

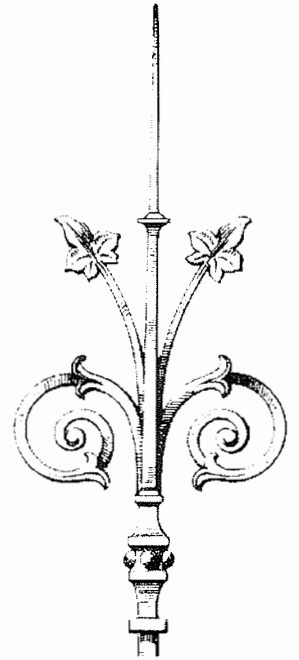
CHAPTER OF ABANA

Hot Iron News

Voice of the Northwest Blacksmith Association

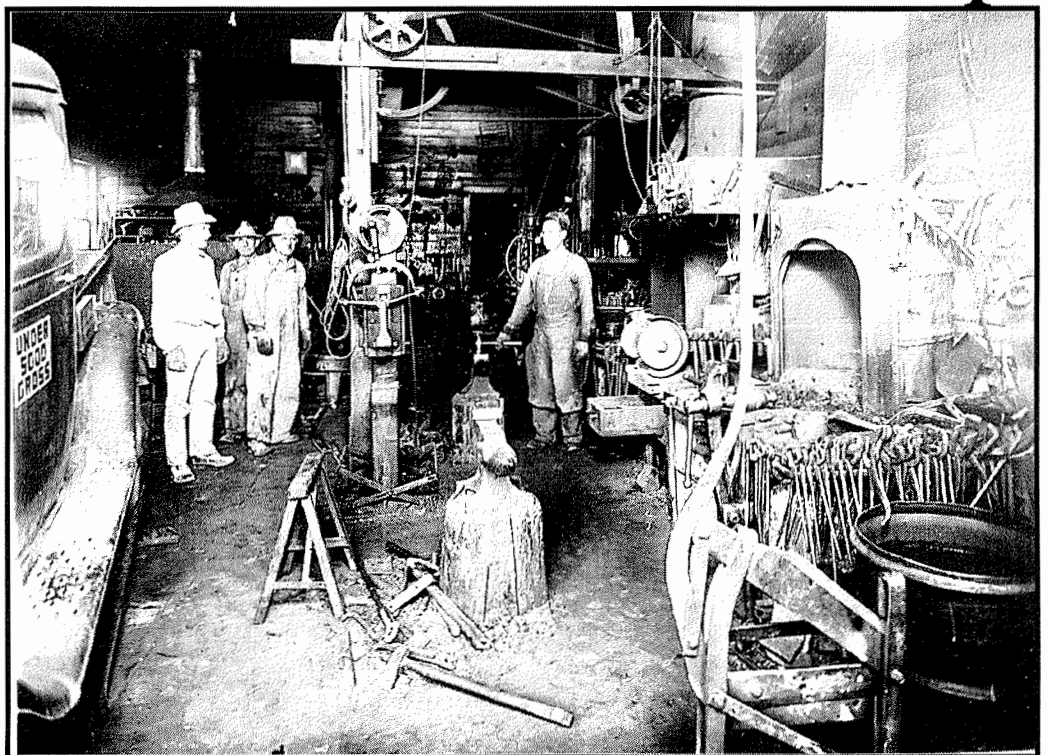
Summer 1996

\$4.00



R. G. Tuttle Blacksmith Shop

New
Plymouth
Idaho
1927





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Front cover- R.G. Tuttle blacksmith shop, New Plymouth, Idaho around 1927. The shear in the bottom picture foreground is still in use by Dave Clyde, the present owner of R.G.'s blacksmith shop.



N.W.B.A. OFFICERS AND BOARD MEMBERS 1995

Hot Iron News is the official quarterly publication of the Northwest Blacksmith's Association. Submission of materials for the magazine is eagerly encouraged and may be sent to the editor, Gene Chapman. Dead-line for submissions are February 15, May 15, August 15 and November 1. Other ABANA Chapters, blacksmith associations, and non-profit educational metals oriented groups have permission to reprint non-copyrighted materials 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, materials, tool design, use, etc., contained herein.

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From the President

Well, St. Helens is over . . . and the 100+ attendees had a grand time. The Grant Sarver/ Dave Brandon team excelled as expected. First time N.W.B.A. demonstrator, Paul Thorn, had the most attentive audience I have seen in a long time. Good going, guys! Everyone pitched in to help at one time or another, but recognition must be given to Vernell and Jerry Henderson and Berkley Tack for their extra effort. And to the Willamette Brewery for the donation of posters, t-shirts and generous libations! Our thanks!

Jerry Culberson entertained while extracting that extra dollar during the auction. The auction income really helps defray conference expenses and N.W.B.A.'s fiscal balance. The board initiated the practice of recognizing the donor of an auction item selling for \$250 or more and granting an additional one year paid-up membership to the donor. So gentlemen, and ladies, "Start Your Forges". Remember, bribing the auctioneer won't hurt either!

I have heard of quite a few members who will be in N.Y. for the A.B.A.N.A.'s biannual "Do". A not to be missed event if you can fit it into your calendar (and budget). Kudos to our own Dave Thompson, selected as one of the demonstrators.

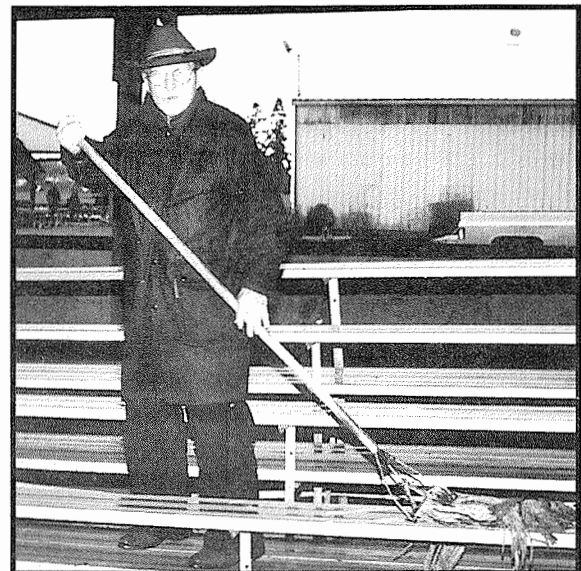
The membership information booklet accompanying your new membership list is a product of the fantastic continuing effort of Gene

Chapman. All those in favor, please say, HERE!, HERE!. We hope the booklet will supply answers to your questions or where to direct inquiries to get answers.

Ah, summertime approaches. The heat of the forge, the time for sharing while demonstrating at public events and fairs, and the thrill of knowing "My grandfather was a blacksmith. . . and I used to turn that. . . what you call it . . . thing for him."

Good pounding,

Don



NEW MEMBERS

Marcellus Angellford, Monmouth, OR
 Wade Colter, Colstrip, MT
 Raymond Coon, Gresham, OR
 Fred Demchuk, Maple Ridge, B.C.
 Elisa Eichhorst, Seattle, WA
 Clemans Hall, Seattle, WA
 Steve Johnson, Redmond, WA
 Larry J. Jones, Veneta, OR
 Randall Klein, Eugene, OR
 Michael Malaspina, Eastsound, WA
 Casey McKenna, Benton City, WA
 Jun Evidente, Vancouver WA
 Richard Tuthill, Portland OR

Mark A. Moshofsky, Portland, OR
 Gaetan C. Myre, Surrey, B.C
 David Nicholson, Montague, CA
 Bruce Niendorf, Missoula, MT
 Dick Nietfeld, Grand Island, NE
 Joe Rostad, Bremerton, WA
 Jerry "Stretch" Stancil, Benton City, WA
 Robert Schade, Peterson, MN
 Sharon Saindon, Seattle, WA
 Kelly Stevens, Sumner, WA
 Jimmy Voyles, Richland, WA
 Mark A. Willhoit, Corvallis, OR



TIDBITS

New Area Codes for Oregon, **541** and Washington, **360**. Send any changes in to the **Hot Iron News** editor.

e-mail listings (cyber punks)

Culberson, Jerry and Ina -- iculbers@we.xerox.com
 Jackson, Phill -- pjackson@arcrafts.com
 Klein, Randall -- randall@versalogic.com
 Loeffler, John -- bluemoon@televar.com
 Montgomery, Alex -- alexmont@v.washington.edu
 Ross, Jamie -- tierodd@aol.com
 Rudisill, Kent -- kenbe@proaxis.com

Eventually this may go in the roster, just didn't make it this time. Ed

The N.W.B.A. has a trailer

For Storing and transporting association stuff.

(Archives, library, kitchen stuff, tools, etc.)

Dennis Prince found a horse trailer at a decent price and we bought it. He says it's an ugly color and he is going to do some maintenance on it for the Association. Perhaps there will be a painting party at midnight madness some day?

Port Gamble Mill

Pope and Talbot closed the lumber mill at Port Gamble, WA in Spring 1996 after 142 years of operation. All was auctioned off, including several anvils and machine shop equipment. Smedley Soapstone bid on several items but things got too pricy and he went home empty handed.

\$\$\$ Auction dollars \$\$\$

Any donated item that sells for \$250, or over, in the auction gets the doner a free, one year N.W.B.A. membership.

The miniature leg vise made from a railroad spike by Terry Willis sold for \$300 and Dick Naven's "Go to Hell door" went for \$250. Both blacksmiths' memberships will be bumped ahead one year. The famous N.W.B.A. Board is always figuring ways to get in our pocket books and this is a good one.

Retirement? If it's called retirement how come I'm still working? Good question! After 35 years in and around U.S. Navy ships, submarines, machine shops and repair facilities, I finally pulled the plug.

Now I'm pounding some iron, the computer keyboard and nibbling away at all the honeydos, and Gene dos that were neglected so long. Just me and Sammy the cat home during the day, amazing how many times that cat wants in and out every day. What's really nice is the 50' commute in the morning to my shop or the 10' commute when pounding the computer and no more getting up at 5 AM every morning. Peg, my wife, still works and enjoys her job, that is an excellent combination for a retired husband. Gary, our son, and I get together frequently for hot iron sessions at the forge.

I've completed a new booklet "Country Knives" about ready to publish. All those ideas, papers, drawings and trivia that were ratholed all these years are finally paying off. Once in a while I just go fishing or crabbing.

Gene Chapman

PS, if you're in Alfred, NY in late June, look for a black, Swains ball cap, I may be under it.

Phone Company Deletes Blacksmith Heading

Dave Clyde from New Plymouth, Idaho reports US West Direct is deleting Blacksmith as a heading in the Yellow Pages. "This decision has an adverse effect on my business, as well as many other in the fourteen affected states."

Anyone with similar problems are advised to mail your concerns to the **Hot Iron News** editor, so all letters can be on file and brought to the board's attention at future meetings. Ed



Letters to the Editor

Dear Gene and Peg;

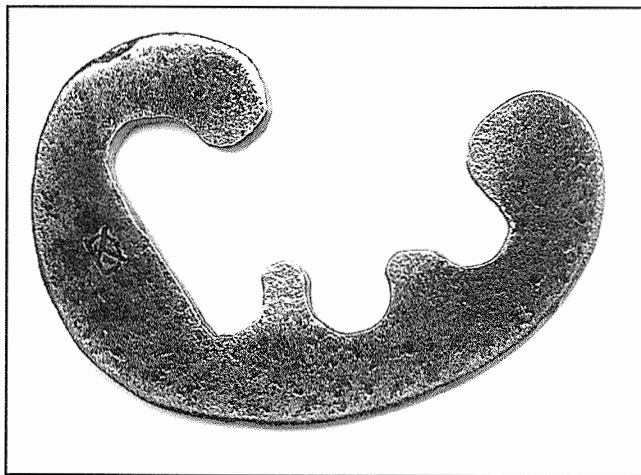
I offer this suggestions for your consideration. Placing the conference registration on the first sheet of the **Hot Iron News**. The reason, when you tear it out of the book it will also release the last page which could have the membership application on it, both being sheets that need to come out of the book. For example, in this issue page 27 and 28 could have been page 1 and 2 and page 36 and 37 could have been combined with 38 on the flip side. In this case the application would not be on the back side. I'm sure that you are way ahead of me by now. By making the first and last sheet the tear out sheets, it would allow us to keep our "Hot Iron News in good shape in our files.

My compliments to you and Peg as I think that you are doing a superlative job in turning out the best **Hot Iron News** ever.

Sincerely, E.E. LaCasse III

P.S. I think the whatsit is a woodworker's retracting bench dog that lies straight away from the wood vise which has a retractable dog, reason being to hold a piece of wood flat on the bench to allow you to plain, sand, or carve on it, or anything else you might want to do in that regard.

Thanks, very good point. Will remember this helpful hint! ed.



Tong ring/holder made by Don Kemper. This design has been in many newsletters. It works
ED

Report on the first official meeting of the New Kootenay Blacksmith Association, Crawford Bay, B. C. Canada

The "Kootenay Blacksmith Association" was formed on November 4, 1995 and had it's first official meeting on March 30 and 31, 1996. The meeting was attended by 28 very enthusiastic smiths at John Smith's "Kootenay Forge" located 60 miles north of the US-Canada border in Crawford Bay, on the east side of Kootenay Lake.

After an executive meeting on Saturday, the demonstrations began and continued until 3:00 p.m. when the forges were open (John has a well equipped shop, with four power hammers, four forges, one of which is coal, numerous anvils and swages, power saws etc. etc.). By 6.00 p.m. it was necessary to drag enthusiasts away from the anvils for a lavish "pot luck" meal at John and Lorna's home. The meal was followed by Iron in The Hat auction which raised almost \$700.00 (not bad for a first time)! A number of the attendees were art students from Nelson.

Sunday saw a general meeting over breakfast, at which time it was unanimously agreed that the Kootenay Blacksmith Association become a Chapter of A.B.A.N.A. Then it was back to more demonstrations and open forges. A truly fruitful and enjoyable weekend.

The next meeting will be held over two days in the Doukabor Village in Castlegar in a shop and barn overlooking the Columbia River, courtesy of the Doukabor community. The third of four 1996 meetings will take place in the Ft. Steele Heritage Village blacksmith shops near Cranbrook, B.C. where President Paul Reimer will be host.

Membership in the Kootenay Blacksmith Association is \$25.00 per year, John Smith is the Editor, Steve (Buck) Cass Secretary and Ron Smyth is Treasurer.

Derry Cook, Creston, B.C. Canada



N.W.B.A. BOARD MEETING

April 12, 1996

Meeting called to order at 4:28 p.m. by President Kemper.

Present were: Don, Dennis, Kent, Tom, Berkley, Barney, Terry, Ralph, Matthew, and Mark Moshoski.

Minutes of January 13 were approved.

The Board received D.J. Stull's resignation. We accepted his resignation and appointed Tom Richards to fill D.J.'s spot for the remainder of his term.

We discussed any problems that there might be with the Spring Conference. We ordered 150 dinners for Saturday night. If we bought 150 meals, the caterer would leave the leftovers so we could use them for Sunday lunch. There is a conflict with the Knife Collectors Association. They have their get together on the same weekend and we know that there are a number of our members that would like to do both. We are going to check and see what we can do to not be in conflict.

Fall Conference will be held at Russ Jaqua's shop in Port Townsend on October 4, 5, & 6. Dennis Proska and Mike Bondi will demonstrate and Alex Montgomery will be doing a cast iron demonstration and pour with a limited number of people being able to do their own casting.

Terry, Ralph and Tom are now the Conference Committee and are working on finding a location for the Spring '97 conference.

Elections will be held at the Fall Conference. Barney, Tom, Don, and Dennis are up for reelection and all have agreed to run. Nominations will start Saturday night at the general meeting and be open for 30 days.

The Association library is now up and running and looks great. Way to go Don!! The Goals and Procedures will be published in the next **Hot Iron News**. In order to get the library going it was necessary to over spend the yearly budget by \$307.04. The cost overrun was approved by the board.

Dennis received some information from the insurance company about what our policy covers, but it is still not clear what was covered. We need to check with someone else.

On the subject of coming workshops, as of now, Don Kemper is planning an animal head workshop with Darryl Nelson on November 1, 2, & 3, and Paul Hinds is hosting a demonstration of his new hammer on May 11th. There are rumors of more workshops in the near future. We will keep you updated.

In honor of Al Bart's memory, we have decided to make our grant program, The Al Bart Memorial Grant Fund. The Association will put in \$1,000 a year plus whatever is donated in Al's name. We have already received a \$25.00 donation.

Kent has been waiting a long time to get all of the job descriptions for officers from Grant. He has decided to give up on Grant so Don will write a job description for president. There will also be an updated list of board members sent out with the minutes.

The Board was glad to receive the gift of a coal forge from Jerry Henderson. Thanks Jerry! We are hoping that Jerry can store it for us until we have a place for it.

It was brought up that we might want to give a bigger discount for auction items that bring in a lot of money. Our dues just cover the four issues of the **Hot Iron News**. Conference fees just pay for the conferences, so any money that we have to work with comes from the auction. It was decided that anyone who bring an



NWBA BOARD MINUTES (continued)

auction item that brings at least \$250.00 at auction, the person donating that item will receive a one year membership added on to their current membership, starting Spring, 1996.

The Association assets keep growing and we need to get going on finding a trailer. Gene is going to put a want ad in the next **Hot Iron News** and will point out that if a trailer is donated, that person donating it can value it as a tax write off. (trailer found and purchased) On the issue of assets, the Association needs a bulletin board for posting things at the conferences. Kent is in charge of the bulletin board and Ralph and Barney are going to work on it.

Ina Culberson did a great job of getting some small reader boards with all of the numbers and two with stands for archives and the gallery. Thanks Ina!!

We will meet again Sunday morning. Adjourn 6:26 p.m.

Sunday, April 14, 1996

Meeting called to order at 8:35 a.m. by President Kemper.

Jerry Culberson has run out of tool steel blanks for novice workshops. The Board has approved either Jerry or Gene get more.

Gene brought a draft of the resource book and roster. It looks great! It will be a loose leaf package that is punched for a standard three hole binder and stapled so that it can be easily updated. Gene is also going to put it all on a removable hard drive so that it can be easily updated and saved. The Board would also like to take a moment to say what a great job Gene and Peg Chapman are doing with the **Hot Iron News** and related publications. THANKS!

The Association is going to purchase the cone mandrels and Don Kemper is going to put together the kit for pouring babbitt on 25 and 50 pound Little Giant Power Hammers. The mandrels are \$180.00. Don will take care of it.

Jerry Kagele was good enough to review our insurance and has told us that it covers us at N.W.B.A. sanctioned events and functions. We need to define sanctioned.

Definition of Sanctioned: A sanctioned event is an event related to blacksmithing that has been approved through the workshop coordinator with all participants being paid-up members of the Northwest Blacksmiths Association or another A.B.A.N.A. Chapter.

We decided that the Association needs to have safety glasses available at conferences. Kent will take care of that.

In order to promote more participation at midnight madness, we are going to get a couple of small forges and try to get some people to demonstrate the basics for the new comers. Gene and Matthew will work on the forges.

The crew that is doing the cast iron pour at the fall conference is donating their time, so it was decided that they would receive conference fees and membership free. In order to do the cast iron pour we will have a two hour lunch on Saturday.

Next meeting will be July 13 at Matthew's shop in Seattle.

Meeting adjourned 9:40 a.m.

Respectfully submitted, Your Scribe,

Dennis Prince

North West Blacksmith Association



Al Bart Memorial Grant

The scholarship program has been revised to a grant system. Assistance is equally open to all current members. The board has allotted a maximum of \$1,000 per year for the grant with a maximum of \$250 per year to any one recipient. Recipients are asked to write a **Hot Iron News** article about their experience and encouraged to demonstrate what was learned to other members, whether it be evening impromptu forging at a conference or stand up in front of the crowd and show and tell. This is a volunteer duty and not mandatory. Contact N.W.B.A. board members Dennis Prince, Barney Coski or Ralph Hinds for more info.

N.W.B.A. Workshop Grant Application

Name _____ Signature: _____

Business Name: _____ Date: _____

Address: _____ City: _____ State: ___ Zip: _____

Phone: (Hm) _____ (Wk) _____

Note-Maximum grant is \$250 per person, per year.

What event (workshop/class/function) are you applying for?

Date of Event: _____ What amount are you asking for? \$ _____

Why do you want to attend this event and why should you be the person to receive this grant?

1. How long have you been blacksmithing? _____
2. How long have you been a N.W.B.A. member? _____
3. Do you have a blacksmithing speciality? _____
4. What are your goals for blacksmithing? _____

5. How soon after the workshop will you send an article to the Hot Iron News editor? Date: _____
6. When could you give a demonstration (this is optional) of something you learned at the workshop? (Such as N.W.B.A. conference - - midnight madness - - a workshop or other)

In accepting this grant you agree to write an article for the **Hot Iron News**, and, if interested, give a demonstration on something you learned at the workshop.

**Return this form to the N.W.B.A. Secretary, Dennis Prince,
695 S.W. Bear Dr., Madras, OR 97741, (541) 475-6505**

North West Blacksmith Association



Al Bart

IN REMEMBRANCE

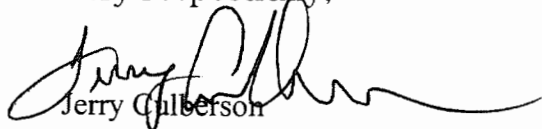
The Northwest Blacksmiths' Association lost a great friend recently when "Big Al" Bart passed away March 9, 1996. Al was big in spirit, big in heart, and big in skill. He was the original "been there, done that" blacksmith. He had, in fact, either done it, redone it, invented it, or refined it, no matter what "it" was; and he took great relish in telling a story about how he'd done "it."

Al was a darned good blacksmith, a heck of a story teller, a fine demonstrator and a man who truly enjoyed his profession. He loved being the "perfessor" as he stood in the center of a circle of attendant blacksmiths and regaled them with stories, all the while demonstrating his skill with the iron.

Of course, with Al, sometimes it was hard to tell when a story was all true, or BS, or a mixture of both, which some people would call manure--Blacksmith manure, that is, the kind that makes those forged flowers grow. (I once saw Al create the greatest clinker I ever saw--it kind of looked like a flower.) 'Course Al did it with a great big smile on his face and a twinkle in his eye--you just knew it had to be gospel, or at the very best, a reasonable facsimile.

Al, thanks for all the great stories, the many demos, and all the good advice you had for us rookies. We'll miss you, Al, but just so we won't forget, we have named our scholarship/grant fund the "Al Bart Memorial Fund." In this way your legacy of teaching and your love of the craft will continue to grow, and you can be sure there will always be one of your stories to tell.

Very respectfully,



Jerry Culbertson

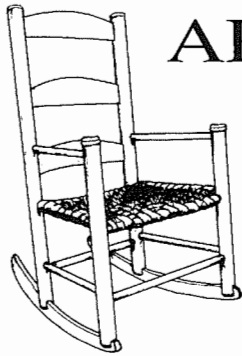
Dear Northwest Blacksmith Association

Thank you for your lovely card and words of comfort. It is comforting to us to know he was so well thought of by so many blacksmiths. Al's passing was quite a shock but God will see us through.

Thank you
Pauline Bart and family

Pall Bearers at Al Bart's funeral were Dave Atwood, Jim Rich, Dennis Debay, Bobby Williams, Steve Gustfson and Bill Anderson, all blacksmiths.

North West Blacksmith Association



ARMCHAIR BLACKSMITHING

Practical Blacksmithing, by M.T. Richardson has over 900 illustrations and consists of over 1000 pages, all packed in a six by nine inch hard bound book. It originally consisted of four volumes and was published in 1889-1891. Weathervane Books republished this classic blacksmithing book in 1978, ISBN: 0-517-25025X.

Subjects include blacksmith tools, welding, brazing and soldering, forging, wagon tires and hardware, and my favorite section, springs. Dozens of old time recipes for heat treating springs are included, some of which I use for pocket knife springs. The terminology and insight used by these smiths is ingenious. This was in a time when training was word of mouth and on the job. They didn't concern themselves with the technical side of heat treating as we do today. They just did what had to be done to do the job at hand.

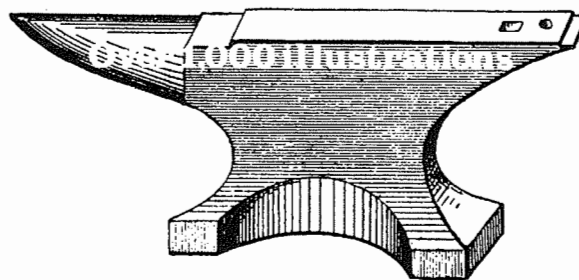
Here is an excerpt from Chapter Four, Springs: *When the springs are hardened, put them in a pan, an old sheet-iron frying pan with a handle is as good as anything; put some oil in with them, hold the pan over the forge fire, shaking it in the meantime until the oil takes fire and burns with a blaze. If the springs are heavy repeat this operation once more. Shaking the pan so as to keep the springs in motion will insure an even temper.*

This book would be a valuable addition to the N.W.B.A. library. ED

PRACTICAL BLACK- SMITHING

Compiled & edited by

M.T. Richardson



With a new Foreword by DONA Z. MEILACH

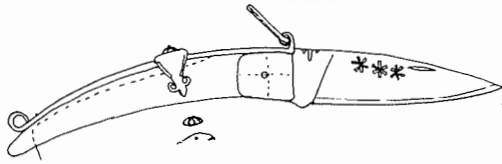
Covers every aspect of working with iron and steel:

- All the blacksmithing processes, including soldering, welding, brazing, forging, and tempering
- All types of smithing equipment, including tools, forges, and anvils
- How to work on chains, knives, sleds, wagons, horseshoes, wagons, and many other items
- A valuable source book for antiques.

Flash

New video in N.W.B.A. library, Paul Thorne's demonstration at the 96 Spring Conference taped by Jerry Kagele.

V-6 "Paul Thorne- Finishing and Detailing"



Bladesmith Corner

Bladesmith's Inc.

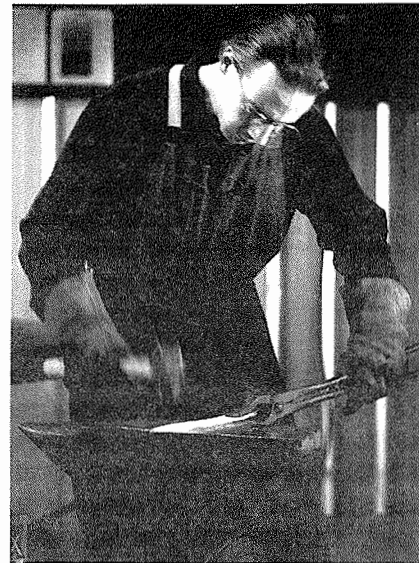
Bob Kramer owns and operates Bladesmith's Inc. at 1028 1st Ave S. in Seattle, 206-623-1088. It's downtown not too far from the Kingdome. His shop was on the tour list that Gary, my son, and I visited before Christmas last year.

Bob's shop has a forging area in a room adjoining the sales area. Windows separate the area so customers can view Bob in action. A 50# pound Moloch hammer is used in the forging area. One curious feature on this hammer is the cutout area above the treadle that some previous owner worked very hard to accomplish. It appears this was cutout to insert toe and depress the treadle with shoe heel. The cutout looks like it was drilled then chiseled out.

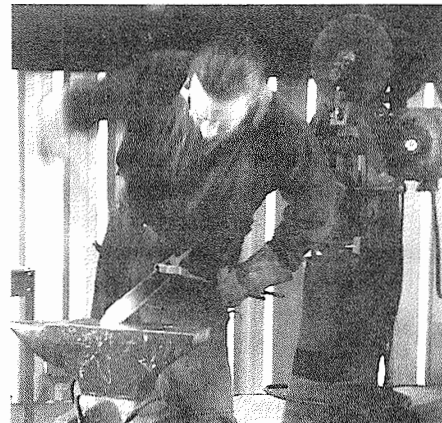
Bob gave us the grand tour before the shop got busy with customers. We wandered around looking at all the nifty tools, knives, and work areas. A large reel of cable was sitting near the shop entry, raw material for future wire Damascus knives. The glass front display cases held Bob's and other maker's knives along with commercial cutlery that the shop sells. Knifemaking supplies are also sold. Several women customers bought handle material for their knifemaking husbands during our visit. A good idea: sell your wares, supplies and factory cutlery too.

Bob began his Bladesmith career by sharpening knives while working as a chef in Seattle. His sharpening skills were in such demand that he began a sharpening business full time. Sharpening led to knifemaking and knifemaking led to bladesmithing via the American Bladesmith Society (A.B.S.), then he heard about and joined the N.W.B.A.

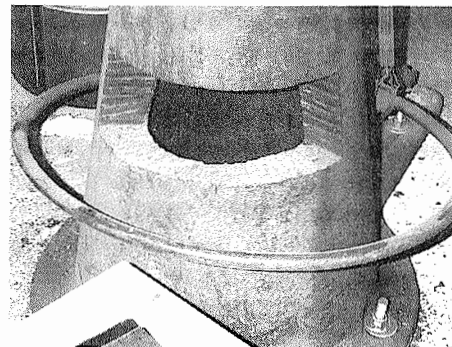
If you're in the neighborhood, drop by the Bladesmith's Inc., say howdy and look over the large selection of cutlery and well equipped and nicely laid out shop. Even if you have a couple knives I'm sure there is a "must have" blade in Bob's showcase for your pocket, kitchen, or hunting pouch.



Bob Kramer in action forging a knife.



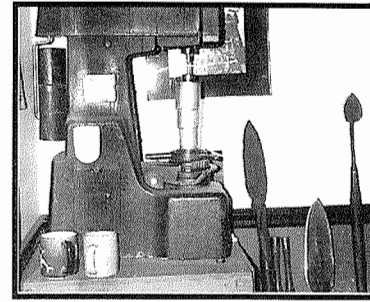
These action photos supplied by Bob Kramer



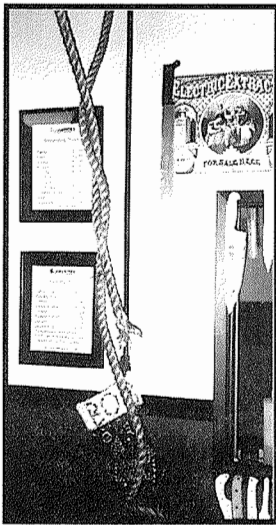
Hmmm- Better read the story.



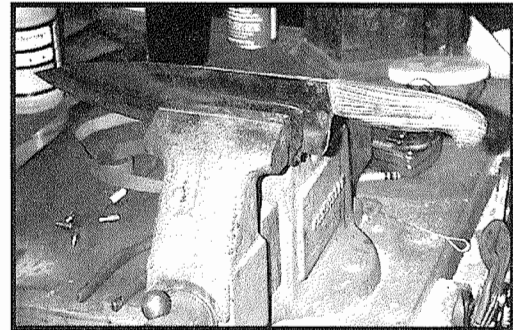
Knife patterns hang in front of a window dividing the gring and polish room from display areas. The dozens of patterns attest to Bob Kramer's large line of knives.



Ah, here is a tool that most knifemakers and bladesmiths just dream about. A Rockwell hardness tester. This beauty uses a system of weights, diamond and carbide tips that mechanically penetrate the heat treated steel. The depth of penetration determines the hardness by comparison to calibrated test pieces.



A hanging manila rope is used in the final testing of Bob's knives. Cutting through a free hanging manila rope tells the story of blade sharpness real quick.

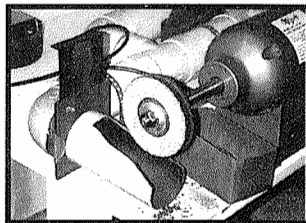
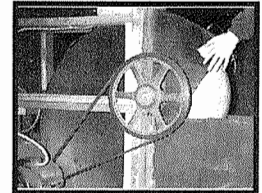


This knife is in the finishing stage locked in a vise on Bob's workbench. Above the bench is a long display of files in assorted sizes.

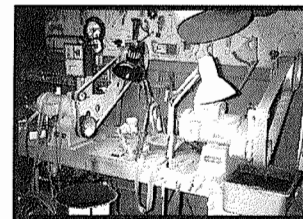


A line of hooded buffer stations with PVC pipe sucker system and water containers tells any visitors this is a serious operation.

A large enclosed grinding wheel has a speed of 150 rpm. This is a real dandy.



Detail of the buffersucker system. Note the gate valve. A three horse power Grizzly sucker motor is located in a back room provides the muscle to the PVC pipe pickup stations.



Two commercial belt grinders, belts and fixtures, overhead suckers, fixtures and lamps make for efficiency in metal removal. Notice the large water filled tubs under the main wheels to catch grindings and sparks. This helps to keep down airborne particulates.



Welding Tips from Al Bart

by Bob Thomson, Loomis, California

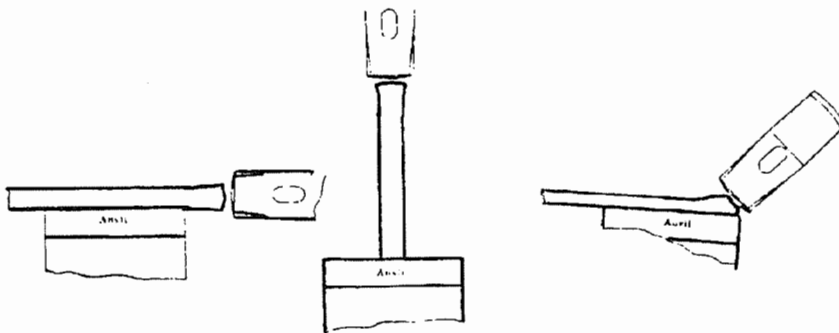
Some of the drawings are from *Plain and Ornamental Forging* – Schwarzkopf.

"As an apprentice we were taught many of the right ways to work. But as the years went by, we began to 'fudge' and take shortcuts. This is fine when you are experienced. Here are some things the old-timers taught me when I started. We'll talk about a lap weld with 1/2" square hot rolled.

First we shape the ends of the pieces to be welded. This is called *scarfing*. We generally *flux* steel to allow the scale to melt below the welding temperature. The *way we scarf* allows the flux, dirt and scale to be forced out as the weld is made. The scarfs must be heated almost to the melting temperature of the steel. The scarfs must be properly positioned – fast, light hammer blows – and a successful weld!"

Forming the Scarf

1. Upset the ends to be welded. This will allow enough material for some scaling and hammering which draws out the steel. (We usually do not upset 3/8" or smaller.)

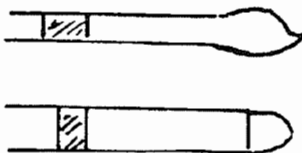
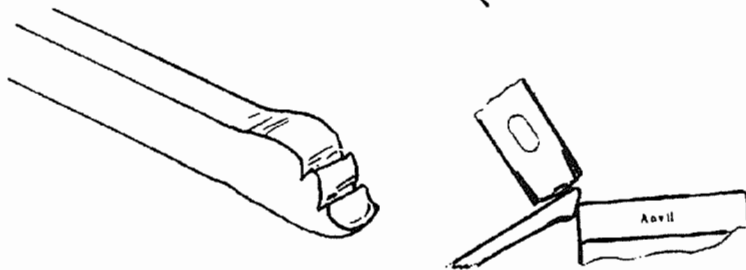
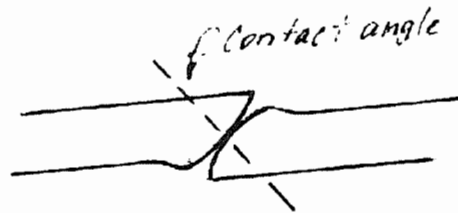


2. When shaping the scarf, make the weld area *convex*. Then, when welding, the scarf centers will touch first – forcing out the dirt, etc.

Our goal is to have the scarfs fit together well.

"I find making cuts or notches in the scarf helps hold them together as I start the weld."

With small metal, the end of the scarf is frequently bent up. This keeps the end off the anvil and it doesn't lose heat.



California Blacksmith



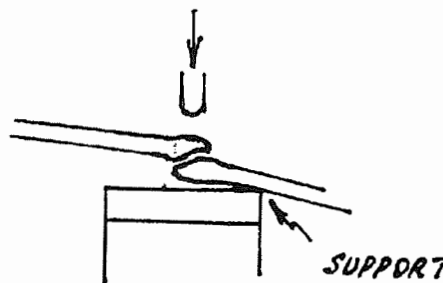
Prior to Welding

1. Get the right hammer. A big hammer may be fine for forming the scarf, but for welding material under 1", use a light hammer (Our goal is to weld – not to *kill*). For ½" stock, a 12-oz. or 1-lb. hammer is good. A 2½-lb. hammer is wrong. Once the weld is made, change hammers. **The correct hammer is part of hammer control.**
2. **PRACTICE** how you will make the weld. How to take it out of the fire (don't drag it through the green coal. Raise it straight up.) How you will touch the pieces on the anvil (*and make sure the thin tip doesn't touch the anvil*). How you will make light, fast hammer blows.
3. The coal fire. Even though the fire looks good, Al finds it best to look for and remove clinkers. Get a good fire going, 3" to 4" of burning coke below where you'll place the steel and 2" or more of burning coke above the steel. All this burning coke will keep the oxygen from the steel and will keep scaling to a minimum.
4. Capable smiths can weld without flux, but they generally do use flux. There are many commercial fluxes available, but borax works well and it is cheap. Look in your market's soap section. You want **20 Mule Team Borax** – about \$4 for 5 pounds. You DON'T want **Boraxo**, which is powdered hand soap.

Welding

1. Heat the scarfed ends to a red. Put borax on the scarf (some smiths put the borax all over, on the back side and up 2" above the scarf.) Watch the borax melt and flow over the scarf. Place the steel in the fire, scarf up.
2. Heat until the scarfed ends are almost the same color as the fire. Rotate the steel placing the scarfs down. Heat for a few seconds until the back of the scarf is a clear, milky coat. Both pieces must be the same color as the fire. **THIS IS A WELDING HEAT.** If you heat until sparks appear above the steel, you are burning some carbon. A little burning and the weld may not be the best. A lot of burning and you've failed!
3. With a welding heat, remove the steel, quickly tap the scarfed ends to remove the dirt and scale. Position the scarfs on the anvil. Quickly, hit fast, light blows on both sides. At a welding heat, the steel is soft. Hit it fast and easy until the steel hardens.

If you are concerned about the weld, put it back in the fire, bring it to a welding heat again – rehammer the weld and dress it up. Once welded, test it. Tap the weld on the anvil. It should bend uniformly. If a tip of one scarf pulls away, flux, reheat and weld it. Once welded, use the correct weight hammer to draw the weld area out to match the stock.



Refining the Steel Next to the Weld

This is required for tool steel. The steel near the weld was very hot for a long time. While it was hot, the crystals grew in size. Large crystals reduce the strength of the steel. There are two ways to reduce the size of the crystals – annealing or refining. The quicker way is to refine. Reheat these areas to a red and lightly hammer until cooled to almost black.

"Use extra heats. Take time to do a good job. Be proud of your work."

It took longer to read these details than to weld. Start in. Each weld will be easier. □

California Blacksmith

MARCH—APRIL 1996



Comments Overheard at the Spring Conference

By Vernell Henderson

"Buttons? Buttons? Buttons?" "Who's got the buttons" "I thought you had them Tom!" "Bob, Grant"? "Babe, it goes in real good!" "I can't believe that cut I had healed overnight." "Mine'll take two weeks." Kent: "Can I leave the money with you girls?" "Is it safe?" "You'll have it done when?" "Oh, my God! Don't tell the Prez." "Oysters? What oysters?" "Come on girls." "Who has Kent's garter?" "Have you seen Cotton Elliot's spurs? "What does he say when you wear them?" "Eeehah!" Don K; "All I've learned at this conference are four-letter words." "Work, talk! Am I in deep...?" "All Sasquatch siteings are not true Sasquatch; it's really Blacksmiths in the dark at a conference. Wade Wade was heard to have said while gazing fondly at the "kick-ass hammer"; "It's kinda like looking at a centerfold, you like the looks of it but you can't have it!"

Until next conference.....

From the ladies corner: Thanks to Dick Fackler, we ladies learned to carve; after some bloodletting and hours of concentration each of us produced a boot. Considering that he brought his new wife of one day to the conference we really do appreciate his kindness. The yo-yo quilt was mentioned. Next Conference bring your yos and we'll start putting them together, by Spring or Fall Of '97 we hope to have it ready for auction. It was really nice of Kent to escort us when we went antique shopping and for waiting for the car to stop when we hit the "garage sales". The true test of his mettle came when he was locked in the car with all of the blacksmith's ladies and couldn't get out due to "child-proof door.....locks".....We do tend to have a good time. Thanks for catering the dinner, directors of the board...This was a fun conference.

Until next time. . .

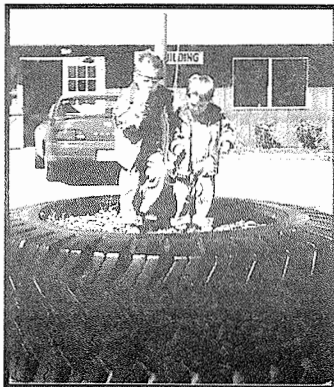
Vernell

THANKYOU!

THANKYOU!

THANKYOU!

My little blacksmith hammer hasn't found a bottle to cork but when Jerry and I are fully moved in to "our old House" I'll make flavored vinegars...wine....or oils....Again I thank you. Vernell



Jerry and Vernell Henderson's grandsons play in the giant tire in front of the 4H building at the spring conference. They are wearing genuine OSH-KOSH coveralls and coats.



Dick Fackler's wood carving lessons were a big hit Saturday and Sunday. Yes, it's hard to believe, some of us aren't interested in watching, talking and dreaming hot iron all weekend. If you have a craft that you feel would interesting to watch or have hands on participation at a conference, contact Don Kemper (The Prez). Past crafts have included quilting, basket making, mumbly peg and pie tasting.

Photos by Ina Culberson and Vernell Henderson



What's Happening or Happened

May 16-19

Peter Ross Workshop, Portland, OR

June 21-22

Early Day Gas Engine & Tractor Assoc. swap meet, Brooks, OR 503-393-2424

June 26-June 30

A.B.A.N.A. Conference, Alfred, NY

June 29-July 1

Historic O'Keef Ranch Get Together, Vernon, B.C. Canada, 604-542-7868 (see Winter **Hot Iron News**)

July 20

Farriers Association of Washington presents Mark Plumlee on Long-Toe/Low-Heel Syndrome. Call Kelly Coons (509)966-2308

August 5-25

Colorado Rocky Mountain School, 1493 Country Rd, Carbondale, Co 81623, 970-963-2562

Beginning blacksmithing Gordon Stonington, Aug 5-9

Advanced blacksmithing Francis Whitaker, Aug 10-14

Repousse, Nahum Hersom, Aug 12-15

August 15-18

Rocky Mt Smiths Sixth Annual Blacksmithing Conference in Carbondale, CO. Dan Nibblelink, 1932 N Hwy 287, Berthoud, CO 80513-9218 970-532-4386

August 23-27

Fire Arts Symposium Foundry Sandcasting, Ross Brown, Bellevue Community College, 3000 Landerholm circle SE, Bellevue, WA 98007

September 6-8

Bladesmith Workshop Instructor Gene Chapman Ridgefield, WA host Don Kemper, Contact Gene Chapman 360-297-2495

October 4-6

N.W.B.A. Fall Conference Nimba Forge, Russ Jaqua's new shop in Pt Townsend, WA

November 1-3

Animal Head Workshop, Instructor Darryl Nelson Host Don Kemper, Ridgefield, WA, Contact Don Kemper, 360-887-3903

Monthly Hammerin

John Loeffler of Blue Moon Studios has a monthly "Hammer-In". Subject matter will vary from chalk talks, demos and hands-on involvement.

You will be asked to sign a disclaimer at each event. If interested, contact:

John Loeffler
Blue Moon Studios
10090 Main St.
Peshastin, WA 98847
(509) 548-4754

Fall Conference

This should be a humdinger with **Mike Bondi, Dennis Proska** (Heavy hammer blacksmiths) and a special event with **Alex Montgomery** and crew pouring cast iron. Put October 4, 5, 6, 1996 on your calendar for must see blacksmith events. A full feature will be in the **Hot Iron News** Fall 96 issue. It's at Russ Jaqua's new shop.

Northern Rockies and North West Blacksmith Associations (May 17-

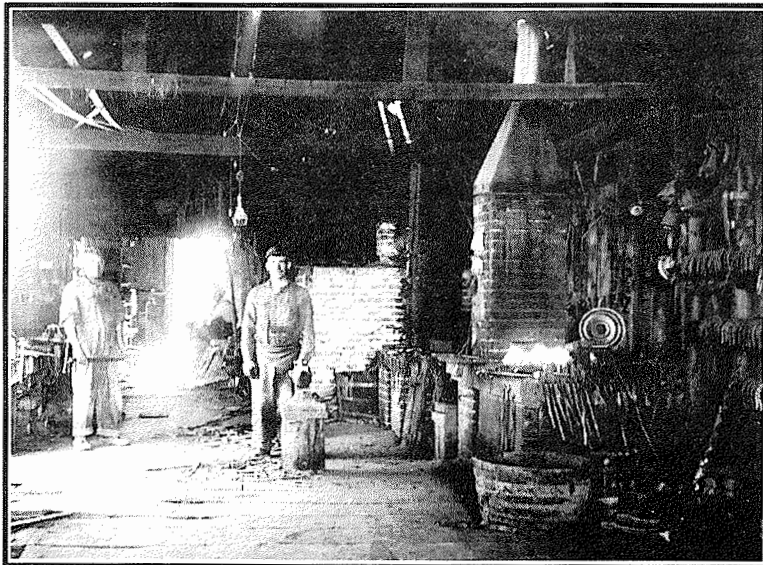
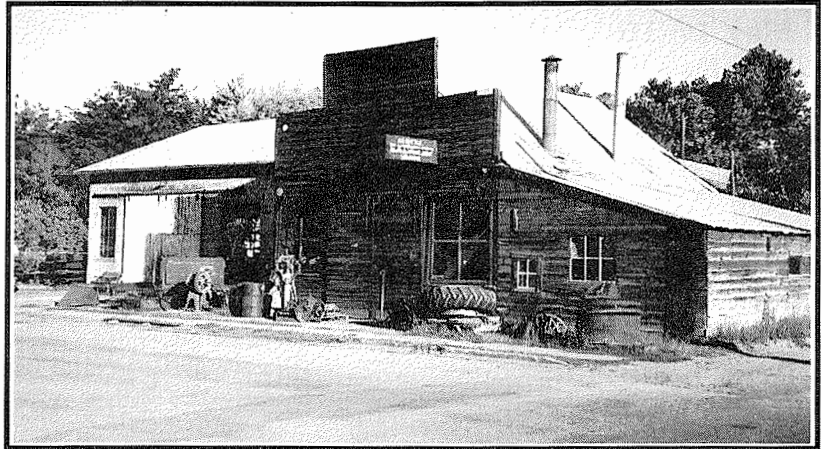
19) joint conference was a real blast. Stay tuned, the conference doings, photos and articles will also be in the Fall Hot Iron News.

R. G. Tuttle Blacksmith shop

By Bill Carrell

In our search to retire, Nora and I found New Plymouth, Idaho an ideal place. We have a view of the mountains and on this spring day a short drive will reveal apple, plum and peach trees in bloom, along with farmers tilling the soil, planting wheat, potatoes and all the other crops that make this valley so lush.

New Plymouth, located about 25 miles northwest of Boise has a population a little over 1400 and is the home of the worlds largest horse shoe.



We discovered an old building downtown, the R. G. Tuttle Blacksmith shop, and found Dave Clyde the present owner working on farm equipment. After talking to Dave, Larry Tuttle and others, we have pieced together some history on this landmark.

The first blacksmith shop was started by a Mr. Burke and was the first business in New Plymouth. A partnership of Mr. Steel and Mr. Compton were beginning a grocery store soon after. This was in 1897 and both business were in a friendly race to see who would bring in the first money. A man named Shaw brought a plowshare for Mr. Burke

the blacksmith to sharpen and was charged 25 cents. Thus Mr. Burke won the race. Steel and Compton opened their grocery store a few days later. Mr. Burke operated his blacksmith until 1919, when it was taken over by R.G. Tuttle who moved the blacksmith shop to the present building.

Many of our acquaintances have worked at the blacksmith shop, or know someone who has. One old fellow told me, "Ray Tuttle sure kept us going in the depression." It has been said he made everything from leg irons to dental tools. Another old timer told

me, when Ray said, " that should fit", it fit. One employee for 16 years was Charlie Lochner, who had lost a leg in an accident. He built himself a wooden leg. Charlie sang, whistled or smoked his pipe while he worked. Ray's son Larry told of the groove Charlie wore in the planking between the anvil and forge with his wooden leg. They had to turn the planking over when the groove became a nuisance.

Eventually Larry Tuttle took over the blacksmith shop. Dave Clyde bought the shop in 1988. He carries on the role of the community blacksmith and promises to continue the tradition.

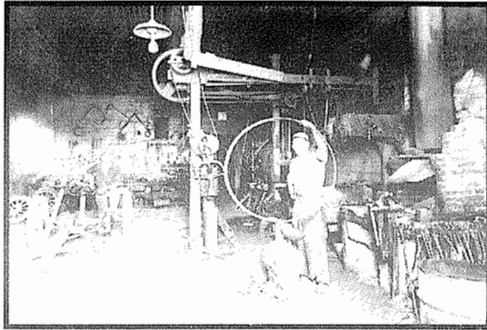
I think it's fun to drive by and look at the oldest building in New Plymouth and see Dave's collection of old things. Dave and I always have plenty to talk about. He seems to like old blacksmithing fixtures, even me.
Bill Carrell

Thanks to Bill and Clyde for this visit to a historic blacksmith shop. Ed

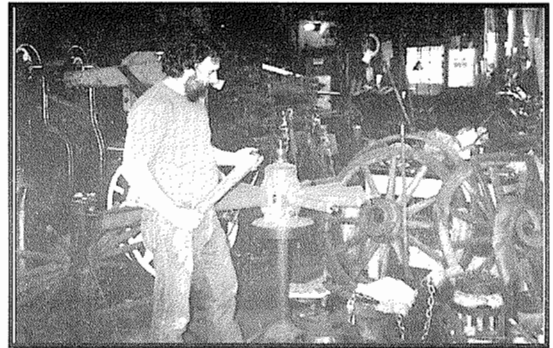
Photos by Bill Carrell



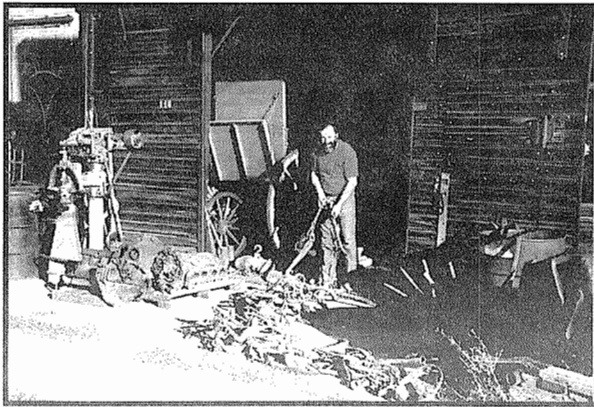
R. G. Tuttle Blacksmith Shop



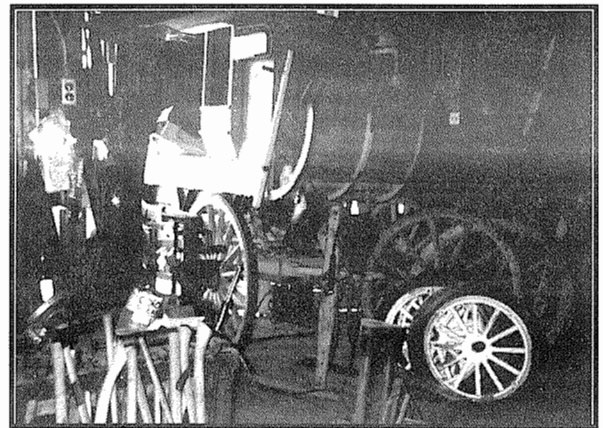
R. G. Tuttle in the new shop, 1927. Irv Saxton is in the background holding the mower up.



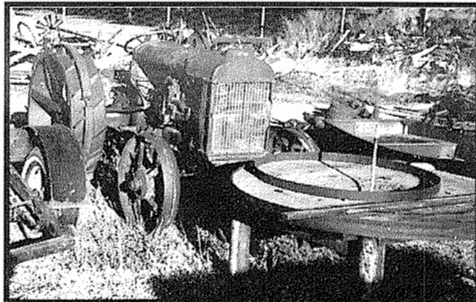
Dave has restored and built wagon wheels. He welds, sharpens plow shares and beater blades plus general blacksmith work that comes through his doors. When asked if he collects old iron, Dave said "It gathers here". Many a blacksmith can relate to that. It's enjoyable seeing a shop as it was in the old days.



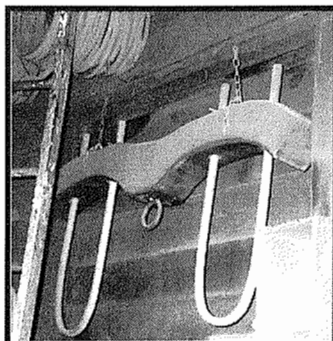
Present owner of the blacksmith shop is Dave Clyde. To the left of the big door is a small power hammer approximately 25 pounder with a 1904 date cast on it. Dave is inspecting a newly arrived set of harnesses.




Stage coach restoration project



A 1919 Fordson tractor plus what looks like a table to shrink tires on directly in front of it.



A fine oxen yoke adorns a shop wall.



**Tuttle Blacksmith
and Welding**
— 116 W. Maple Street —
(208)278-5846

DAVE CLYDE
PROPRIETOR

P.O. BOX 833
NEW PLYMOUTH, ID 83655

If you're around New Plymouth stop in and see Dave Clyde at R. G. Tuttle's Blacksmith shop. Bill and Nora Carrell are two miles out of town at 4724 Highway 72.

Anvils, Anvils, Anvils

**RUSSELL JAQUA
GALLERY SHOWROOM
221 Taylor Street
Port Townsend, WA. 98368
(360) 385-5272**



May 3, 1996

Dear Gene,

We are pleased to let you know the Gladiator Anvil is now in production and it is a beauty! The anvil weighs 471 pounds and the dimensions are: Length 37 1/2", width across top 7", height 13".

The availability from the time we receive your order is one month or less. The cost of the anvil is \$1,295.00 plus sales tax of \$102.31 and shipping. Shipping costs will vary depending on your location. However, we can give you a firm price at the time you place your order.

The pattern for the Centurion Anvil is now in the works. It should weigh approximately 220 pounds. Although we won't have a price for the Centurion until we are closer to production, we anticipate having them ready in the near future. We will keep you informed!

Orders can be placed by calling 360-385-5272. Our office hours are 11:00 to 5:00 daily except for Tuesdays.

If you should have any questions, please don't hesitate to call or write us at the above listed address.

Thank you,
Russell Jaqua

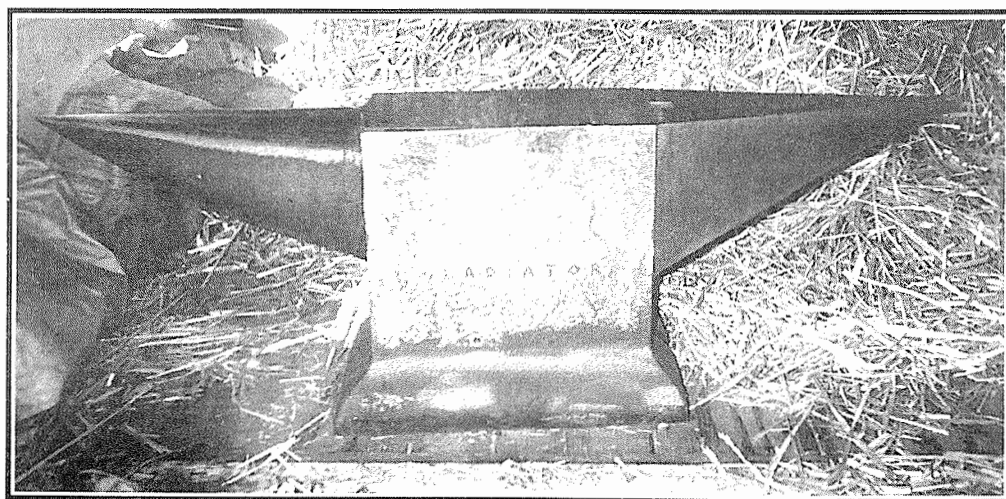


Photo by Phil Jackson

The Gladiator Anvil is truly a beauty, 471 pounds, length 37 1/2", width across top 7", height 13" with a 1" hardie hole, 7/8" pritchel hole, cast from 8640 alloy steel, and professionally heat treated.

Animal Head Workshop



Instructor: Darryl Nelson

Location Earth-Wind-Fire & IceforgeWorks
A.K.A. "The Olde Smithy"
(Don Kemper's Place)
Date: November 1-3 (Fri. Sat, Sun) 1996
Contact Don Kemper
20100 NW 61st Ave.
Ridgefield, WA 98642
360-887-3903

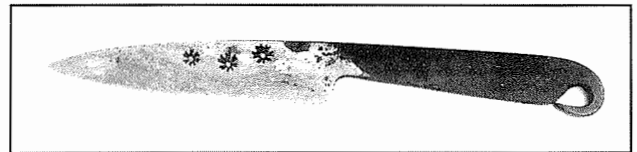
Darryl's talent and experience at the forge are well known by long term members of the N.W.B.A. and A.B.A.N.A. Examples of his work (including animal heads) are utilized at Silcox Hut on Mt. Hood, in Skamania Lodge in the Columbia Gorge and a new art gallery on the Oregon Coast, among other local sites. He has freely shared his skills at numerous national workshops.

Demonstrations will alternate with hands-on student practice. Tools and sample pieces will accompany student notes home for future reference.

The workshop will accommodate **12 students**. Students will furnish own hand tools and portable anvil (Please leave your 400# treasured anvil at home. Iron and some tool steel will be furnished, as will coffee, juice, rolls and a smile. **Note** students may bring additional tool steel (5/8" round or hex, nominal for tooling).

This workshop was announced at the spring conference and is rapidly filling. Darryl has agreed to have a **second** workshop if the need arises.

Blacksmith Knives (A Bladesmith workshop)



Instructor: Gene Chapman

Location Earth-Wind-Fire & Ice forge Works
A.K.A. "The Olde Smithy"
(Don Kemper's Place)

Date: Sept. 6-8, Fri. Sat, Sun 1996

Cost: \$180

Class size: 10 students

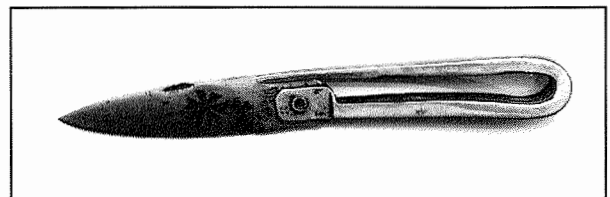
Contact: Gene Chapman
PO Box 1038, Kingston, WA 98346
360-297-2495

Subjects: Steel selection, heat treating, knifemaker's bench tools and techniques. Blade forging practices, forge welding cable and pattern welded Damascus steel.

Projects: Intergal forge welded spring pocket knife (introduction to the wonderful frustrating world of pocket knives) and a blacksmith fixed blade knife, forge welded cable knife.

Tools: bring your own tongs hammers, portable anvil and base. Some students may be requested to bring a portable gas forge and gas bottle. This will be worked out prior to the workshop.

Knifemakers steel, files, emery paper supplied as well as coffee, juice, rolls and a smile.

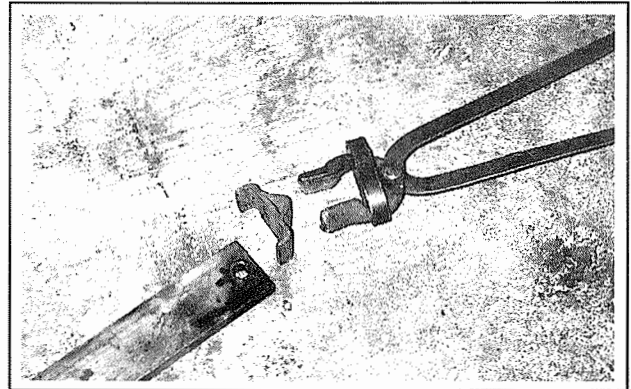
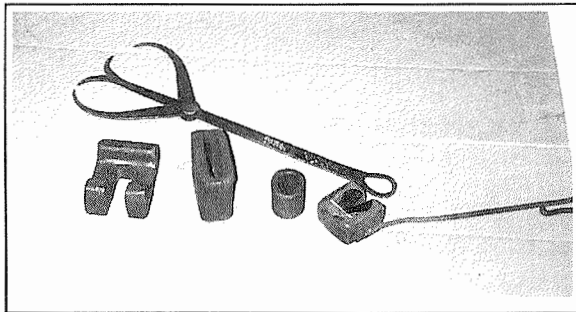
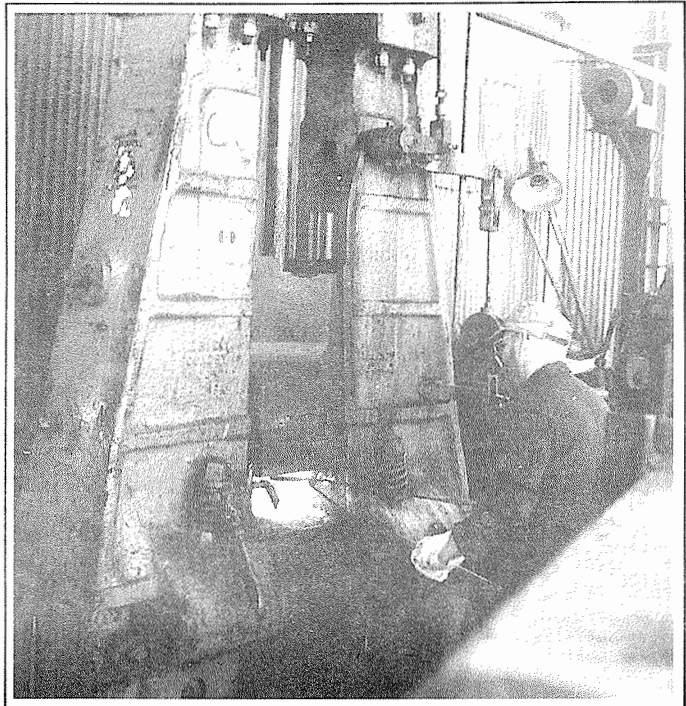
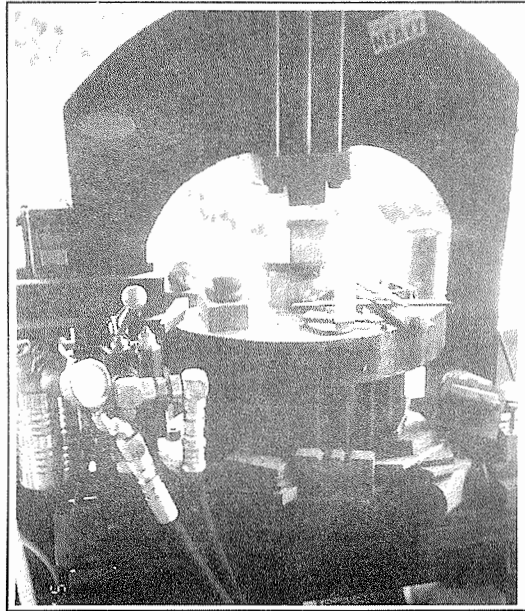


Intergal frame/spring pocket knife, alias "The one Hour Folder" dreamed of in earlier days.



N.W.B.A. Archives

Can you identify the places, time, people or things in these photos? Send your answer to the **Hot Iron News** editor. First correct answer gets your name in the paper.

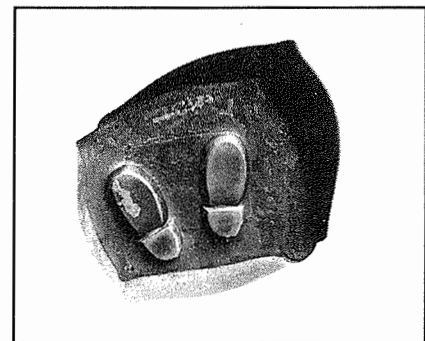


Last issue archives: Bill Carrell identified Ed La Casse III forging a steak turner and Jack Slack posing as Smokey Adams.

Ike Bay identified Peter Ross and Dave Stearns forging at St Helens.

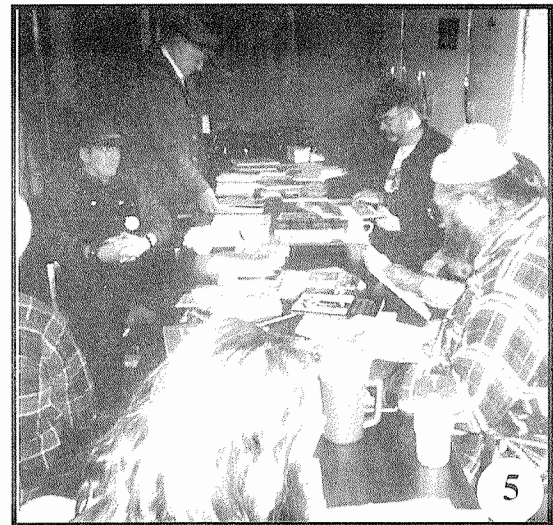
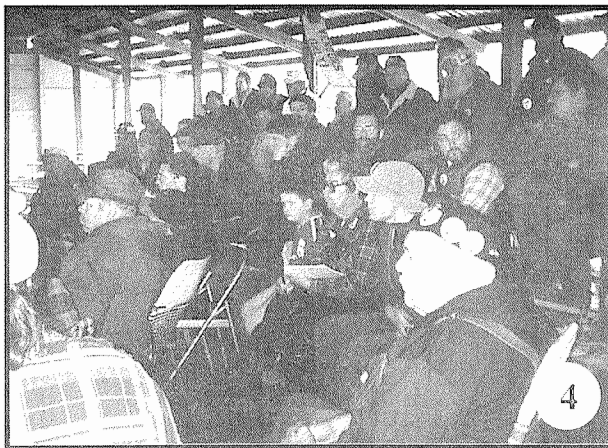
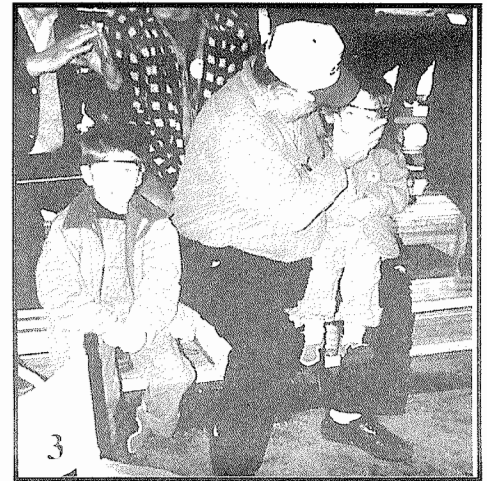
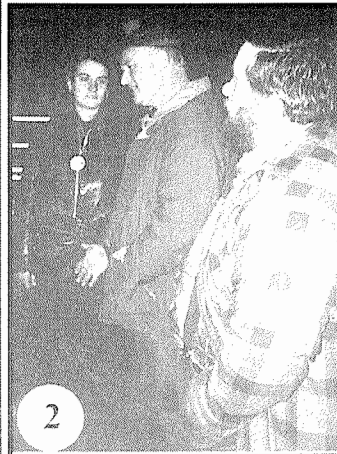
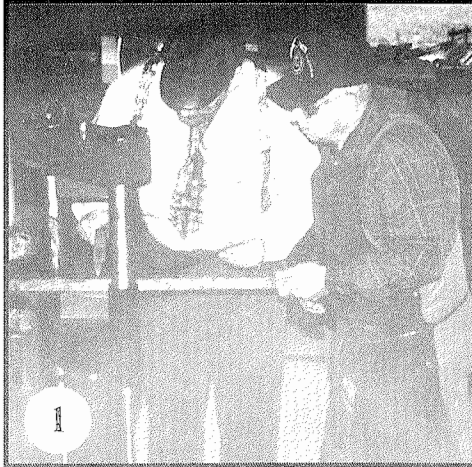
Russell Jaqua sez, "Hey that's Rappy dog".

Smedley Soapstone thinks he saw the gate on Piikoi St. in Honolulu, but not too sure.



Wanted: Your duplicate or unwanted blacksmith or N.W.B.A. related photos. If you're cleaning out that junk drawer with all the stuff in it and your better half sez, put the photos away, and you can't figure where, send them to the **Hot Iron News** editor. I'm building files for the **Hot Iron News** by name, category, etc. to easier access and identify reference material for our newsletter. ED

St. Helens Spring conference



1 Dave Brandon and Grant Sarver demonstrate their skills on Grant's Kickass 75 # new age pneumatic hammer.

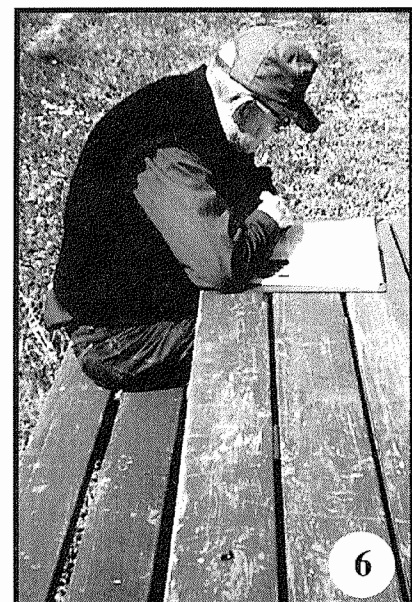
2 Demonstrator Paul Thorne relaxes during midnight madness Saturday night.

3 Grandpa Jerry Henderson adjusts safety glasses on his grandson during a conference demo.

4 Bleachers were near full watching the demos.

5 First showing of the N.W. B. A. book and tape library met with approval. All during the conference booksmiths were taking notes and reading books on their favorite subject, iron.

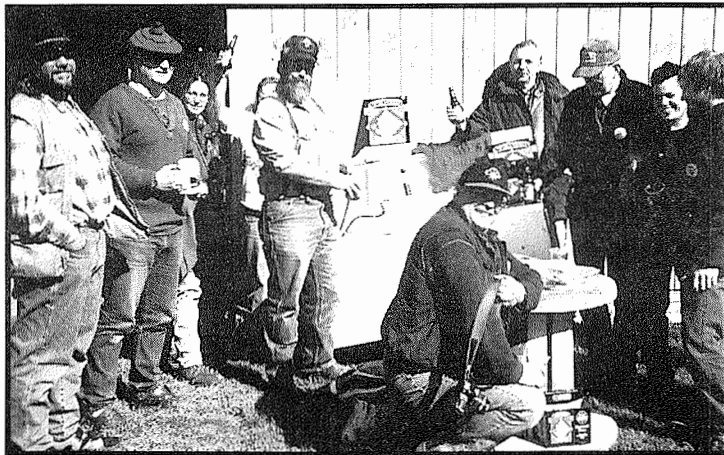
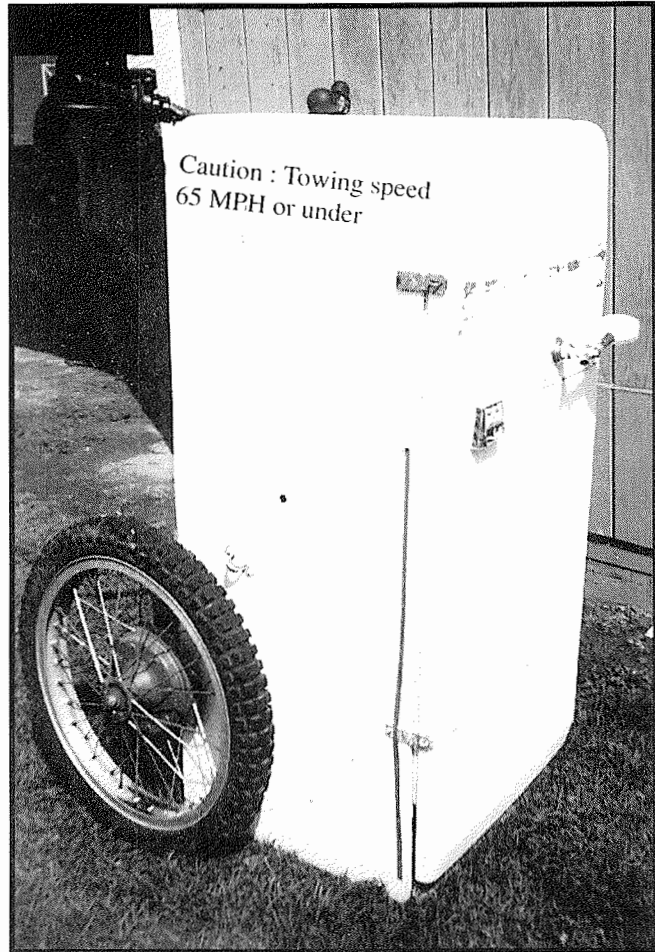
6 Barney Coski takes a break.



Photos by roving photographers, Lauren Ozmolski, Wally Albin and I don't remember who had the other disposable camera. Your over 50 ED.



Wade Wade, or W2, shows his colors in "Canuk" row, a section of St Helens fair-grounds reserved for our neighbors to the north. Tents, campers and travel trailers make up the caravan. In days gone by they used to circle their wagons to keep out the blacksmith element known as "Yanks" who always seem to be around at mealtime, "Hey buddy, whatcha cooking for breakfast, sure smells good, can you spare a cup of coffee and while you're at it, a couple of fingers of Canadian in it, eh."

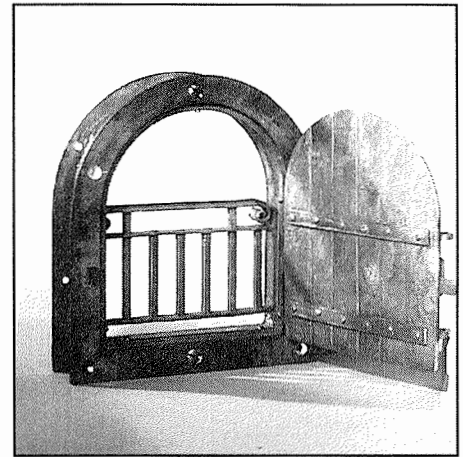
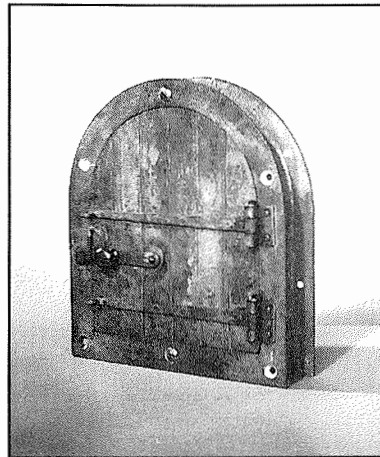
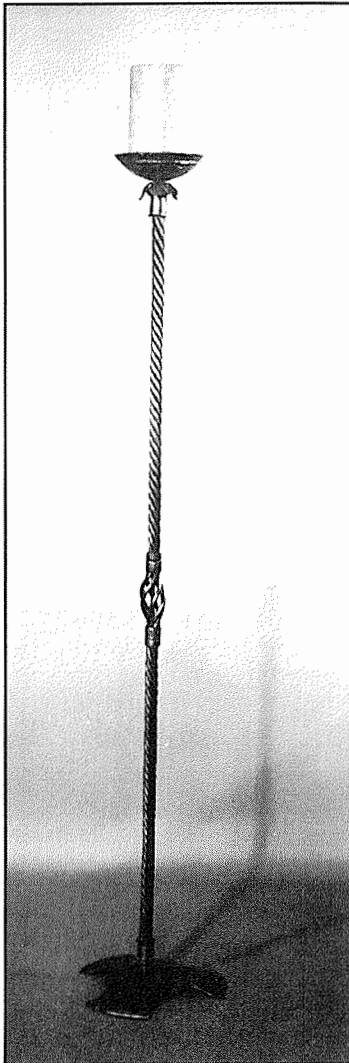


"Kegger on wheels" constructed in high school shop when "teach" wasn't around. Street legal and licensed by Dennis Prince. Most recently, Dennis has volunteered to store and work on the recently acquired N.W.B.A. horse trailer that will be used to store and haul the Association's heavy tools, stuff and whatever else Kent can load on it. It may have room for conference lodging for a dozen or so friendly blacksmiths if the need arises.

With the mounting pressure, micro breweries are taking over the blacksmiths' thirst with heavy brews. The cream of the froth is Nor'westers' Blacksmith Porter from North West Brewery, 66 SE Morrison Portland, OR 97214, who donated a keg and several cases of their famous brew. An on the spot, unofficial blacksmith meeting was held in front of Dennis Prince's kegger on wheels, incidentally the only refrigerator on motorcycle wheels in the world, and a vote of yeas and nays was held. The yeas had it, Blacksmith Porter is the official medicinal drink of the blacksmith tasters present at the Spring conference. The only nay was booed and jeered and generally run out of the area muttering something about Pepsi. Can any of the other A.B.A.N.A. chapters boast of having their own blacksmith brew. The keg was cracked after the last demo Saturday and official tasting continued until the general meeting in the round building. Now these tasters weren't hogging it down as a few draughts were left over for lunch Sunday, true connoisseurs of fine brew. Many thanks to Ike Bay for arranging this donation.

North West Blacksmith Association

St. Helens Conference Gallery



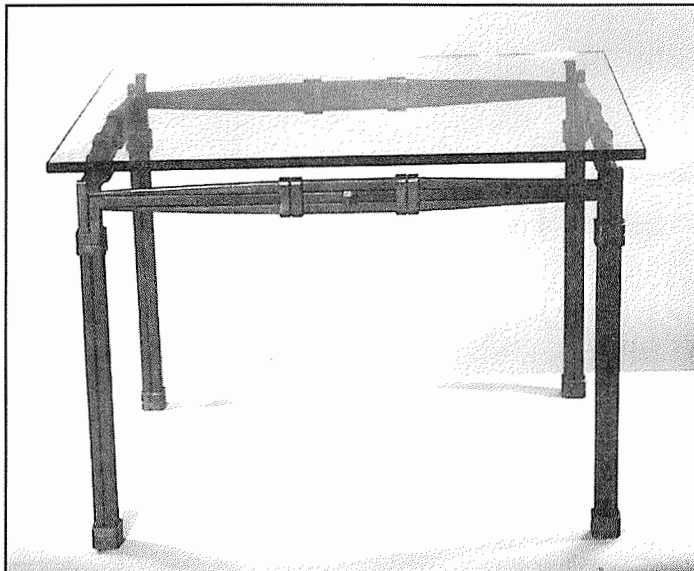
Left: Floor candle stand By Jerry Culberson

Upper middle and right: "Go To Hell door", by Dick Naven which sold for \$250 in the Saturday night auction.

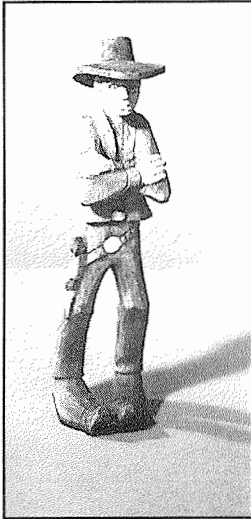
Bottom left: Matthew Tilton's, "Craftsman Table"

Bottom Right: Miniature post vise made from railroad spikes by Terry Willis, this sold for \$300 at the auction

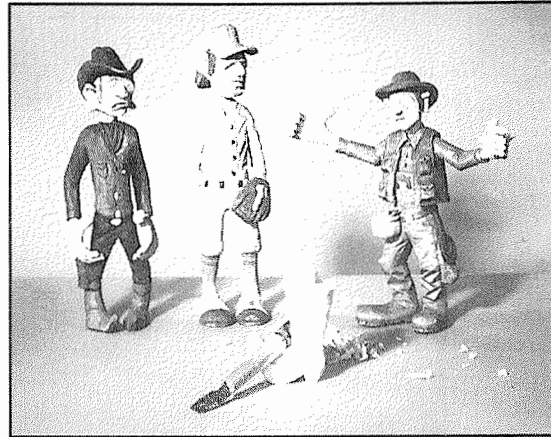
Photos by Phil Jackson



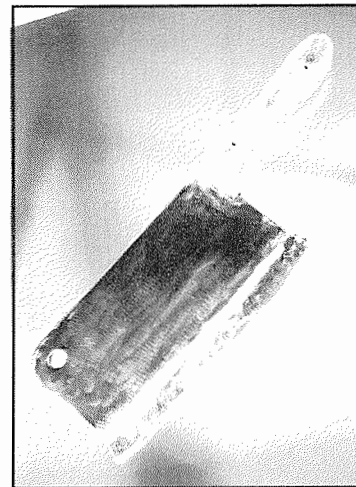
St Helens Conference Gallery



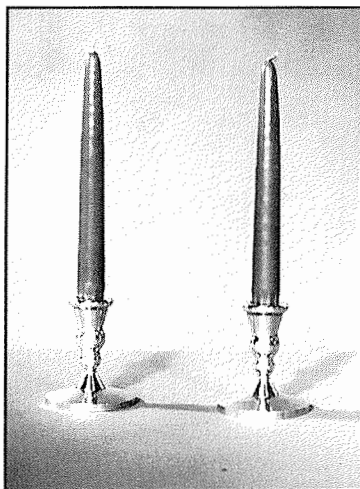
Wood carvings by Dick Fackler of Gazebo Forge. When asked how he named his forge, he told of a neighbor who kept wanting to know what he was building when constructing his forge. Wanting to put him at ease, he said, "a Gazebo", thus the Gazebo Forge was born.



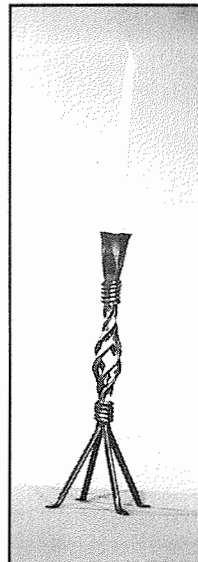
"E Saw Face Mask", made from several saw blades by Bill Carrell



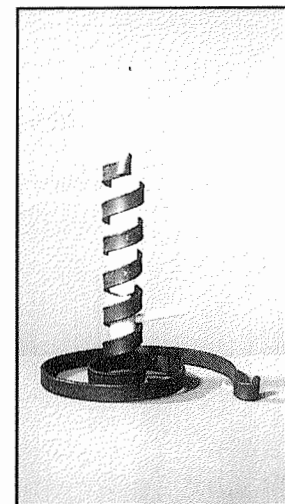
"Cleaver for Chicken Head" by Jerry Nielsen



CNC programmed and turned candlesticks by Kent Rudisill



Candle holder by Glenn Webb

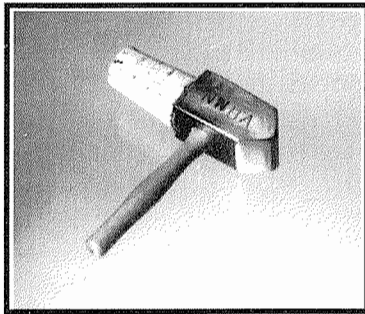


Courting candle holder by Gary Chapman

Photography by Phil Jackson

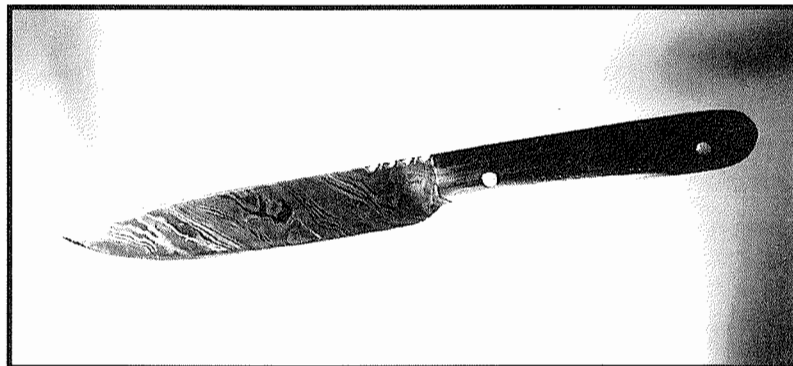
St Helens Conference Gallery

"Dameion" by Eric Grip. Eric had this dragon displayed at the Cascade Mt Man show in March. It stands about two feet tall and is holding a crystal ball.



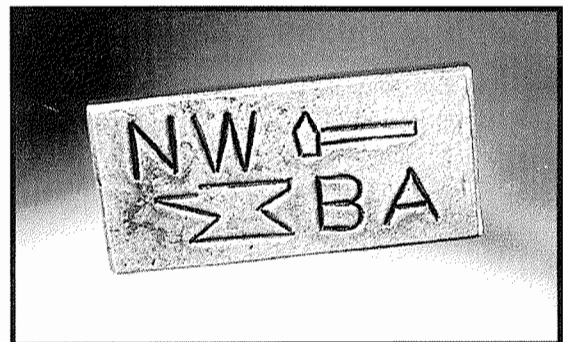
Wine hammer bottle stopper with N.W.B.A lettering by Don Kemper

Photography by Phil Jackson



Meteorite Damascus knife by Eric Grip

N.W.B.A. paper weight/plaque by Paul Hinds. Paul uses his homebuilt power hammer with tooling to create unique work. Read about "Building of Big Blue" by Paul Hinds in this issue.



Note: Some gallery and auction items either weren't photographed or the photographs didn't turn out as expected. If you have something special you want photographed for the Hot Iron News, bring it to the next conference and we will try to accommodate you. ED



A KNOT TYING JIG
by Al Cannella

Doug Verble, a member of the Appalachian Chapter of ABANA, used to be very active as a scout leader but now spends much of his spare time developing techniques for his blacksmithing work.

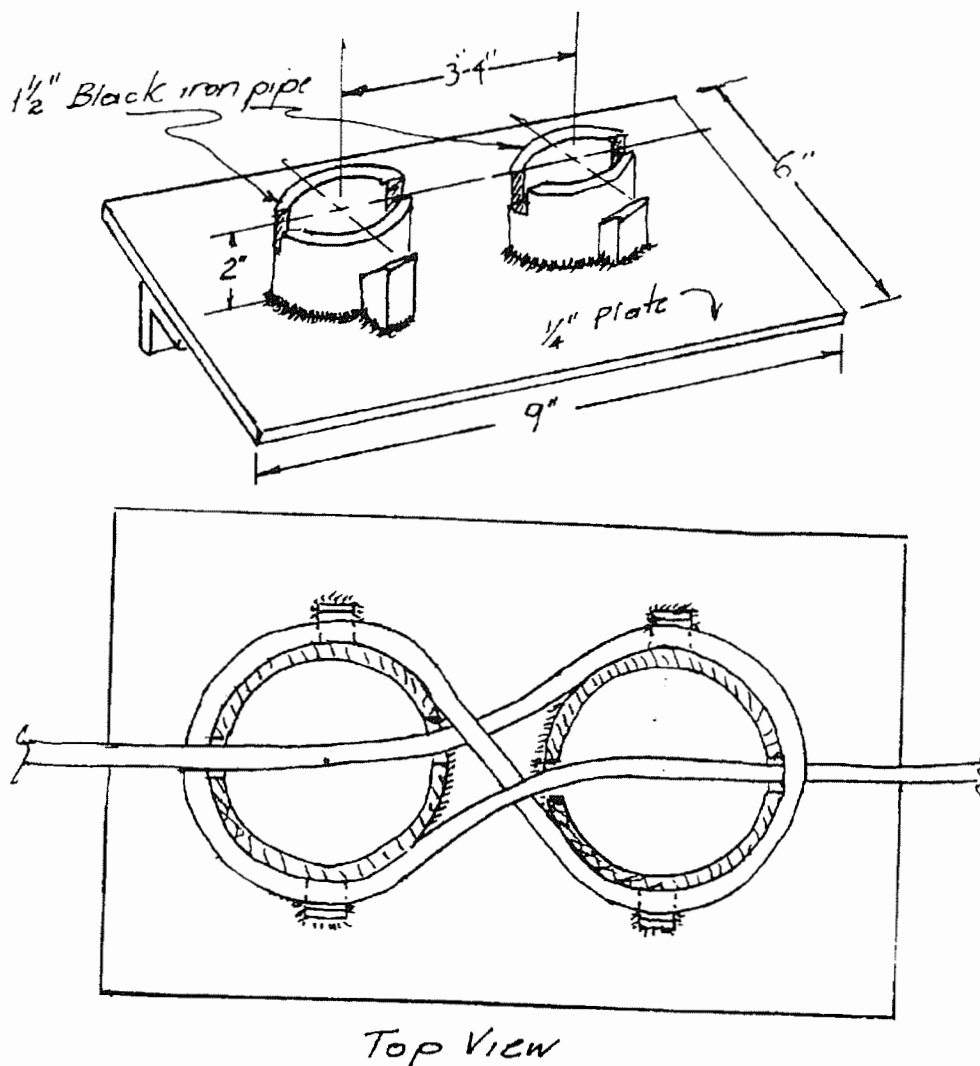
In particular, as an expert tyer of knots, he has made jigs for forming many of the standard rope knots using 1/4" round or square rods. Shown below is his jig for forging a figure 8 knot.

Using two pieces of 1 1/2" diameter black pipe with slots 3/8" wide by 1/2" deep 180 degrees apart, welded to a 1/4" plate on 3"-4" centers, he can make perfect knots every time.

To keep the loops in place 1-inch square guides are placed 90 degrees from the slots. The interior slots are offset by 1/2 their widths.

Also, a piece of angle iron is welded to the bottom of the plate to mount in vise.

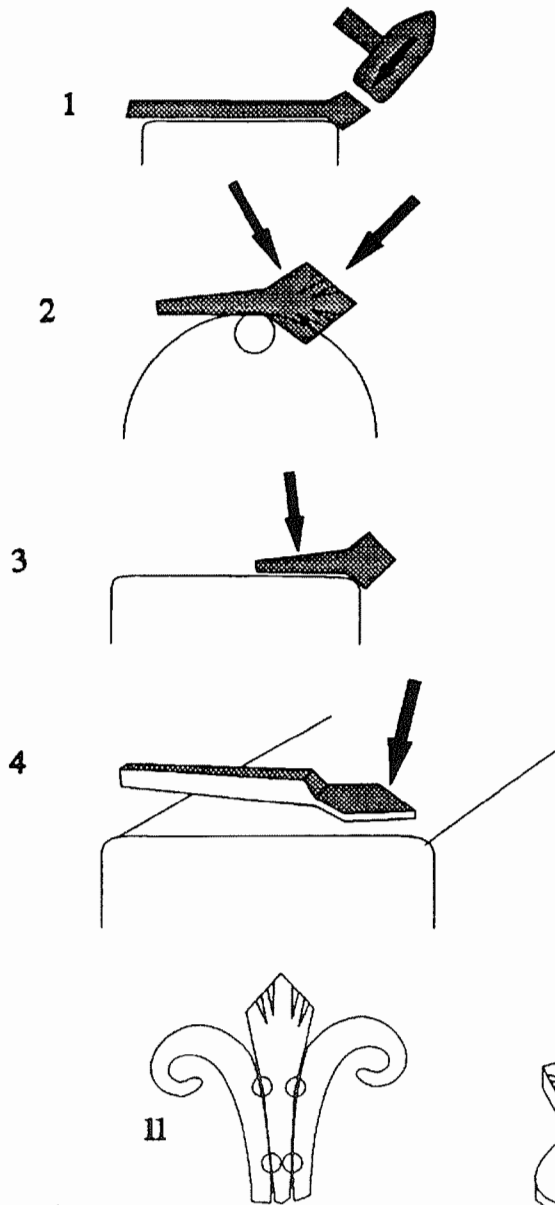
Doug uses these completed knots for handles, wall hooks, sconces and numerous other unique items.



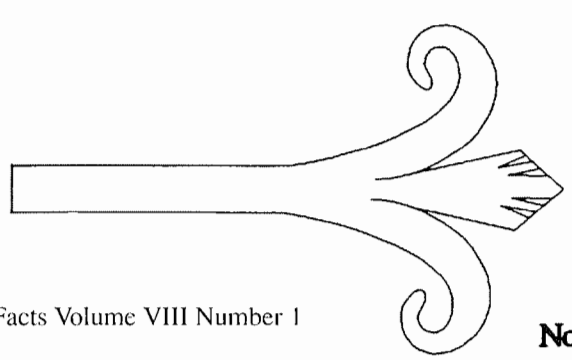
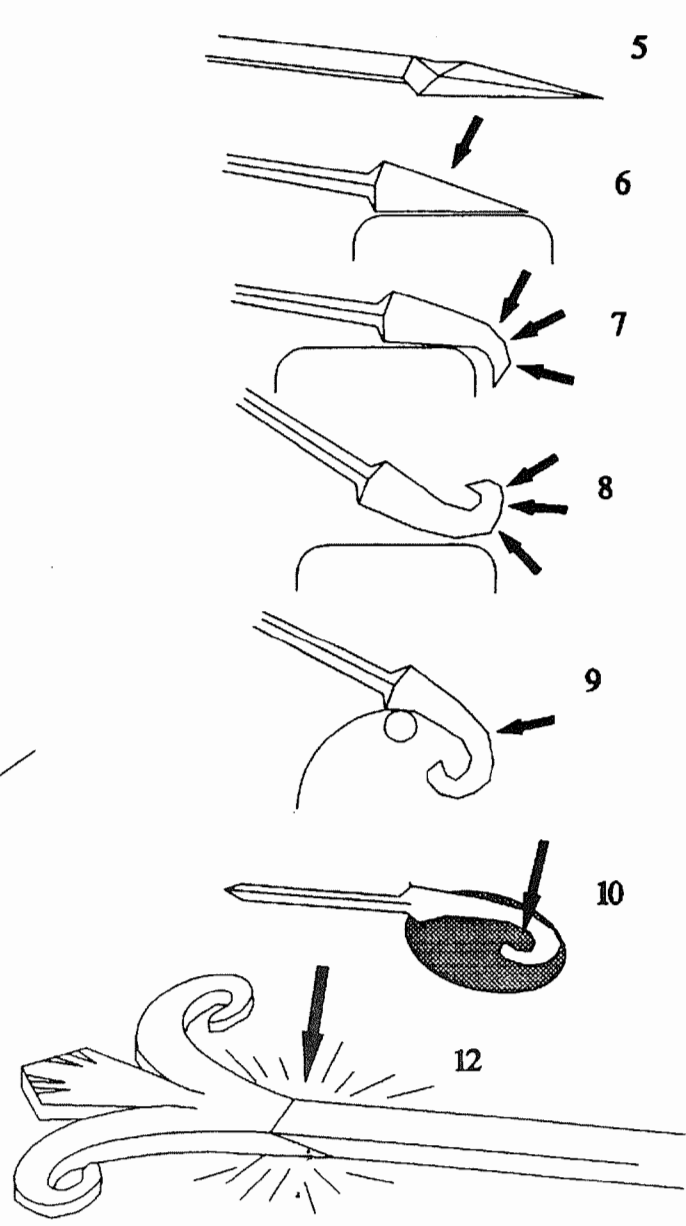
Reprinted from the Blacksmith Association of Missouri newsletter

Craig May's Fleur-de-Lis Finial

Center



Leaves

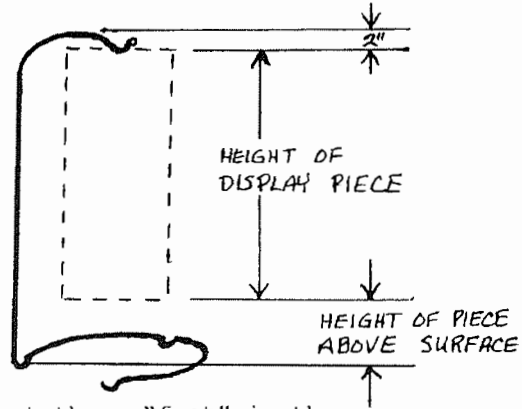


Reprinted from The Forge Facts Volume VIII Number 1

Notes/Drawings by Eric Harmon

THE STAND. . .

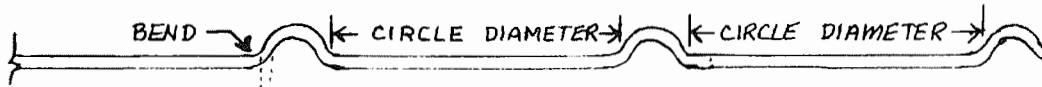
was the request of one of my acquaintances. She wanted something to hang a piece of artwork for display. I had drawn a circle having the end come straight up and then curving over to make the hanger. This was just what was needed.



To prevent the piece from rocking, I put three "feet" in the circle to provide the stability.

Determining the sizes will be up to you to fit the piece that you want to hang. The size of the stock depends upon the weight of the item. I used 1/4" round. You will need to know the diameter and height of the piece and distance between the surface and the bottom of the piece. My customer had given me those measurements. I made the circle slightly larger than the piece's diameter to provide stability. The amount of stock it will take depends upon how large you make the "feet." I allowed 2" for each of three "feet", the amount it will take to get from one "foot" to the other (twice) and the amount needed to rise the amount of clearance plus the height of the piece plus the amount of space above the piece for the hanger, and added the amount needed for the hanger and hook.

The circle is actually only 2/3 of the circle since you don't need to connect from the third foot back to the first. I started at the end of the circle, forming the first foot. I then marked off the amount of stock to reach to the second foot. That amount is the same as the diameter of the circle. I began the second foot at that point. After the second foot, I repeated the process for the third foot. After forming the three feet, the piece looked like this:



I formed the circle around a floor mandrel, keeping the feet pointed up. If the feet had been pointed down, they would have ended up being splayed to the outside instead of vertical. You might want them so angled, however. Don't pull on the bar while bending -- you'll straighten out the feet. At the end of the third foot, the bar was bent at a right angle that left the bar vertical when the stand was put down. I allowed 2" of height for the bend that would place the hook directly above the center of the circle. I taper the end of the rod and form the hook. Decorative addition to the end of the hook is optional - I add a small loop.

Ray Baker - Olympia

Ray Baker has attended Novice and Novice II workshops. He attends black power rendezvous and has a portable setup forging the accoutrements that Mt. Man reinactors use. These rendezvous are held throughout the year and vary in location. If you have the chance to visit one, walk through and look around. Ray may be there forging some iron. Eric Grip also frequents rendezvous and has a complete primitive blacksmith shop.

The Beginners Corner

By: *Buster Grubbs*

Ocmulgee Blacksmith Guild

A Plate Hanger

You will need:

- * 2 pieces of 3/8 to 1/2 square 6' long
- * 2 pieces of 1/4 x 1" flat 6-3/4" long
- * 3 pieces of 5/16 or 3/8 square 13"
- * 10 - 1/8" rivits (or welder)

Step 1-

Forge both ends of the 6' long pieces to a taper or flair or whatever, and roll these into scrolls. (Use your imagination as to design).

Step 2-

Center punch marks at 14", 16", 29", 42" and 44" from the tops of the scrolls as shown (in figure 2).

Step 3-

Heat at the 14" and 44" marks and drive a piece of the 1/4 x 1" flat bar into it so that a notch is formed for the 1/4 x 1 to rest in (so that it is flush with the back of the scroll.)

Step 4-

Weld or drill and rivit the 1/4 x 1 x 6-3/4 to the upright scrolls. (as shown in Figure 4) and then drill 2 holes in each of the 1/4 x 1 cross pieces for mounting.

Step 5-

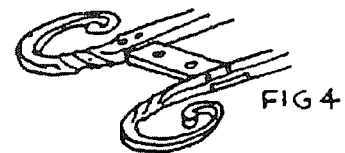
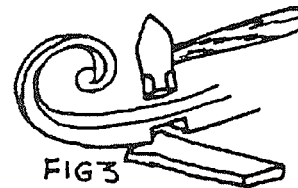
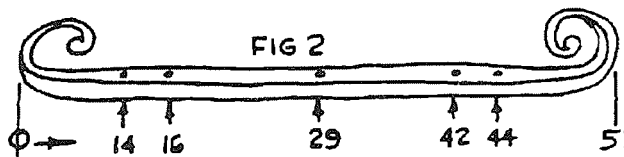
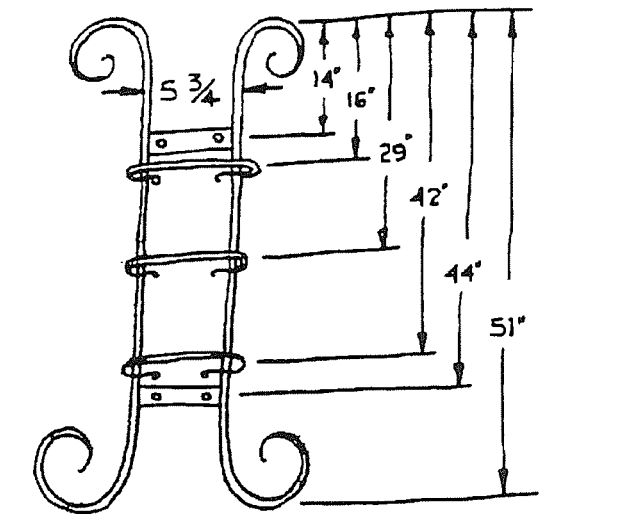
Forge the 3 pieces of 13" long 1/4 or 5/16 out to a taper so that they end up about 15" long and form tiny pig tail scrolls on each end with needle nose pliers or small scroll tongs. Bend each of these as shown. These are the pieces that will actually hold the plates.

Step 6-

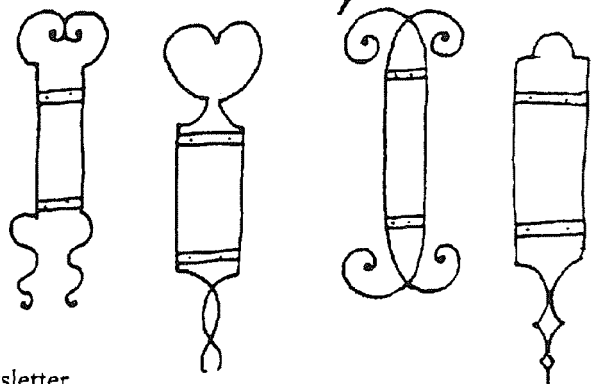
Attach these pieces to the uprights at the 16, 29, and 42" center punched marks made in step 2 above.

Step 7-

Finish by cleaning with a wire brush and applying an edible oil such as vegetable, olive, or whatever you use in your kitchen.



VARIATIONS



Reprinted from the Ocmulgee Blacksmith Guild Newsletter

THE BUILDING OF BIG BLUE

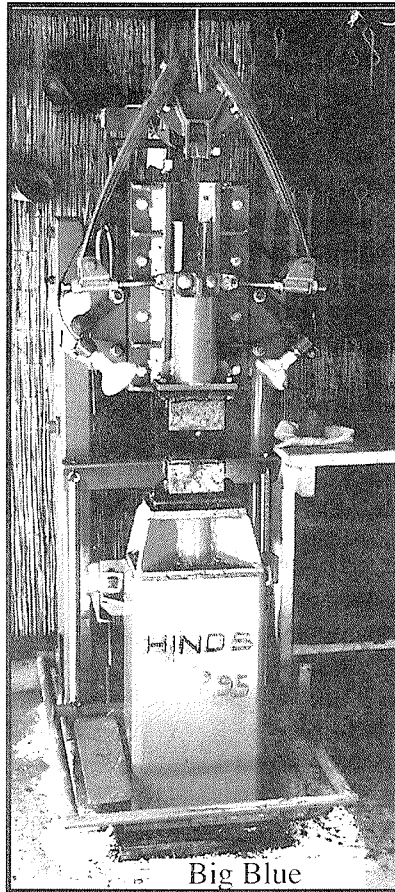
by Paul Hinds, Fatagaga Forge

For some period of time I considered building a treadle hammer in order to use tools that are difficult to position by one person forging alone. The disadvantage of this type of hammer is that no additional power has been added to human effort. It would be replacing a sore arm with a sore leg or a headache with a stomach ache.

After researching many types of hammers and a lot of sketching, the way to go seemed a mechanical hammer assembled from scavenged parts. The search began—scrap steel yards, junk yards, auto wrecking yards and my brother Ralph's metal museum. If it isn't there, it hasn't been junked yet. It seems, in cut and try engineering part availability has great effect on the end result.

The outcome was a hammer weighing 65 pounds including the die, suspended between two one-half ton truck leaf springs. Tension is maintained by two adjustable toggle bolts. This entire assemble is hinged on the end of the activating beam. A three quarter horse motor drives a jackshaft which in turn drives the activating pulley. This pulley is mounted on a one-half ton truck front wheel spindle. The disk brake was converted to a band brake with leather lining. The drive pulley connects to the hammer activating beam with a connecting rod. The rod may be lengthened or shortened to raise or lower the hammer. The drive pulley cam is adjustable to produce a hammer stroke from 0" to 10".

The foot treadle controls an idler pulley, tightening or loosening two v-belts from the jackshaft pulley to the drive shaft. This serves as the clutch. The clutch also operates the break. As the clutch tightens the brake loosens and visa versa. As a result this is a very low speed, but has a great safety advantage in positioning hand held tools on the anvil.



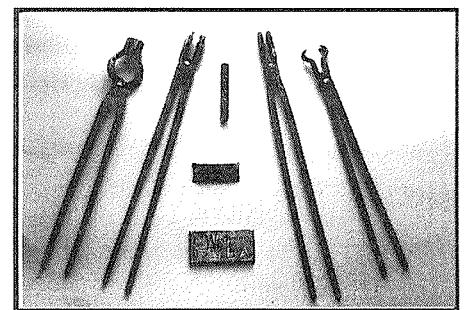
Big Blue

To briefly summarize, the machine's specifications fall in these parameters:

- hammer with die 65 lbs. wt.
- leaf spring bow type hammer suspension
- die blocks 3"X 3"x 5" bolted in place
- anvil fabricated and filled with concrete, wt. 300+ lbs
- seven inches of throat clearance
- three quarter horsepower motor
- painted safety blue, with left over paint

It is one thing to build a hammer and another thing learning how to operate it. The possibilities are endless—but it requires tools, tools, and more tools. The Clifton Ralph tapes were incredibly helpful in this phase of learning. So far, work has been done with cutting, drawing, bending, punching and riveting, letter stenciling and pattern designing.

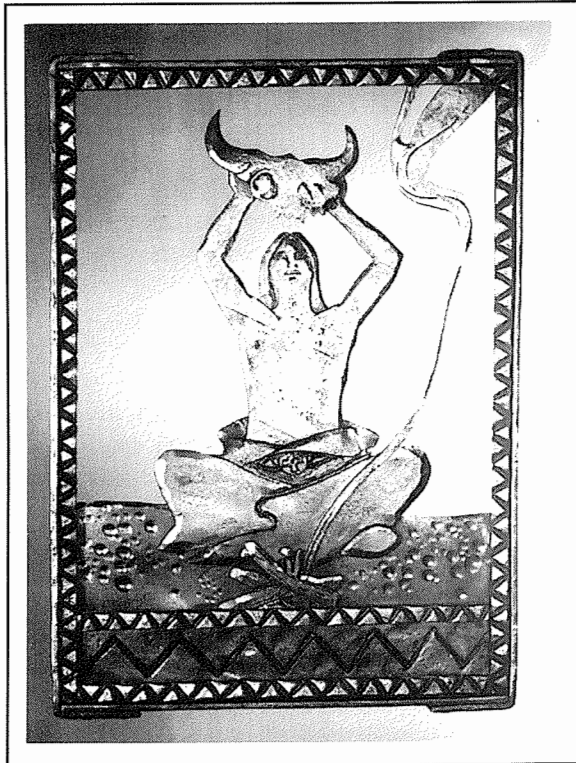
An open house for Big Blue was held but heavy snow limited attendance. Another event will be scheduled later.



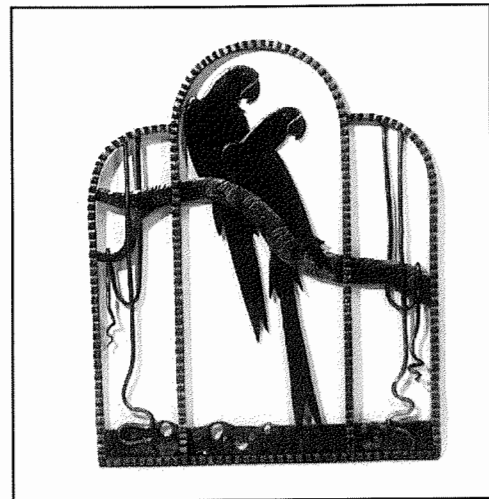
Iron forged by Paul on Big Blue

Paul is inventive and along with Yankee ingenuity has built many other power tools. Well done Paul you inspire us. ED

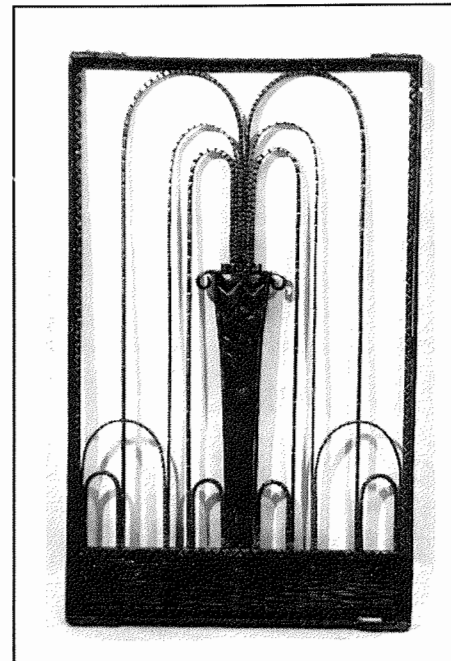
Wall Hangers by Gary Eagle



18" x 24"



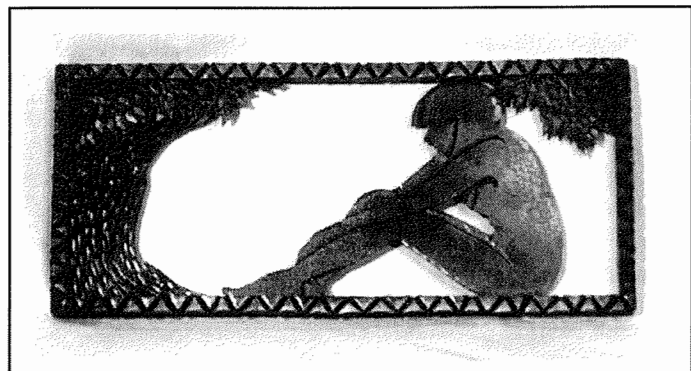
30" x 30"



20" x 36"



15" in diameter



10" x 18"

Gary Eagle demonstrated at the 1995 fall conference in Winthrop, WA. Most of these panels were displayed in the gallery and drew a great deal of attention. The upper left panel was displayed in the N.W.B.A. gallery at the St. Helens conference, 1995. Gary calls his panels "Wall Hangers" and has incorporated them in gates and fireplace screens. Some are made to hang on the wall. Most were done within the last two years and are to be a "continuing thing" with Gary. These artistic panels provide inspiration to all and are a welcome addition to conference gallery iron.

ROASTING SPIT

By: David Fink of Lumpkin, Ga.

Material Needed: 1/2" x 1/2" x 24" - 2 pieces
 1/8" x 1/2" x 7" - 2 pieces
 1/8" x 1/2" x 10" - 2 pieces
 1/8" x 1/2" x 5" - 2 pieces
 3/8" x 3/8" x 28" - 1 piece

1- Stack the 1/8 x 7 on the 1/8 x 10 and secure with wire while welding. Taper the welded area as shown in figure 1. Repeat with other like pieces.

2- Weld the above parts to the top of each of the 1/2 x 24" pieces as shown in figure 2.

3- Forge a point on the other end of the 1/2 x 24.

4- Heat the welded end and pull the 7" piece up and forge into a "U" shape. Reheat and repeat the operation on the 10" piece to form an object similar to that in figure 4.

5- Upset one end of the 3/8" bar to about 1/2" square and flatten. Over the edge of the anvil, forge this flattened section into a round one and punch a hole in it's center of a little over 5/16" diameter. Forge the 3" under this eye into a rounded cross section as shown in 5a and b.

6- Forge the opposite end of the 3/8" bar to a tapered point and forge the 3" behind that point to a rounded cross section similar to the other end as shown in figure 6.

7- Forge both of the 1/8 x 1/2 x 5" pieces to a long sharp tapered point on both ends. Measure the resulting pieces and mark the center point. Punch a 1/4" square hole in the center of each piece then drift to 3/8" square.

8- Slip these onto the 3/8 square bar (made in steps 5 and 6 above) and heat each of them in turn.

9- Use a scrap piece of 1/2" thick material as a spacer to form the last parts into a squared "U" shape as shown in figure 9.

10- Optional. A 20" x 1/4" round rod can be pointed on one end to hold cross bar in position.

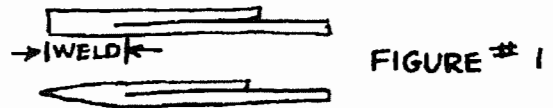
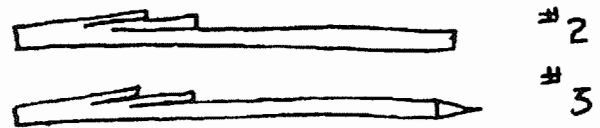
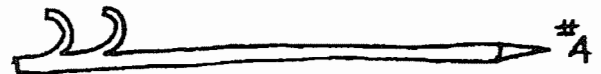


FIGURE # 1



2

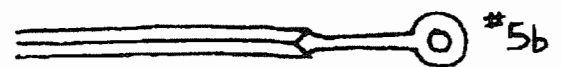
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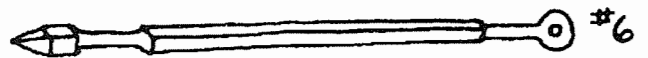
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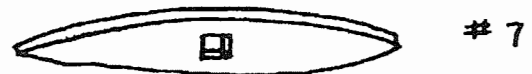
5a



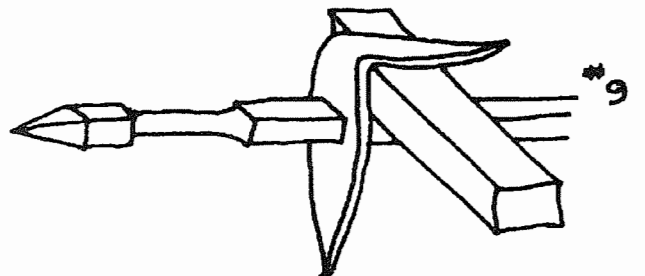
5b



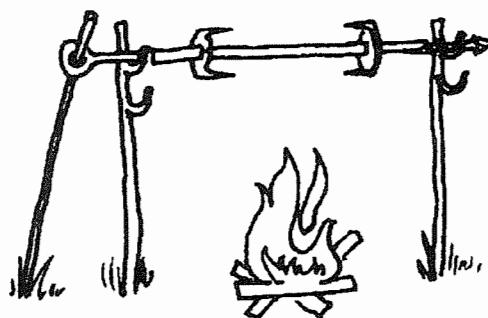
6



7



9



Reprinted from the newsletter of *The Ocmulgee Blacksmith Guild Chapter of ABANA*

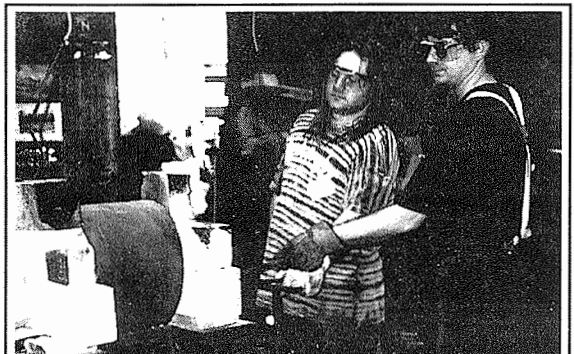


Novice II Workshop

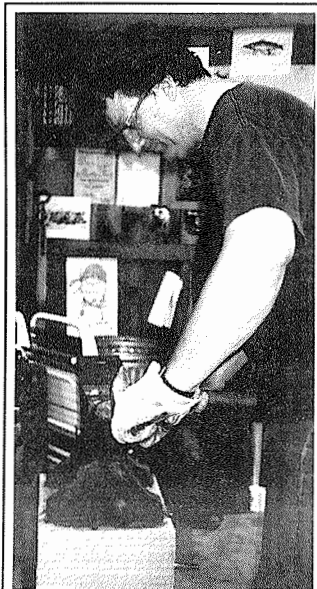


Jerry Culberson demo'd some snake belly technology for us one evening. His power hammer arm, plus master skills leaves all with the same thought, he makes it look so easy.

Old Cedar Forge was the scene of the latest blacksmith workshop doings. Host and instructor, Jerry Culberson, always delights everyone with his quotes, ironwork, gourmet food and "Snakebelly Technology" of blacksmithing. Berkley Tack and your humble editor were also instructing. This workshop was open to previous novice workshop students, although we squeezed in one person who missed out on a previous workshop. The Poz tongs, as always, are one of the first projects and many a fine pair were forged by these repeat offenders. Jerry and Berkley demonstrated a line of "product" iron for those wanting to develop a line of ironwork to sell. Candle holders, spoons, hinges, hooks, door pulls, poker, knives, and a variety of tongs. The iron on the floor in the photographs testify to the sweat, blood, and smiles that accompany a satisfied blacksmith at days end. I demo'd and helped with knifemaking basics to those interested in the cutlery end of ironwork.



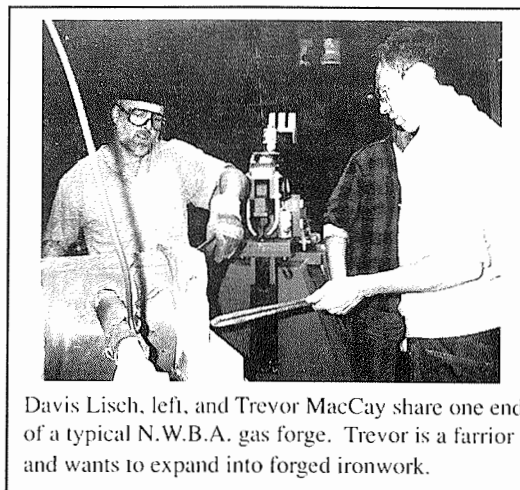
Fred Bryant, left and Richard Gathmann. Fred drove over the cascade Mountains in winter weather to attend. Fred is a knifemaker and wants to expand into bladesmithing.



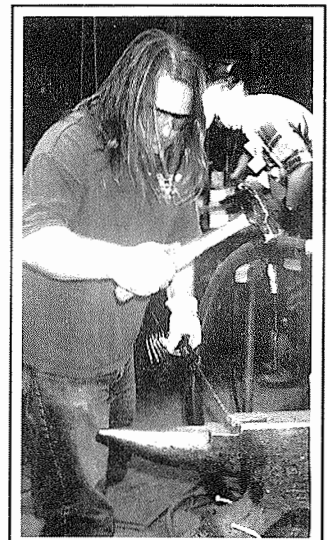
David Lindamood strategically placed his anvil near the large sliding doors, a wise place to be when four or five gas forges are running full tilt, not quite as sweaty with a cool breeze flowing past.



Dan Armstrong drove down from Winlaw, B.C. to get serious about forging.



Davis Lisch, left, and Trevor MacCay share one end of a typical N.W.B.A. gas forge. Trevor is a farrier and wants to expand into forged ironwork.



Richard Gathmann from Renton, WA. this was his second workshop

Photos by Ina Culberson



Novice II Workshop

Attendees are Jim Coston, Fred Bryant, Dan Street, Phil Jackson, Jeff Hammond, Raymond Baker, Davis Lisch, Trevor Mac Cay, Richard Gathmann, David Lindamood, Dan Armstrong, with instructors Jerry Culberson, Berkley Tack and Gene Chapman.



Graduation, time to go home, kick back and begin planning that next forged iron project.



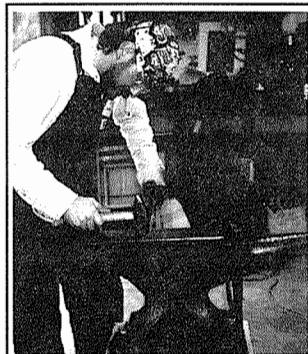
Dan street gets some good advice from Berkley Tack



Raymond Baker forging one of his projects.

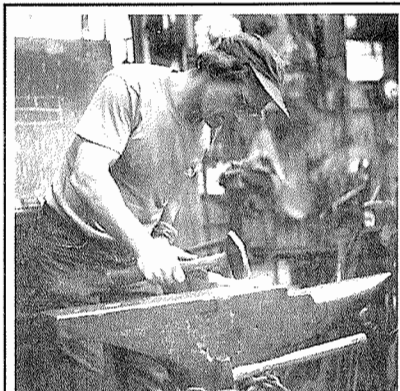


Phil Jackson hails from Friday Harbor in Washington's San Juan Islands

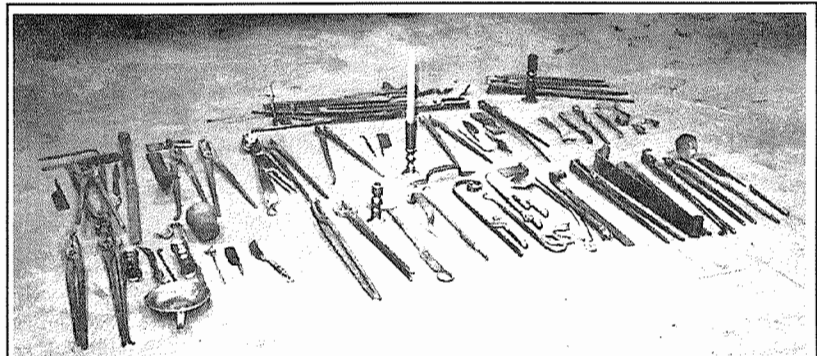


Jim Coston is a boiler maker from Olympic, Wa.

Photos by Ina Culberson



Jeff Hammond teaches at the Wooden Boat school in Pt. Townsend, WA.



An impressive amount of good looking forged iron, three days worth, plus demonstration ideas and tall tales go home with all who attended.



Ring Roll

by Art Miller, Riverside, California

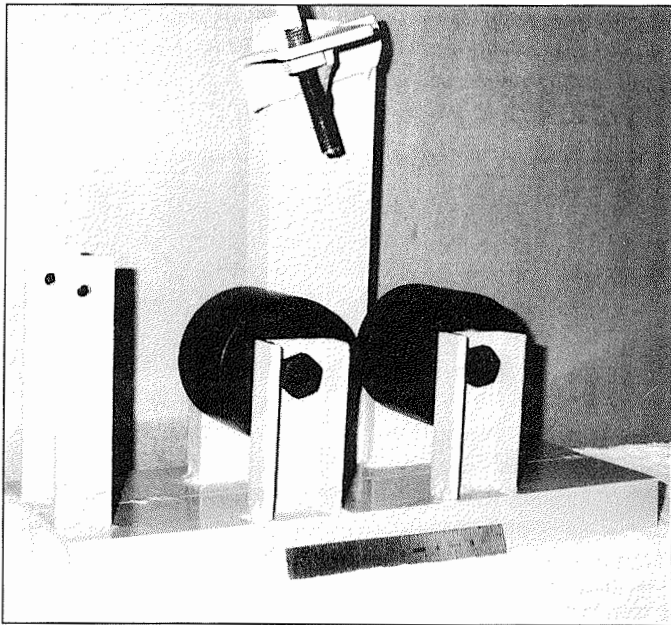
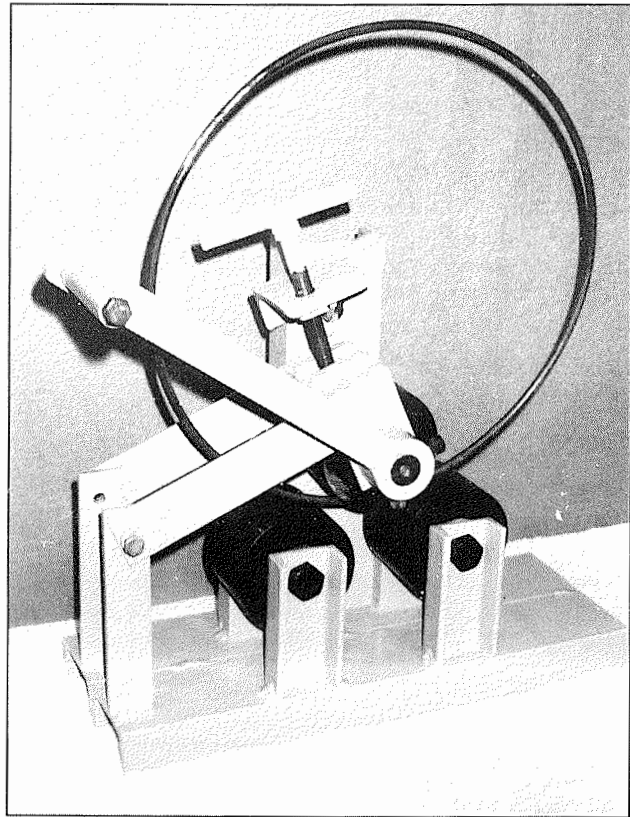
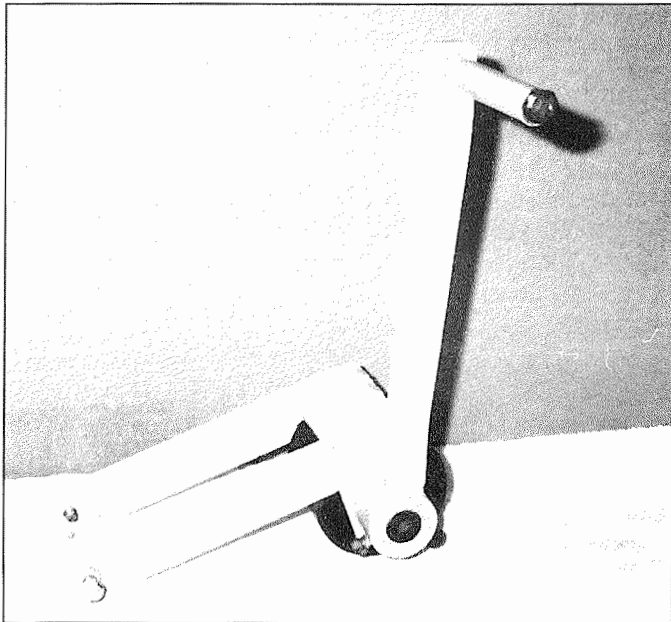
In the need for a ring roller, I copied and scaled down a ring roll used at a local fabrication shop. It is made from miscellaneous cutoff and was fabricated with a cutting torch, cutoff saw, drill press, hand grinder and arc welder.

The fixed roller and crank assembly is removable from the base to allow installation and removal of welded rings.

The 2½"-wide rollers are made from sch. 40 pipe (3½ O.D.) with ¼" plate end caps. 5/8" bolts are used for axles. The fixed roll has a ¾" diameter shaft with the

fixed roll pinned through this shaft and pipe roller with a 5/16" diameter rod, 3½" long. Braze the pin to the pipe roller O.D.

TIP: The roller will not bend the ends of the material. The length of this straight section will depend on your roller spacing. Mine leaves a little less than 2" straight on each end. So I calculate the ring material length ($C = \pi \times \text{mean diameter}$) and add 4". Cut stock and prick punch 2" from end of stock. Lay out ring length and prick punch at the other end of the material. Roll ring and cut off at punch marks. □





Fort Vancouver Blacksmiths' Guild

Fort Vancouver was originally the headquarters of the twenty-five posts of the Hudson's Bay Company in what was known as the Columbia Region. The Fort's blacksmith shop was more of a small factory than the usual "smithy" as most people think of a blacksmith's shop. The Fort Vancouver shop had as many as 12 men working from early morning to 6:00 p.m.. They manufactured tools not only for their fur trade but for farmers, loggers, and the small shipyard on the river. Almost all of the iron kitchenware and the ironwork for the buildings, which included the church and the bars for the jail, were undoubtedly fashioned at one of the forges in that small but efficient factory.

The goal of the Fort Vancouver Blacksmiths' Guild is to inspire visitors to the Fort Vancouver National Historic site with the history of the blacksmith shop and its significant impact on the industrial history of the northwest. Historic interpretation is the primary purpose of the Guild, and the production of ironwork is a close second. We of the F.V.B.G. are a group of energetic volunteers and invite you to join us in the fun showing and explaining our skill to children of all ages as they pass back into the days of yesteryear. Anyone interested may contact:

Michael Darrig, Blacksmith
 Fort Vancouver National
 Historic Site
 612 East Reserve Street
 Vancouver, Washington 98661
 360-696-7659

BE SOMEONE SPECIAL



VOLUNTEER IN PARKS

FORT VANCOUVER
 NATIONAL HISTORIC SITE

The Fort Vancouver Blacksmiths' Guild, in cooperation with the National Park Service, is able to offer you a unique training program in blacksmithing. Modeled on a mid-19th century apprenticeship, the program takes place in the recreated Fort Vancouver Blacksmith Shop. Training will be entirely in the handwork tradition of a Hudson's Bay Company shop of the 1840's.

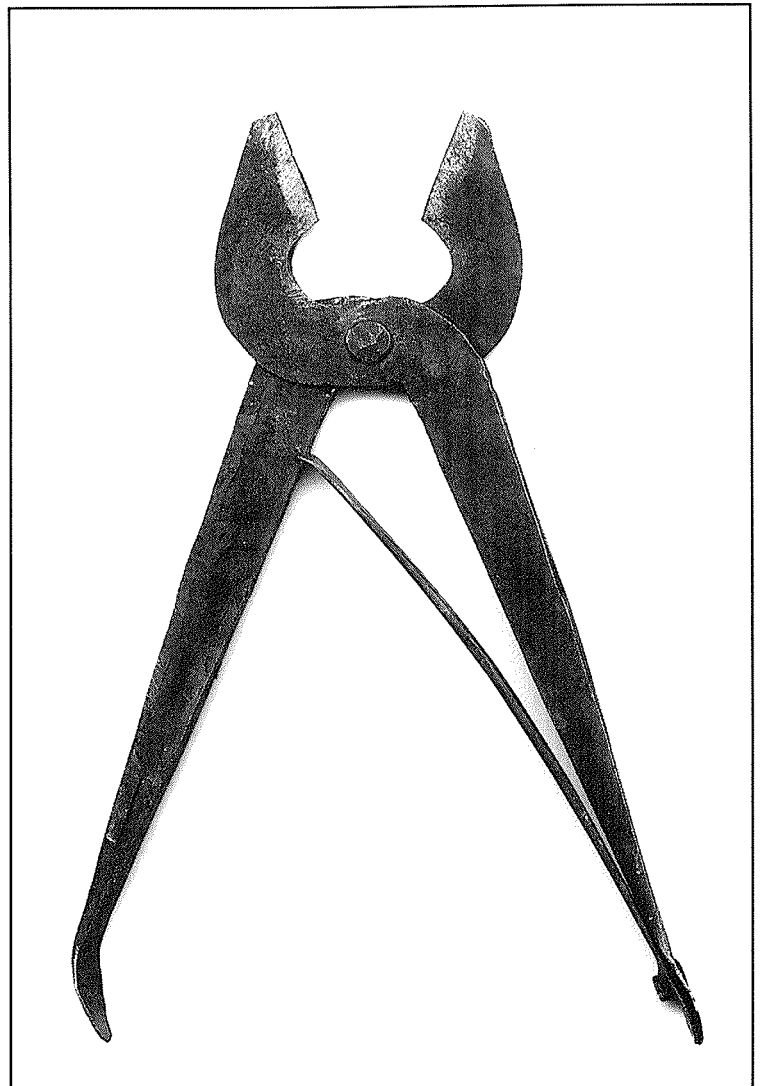
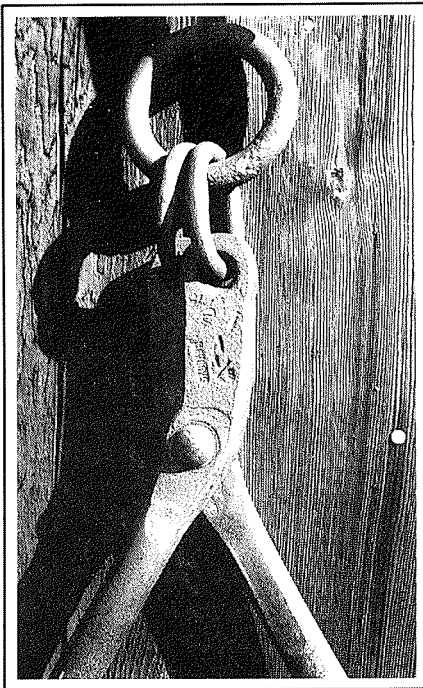
The program is divided into three basic sections of approximately six months each (a minimum commitment of four hours per day, once a week, doing historic interpretation and practicing smithing skills, plus class time):

1. Six months of initial training in shop maintenance, repair, and cold benchwork, as well as, study and preparation for historic interpretation duties.
2. Six additional months of mentored shop or "studio" type training. During this time you will work on a variety of projects com-

pleting a basic tool set for yourself and adding to the production of goods for the reconstruction of the Fort Vancouver National Historic Site.

Additionally, as there are no tuition charges for this training (other than ordinary tool and safety equipment purchases), you will be expected to commit to a minimum of four hours a day, once per week, for a year as a National Park Service Volunteer. This is above and beyond the instructional period, and is viewed as compensation for your training. The initiation fee is \$5.00 and annual dues at \$5.00 with the latter falling due on Waterloo Day. We hope you'll be joining us soon!

"Whatsit??"



Top left: Photographed at fire Mt Forge, I think, a long time ago.

Bottom left: Size 2 3/4" tall, you know what it is, but where was it made? Hint, it's Peg Chapman's and she is from the East Coast.

Top right: About 7 1/2" tall, look like Poz tongs, handles are about 1/8" thick. I purchased it in an antique store in La Conner, Washington. Found a store there that specializes in olives, dozens of different kinds. Look up the Olive Shoppe if you ever get to LaConner. The garlic, home cured, olives are super. They have a tasting area, 10 cents an olive. mmmmm

Last issue: Whatsit was first answered by Rudy Pineau, it's a adjustable bench stop designed to be mortised in a wooden bench. Many others had the correct answer. If you're first, you get your name in the papers.

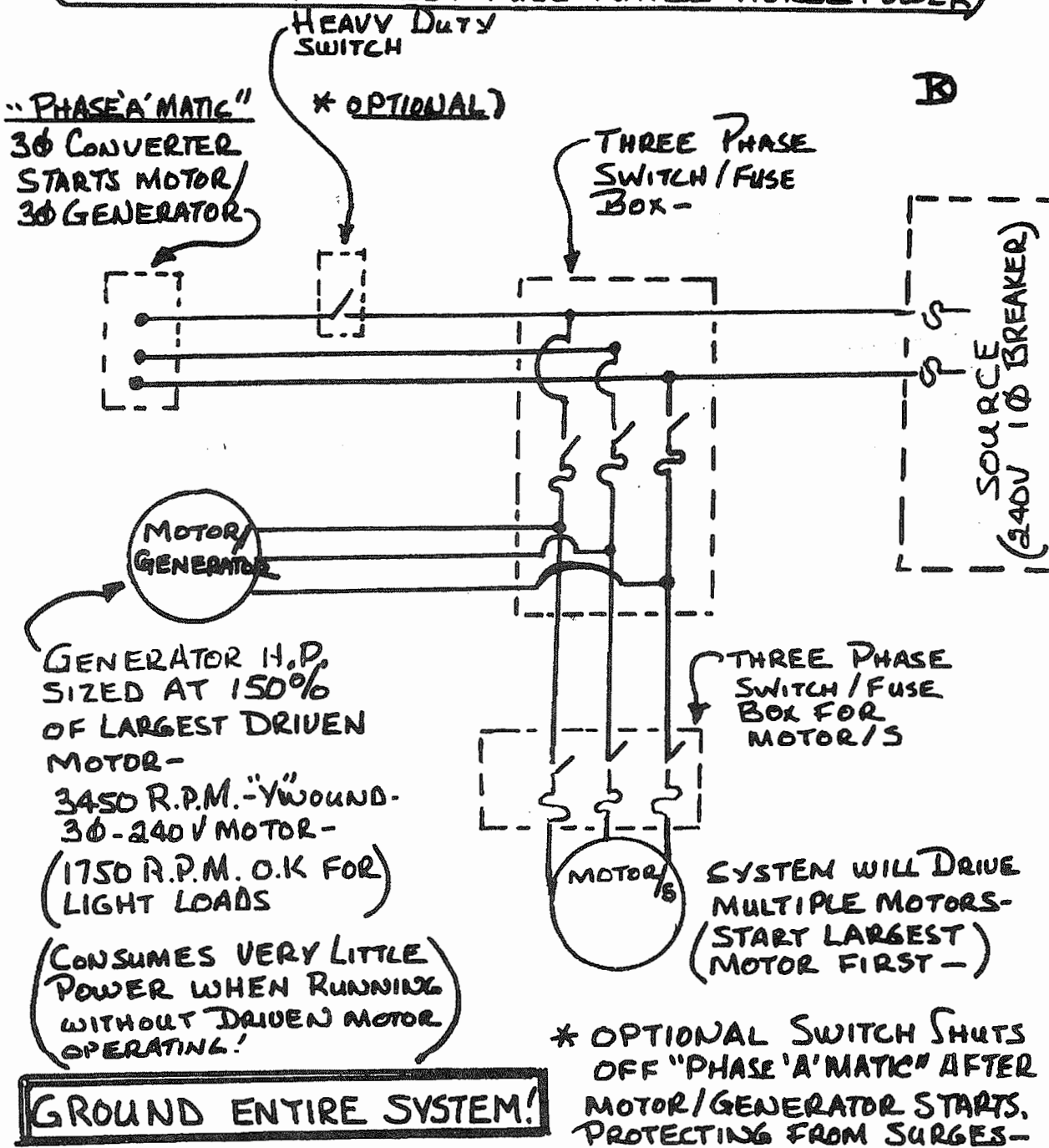
Help! I'm getting low on whatsits, send photos or bring them to the fall conference in Pt Townsend.

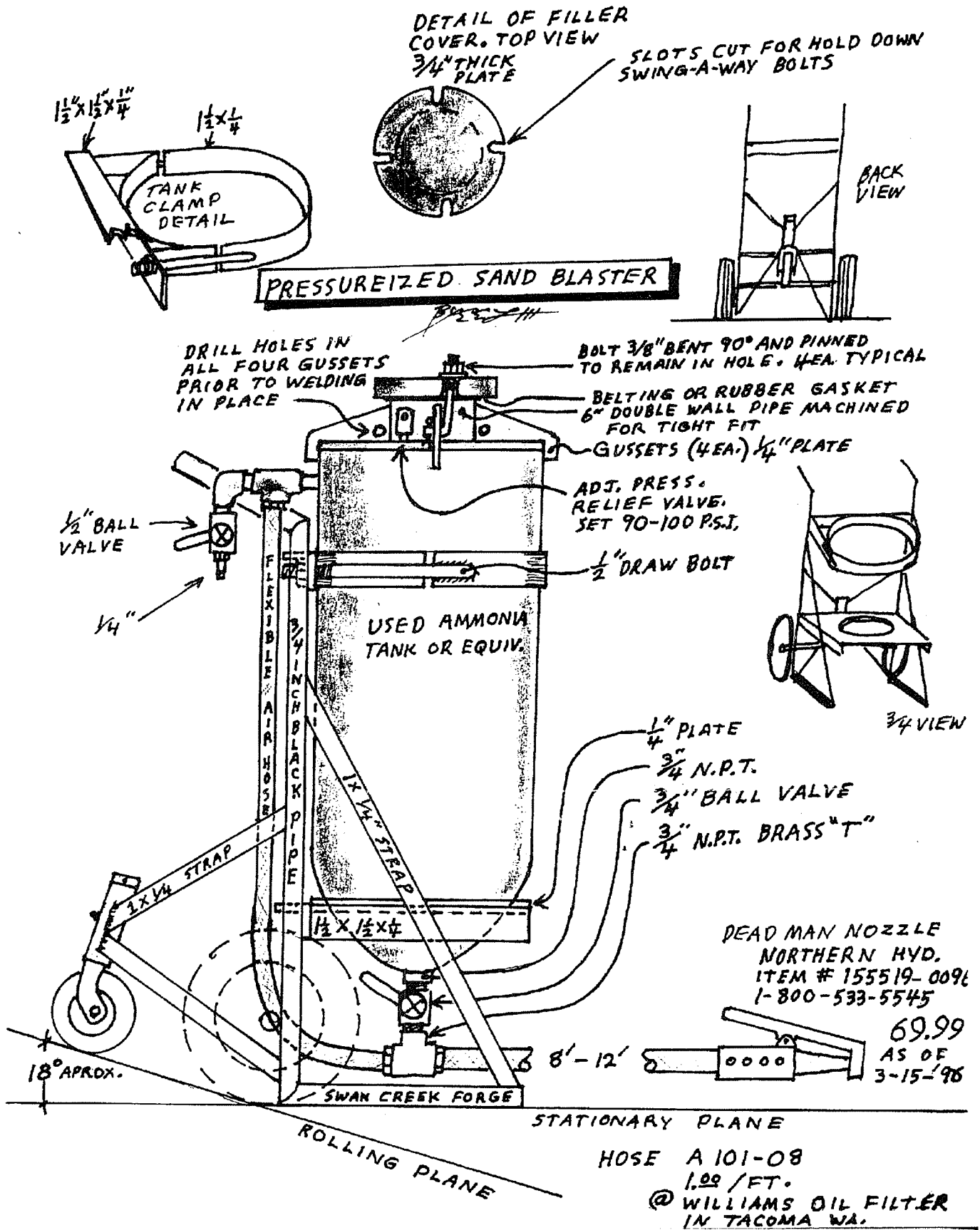
Thanks to all who know or guess about the whatsits. Some whatsits photographed previously just don't reproduce well in our scanner, so that's why they haven't been on the whatsit page. ED



THREE PHASE CONVERSION SYSTEM USING A "PHASE-A-MATIC" CONTROLLER AND IDLER MOTOR

(IDLER MOTOR SET UP ALLOWS DRIVEN MOTOR TO DEVELOP ALMOST FULL RATED HORSE POWER)





Thanks to Ed La Casse III for submitting this.



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FOR SALE: One lot unused hammers, hot punches, flatters, and fullers. 53 total, \$1520 plus shipping, All "USA" Mfg by Heller and Atha tool Co. Atha Tool Co was bought out by Stanley Tool Co in 1913. Paul 360-373-4053

Blacksmith Internship: The National Ornamental Metal Museum in Memphis TN is seeking an experienced blacksmith interested in a two year museum internship program which has been ongoing for seventeen years. \$500 per month stipend, health insurance, workman's comp., one bedroom apartment, utilities and studio space with ample opportunities though the year for additional income through repair work and commissions.

Artist-In-Residence/Smithy Manager Position Full time, permanent position, \$16,500, Tuesday through Saturday. Medical insurance, workman's comp., sick and annual leave, studio space, commission and work for exhibitions are strongly recommended. Contact Jim Wallace, Director, National Ornamental Metal Museum, 374 Metal Museum Dr. Memphis TN 38106

FOR SALE: South Bend 10K lathe on nicely built steel bench. Quick-change feeds, 10x22 capacity, 12 speed with reversing motor. Has 3 spindle chucks, collets, face plates, milling attachment, "10-in-1" tool block, rocker toolpost with 7 tool holder, thread dial carriage and cross-slide stops, micrometer carriage stop, 6" steady rest, taper sleeve, centers, die holder, live center, etc. This is a recent production, low hours machine. Lathe and all tooling in very good to new condition. \$3,700. Art Anderson, P.O. Box 631, Lolo, MT 59847 Phone [406] 273-0986 (24 hour message machine).

Genuine Wrought Iron: All sizes square, round, flat and fabricated bar. Made in England, contact Tim Ryan, 617-643-0158

KNIFE BLADE STEELS: Stainless ATS-34 and 440C Non stainless: 1084, 1095, 5160, 01, A-2 and D2 come in a variety of sizes and lengths. Contact: Admiral Steel L.P. 4152 W. 123rd St. Alsip, IL 60658-1869, 1-800 323-7055. They have a handy guide/price list and also Admiral laser cuts custom knife blades.

WANTED: Used anvil, 125# to 175#, give or take. Contact Larry Quaglia [503] 284-2422.

WANTED: 25# Little Giant or similar power hammer. Marten Stone, Brandon, OR [503] 347-9047.

WANTED: Black and white professional quality 5"X7" photos of blacksmith hints and work for 1997 blacksmith calendar. Jody Best, Hidden Hills forge, RD1 Box 141, Confluence PA 15424

WANTED: 25# or 50# Little Giant, 300# anvil and tools. Aziz Patel, Box 236, Carlton, WA 98814 [509] 923-2144.

FOR SALE: Ring roller, benders, twisters, bending dies, ornamental iron drawing system, scroll iron attachments, All new manufactured products, Send for info, Shop Outfitters, 605 S Adams St, Laramie WY 82070, 307-745-5999

WANTED: 25# Little Giant or similar power hammer, Martin Stone, PO Box 888 Brandon OR 97411 503-347-9047

WANTED: Photos of your shop, iron-work, demonstrator notes /drawings, blacksmith action pictures or anything else you feel would be useful for publication in the **Hot Iron News**. Contact Gene Chapman, PO Box 1038, Kingston WA 98346, 360-297-2495

Crafty Tip: Designing craft hang tags. Using a uniform hang tag on your products gives your product a packaged finished touch that singles you out as a professional merchant.. The hang tag identifies you as the manufacturer and your product. It should reflect the image you want to project for your products and business. To do this you should consider (Color, size, logo or graphic, information needed, method of attaching it and, type of produce. Integrate your hang tag with your other stationary like your business cards and letter head to create an image and a consistent theme. If you have a product line that varies widely in size, consider the same design using several sizes or types. Put your personality into the hang tags as you do your product, be creative and clever while serving a useful way. For example a wood crafter could use a log and saw. Now you blacksmiths have many tools that are symbols of the trade. The goal is to have your hang tag reflective of your actual trade and product. Visit craft shows and see what the other folks use. This was gleaned and edited from the internet. ED

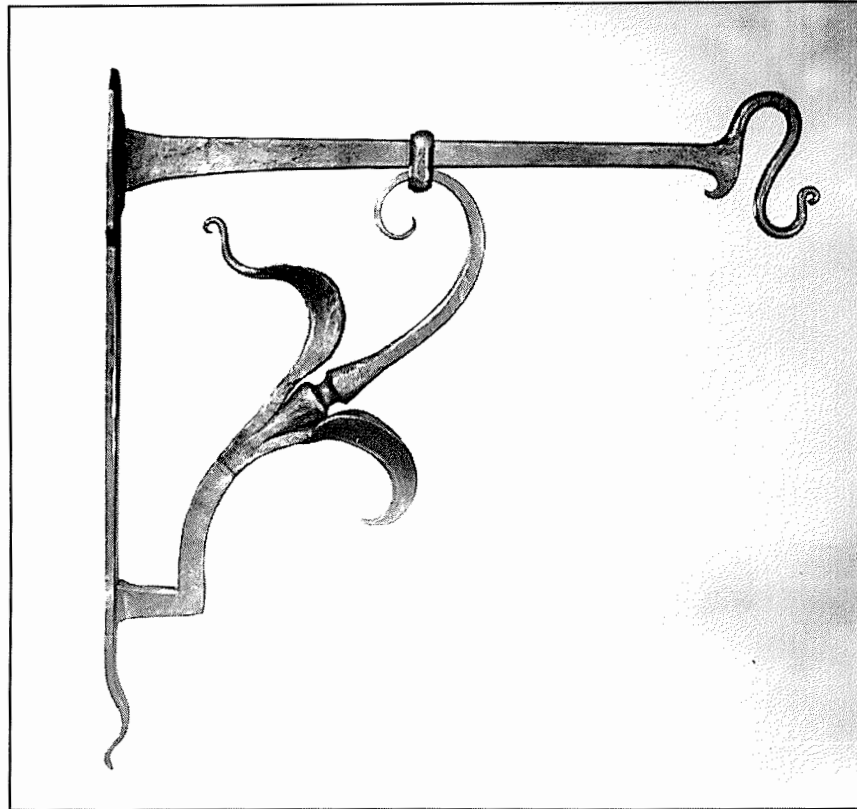
Trade for Surface Grinder or \$\$: A vintage restored South Bend Lathe, 14 1/2" swing, 36" between centers, steady rests, following rest, 3 jaw and 4 jaw chucks, Shafting and clutch for overhead drive, and some tooling. In primo condition Need surface grinder and magnetic table for knife work. 360-297-2495, Gene Chapman

For Sale: 25# Little Giant, rebuilt to better than new by Fred Caylor, new 2 hp motor. \$2200, 503-658-3004.

Thanks: All N.W.B.A. members and A.B.A.N.A. chapter newsletter editors for your generous input of articles, photos, ideas and friendship. You make the Hot Iron News what it is., a newsletter for blacksmiths. Ed

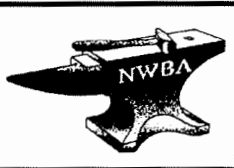


Japh Howard Demo Iron Photo by Phil Jackson



Japh Howard's demonstration piece from N.W.B.A. fall conference, Winthrop, WA, October, 1995. Demonstration iron is displayed with N.W.B.A. archives which is available for members to fondle, draw, trace or just look over for inspiration and ideas.

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