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Hot Iron News is the official quarterly publication of the Northwest Blacksmith's Association. Submission of materials for the magazine is eagerly encouraged. Editor is Linda Owens. Deadlines for submission are February 15th, May 15th, August 15th, and November 1st. Other ABANA Chapters, Canadian, British, and Australian blacksmith's associations, and non-profit educational metals oriented groups have permission to reprint non-copyrighted material found within the covers of Hot Iron News as long as credit is given to the authors, the magazine and NWBA. The Northwest Blacksmith's Association, and the Hot Iron News disclaim any responsibility or liability for damages or injuries as a result of any construction, design, use, manufacture or other activity undertaken as a result of the use or application of information contained in any article in the Hot Iron News. The Hot Iron News makes every effort to insure the accuracy of the information contained in the articles published herein, but the use of any material or information is solely at the user's own risk. The Hot Iron News assumes no responsibility or liability for the accuracy, fitness, proper design, safety or safe use of any information, technique, material, tool design, use, etc., contained herein.

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Front Cover: White Work by Peter
Ross - Details done with a 6"
Half Round File.



The Advanced Workshop, hosted by Joe Elliot; proprietor of The Traditional Blacksmith Shop in Redmond, Oregon, has certainly been etched in the memories of its participants as a very inspirational and educational event.

Al Bart, the Blacksmith/Educator (whose business card is printed with the words that are the title of this article) demonstrated the great skill of communication he has. Al's mixture of storytelling and technical information left attendees with a wealth of new possible directions to advance in.

The blacksmiths present at this workshop were all well experienced with the art at varying levels and, when it was all over, were all at least another notch up in their knowledge. Maybe two notches in enthusiasm.

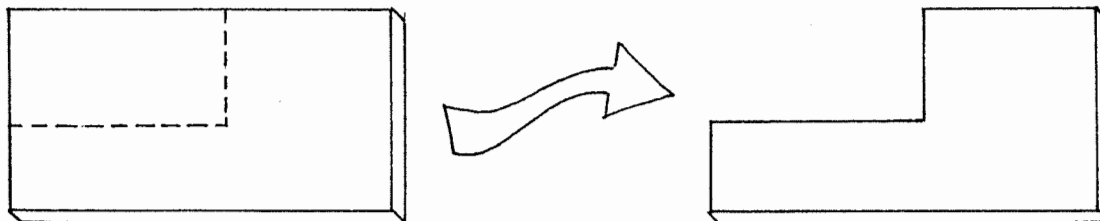
The blacksmiths present at this workshop were: Joe Elliot, Jim Lovelace, Dennis Prince, Ike Bay, Louie Raffloer and Jeff
A fairly diverse cross-section in talent and no shortage of hot rolled humor resulted in a pretty nice pile of fine iron work and in the case of this writer, sore sides. As much as the anvils were ringing could also be heard lots of hearty laughter as jokes and innuendos flew around like sparks (high carbon sparks). For instance, and this may not seem important but; DO NOT!! REPEAT: DO NOT!! ever send Joe Elliot to buy you disposable razors, (especially if you need to shave in a public place)!

Following are some of the ideas that highlighted the workshop. These have been interpreted from very randomly taken notes.

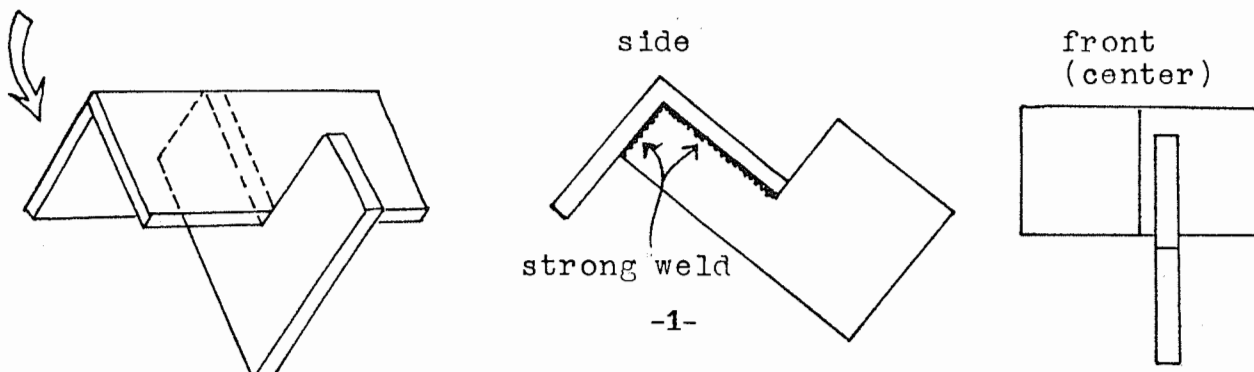
The first item was a very handy vise tool (which will be used in the production of the piece that follows it).

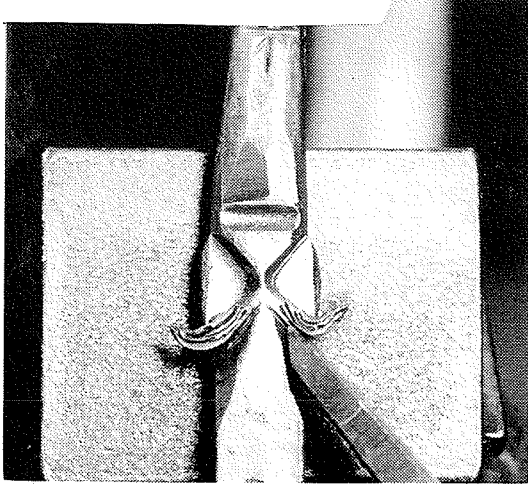
WISE TOOL: For punching/carving/stamping work at 45% to vice jaws starting with a piece of $\frac{1}{4}$ " iron about 3-4" long, and of a substantial dimension (i.e. $\frac{3}{8}$ " X $3\frac{1}{2}$ "); a piece of plate (or section of 4-5" flat bar) about 6" long and 4-5" in width; and a couple of pieces of $\frac{1}{4}$ " X 1" measuring at least the distance between the extremities of the $\frac{1}{4}$ " iron, which construct the tool.

First cut a tab out of the plate (with a hacksaw or a torch)



then weld as shown





With a very sharp cutting chisel peel up the mustachio. Then fuller in a beard.

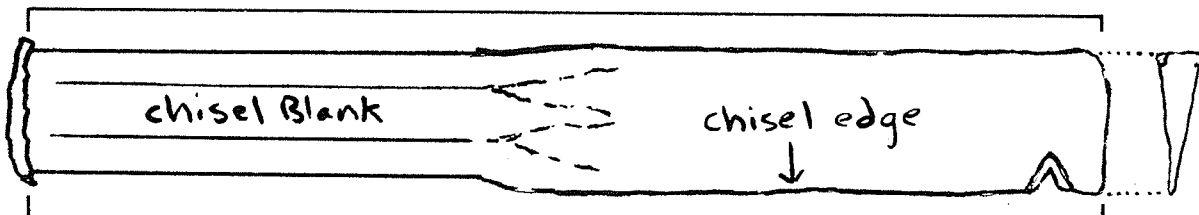


Center punch a mouth in and use your favorite eye tool to put eyes on.

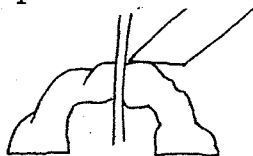
This project is an excellent mixture of techniques that both pro and amateur smiths can learn something from. All necessary tools can easily be made, even improvised scraps of stock. All possibilities for detailing should be explored so's we don't have a glut of basic designs, such as this one.

Here's a couple of very handy techniques that some of us saw of the workshop for the first time.

1. HORIZONTALLY HELD SPLITTING CHISEL: A great replacement for the more risky method of driving a splitting chisel straight down. The risk being; yet another third degree burn if the chisel slips. Also, the sharpened cut near the top works as a sheet metal cutter. Real convenient for getting barrel tops and car trunks open.



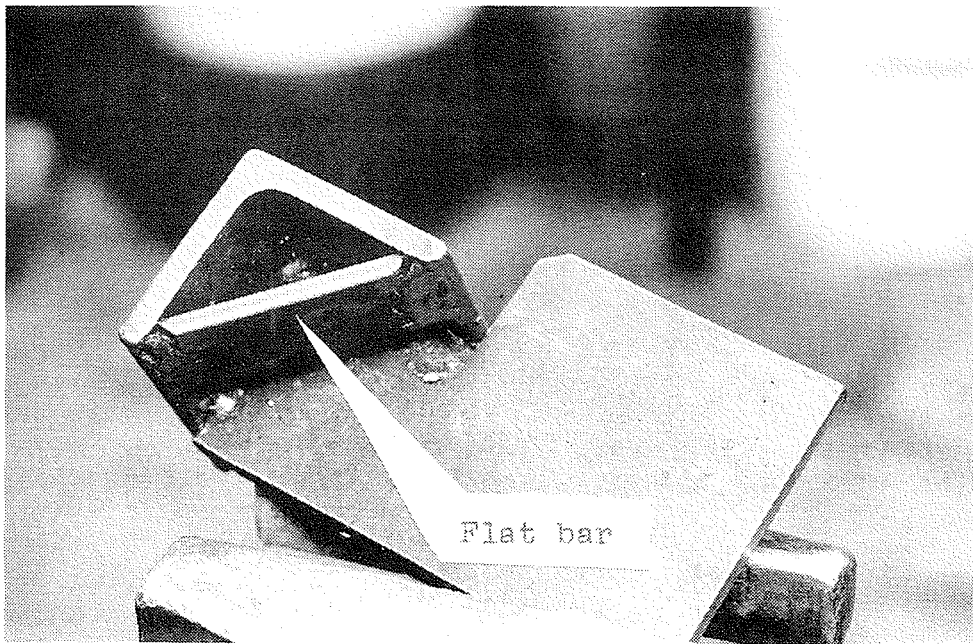
2. Shearing light plate in a vise can be crudely done by using a cutting chisel edge held/struck on one side of plate as close to the jaw line as possible. Use the cleanest portion of vise jaws.



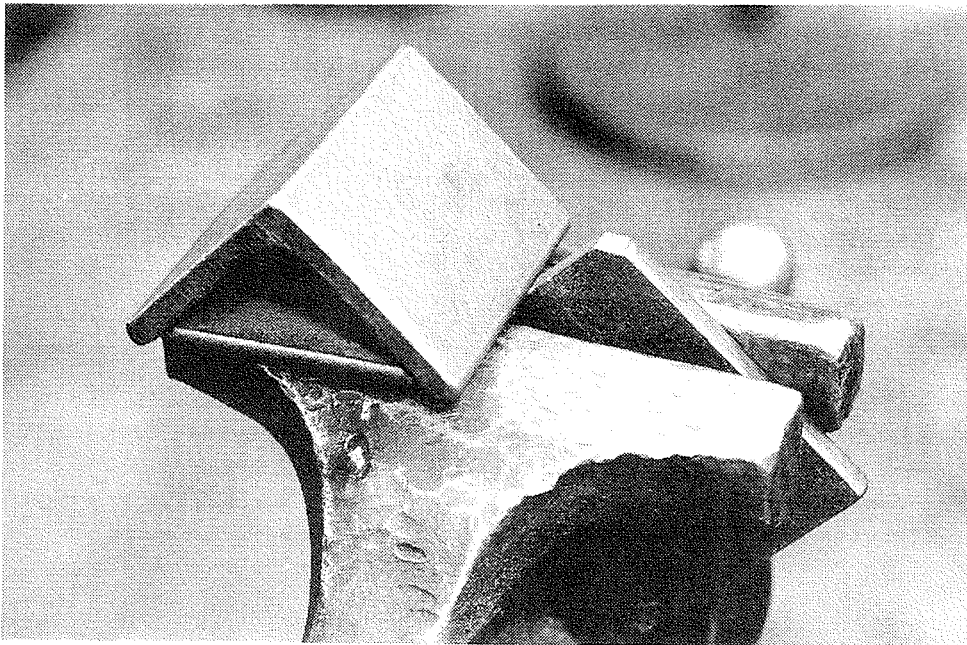
When chisel is struck the shearing action should cut efficiently. This method should serve you well, until you can afford a plasma cutter. A far more sensible way of doing cleaner cutting.

It must be said that all this information is open to your own interpretation, especially for the improvements possible. If you have any questions about any of this, please feel free to sign up for any open forges or workshops that may be coming up, and ask there. You won't regret it.

Vice Tool (continued)



Add the flat bar to provide more support to the \times iron against the vise jaws



As shown in vise

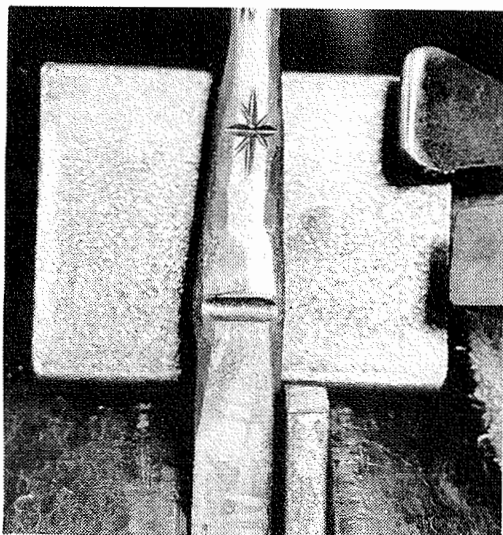
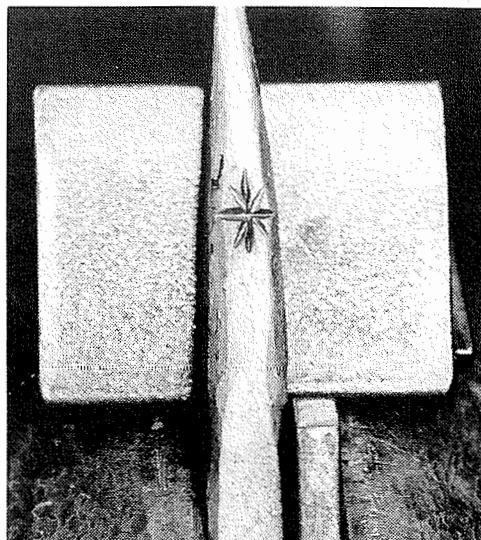
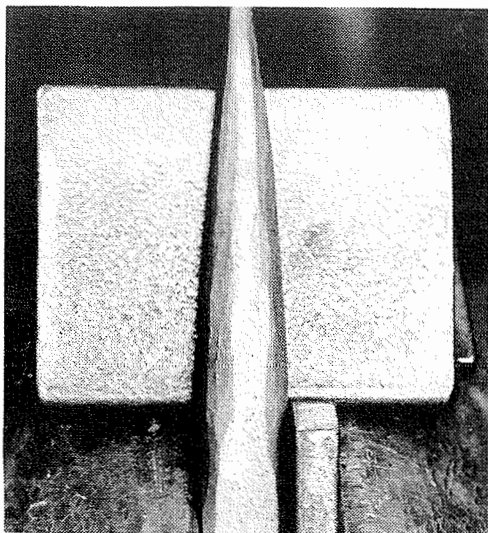
Workshop notes (continued)

THE WIZARD HEAD: As taught by Al Bart. This requires a piece of round stock ($\frac{1}{2}$ " ϕ was used at the workshop), at least 8" long (handle length is always even better).

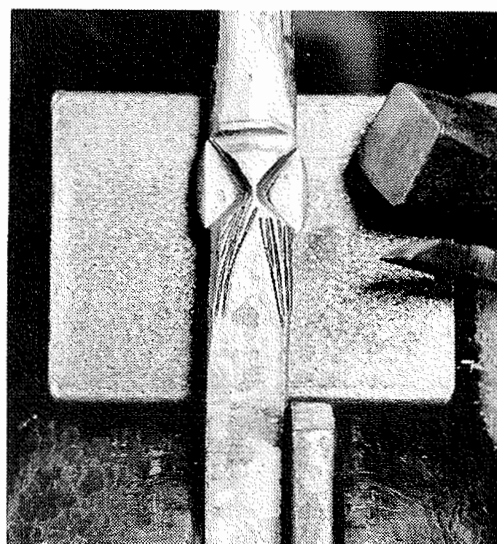
First: round stock should be drawn to a taper. This taper should extend to a blunt end and be slightly oval in cross section.

Second: with a fresh heat, the taper should be placed in vice tool as illustrated (this is where the beauty of the vice tool can be really appreciated).

Third: with back of taper secured firmly against the \times iron surface, and tightened in the vise, incise a small star pattern in what will later be the wizard's hood.



Fuller in a line at bottom of taper (lightly).



Using a square tool indent lightly above fuller to define the hood above. Then fuller heavily as shown for the eyes. Using a sharp chisel put hairlines below eyes.

Attitudes & Perspectives: Some Personal Retrospective

By David Stearns

Through the joint cooperation of NWBA, the National Park Service, and Peter Ross, the members of the Fort Vancouver Volunteer Blacksmith's Association were privileged to share in a unique experience this past April. For 3 days we hammered, sweat, and learned under Peter Ross' guidance. The focus of the workshop was the eventual reproduction of period hardware for Fur Warehouse #4, which is to be constructed this fall. For me, this was one of the most intense and rewarding experiences of my blacksmithing life. Peter remarked several times during the course of the workshop that he really didn't expect much immediate improvement in skill level in 3 days. What he was looking for, and hoping to instill, was new insight and raising of personal expectation that would lead people to continue to strive and learn on their own. That certainly happened.

Eleven hours into day two of the workshop, Peter asks me how late I think people will be staying. I know this has been a hell of a day for him, full of demos, personal instructions, moving from forge to forge and back again for the whole long day. I told him we can shut down any time he is ready. His reply is revealing: "No, that's not it. I was just hoping people would be willing to stay and work for a while yet." Two hours later, he finally throws in the towel. As we are closing up the shop, one of the stragglers asks a question about an artifact. Another quarter of an hour into the night, he is still patiently discussing the box of artifacts.

The workshop begins and ends with the original artifacts we are to copy. My last memory of the work in the shop is Peter

asking where the original was so we could compare an attempt. It had already gone back to the vault where they are stored, so I know the workshop was really over. During the training, Peter demos many pieces, but when we needed a standard for comparison of our own attempts, he always sent us back to the original artifact and asked "Ok, now how is your piece different?"

One of our teams is working on a "simple" door hook-unwielded eye, twisted shank, standard hook. One of the volunteers is making another one to add to the pile on the forge. A pretty skilled metal worker in his own right, he says none of them met the standard yet. The next day, he went by shaking his head. He points at the latest attempt Peter had just made to get it right. Apparently it didn't meet the standard either. "Doesn't match the original: The twist's too even."

"Sometimes people get frustrated because I don't give them the answers to all their questions. I want them to learn to see for themselves."

I looked around the shop. At every forge, I saw people I volunteer with more intent, more focused than I had ever seen them before. Hammers are falling harder, more regularly. Everyone, including me, was working harder and better than I thought we could. Not because we had learned magic new techniques or special secrets, but because we had new insight into the importance and meaning of our work, and of the work of those who went before. That is what Peter had done with us.

During the workshop, we touched on everything from stance at the anvil, through wielding the pin in a pintle, to the importance of learning

to do things for yourself so you don't waste a helper's time. But the real success of the workshop was the perspective we had gained, which can perhaps be summed up in respect. Respect for the artifacts (and for our long dead partners of 150 years ago who made them), for our own efforts, and most of all, respect for our stubborn, demanding, delightful craft itself.

A few random comments which I paraphrased since I have a notorious lack of memory, and therefore take full responsibility for any errors they may contain:

(Most frequent and in many variations): "Hit it harder!"

(Second most frequent): "Get it hotter!"

"Learn to see."

"You have to forge cleaner." (In response to "Couldn't I clean that up with a file?")

"If they'd had _____, they wouldn't have forged this in the first place." (My all time favorite response: If they'd _____, they would have used it.)

"When I'm at this stage in my home shop, I often use a body grinder." (Somehow that puts the previous comment in some kind of different perspective, I think.)

"People are always asking me for the tips that will show them how to learn to do this stuff right away. There aren't any. You have to learn how to do it, figure it out for yourselves, and practice."

DO UNTO OTHERS AS YOU
WOULD HAVE THEM DO
UNTO YOU

Unfortunately, we still have folks who ignore their fellow association members and walk right up to the demonstrator to get a good look but are blocking every one else. We also have more more video tape of members' backsides than we really need. During demos please don't walk in front of other viewers or the camera. Everyone wants to see just as bad as you do and since everyone pays the same dues, everyone gets the same benefits. Please, be more considerate of your fellow members, and let everyone have the same exposure to the demonstrators.

Thank you,

The NWBA Board

Letter to the Membership

Dear N.W.B.A.,

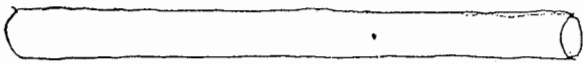
What are the prospects of a Channel 9 half hour blacksmithing program to coincide with the Wood Wright Shop? If feasible, it could bring great rewards to the N.W.B.A. and the art of Blacksmithing. I have talked to many people about blacksmithing and their favorite retort is "That has something to do with horseshoes doesn't it?" A television program could educate the public and inflame N.W.B.A. membership.

Something to consider,

Jerry Becraft
Seattle, WA
365-3251

A HOLD FAST FOR WOODWORKER BENCH

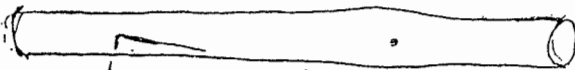
← 6" →



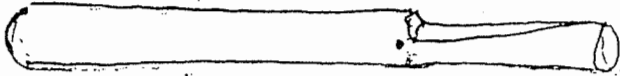
18" 3/4 ROUND

NOTES ON
Peter Ross
Spring 1991 Demo
St Helens, Ore

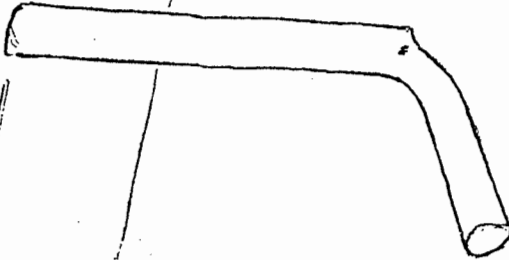
NWBA EVENT



UPSET SLIGHTLY



FLATTEN TO MARK



← ACTUAL SIZE

START BEND

Approx 12" Long



After upset complete 3/4" RD meets 3/4" SQ



UPSET

gets wider about 1 3/8"

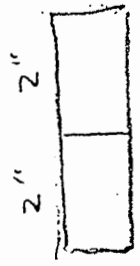


TAPER END

+

← BEND TO SHAPE

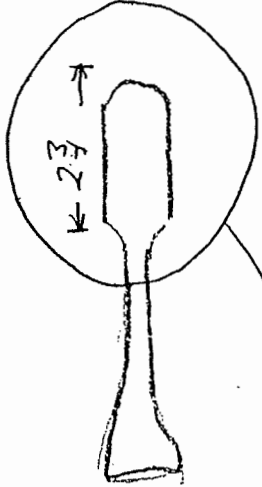
KITCHEN LADLE



4" 1/4 x 1



NECK DOWN

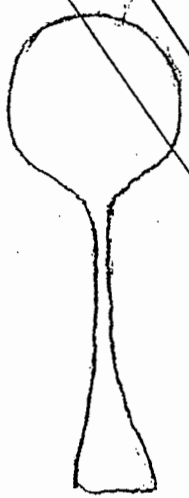
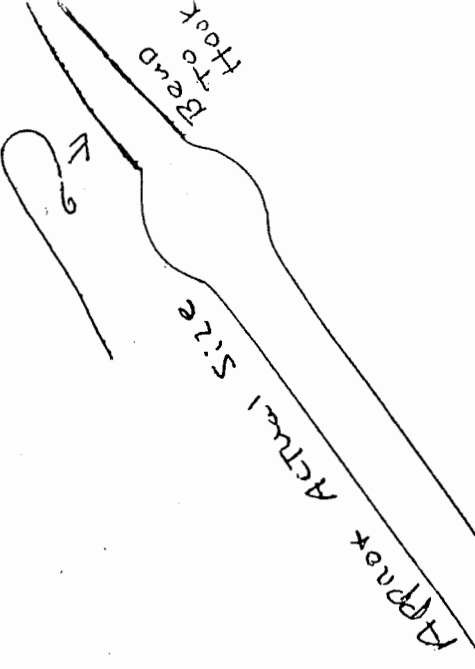


DRAW HANDLE AND BOWL SECTION

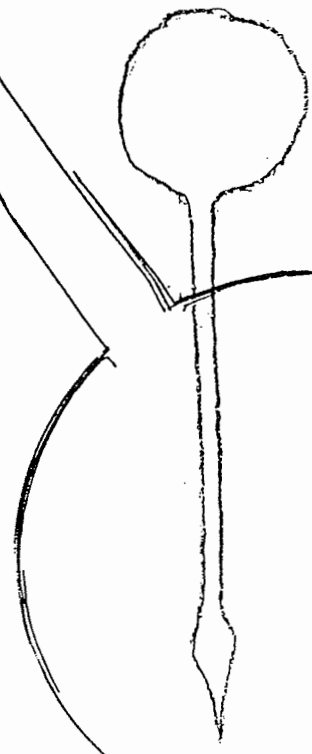
Make Center Mass at Circle

Clear Finish + 1/2" AP

3/8 x 3/16



SPREAD BOWL SECTION
3" DIA [work center first]



DRAW HANDLE

SINK BOWL

NOTES ON
 Peter Ross
 Spring 1991
 Demo
 ST. Helens, OR
 NWBA

President's Message

To the members:

Due to scheduling conflicts with some of the Board Members, July's Board Meeting will be handled by a conference call on July 10th. Anyone who has anything they would like discussed, either write to or call any Board Member prior to July 10th.

Spring Conference went well. St. Helen's Fairgrounds is a real handy place for us. Camping, dorms, inside kitchen, barbecue area, RV hookups, covered demo area, and bleachers all make life a lot easier. I want to thank all our members who helped put the conference on, and also, thank the Fort Vancouver Blacksmiths for all their work in co-hosting the event.

Fall Conference is still tentative as far as dates and place. It will be in the first part of October. The next informational update will have firm times, places, prices, etc.

Kent Rudisell was kind enough to host an open forge on June 1st and only one member from Issaquah, WA showed up. I don't know if you people realize that there is a good amount of work that goes into scheduling and getting ready for these types of things. We are trying to get more local events for you, but if you are not going to take advantage of them, then we won't bother to put them on. **It's your association, you make the choice.**

--Smokey Adams

HELPFUL HINTS PICKED UP FROM NWBA SPRING CONFERENCE 1991 (Peter Ross & Fiddlin' Red)

1. Bear grease, vegetable oil, mineral oil and motor oil all make good quenchers when hardening spring steel. NEVER use used motor oil -only new and make it 30-40 weight. Temper springs at 750-800 degrees F.
2. Use heavy tongs to hold small pieces when hardening so that a double ended piece is not overheated after one end is done.
3. A horseshoeing resp is excellent for hot filing - file while real hot if possible.
4. Fiddlin' Red's case hardening process -take a tobacco tin and fill it with flour, put small pieces in, wire the lid on, red heat for two days, i.e. in your stove.
5. Use three 10" mill bastard files at a time; one worn, one good and one new. Use each alternately depending on what you are filing, i.e. worn one for first cuts on forged knife blades, second one as the work gets cleaner and the new one for draw filing and finishing.
6. In measuring for the length of metal needed to make a curve, i.e. scroll or circle -measure with a compass along the center line of the stock because the outside will end up smaller and the inside longer.
7. Use "wrought iron" filings in your welding flux, it is better than any other iron filings.
8. When making a round taper, make an octagon first.

1991 Spring Conference

Written by Ike Bay

Pictures submitted by Mike Falk, Paul Casey, and friends

It was a wonderful time and even the weather cooperated. We must start off with a special thanks to Jerry Henderson for finding us this place. The open barn with bleachers made it possible for everyone to have a good seat and see the demo clearly. The ladies took up residence in the 4-H building and the large commercial kitchen really helped a lot. The ladies worked on the quilt in comfort. The dorm rooms were not utilized that much, but a change in the weather might have changed that and of course no one minded the showers.

The event was co-hosted by some of the local smiths and the Ft. Vancouver group, with the "ladies auxiliary" doing most of the meal service and clean up. Hosting is a fancy term for doing all the grunt work. The auction went very well, with a forged iron nose being one of the surprise items offered. We had a great time. We learned a lot from Fiddlin' Red and Peter Ross, and the extra creature comforts were appreciated. Again, a special thanks to all the people who worked so the rest of us could come and play.....

The site was so successful that we have tentatively reserved it for next spring. Let your board know who would like to see demonstrate.

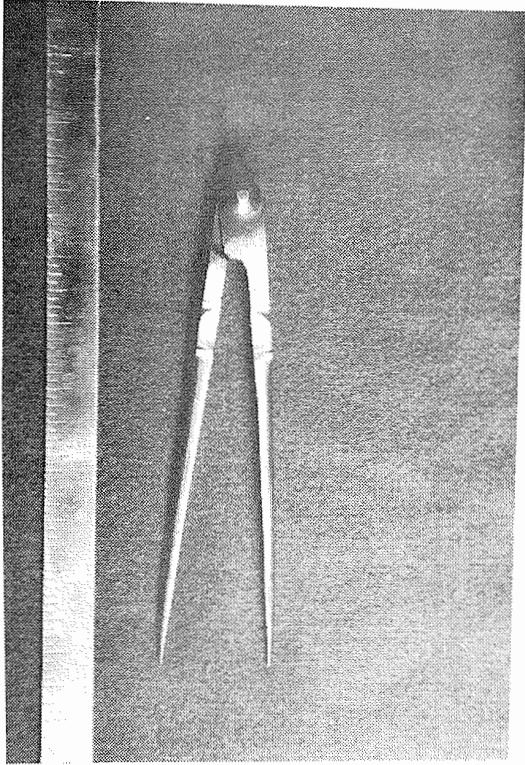
The following pictures have been donated by Mike Falk, Paul Casey, and other friends of NWBA. Photo credit also goes to Mr. Rick Edwards, Ft. Vancouver.



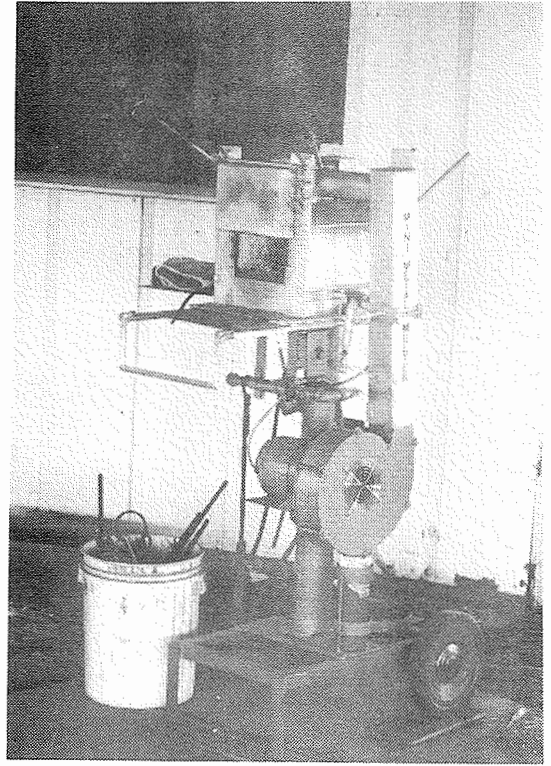
Jerry Culberson and an iron Kleenix box made by Joe Elliott.



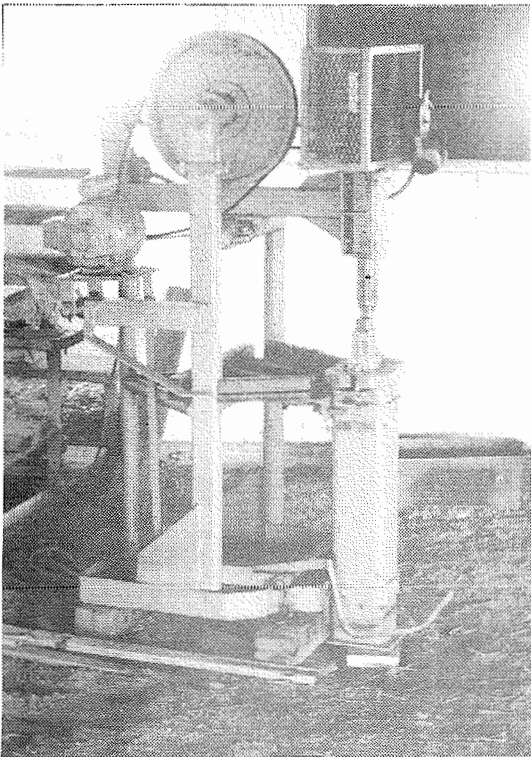
Fiddlin' Red and wife entertaining on Saturday night.



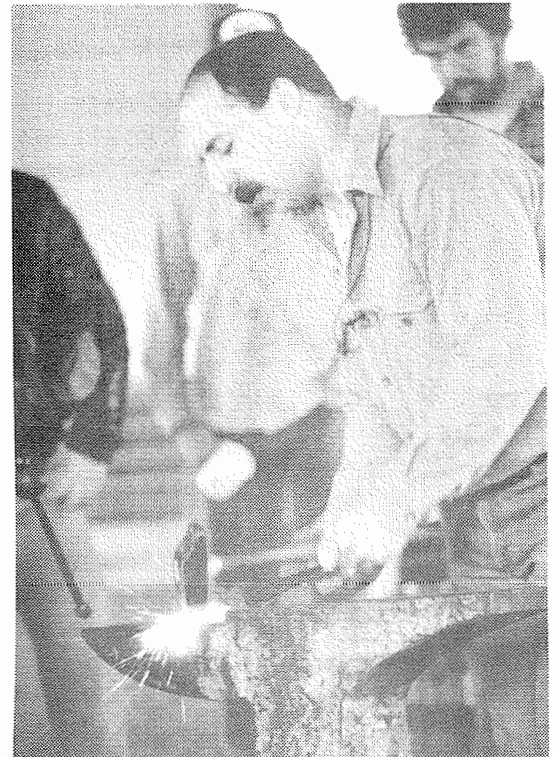
A Compass used by Peter Ross for
Layout Work



Gas Forge

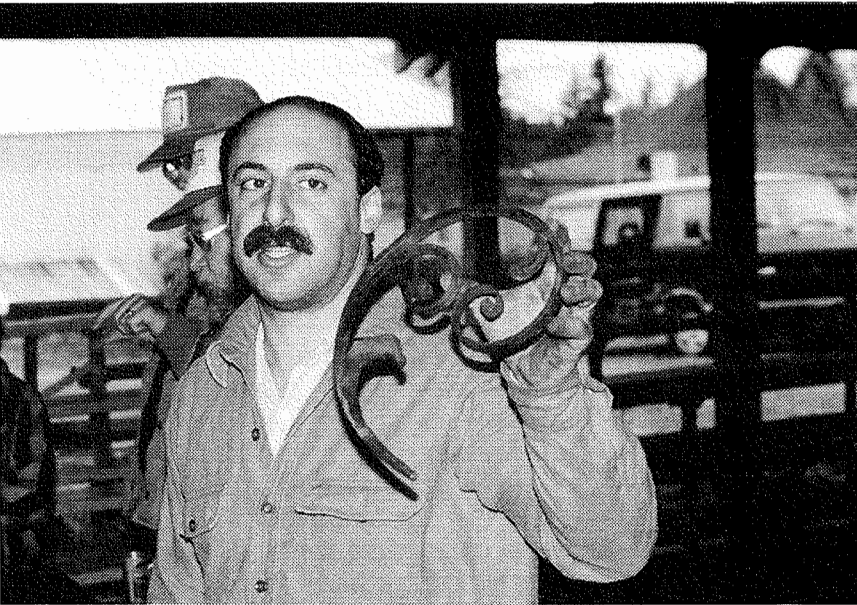


Metal Masher



Peter Ross Esquire

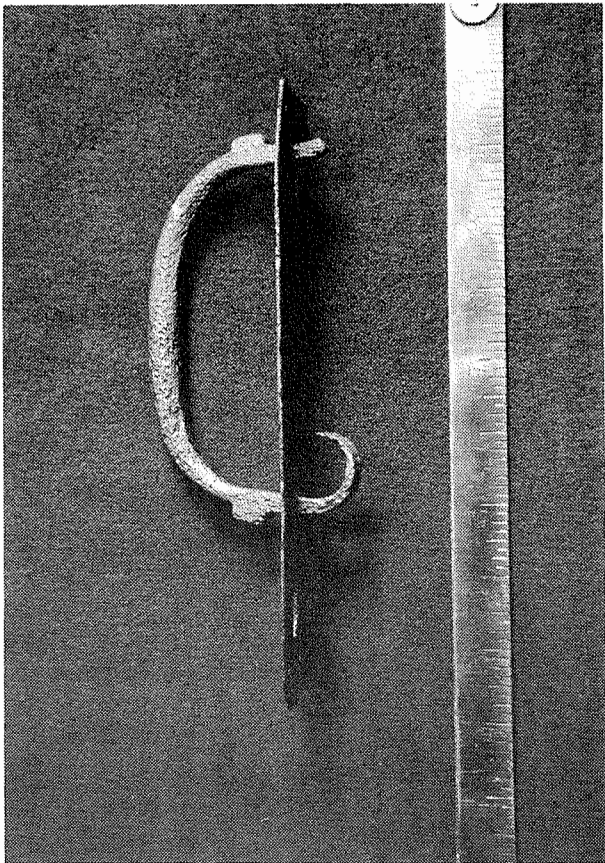
Fur Trade Era Beaver
Trap and Knife made
by Fiddlin' Red



Peter Ross holding
Scroll Work



Door Pull Artifact -
Ft. Vancouver Collection



Thoughts from the Mythical State of Jefferson

By Al Bart

The letter of J.T. Simmons in the last issue brings out many thoughts that I and many others have had for years. Raffi Bedyan, editor of the CBA Newsletter, asked me years ago how we could tell who was a "Master" smith. It seems that a few smiths would write and ask him to put notices in the Newsletter about classes they were starting and claiming to be "Master" smiths. Raffi, in turn, would call me and ask my opinion, since I knew some. One in particular didn't know how to build a fire and couldn't weld. How could anyone who couldn't weld be even called a journeyman? Since Raffi refused to print the title, it caused some hard feelings.

Here, let me explain. No one took the title "Master". This was a title given to you by your peers, that is someone who had as much or more experience than you did. Bob Thomson of the CBA has been trying to start some way in which smiths could be placed in some kind of category. So far, nothing is set hard and fast. Bob is trying to get some kind of consensus on this.

Now I would like to give some of my experiences and knowledge I picked up along the way. When an apprentice had served his four years properly and honorably some were given a letter to that effect, others were given a card, and some were simply kicked out the door, because now as a full-fledged journeyman they were to be paid wages. In my case, I received nothing because feelings were strained, however we later became good friends again. I had left for a job that paid me almost twice as much.

When I reached close to retirement age, I thought I would get a lighter job and not

have to handle heavy steel as I had in the mills. Mills were in the process of phasing out burners, putting in chippers and slabbers to conserve the waste wood. I took a job in a small engine repair shop handling lawn mowers, rototillers, chain saws, generators and outboard motors. The owner hired a young man, very friendly and likeable, 23 years old. The owner asked me to teach him how to repair the machines. The next day the young man came to me and said he had a problem with the carburetor. I told him to get the manual, go into the back room and read the section on carburetors and come back and ask questions on what he didn't understand. He came back half an hour later and said he couldn't read. Here I told him to stand by my bench, since I had work to do, and read out loud and I would help with the words he didn't understand. He couldn't read a single word, not a word. I asked how did you get a high school diploma. It seems he was the star pitcher and the star quarterback and the girls flocked around him and did his homework. I exploded and told him to get those girls and have them come there and do his work for him. He went crying to the owner and said I wouldn't help. The owner came out and asked what happened and told him I gave him the book and had him read. The owner had to let him go.

One more case, those who follow football know who Dexter Manley is. He was standing on the sidelines when Joe Theisman broke his leg. Dexter thought if that were to happen to me what would I do. It's to his credit that on Tuesday he walked into the library and said "I need help". Tests showed that he had a second grade reading

level. Yet he had a college diploma and was making \$600,000 a year. The last information I have is he has now reached a ninth grade reading level. I cite these two cases to show the worth of a piece of paper.

Now to go back to my youth. You were not asked for papers, or your age, if you could do the job you were treated like a man. At the age of fifteen I was driving six head of horses, when prohibition ended, they didn't ask how old you were, if you were doing a man's work, you were allowed to drink. In other words it was ability that counted. If you did a man's work then you were treated like a man.

Old time blacksmiths used to tell me that when smiths walked into a shop and asked for a job, the owner would tell him to light a fire in the extra forge. It was how he would prepare and light the fire and coke up some extra coke to help carry out any work. If the fire had been properly build and prepared no words were exchanged, the owner simply dropped some work by the forge and the smith knew he was hired. If the fire was not built and cared for properly, the owner would simply say "I can't use you". No papers would help, it was ability that counted.

I have much more to say, but I feel it would make one article too long. I give this much so other smiths could get some idea of what can or should be done. I will write another article completing my trend of thoughts.

* * * * *

**IF YOU HAVEN'T GOT THE TIME TO
DO IT RIGHT - WHEN WILL YOU HAVE
THE TIME TO DO IT OVER!**

PROPANE/ACETYLENE SAFETY

If you are unfamiliar with the properties of propane and acetylene gases and the proper use of the tanks for each, you should contact your gas supplier to get the info you need to use, store, and transport these gases safely. Each has different properties, tanks, and safety precautions.

A propane flash fire can burn you severely. A tank explosion can be deadly.

Acetylene is unstable at high pressures. It is mixed with acetone in the tank to keep it stable. If an acetylene tank detonates, very little is left of a vehicle or building.

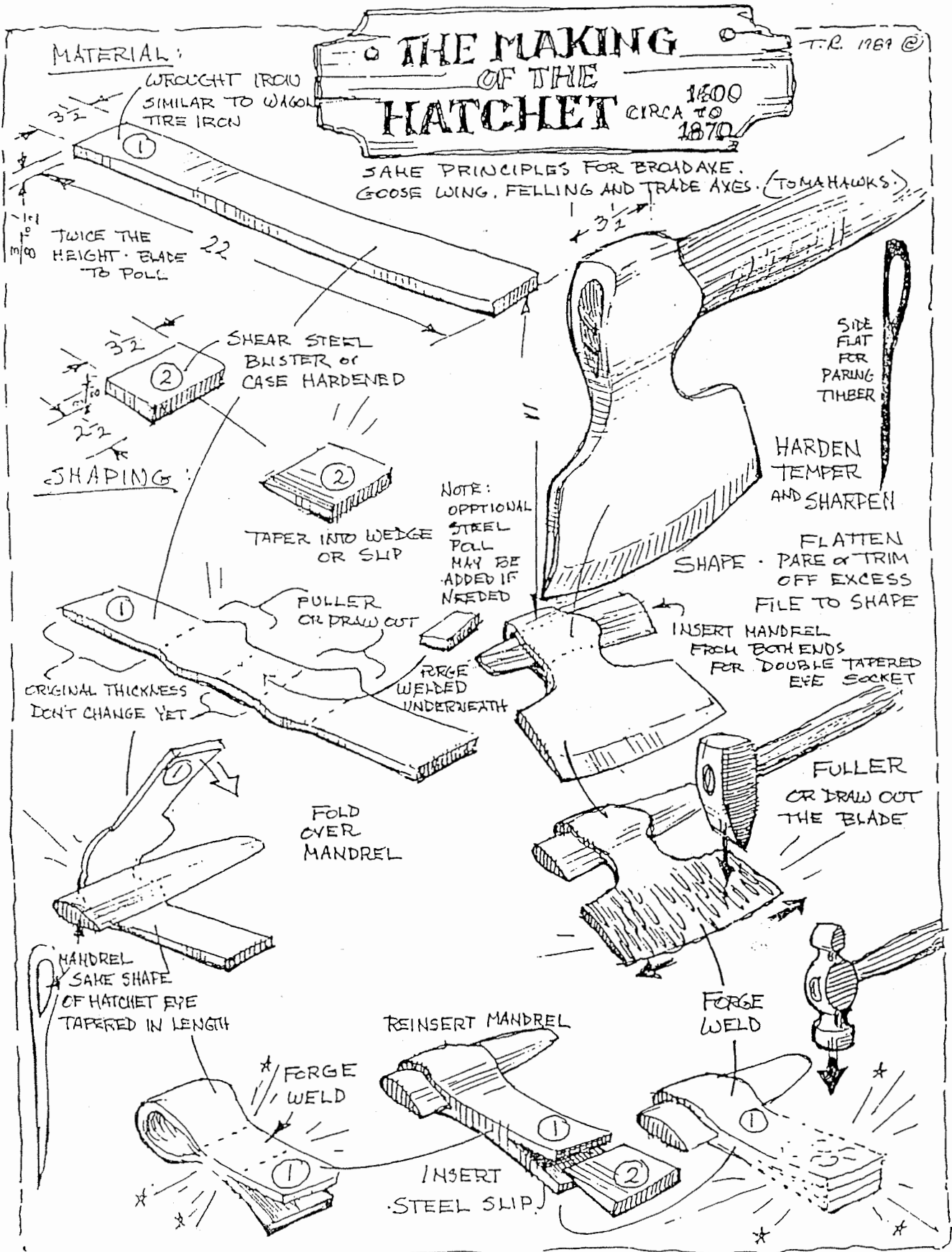
Don't stick an acetylene or propane tank in your car trunk and have members of your family ride with you. Don't place tanks in your pickup bed and let them roll around as you drive. Make sturdy racks for your pickup so that tanks are transported in an upright position and are chained so that they can't fall over.

Farriers should buy special motor fuel propane bottles that are mounted underneath truck bodies where they can be vented. Motor fuel bottles are available in various sizes and shapes to fit all trucks.

Time and money spent on gas safety is well spent. Medical bills for burn victims are high, and much time is lost in hospitalization and rehabilitation. Make gas safety a top priority.

Get to know the gases you use. Understand how your tanks, regulators, torches, and forges work. Replace old, faulty, broken, or damaged gas equipment before they damage you.

--taken from the Blacksmith Guild of the Potomac, Inc.



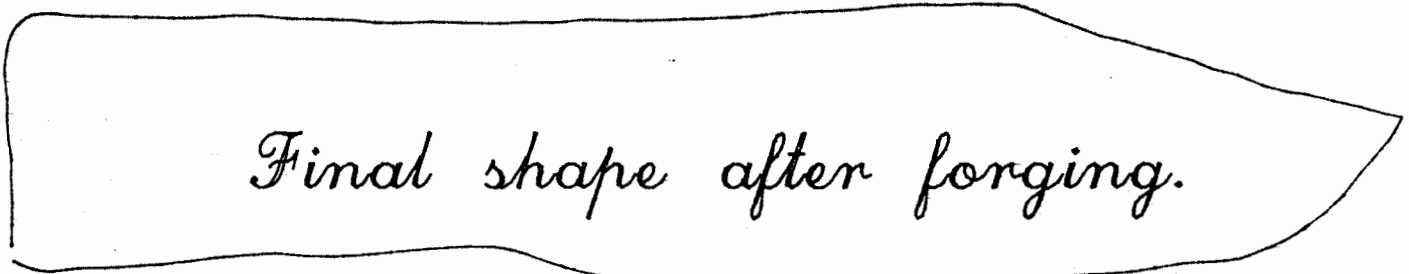
Board Meeting Notes

Submitted by Ike Bay

Meeting called to order by Smokey, Grant, Ike, Kent, Tom, Mike in attendance, along with Linda Owens, New Hot Iron News editor. Several members visited part or all of the meeting, and they were encouraged to participate where appropriate.

1. By laws, the board reviewed material submitted by the president. Discussion of several issues took place. Moved and passed to present the ascended draft by laws to the membership for voting. There is a legal question relative to proxies, and Ike will get a legal opinion on it. Secretary will do a side by side old vs new write up of the by laws so the members can make a informed vote.
2. Non-profit status - the state of Washington recognizes us, and we now need to work on the Feds and the IRS.
3. Will open the nominations for up coming openings on the board at the evening meal.
4. Open forges. Smokey, Bill, Carol, Ike (fall), Berkley tasck (ask), Kent are interested, and we are looking for others.
5. Board members are going to continue to help get articles written for the news letter...Joe Elliott on a special hardie tool, Holtbe has some material. Other suggestions are being perused.
6. Do we pay for photos in the Hot Iron News? After much discussion, the issue was tabled.
7. Grant and Ike will work together perusing some possibilities with the city of Tacoma, and its Blacksmith shop. This is also part of Grant working on some possibilities of a permanent site (home for the Organization). The St. Helens site was felt to be great, and the secretary was asked to make note of Jerry Hendersons work in getting this site for us in the minutes.
8. Items 8 and 9 are covered in a separate memo as the board moved into executive session to deal with them.
10. Grant - 100 pieces of 7/8 hex 6-8 inches long tool steel the association to buy and resale for a slight profit, as the s-blanks are all sold.
11. Sales tax - still an open item and further research is being done.
12. Tom will research our insurance about coverage and what the specifics are.

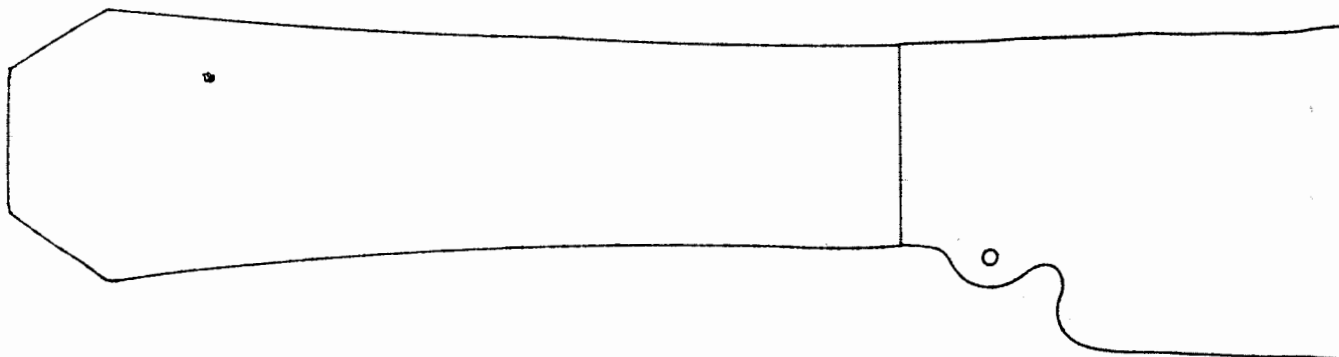
FIDDLE'N RED'S



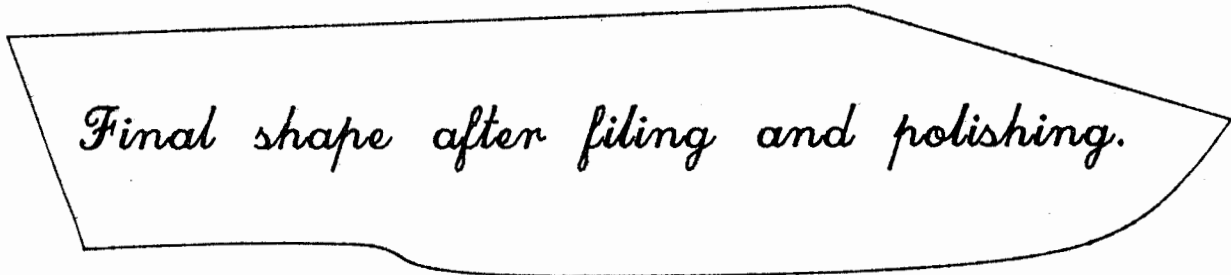
Final shape after forging.

The smaller knife was made by Red at our Spring conference at St. Helens, OR. Two well-placed rivets securely fastened the blade to the deer antler that was split using a hacksaw. This blade is about $3/16$ " thick and was made from some shear steel.

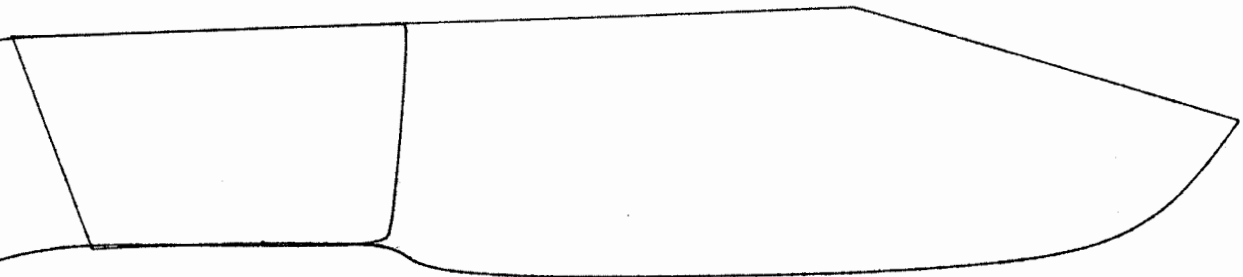
The large knife is a copy Red made of an original trapper's knife. Its blade is $1/4$ " thick, with the handle having an almost rectangular cross-section.



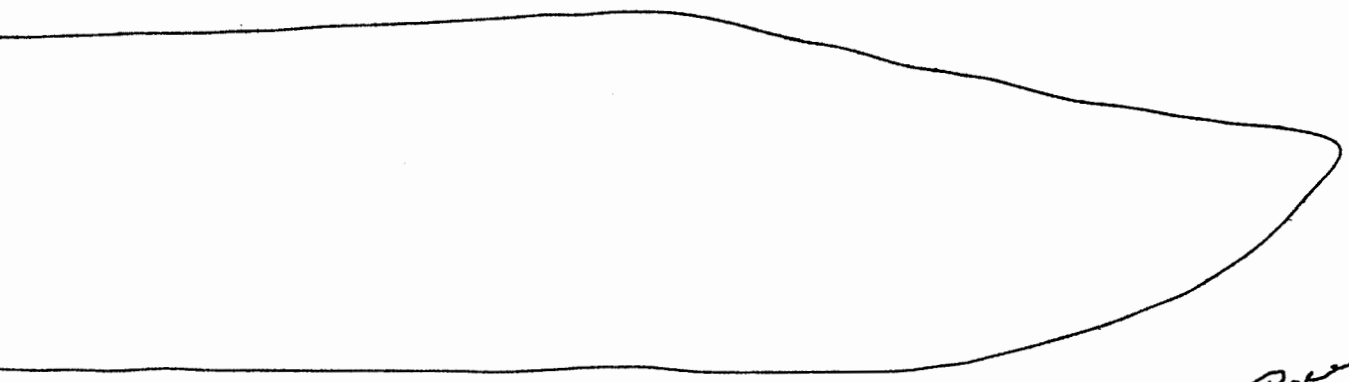
KNIVES



Final shape after filing and polishing.



Blade fitted into a deerhorn handle.



Rose

PAUL HIND'S MINI-METAL MOVER

By Gary Hart

Drawing and observations made of Paul Hinds Hammer as seen at the 1991 N.W.B.A. spring conference in St. Helens, Oregon.

Paul Hinds built this power hammer about 5 years ago using only a cutting torch, 3/8 inch electric hand drill and the electric welder he had built earlier.

Notice of disclaimer

Neither the builder nor the author are a professional engineer nor have they had formal training in the design or operation of this project. Since we are not professionals in this field, there may well be dangers not explained in the building and operation of this project.

The builder, the author and the N.W.B.A hereby disclaims any liability for injury to persons or property that may result while building or using the Mini-Metal Mover.

No electrical wiring is shown in these drawings. All that is needed is proper grounding, proper power supply to your motor and a on/off switch. Paul had his on/off switch located on the guard screen in front.

Some other parts may have been left off for simplicity in showing the workings or by the authors ignorance, I've had no training in making drawings. Some changes wre made to show how Paul Hines would do it if he was to do it again.

Stepping on the foot control tilts the motor rearward causing the v-belt to tighten and start into motion the flat bottomed flywheel. There is an adjustable flat bar under the v-belt near the motor, Visible in the left side view. When adjusted this prevents the belt from falling and grabbing in the v-grooved pulley. This will give a smooth action to this simple clutch system.

The flywheel is fabricated from a 16" diameter circle of 1/4" plate. A 1/2 x 1" flat bar rolled into a 15" diameter ring with the 1" surface making the belt surface. A ring cut from 1/4" plate with a 16" O.D. and a 14 1/2" I.D. These are welded together to make the flywheel.

The Flywheel must turn in the proper direction. That is the crank (bearing inside the hammer arm) should be on the long axis, closest to the front, when lifting (power stroke) and on the short axis, closest to rear, when driving the hammer

down. this will give a good snap to the hammer.

The center of the 2 3/4" bearing (crank) that drives the hammer arm is about 2 3/4" from the center of the flywheel. This bearing is mounted onto a U shaped piece of flat bar about 1/2 x 2 1/2" with about 2" legs that are welded to the flywheel. The bearing bolt mounting hole has a slot about 1 1/2" long to allow for some adjustment. Use a grade 8 or f9 11 bolt of 5/8" diameter or bigger for attaching this bearing.

Paul Hinds said, he designed the hammer arm to be light and still maintain enough strength. Excess weight in the hammer arm is not needed as it is the speed and hammer arm stroke length that delivers power to the hammer with a snap.

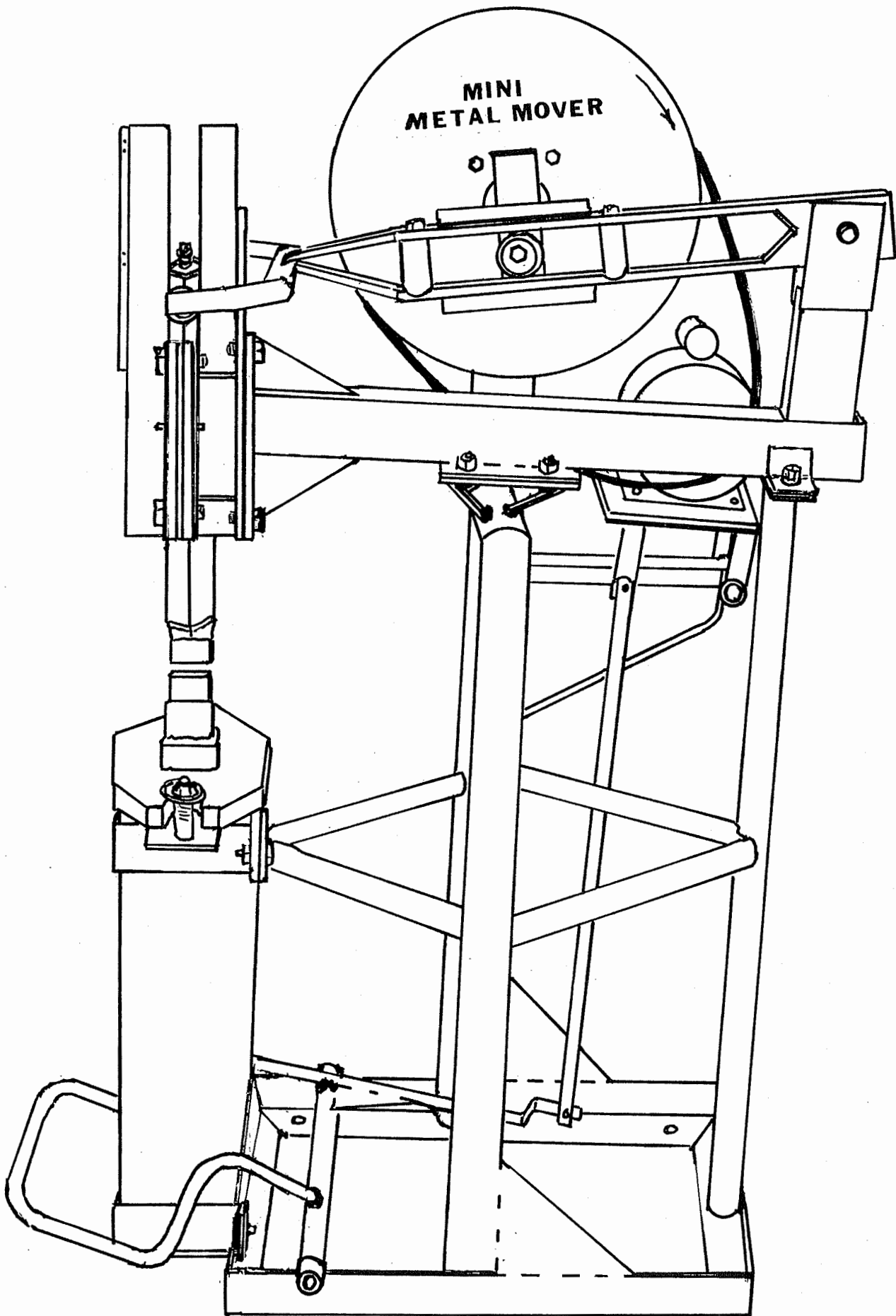
The length of the hammer arm from the pivot point to the center of the hammer is 28". The distance inside of the arms where the springs attach is 17". The hammer arm is fabricated from 1/4 x 1 1/2" flat bar, on the long lengths. 3/8 x 1" flat bar, on edge, is welded to the 1 1/2" flat bar in the area where the bearing pushes. Pipe is used with thru bolts to box the area in for further strength. The 1 1/2" flat bar is welded to the center of a 12" piece of heavy wall pipe. To the ends of this pipe are welded 3/8 x 1" flat bar. 2 tabs are welded on the inside of these from which the hammer springs are attached.

Be aware that the height of the anvil in relation to the hammer determines the travel of the hammer. You want about 1/2" or more clearance before the spring clevises meet the bottom of the groove in the hammer housing assembly. This will be necessary to remember if you build extra anvils.

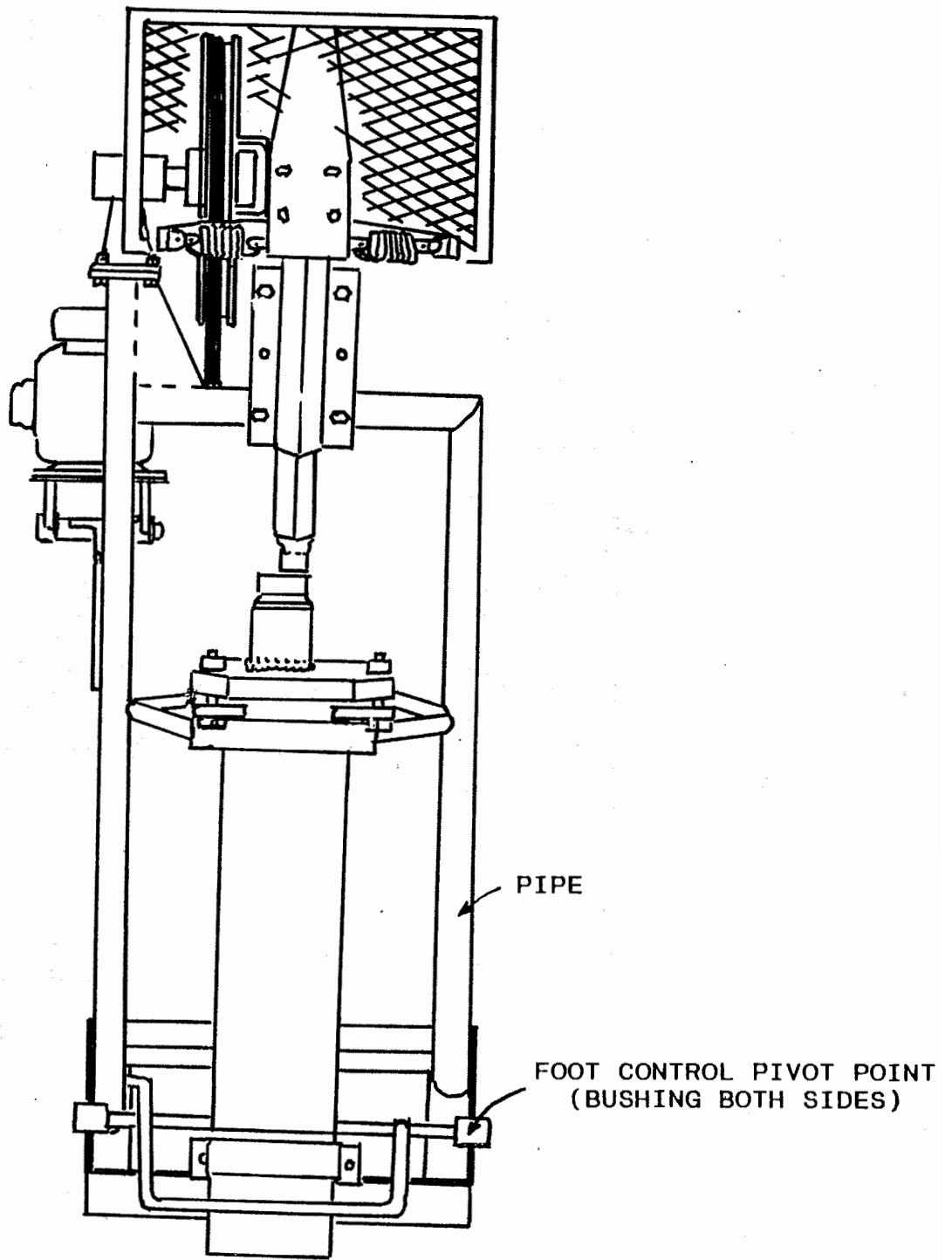
Determine the anvil height you want, distance from the ground to top of anvil, what is comfortable for you and your use.

The operator is protected from the moving hammer arm by a guard. The guard has an angle iron frame work that wraps around the sides about a foot. A mounting plate is welded to this frame work for easy guard removal. This frame work is covered with expanded metal.

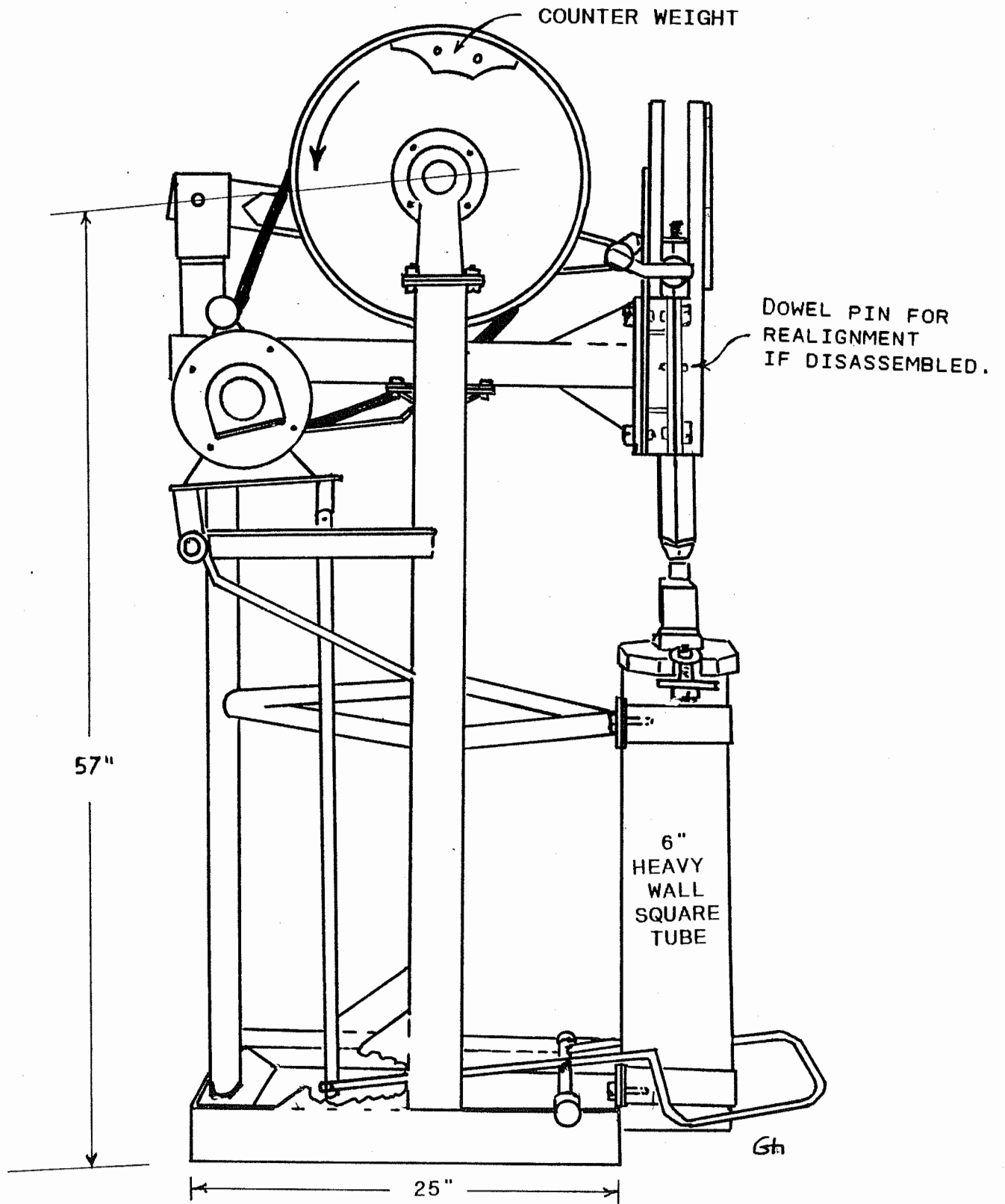
Bearing for the sliding hammer is poured babbitt. First the inside surfaces of the angle iron should be cleaned good, a weld grinder would work good here. Then this area where the babbitt will be is tinned with solder. The hammer is coated with a film of oil or grease. The hammer housing is assembled with shims and 1/8" spacer in place. The hammer is blocked in placed and plugged so no babbitt will run out when poured. Babbitt has the advantage of no correction is needed for warpage in the angle iron from the welding. Brass or teflon strips fastened to the angle iron could be another option.



RIGHT SIDE



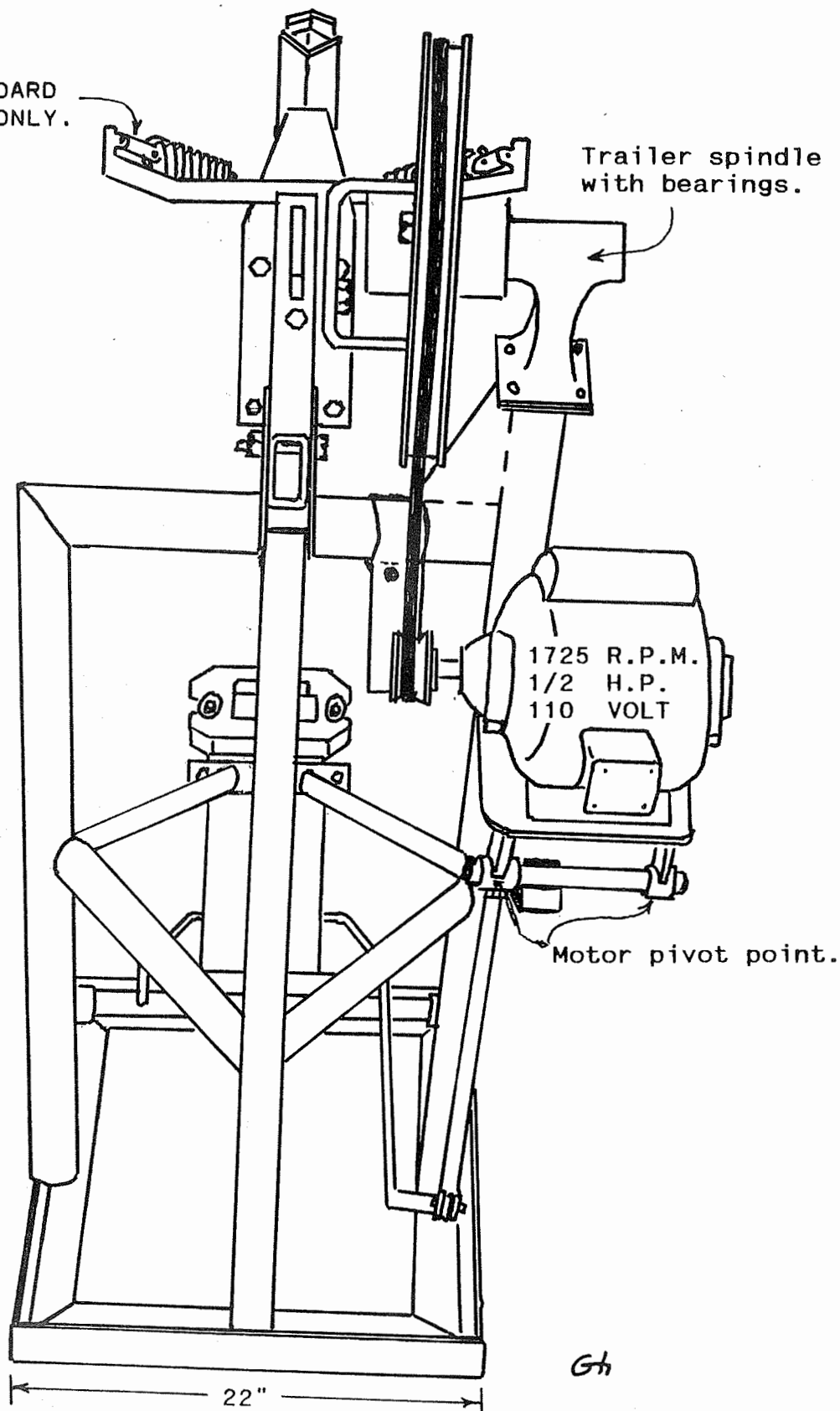
FRONT VIEW



LEFT SIDE

LINKAGE ON OUTBOARD
SIDE OF SPRING ONLY.

Trailer spindle
with bearings.



1725 R.P.M.
1/2 H.P.
110 VOLT

Motor pivot point.

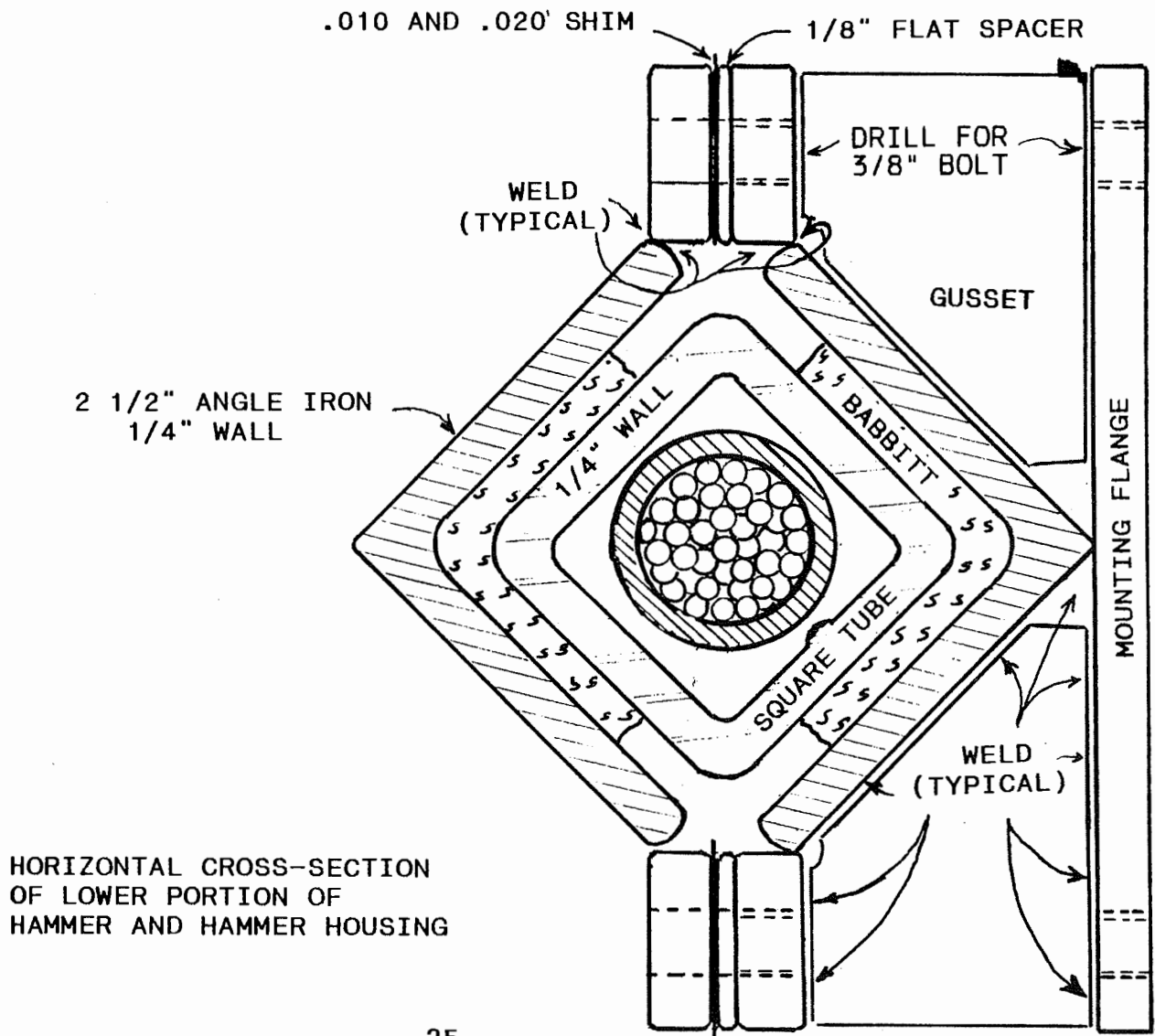
22"

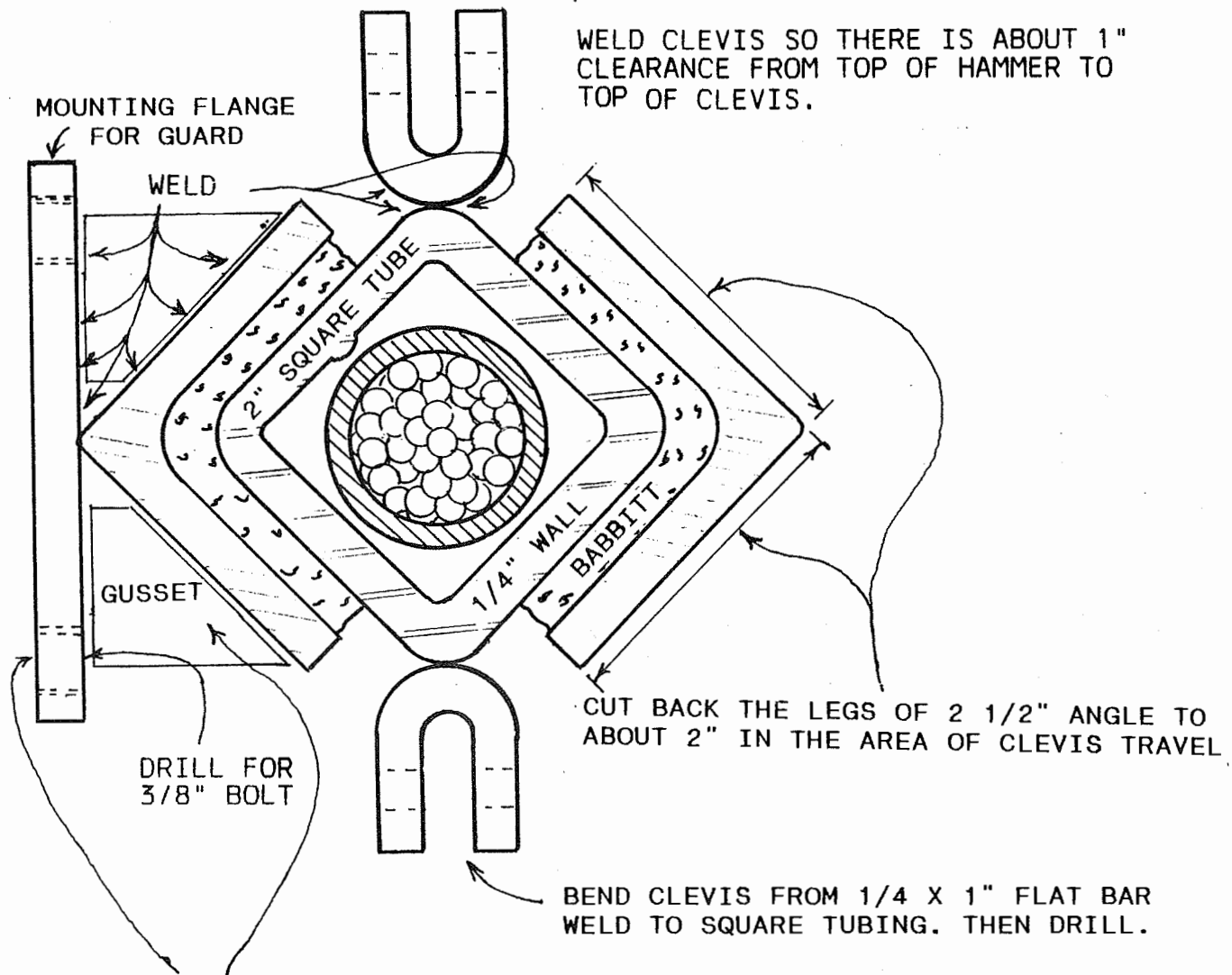
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VIEW FROM BACK

* THE GUSSETS, SHOWN IN UPPER AND LOWER HAMMER AND HOUSING CROSS-SECTIONS, ARE ON A DIFFERANT PLANE THEN BOLT HOLES.

FOR MORE INFO ON BABBITTING SEE THE MAGAZINE FINE WOODWORKING JAN/FEB 1983 ISSUE PAGE 73. (AVAILABLE FROM MOST LIBRARIES)





THE GUSSETS ARE ON A DIFFERENT PLANE THEN BOLT HOLES.

BUSHINGS MADE FROM RINGS OF 1/2" WATER PIPE ARE PLACED BETWEEN SPRING EYE AND SPRING RETAINING PIN TO DISTRIBUTE THE AREA OF CONTACT, REDUCES WEAR.

HORIZONTAL CROSS-SECTION OF UPPER PORTION OF HAMMER AND HOUSING

NUT
 HEAVY COMPRESSION SPRING
 1/2" N.C.
 GRADE 8 OR BETTER BOLT

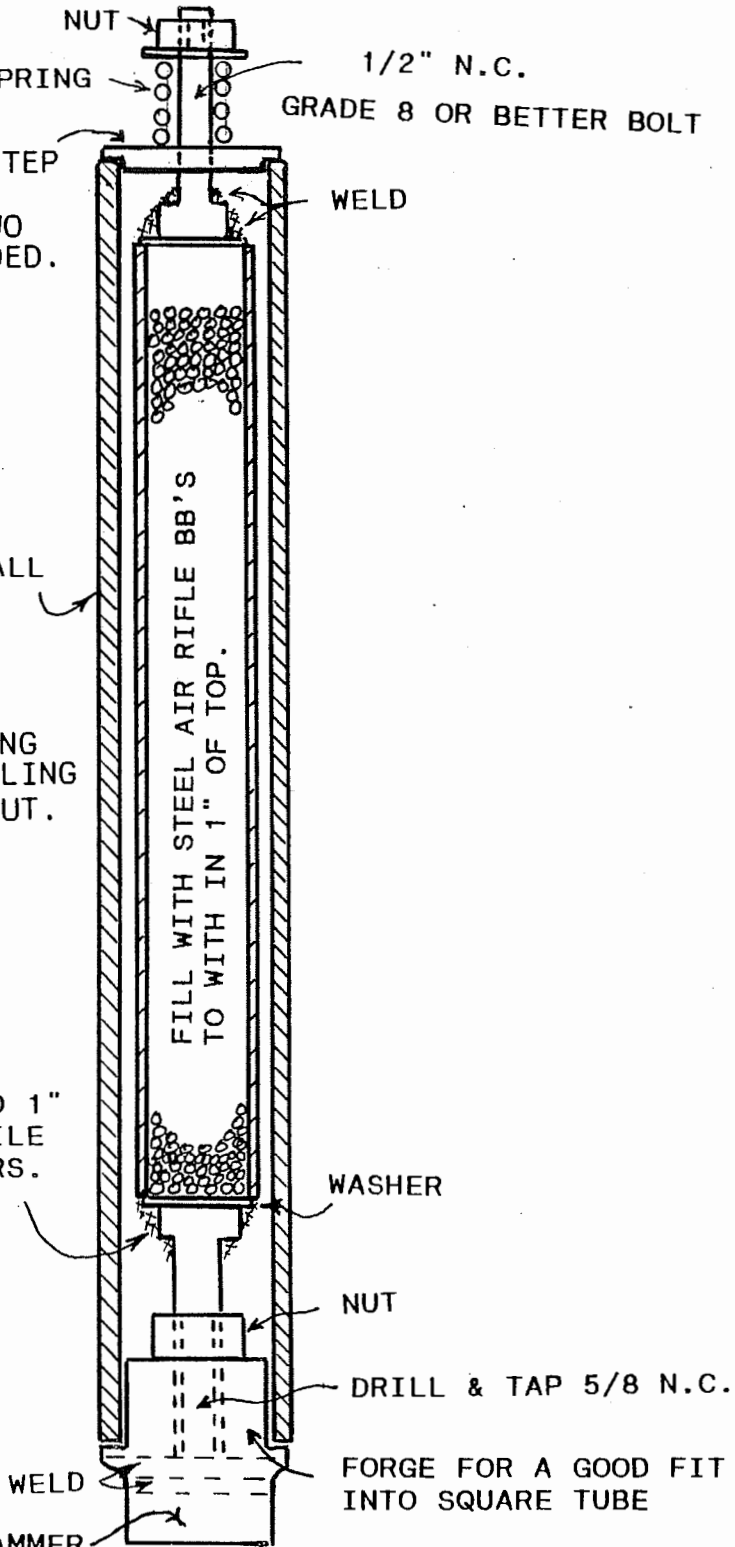
SQUARE WASHER WITH SQUARE STEP TO FIT INSIDE SQUARE TUBE. COULD BE FABRICATED FROM TWO SQUARE PIECES AND PLUG WELDED.

2" SQUARE TUBE WITH 1/4" WALL

BB'S CAN BE ADDED AFTER WELDING BY DRILLING HOLE IN PIPE, FILLING AND THEN PLUG WELDING HOLE SHUT.

WELD BOLT AND WASHER TO 1" WATER PIPE, GRIND OR FILE RADIUS, NO SHARP CORNERS.

USE SUITABLE STEEL FOR HAMMER



VERTICAL CROSS-SECTION

HAMMER ASSEMBLY

Gh

ABANA

Artist-Blacksmiths' Association of North America



P.O. Box 1181, Nashville, Indiana 47448
Executive Secretary, Janelle Gilbert

Office Hours: 7:30-11:30am & 1:30-4:30pm
Phone: (812) 988-6919

PRESIDENT'S MESSAGE June 1991

Dear Friends,

Thanks for the calls and letters concerning the fire here at our homestead! Indeed, I am fine now, and except for the black spots on the walls and the burned carpets, you would never know anything happened.

VisionGroup International Post Office Box 27524 Tempe, Az 85285, is considering a television series on Blacksmithing. It will be a little like This Old House, but about blacksmithing. Your Chapter will be hearing from Eric Sperstad in the near future regarding this excellent opportunity for advancement of the trade. At the moment, the prime concern is in funding. Mr Sperstad will be sending each chapter a detailed proposal and will probably be seeking chapter support as well as individual support for this idea. Please watch for his mailing and contribute in any way that you can.

The Atlanta Historical Society of Atlanta, Georgia is in the process of building a new museum. Within this project is to be a memorial to Alex Bealer, one of the founders of ABANA. At this time they are in the process of preparing a design concept for the memorial that can incorporate as many of us as we wish to participate. We all remember the combined effort for the beautiful gates at the National Ornamental Metals Museum, and although this may not be a gate, the idea is the same. I will keep you as informed as possible so that everyone is given the opportunity to contribute and in our own way, forge a lasting and fitting memorial to a truly wonderful man.

PLEASE SEND YOUR NOMINATIONS FOR THE ABANA BOARD OF DIRECTORS ELECTION A.S.A.P. We have not received any nominations at the time of this mailing. The deadline for nominations to stay on schedule is (noted in Spring issue of The Anvil's Ring) June 15, 1991.

Directors who are leaving are as follows:

Ward Bringegar - Chairman of the Chapter Liaison Committee, member of the Canadian Liaison Committee, and member of the Conference Planning Committee.

Randy Calhoun - Member of Conference Planning Committee, member of the Library Committee, and member of the Chapter Liaison Committee.

Bill Callaway - Treasurer, member of the Election & Nominating Committee, member of Long Term Planning Committee, member of Conference Planning Committee, and member of the Finance/Audit Committee.

David Norrie - Chairman of the Canadian Liaison Committee, member of the Library Committee, and member of the Membership Committee.

Mark Smith - Member of the Anvil's Ring Committee, member of the Conference Planning Committee, and member of the Chapter Liaison Committee.

We are looking for those of you who would like to work on the ABANA Board of Directors and serve on committees. Please contact the ABANA Office if you have someone in mind but don't know the details of making the nomination.

Warm regards,

Dorothy Stegler
ABANA President

DES/jrf

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PRESIDENT'S MESSAGE May 1991

What a Spring! I want to apologize for not corresponding with you last month. The kerosene heater in our living room blew up and I had my hands pretty full getting the fire out before we lost more than the carpet and drapes. I managed to get the darn thing outside mid full blaze and sustained only 2nd degree burns on my hands and lost about 4 inches off my hair. Fortunately, it was the bottom 4 inches instead of the top 4! I was down for about two and a half weeks, but I'm up and running fine now.

I want to remind everyone to get your signatures in to our main office by June 15 for the upcoming Board of Directors Election. You will need 10 signatures of ABANA members in good standing to qualify for nomination. You are going to want to send a snapshot of yourself, and a short paragraph telling why you want to run for the Board. You might want to include a notation on what you feel you can contribute to the organization in the way of service. If someone doesn't recognize your name or face, they will be looking to that statement when they vote.

We have just received the last of the slow mail from past Editor Al Anderson, so we can look forward to some of those great articles in print very soon. Thanks for the vote of confidence while we moved the Editor's Office.

I got a note from Ben Fenton of Wellsville, NY and he had submitted an article entitled "Blacksmiths as Artists", to the flight magazine that Delta Airlines publishes. He said that it had been accepted for the Sky Magazine, June issue. If any of you are flying DELTA in June, pick one up. I haven't actually seen the article, however I am confident that it will represent us well.

We are currently working on the Long Term Plan for ABANA. I am in hopes that some of you will have some suggestions in this direction. We are quite solvent at this time and we want to implement a good guide line for the organization to follow. If you have any suggestions, please mail them to the Chairman of the Long Term Planning Committee, Mark Smith, 185 E. Derry Road Apt A-1, Hershey, PA 17033. Something that I personally would like to see, is a bridge for the wide gap between those who call themselves Farriers and those who identify with the term Artists, and/or hobbyists craftsman. Any suggestions??

We are also putting together the next ABANA National Conference to be held in California during the summer of 1992. Have you any suggestions for who you want to see as demonstrators or lecturers? Any suggestions should be sent quickly to Chairman, Michael Bondi, 1818 Shore Street, Oakland, CA 94607.

Have a real great June and take time out to smell the flowers!

Warm regards,

Dorothy Stegler
President of ABANA

DES/jrf

North West Blacksmiths Club.

Dear Fellow Members,

Jerry Henderson called a few nights after the spring conference and told me a most joyous bit of news. I couldn't have been more

surprised when I heard, I had been awarded a pair of memberships by my peers in the N.W.B.S.A.

I deem this an honor, and I thank all of you for your thoughtfulness and generosity.

In my travels during demonstrations our N.W.B.S.A. members and magazine Hot Iron News have brought a most favorable response from other local groups.

We have a very good organization here in the Northwest and it is my hope that this desire for excellence will continue to be.

Again I thank you all for this award, I remain,

Most Sincerely Yours,

Nahum Peterson
"Grandpa"



I'm very grape-ful!



Northwest Blacksmith's Association

P.O. Box 81041

Seattle, WA 98108

PRELIMINARY
TREASURER'S REPORT FOR SPRING '91 CONFERENCE

CREDITS		DEBITS	
ATTENDANCE FEES *	2730.00	FAIRGROUNDS RENTAL	260.00
AUCTION	1992.75	DEMONSTRATOR FEES	700.00
BOOK SALES	690.00	TRAVEL EXPENSES (DEMONSTRATORS)	300.00 120.00
		FOOD - CHICKEN	129.56
		FOOD - MISC.	98.30
		CHARCOAL	15.00
		VIDEO TAPE	14.67
		BOOKS	575.00
TOTAL CREDITS	5412.75	TOTAL EXPENSES	2212.53
CURRENT BALANCE (4-30-91)		8634.63	

* TOTAL ATTENDANCE 108
MEMBERS ATTENDANCE 78
ABAWA MEMBERS 19

AN EXCEPTIONAL SPRING CONFERENCE DUE TO GOOD MEMBER SUPPORT, AND EXCELLENT COOPERATION BETWEEN NWBA, FORT VANCOUVER SMITHS AND COLUMBIA COUNTY FAIRGROUNDS

John [Signature]
TREASURER

CALENDAR OF EVENTS

- July 6-9:** Calgary Stampede World Championship Blacksmithing Contest in Calgary, Alberta, Canada. 800-661-1260. Large prize money given to farrier competition winners.
- August 3,4:** Open Forge, Bill Carrell, Hobart, WA. (206)432-0503.
- Sept. 7,8:** 1991 Annual Wrought Iron Conference sponsored by the Mid Atlantic Smiths and the Delaware Agricultural Museum, 866 N. DuPont Hwy., Dover, Delaware 19901.
- Sept. 28,29:** 1991 Quad-State Roundup at the Studebaker Homestead, Tipp City, Ohio. This is probably the biggest and best annual conference in the country.
- Dec.12:** Entry deadline for the national open media competition, "Everything But the Kitchen Sink: Artists and the Kitchen, New Forms, New Functions". Sponsored by the Arrowmont School of Arts/Crafts, Gatlinburg, TN. Contact Cynthia Huff, (615)436-5860.

****DEADLINE FOR NEXT INFORMATIONAL UPDATE - JULY 15****

-----cut and mail to:-----
NORTHWEST BLACKSMITH ASSOCIATION
C/O TOM GRAHAM, TREASURER
PO BOX 81041, SEATTLE, WA 98108

Membership Application: _____New _____Renewal (New Address?)

Annual dues are \$15 and include a subscription to Hot Iron News. Please make your check to NWBA and mail it to the above address.

Date: _____

Name: _____

Firm: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: (_____) _____

BLACKSMITHING SCHOOLS AND CLASSES

(From the Newsletter of the Blacksmith Guild of the Potomac)

Arromont School of Arts & Crafts
Sandy Bain, Director
P.O. Box 567
Gatlinburg, TN 37738
(615)436-5860

Anderson Ranch
Brad Miller, Director
Box 5598
Snowmass Village, CO 81615
(303)923-3181

Art League School
Gerri Gordon, Director
105 N. Union Street
Arlington, VA 22314
(703)683-2323

Brookfield Craft Center
Jack Russel, Director
P.O. Box 122, Rt. 25
Brookfield, CT 06804

Cedar Lakes Craft Center
Tim Pyles, Director
Ripley, WV
(304)372-7005

Cranbrook Academy of Art
Roy Flade, President
500 Lone Pine Rd. Box 801
Bloomfield Hills, MI 48013
(313)645-3300

Glen Echo Park Classes
c/o National Park Service
7300 MacArthur Blvd.
Glen Echo, MD 20812
(301)492-6282

Haystack Mt. School of Crafts
Francis Merritt, Director
Deer Isle, ME 04627-0087
(207)348-2306

J. L. Evins Appalachian Craft Center
Alf Ward, Director
Rt. 3, Box 430
Smithville, TN 37166
(615) 597-6801

John C. Campbell Folk School
Ron Hill, Director
Brasstown, NC 28902
(704) 837-2775, 7329

Montgomery College
Rockville Campus, 51 Mannakee St.
Rockville, MD 20850
(301)279-5040

Penland School
Verne Stafford, Director
Penland, NC 28765
(704)765-2359

Center for Craftsmanship
Jim Bjornerud, Director
245 Tech Wing, Jarvis Hall, UW-Stout
Menomonie, WI 54751
(715)232-1102

Peters Valley Art Center
Matt Povse, Director
County Rte. 614
Layton, NJ 07851
(201)948-5200

Pioneer Crafts Council
Eleanor Molnar, Director
P.O. Box 2141
Uniontown, PA 15401
(412) 438-2811

Rhode Island School of Design
Providence, RI
(401) 331-3511

The School of Art, Southern Illinois
L. Brent Kingston, Director
University of Carbondale
Carbondale, IL 62901-4301
(618)453-4315

Southwest Craft Center
Ric Collier, Director
300 Augusta Street
San Antonio, TX 78205
(512) 224-1848

The University of the Arts
Peter Solmssen, President
Broad and Pine Streets
Philadelphia, PA 19102
(215)875-4808

Univ. of Washington, School of Art
320 Schmitz Hall
1400 Northeast Campus Pkwy
Seattle, WA 98195
(206) 543-0970

Washington University
School of Fine Arts
1 Brookings Drive
St. Louis, MO 63130
(314)991-2149

The Colorado Rky Mtn. School
Francis Whitaker, Master Smith
1493 County Road 106
Carbondale, CO 81623
(303)963-2562

Turley Forge
Frank Turley
Rt. 10, Box 88C
Santa Fe, NM 87501
(505)471-8608

Letter to the Editor:

Following is information about Francis Whitaker's school in Carbondale, CO at the Rocky Mountain school.. The reprint is from the Rocky Mountain Smith's Newsletter, editor Jim Fleming.

I did a demo at this school during a conference at Francis Shop, last August and the response was very rewarding.

I was surprised to see the extent of Francis' shop school. One of the pictures shows the three forges down one side of the shop, which are backed up by 3 more on the other side - all are arranged and tools in handy racks. It was very well laid out with plenty of lighting, lots of windows and well ventilated.

The other pictures are of the grand master himself.

When I arrived and as we were shaking hands I told Francis the nicest thing about this handshake was the fact we were still both here to greet each other and to enjoy the conference. (At our ages, we both are blessed with good health and are still working craftsmen.)

He stopped a moment, then smiled and agreed with what I had just said.

If you can put this article and pictures in the HIN perhaps it might prompt some of our young people to consider the Rocky Mountain School and Mr. Whitaker's shop.

Sincerely,

Grandpa
(N. Hersom)

*****Editor's Note:** Here 'tis,
Grandpa!

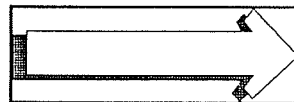
Whitaker Foundation Awards First Grant

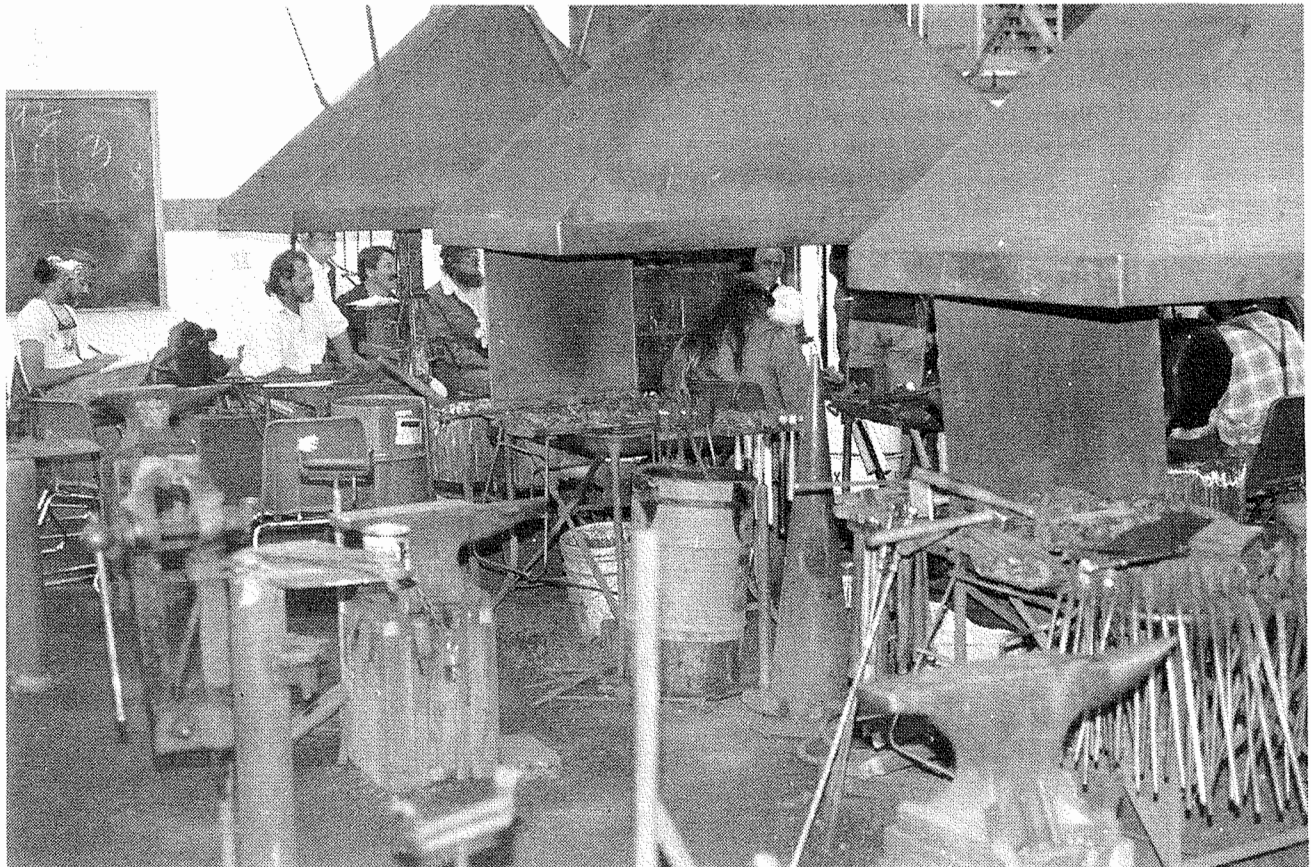
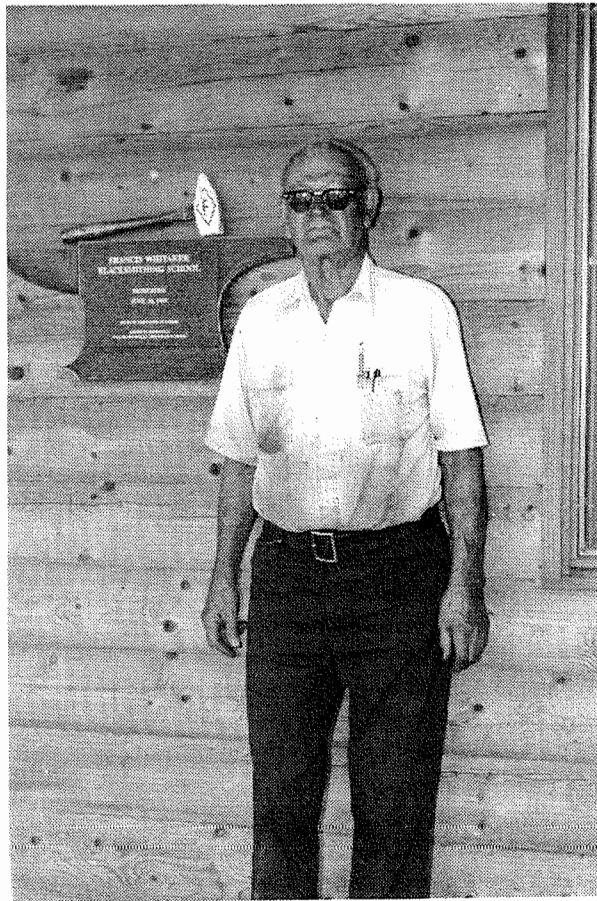
The Francis Whitaker Blacksmiths Educational Foundation 1990 grant went to student Ryan Johnson for a partial scholarship to The Colorado Rocky Mountain School in Carbondale, Colorado where he studies and assists Master Blacksmith Dr. Francis Whitaker in the Smithing department at the school. This grant was supported by a \$1000 donation by Rocky Mountain Smiths, and is the first official act of the new foundation.

It is a goal of the foundation to raise and invest 100K. To date over 35K have been permanently invested to generate grant funds of about 2K per year. As the principle increases this amount will increase.

To increase the principle the Foundation has arranged to sell an unusual and useful tool, the center dividing caliper. With this tool the center of bars, flats, and circles can be easily determined. There are only a few dozen of these tools, available from Francis Whitaker at the following address for \$31.50 ppd. Each sale will contribute \$10.00 to the Foundation principle and is a way for supporters to make a permanent contribution to the future of blacksmithing in America.

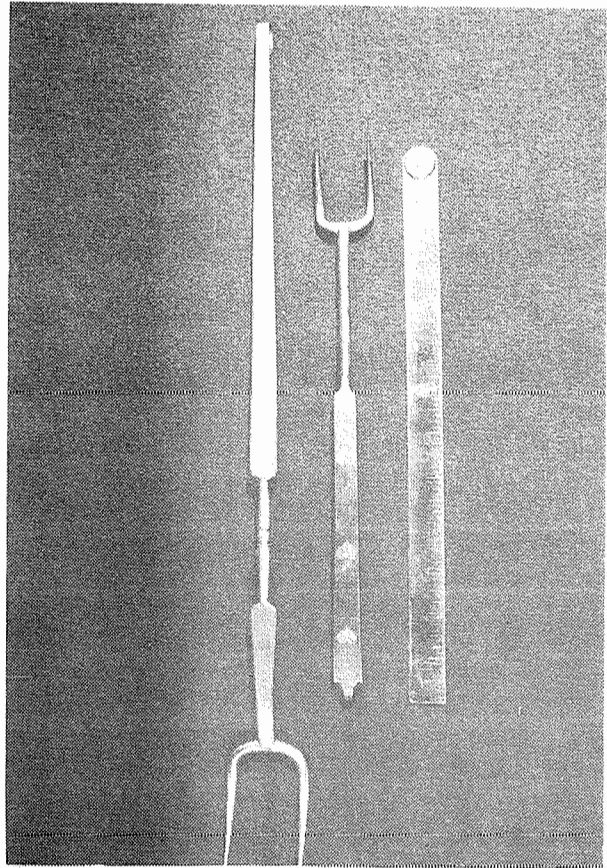
The Francis Whitaker Blacksmiths Educational Foundation is accepting applications for student and teaching scholarships; project funding for recording and archival preservation of blacksmithing exhibits, collections, and important specimens; and for seed monies for smithing workshops and seminars. Funding is for 1992 and applications are available from Francis Whitaker, Colorado Rocky Mountain School, 1493 Co. Rd. 106, Carbondale, Colo., 81623. Contributions to the Foundation are tax deductible.



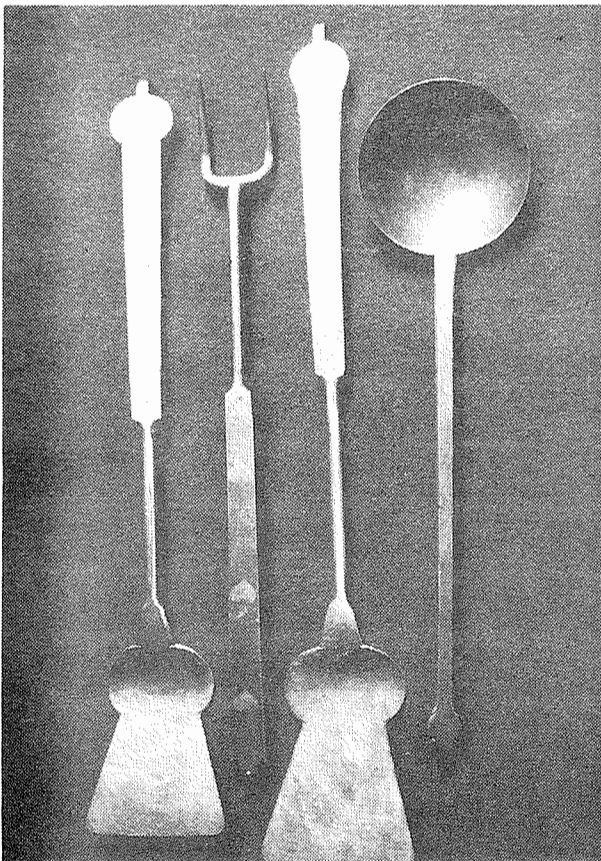




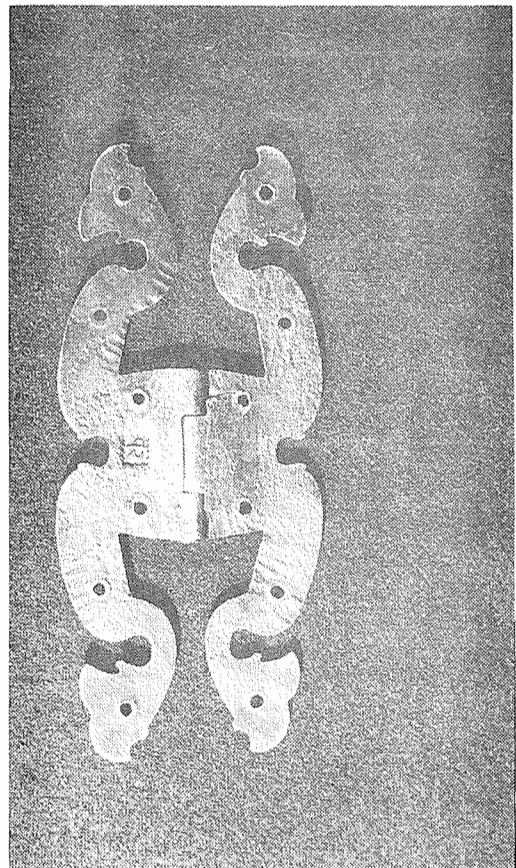
Laughin' and Stokin'



Forks come in all sizes.



Kitchen Items by Peter Ross



Cock's Head Hinge by Peter Ross

Classified Ads

FOR SALE:

** Buffalo 668 Forge (Coal) with recirculating hood, and hand blower 24"x36" table +100 lbs. coal \$275.

**Cincinnati-Bickford Radial-Arm Drill (39" arm, 4 MT Spindle) \$350.

**Gould-Eberhard 18" Shaper. Plain-table \$300. (Both machines for \$500.) Contact Tom Graham, 7545 45th NE, Seattle, WA 98115, 206/523-5334 (after 6:30 pm).

FOR SALE: 25# Little Giant /Single phase motor/Drawing and Flat dies. \$300. Contact Hugh Eddy, Caldwell, Idaho, 208/459-0536.

FOR SALE:

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**250 lb. Little Giant, excellent condition.

**25 lb. Champion.

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**Many misc. hammers, top, bottom, fullers, swages, tongs, etc. Contact Bill Workinger (503)935-4012.

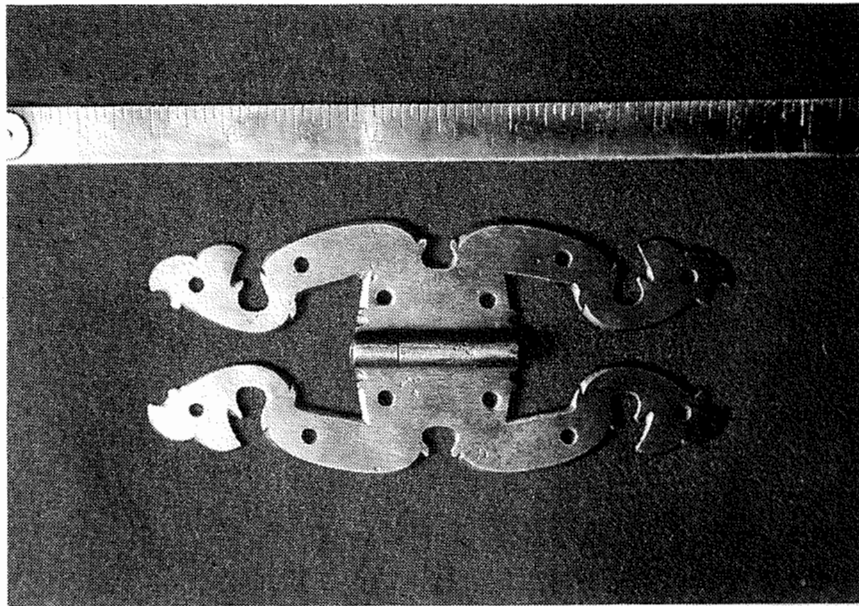


Jeff Holtby having a good time!



Eric Gripp Exhausted!

Back Cover: Backside of Cock's Head Hinge by Peter Ross



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