSS
WORKSHOP
NOTES

APRIL - MAY 1990

The Blacksmiths' Association of Missouri is a chapter of The Artist-Blacksmiths' Association of North America. This organization is devoted to preservation, advancement, and communication between blacksmiths of Missouri and surrounding areas. BAM's newsletter's goal is to support these ideas. Letters to the editor, tech tips, tools for sale, or any ideas which further these ends will be considered for publication.

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BAM MEMBERSHIP APPLICATION

Name: _____:

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City: _____:

State: _____ Zip: _____:

Telephone: _____:

New Member: _____: Renewal: _____:

Memberships are for the calendar year, January 1 to December 31. Dues are \$15.00, which includes a subscription to the bimonthly BAM newsletter.

Please make checks payable to Blacksmith Association of Missouri

SEND CHECKS TO: Steve Austin
 44 N.E. Munger Road
 Claycomo, MO 64119

FINANCIAL REPORT ON
 PETER ROSS WORKSHOP
 BY

STEVE AUSTIN, TREASURER

Income		Cost
Pre-registration	\$2,120.00	Airfare \$ 280.50
Post " "	200.00	Fee 900.00
Auction	463.00	Parking 20.00
	<u>\$2,783.00</u>	Motel 38.00
		<u>\$, 1238.50</u>

\$2,783.00
1,238.50
 \$1,544.50 Profit

The financial success of the Peter Ross workshop was due in part to the generosity of many members who brought tools, iron work, and coal to the auction. Peter was kind enough to donate everything he forged to be auctioned. This also helped. Al Stevens, Maurice Ellis and Colin Campbell all saved BAM money by housing, feeding, and chauffeuring Peter during his stay in Missouri. It's never been our goal to make money with our workshops, but it doesn't hurt, does it?

DIRTY HANDS
By Dr. Iron

Several issues back Maurice Ellis recommended a hand soap called Pumx. As months passed it became obvious to Maurice that I really didn't believe him. My dirty hands and lack of praise for the product tipped him off. Maurice continued to pursue his mission to clean up Missouri's blacksmiths by whatever methods he could come up with. Well, I don't know what the rest of you look like, but I'm now squeaky clean, thanks to Maurice and the gallon of pumx he brought me. Each and every one of you can join clean me. No longer do you have to suffer the public embarrassment of having small children hide behind their mothers skirts when you pass. No longer will yuppies snicker, mothers nag, wives cajole, and dogs run at the sight of your hands.

Try this pumx stuff, it changed my life and it can do the same for you.

Pumx Products Inc.
1-800-537-1418
Robert E. Wann
P. O. Box 150
Bonne Terre, MO 63628

ABANA Membership Application

Name: _____

Address: _____

City: _____ State: _____

Phone: () _____ Zip: _____

New Member

Renewing Member

How did you learn about ABANA? _____

Regular Member \$35.00 yr

Family Membership (one Vote) \$40.00 yr

Senior Citizen (age 65) \$25.00 yr

Overseas Membership \$45.00 yr

Contributory \$100.00 yr

Library \$25.00 yr

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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Exp. Date (Required)

	/	
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Checks must be in U. S. currency
SEND RENEWAL TO:

ABANA
P.O. Box 1181

(812) 988-6919
Nashville, IN 47448

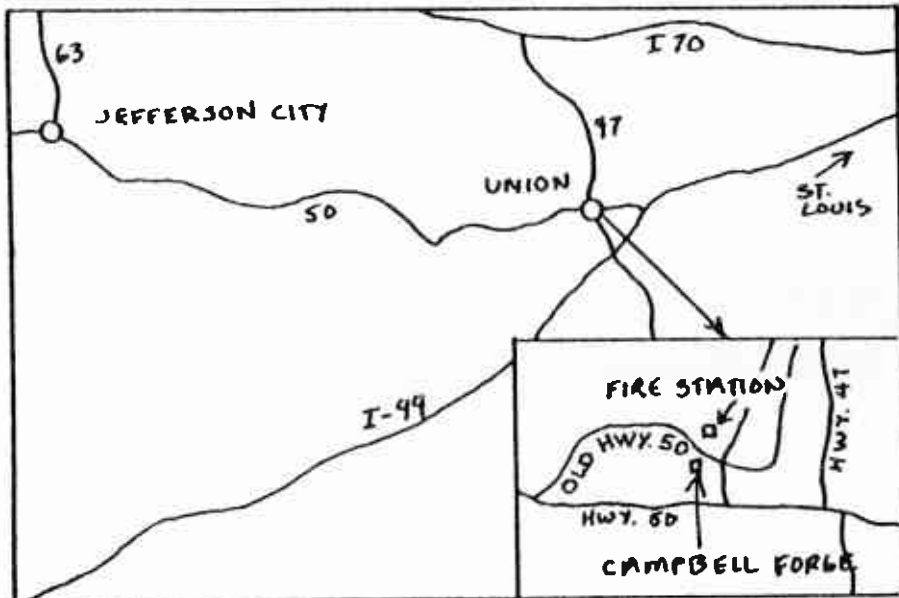
Dues Distribution:
1 Year Subscription Anvil's Ring: 68.5% \$24.00
Adm. Offices & Other ABANA projects (Conferences etc.): 31.5% \$11.00

Next Meeting

May 12 Meeting

Our May meeting will be held at Colin Campbell's shop in Union, MO. Colin is trying to get the Dillon Torch Rep. to demonstrate his equipment. Several years ago several of us saw this demo. It's quite amazing. He welded, cut, and brazed a variety of metals with relative ease. I'm sure this years show and tell will be as educational and inspirational as the last one.

The trade item for this meeting is a set of hinges. Don't you wish you had attended the Peter Ross Workshop now?



John Lovin of Belle Rive, IL sends this blacksmithing related brain teaser. John says he made it up this winter. He also says he enjoyed the Peter Ross workshop. Thanks for the puzzle, John.

Find these words up, down, forwards, backwards, and diagonally.

BPJ IOTSHYVRHAPEENJLC
 BLOWERNBCRFEFIREKJLOOHGWB MJYFEBVSEFROK
 KHASTEELZDYMI IHERAOPSEBTRIPHAMMERXAGF
 REIFDSTJDMBCVLOICPQDTHKFVTETKLFIE
 VEDDPRITCHELNCKIGFEDDEBLHFREW
 KITAGHOHHTOUPSETAJMRDAREYU
 HCNUPBAIJGIMJONSXZILOOJ
 NYIEDMSIKIFVNO COLLAR
 HJVEMEETUYERENC ELP
 RELHNEAXLIVNA
 HRIHSLLBCEWM
 POKHFOFEDWAV
 YITDRHGTYNKI
 FHUSCALEVDJKIU
 YBLSSXUONRSEMNB
 JIGDEDUKIJTEVSGNOTVZ
 WERHGDLI XNILIHARDENOKKD
 REOKRBELLOWSASWOPIYRWQI
 MVNYHCWROUGHTHEFRACSUTE

SCROLL	HOTCUT	COLLAR
WELD	SCALE	BLOWER
FILE	JIG	SWEDGE
BLACKSMITH	SCARF	MANDREL
TUYERE	PEEN	DIE
FORGE	FIRE	CHISEL
IRON	WISE	ANNEAL
COAL	PUNCH	ANVIL
SMITHY	HARDEN	FLUX
IVBA	UPSET	STEEL
HARDY	POSTDRILL	HEAT
PRITCHEL	HAMMER	RIVET
BELLOWS	WROUGHT	TRIPHAMMER
TONGS		

PETER ROSS WORKSHOP

by
K. E. Valdejo

The 1990 workshop sponsored by the Blacksmith's Association of Missouri was held in the sculpture studio of Southern Illinois University, at the Edwardsville campus. It was once again hosted by Tom Gipe, nationally known sculptor and head of the department.

Even though the March 24th and 25th event was billed as a workshop, the atmosphere was much like a BAM meeting. Peter's relaxed manner immediately put everyone at ease and proved that learning can be a lot of fun. At some workshops, the demonstrator likes to keep a certain professional distance between himself and the audience, Peter did just the opposite. He acted like he was really glad that everyone came.

Peter Ross has been a blacksmith for 18 years and has worked at Colonial Williamsburg for the last ten years. Prior to coming to Williamsburg, he was self-employed with 18th century hardware reproductions. The research for his own work was a natural lead in for Williamsburg. (Experience in the reproductions field is considered when applications are taken at Williamsburg.)

His knowledge of 18th century tools, techniques, and products is enormous. Much of this has been gleaned through inventories. When Peter makes something, he can tell you the type of tools that were probably used, the historical period, and whether it was more likely to be imported or locally produced.

Most hardware and household items of the time were finished in the "white", that is to say that they were filed. If they were left in the black, they were cheaper in price, and generally thought of as inferior. Peter mentioned that he saw a price list of garden hoes and there were different grades. You could even buy a garden hoe finished in the white.

The job of the blacksmith at Williamsburg is to supply the hardware and household articles that are used in the restoration and repair of the buildings. There is a separate shop "out back" with more modern conveniences that supply goodies for the gift shop.

Peter hits as hard as anyone that you have ever seen. When he really gets to smoking, he rocks up on his toes and drops his knees on contact. He doesn't seem to use his shoulder a lot though, mostly forearm and upper arm.

When a lot of people strike a blow, they tend to coast that last quarter of an inch or so, anticipating the bounce, letting the weight and momentum of the hammer do the work. Peter doesn't do that. He acts as though he's really mad at the iron and wants to drive it through the anvil.

He doesn't subscribe to the golf club theory of hammers. That is when you use the same force all the time and just match the hammer size to the stock. He used one hammer exclusively while working on the anvil (2 - 2 1/2 lb. range).

He wasn't observed to take a resting blow during the whole 2 days and he worked until 6 pm on Saturday and 5 pm on Sunday. He acted as though he didn't want to quit.

Peter indicated that he didn't use wiping or

pushing blows. He thinks that they are insufficient and more iron can be moved with a square hit.

He takes a great deal of pride in turning out the best possible work with the fewest tools in the least number of heats. As an example, he made a Suffolk latch handle in twelve minutes.

Peter's approach is very low tech, even 18th century if you will. That is his area of expertise though and he needs to think in those terms to do his job properly. He not only wants the work to be cosmetically correct, but he wants to produce it in manner that was proper for the historical period.

He was asked if he ever "cheated" with a power hammer. Naturally there were none in Williamsburg in the 1700's. Now here's the dirt on Peter Ross, he admitted to owning a power hammer. However, it's been sitting outside his shop for ten years, rusting. He has never set it up. (Sorry to disappoint all of you, no scandal here. Ed.)

Sunday morning, the question of advice was put to Peter. What advice would he give to a would be smith. He laughed, this was probably only the 500,000th time he was asked such a well thought out question as this. He made a couple of jokes like don't quit your day job and go back to school. He evidently did give it some thought though. Sunday afternoon he answered the question with one word. "Experience", was his answer. He hesitated a moment and then elaborated. Here is the rest, as best as memory can recall.

Only through experience can you expect to gain any kind of skill. No amount of knowledge can substitute for experience. Blacksmithing is as physical as a lot of sports. Your body must respond properly.

Even though your head knows what to do, your hand must be able to carry out the instructions.

Here, in no particular order, are a few tips and hints that were picked up or dropped whichever way you might look at it.

Drifting- Forge on the undersized portion of the drift to keep from elongating the hole. Only drift all the way through after the cheeks or sides have been finished.

Peining- Work inside out. Leave the thick edges for last so that they won't be as likely to burn on successive heats. Peter has ground his cross pein flat rather than half round. He says that it works better for him.

Hinges- The thickest part should be next to the eye. The scarf should be on the back side and should come out past the first nail hole. English strap hinges were usually a plain straight taper with a finial. A point on the end was sometimes bent in and driven through the door.

Pintles- Use an undersized pin to form the circle, this makes a shrink fit for the weld. Start weld at the pin and work towards the scarf to keep the hole tight. Going the opposite way may tend to enlarge the hole. When welding the hinge, do just the opposite to keep the eye from getting too small.

Fullering- When making the saddle as for the box joint, start with an undersized fuller. As the saddle nears the finished size, then dress with the actual size to square things up. This is about the same thing as the drifting tip.

Folding- When to make a fold and the legs are uneven, put the shorter side on top and

Measuring Devices- He was asked repeatedly about size and measurements. He continually declined to be specific, much to the dismay of Dr. Iron and his quadrille pad. To Peter, it's all relative. If you are making a Suffolk latch for a door, make it proportional to the door. It really doesn't matter if it's 4" or 8" long. It should look as though it belongs there, not like it was salvaged from another door.

Peter Ross gets his iron hot hot and works it right down to black if necessary. For example, here's how he forges a drift.

1. Get the iron white hot past where you need it.
2. Forge the first taper.
3. Hot cut it almost off, grab with tongs and forge the second taper.

The drift is not a major piece of forging but it does demonstrate Peter's general philosophy of beating. Get it hot and hit it - NOW!!

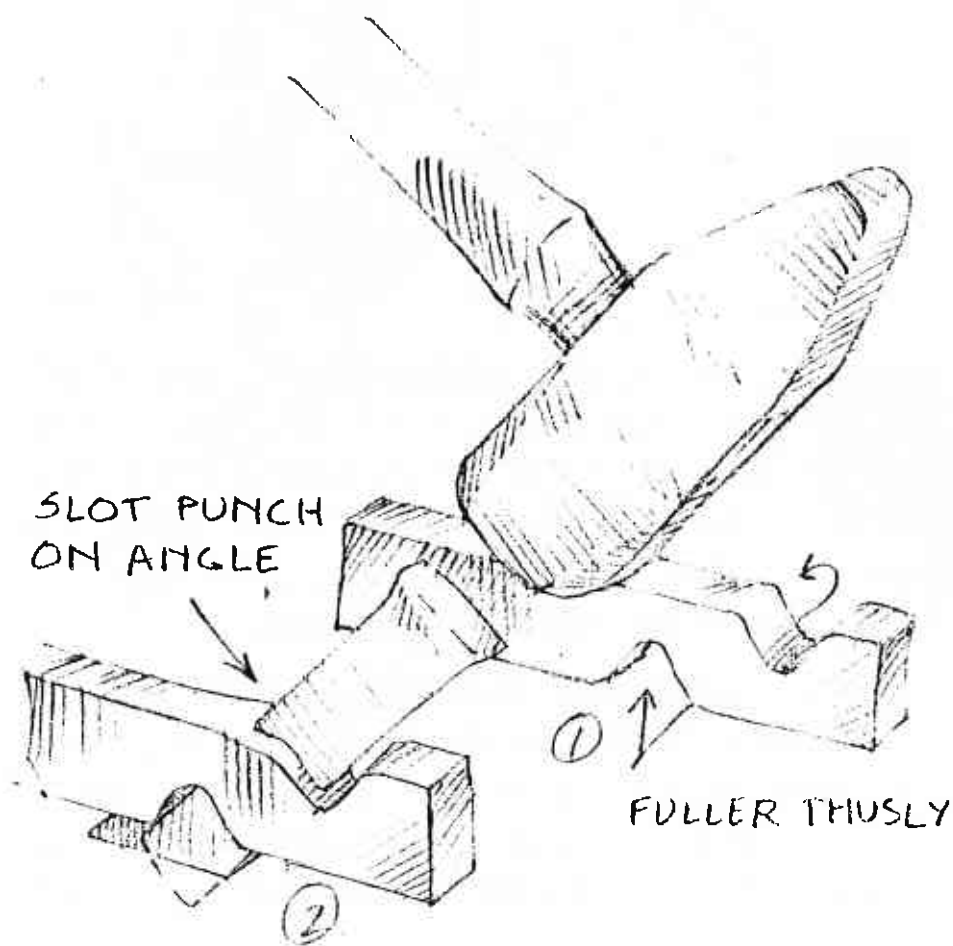
WORKSHOP NOTES

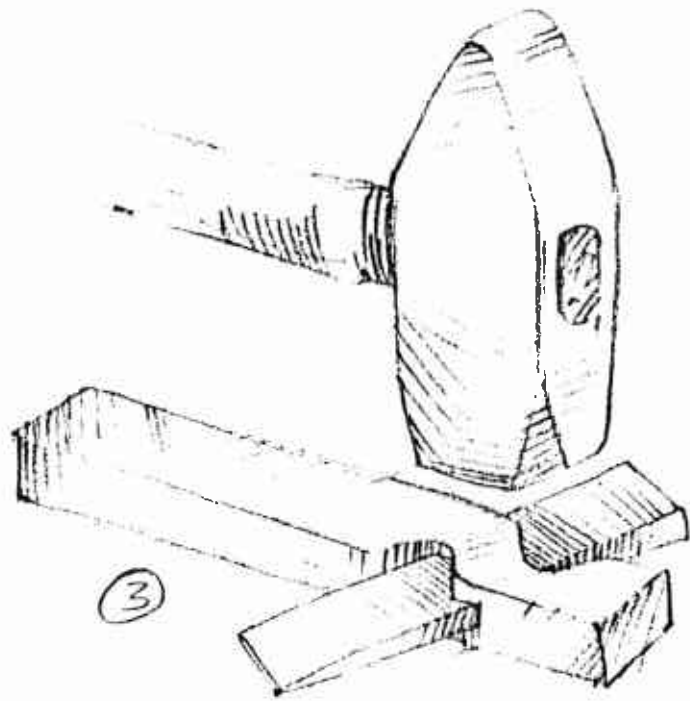
NOTES, BY DOUG HENDRICKSON

ILLUSTRATIONS BY JERRY HOFFMANN.

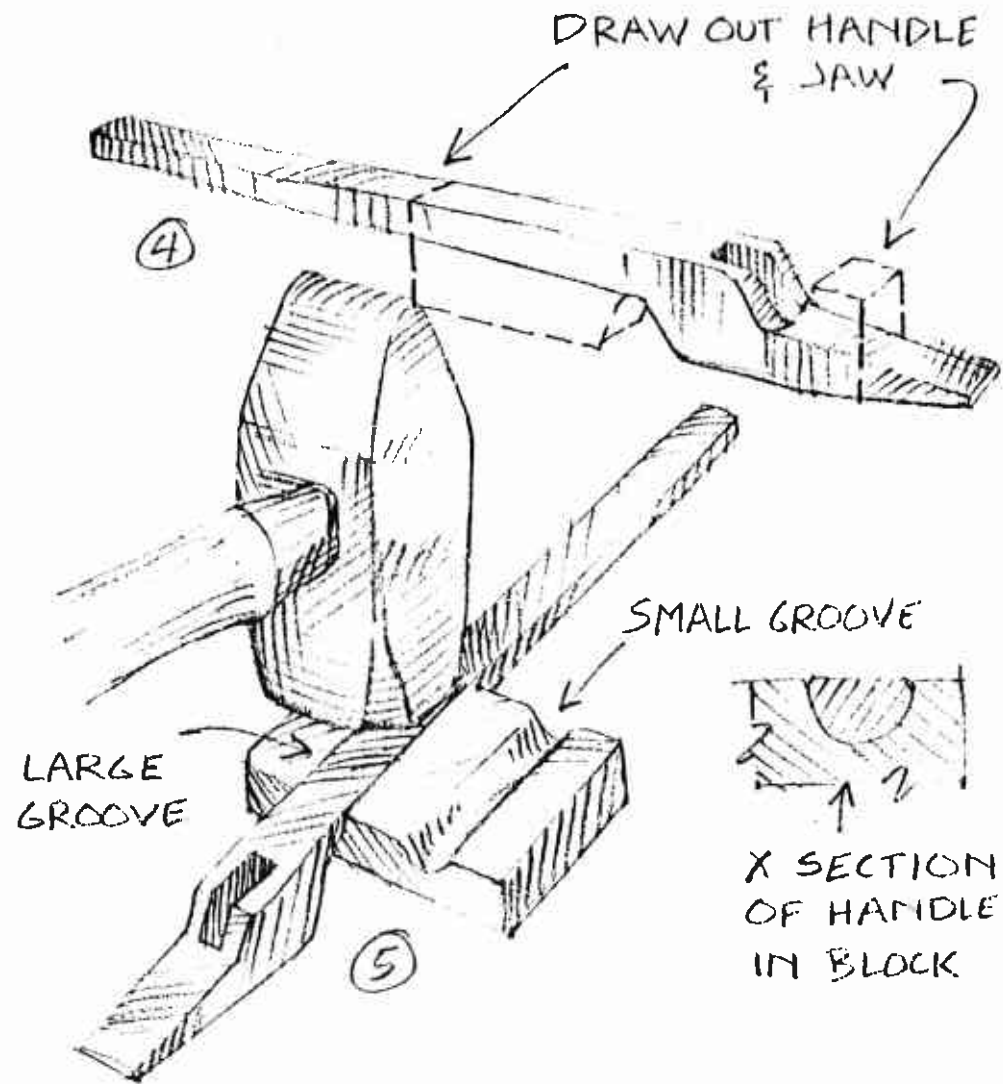
BOX JOINT PLIERS

(A) FORGING 1ST (FEMALE HALF) OF PLIERS





INSERT A HIGH CARBON DRIFT THE SIZE OF THE FEMALE HALF OF THE JOINT & HAMMER THE SWELLING CAUSED BY THE PUNCH BACK TO ORIGINAL THICKNESS. THE DRIFT SERVES AS AN ANVIL; DO NOT STRETCH THE HOLE TOO MUCH.



PETER HAD A BOTTOM SWEDGE WITH 2 - 1/2 ROUND GROOVES TO FORM A COMFORTABLE HANDLE. ONE GROOVE WAS LARGER THAN THE OTHER TO ALLOW FOR THE TAPERED HANDLE.

③ FORGING 2ND (MALE HALF)

FORGE AS YOU WOULD TONGS ↘



WIDTH OF FINISH SWEDGING

WIDTH OF ROUGH SWEDGING

TOP SWEDGE

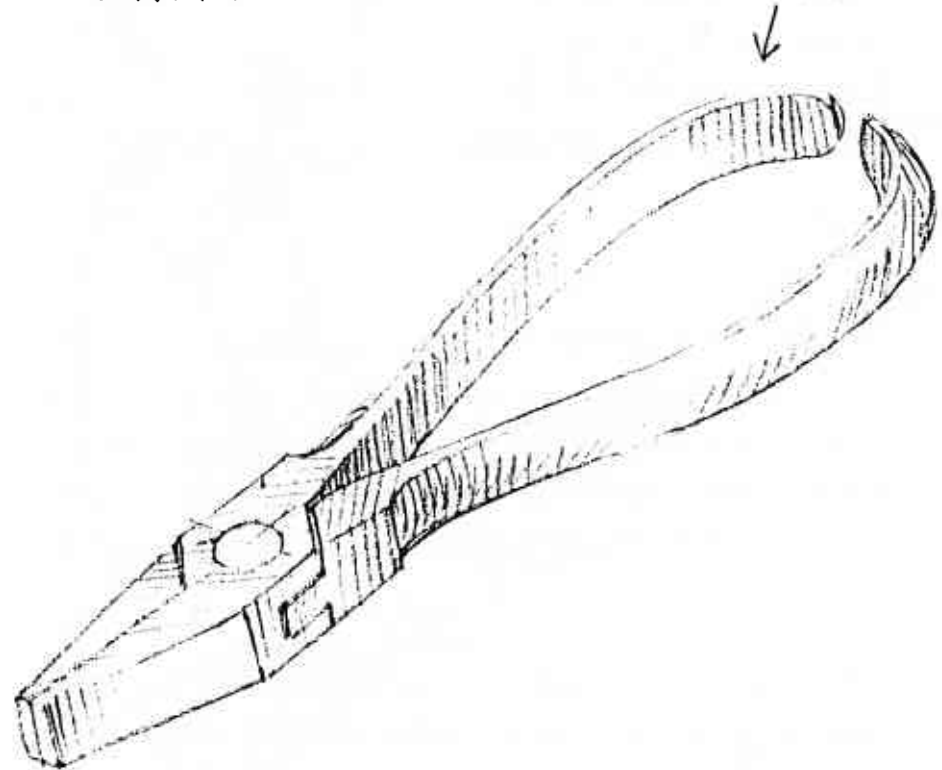
BOTTOM SWEDGE

⑦

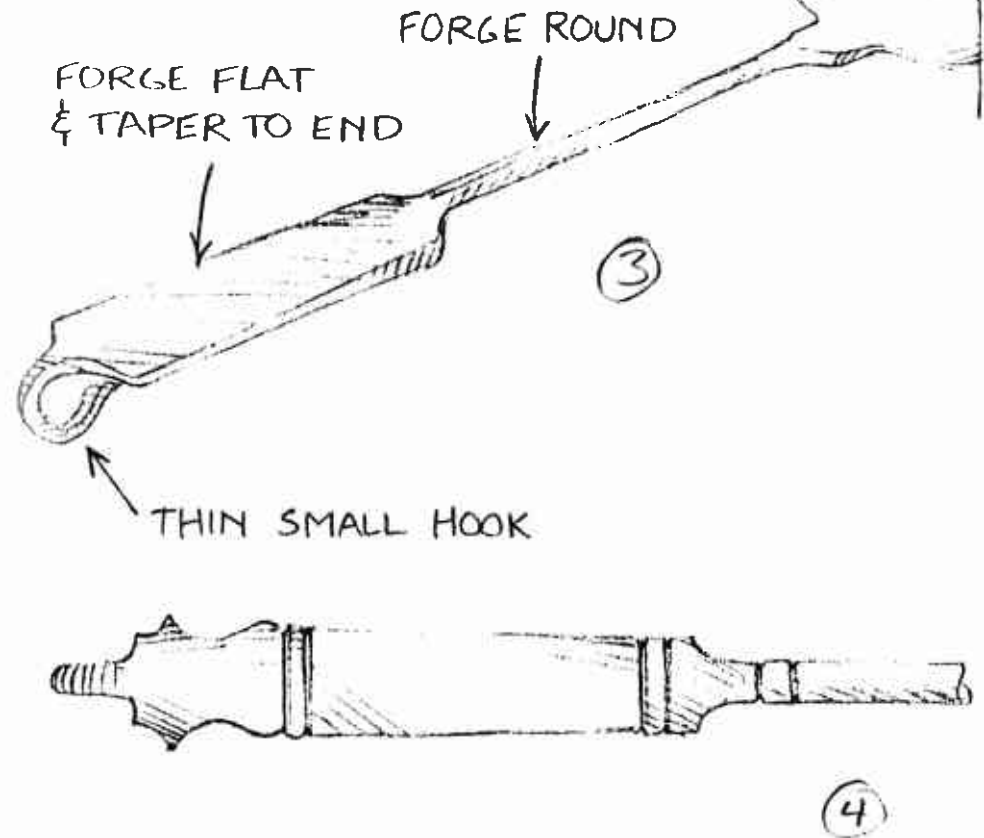
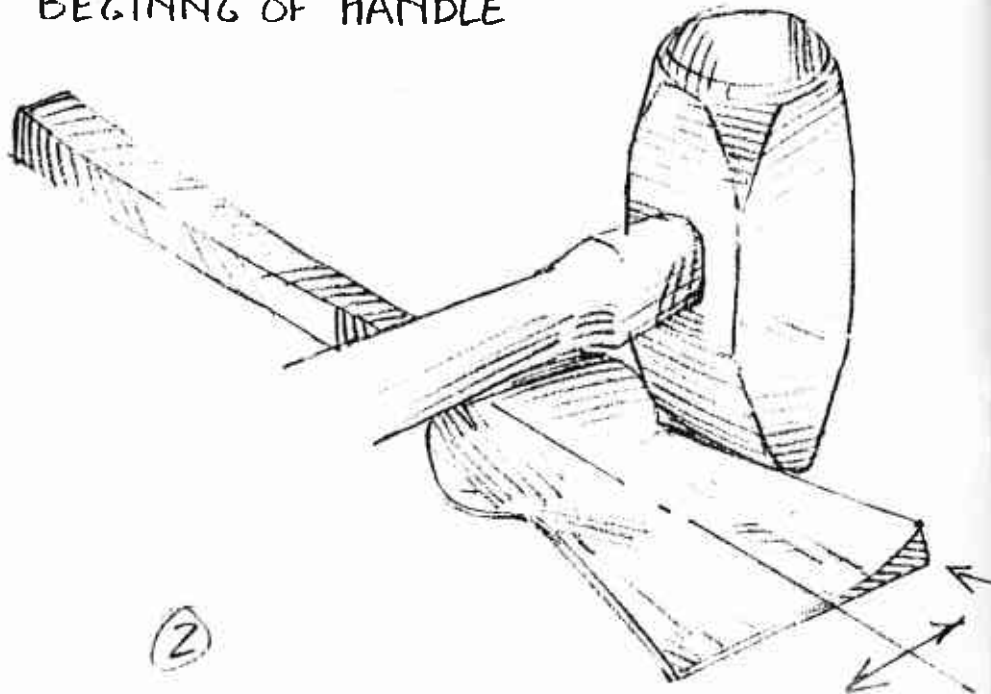
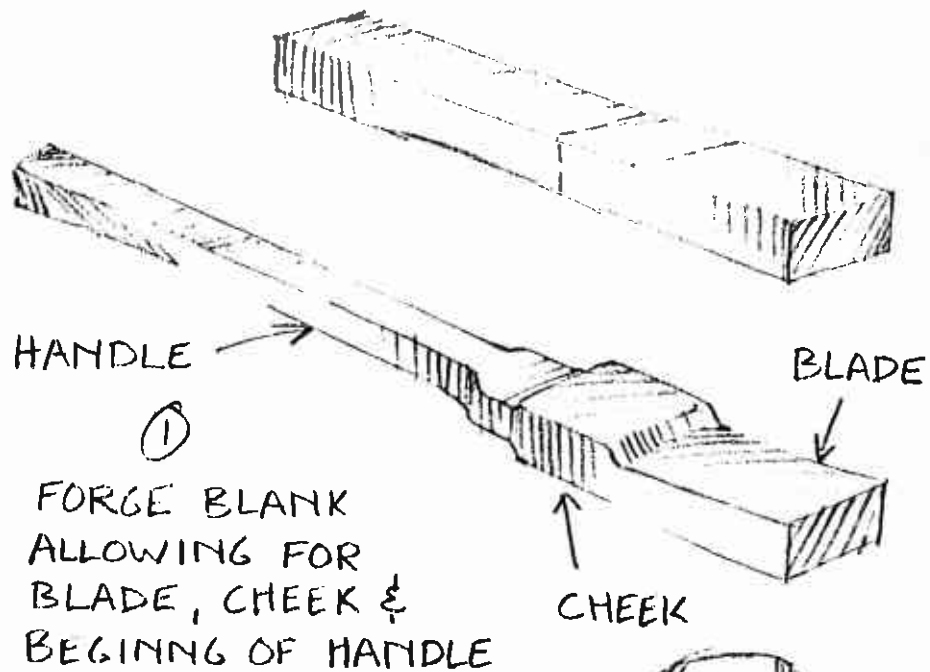
PETER USED A SPECIAL TOP & BOTTOM SWEDGE MADE FROM BAR STOCK TO FORGE THE MALE HALF OF THE BOX JOINT. HE SWEDGED MOST THE WAY UNDERSIZE & THEN FINISHED TO SIZE.

⑦ DRIFT OPEN THE FEMALE HALF, INSERT THE OTHER HALF, HEAT & HAMMER IT TRUE. DRILL & PIN; FORM HANDLES TO TASTE.

FINISHED PLIERS LOOK LIKE THIS

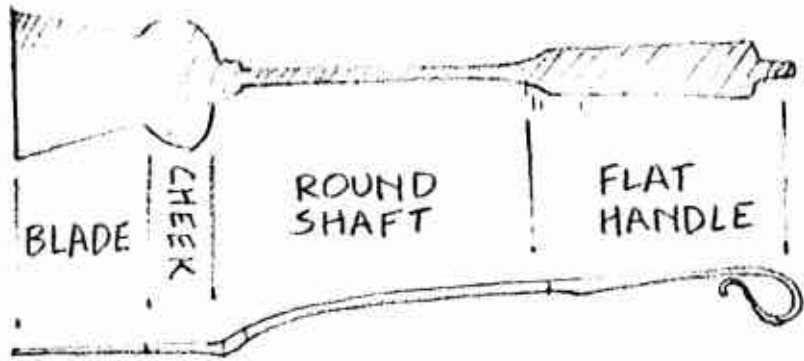


SPATULA



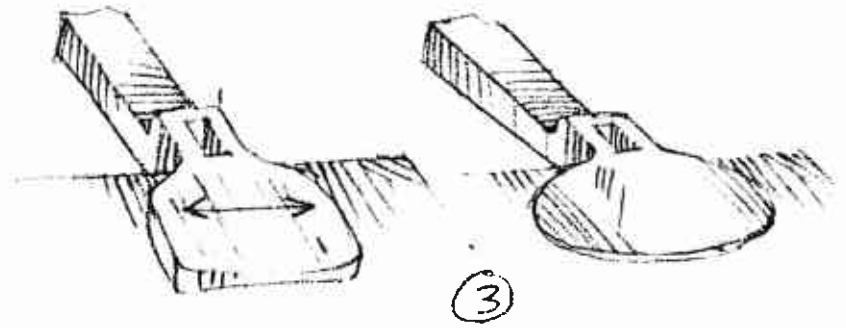
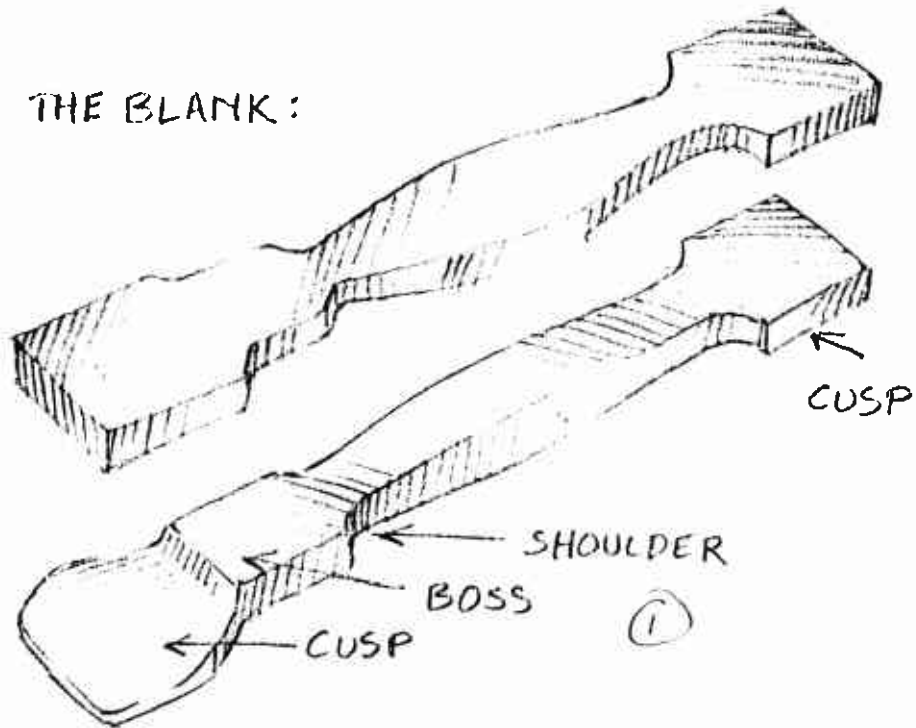
PETER FINISHES HIS SPATULA WITH A FILE. THE SHAFT IS ROUND, THE HANDLE FLAT. RINGS ARE FILED IN THE SHAFT AN THE HANDLE HAS HALF ROUNDS AND NICKS FILED IN IT.

WHEN SPREADING BLADE & CHEEK, USE A CROSS PEEN HAMMER. WORK FROM CENTER TO EDGE.



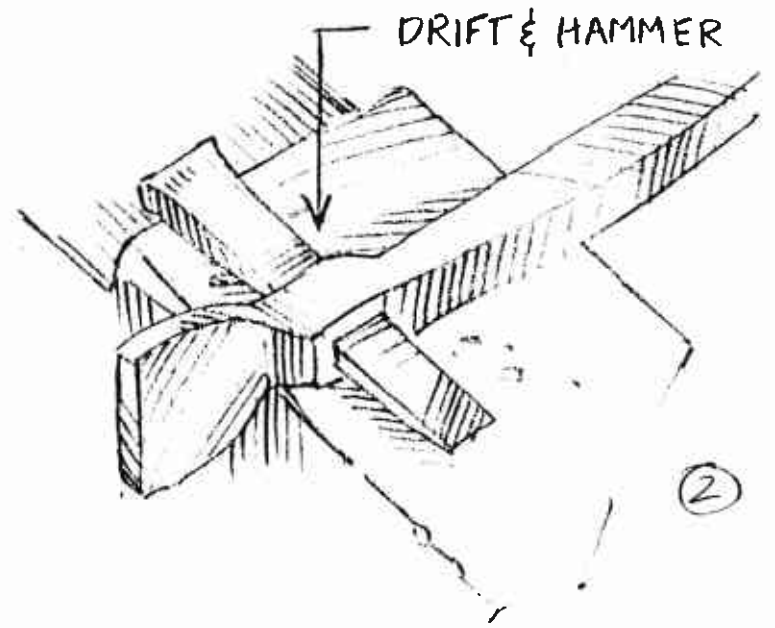
SUFFOLK LATCH

THE BLANK:

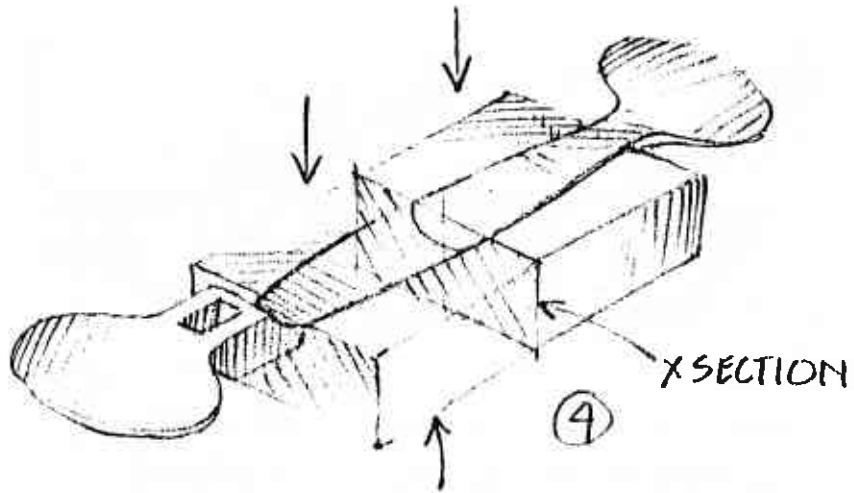


CROSS PEEN FROM CENTER TO EDGE FLATTEN & REFINE

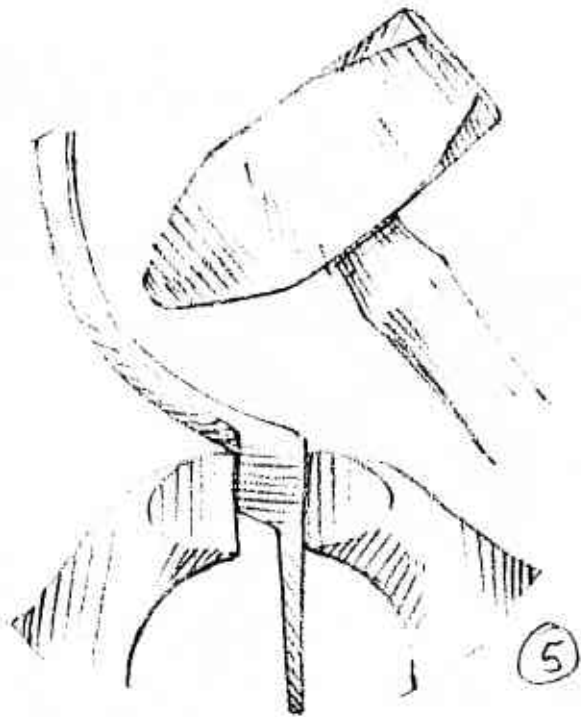
HAMMER OUT CUSP ON BOTH ENDS



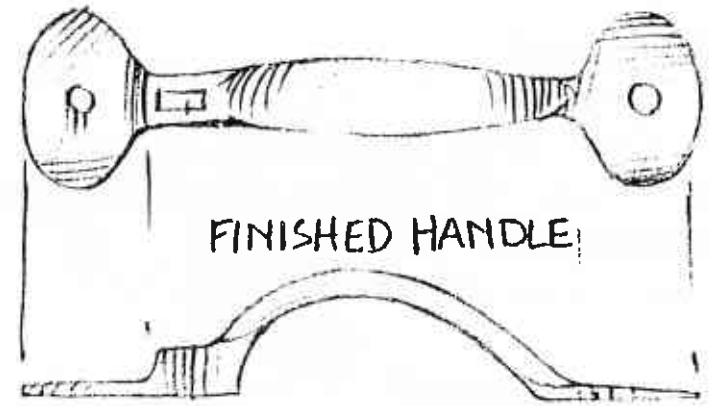
PUNCH THE BOSS & GRADUALLY DRIFT TO SIZE WHILE HAMMERING ON THE SIDE TO THICKEN. LEAVE DRIFT IN DURING THIS STEP.



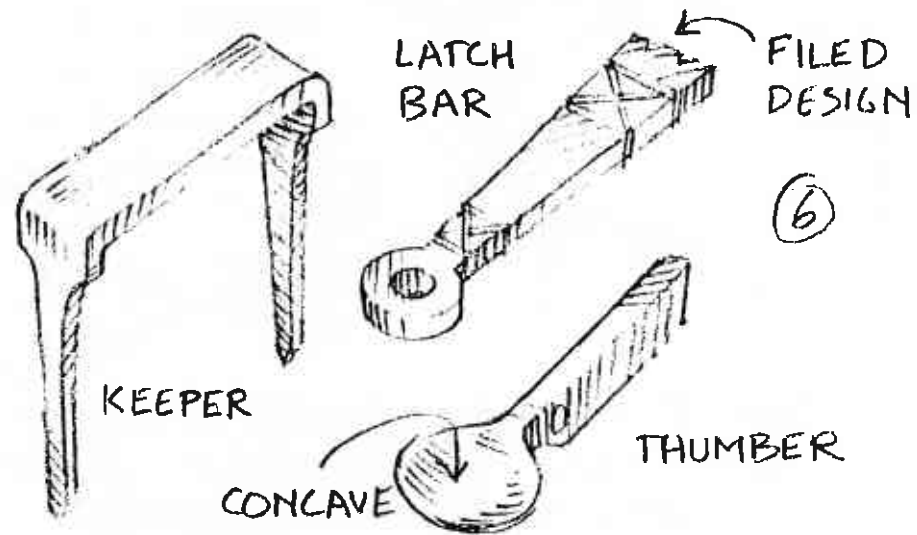
PETER USES A SWEDGE BLOCK TO FORM THE HANDLE SECTION.



SHAPE 1ST HALF OF THE HANDLE AS SHOWN. REVERSE & FINISH OTHER END.

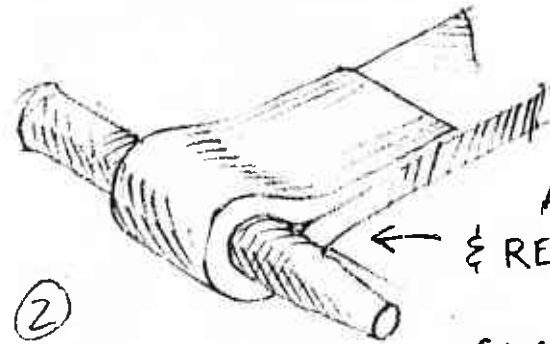
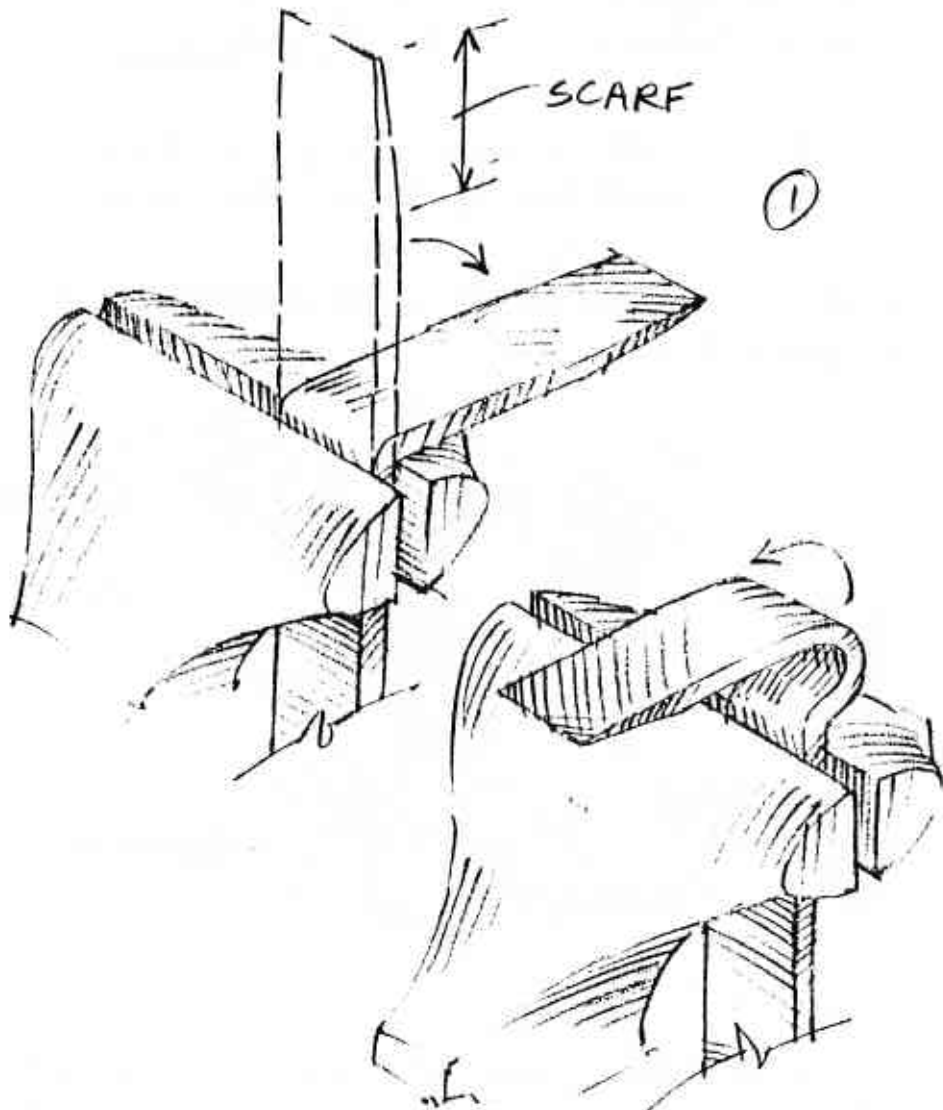


FORGE THE KEEPER, LATCH BAR, AND THUMBER.



STRAP HINGE

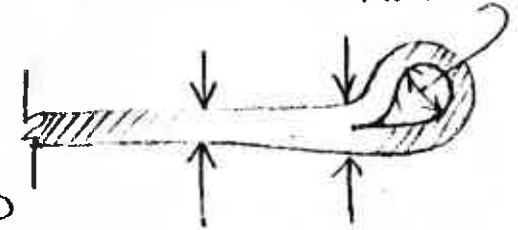
SCARF ONE END OF STOCK & BEND
IN THE VICE TO FORM ONE HALF OF
THE BARREL AS SHOWN



BARREL FINISHED
AROUND A DRIFT
& READY FOR WELDING

SLIGHTLY OVERSIZE

AFTER WELDING



DO NOT WELD TOO
CLOSE TO THE
BARREL OR
WORRY ABOUT
COLD SHUTS;
UNIFORMITY IS
MORE IMPORTANT.

ORIGINAL THICKER
THICKNESS HERE

WORKING FROM ONE END TO THE
OTHER, PETER RARELY GOES BACK
IN THE FIRE AFTER FINISHING A
SECTION. IT'S LIKE PULLING A WINDOW
SHADE DOWN - DEVELOPING FROM ONE
END TO THE OTHER



Prof. Safety

Dear Readers,

Last issue I talked about the oxygen half of our oxy-fuel cutting/heating/welding setup. Today I'll take up the other half: fuel gasses.

There are a number of fuel gasses in common use. Acetylene (C_2H_2) is probably still the most popular, because the oxy-acetylene flame is hotter than that obtained with the other readily available fuel gasses. It is, however, the most dangerous one. So it's the one I'll deal with most.

The Victor company's "Welding, Cutting, and Heating Guide" (.50 cents from welding supply stores) is my source for most of this. You should get a copy.

Acetylene presents one major kind of hazard. It can blow up. When we think of explosions, we usually think of very rapid combustion. And acetylene can surely explode that way, with a great release of energy, i. e., a very

loud noise and accompanying carnage. The book gives the explosive limits of acetylene in pure O_2 as 3% to 93%. That is, a mixture of oxygen and acetylene which is anywhere from 3% to 93% acetylene will not just burn, it will explode. That is a very wide range. Compare that to natural gas, which has explosion limits in oxygen of 5.0% to 59%. In short, all you need for an explosion is a mixture in that range, and a spark. In air, as opposed to pure O_2 , the situation is a little better, but not much: 2.5% to 80%.

The conditions for an explosion are fairly easy to avoid. Here are some things to keep in mind.

1. Store, use and transport acetylene (and other gasses in well ventilated areas, to prevent accumulation of gas in the event of a leak. One real dumb trick is to haul bottles in the closed trunk of an automobile (right over the exhaust pipe, right?). People are sent to glory this way every so often, sometimes in traffic.

2. Keep your equipment in good repair. It'll work better and cost less, but it will also help prevent accidents. This includes hoses, gauges, and torches. Don't cut over your hoses. Don't walk on them, drive over them, kick them, drop heavy things on them or drag them over sharp objects. Keep your tips clean. You can't do good work with a dirty tip anyway, and a fouled tip increases the already considerable tendency of acetylene to backfire. Replace o-rings in your torch as needed, and have seats recut when the top won't seal.

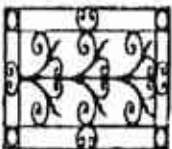
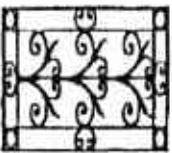
3. Use proper operating pressures. This is more important with acetylene than with other fuel gasses, as it becomes unstable above 15 psig outside the bottle, and can be set off by a physical shock



USES FOR A GRUBBY LITTLE BLACKSMITH



DIVING FOR LOST TREASURES
IN THE SLAK TUB



I ANNOUNCING I

THE MOUNTAIN SHITHS BLACKSMITHING CONFERENCE

WHEN: Thursday, August 23, 1990 through Sunday, August 26, 1990

WHERE: The Francis Whitaker Blacksmith School at the Colorado Rocky Mountain School, Carbondale, Colorado

WHAT: A four day conference featuring demonstrations by well known smiths, hands on forging clinics and a special window grille project lead by Francis Whitaker. Lodging and meals will be available at the conference site and excellent camping and motels are located within a short distance.



FOR REGISTRATION AND OTHER INFORMATION CONTACT:

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President, Rocky Mountain Smiths
1632 S. Virginia Street
Aurora, Colorado 80012
(303)750-0786(Home)
(303)270-7826(Office)

HIGHLAND
BOTTLING WORKS
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WE ARE PLEASED TO ANNOUNCE A ONE WOMAN SHOW OF WORKS IN IRON BY MS. ELLIOTT-FRANCIS. MS. ELLIOTT-FRANCIS IS CURRENTLY SHOWING AT SOUTHERN ILLINOIS UNIVERSITY IN CARBONDALE.

PREVIEW SHOWING OF MS. ELLIOTT-FRANCIS' WORKS WILL BE SUNDAY, APRIL 8, 1990 FROM 1:00 P.M. TILL 4:00 P.M. WITH COMPLIMENTARY hors d'oeuvres AND DRINKS BEING SERVED.

MS. ELLIOTT-FRANCIS' WORKS WILL BE ON DISPLAY UNTIL MAY 5, 1990. GALLERY HOURS ARE TUESDAY THRU THURSDAY, 5:00 P.M. TILL 9:00 P.M., FRIDAY AND SATURDAY, 5: P.M. TILL 10:00 P.M. FOR FURTHER INFORMATION, PLEASE CALL 618/654-5177.

SINCERELY,

CARRIE & MICHEL FINLEY
HIGHLAND BOTTLING WORKS
RESTAURANT & GALLERY