

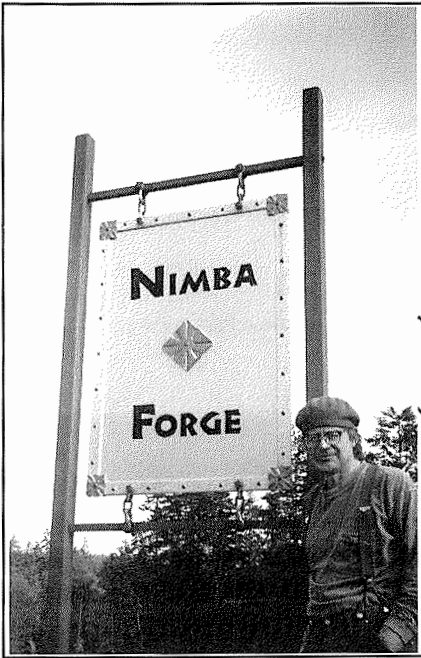
CHAPTER OF ABANA

# Hot Iron News

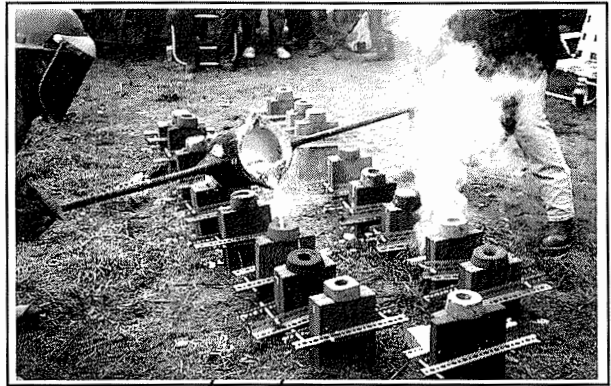
Voice of the Northwest Blacksmith Association

Winter 1996

\$6.00



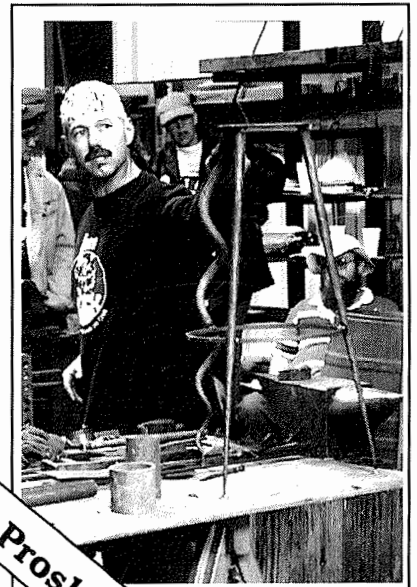
Hot Iron. . .  
Hot Times in  
Port Townsend  
see pages 10-15



Russ Jaqua

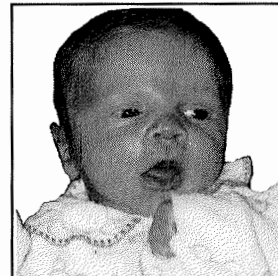
Cast Iron Pour

Fall Conference at  
Russ Jaqua's  
Nimba Forge



Mike Bondi

Dennis Proska



See  
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Born with a hammer  
in his hand!!



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Cover photos by Rucy Pineau, Bill Carrell, Vivian Urban and Smedley Soapstone



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

**1997**

*Hot Iron News* is the official quarterly publication of the Northwest Blacksmith's Association. Submission of materials for the magazine is eagerly encouraged and my 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 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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**1997 Committee Assignments**

(Contact them for special needs or crying towels)

*Job Descriptions:* Kent Rudisill

*Insurance:* Jerry Kagele/Dennis Prince

*Grants:* Terry Willis/Berkley Tack

*Spring 97 Conf. Coordinator:* Tom Richards/Ralph Hinds

*Fall 97 Conf. Coordinator:* Matthew Tilton/Barney Coski

*Librarian:* Don Kemper

*Internet:* Kent Rudisill

*Club Storage:* Barney Coski

*Video:* Jerry Kagele/Rudy Pinequ

*Workshop Coordinator/Hammer Ins:* Berkley Tack

*Official in charge of nothing:* Smedley Soapstone



## From the President

First of all let me say Thank You! To all who helped make our Fall Conference such a great success. . . from organizers. . . to host. . . to demonstrators and all who helped whenever and whatever needed to be done! Secondly, on behalf of the entire board/candidates, thank you for your vote of confidence.

The good news is that with our strength and support, our Spring Conference demonstrator will be Willem Jonkers (a sixth generation artist blacksmith from the Netherlands). Our Fall Conference demonstrator will be another international artist blacksmith featured at the recent Alfred, NY "Do".

The flip side is that conference attendance makes even a shop as big as Russ' burst at the seams. Small problems are easy to solve. A professional quality portable mike for the demonstrators and a sound system volunteer to make sure everyone can hear ( thanks Terry and Gene). Making benches more portable to increase seating (thanks Jeff).

Weather proofing the N.W.B.A. trailer so all our equipment is more portable (call Barney to help). Setting up a second tent for more room for periphery activities and open forge (thanks Mike). We would like your suggestions/comments on keeping the learning experience at our conferences at the highest level and comfortable as our attendance has grown. No, we still expect to have some minor glitches! "We are an army of volunteers you know". If you have a suggestion, please just drop me a line, preferably starting out, "Have I got a hot idea for the board". No prizes but all will be shared with the board and thoughtfully considered.

The best wishes for the holiday season and may those closest to you be astonished by your "Art in Iron".  
Don Kemper

## N.W.B.A. MINUTES

Meeting called to order at 5:35 p.m. by President Kemper. All board members present. Minutes of July 13, 1996 approved.

Kent asked for permission to close the post office box in Seattle. It was approved.

The Treasurer will be audited by Tom & Matt and the Editor will be audited by Terry and Berkley.

The Fall Conference was discussed. No problems at this time. A silent auction was discussed and was decided to try a silent auction on a few items in the spring.

The Association now has a trailer. Dennis donated the trailer and Barney is going to get a crew together to seal up the doors and build a roof rack. Jeff Holtby will build removable legs for the benches so they don't take up so much room. We are looking for someone to paint the trailer and someone to put our name on it.

Spring Conference '97 will be held at John Loeffler's shop in Peshastin, WA (Outside of Leavenworth on Stevens Pass). He has a large shop and plenty of parking and camping near by. Charles Lewton-Brain from Canada, is scheduled to be our guest demonstrator, possibly Berkley Tack as our local demonstrator, and the casting crew will be back!

Spring Conference '98 is proposed to be held at Jeff Wester's shop in Sisters, OR. Joe Elliott volunteered to be conference guru.

Scott Randall sent correspondence on a traveling exhibit and demonstrator for 1998 and wants us to sanction and donate to it. We would like to see more information and a proposal.

It was discussed and decided that the grant money would be used more for people going out of the area for workshops and the like to bring information back to our group.

Matthew will be putting together a tool making workshop and making tools for the Association. The Association will pay for materials for tools.

Meeting adjourned at 6:50 p.m.

Sunday meeting called to order at 8:00 a.m.

Ballots were counted and all board members were re-elected. It was a very close election. All officers were re-elected and Matthew was elected Vice President.

The money for the grant fund and the library was approved. Committee assignments were announced. Audits were completed and certified.

Meeting adjourned at 8:40 a.m.

Dennis Prince



# TIDBITS

**N.W.B.A.** grant information is in the Resource Handbook. Just run off a copy and apply if you need assistance for a workshop or blacksmith related event. There is a \$250 maximum per person each year. The grant fund is currently \$1,000 per year. There are a few strings attached though. Grant recipients are required to write an article for the *Hot Iron News* about the event they attended and are requested to demo some of what they learned, however the demo isn't mandatory.

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

**Attention: New members:** Have you received an N.W.B.A. Roster and Resource Handbook??? If not give Gene Chapman a call at 360-297-2495.

**N.W.B.A. membership** is at an all time high with around 450 paid up at any one time. The roster has 917 names in it, around 55 are ABANA chapter editors. Membership generally peaks after the spring and fall conferences.

## CORRECTION

### *The Joe Humble Award*

I incorrectly identified who made the quill for the Joe Humble Award. Donnie Fulwood of the Ockmulgee Guild made the quill and Jim McCarty made the placard. Ed

## **New Members**

Mark Downing, Portland OR  
 Jim Lovelace, Tacoma WA  
 Wally Action, Sierraville CA  
 Lisa Webber, Vashon WA  
 Larry Wendell, Santa Cruz CA  
 Alexander Mfg, Portland OR  
 Mark Cramer, Issaquah WA  
 Mike Mc Nulty, Friday Harbor WA  
 Charlie Dunford, Bremerton WA  
 Randy Bren, Cinebar WA  
 Jerry Zygmuntowicz, Corvallis OR  
 Ron Hatfield, Beaverton OR  
 Jamit Fackler, Seattle WA  
 Jack Meade, Buxton OR  
 Susie Crowell, Belfair WA  
 Vincent Gorjance, Sedro Wolley WA  
 Paul Jendrucko, Torrance CA  
 Frank Sneed, Beaverton OR  
 Roger Petroff, Pt Angeles WA  
 Jim Kingston, Lincoln City OR  
 David Rase, Bremerton WA

JT Hardin, Monroe WA  
 Charles Sowers, Eugene Or  
 Ronald Denning, Graham WA  
 RL Lowman, Portland OR  
 Thomas Wawson, Kingston WA  
 John Johnson, Bend OR  
 Barney Warren, Boise ID  
 Jack Butz, Tillamook Or  
 R Hammers, Bremerton WA  
 Ken Mills, Crabtree OR  
 Jesse Ariza, Bell Ca  
 Ken Bau, Pt Townsend WA  
 Heather O'Brien, Vancouver BC  
 Rick Toews, Boise KD  
 Arvid Weflen, Fairbanks AK  
 Kimm Kelly, Chelan WA  
 Terry Waters, Chilliwack BC  
 Glen Jones, Shawnigan Lake BC  
 Mark Eschbach, Des Moines WA  
 Mark Burnside, Seattle WA  
 Carl Walden, Kirkland WA

Kristine Morgan, Vashon WA  
 Kate Heinsberg, Peshastin WA  
 Mark Tibbles, Anacortes WA  
 Perry Mc Gill, Eugene Or  
 Robert Bailey, Bellingham WA  
 Steve Gustafson, Redding CA  
 Jim Vander Pol, Blaine WA  
 Kelly Gilliam, Seattle WA  
 Mike Bendall, Cobble Hill BC  
 Gene Kobetich, Pt Townsend WA  
 Harold Hennigar, Sidney BC  
 Ed Parker Victoria BC  
 Mike Northrop, Seattle WA  
 David Francis, Rockford IL  
 Ruth Chau, Bothell WA  
 James Stover, Lakeview OR  
 Marc Davis III, Allen Park WA  
 Hardy Swedge, Portland OR  
 Chris Rose, Sutton AK  
 Harlan Weber, Issaquah WA  
 Robert Howes, Junction City OR  
 Dale Rush, Government Camp OR



# More Tidbits/Workshops

## Help Wanted

The **Hot Iron News** is going to feature N.W.B.A. lady metalworkers (Blacksmiths, Farriers, welders, metalworkers etc.) for the fall 1997 newsletter. We are beginning a file for this purpose. If you know any female N.W.B.A. member, past or present, please let me know. I'll canvas all I know and recruit from other's info about this feature. Photos, stories, special interests, areas of expertise and any info you feel pertinent would be appreciated.

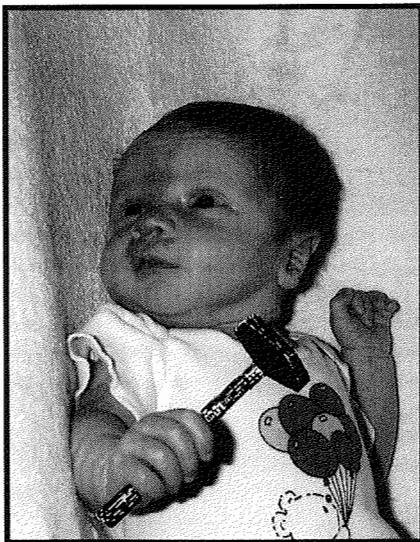
## Full Time N.W.B.A. Blacksmiths??

During a recent conversation with Paul Thorne, the question of how many members were making their living blacksmithing came up. This question has been asked before. Well, a quick review of the **Hot Iron News** roster coughed up 43 names that I think make their living at the craft. Of course some of these are retired from other occupations and claim to make a living doing hot iron. At least that's what I tell Peg! Possiblesuggestions:

- Something new on the N.W.B.A. application form.
- • Simple questioner about blacksmithing.

Comments are welcome. Ed

## Newest N.W.B.A. Member



Sawyer Nicholas Chapman, born to Gary and Kristyn Chapman, October 25, 1996. Shortly after arriving home he began playing with a small cross pein hammer Grandpa Gene gave him. He'll need a little facial hair before becoming a "real" blacksmith!

## Tinware & Sheet Metal Joinery Workshop



**Instructors:** Rikki Scott and Dick Naven

**Location:** Dick Naven's shop in Portland OR

**Dates:** March 15 & 16, 1997

**Contact** Dick Naven, 6802 SW 33rd PL, Portland, OR 97219, 503-245-3659, Fax 503-244-2977

Rikki Scott had her line of tinware and pierced copperware on display at the Northern Rockies Blacksmith Spring Conference. She and her husband Jon, own and operate Burr Creek Forge and Tinworks in Victor, MT.

Dick Naven owns and operates Naven Restoration Specialties in Portland, OR, doing woodwork, metal work, and other trades involved in the restoration of older homes in the Portland area.

The workshop will consist of demonstrations and hands-on student projects. Intentions are to include one project of pierced tinware (candle lantern?) and one of pierced copper (wall sconce/light fixture...above). Rikki will demonstrate the use of artistry and design, while Dick will instruct in joinery (seams & seaming, rivets, soldering.....).

The workshop will accommodate 8-10 students. Students should bring their own tools. Not everyone needs to bring a small anvil. Materials will be provided; bring any speciality items you're thinking about incorporating into a project. Cost is projected to be \$140.00. Some meals are included. Write, call, or fax for an application and more information.





# Letters to the Editor



The Proprietor  
The Blacksmith Shop  
Winthrop  
Washington State  
U.S.A.

Dear Sir,

I had the very great pleasure of visiting your shop in downtown Winthrop while on vacation last September. I much admired the excellent work on display. Ironwork is one of my hobbies so I know good work when I see it. I am not ashamed to say that I got some very useful ideas from what I saw.

Another of my hobbies is writing poetry. While talking to the very pleasant young lady in charge I quoted a poem that I wrote about "The Enchanted Smithy". The young lady gave me her business card and asked me to send her a copy of the poem. Which is enclosed. Unfortunately I lost the card. So I have had to take this rather unusual method of getting it to you.

If you chose to use my poem in any way to help your business PLEASE FEEL ABSOLUTELY FREE TO DO SO. Just leave my name under the title. I feel that the ideas that I got from viewing your excellent work as full payment for any benefit you may derive from the use of my poem. Because of the rather unorthodox method I had to use to get it to you I would appreciate an acknowledgment that you received it.

Yours truly

Norman Pocock

Norman Pocock's letter and poem were mailed to:

The person in charge of the Post Office  
Winthrop  
Washington State  
U.S.A. (Postal code not known)

The Post Office forwarded them to D.J.'s shop. Wonder if you would receive the same service in a large metropolitan Post Office. Ed

## The Enchanted Smithy by Norman Pocock

*There's a magic in the anvil.  
There's a magic in it's steel.  
There's a magic in the glowing fire  
And how it makes you feel.*

*There's a magic in the hammer  
In it's heft and solid ring and  
How it bends the iron  
Like an independent thing.*

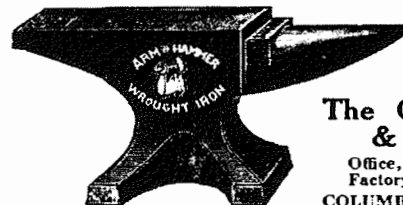
*But the magic of all magics,  
The one that steals your soul,  
Is the magic of the red hot iron  
That comes from glowing coal.*

*If you would be a rich man.  
As Midas was of old,  
Then keep away from smithy fires  
And stay out in the cold.*

*But if you would be a happy man  
Contented with your lot.  
Then warm you by the smithy fire  
And watch the iron get hot.*

## Is Your Anvil Worn Out?

But it is **NOT** beyond repair, for we can **REPAIR** old wrought anvils, no matter how badly they are broken.



*Before buying a new anvil write for our prices-- it will pay you.*

**The Columbus Anvil & Forging Co.**

Office, Wyandotte Building  
Factory, West Frankfort St.  
COLUMBUS, OHIO



# Thanks, N.W.B.A.!

8 Oct 96

Don Kemper, President  
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(604)652-1864  
email <wd006@freenet.victoria.bc.ca>

Though addressed to the president, this letter is to all the members and attendee's at the NWBA 1996 Fall Conference at Port Townsend, Wash. 4,5,&6 Oct 96.

What a hoot! What a charge! 3 days of total immersion in making smoke and noise! It's 2 days later and I'm still pumped! Talk about the Forge being with you, it's sort of swept me away!

For the first time, I brought the van to sleep in. By getting it parked about 50 yards from the Nimba Forge back door, I was close enough to be lullaby'd to sleep by the power hammer, still thumping away at 0100! Any closer and I'd have been shaken onto the floor!

Raging and Tumultuous Congratulations should go to:

- The committee members who did the months of organizing, (veterans of a zillion details!)
- Mike Bondi and Dennis Proska, the demonstrators, (now that I've seen it, can I see it again? So I can figure out my hurried notes.)
- Russell Jaqua for opening up his new shop to the stampede, (and thanks to Russ and Jim for opening my van door when I'd locked the keys inside!)
- The crew who put together dinner at the Palindrome (ladies with the scrumptious food, guys on the tables and chairs) and saved enough leftovers for lunch on Sunday!
- Jerry Culberson and the crew who ran the fantastic auction (did I hear \$5900?),
- The coffee, donut and registration brigade who kept it up all weekend,
- Berkley Tack for taking the time to set up a demo on Friday and Saturday night and finally got my hands learned enough to do some real forge welds,
- Norm Larson for bringing tons of printed delectables 1300 miles so we could drool and over-spend,
- The Iron Casting Mob for bringing us something new and interesting,
- And the club members, all of whom seemed to appear when something had to be done!

I'm glad I got to meet all the new folks that I did, finally learn to forge weld, lost a lot of sleep by staying up late, learned about stuff I'd never thought about before, (bring on the bronze!), saw lots of ideas for my shop, sold enough rail spike letter openers to cover my registration costs, over-spent my book budget (and I don't care!), and meet even more new folks!

The burn on my finger is healing and will soon disappear, but the fun and excitement of a 3 day overexposure to blacksmithing will stay in my heart for ever!

Thanks to all!

*Gus.*

Ralph (Gus) Gustafson

**Auction Note: The N.W.B.A. auction brought in \$3918.50 and the silent auction proceeds were \$75.00. Ed**





# What's Happening or Happened

## January 9-12, 1997

### A.B.A.N.A.'s First Official Winter Mini-Conference

The conference will be held in Phoenix, Arizona with demonstrations at the Phoenix Forge. Meals and lodging will be at the Downtown Ramada Inn directly across from the demonstration site. Four days of demonstrations by Dorothy Stiegler, Jerry Hoffman, Dmitri Gerakaris, Lou Mueller, and Corky Storer, a reception and Gallery are the highlights. Registration is \$150. The lodging package is \$191.50 per person, double occupancy which includes four nights lodging, four breakfast buffets and a banquet dinner. To register or for more information contact: Bill Callaway or Bob Rummage at the Phoenix Forge at 602-253-3316 or Mike Cooper at 602-938-1495

## Jan 24-26

### N.W.B.A. Novice Workshop

Contact Jerry Culberson 360-275-6769 or Gene Chapman 360-297-2495 to get on a list. Many signed up at the fall conference, your name is in the computer, you will be contacted as soon as dates have been set. Proposed dates are

- Novice , Jan 24-26
- Novice II and III, Feb 21-23
- Mar 14-16, If needed

If you haven't heard from anyone about the workshop by the time you read this newsletter give Gene or Jerry a call, Murphy's law??

## Jan 18-Feb 26 1997

### "Living With Iron"

Presented by **The Frame Wright Gallery** in Bothell WA. the gallery will welcome the N.W.B.A. community for an open house during the day on Sat Jan. 18th followed by an artist reception in the evening. The following artists have accepted invitations to participate: Phil Baldwin, Judith Caldwell, Jerry Culberson, Russell Jaqua and Nancy Mee. Contact Lunn Asmann 206-483-7385, Frame Wright Gallery or Jamie Ross 206-481-8961 for more info. (See map below)

## Feb 15-16

### Tin Smith Workshop

(see write up on page 6 for more information)

## Feb 21-23

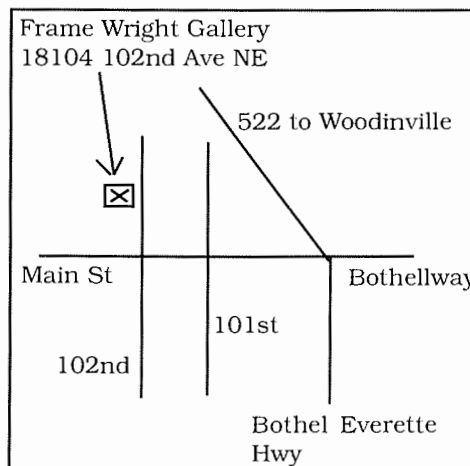
### N.W.B.A. Novice II & III

(see write up above for more information)

## March 14-16

### N.W.B.A. Novice II & III (if needed)

(see write up above for more information)



## May 15-16-17, 1997

### Southeastern Regional Blacksmith Conference

Presented by The Tullie Smith Guild, Ocmulgee Guild, Alabama, Appalachian Area, Florida, South Carolina, and North Carolina Chapters of A.B.A.N.A. in Madison, Georgia Demonstrators: Bob Becker, Roberta Elliott, Tal Harris, Bob Patrick

Blacksmithing classes, Auction with Tim Ryan, Family Programs

Conference planning contact: Bill and Brenda Pate 1611 Oakley Rd, Castle Hayne, NC 28429

Auction donations contact: Jim and Cindy Alexander, 922 Lakeside Dr, Durham, NC 27712, 912-471-0184



Monthly hammer-ins, open forge Sundays 1 PM until???

Oct 13, Nov 24, Dec 15 at Dan'l Moores' Coon Hollow forge, 258 Riverside Dr., Kalispell, Mt 59901, 406-257-4766

Bring Safety glasses and ear-plugs, enthusiasm, questions and problems, ideas and favorite tools (not necessary).

Perhaps Dan'l may have some after the first of the year????

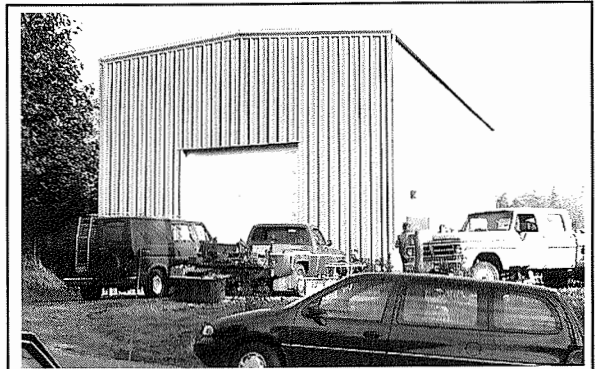
# May

# January

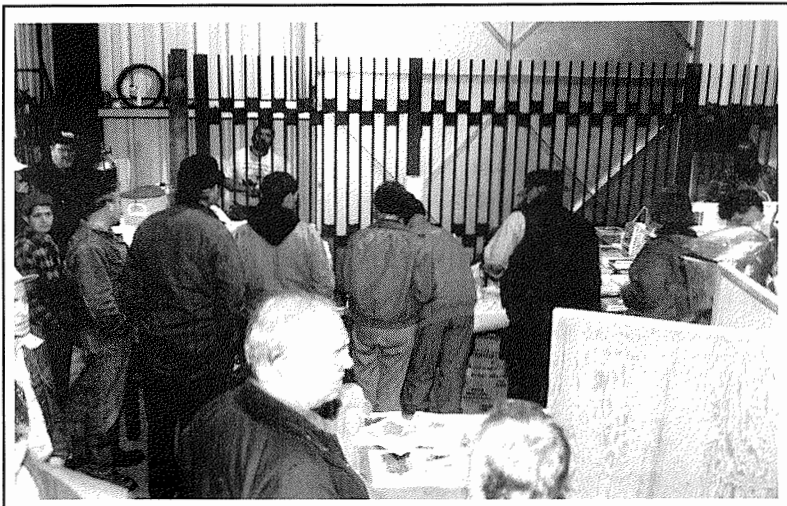
# March February

# Fall 96 N.W.B.A. Conference

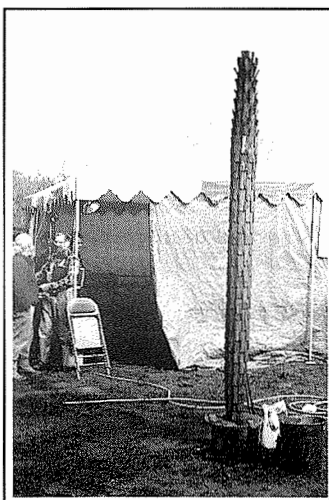
Conference attendance was around 230 who signed registration forms. This is probably near the all time high attendance of the doin's at Winthrop Fall 95. Also were a few walk ins who were passing by and saw the green "Anvil" signs and some who were directed from Jaqua Gallery and were curious about the conference.



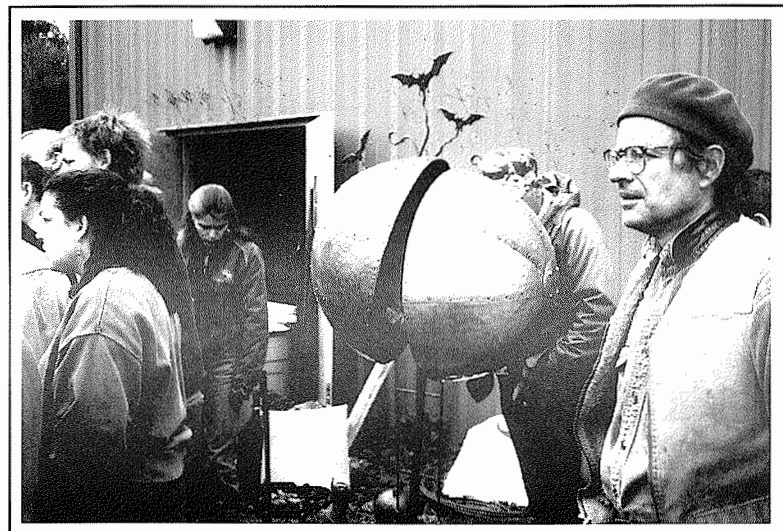
Nimba Forge. No spreading chestnut tree here, might be some Madrona though to the left. A large rail crane runs fore and aft in Russ's shop.



The gate in the background is part of a memorial commission Russ is forging. Russ' shop is usually more spacy but with 200 people milling around doing the tour it got a bit crowded. Norm Larson, The Book Man, set up his wares in front of the gate. It was mostly elbow room only around Norm's table. One can never have too many books. Did anyone notice the layout table. Must have been two inch plate about eight by twenty.



Steel monolith is actually a steel test piece for a bronze fountain commission Russ is building.

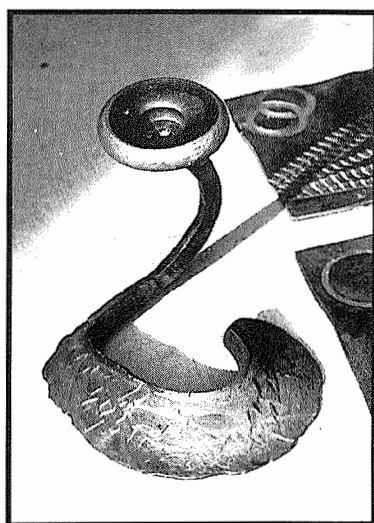
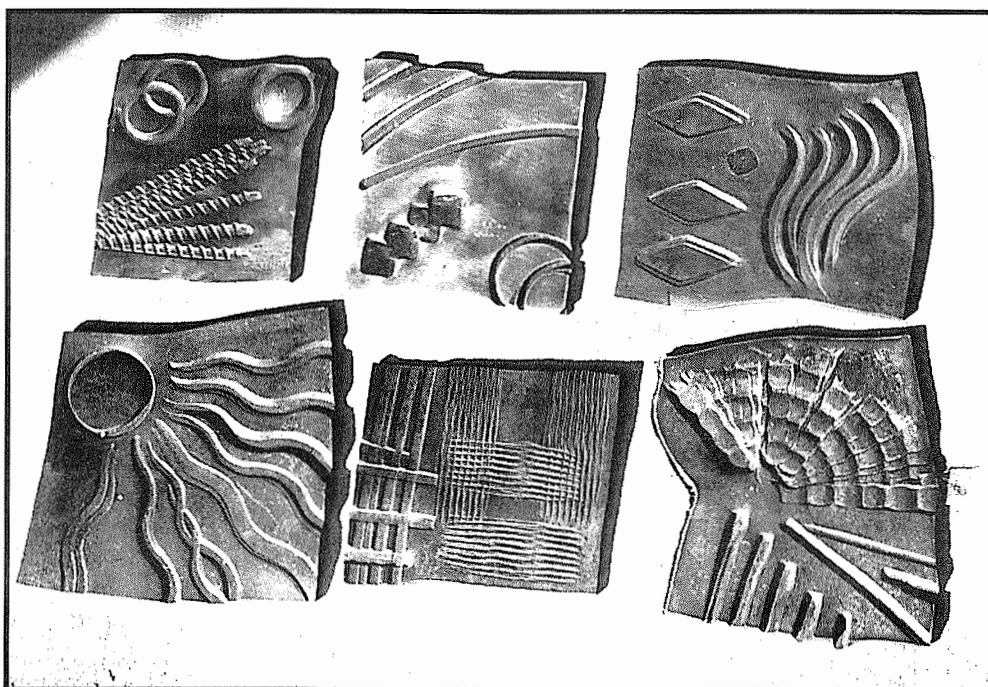
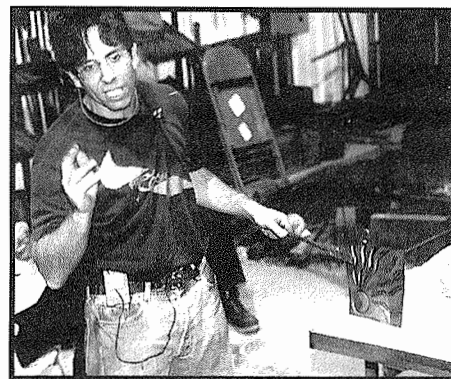


Russ Jaqua and about 200 others view the cast iron pour. Some one said "It's kinda like pouring lead only 2500 degrees hotter and a hundred fold the work".

# Mike Bondi

Part of Mike's demo was forging aluminum and bronze, application of chemical patinas and a wonderful slide show on his commissions, shop and work in progress. Of particular interest were the stair railings and their layout.

The demo pieces below were made from simple tooling found around Russ' shop, shows you what imagination, skill, practice and a large hammer will do.



Bronze candleholder

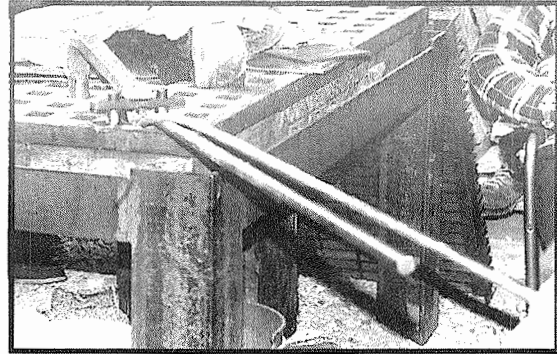


Mike tests for proper forging heat on a piece of aluminum using a piece of wood. When the wood smokes and slides over the metal surface it's ready to forge.

# Dennis Proska



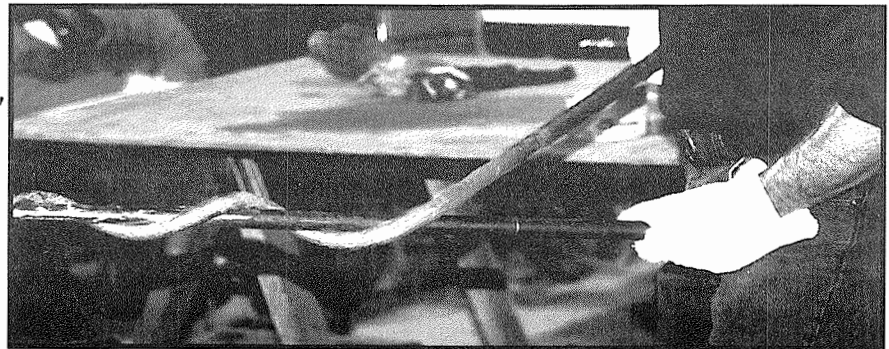
Tapering a long piece for a stool leg, Dennis makes it look "easy" on "The Bear", Russ' Nazel hammer. After tapering, Dennis heated the bar and used a unique clamp to hold the bar while spiraling it around a mandrel.



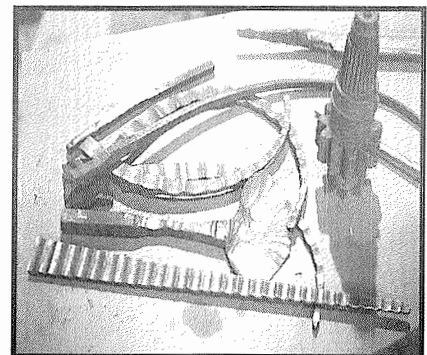
The first time I heard and saw a power hammer was at an N.W.B.A. conference at Ft. Worden with Francis Whitaker as demonstrator. The whosh, whosh noise of this hammer always brings back memories of those early days and the wee hours of midnight madness

### *"I wish I'd thought of that!"*

How many times have you said that. Other's ideas, techniques and examples give us inspiration, perspiration and sometimes frustration. How do they do it so easy???????



Dennis gets some human hand clamps during the assembly of his forged stool.



Test pieces from the demo table up front of the crowded bleachers. There was standing room only during the inside demos.





# Cast Iron Pour

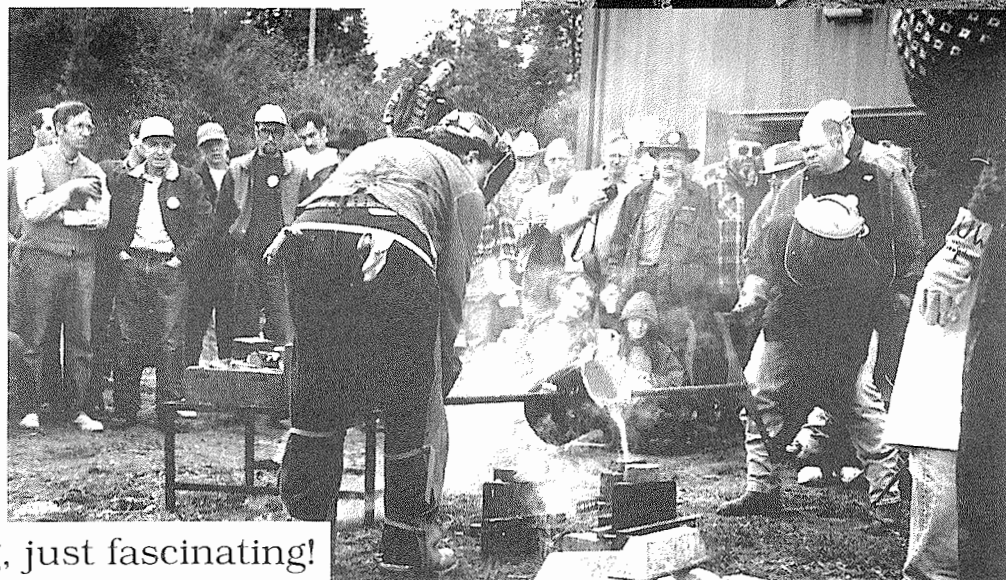
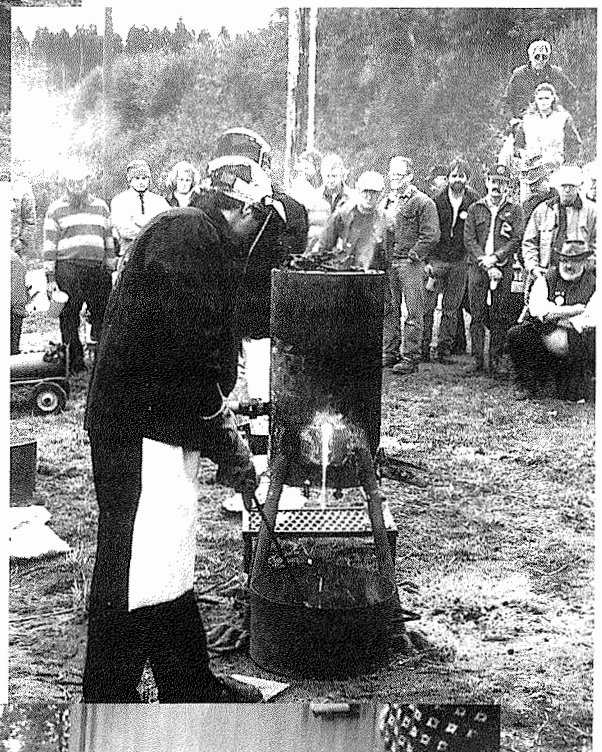


The Saturday afternoon event has been long in the making. Alex Montgomery contacted the board about a demo a year ago. It all jelled and we were all awed and delighted to view the pouring of the iron. Hope we get to see it again.

Alex Montgomery, Jamie Ross, Judith Caldwell, Laura Goemat, Hahn Rossman, Drew Middlebrooks, Torvald Sorenson, Sharon Saindon and Vince Maggiorie made up the cast iron crew.

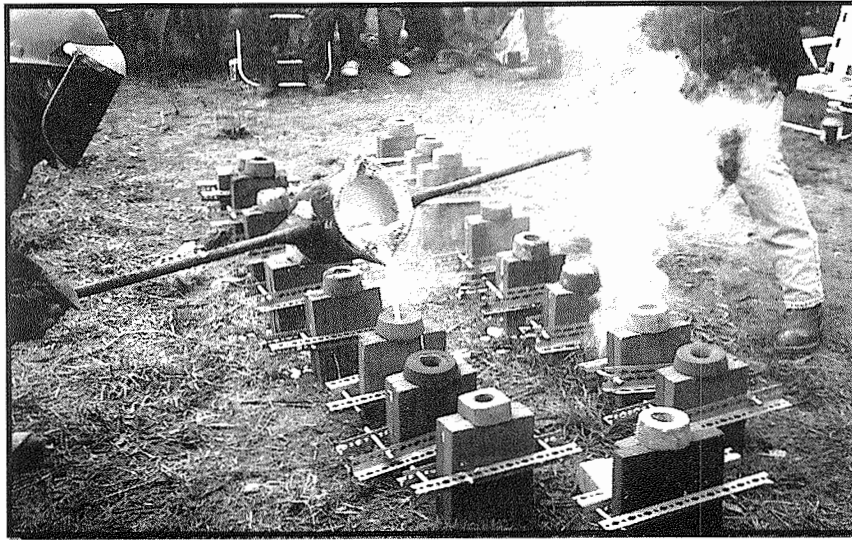
The pour had everyone glued around the coupula. Notice how the crowd gave the cast iron folks plenty of room. They just seemed to know when to stay back. Lucky the weather held with no rain during the pour. Seems liquid iron and water don't mix.

Right: Tapping the cupula at first.

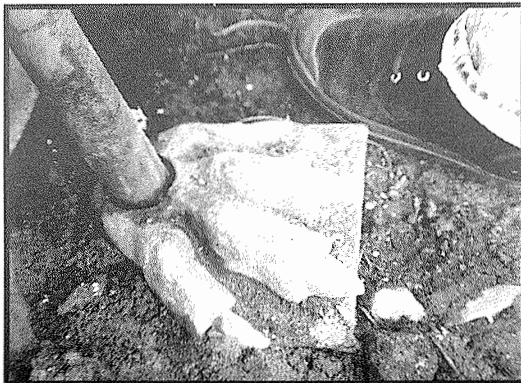


Fascinating, just fascinating!

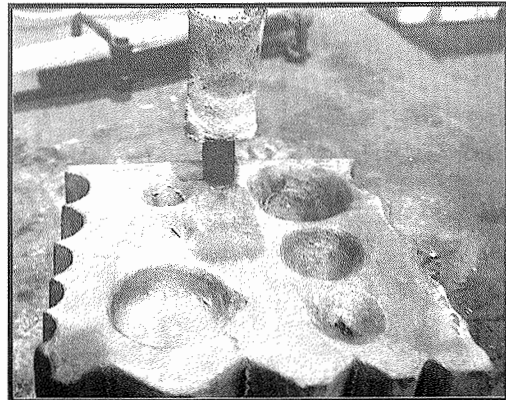
# Cast Iron Pour



Molds are filled with the fiery stuff. These molds were made by over a dozen members Friday afternoon and Saturday morning. The molding material could be easily scratched out with a knife, nail or suitable Port Townsend rock. After seeing how easy it looked, many were in line to try their hand at mold making in the next pour. Yep, we hope to have a cast iron demonstration in the future, that is if Alex and his crew can be talked into it.



The cupola has cast iron feet most likely made by some artist, no doubt connected with the iron pour crew.



Swage block from the pour. Don "President for life" Kemper made the forms for this nice swage block. This piece was auctioned off Saturday night.



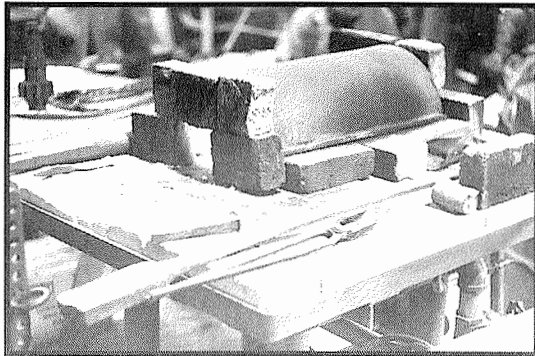
Abstract cast iron artwork from the pour.



Torvald Sorenson, with the derby, and Alex Montgomery load up the numerous pieces, cans, buckets, hose etc. that were used in the pour. Pouring iron is no little task, it takes much equipment and work.



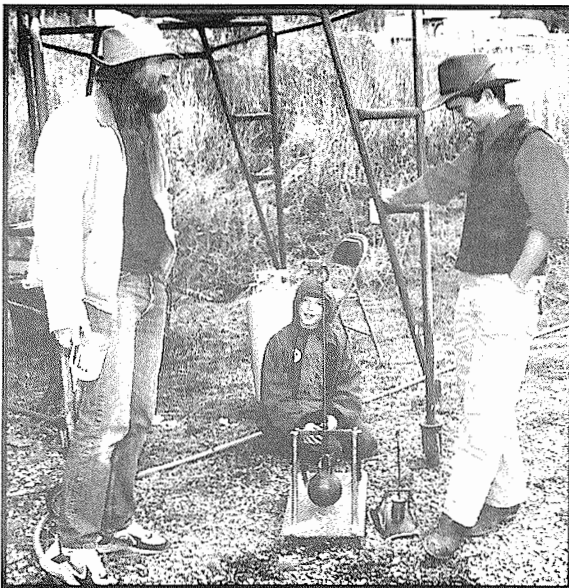
# More Fall Conference



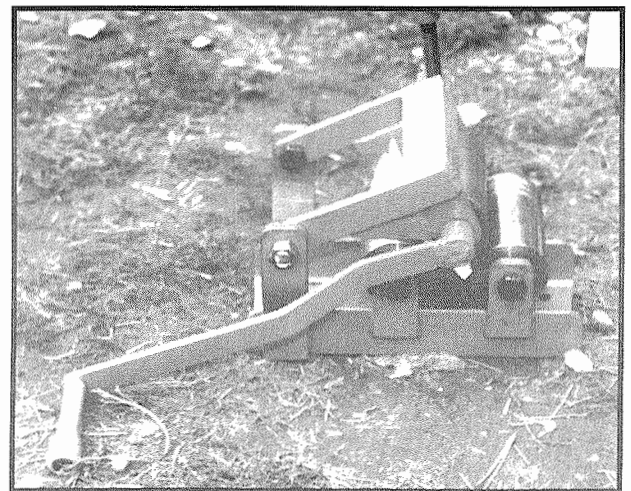
Russ' forge, domed, removable top, set on fire brick which can be removed one or all . . . ingenious.



People vigorously attacked the soft cast iron molds with all sorts of implements.



Dan'l Moore and Japh Howard discuss the merits of Dan'l's rock throwing catapults. Dan'l's son just loaded and shot a few rocks for them.

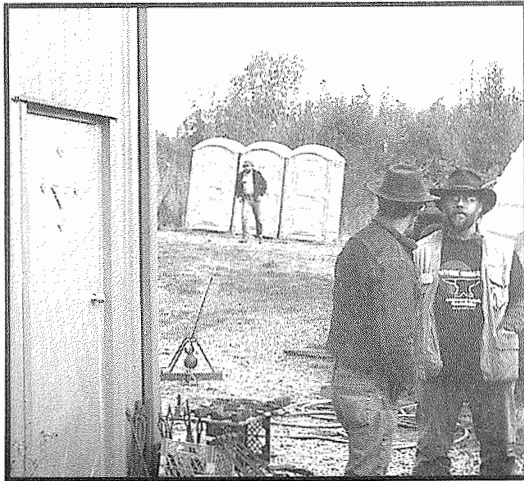


Metal roll by Tom Richards made similar to the one in the California Blacksmiths newsletter. This one has grooves for round stock. You sure do nice work, Tom.

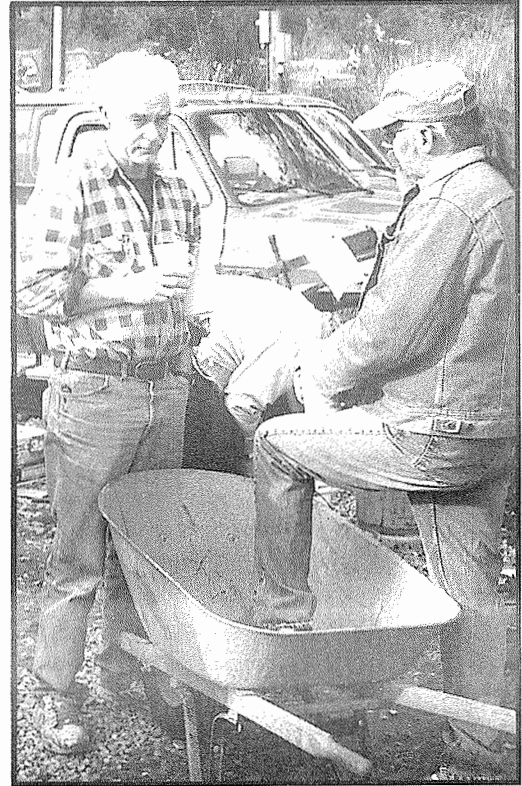
There were several tailgaters at the conference. Corkey Storer had the most goodies, hammers top and bottom tools, clamps, brushes (the same ones that were being sold way back at Fire Mountain forge), still a good buy. Look for the 250# Little Giant ad Corkey has in the classified section of this newsletter.



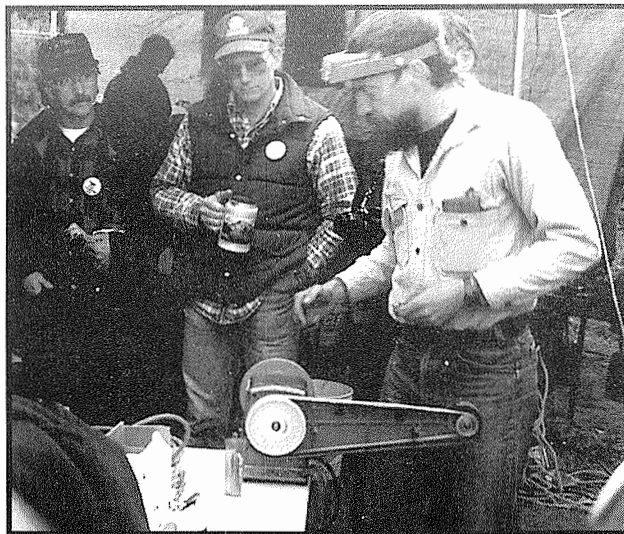
# "What the Heck is Going On" . . . Conference Page



Sani Kans much apparent out of plumb. Five more degrees and seat belts would be in order.



Some blacksmith talk gets a little deep.



Jim Wester gave sharpening demos for us wanna bees.

This was a real fun conference. When people ask isn't blacksmithing a lost art? Say Nope. There is more interest each passing year, the N.W.B.A. and other A.B.A.N.A. chapters are growing rapidly. As we grow we learn more and help others with our knowledge.



All eyes "left" intensely watching Russ and Dennis do something or other. Ron Greig, Vancouver Island Blacksmith Association editor of the "Forge" took this panoramic photo of the doings.



# CANIRON 1

## REGISTRATION & INFORMATION

PO Box 136, 4445 Highway 3 East, Erickson, BC V0B 1K0, Tel/Fax (604) 428-8462

**What** "Caniron 1" First Canadian National Blacksmithing Conference

**Where** Historic O'Keefe Ranch, Vernon British Columbia, Canada

**When** June 28, 29 & 30, 1997

**Why** Six professional U.S. & Canadian Demonstrators  
Two teaching stations, three public demonstration stations, watch a wagon built in three days, monster auction, blacksmith competitions, programs for spouses and non participants, wonderful location in the Okanagan valley.

Plan your holidays now (Plenty of camping and RV space close to demo areas)  
For registration forms and more details contact

Derry Cook, PO Box 136, 4445 Hwy 3 East, Erickson, B.C. Canada V0B 1K0  
Telephone/fax: 250 428 8462

## The 1st Canadian Blacksmith's Conference,

June 28, 29 & 30th, 1997, O'Keefe Ranch, Vernon, BC

### Spring 97 N.W.B.A. Conference

Eugene, Oregon is the proposed site of the Spring Conference at Dave Thompson's.

Willem Yonkers will be the demonstrator. He is pictured here with his son Mendel at the 96 A.B.A.N.A. Conference in Alfred, NY. Willem is from Holland. The helmet he made at Alfred was bought by Jerry Kagele and was on display at last conference in Pt. Townsend.

Willem is the only demonstrator but I'm sure there will be plenty to watch in the evenings, as always. More about this conference in the spring **Hot Iron News**.

By the way, **are your dues paid up???** A quick look at your address on the last News should tell. Your expiration date is to the right of your name

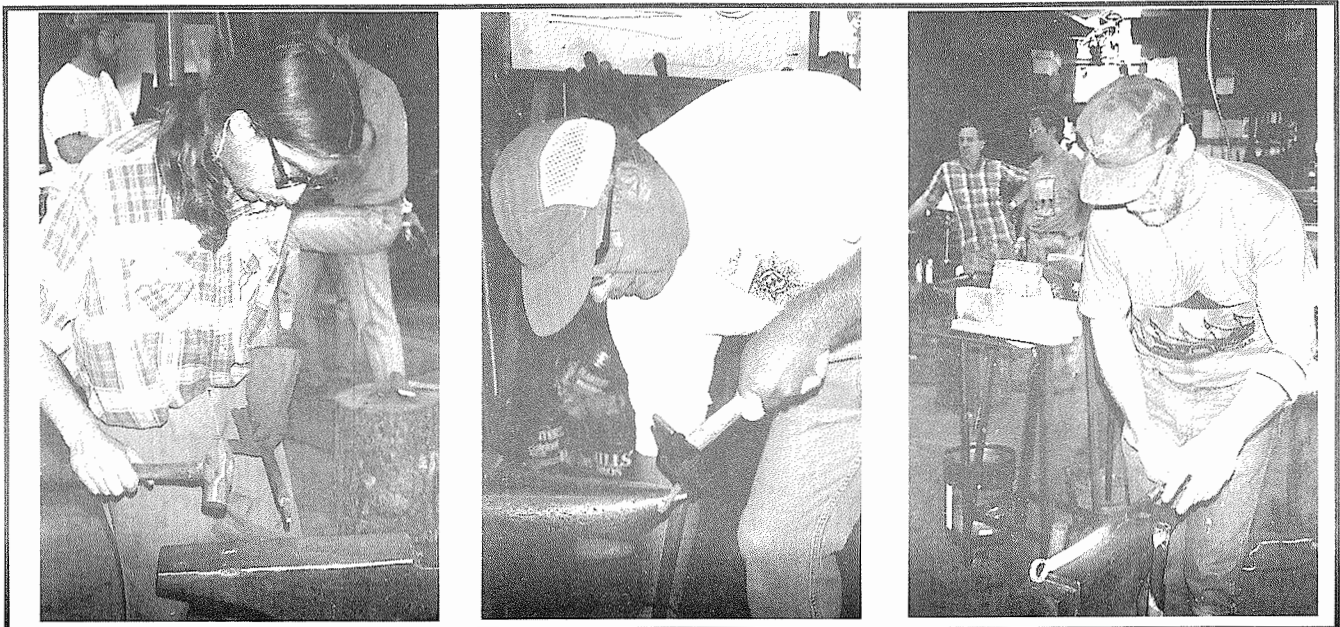




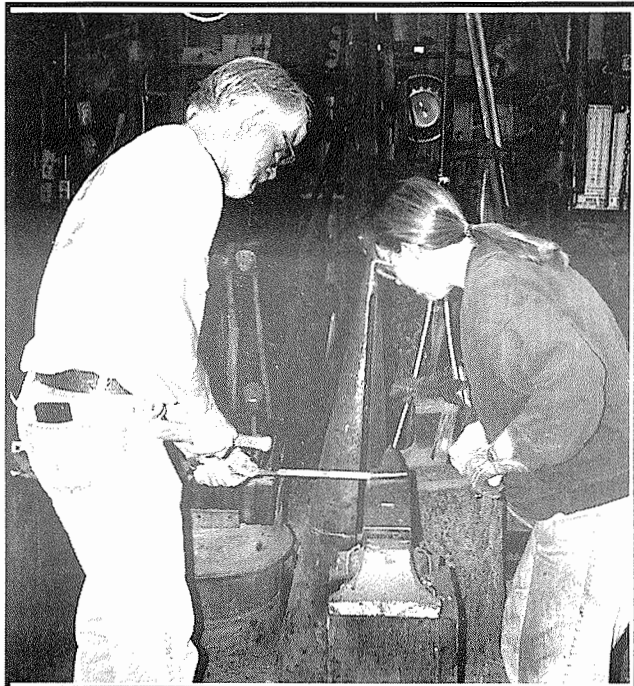


# Wooden Boat Blacksmith Workshop

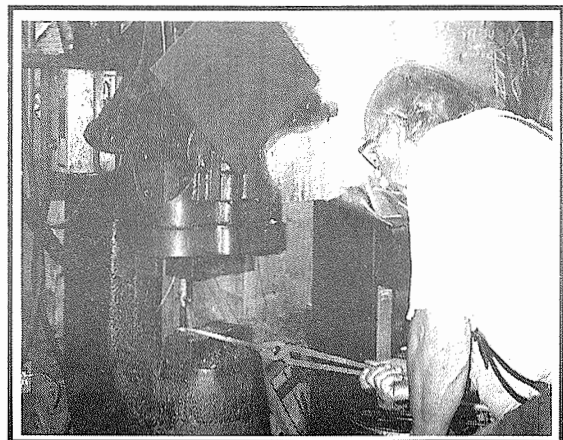
## Ships of Wood . . . Men of Iron



This is the third Blacksmith workshop that the Wooden Boat School at Port Townsend, WA has sponsored. They have been held at Jerry Culberson's Old Cedar Forge. Jeff Hammond, an instructor at the school, has attended most, if not all of them. Some of the folks that attended even have wood boats. Some just read about the workshop in one of the wooden boat magazines and decided to try their hand at blacksmithing. These people come from all walks of life and after the workshop have a new appreciation of the craft. Some will continue in hot iron and some not. About 10 % of students of novice workshops continue in the craft. Jerry had his usual full spread of groceries, heavy on the garlic and protein for well toned bodies. You don't need any fancy "ab" machine in a blacksmith shop. . . just hot iron, anvils, tongs and hammers.

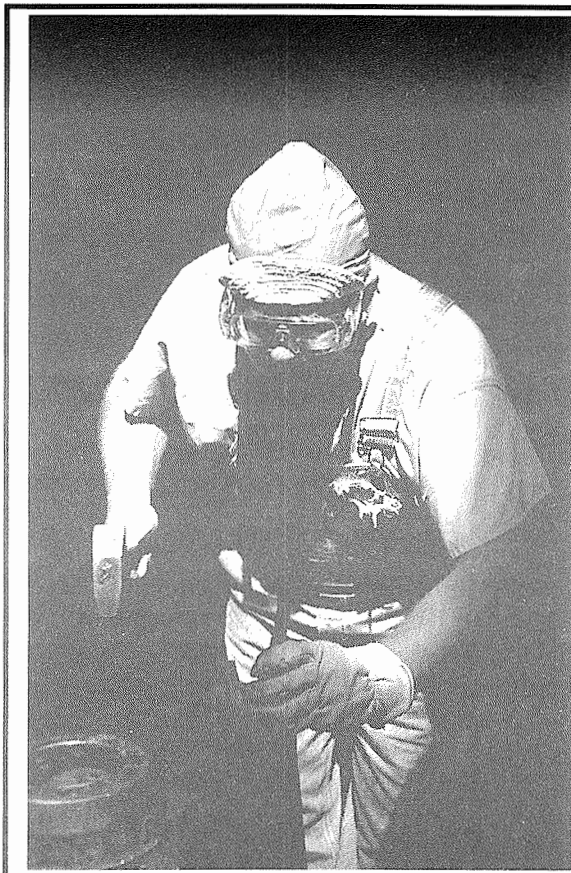


Laura Goematt, left, gives some advice to one of the students. Laura works in Jerry's shop full time. Jerry Culberson, below, draws out a taper on the power hammer, how does he make it look so easy?



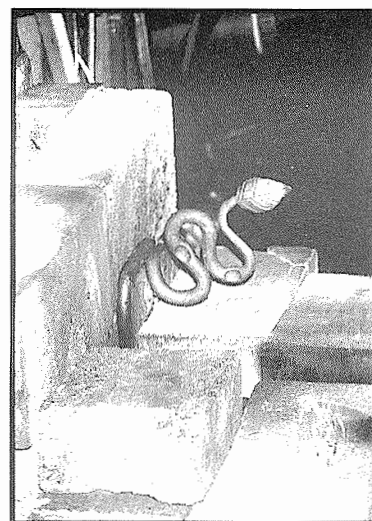
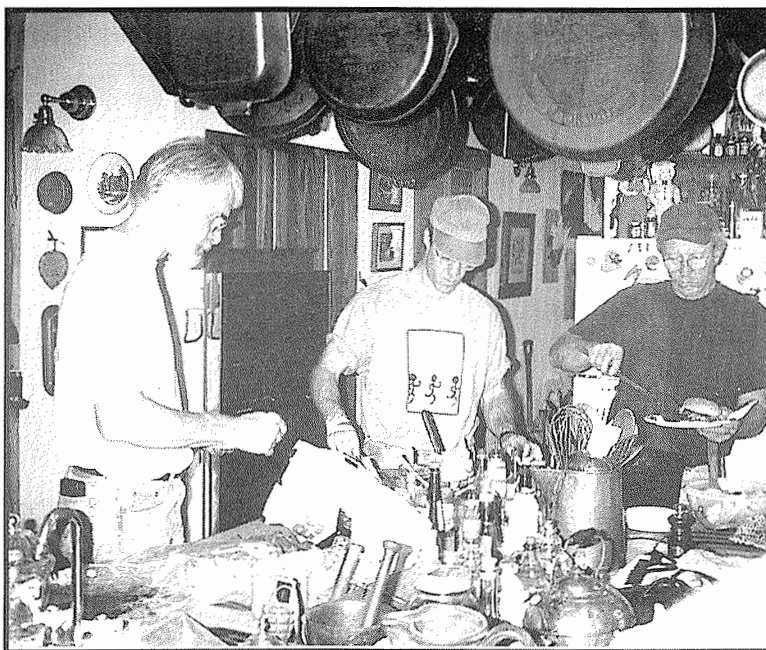
# Wooden Boat Blacksmith Workshop

## Ships of Wood . . . Men of Iron



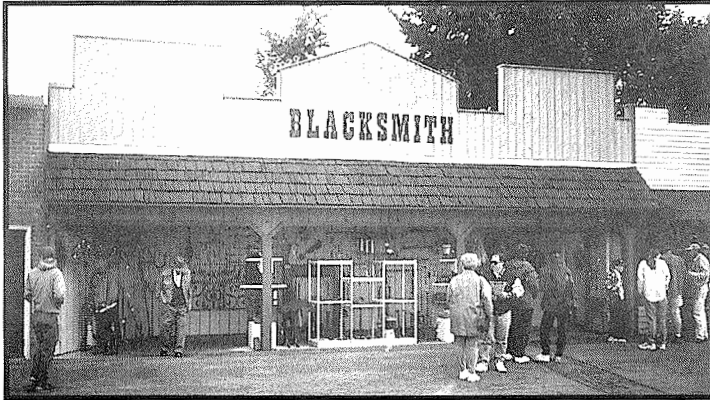
Students of iron enjoy themselves at the workshop. The feedbag is cooked by Jerry himself who may go on to be a world renowned garlic chef if he ever retires from the hot iron farm.

A demo piece snakes out of the propane forge (right). Many of the impromptu demos are forged pieces from Jerry's product line.

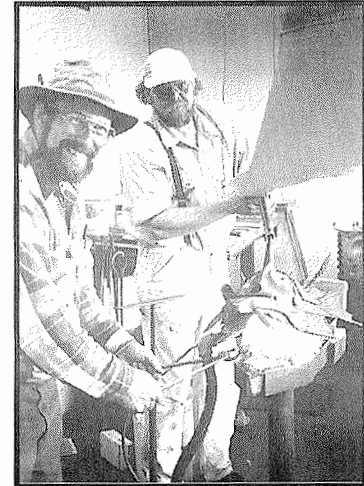




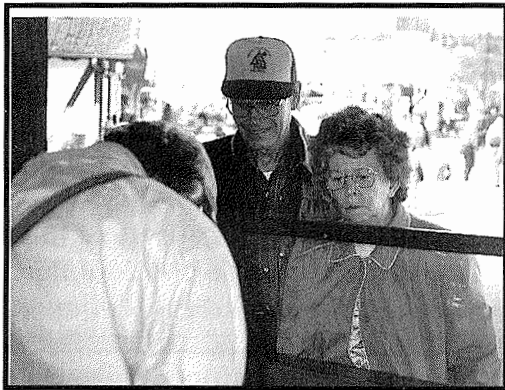
# "Do the Puyallup"



The fair built this fine display and working shop area for the Co-op. The shop is just to the right of the display area..

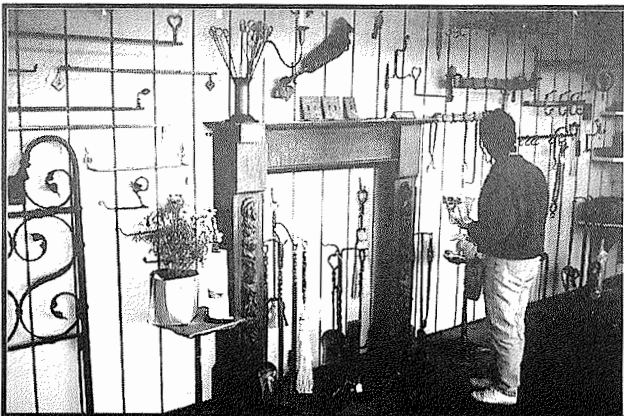


Darryl Nelson and Roger Olsen show off the propane dragon forge. The mouth opens for long pieces. Most of the work is done in the rear end of the dragon.

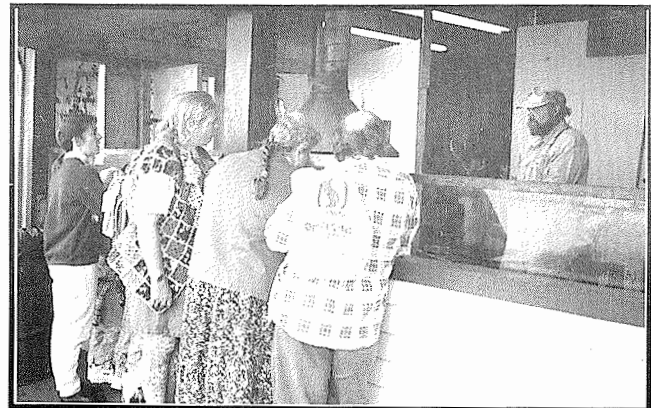


Roger was patient with lookie loos and stopped frequently to answer their questions. You can see the gleam in the gentlemen's eye as he watches hot iron forging.

When you "Do the Puyallup", the biggest fair in Washington State, you go in the blue gate, take a left and meander around till you see the fire hall. Next to the fire hall is the Co-op Blacksmith Shop. The Co-op has been at the present location 11 years and have been a part of the fair 15 years. Darryl Nelson of fire Mountain Forge, Eatonville WA is officially the superintendent of the Co-op. Sometimes he is called the CEO, blacksmith, cashier, janitor, striker, official greeter or just hey You. Usually there are two working sales and two blacksmithing doing 2-3 hour shifts. Roger Olsen of Winthrop, WA was forging, Donee Hainsworth and Craig Hollow were manning the sales counter. Darryl Nelson gave me the tour of the shop, the fair and the famous Puyallup onion burger food stands. Many blacksmiths have been co-op members in the past. 1996 members are Alice James, Joe Elliot, Mike Linn, Roger Olsen, Randy Unger, Dave Reis and Darryl Nelson.



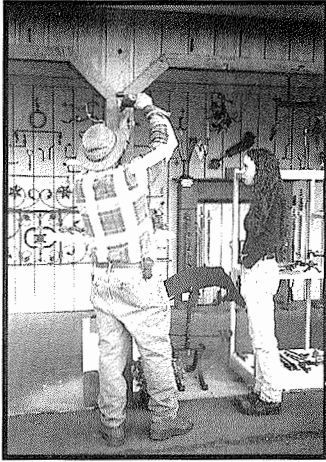
Forged iron is well displayed and draws a great deal of attention from passerbys.



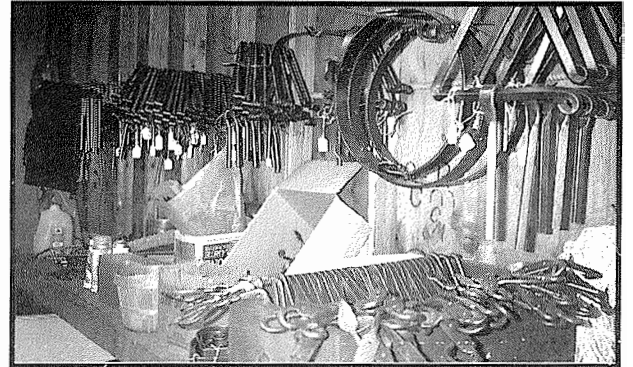
Many folks hang around the shop area. Below the lady on the left is a childrens viewing area with plexiglass windows.



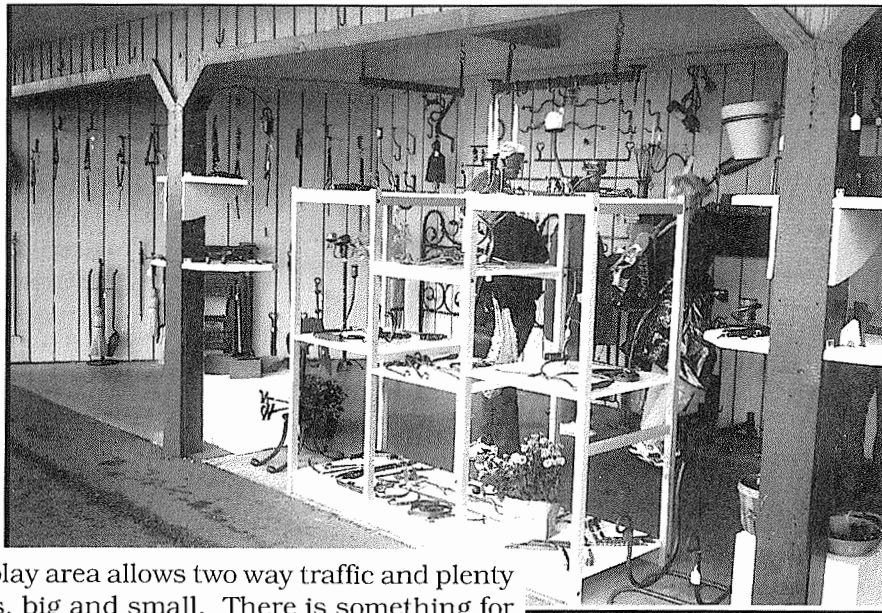
# "Do the Puyallup"



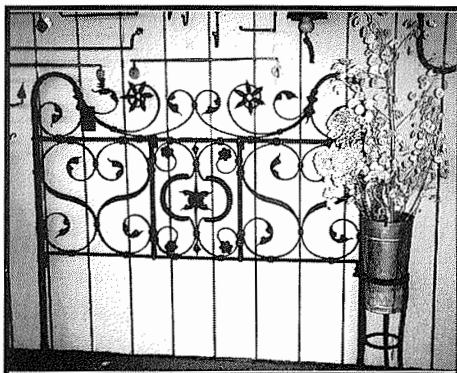
Darryl's keen eye found an open spot here he quickly installed some forged iron.



The "back room" has piles and stacks of iron waiting to replace that which was sold.



The roomy display area allows two way traffic and plenty of forged wares, big and small. There is something for every house hold in the Co-op



Darryl's forged bedstead drew considerable attention during the fair.



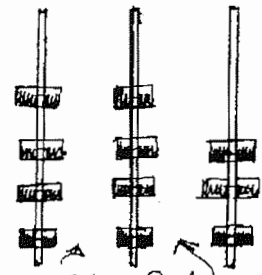
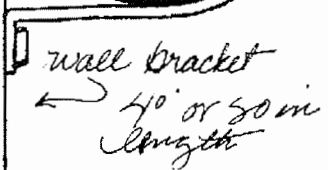
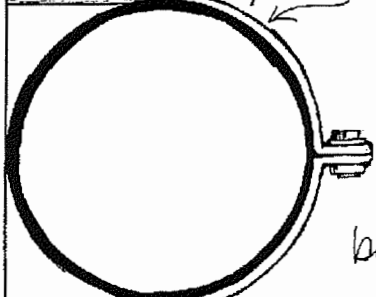
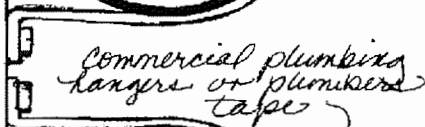
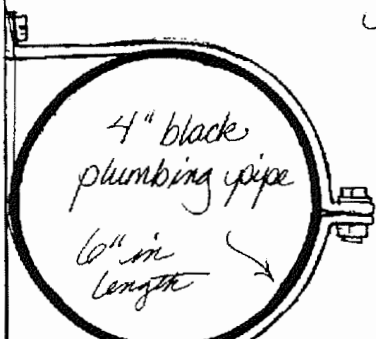
Donee and Craig man the sales counter. The sign behind them sez, "We Do Precision Guesswork". Donee works for Darryl and Craig is building a shop and treehouse to live in in Arlington, WA.



# Hot Tip

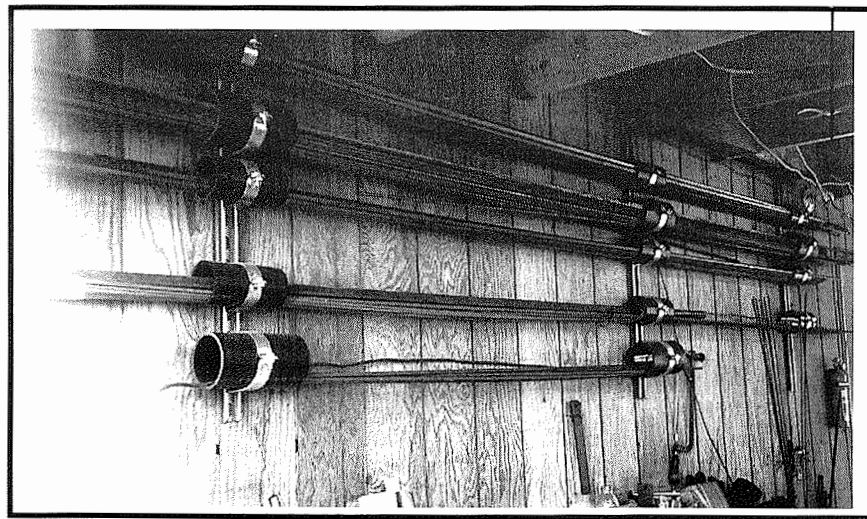
## Steel Storage for your Shop

*This is a simple way to keep round & square stock up and out of the way in your shop.*



*you can add more pipe as needed. This really tidies up the shop area and it was simple to make*

*by Harold Heia and Mark Mathay*



Great idea Harold, wish I'd thought of it. Ed

# More Tidbits

Mike Linn's Blacksmith shop retail outlet moved to 700 5th Ave. Suite 606. It's on Columbia St. halfway between 5th and 6th. When doing Seattle stop in and see the forged iron.



Paul Thorne told a story about his mother who had been watching him work in a coal forge for 45 minutes. Before leaving she told Paul "I understand why you do this, everything a boy likes, fire, dirt and noise".



An excerpt from Clark's Other Journal, as recorded by William Clark, 1820

**"To Stop Puking Heat an iron red hot and put it in cold water, and use the water."**

Perhaps this could be a cure in the morning after midnight madness.

This 54 page reprint is available from The Fat Little Pudding Boys Press, 1221 SE 11th ST., Lee's summit, MO 64081



## Things to do this winter and Hot Tips

### by Smedley Soapstone

1. Empty your slack tub, clean all the critters off the bottom.
2. Cedar bark boiled in water makes a mild etchant for Damascus steel and a vegetable stain for cloth.
3. If the sign at the beach says, NO CLAMMING it means it. Somehow talked my way out of that one, real lucky that day. Ranger Rick wasn't smiling.
4. Rusty wrought iron that has cured in seawater smells awful when heated red hot.

# Al BART MEMORIAL CROSS

Roy Whisenant  
 1752 Rounds Ave  
 Grants Pass, OR 97527-7215  
 N.W.B.A.

Hi Gene,

Thought you might be interested in these pictures. A group of us in Southern Oregon and Northern California got together to make a marker for Al Bart's grave. It will be in the Ft. Jones Catholic Cemetery.

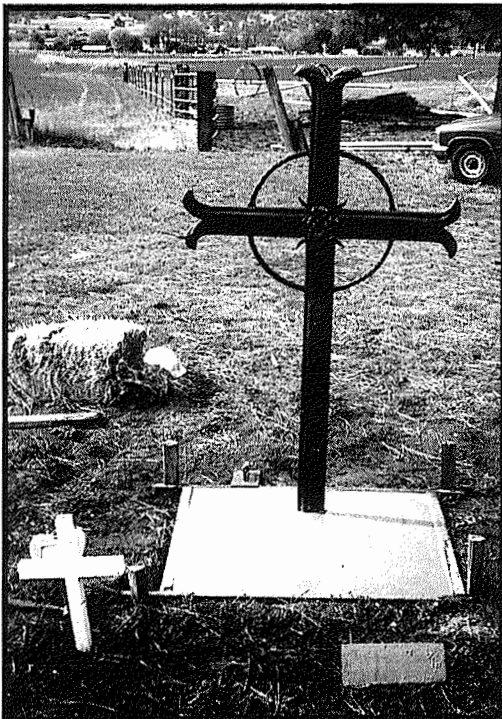
Two other people helped but were not there the day I took the pictures. They were Jim Rich and Gary Goines.

It was made of wrought iron with a bronze rose.

Sincerely  
 Roy W.

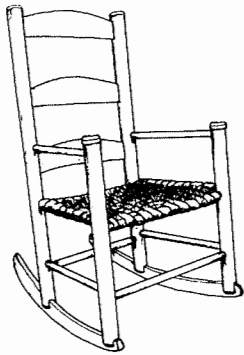


Blacksmiths left to right are, Stefe Gustaffson, Dennis De Bey, Dave Atwood and Roy Whisenant



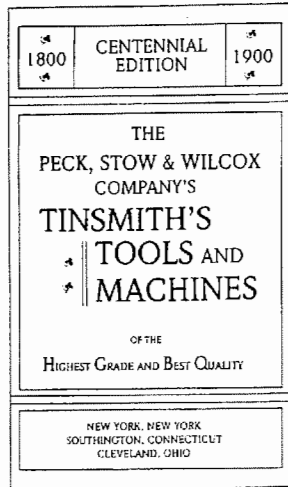
The cross weighs about 250# and is made from two wagon wheels, straightened out with ends split and scrolled. The biggest wheel was 5/8" X 4" . Hand made rivets join the iron together. The cross was recently set in concrete on Al Bart's grave. Dave Atwood, Pam Bart, Roy Whisenant, Gary Goynes, Steve Gustafson, Dennis De Bey were among the work crew who set the memorial cross in concrete at the head of Al Bart's grave. A memorial was held November 11 by the Catholic Church and the Historical society. A bronze plaque with Al's name, dates, and "Blacksmith" on it was set in front of the cross.

A group of blacksmiths from Northern California and Southern Oregon got together in the past and called themselves the Jefferson Smiths, as suggested by Al Bart. These same smiths decided to resume their activities when making the cross. Their hammerins are mostly open forges with no paid demos. They do plan to have an ongoing novice program. A hammerin was held at Dave Atwood's place in Somes Bar, California. For those of you in the area you might give Dave a call about the next hammerin at 916-469-3389



# ARMCHAIR BLACKSMITHING

## Blacksmithing & Early Metalworking



### Peck, Stow & Wilcox Company's 1900 Centennial Catalog of Tinsmith's Tools and Machines

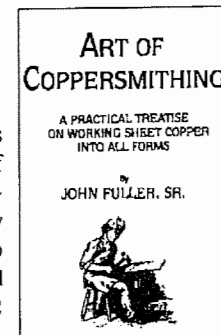
Peck, Stow & Wilcox was probably the foremost manufacturer of tinsmith's tools and machines in the world. This reprint of its 1900 centennial catalog was designed to reflect this. Every imaginable piece of equipment from formers and stakes to double seamers, folding and wiring machines are listed, described and illustrated. 144 pages. Approximately 300 illustrations. 6" x 9 1/4". Soft cover. \$13.50.



### Art of Coppersmithing

John Fuller, Sr.

Written in 1893 by one of the leading practitioners, this book has come to be recognized as the classic work in its field. All aspects of this important craft are covered, from the making of household copper goods and ornaments, to copper piping, three- and four-way expansion joints and double bends, brewery, locomotive, and ship installations—from the simplest, to the most complicated and demanding work. Over 474 illustrations and completely indexed. 352 pages. 6" x 9 1/4". Soft cover. \$25.00.



*"A classic, practical and easy to follow book on coppersmithing...one of the best practical books for the aspiring tinsmith as well."* —Blacksmith's Gazette

### The Tinsmith's Helper and Pattern Book With Useful Rules, Diagrams and Tables

This is a reprint of the 1910 revised edition of the classic handbook first published in 1879. It contains 53 diagrams and patterns covering a wide variety of products and layouts, each fully explained. There is also an extensive appendix that gives tables, rules, and practical recipes that continue to be of great interest to contemporary tinsmiths. A clear, concise and practical handbook that will prove most valuable to anyone engaged in, or with an interest in, tinsmithing. 120 pages. 6" x 9". Soft cover. \$13.50.

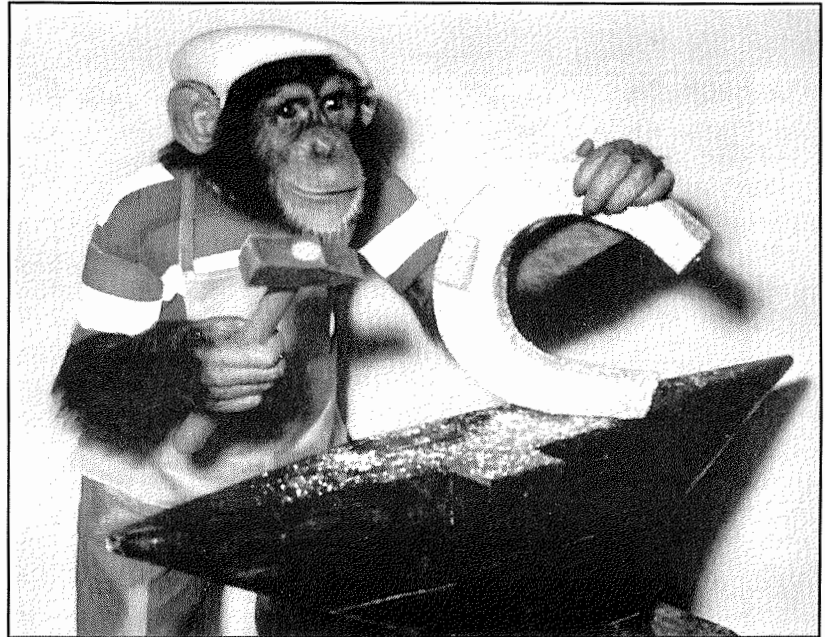
Astragal Press has many books on early tools, trades and technology. Send or call for a catalog

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201-543-3045 fax 201-543-3044



# Monkey See -- Monkey Do and Other Things

This picture is from an old postcard that Peg and I acquired at a recent antique and collectable show at the Puyallup Fairgrounds in Puyallup, WA. One dealer had a large collection of old postcards and photographs which were arranged by category. About 30 cards were in the anvil section. Many were pictures of old shops. This one caught my eye and was reasonably priced.



Ed La Casse, III sent a stack of cartoons, watch for more in future issues.

## Photo Credits

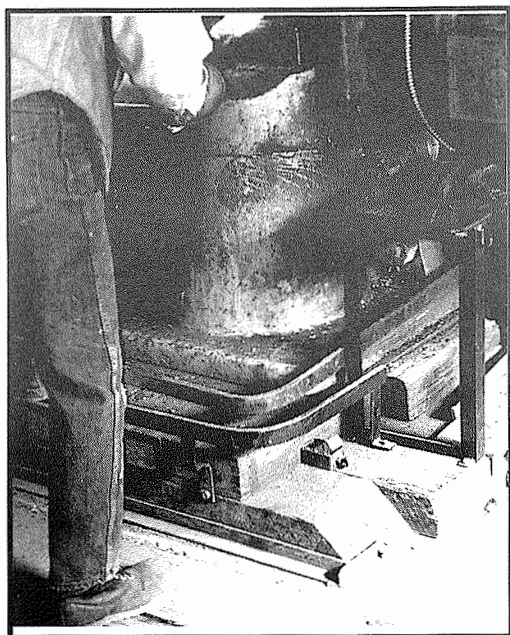


- Vivian Urban
- Rudy Pineau
- Bill Carrell
- Roy Whisenant
- Paul Hinds
- Ralph Hinds
- Ike Bay
- Jerry Kagele
- Don Kemper
- Louie Raffoler
- Ron Greig

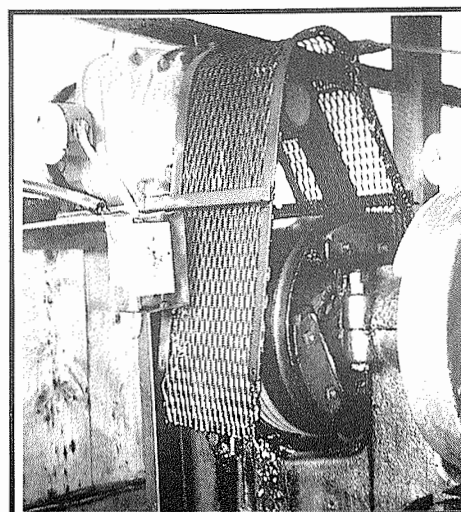
These folks sent in photographs of events and conferences, **thank you** sooo much for all the photos they are **much appreciated**.  
Gene & Peg Chapman



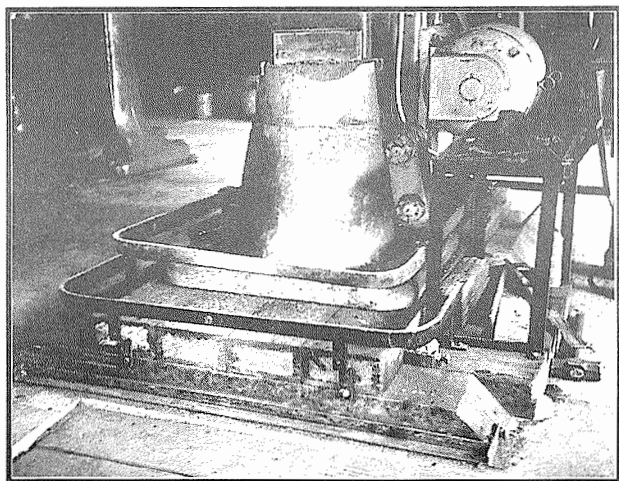
# Raise, Hold and Constrain



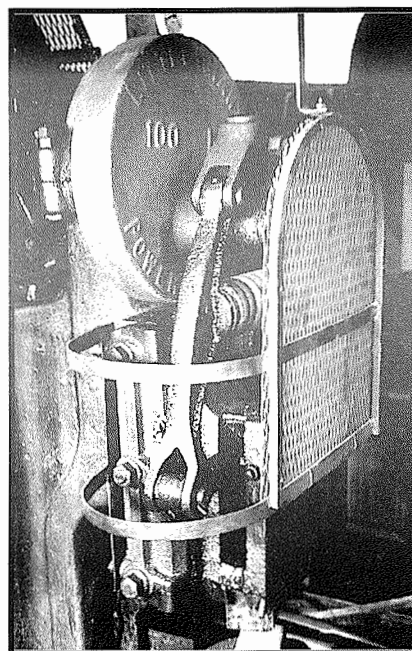
Steel foot support wraps around front treadle. Berkley prefers a heel support and wrap around treadle



Expanded metal belt guard keeps fingers out and belts in. Berkley Tack has a 100# and 250# Little Giant power hammer. His methods of safety, installation and foot treadle ideas follow.



Hammer is constrained with angle iron and anchor bolts. Timbers under hammer prevent the floor from pulverizing.

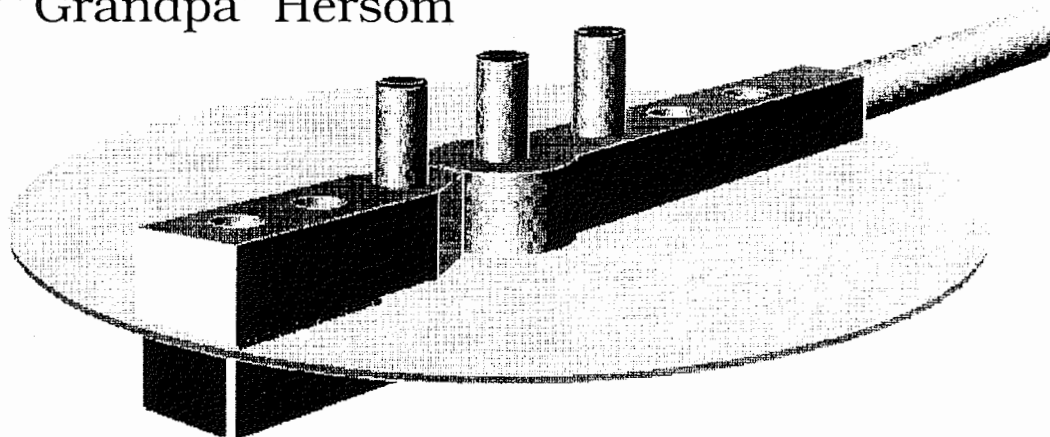


Expanded metal guard around toggle arms with access for lubrication.

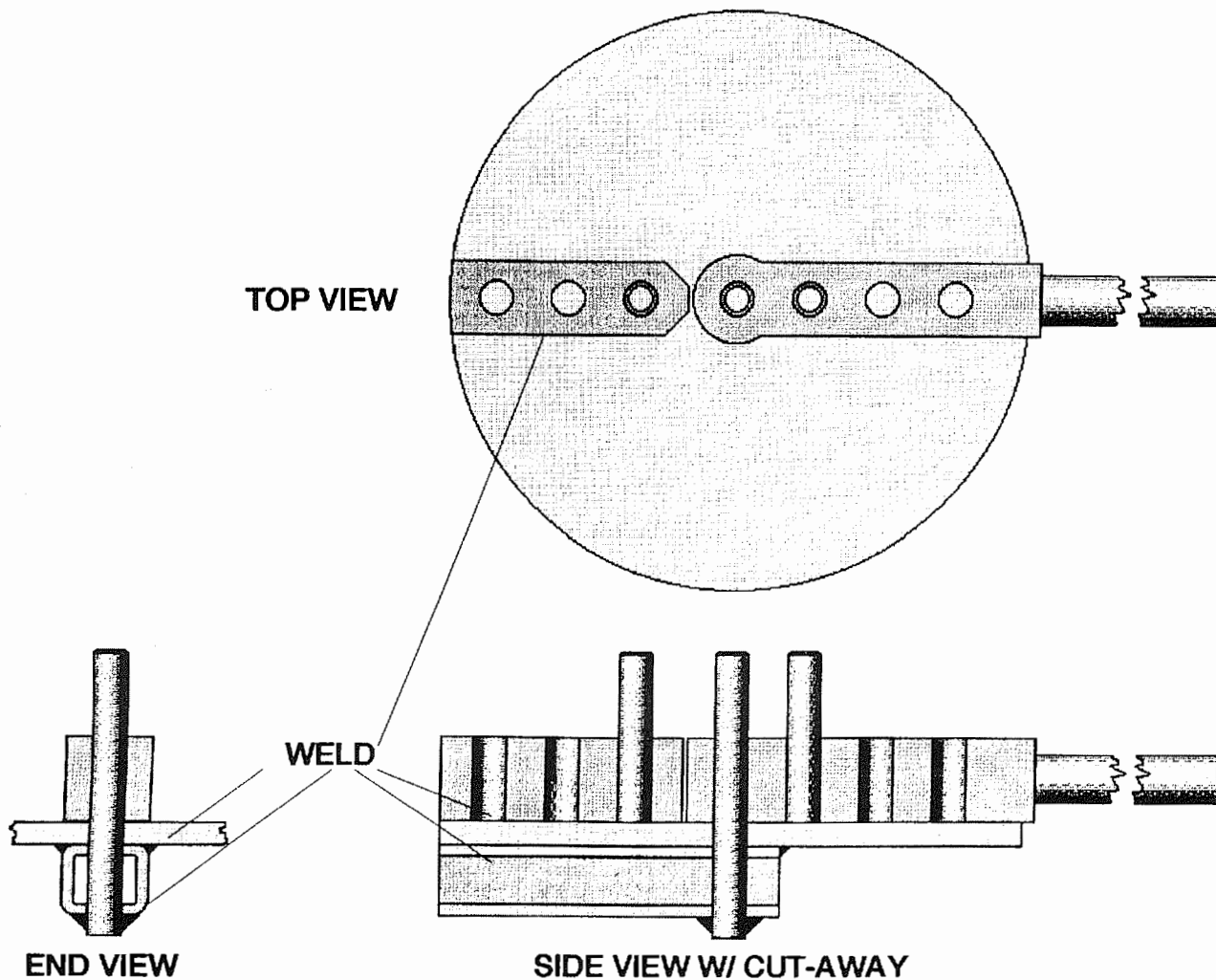


# FROM GRAMPA'S TOY SHOP

By "Grandpa" Hersom

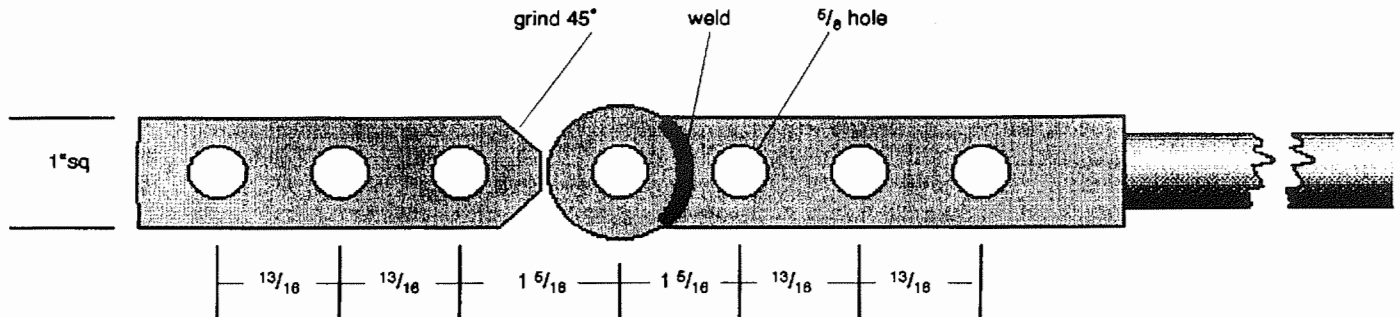


Reprinted from Hot Iron News winter 92 issue. Graphics by Grant Sarver and his wizard computer.



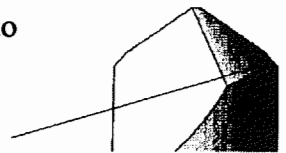
**FROM GRANDPA'S TOY SHOP**

"This is the handiest bender not only for scrolls but for other projects as well."

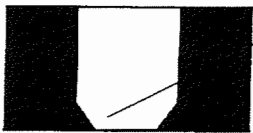


1" square stock with 1 1/4" round boss welded on with 1/16" wall bronze bushing in center hole to take wear. Grind & weld boss deep and grind clean.

2. Bottom plate is a 1/4" x 8" circle with 1" tube x .125 wall welded to the bottom.
3. Center pin goes thru plate and 1" tube welded to bottom side. Lots of strain on center pin.
4. Bending pins made of tool steel - 2 1/2" - 2" long. I use potato digger bars 5/8" dia. which are already hard.
5. I used 1" square HR iron - maybe should have heat treated(lye) holes. May distort due to side pressures.



6. Drill holes with pilot drill - 9/16" or 19/32" drill. Then 5/8" drill. Grind corner off 1/8". Makes a type of reamer drill that works on movable arm. Leave a shelf on bottom of hole to keep pins from dragging.

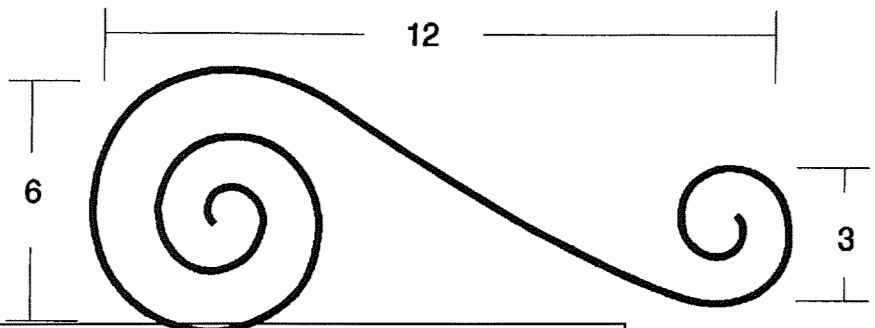


7. Weld 5/8" stub on movable arm. Put 24" long pipe over this for leverage.

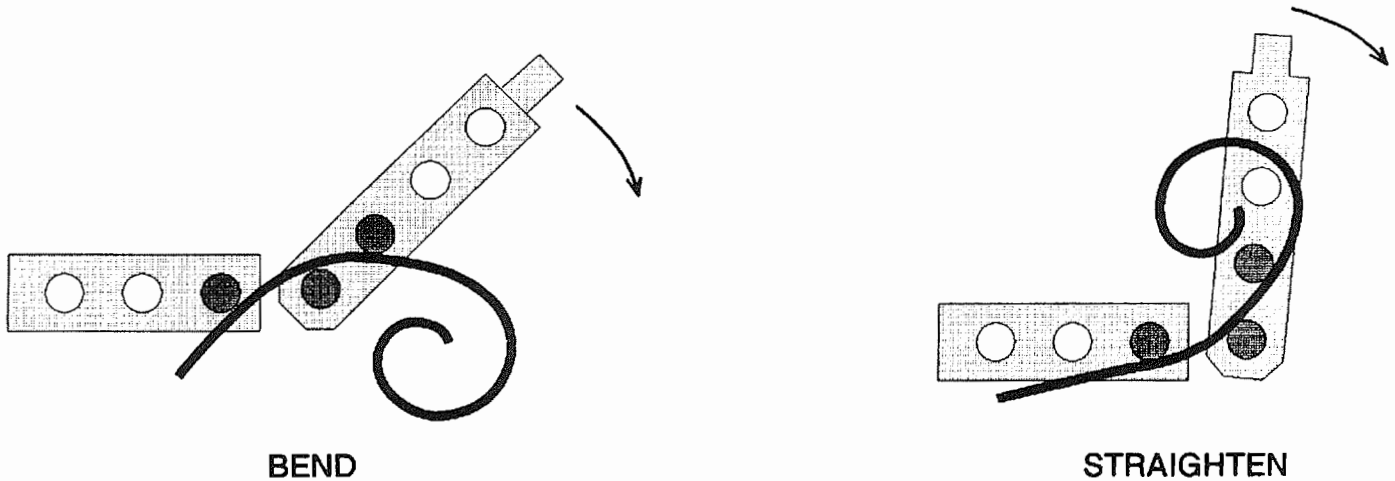
8. 45° angle on stationary block

lets movable arm go back past 90° to help pin clearance and increase chance to bend better, closer.

To bend scrolls I use scroll forms to get basic shape, then use 3 pin bender to



FROM GRANDPA'S TOY SHOP

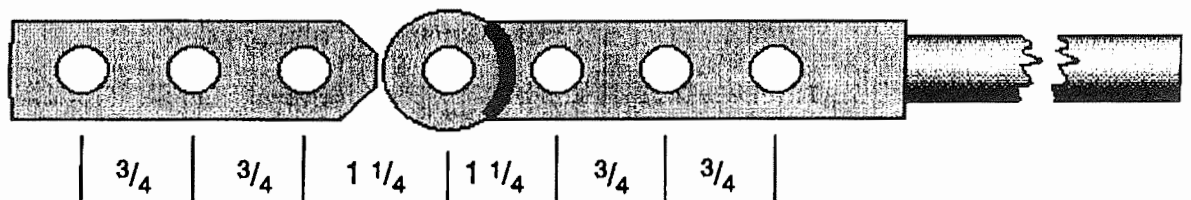


adjust scroll to proper width and length, etc.

I use a block 1 1/4" square with one square end and other end curved over center pin. To bend parts square, round with pins outside hole. Can bend 1/2" square or round HR bar cold on large radius or small radius hot; 90° bends, etc. To cut down on clearance between pins use pipe or tube over pins or just the center pin.

FOR MY SMALL BENDER

Same frame, 1/4" x 8" plate and 1" tube on bottom. Same as large bender.



3/4" square stock heat treat(lye), 1/2" potato bar pins, 1 1/16" round center pivot with 1/16" bronze bush. I put wooden dowels (short ones), in empty holes to keep scale out when hot bending.

*Sincerely*  
*Grandpa Heron*

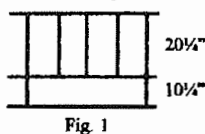


# Hot Tip from the newsletter of the Arizona Artist Blacksmith Assoc.

## ◆ The Anvil's Horn

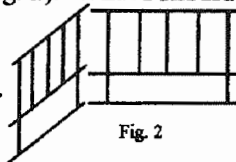
### TARRED, FEATHERED and Run out of town on a Railing by Bob Rummage

Sooner or later you are going to find a customer who wants a railing made. Railings are generally straight forward as far as layout is concerned. But one day someone will want a straight-run railing that continues down a stairway. Such is the case in our shop now. A horizontal run of about 50 feet and then left down a flight of stairs for 12 feet, another left and down 13 more feet. The horizontal run went smoothly - too smoothly. The railing had a top rail, a mid rail, and a bottom rail. The inside distance between the top and mid rail was 20 1/4". The distance between the mid and bottom rail was 10 1/4" (Fig. 1).



When I layed out the stairway run my brain suffered a case of flatulence.

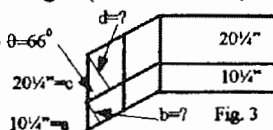
Without realizing what I was doing I layed out the same perpendicular distance between the rails as the horizontal run. Whoa! Back the coal truck up! Needless to say the rails didn't mate together where they were to be joined (Fig. 2). What I should have done was measure the 20 1/4" and 10 1/4" as the plumb vertical measurements a and c in Figure 3. What are these measurements b and d if a is 10 1/4" and c is 20 1/4"?



Well, to do this we need to use a little trigonometry. Stay with me on this. It's not exactly rocket science. Trigonometry means triangle measurement. By means of trig, distances that cannot be measured directly can be computed. The computation is accomplished by the use of six ratios called trigonometric functions. With these trig functions we can calculate an unknown measurement of a right triangle (a triangle with a 90° angle) if we know one side and one angle measurement. The six functions are:

- sine  $\theta = \frac{\text{opposite side}}{\text{hypotenuse}}$
- cotangent  $\theta = \frac{\text{adjacent side}}{\text{opposite side}}$
- cosine  $\theta = \frac{\text{adjacent side}}{\text{hypotenuse}}$
- secant  $\theta = \frac{\text{hypotenuse}}{\text{adjacent side}}$
- tangent  $\theta = \frac{\text{opposite side}}{\text{adjacent side}}$
- cosecant  $\theta = \frac{\text{hypotenuse}}{\text{opposite side}}$

The angle between the railings and the balusters is measured at 66°. Now, we know the slant height a and c (hypotenuse) and the angle measurement (66°). Using the appropriate trig function we can compute the perpendicular distance b and d between rails. Which trig function do we use? Well, we know the hypotenuse and the angle (66°) but we want to know the side opposite the 66° angle (the unknown). Looking at



the six functions above,

the sine function is the one to use. So:

$$\text{sine } 66^\circ = \frac{\text{opposite side}}{\text{hypotenuse}}$$

$$\text{sine } 66^\circ = \frac{d}{20\frac{1}{4}} \text{ or } \frac{d}{20.25}$$

We look up in a trig table the sine of 66° and find it is .9135 so:

$$\frac{d}{20.25} = .9135, \text{ so } d = .9135 \times 20.25$$

$$d = 18.498 \text{ or } 18\frac{1}{2}$$

and:

$$\text{sine } 66^\circ = \frac{b}{a} = \frac{b}{10.25}$$

$$\text{so } b = .9135 \times 10.25 = 9.35$$

$$\text{or } b = 9\frac{3}{8}$$

So what we are saying mathematically is that in any right triangle with an angle of 66° the side opposite that angle is always .9135 of the hypotenuse. How's that for some neat application of math for the blacksmith shop? Hope you learned from my mistakes and lack of doing my homework. (Incidentally, the rails mated perfectly after doing the above math). Happy hammering and remember: Mathematics- it figures!

Incidentally, some may wonder why the sine function and not the cosecant function was used since both deal with the angle, the hypotenuse and opposite side. The reason is most trig tables do not include secant and cosecant values.

**If at first you do succeed, try to not look astonished!**



# Bladesmith Workshop

## Sept. 6-8, Don Kemper's Forge, Gene Chapman, Instructor

*A report to N.W.B.A. by Hardie Swedge (Class Scribe)*

The five class members had a wonderful time and a wide range of material was well presented by our instructor.

We forged a fixed blade knife, filed and heat treated it; welded cable damascus and a folding knife frame. Lots of good info, many demos, hands on work, informal setting, enjoyed it all. Thanks to the instructor and the hosts from the entire class.

Just a few highlights of the material covered.

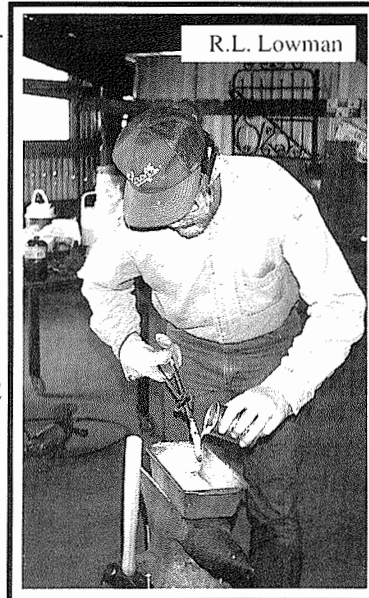
Northwest Knife Supply is a good source for Regaloy bond belts and other stuff.

Knife filing board made from 2" X 2" wood 12" long. Slots in ends for clamping blades for filing. Clamps made from 1/4" X 2" mild steel, 1/4" all thread and wing nuts. Notch wood for guard or bolster clearance.

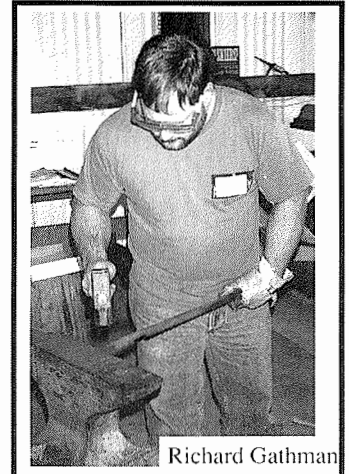
Heat treat quench medium made from approximately 50/50 paraffin and vegetable oil. It's solid at room temperature, making it ideal for the traveling bladesmith. Keep away from mice and slugs. Wear gloves and have a fire extinguisher handy when heat treating.

**TEMPERING GUIDE**  
(Wayne Goddard Booklet)  
for plain carbon steels

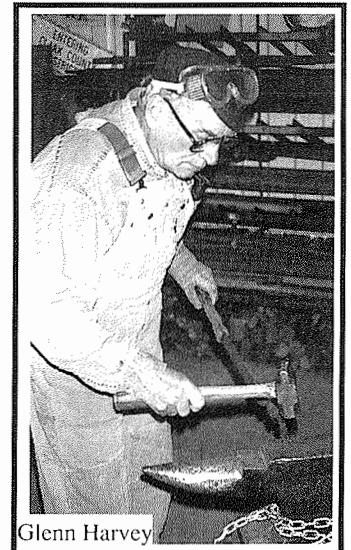
<u>Work</u>	<u>Temp F</u>	<u>Color</u>
Leather, paper, light work	300-325	Do in oven,
Skinning knife	375	Straw
Hunting Knife (heavy duty)	425-475	Dark Straw
Axe, throwing knife	550	Purple



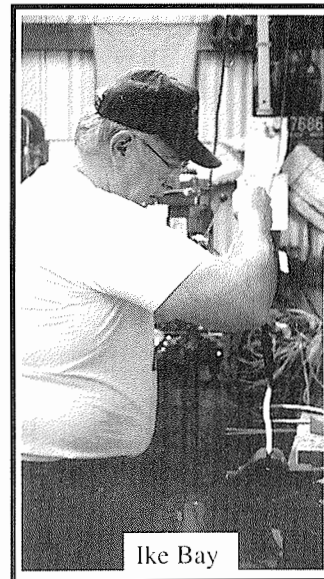
R.L. Lowman



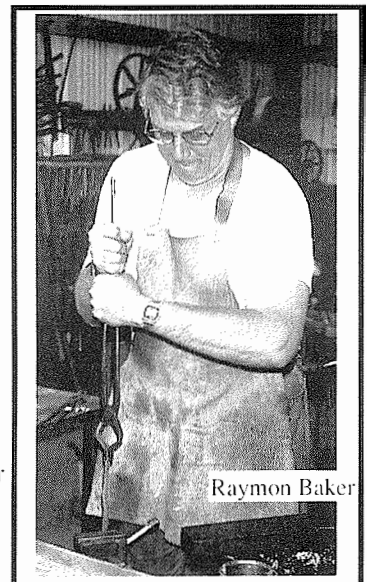
Richard Gathman



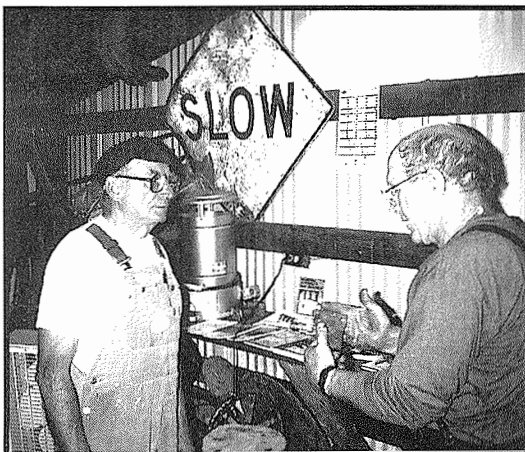
Glenn Harvey



Ike Bay



Raymon Baker



Glen and Don confer on some important aspect of hot iron or maybe Don's collection of 25 anvils and power hammers.

Gene says, "When tempering in an oven, preheat oven 30 min. If tempering using oxidation colors, repeat three times. Toaster oven OK but not for big work. "Wrap blade in tinfoil. Temper in oven 1 hour. Think twice about using wives oven for tempering (no motor oil quench)".



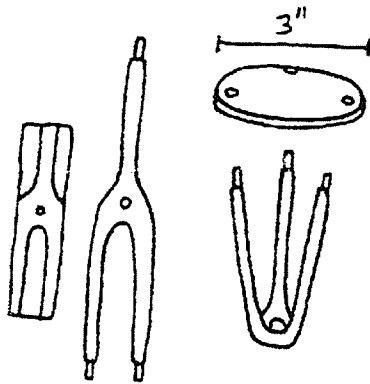
# Cage Head Brace

By Tim Barnes  
From the Appalachian Blacksmith Association Newsletter

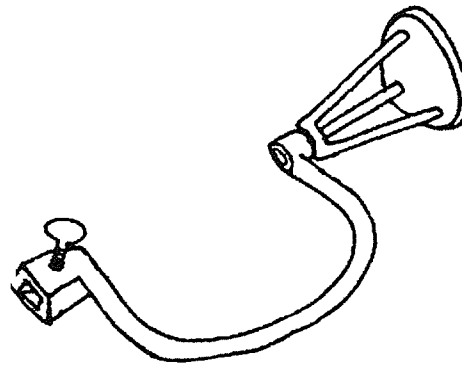
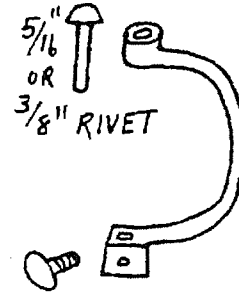
1/2" or 5/8" round  
Slightly upset and bend  
round. Then drill a rivet  
hole in the center



Upset and square, then  
drill a small pilot hole and  
drift with a square tapered  
drift to a auger shank



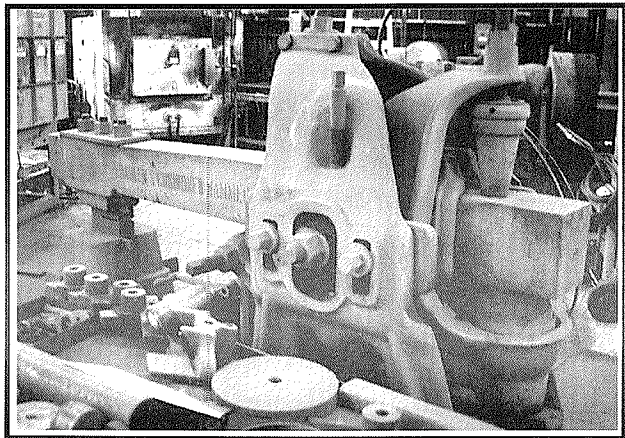
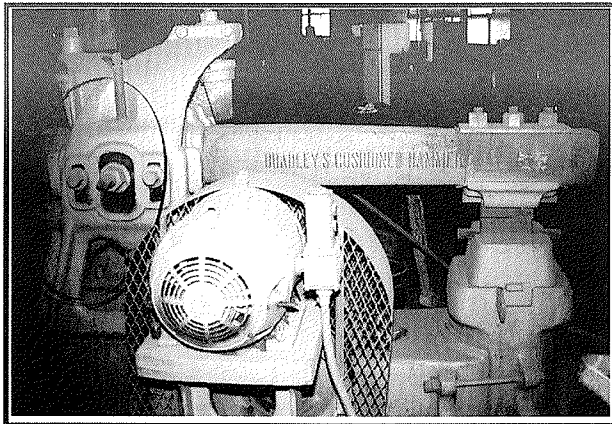
Drill and tap hole for  
the thumbscrew



Cut out and draw the posts. form a 3/16" tenon on the ends. Round the posts 1/4" to 5/16", make sure all are centered and equal. Rivet posts to head using the vise. Rivet the head to the brace.

# Mint Condition Bradley Cushioned Hammer

Sits in an industrial shop in the Portland, Or, area  
Photos supplied by Don Kemper







# Blacksmith Hints. . . Bits and Pieces

by Ryan Johnson

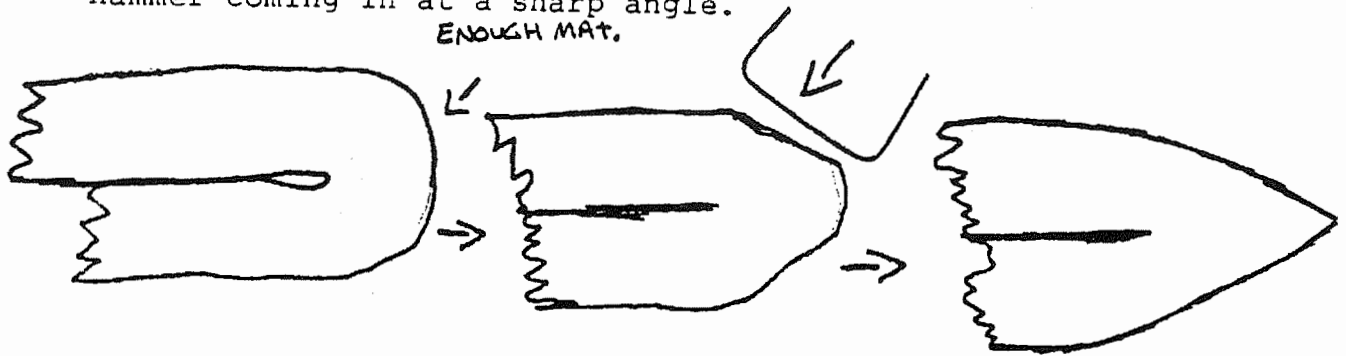
From Appalachian Blacksmith Association Newsletter

Ward Brinegar makes heart dinner-bells out of 1/2" round. He showed me how to make the point inside the heart ...

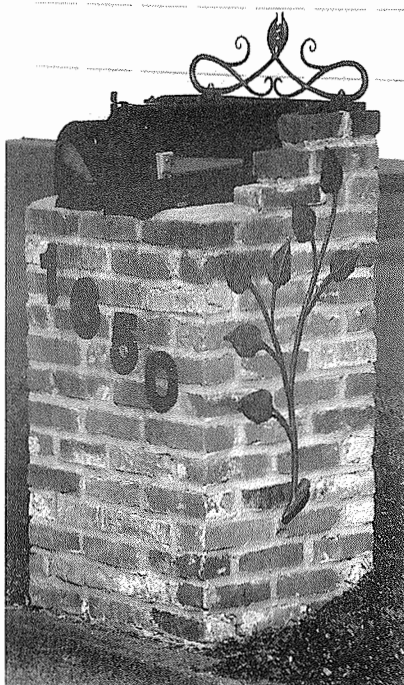


without forgewelding. If you double a peice of 1/2" round back, you have enough material in the bend to make the point. Just be sure and keep hammer coming in at a sharp angle.

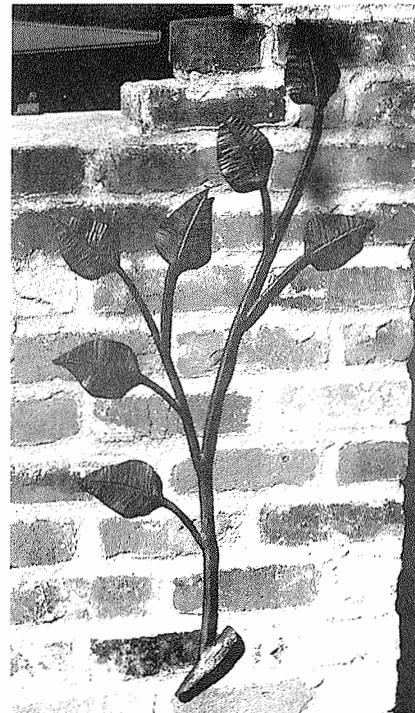
ENOUGH MAT.



## Ralph Hinds Mailbox . . . a visual treat



Ralph Hinds hails from Albany, Or. He forged this decorative iron work for his mailbox stand. Nice work Ralph.



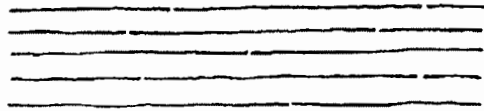


# Drawing Tips

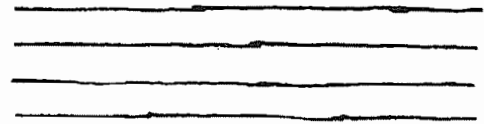
reprinted from The Newsletter, The Blacksmiths Guild of the Potomac, Sept/ Oct 1993

Line work is an important part of drawing. Here are a few hints on how you can make your line work more compatible with the aesthetic standards imposed on you by that tyrant, your brain.

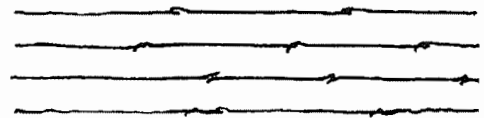
When drawing a long line draw that line with a series of shorter lines which are arranged end to end. Leave a small space between the ends of the line segments. The eye will read through these small gaps more easily than if the lines meet or overlap.



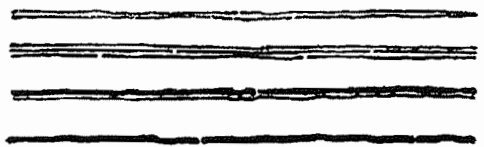
If the lines overlap the doubling of the line highlights their joining, a condition that we frequently wish to avoid.



If you want to call attention to that joining of lines overlap line ends. This can be done in numerous ways:



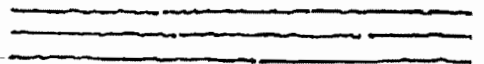
If you want to emphasize a line, either increase the line weight or render the lines as closely spaced parallel lines. This technique can be useful where an edge is not sharp and crisp.



The double/multiple line technique can be used to render dings and imperfections in edges and surfaces.



When drawing lines forget about making them look like you drew them with a ruler. Make them wiggle. Visual straightness depends more on the average straightness of a line and the directness of its passage from one point to another than its local micro imperfections. Strangely, if you put a nervous little wiggle in a line it seems easier to draw it directly from point to point.

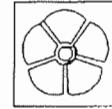




The Florida Clinker Breaker, April, 1990

# Jig for Three-Legged Bases

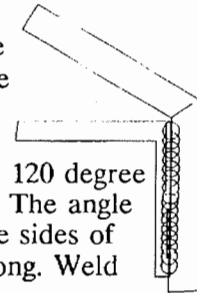
Steve Bloom



If you need to make several bases or (like me) have some problems with getting the angles right, this jig might help. In successive write-ups, I'll describe a shaping jig for the arcs of the legs & two projects, (a simplified courting candle-stick & an elaborate copper & basket-work combination).

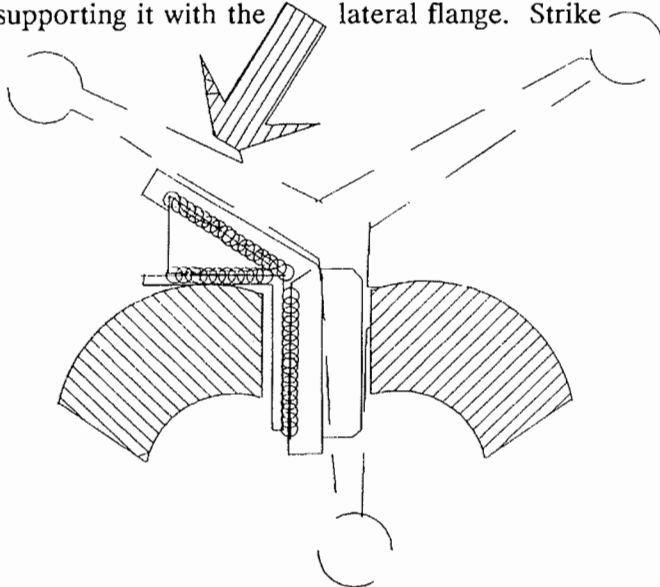
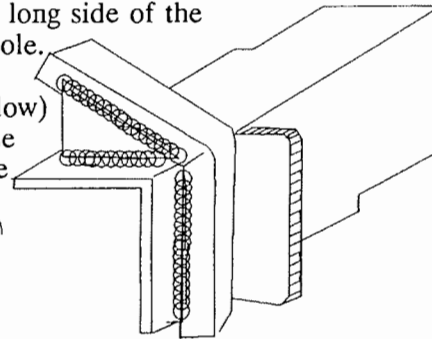
A. Start with 6" of 1/2" square stock and hacksaw a 60 degree notch 2/3 of the way through.

B. Bend the stock as shown (giving a 120 degree arc) & weld to a piece of angle iron. The angle iron should be slightly larger than the sides of your anvil's hardy hole & approx. 6" long. Weld the bent piece 4" from an end.



C. Weld side gussets between the free-standing portion of the 1/2" stock and the angle iron and weld a flange (1" x 1/4" x 2.5") along one side of the other limb of the 1/2" stock. Grind the edges of the long side of the angle iron so the jig can be inserted into the hardy hole.

D. To use the jig, prepare the leg unit (details to follow) & while still flat & hot, place the jig either in the vise (as shown) trapping 1 leg between the vise jaws while supporting it with the lateral flange. Strike



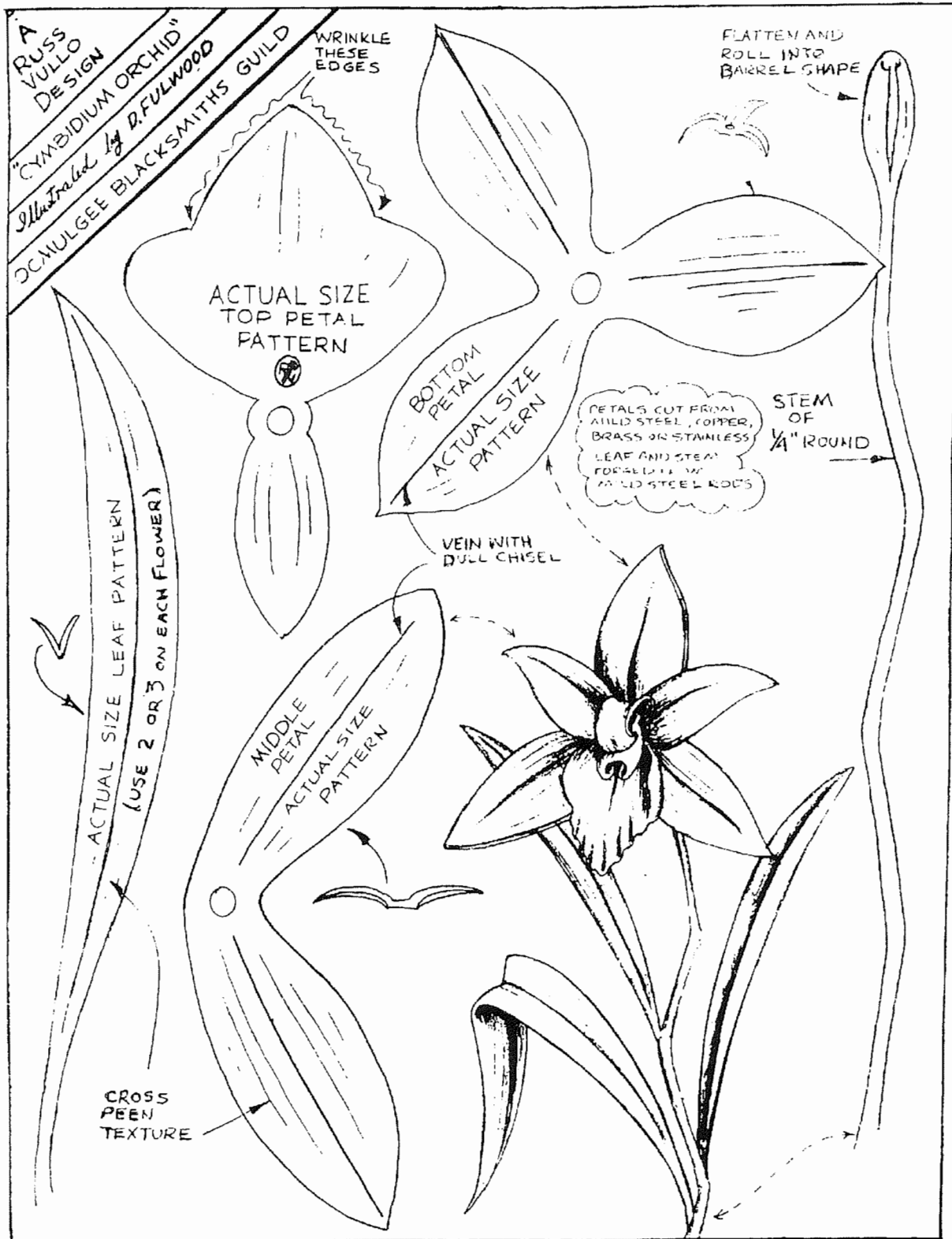
the other leg as shown to set the correct 120 degree angle. Be sure to compensate for the taper of the legs. Alternatively, insert the jig into the hardy hole & hold 1 leg while tapping the other (this is a nice way to do fine adjustments).

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# More Hot Tips

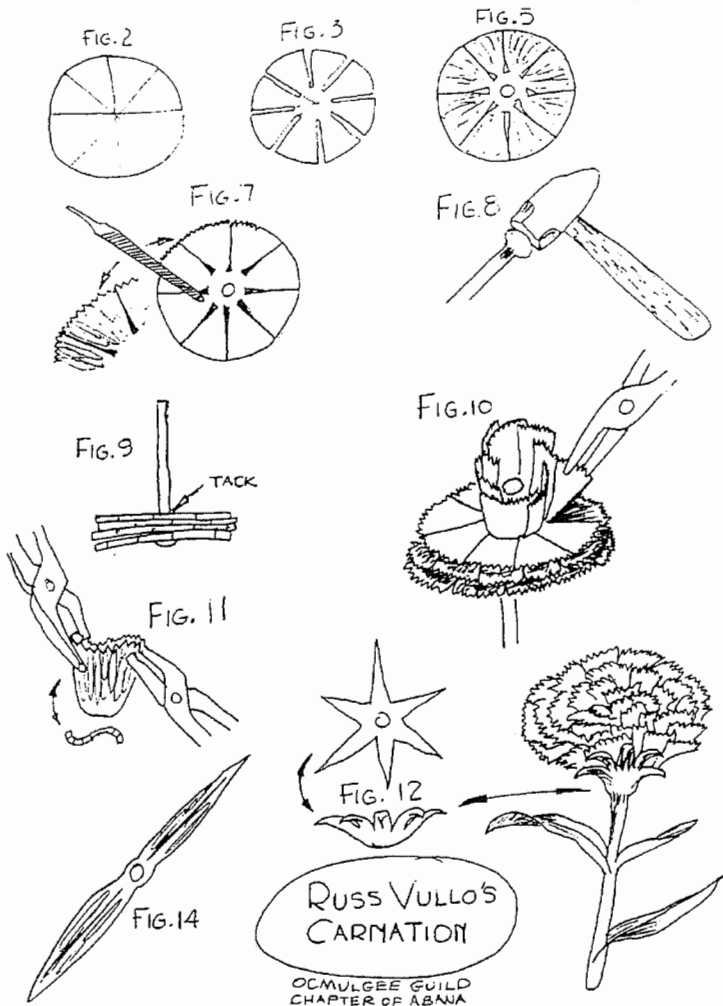


Reprinted from the Ocmulgee Blacksmith Guild -- just a tad bit smaller than the original



# Russ Vullo's Steel Carnation

Ocmulgee Blacksmith Guild, Chapter of A.B.A.N.A.



1. Cut out 4 disks of 16 gauge sheet steel 2 1/2" in diameter.
2. Scribemark the disks into 8 equal segments. Fig 2
3. Hacksaw cut to within 1/2" of disk center. Fig 3
4. Thin disks edges by drawing out till diameter is 2 3/4".
5. Texture disks with cross pein. Fig 5
6. Drill 1/4" hole in center of disks.
7. File serrations in disk edges with triangular file. Fig 7
8. Upset end of 1/4" rod to form "rivet head". Fig 8
9. Stack disks with textured side up and tack weld bottom of lower disk to the rod. Fig 9
10. Heat disks with torch or forge and bend upward overlapping each other to form petals. Fig 10
11. Put "S" curve in edge of each petal by twisting in opposite directions with two needle nose pliers. Fig 11
12. Cut out six pointed star and drill center with 1/4" hole and sink center into a cup shape. Fig 12
13. Install onto rod under bottom disk and weld to rod. Grind and file weld smooth.
14. Forge leaves from 1/8" round stock and weld to 1/4" rod.
15. Clean with wire brush, then heat to dark red and brush edges of petals with brass brill cleaning brush till gold colored.
16. Apply clear protective finish of your choice.

RUSS VULLO'S  
CARNATION  
OCMULGEE GUILD  
CHAPTER OF ABANA

## Power Hammer Rebuilding Rental

Expertise in rejuvenating a power hammer was given a boost when Berkley Tack sponsored a Fred Caylor Workshop in 1994. This N.W.B.A. workshop, with 12 students, was held at Clyde Schurman's shop, Fred Schulz assisting.

Detailed rebuilding information can be found in the "Little Giant Power Hammer" book by Richard Kern (copy in the N.W.B.A. library) and "Power Hammer Restoration Notes from the Fred Caylor Workshop", Anvils Ring, Winter, 1992 issue.

In an effort to assist N.W.B.A. members, a rabbeting kit is available for rent. The kit contains a mandrel to pour the clutch bearings for a 25# or 50# Little Giant (specify size when ordering), Bear Pucky (damming material) and a copy of Fred's, easy to understand, rabbeting instructions.

The 30 day rental fee is \$20.00, (outgoing shipping included). The instructions, which can be of use on other sizes/ makes of hammers and Bear Pucky, without clutch mandrel will rent for \$5.00 for 30 days.

For rental contact: Don Kemper, N.W.B.A. librarian, 20100 NW 61st Ave, Ridgefield, WA 98642, 360-887-3903

Bear Pucky, Smedley wonders??? Is that similar to Monkey Do, that was once used in shipboard cable stuffing tubes.

**North West Blacksmith Association**



METAL VOLTAGES	
Magnesium	-2.34 v'
Beryllium	-1.70
Aluminum	-1.67
Manganese	-1.05
Zinc	-0.76
Chromium	-0.71
Iron	-0.44
Cadmium	-0.40
Nickel	-0.25
Tin	-0.14
Lead	-0.
Copper	+0.34
Silver	+0.80
Palladium	+0.83
Platinum	+1.20
Gold	+1.42

Metals in the same group below will experience little or no corrosion. Metals in different groups will corrode according to which group occurs first in the table.

**METAL AND ALLOY GROUPS ARRANGED IN ORDER OF CORROSIBILITY**

- Magnesium, Magnesium alloys
- Zinc, Galvanized Steel, Galvanized Wrought Iron
- Aluminum 52SH, 4S, 3S, 2S, or 53S-T, Aluminum clad
- Cadmium
- Aluminum A17S-T, 17S-T, 24S-T
- Mild Steel, Wrought Iron, Cast Iron
- Ni-Resist
- 13% Chromium Stainless Steel, type 410 (active)
- 50-50 Lead-Tin Solder
- 18-8 Stainless Steel, type 304 (active)
- 18-8-3 Stainless Steel, type 316 (active)
- Lead, Tin
- Muntz Metal, Manganese Bronze, Naval Brass
- Nickel (active), Inconel (active)
- Yellow Brass, Admiralty Brass, Aluminum Bronze, Red Brass, Copper, Silicon Bronze, Ambrac, 70-30 Copper-Nickel, Comp. G-bronze, Comp. M-bronze
- Nickel (passive), Inconel (passive)
- Monel
- 18-8 Stainless Steel, type 304 (passive), 18-8-3 Stainless Steel (passive)

REPRINTED FROM: THE ROCKY MOUNTAIN SMITHS; FORGE FACTS

**HOPEFULLY EXPLAINING HOW ELECTROCHEMISTRY AFFECTS CORROSION.**

by Steve Smith

Corrosion in metal exposed to the weather is primarily oxidation (I'm not talking about the effect of acids or bases on metals). Oxidation is greatly accelerated in the presence of another metal, due to the difference in potential (voltage) caused by the contact of the two metals. This brings up the best method of prevention: Put an insulator between all dissimilar metals! Note that the insulator approach will not work if water puddles over it and bridges between two dissimilar metals.

Electrochemical oxidation will only occur in the presence of some kind of electrolyte; in our case dirty water, or moisture and dirt. This suggests the second line of defense against corrosion: Coat the metals so that moisture cannot get in. A lot of the time, you cannot do either of the above. The tables sidebar will help you figure out what will happen.

Two (or more) dissimilar metals, in electrical contact with each other through an electrolyte (dirty water, damp earth, etc.) will produce a voltage. This is a simple battery. If you put a voltmeter from one metal to the other, you can measure this voltage. Only one metal will corrode! The metal which corrodes is the one with the lower of the voltages (from the tables sidebar). The metal which has the larger voltage will not be corroded (until the metal with the lower voltage is all gone, or loses contact with the electrolyte). This is how you can predict corrosion; this is also a third way of protecting your metal work called Anodic Protection.

Anodic Protection (=sacrificial anode) means that you attach a lump of metal to your sculpture which has a lower voltage than any other metal in your sculpture. The attached lump (anode) will corrode away, but as long as contact is maintained and some part of the lump is still there, your sculpture will not corrode (a regular maintenance program is needed, of course). This is how galvanized steel works! There is also a magnesium anode in your water heater. When it's gone, the water heater starts rusting and fails quickly. (Funny how they don't tell you to replace the anode...)

Given the above discussion, it is easy to see why gold doesn't corrode. If gold is connected to any metal on the list, the other metal (all others having a lower voltage) will corrode. In galvanized iron, the zinc corrodes instead of the iron, since zinc is more negative than iron (zinc corrosion is much less noticeable than rust).

Other examples:

A sculpture made from silver (+0.8) and nickel (-0.25) would show corrosion on the nickel.

A sculpture made from aluminum (-1.67) and nickel (-0.25) would show corrosion on the aluminum.

A sculpture made from copper (+0.34) and silver (+0.80) would show corrosion on the copper.

Alloys have their own voltages, as shown in the second table also from Langes (sidebar).

The sidebar tables came from:  
 Electromotive Series of the Metals  
 from Langes Handbook of Chemistry, Eighth edition  
 Handbook Publishers Inc., Sandusky, Ohio, 1952

Reprinted from: The Rocky Mt Smiths Forge Facts

# Hot Tips

## A Christmas bow and wreath hanger

submitted to the Ocmulgee Blacksmith Guild Newsletter

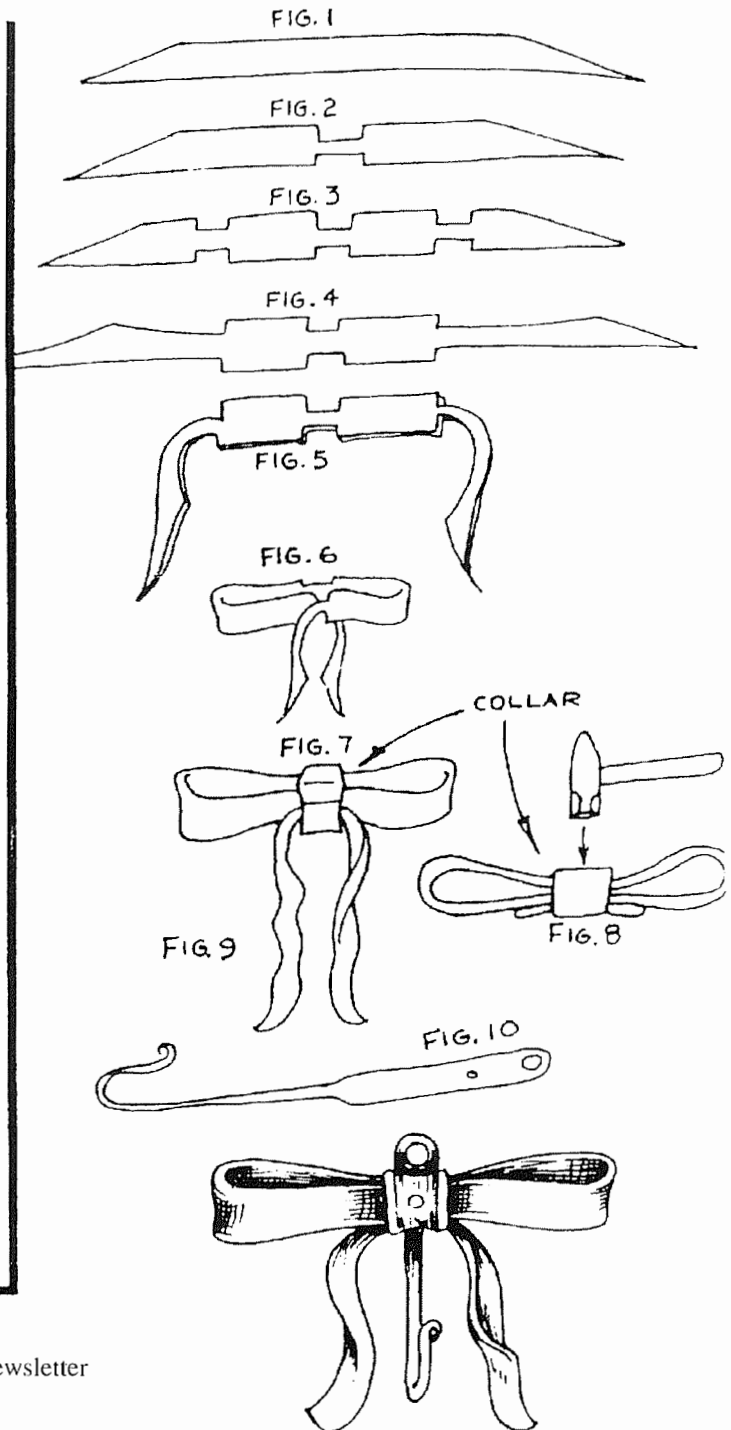
By David Fink of Westville (Lumpkin), Georgia

**MATERIALS NEEDED:**

- 1- 1/8" x 1" x 28"
- 2- 5/16" round x 11"

**INSTRUCTIONS:**

- 1- Cut or forge both ends of the 1/8 x 1 to a very steep angle. (See Figure 1)
- 2- Mark the center and fuller or cut a notch 3/8" deep by 1" long. (Fig. 2) leaving a little more than 1/4" of material in the center.
- 3- Measure 8" from notch and add another notch to each end. (See Figure 3)
- 4- Forge the material from the outer notches down to a gradual taper as shown. (in Fig. 4)
- 5- Bend ends down 90 degrees. (See Figure 5)
- 6- Bend over horn so that the 90's overlap & rest over the center notch. (See Figure 6)
- 7- Make collar of the same 1/8 x 1 stock and attach it so that the joint is on the same side as the "ribbons" that were bent down 90 degrees. (The ribbons will hang from the back of the finished piece.) (See Figure 7)
- 8- Push the collar down so that it is recessed into the bow and the bow bulges outward to the front as shown. (in Figure 8)
- 9- Adjust the ribbons to a pleasing angle and bend on the horn or with scroll tongs to give them dimension and appearance of real ones.
- 10- Forge a 1 to 1-1/2" hook on the 5/16" round stock and flatten the opposite end. Punch or drill a 5/16" hole in this flattened end to eventually hang it by. (See Figure 10)
- 11- Drill a 5/32" hole through collar & hook. Rivet with 8d nail and apply finish.



Reprinted from the Ocmulgee Blacksmith Guild Newsletter







# Carbon Content and Tempering Colors

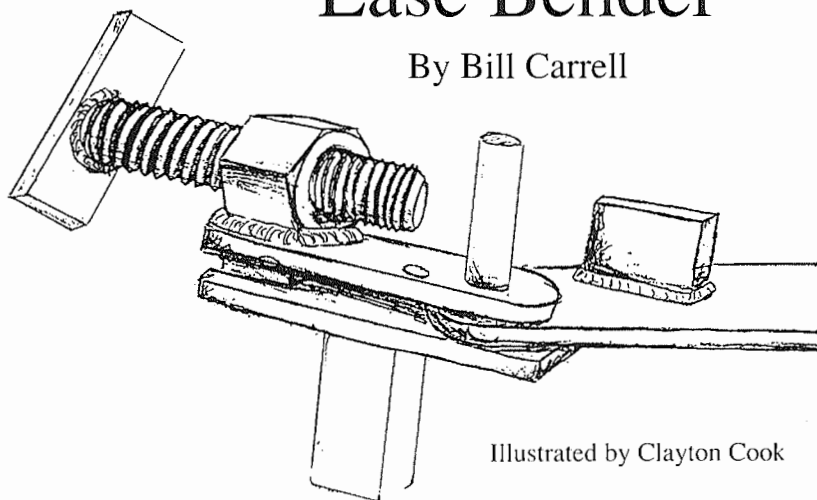
Reprinted from The American Blacksmith Dec. 1915

Tool	Carbon Percentage in Steel	Temper Color	Color Temperature Fahr.
Axe	0.60 to 0.70	Dark Purple	550
Stone Axe	0.80 " 0.85	Dark Straw	500
Broad Axe	1.15	Dark Purple	550
Plier Bites	1.00 " 1.10	Dark Straw	500
Carver	1.00 " 1.10	Dark Blue	570
Stone Boring Bit	1.10 " 1.18	Medium Straw	460
Auger Bit	0.50 " 0.65	Light Purple	530
Milling Cutter for Iron	1.20 " 1.25	Medium Straw	460
Milling Cutter for Brass	1.20 " 1.25	Very Light Straw	420
Chipping Chisel	1.10	Dark Purple	550
Chisel for Hot Iron	0.60 " 0.70	Dark Purple	550
Cold Chisel	0.85 blk.	Light Purple	530
Lathe Centre	0.80 " 0.90	Light Purple	530
Screwing Taps	1.20 " 1.22	Medium Straw	460
Scraper for Iron	1.30	Dead Hard	
Lathe or Planer Chisel	1.20 " 1.25	Light to Medium Straw	430 to 460
Twist Drill	1.20 " 1.22	Dark Straw	500
Files	1.20 " 1.30	Pale Straw	420
Pipe Cutter	1.20	Medium Straw	460
Anvil Face	0.85 " 0.90	Splashed Red-brown	510
Hammer, Blacksmith's	0.67 " 0.78	Splashed Red-brown	510
Hammer, Machinist's	0.90 " 1.00	Splashed Red-brown	510
Grips	0.85 " 0.90	Purple Blue	529 to 531
Woodworking Knife	1.15 " 1.20	Dark Purple	550
Hatchet	1.15 " 1.22	Splashed Red-brown	510
Saw for Steel	1.60	Medium Straw at Teeth	460
Saw for Wood	0.80 " 0.90	Dark Blue	570
Springs	0.90 " 1.25	Very Dark Blue	601

TABLE SHOWING THE STEELS USED FOR VARIOUS PURPOSES, THE CARBON CONTENT, THE TEMPER COLORS AND THE TEMPERATURES AT WHICH THESE COLORS APPEAR

## Ease Bender

By Bill Carrell



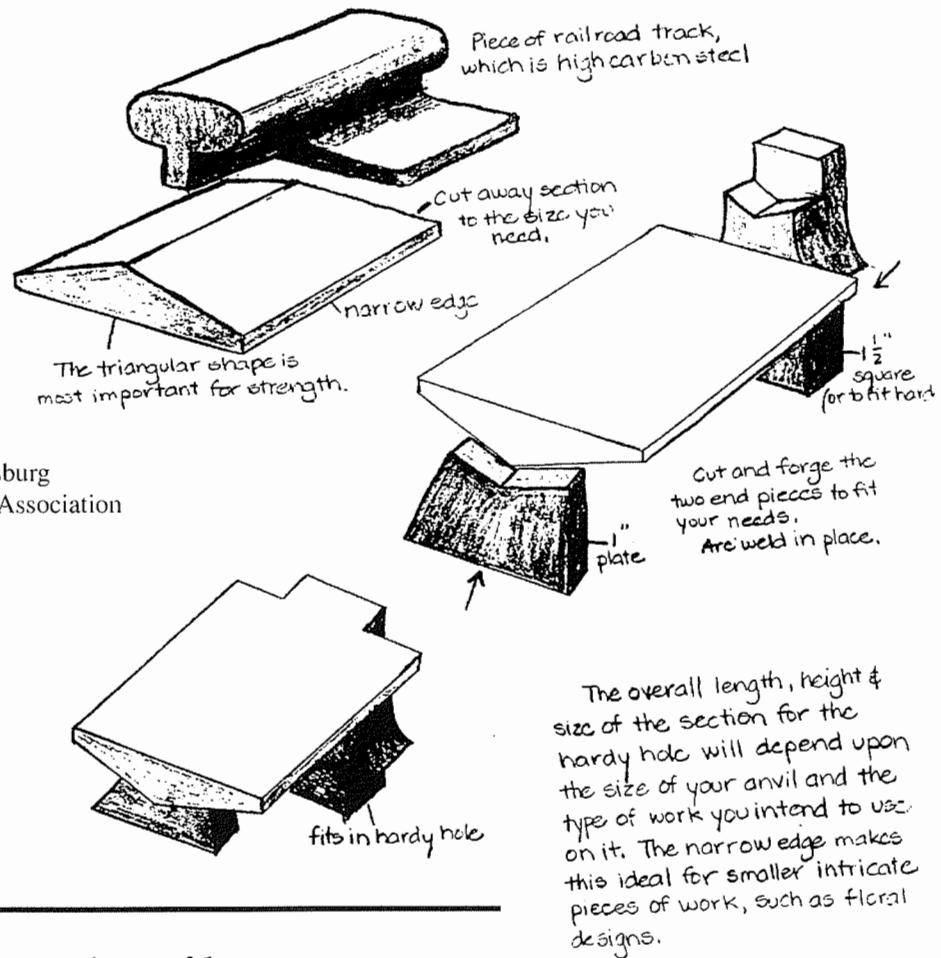
Illustrated by Clayton Cook

You oughta try this. I made one 40 years ago. It's about worn out. It's easy to build, can be made any size and is quick in and out of the vice, makes an accurate bend in hot or cold iron and takes up less room than a Hossfeld.

# Anvil Bridge

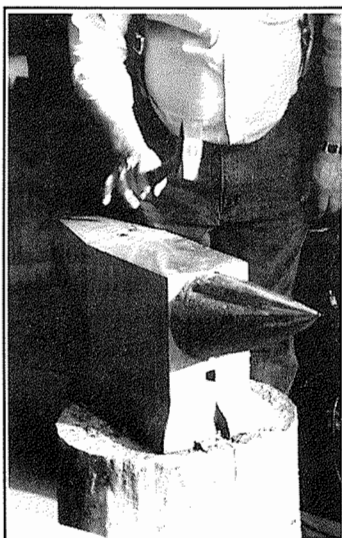
Mike Kudziński's Small Bridging Table

Reprint: Pittsburgh Area ABA



Reprinted from the Pittsburg Area Artist Blacksmith Association

## Testing Your Anvil



A simple test of an anvil's ability to rebound is to lightly grasp a known, good, hammer and let the hammer fall on the anvil face, from about 5 or 6 inches. It should rebound almost to the point of release. This is not necessarily a test of hardness, some anvils may rebound fairly well but will dent from improper use.

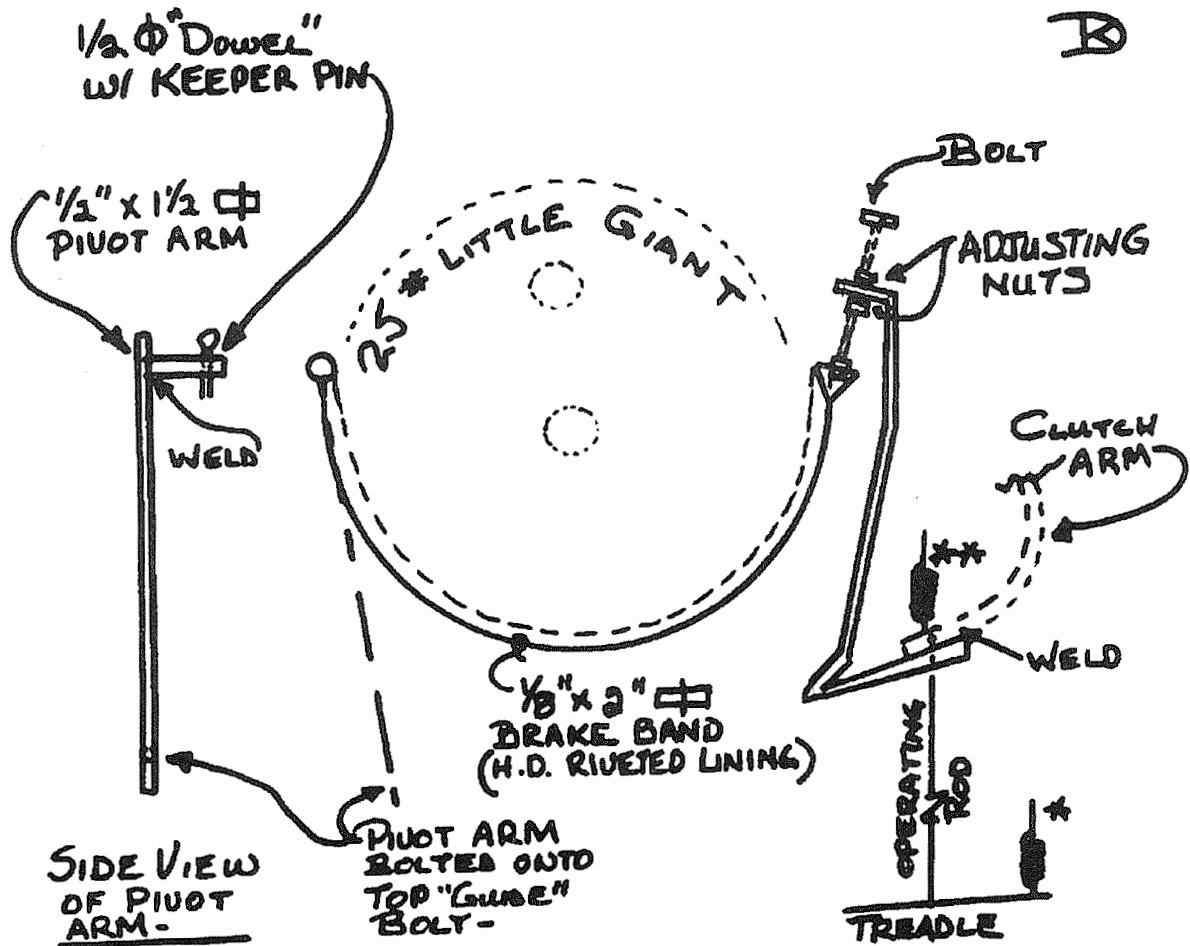
The anvil tester is none other than Jerry Culberson, himself, testing a Gladiator anvil at last spring's dual Northern Rockies and North West Blacksmith Assoc. Conference in Montana. Notice the proper pinky position during the rebound test. True anvil etiquette.

**Note:** You must test an anvil with a known, good, hammer, improper hammer hardness won't "rebound" as well as a properly heat treated hammer. Darn, it's always something, story problems, physics, or Murphy's law, just when one begins to get the hang of it.

Just a thought, will an anvil rebound higher at 5000 feet altitude than sea level?

Smedley Soapstone was so poor when growing up in Nebraska he took his forge to the wrong side of the tracks, swiped the coal from the U.P. yard, then forged on the R.R. tracks inbetween trains.

# 25# LITTLE GIANT BRAKE (ONE APPROACH TO "CONTROL")



### SUGGESTIONS

- ROUNDING / SMOOTHING "CROSS PLATE" EDGE BY SANDING / FILING WILL IMPROVE SMOOTHNESS-
- HEAVY DUTY BRAKE LINING PREFERRED-
- \* REPLACE FACTORY SPRING IF WEAK!
- \*\* ADD ONE (OR TWO) AUTO "BRAKE SHOE" SPRING/S IMPROVES OPERATION



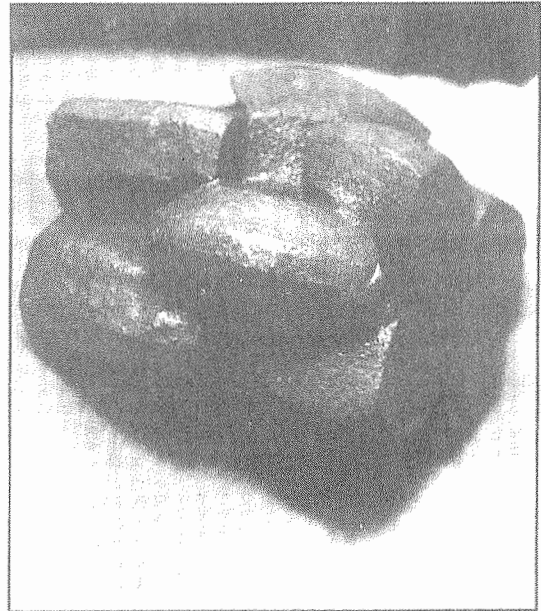
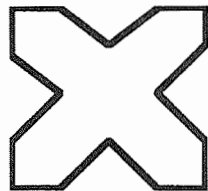
# Don Asbee's Hand Grenade Twist

Don showed off this unique twist at the May BAM meeting. It would make a neat handle or a balluster or maybe even a salt shaker if the center was drilled out.

- 1. Start with a piece of 1" square long enough to hold

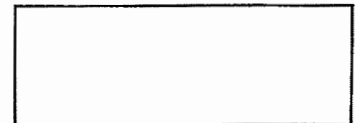


- 2. Fuller all sides until it looks sort of like this

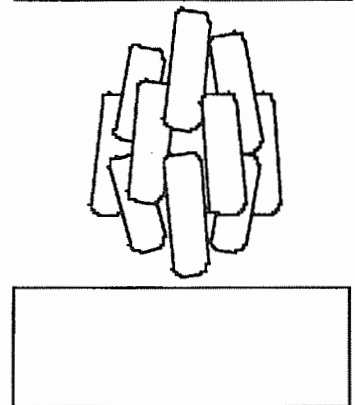
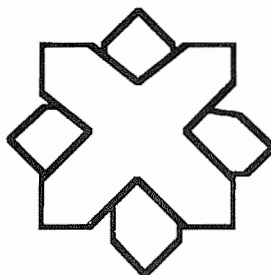


- 3. Let it cool and then cut at 3/4 to 1 inch intervals to an even depth with a hacksaw or chopsaw on all four sides to isolate rectangles. Don't cut too far!

- 5. Now heat and squash under the power hammer until the segments slide past each other



- 4. Clamp in a vise and twist every other segment until points are 45 degrees off center. Cut off the longest length that will fit under the power hammer. (2-3 ")



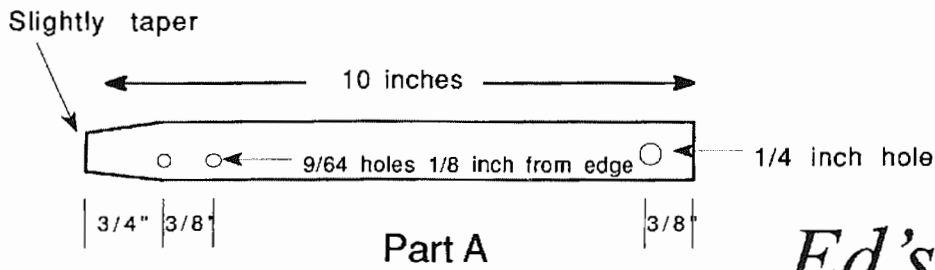
Note: All work is done hot except for step #3.

Reprinted from the Newsletter of the Blacksmiths Association of Missouri

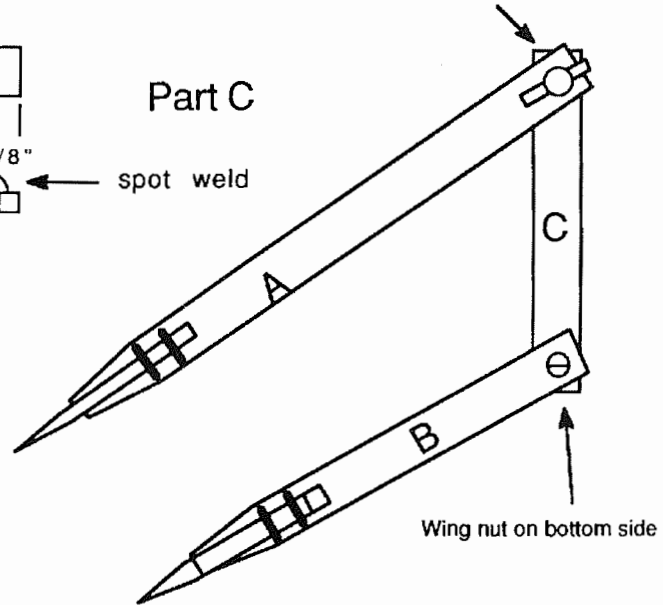
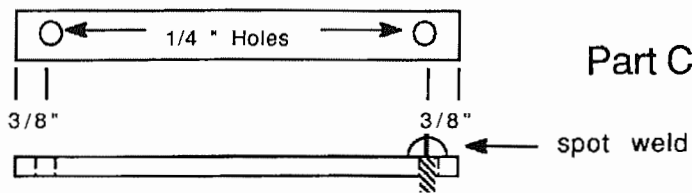
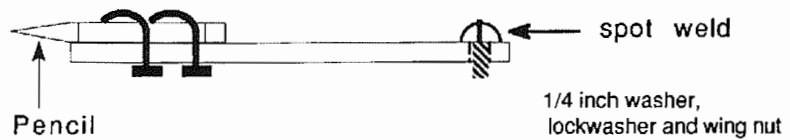
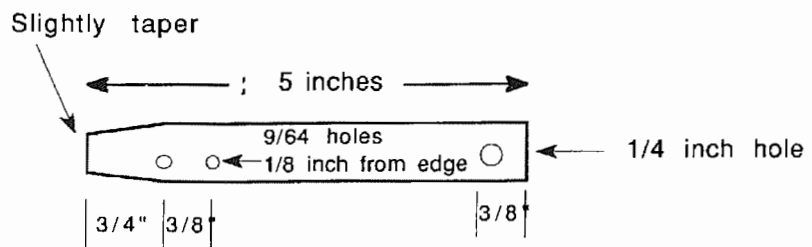




# More Borrowed Hot Tips



## Ed's Circle Maker



Have you ever started to draw a big circle and got tired of the stick, nail and pencil trick? Here's a simple solution, make your own compass. All you need is:

- 20 inches of 1/8 by 1/2 inch flat steel (cut one piece 10 inches long and 2 pieces 5 inches long)
- 2 1/4 x 20 round head screws
- 2 1/4 inch flat washers
- 2 1/4 inch lock washers
- 2 1/4x20 wing nuts
- 4 6/32 x 1 1/2 inch screws and nuts (Bend 2 6/32 screws to 1/8 inch diameter. Bend 2 6/32 screws to 1/4 inch diameter)
- 1 8d finish nail — cut off the head

Assemble the compass as shown. Keep one or two 5 inch pieces extra to extend the compass.

— Ed Harper, Wright City, Mo.

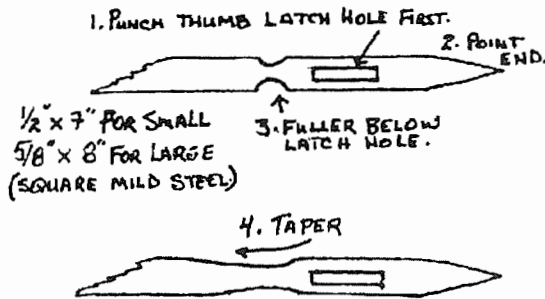
NEWSLETTER of the BLACKSMITHS ASSOCIATION OF MISSOURI



**The Suffolk Latch** - as demonstrated by John Smith of Kootenay Forge to the Vancouver Island Blacksmith Association - from the May 1996 VIBA Forge.

John uses mild steel throughout. For the handle he uses square 1/2" x 7" for small ones and square 5/8" x 8" for large ones. He starts by taking a good heat and punching the hole for the thumb latch. To maintain the shape, he works the

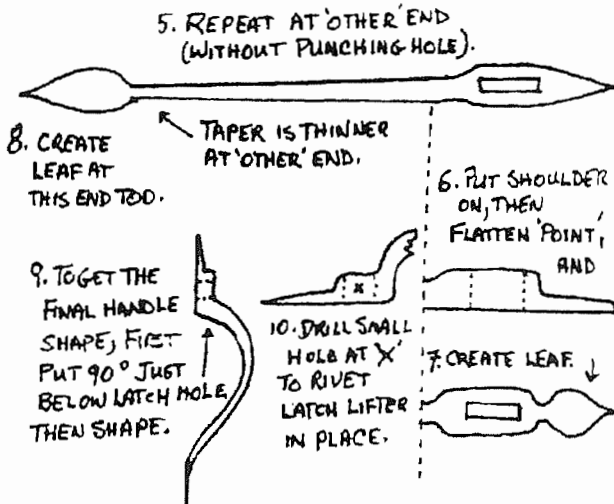
**HANDLE**



hole from both sides on the 1st heat, then punches through on the 2nd.

The next step is to point the end beyond the hole, then fuller below the hole and taper the square stock back towards the other end. That end is also fullered and drawn to a point.

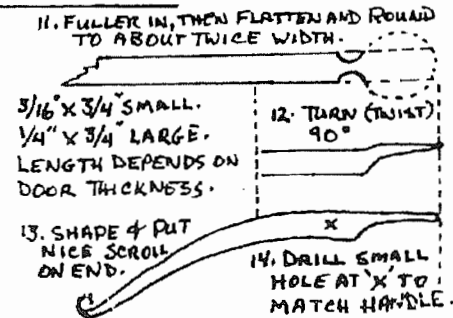
Before the leaf can be formed (on the latch-end of the handle) you must put a shoulder in and flatten the



material beyond the shoulder. Next, form the leaf at the other end of handle. With yet another heat, you knock a 90 into it just below the latch hole. Now the handle can be shaped.

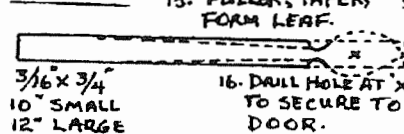
For the latch-lifter for a small door, a piece of 3/16" x 3/4" (1/4" x 3/4" for large doors) is required; the length is dependent on the thickness of the door. Decide on the size of thumb plate, and fuller at the appropriate place. You now flatten the material left on the short end (after fullering) and round it out to about twice the width of the original stock. Heat and twist to a 90, shape latch lifter and drill hole for rivetting to handle.

**LATCH LIFTER**



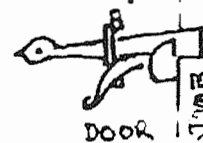
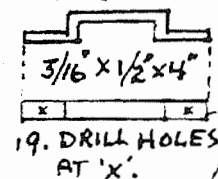
The striker is a piece of 3/16" x 3/4" (10" for a small latch, 12" for a large). You fuller, taper and form a leaf. A hole must be drilled in the leaf to allow for attachment to the door and for the

**STRIKER**



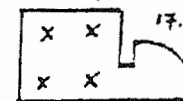
To keep the striker on track, a keeper is necessary. John uses 3/16" x 1/2" with the finished piece ending up

**18. FORM KEEPER FOR STRIKER.**



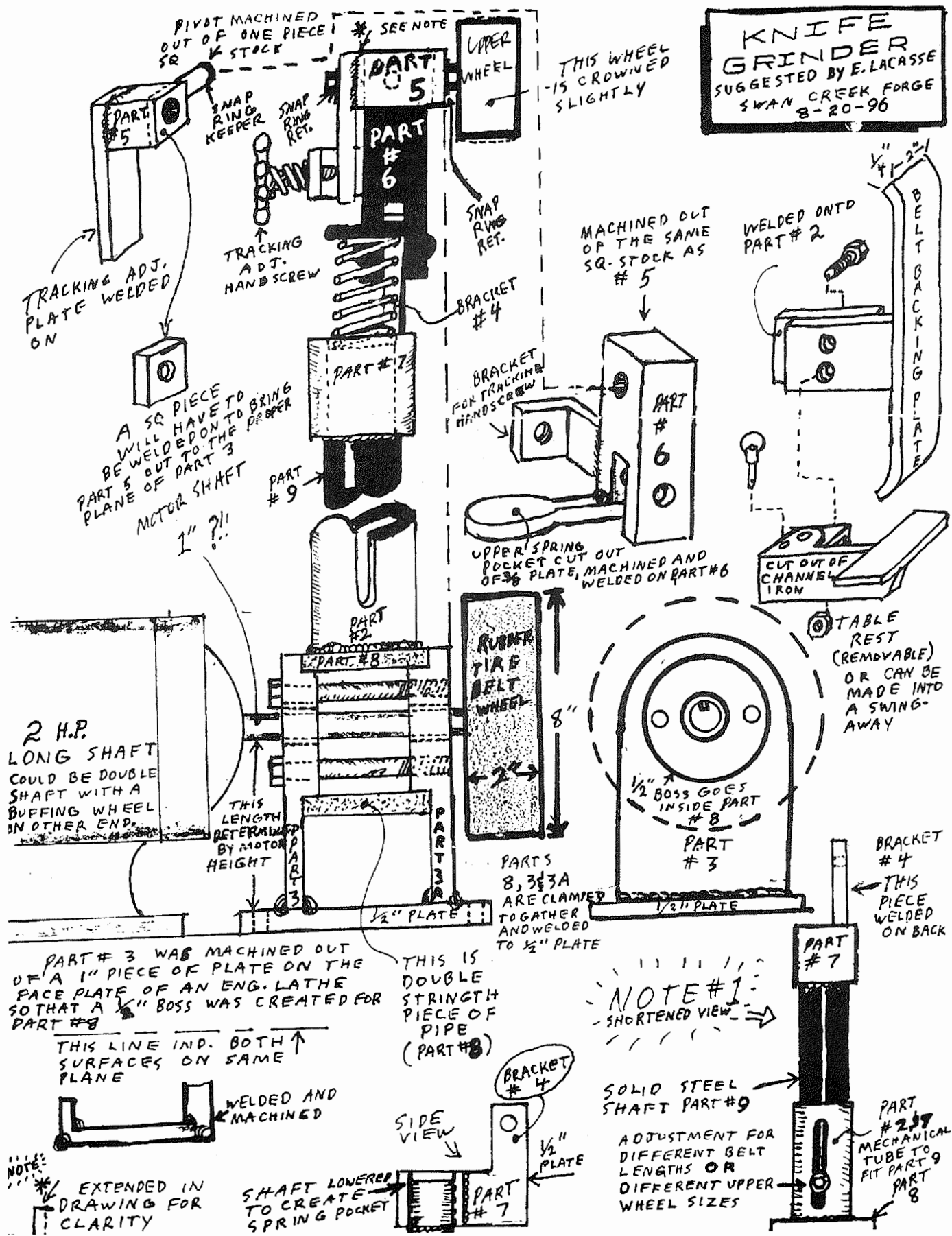
about 4" long

**16. CUT OR FORM STRIKE PLATE.**



**17. DRILL AT 'X'S'.**

Make (cut, form or buy) a strike plate and you are ready to latch your door!





# Tips on Buying a Power Hammer

by Fred Caylor

From the *Newsletter of the Blacksmiths Association of Missouri*

If you don't know what to look for take someone with you who does know.

✓ Don't worry about the condition of the babbitt in the shaft journals or clutch pulley, unless they are so bad there might be some wear on the shaft.

✓ Check the wear in the toggle pins and look for elongated wear in the arms an toggles. If elongated, they will have to be bored out and oversized pins made.

✓ It is very common for the upper arms to have been repaired. If done properly they will function as good as new, but if they have been put back together in a slight twist this will cause the toggle holes to not line up properly and

will wear the pins out as fast as you can make them. Remedy-ream the holes through arm and toggle while in correct position. Make oversized pins.

✓ Check for wear inside of the ram where toggle cross pieces ride. We recently found one that was worn so badly they had to be filled with weld and remilled to size. This unfortunate situation calls for countless hours of work and special machinery.

✓ Check for wear in the vee guides on front and rear ram guides. These control the path of the ram, and it would take a lot of work to correct. The aforementioned hammer had the front guides worn almost through and had to be rebuilt and reshaped due to warpage from welding heat. This hammer was worn out from lack of lubrication.

✓ Last but not least, don't let your desire to own a hammer at a bargain price induce you to buy one that needs work that you can't do yourself or afford to have done. A poor hammer is worse than no hammer at all. Save your money and buy one that you will enjoy using and can make money with. Price should be secondary if you have work for it.

✓ One thing I would like to suggest is that when you acquire your hammer take the time to strip it down completely. This way you can inspect it throughout. As you are cleaning it make repairs right then and there. This is a good time to repaint the parts before you reassemble. When you are finished you will have a piece of equipment you will be proud of, and it will give you years of service. After all, it did take years for the hammer to get in such a sorry condition.

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**North West Blacksmith Association**





# TREADLE HAMMER FABRICATION

## Hammer, Anvil and Face Plates

By John Dittmeier, Alexandria, Virginia

At the BGOP Spring Fling, I heard discussions of efforts to fabricate a treadle hammer per the latest plans. With its numerous parts, the prospect of fabrication can be daunting. The following article appeared in the Anvil's Ring and offers an easier method of fabricating the hammer, anvil and face plates from one bar and thereby avoids the hunt for lead, bulldozer blades and solid rounds of 4 inch or more diameter.

By use of one 20-foot length of 1 x 4 inch steel bar, I easily fabricated the hammer, anvil and face plates of an ABANA treadle hammer(original version) per Clay Spencer's modifications. I directed the steel supplier to saw the bar to the lengths given. Here are the advantages over the ABANA plans: no use or handling of molten lead, a solid steel hammer head of 75 pounds, a solid steel anvil, thick face plates with hardie holes, side openings for Clay's hardie tool pins, and an anvil cavity for drift tools to emerge after passing through the workpiece and face plate. In each face plate, I drilled within the outline of an 1 inch square hardie hole until I was able to cold punch out the remnant slug by use of a top tool and hand hammer. For deep, sound welds, the butt joints, which are not shown below, should be V-ground.

Addendum: In testing different treadle hammers, I have concluded that the ABANA springs, eight in number, require less leg force to extend than the garage door springs.

HAMMER HEAD  
 Two at 12 inches = 24  
 Two at 13 inches = 26  
 One at 11 inches = 11

FACE PLATES  
 Two at 5.5 inches = 11

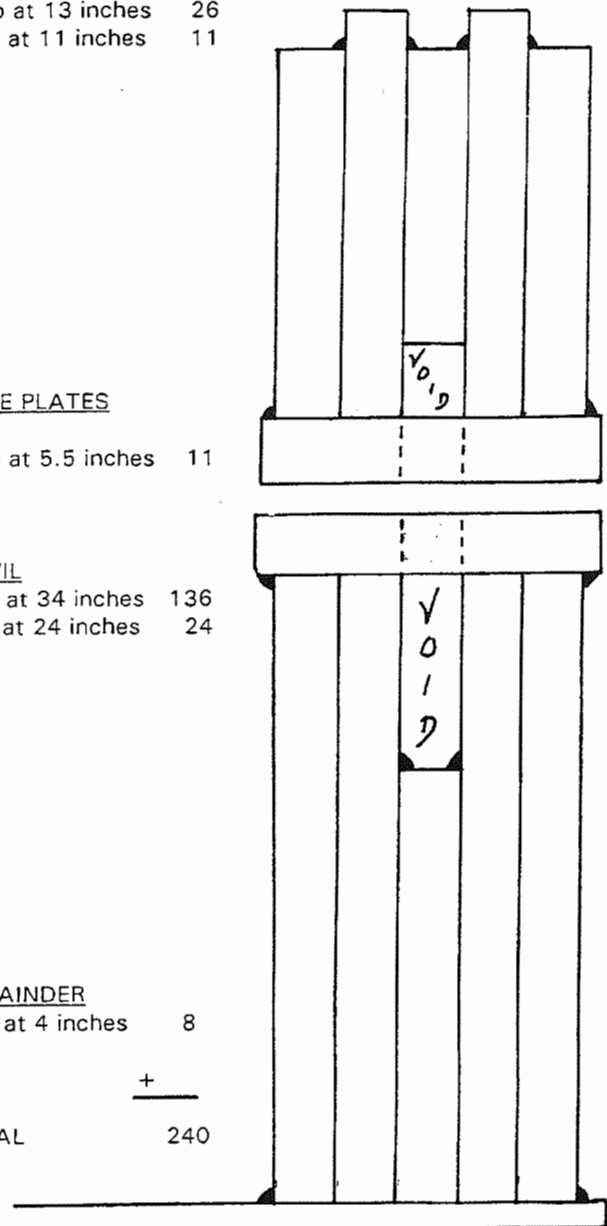
ANVIL  
 Four at 34 inches = 136  
 One at 24 inches = 24

REMAINDER  
 Two at 4 inches = 8

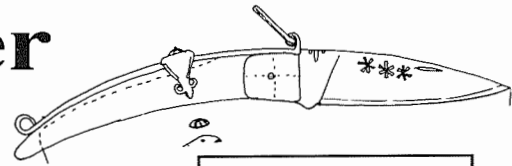
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TOTAL = 240

SIDE VIEW  
 Not to Scale

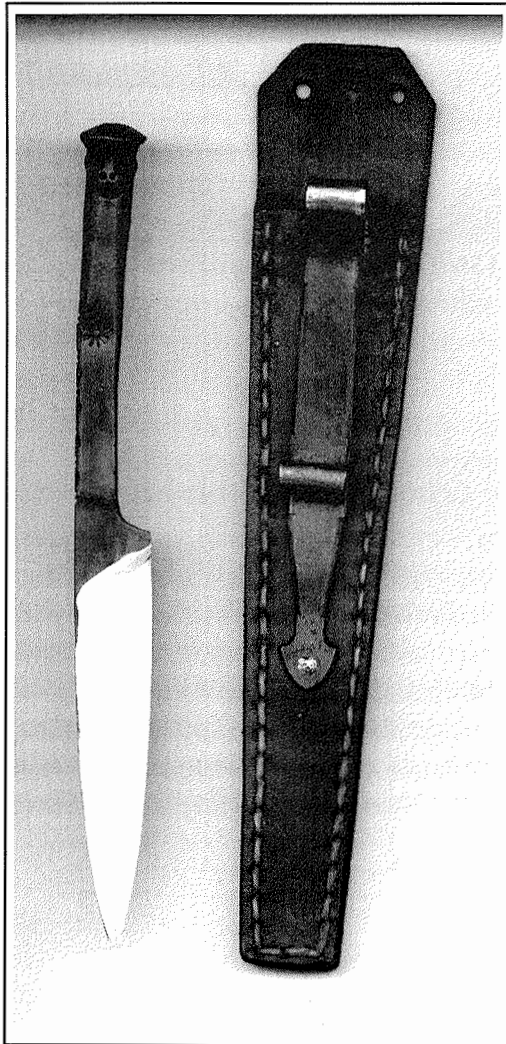


# Bladesmith Corner

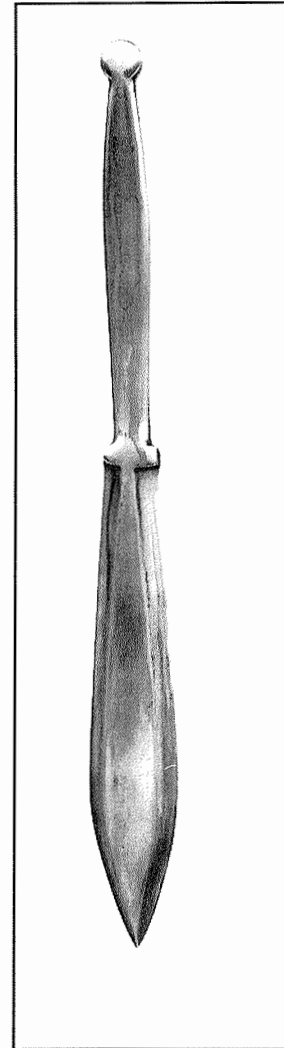


Below is a knife and sheath made to replace the one I lost, then found a month later. Funny how many knives one loses in a lifetime. That's what the pocket knife makers are counting on. All those boys getting their first pocket knife, it's just a matter of time, "Hey Ma, I lost my knife again." Sound familiar.

The "Little Ugly" knife is made from a 3/8" Canadian rake tine that Wade Wade peddles. Canadian steel makes better knives than the stuff down south, must be the winters that cold temper the steel?? The tine was upset, squared up a bit, then I pounded his "Little Ugly" face in using a carpenters nail set for eyes, center punch for nostrils, and a cape chisel for the mouth. The blade was flattened and shaped somewhat then ground on a 2" X 72" belt grinder. Heat treat consisted of normalizing, annealing, edge quenching and tempering in Peg's oven. Heat treat oil was vegie oil. The sheath spring is 1/16" X 1/2" spring steel from Pacific Machinery and Tool Steel in Portland, Or. It was shaped, annealed, filed, drilled then hardened and tempered. A rivet holds the bottom of the spring to the sheath. The upper part is attached using waxed nylon to sew the spring to the sheath.



This type of spring/sheath fits in my Jeans pocket. Better than a pocket knife, easy to take the knife in and out while sitting. Wayne Goddards' idea.



D J.. Stull forge welded this Damascus knife from 1/8" X 1" needle bearings and 3/8" X 1" mild steel. The needle bearings were tack welded on the flat bar then forge welded in it, folded and welded over and over. This scan doesn't do the blade justice, as it has a very interesting pattern. D. J. is always experimenting with new methods and processes. All these don't necessarily work but the important fact is that he never gives up and creates new and marketable products for his retail shop in Winthrop, WA.



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The design of these easy step-by-step plans for the  
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The recuperative (propane) gas forge plans were designed  
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Spiral bound.

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**Simple Air Hammer Plans**

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and donated to ABANA by Ron Kinyon of Mesa, Arizona.

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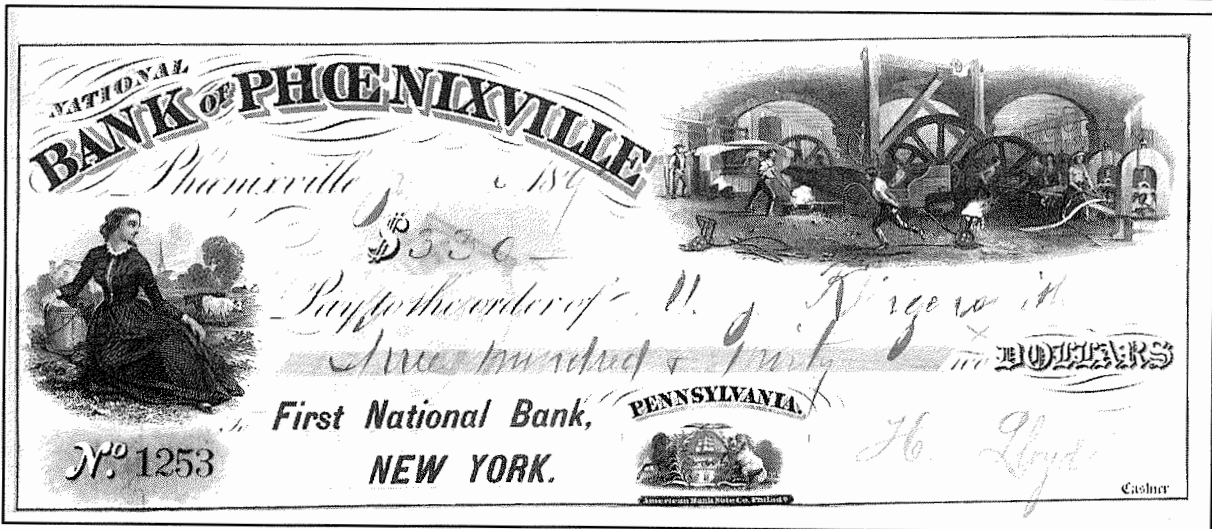
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Bank note from the past, with engraving of iron works, slitting and rolling mill. Courtesy of Dick Naven, Portland, OR

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**CHAD GUNTER'S CHILI PEPPER**

Material: 3/4" black iron pipe

Work in high yellow heat, almost white

#1 - Fuller pipe 1/2" back and down to 3/8" hole.

#2 - Forge weld in fullering jig.

Chad mixes various fluxes in even proportions.  
 Prefit 3/8" round stem in pipe - there should be a slight gap so flux squirts out later under impact of fuller.

To flux, get pipe especially hot and keep turning it in fire, fuller and weld.

#3 - Place stem in pritchel hole so bottom of pipe flares out.

#4 - Draw out stem on your side of the anvil.

[N.B. Keep cleaning stem with wirebrush, as the flux sticks]

#5 - File 5 flats with a rasp on collar while piece is in vise.

#6 - Heat, quench stem and collar, then seat over pritchel hole.

Hammer end to seat collar against body and give top of pepper a little swell.

#7 - Place pipe in vise and fuller two parallel lines at 5 points equidistant apart on the collar.

#8 - Make pigtail hook

#9 - Fuller at about 4" mark of pipe but don't pinch off yet.

Taper bottom third of pepper.

#10 - Use cross peen to fuller 4 parallel grooves; also put in some dents and wrinkles, then add a slight curve.

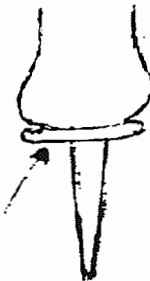
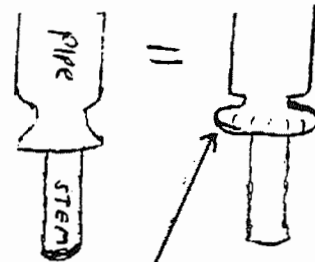
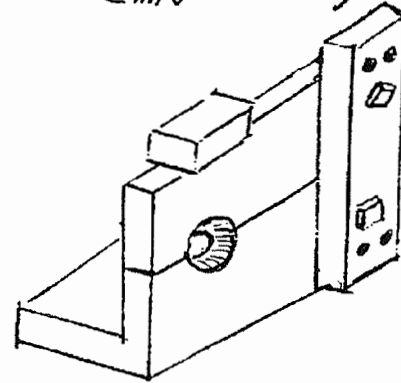
#11 - Fuller pepper almost off at the 4" mark,

then separate by twisting it off.

Rasp or sand pointed end

#12 - Brass brush top portion of pepper, and finish with Johnson's paste wax.

*Chad's fullering jig*



- from notes by **Richard Long** and **Jim Frazier**



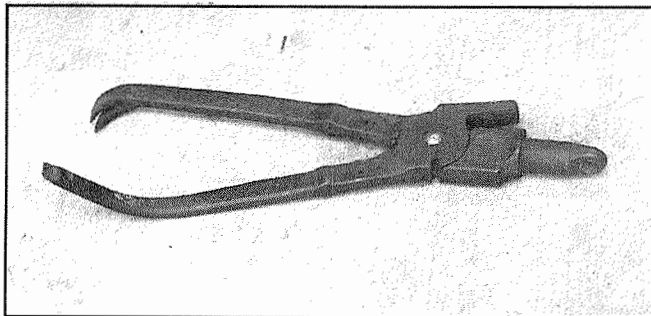
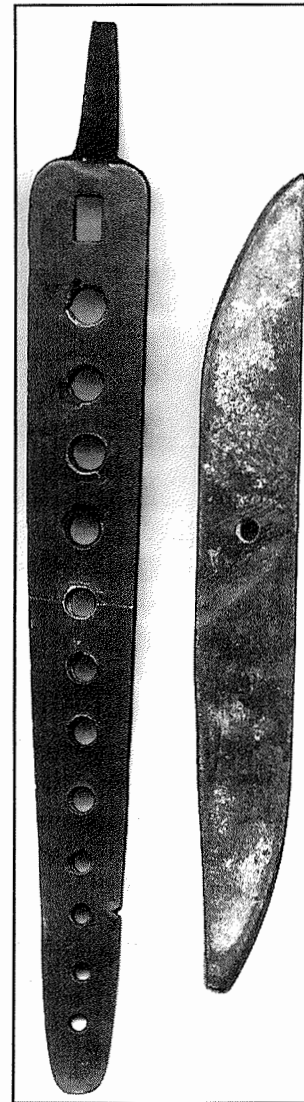
# "Whatsit???"

The "Whatsit" top left was purchased in an antique store in Old Saybrook, Conn. after the A.B.A.N.A. Conference. Roman numeral markings on one side, twelve of them are next to the holes. Perhaps it came from Rome with Roman numerals on it, eh Terry, Gary, Wade. If it came from Canada it would have Canadian numerals on it???? It is about thirteen inches long and has thirteen holes, twelve round and one oblong. I'm writing this close to Halloween, thirteen inches, thirteen holes, enough to give you the jitters.

The far right top "Whatsit" was my Grandfather's who lived in eastern Nebraska all his life. Incidentally, it was made by one of my aunt's father named Critchfield who was a blacksmith in the town of Papillion, Neb. Whoopee, nice to know all those facts. It is ten inches long and thickness is about three eights of an inch.

The bottom "Whatsit" was brought to the Fall Conference in Port Townsend. Whoever brought it, call or write me, I forgot your name. Where was it found and how old is it? It is an unusual piece, about twelve inches long or so, has a pliers action, with several tool like things on the ends. It's amazing all the trade and occupational tools that were invented and used long ago.

Reference : Early American Industries Association  
 PO Box 2128  
 Empire State Plaza Sta.  
 Albany, NY 12220-0128



John Simpkins identified the "whatsit" that Gary Everett had at the Fall 94 Conference as the pulling ring from a horse drawn plow. He remembers seeing a similar one on plows years ago in England.

Last issue's "whatsits" were a slag hammer, gas nut pliers and a straight razor. Several people identified these at the fall conference. I don't remember exactly who, that was a real busy time for me.





# Hot Tips

## From the Southern Ohio Forge and Anvil

### JONES' JIG FOR A DOUBLE TWIST

SUBMITTED BY GLEN JONES

I noted, with interest, Berkley Tack's solution (jig) for putting the twist to several-hundred pieces of metal. I had a similar problem, (although on a much smaller scale so far as number of pieces), and came up with a jig of my own that seems to work just fine.

I required a sign hanger and my design called for a twist on either side of each of two attachment points (see sketch Fig. A)

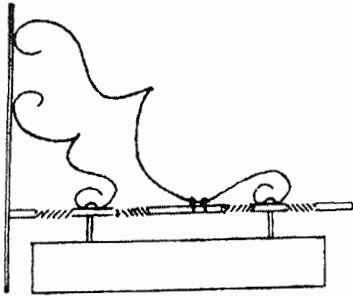
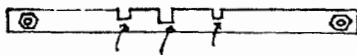


Fig. A

I took a couple pieces of 3" x 3" x 1/4" angle-iron, 2 lengths of 1/2" ready-rod, 8 nuts for same and created the following jig. I first clamped and notched the angle-iron to provide slots for 3 sizes of bar (3/8", 1/2" & 3/4"). I made the slots slightly deeper than necessary (1/2", 5/8" & 7/8") to ensure that the pieces would hold position while being twisted (Fig. B).



1/2 X 5/8" 3/4 X 7/8" 3/8 X 1/2"

Fig. B

While the angles were still clamped together, I also drilled the holes to receive the ready-rod. I was now set for assembly.

One end of the jig is fixed while the other is adjustable to suit the needs of the individual project. The nuts on the fixed end could be welded in place, although mine are just tightened and seem to work fine. (Fig. C)

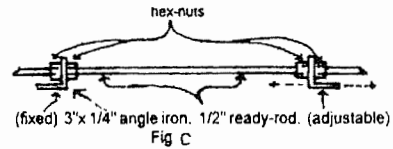
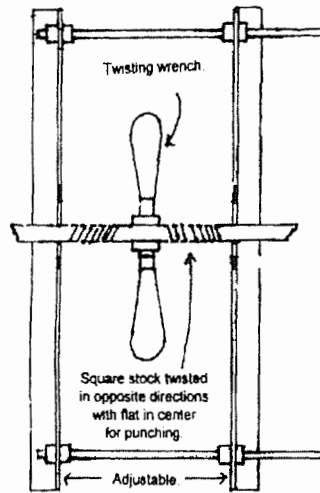


Fig. C

When fully assembled you simply heat the metal, drop it in the appropriate slots, grab it in the middle with your twisting wrench, give it the number of turns as dictated by your design, and there you have it. Square stock, twisted in opposite

VIBA Forge, March 96

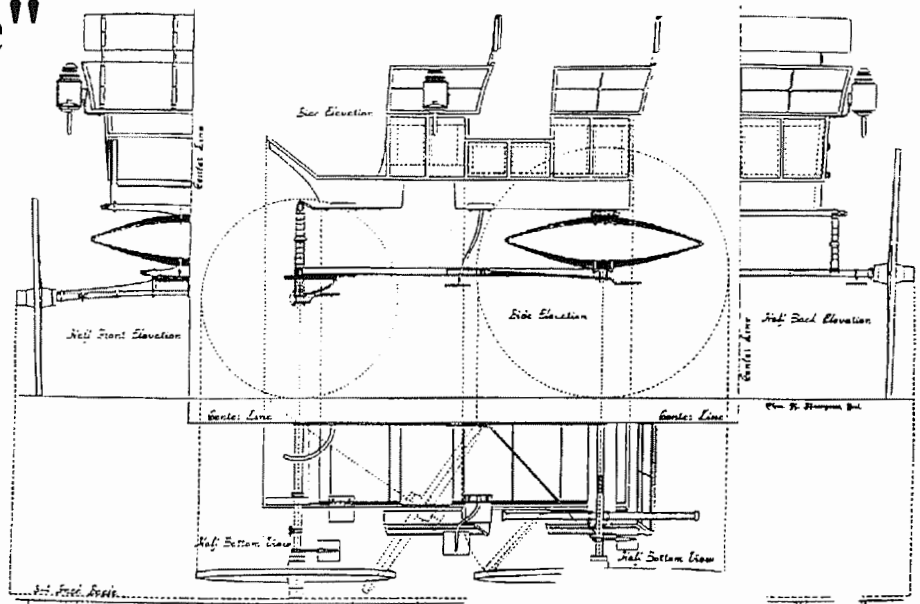
directions with a flat spot between the twists which is suitable for punching (or drilling if Joe isn't looking) (Fig. D)



If you have unlimited shop space you might like to bolt this to a table or post.....I don't have, so I just clamp mine in my leg-vise and it seems to work just great!  
If anyone has any questions, give me a call

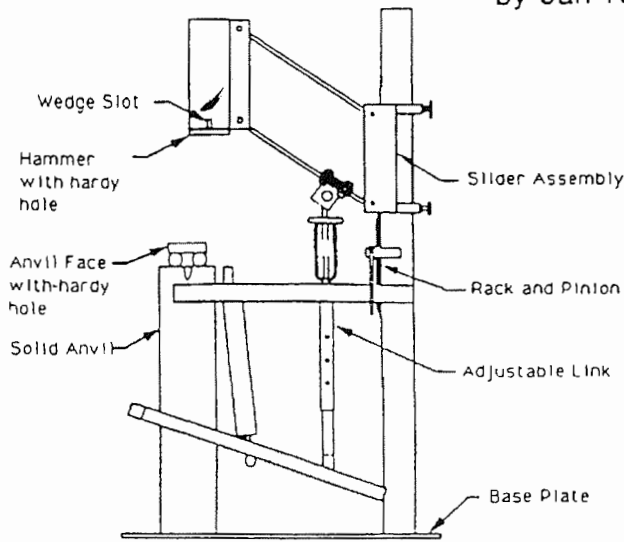
# "French Rule" of Drawing

Submitted by Don Kemper



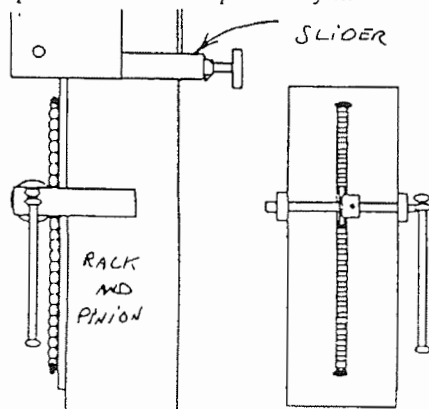
# Blacksmithing Notes

by Jan Kochansky

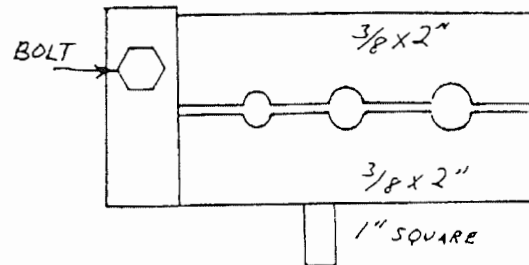


Clay has made a lot of tooling to use with the treadle hammer. This allows one person to do some jobs that would ordinarily require a smith and a striker to accomplish. The heavy, square blow from a treadle hammer allows you to do some jobs in one heat with consistency, whereas a striker needs experience to hit a good blow with accuracy and safety. This makes it a valuable tool for most smiths whether or not they work alone. Here is some of the tooling that Clay Spencer demonstrated for BGOP.

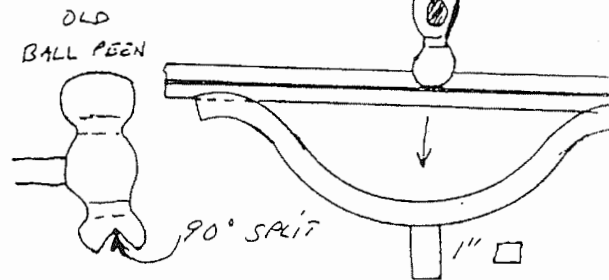
Clay has 1-inch square hardy holes in the hammer and anvil faces of his treadle hammer. The faces are made from inch thick grader blade. The top hardies are easily held in place with a U-shaped retainer or a tapered key in a slot.



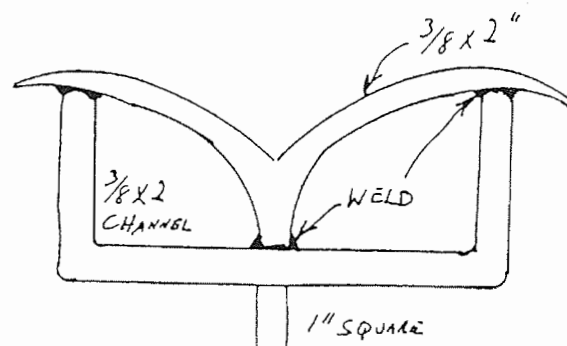
A swing-arm fuller can be made from 3/8 x 2-inch stock.



Square bars can be bent on the diamond with these two tools. A U-shaped bottom tool with V-grooves cut into each end. The top tool can be made from an old ball peen hammer. The ball peen end is split to form a 90° V-groove which fits over the edge of square bars.



A similar tool to the one shown above can be made for bending flat stock. Make the V part of the tool from 3/8 x 2-inch stock. This is welded into a piece of heavy channel iron.





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Southern Illinois University at Carbondale has a job announcement to replace Brent Kington who is retiring. The university has three power hammers and five forging stations. Applicants must have Master of Fine Arts degree or equivalency. Richard Mawdsley, Professor is the chair of the search committee.

Contact Richard Mawdsley, Professor Chair, Search Committee, mailcode 4301 Southern Illinois University at Carbondale Carbondale, Illinois 62901-4301 618-453-4315

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

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**HELP Wanted:** looking for learning/part time blacksmith position in Seattle area. 206-628-6935

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**Free Advice**

**"You're either making money or learning"**

...Grant Sarver

**Cone Mandrels and Swage Blocks**

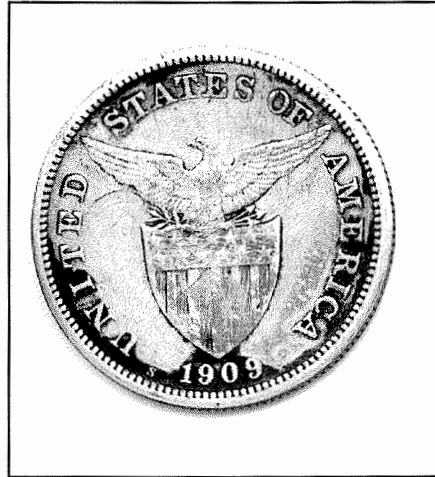
Ted Mays has Wassy Yater's patterns and is casting high quality ductile iron mandrels and swage blocks. Wally's designs were recognized as some of the best. Contact Ted at 508 Emerald Woods Dr, Indian Trail, NC 28079, 704-882-6056

**Mini Anvil collectors**

David Poppe has started a group of collectors of miniature blacksmith anvils. If you are interested contact him at 1418 Burntwood CT, Grand forks, ND 58201, 701-746-7841, fax 701-777-3650, email: poppe@plains.dodak.edu

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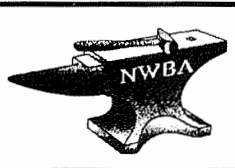
Note: coin image is enlarged a bit for clarity.

This silver coin is from the Philippine Islands. I purchased it in a shop in Olongapo, which is adjacent to the Subic Bay Naval Base, about 1962. Dick Naven supplied the following information about it. The largest denomination coin in a series, 1 peso, 50, 20, and 10 centavos which were silver. A 5 centavo coin was minted from copper/nickel alloy. The first series were minted during 1903-1906 and were larger in size than later series. This coin is 1 3/8" in diameter measured with a desktop ruler, and about 1/16" in thickness.

The standing female figure represents Filipinas with the volcano Mayon in background.. The anvil, stump and hammer is unique. The 10 and 20 centavo coins have a similar figure on them. The 5 centavo coin has a seated male figure resting one arm on the anvil and is looking in the direction of the volcano.

Does anyone have more coinage, notes or stamps with a blacksmith on them?? I'm frequently in the Post Office and read the wall posters about stamps and to see if anyone I know is wanted. Has there ever been a U.S. or Canadian stamp with a blacksmith theme on it?? Or for that matter, stamps from outside North America with blacksmiths on them. With all the stamps depicting all sorts of unusual subjects, you would think a blacksmith would have been in there somewhere. Let me know. Ed

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**GENE CHAPMAN, EDITOR**  
**P.O. BOX 1038**  
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