

# *The Anvil's Horn*

A Publication of: The Arizona Artist Blacksmith Association

Issue No. 150

May 2011



## *Spa Railing, forged by Grizzly Iron.*

*This railing received the 2011 Silver Award for "Exterior Railings & Fences - Forged" from the National Ornamental & Miscellaneous Metals Association (NOMMA). The competition was open to over 700 member firms throughout the U.S. and in 12 foreign countries.*

*Congratulations, guys!*

# President's Message:

Where is time going?

The year is passing us by, when my parents would tell me time flies by faster and faster every year, I did not want to believe them, why do some things that they said have to come true?

Well as a lot of you know I missed the March hammer-in at Harold's shop, but from the feed back I received, it was a great show. I really did not want to miss Cathy's talk on the ins and outs of the world of art shows, and then to miss Brian and what goes through his mind when designing and building one of the top notch railing he's known for. But then again as most of you all know we had a great weekend too! (*Jason and Amber got married!*)

Well and for all of you that missed out on being at the Iron in the Desert II event the next weekend, we had a dozen smiths show up with their wares for sale and a few others that donated items to the silent auction. A huge thanks to all who participated!!! Next year should be even better!

In just a little while we will be back at the Bar-U-Bar for the next demo! In case you don't know, the Bar-U-Bar is a working horse ranch just outside of Prescott. You're likely to wake up with antelope, deer, and elk grazing in a nearby field. Barry always has lots of entertainment and events planned and there're blacksmith tools to buy. Hope ya'all will come, its worth the drive.

Just a little reminder to our Board of Directors, we will have a meeting at the Bar-U-Bar on Friday evening 5-20-2011 at 6:30 pm, and as always all of our members may come and participate, we would love your input.

One more thing, don't forget about the open forges held at Grizzly Iron in Phoenix and Holy Iron-works in Tucson on the first Saturday of the month. In May, Jason and I will be hammering out one of our Dragon heads. If anyone wants to do a short demo let me know, the open forge is a great place to get your feet wet!

Keep the fires hot,

*Grizz*

## AABA OFFICERS and BOARD OF DIRECTORS

**PRESIDENT:** Roger LaBrash 1329 W. Lincoln Phoenix 85007 602-716-9660 grizz@grizzlyiron.com

**VICE PRESIDENT:** Paul Diefenderfer P.O. Box 8094 Cave Creek 85327-8094 602-509-1543 dief@phoenixrockgym.com

**SECOND VP:** Mary Ann LaRoche 1775 E. Ocotillo Road Phoenix 85016 602-279-6702 maryann.laroche@cox.net

**SECRETARY:** Terry Porter 2310 E Melrose Street, Gilbert 85297 480-988-2070 trp555@prodigy.net

**TREASURER:** Len Ledet 24200 N. Alma School Rd. #32 Scottsdale 85255 480-502-9498 lledet@earthlink.net

**WEB MASTER:** Paul Diefenderfer P.O. Box 8094 Cave Creek 85327-8094 602-509-1543 dief@phoenixrockgym.com

**LIBRARIAN:** Pat Clark 4149 E. Hampton Circle, Mesa AZ 85206 480-924-5582 pclark26@cox.net

**EDITOR:** Dan Jennings 2522 W Loughlin Dr. Chandler 85224 phone: 480-510-3569 danshammer@cox.net

**DIRECTORS:** Pat Clark, Bill Ganoe, Sarah Harms, Harold Hilborn, Ivan Hill, Ron Kinyon, Doug Kluender, Jason LaBrash, Kristin Loving, Clark Martinek, Rick Miller, Bill Morris, Peter Sevin, Jim Sheehan, Ira Wiesenfeld.

## **Demo: May 21 &22 Bar U Bar Ranch in Skull Valley**

Registration opens at: 8:00 am Saturday; Demo begins 9:00 Sat. and Sun

**Jim Sproles** : He has been a horseshoer and forging his own horseshoes and tools for over 40 years. He served a 4 year apprenticeship with Bill Whitney of Salinas, CA. Jim has made commercial tongs for Bill Pieh at Centaur Forge of Burlington, Wisconsin and also produced and sold many ornate fireplace sets. Jim is not only a top farrier, but an extremely talented blacksmith and toolmaker. Jim will demonstrate tong making and some artistic blacksmithing.

**Chris Contos** will be first in the morning demonstrating Repousse. He will show ways to preserve your tools and how to make them work better for you; methods of converting common tools (ball peens) into blacksmith tools such as planishing hammers etc. Working tools and tempering punches and chisels from the coal fire to the gas fire. Hammer handle tips.

**Mystery guest** never seen before at any blacksmith demo.

After lunch we will have the "Blacksmith Olympics" and more demos. Bring your best throwing hammer etc. Entertainment on Saturday night.

- Camping: bring your tent or RV. Come Friday and stay until Sunday.
- Tailgating: this is the best in Arizona. If you have something to sell bring it. If you are a buyer, bring \$\$\$ Barry is expecting a truck load of great used blacksmith tools before the demo!
- Lunch on Saturday by the Bar-U-Bar cost \$7.00
- Bring a dish to pass and your own meat to BBQ Saturday evening.
- Remember to bring something for Iron-In-the-hat and Show and Tell.

### **Directions to Bar U Bar:**

1. I-17 to Cordes Junction Exit
2. Exit at Prescott/ Cordes / Hwy 69.  
Travel West through Dewey to Prescott
3. Turn right at Sheldon
4. At the T, Turn right on Montezuma,  
which will become Iron Spring Rd. (8 mi)
5. Turn right on Conteras Road (3 mi).
6. At the T, turn right, go one mile. Bar U Bar is on the right.

### **GPS Location:**

**Bar U Bar Ranch, Skull Valley, AZ**

**As always, safety glasses are required.**



## March Demo Report:

by Dan Jennings

Photos by Sam Rivera

Harold Hilborn's Holy Hammer Ironworks proved to be a great venue for the demo. Located on the Tuller School campus, there was plenty of parking and lots of room to spread out and watch Kathy Borthwick and Brian, *the Brain*, Hughes perform. The school PTO put on a great lunch for \$5 and still made money for their organization. Harold, as always, was a gracious host.

Kathy talked a lot about what it is like to make a living selling at crafts shows. Problems getting started include: guessing what items will sell and how many to take, what to charge, determining which shows are worth the entry fee and travel time, finding an inexpensive method of taking credit cards, and setting up a schedule of shows for efficient travel. Typically Kathy will load up and hit several shows in several weeks and use the time between shows to camp out, hike, and visit friends. For Kathy, it seems this isn't just a business, it is a lifestyle.

Brian Hughes made a newel post similar to the one on the cover of the January 2011 *The Anvil's Horn*. He also showed slides of the railing as it goes up the wall and its attachment brackets. Brian used the power hammer to forge large leaves and did an amazing amount of hand hammering to create the complicated newel post in a very short time.



*Kathy made an elk head, a detail that she uses as a motif for several of her products.*





*Brian started with 1 1/4" stock under the power hammer and created a basic leaf shape. A few blows with the hand hammer finished it off.*

*Below right: Brian telling Harold, "weld here".*

*Below left: Brian with the almost finished piece. Look for it at this years Auction.*





# Fort Verde Days 2010

by Bill Morris

The annual Fort Verde Days celebration is held in October and commemorates the founding of Fort Verde and its importance in the development of the town of Camp Verde. For the past two years several AABA members have presented a blacksmithing demonstration in conjunction with the event.

This year the demo took place at the 1933 Camp Verde Jail which has recently been restored by several talented and ambitious members of the Camp Verde Historical Society (CVHS). Society members bent over backwards to accommodate us and we were well provided for with shade, water, and a delicious lunch. The demo was a success and we are currently in discussions with the Historical Society about setting up a permanent blacksmith shop and participating in future events.



*Left: Fort Verde Jail*

*Right: Bill Morris trying to get those 3 guys to put an anvil somewhere.*

*Below: George Alexander, Marc Larsen, Jim Sheehan doing what they do best.*



*Left: George working on a clavo*

*Right: Marc starting a knife*



# Blacksmithing—There's an Ap for that ?

By Paul Dief [dief@phoenixrockgym.com]

Ask the Old Fart:

**Q:** Hey old Fart – I heard you yapping at the last demo about “smart phones”. What gives?

**A:** Long, long ago in a world far, far away I used to be a computer programmer. Now I is a blacksmith and I'm here to edumocate you about some computer stuff. Specifically your “smart” phone. Hard to believe these little bug-gers have more computer power than the dishwasher sized mini-mainframe I used to have in my house in the early 80's. There are about a gazillion aps out there - many are free and the rest mostly cost just a buck or two. Here are a few aps I use to better run my business – Desert Rat Forge.

**Credit/Debit Cards:** Anyone with a smart phone and a checking account can accept credit/debit cards. A company called SquareUp (SquareUp.com) will allow anyone on the planet to accept credit/debit cards. They will send you a free postage stamp sized reader that plugs into the headset jack on your phone. Launch the free ap, swipe the card, enter the price and a description of the transaction and the money is as good as yours. You can also enter the client's email so they get a copy of the receipt. You can even take a picture of the item that will be included with the receipt. SquareUp charges 2.75% of each transaction. No monthly statement or other fees. There is no reason not to accept credit/debit cards. What did I say? Whenever I talk to a potential client I add them to my phone's contact list. I also make a note of how they heard about me, what they want and what price I quoted or guestimated. I've have clients call me back a year or two after our initial phone call and want to proceed with the project. I can quickly look at the notes and “remember” what we talked about.

**What? When?** I use an ap called ToDo Task Manager. When I get approval for a project I enter it into this gem of an ap. I enter a brief de-

scription of the project, a due date and a 1-5 priority. I can quickly see how much work I have in the que so I don't get carried away when making promises. You can also assign the project to different categories. I have a “Desert Rat Forge” category for work and a “Honey Do” category home projects so I don't forget about them.

**Electronic sticky pads:** I hate it when I show up for a public demo only to realize that I forgot the anvil stand (yes, this has happened – once). I now use an ap called uNote. I give each note a title and then enter whatever I want in the note contents. I now have a “Blacksmith Demo” note that has a list of everything I need to take on a demo. I also have a “Blacksmith Stuff” note with lots of little tidbits that are handy to remember every so often. For instance: when twisting 4 pieces of #3 rebar 55 inches of rebar will give me 42 inches of usable stock after I cutoff the welded ends. And... the attachment bolt size for the Marks locks that I use is 10/24. No more scraps of paper and I always have this info with me.

And all this time you thought I was just a pretty face. OK – no one has ever thought that but I do like modern technology and I'm amazed at how powerful these new fangled smart phones are. As you discover other cools aps let me know and I'll pass the word along.



# Open Forge At Holy Hammer Iron Works In Tucson

By Harold Hilborn

For the past 6 months we have been holding a open forge for members in Southern Arizona. We have been averaging about 15 people per event. The response has been such that Holy Hammer Iron Works will continue to host these events for the future. Just remember to give them a call or check the AABA forum on the I Forge Iron web site for cancellations and information about the upcoming event.

The April Open Forge featured Dan Jennings as the demonstrator. He was gracious enough to drive all the way down and back from Chandler to do a propane forge welding demo for us. Thank you Dan!

The first demo was a 3 hook rack using a rivet forge weld technique. He used flat head rivets and then squirted some kerosene on the joint brought up to a orange heat, pulled it out on to the anvil and sealed the deal. He pointed out how a rivet forge weld can be a precision way to make a forge weld when you really need to make it work the first time and you have a lot of time invested in your work to that stage and do not want to risk ruining it.

The next demo was a forge weld using a flux called Black Magic. It seem to work fairly well at a bright red to orange temperature. The procedure is basically the same as any other forge weld. Heat your part, wire brush it, apply flux, return it to the forge laying the parts together the way you want them welded and here is where it starts to differ. As the parts reheat he reached into the forge with is "Magic Wand" which was a 1 ½"x 1" dia. Piece of steel with a ½" HRS handle on it and tap it together in the forge, to stick it together. (I did notice when the flux comes up to weld temperature, it becomes active and starts to dance on the steel.) When he pulled it out of the forge he turned it up side down and they stayed together. Then brought it to the anvil and applied very light blows to set it. Then refluxed and returned it to the forge, reheated it and back to the anvil turned it over and set home.

The one quality that I like about this flux is that it is very forge friendly and did not leave a gummy mess in the forge.

If you are interested it can be purchased from;

Black Magic, Forge Welding Flux, Canal Forge, 496 Towpath, High Falls, NY 12440 or you may call 845-687-7130. The cost is \$25.00 for a 2lb can plus shipping.





# Rivets

by Dan Jennings

It seems that whenever a demonstrator talks about rivets there are always a lot of questions about rivets and riveting. Here are a few answers to recent questions. If anyone has additional input or other questions send me an email.

Generally blacksmiths use solid steel rivets in round head, or CSK (countersunk head). 1/8", 3/16" and 1/4" diameter seem to be the most common sizes. Commercially made rivets are made from 1008 mild steel, which means they can be hammered cold without work-hardening and cracking. 1/8", 3/16", and 1/4" can and usually are easily set cold. With 5/16" and larger I usually set hot with the heat applied by a torch.

**Hole size:** Upon occasion I have gotten some rivets that are slightly oversize and won't go in the nominal sized hole (1/8 diameter rivet won't fit in a 1/8 diameter hole). For 3/16 and 1/4 I drill 1/64 oversize. This eases the assembly and often saves a lot of time. When the rivet is set, it will upset and fill the hole making a secure joint. For 1/8" (.125" diameter) rivets I buy Number 29 (.138" diameter) drills. These ease the assembly without being too large.

**Rivet Length:** Most of the books and resources say to leave 1.5 times the diameter of the rivet sticking out of the metal. This applies to a rivet that will be set with a round-headed rivet set. However, many times blacksmiths prefer to hammer the rivet down without a set. This only requires 1 diameter sticking out of the metal.

**Deburr** the hole: Both sides of a hole that will be riveted need to be countersunk to eliminate the sharp edge. The head side doesn't need as large a countersink as the side that is to be set.

**The source** I use for rivets is RJ Leahy (rjleahy.com). I have found them to be very helpful and have a great supply of all kinds of rivets and other fasteners.

A recent April 3, 2011 search of their website shows their process range from \$5.50 per pound to \$7.50 per pound. Generally smaller rivets are slightly more expensive per pound than larger diameter rivets. They also show an approximate count per pound for each size and style of rivet. Examples of round head rivets:

1/8 x 1" 270 pieces per pound

3/16 x 1" 98 pieces per pound

1/4 x 1" 51 pieces per pound

RJ Leahy shows stock in round, flat, CSK, tinnings, and tinnings head in steel, copper, stainless, brass and aluminum..

## More About

## Propane Forge Efficiency

In the last issue I wrote an article comparing the gas flow using AABA type forges using two .023 MIG tips vs. two .045 MIG tips.

A conversation with Frank Villars, who built forge burners for Chili Forge, prompted me to take my single Chili Forge burner forge to MCC and check its flow.

The forge below uses a single Chili Forge Burner (purchased several years ago at an AABA auction) with a .045 MIG tip.

At 10 psi it flows 33, however, it runs very well at 8 psi where it flows 28

AABA 2 burner .045 10 psi flows 55

AABA 2 burner .023 10 psi flows 30

Chili 1 burner .045 10 psi flows 33

Chili 1 burner .045 8 psi flows 28

The Chili forge burner I have, uses 1" pipe for the burner tube and 1 1/2 for the venturi (the AABA burners use 3/4 pipe for the burner). My observation is that the a Chili Forge type burner at 8 psi gets hotter, quicker than the two burner AABA style at 12 psi.



# CALENDAR 2011

May 7	Open Forge	Grizzly Iron	Phoenix
May 7	Open Forge	Holy Hammer	Tucson
May 21-22	Demo	Bar-U-Bar	Skull Valley
August 18-21	Western States Conference	Alpine Village	Mount Hood WA

## Welcome New Members

Gloria Marsiglia	John Gourley
Charles L. Banning	Francisco Peralta
Dennis Van Gorp	Linda Bahrami
Frank & Lisa Grannis	Travis Tarwater
Dr. Jeffrey T. LaBelle	Darian Rivas

## AABA BOD Meeting

May 20, Friday evening at the Bar-U-Bar will be a Director's meeting at 6:30. The meeting is open to anyone who wants to attend.

## The AH Needs your Articles and Shop Tips (Photos too!)

Come on folks –make something, take a pic and send it in. Everyone says that photos of iron work is their favorite part of the AH.

Where's your brilliant ideas and what happened to the illustrated HOW-TO articles? They seems to be getting very scarce in all of the ABANA affiliate newsletters. The few that do get created get printed in all the newsletters. So, put that great idea in the hands of over 5000 blacksmiths, send it in to the Anvil's Horn.

Danshammer@cox.net

## AABA Publications

Most of the Best Tips Project Ideas Patterns from ABANA Chapter Newsletter, aka The Tips Book, is 291 pages of all those things organized so you can find them. It is bound in a 3-ring binder so you can add info as you get it. Available at demos for \$25.

The Blacksmith and His Art by Jess Hawley. Many feel this is still the best basic blacksmithing book available. Plus it's got pictures and a bit of history. Available at demos for the wholesale price of \$12, Or from Pieh Tool or Blue Moon Press for \$20.00

## Need Coke?

L Brand® is offering single ton (40-50 LB Bags) shipments of coke for sale: This truck can deliver to New Mexico and Arizona on the I-10 corridor. The truckload price is \$515.00 (\$495.00 if paid by check or money order). Delivery can be made at any location that can accommodate a full size flat bed truck. A commercial address or forklift is not required. The minimum order is one ton (2,000 LB).

Credit cards will not be charged until the business day prior to shipment. Checks will be cashed on the business day prior to shipment as well. Orders will be accepted until the truck is full. Package is 40-50 LB cloth bags on a black plastic covered pallet. The black plastic cover extends the time "L Brand"® can be stored in the sun. To place an order, or for more information call 678-360-3521. Visit our web at L Brand® Coke

*From the SWABA on-line newsletter.*

*Ed note: As far as I can ascertain AABA does not have anything in the works to procure coal or coke. No one has volunteered to be the drop location or to take names and collect money. If you'd like to take on this task call Grizz. Or it might be an opportunity for an enterprising entrepreneur.*

**Deadline: June 3** for the July issue of the Anvil's Horn. Earlier would be greatly appreciated. Articles, photos, notices, and ads can be emailed to: Danshammer@cox.net or mailed to AABA 2522 W. Loughlin Dr. Chandler, AZ 85224

## Western States Blacksmith Conference

August 18-21 NWBA will host a conference in The Alpine Village of Mount Hood Washington. Interested in smithing on the AABA blacksmith wars team? Contact Grizz.

For more information: [www.westernstates2011.com](http://www.westernstates2011.com)



# AABA Website: [AZ-blacksmiths.org](http://AZ-blacksmiths.org)

**2011 Dues were Due January 1**

## Open Forge: Phoenix

Grizzly Iron is hosting their monthly open forge on May 7.  
8:00 am until around noon

Grizzly Iron, Inc  
1329 W Lincoln St., Phoenix, AZ 85007

## Open Forge: Tucson

Harold Hilborn of Holy Hammer Ironworks is hosting his monthly open forge on May 7. Hours: 8:00 am—I:00 or so. Please note the earlier start time.

In May, Harold will show how to make a Thorny Rose. If you have a project you want to work on, a welding repair, or just want to stop by and have coffee with some friends, please attend. Address: 5870 E. 14<sup>th</sup> St. Tucson. The shop is located on the Tuller School Campus.

For directions, questions, or to be sure the event wasn't cancelled, give Harold a call at (520) 603-6723. Hope to see you there!

## Vern Lewis Welding AABA Discount

Vern Lewis Welding Supply, Inc has a great discount program for AABA members. Delivery is available at the low price of \$8.00 per order.

Vern Lewis Welding Supply, Inc: [www.vernlewis.com](http://www.vernlewis.com)  
or contact Chris Perella @ 602-319-7693

Examples of Discount pricing

Oxygen - \$12.30 (LG Cylinder) 75/25- \$39.38

## Pieh Tool Educational Opportunities

**Beginner/Intermediate Blacksmithing Classes with  
Gordon Williams**

Class Dates:

May 6-8 (check the website for more dates)

\$455 per 30 hour class. All materials and equipment are provided.

Bill Pieh Resource for Metalwork at Pieh Tool in Camp Verde, Arizona. Contact: 928-554-0700 or [www.piehtoolco.com](http://www.piehtoolco.com)

## MCC Blacksmithing & Welding

The MCC blacksmithing program is one of the best deals around - over 60 hours of instruction for just under \$450 and that includes material and propane! Saturday (Jaime Escobedo instructor) and evening classes (Dan Jennings instructor) are available. Blacksmithing is WLD103.

TIG, MIG, Arc, Gas, and Art classes are all available, as is certification in any of those welding methods at Mesa Community College, Southern and Dobson in Mesa.

Classes fill early so it's not too early to be thinking about fall 2011 (if the computer tells you the class is full, contact Jaime or Dan for an override).

For more info go to: [www.mesacc.edu](http://www.mesacc.edu)

### AABA New Member and Membership Renewal Form

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_

Professional blacksmith \_\_\_\_\_ Hobbyist \_\_\_\_\_ Farrier \_\_\_\_\_ Blade smith \_\_\_\_\_

Your main blacksmithing interest \_\_\_\_\_

Occupation or skill \_\_\_\_\_

Please check one:

Regular membership (\$30) \_\_\_\_\_

Family membership (\$35) \_\_\_\_\_

Mail to: Terry Porter  
2310 E. Melrose St.  
Gilbert, AZ 85297

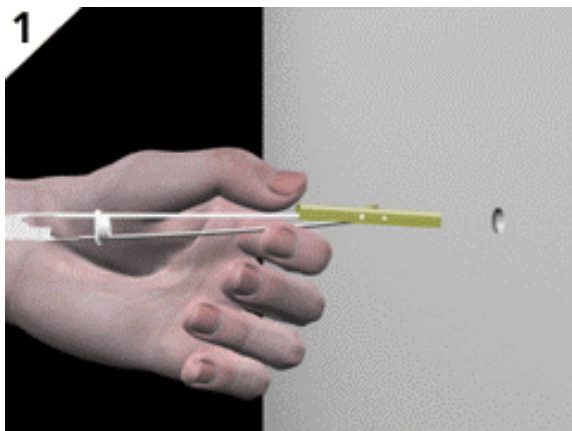
**Make Check Payable to AABA**

## Handrail and Toggler Bolt Fasteners by Len Ledet

I recently had a job to construct and install three sets of handrails for a home in Troon. Two of the sets were for three steps and one was for two steps, the longest hand railing being 38 inches long. The handrails were to be forged to look like snakes. It was a fun project – learned more about snakes than I really wanted to know. After several tries, I finally was able to forge six heads and tails that looked like they at least came from the same mother. Most important, my client was happy with what they looked like.

Since the railings were rather short, there was a good chance that I would NOT find a stud or backing to mount the rail supports to.

What to do? Discussed with Doug Klunder and he suggested the use of TOGGLER bolt fasteners. They are great and made the install much easier. Regular lag bolts were used when a stud was found. No stud – a TOGGLER was used. For this job I used a 3/8 inch diameter TOGGLER, which requires a 3/4 inch hole drilled into the wall board. The TOGGLER fasteners are very strong, designed to carry considerable weight. On their WEB site [www.toggler.com](http://www.toggler.com) is a table for different size TOGGLERS and their rated capacity. They are not inexpensive, but purchasing them in a box quantity (qty 25 or more) gets better pricing. If you have any questions. Call Len.





## Member's Gallery: Ivan Hill



The Anvil's Horn

## CHRIS WATERS' COPPER PLATING SETUP

### Parts needed:

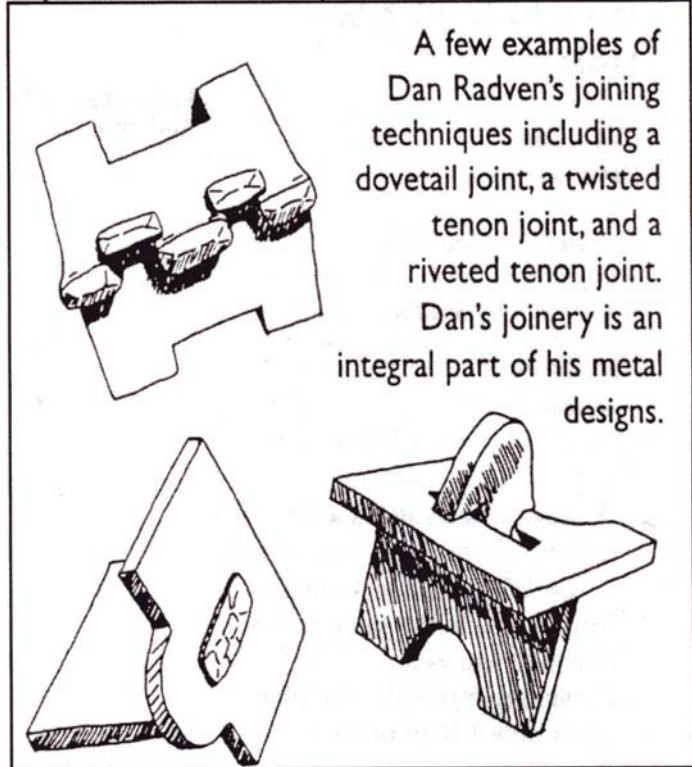
- 4 litre ice cream pail
- 3 litres water
- 2 Tbsp. sodium bicarbonate (baking soda)
- 1 piece of copper (plate, pipe, etc)
- car battery
- 2 leads with alligator clips

### Instructions

1. Mix water and soda and stir well
2. Connect positive wire to copper piece
3. Connect negative wire to a piece of scrap steel
4. Let this stand for 30 - 60 minutes to charge the solution.
5. Remove the scrap steel and replace with the piece you want plated.
6. Plating takes about 5 minutes. Experiment to get the amount of plating you desire.
7. Rinse piece thoroughly and dry.

*This size setup works well to do small pieces like cabinet handles and knobs.*

Reprinted from the Kootenay Blacksmiths' Association

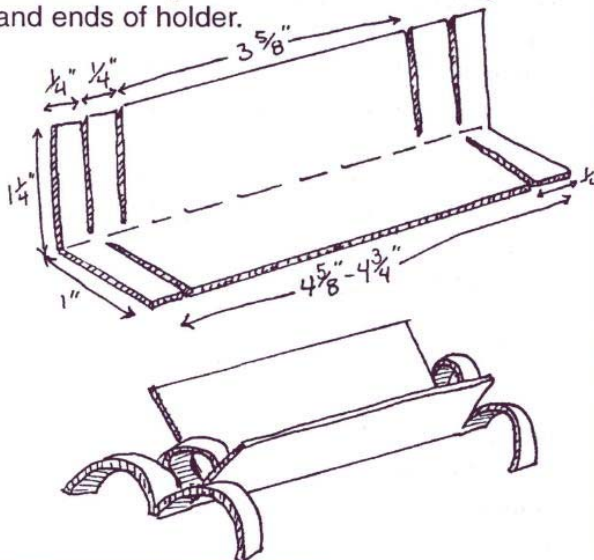


A few examples of Dan Radven's joining techniques including a dovetail joint, a twisted tenon joint, and a riveted tenon joint. Dan's joinery is an integral part of his metal designs.

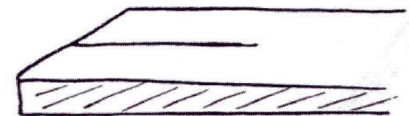
*From KBC Hammermarks September 2005*

## Tony Austin's Real Nice Business Card Holder

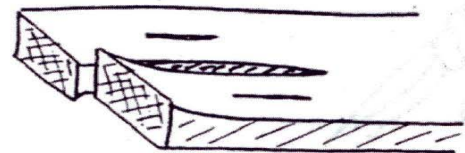
- Make cuts as shown on a scrap piece of angle rod (1 x 1 1/4 best).
- Curl end strips as shown to make legs and ends of holder.



## Frame Joint By Derek Glaser



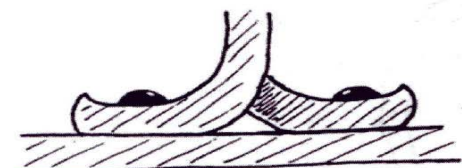
Split the end of the horizontal bar.



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



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

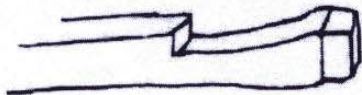
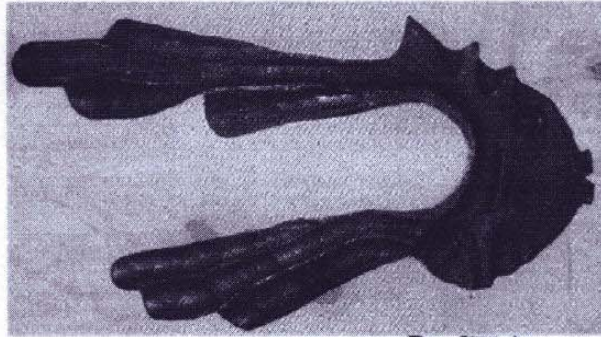




**Joe Davis Fish Demo** by Bob Ehrenberger, Blacksmiths Association of Missouri

Joe used 7-1/2" of 1/2" x 1-1/4" flat bar and divided the bar into 3 equal parts.

Why not try it with lighter material as Joe used a power hammer & fly press for this demo. Maybe we can get Ralph Sproul to make a big fish, Nazel style!



The first step is to butcher off material for the first fin.



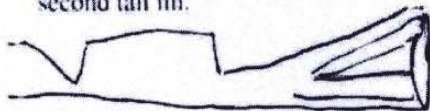
Draw it out starting at the body and flair the end. Thin to about 1/4"

Forge a recess into the end.

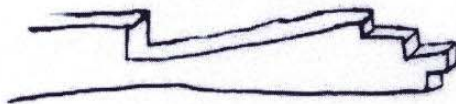


Use a fuller to texture the tail fin, 3 or 4 rows

Butcher the start of the second tail fin.



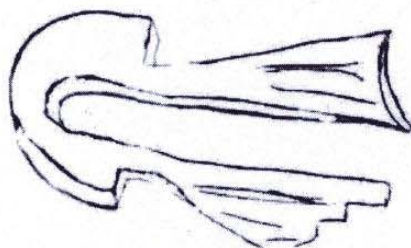
Half strike blows create these "steps"



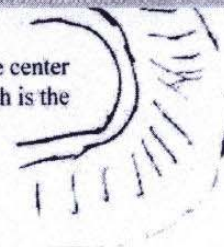
Use a fuller to create a ridge at each of the steps.



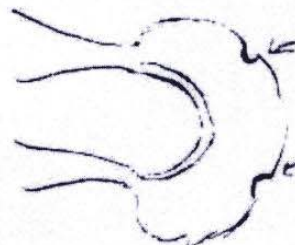
Bend into a "U" shape, the hard way.



Draw out the center section which is the body.



Fuller in 2 notches to start the lips



Then "pinch these together, "upset" to form the lips.

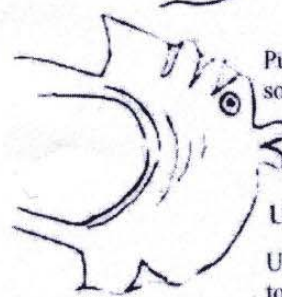


Punch the eye & socket

Then split the lips and upset a little,

Use curved chisels to define the gills.

Do heavy fullering top and bottom.



# Design Challenge –Build a Better Leg Vise

Most of the best of our antique vises don't hold all that well and never did. The really heavy ones that do hold and are in good shape are usually priced at \$400—\$800 and they're hard to find. The light 4" vises don't hold any better than a cheap mechanic's vise. For new a smith, in the process of setting up a forge, the post vise is often a sticking point.

So, I think it's time to develop the leg vise in the same way we have created our own power hammers and forges. Maybe you've already done it. Send photos or drawings and let us know how your idea worked and what improvements you'd like to see.

The challenge, let's design a better leg vise. One that could be easily and cheaply built, and that would fit the needs of today's blacksmith and would actually hold the majority of our work. I found this example from Brian Gilbert that we can use as a starting point.

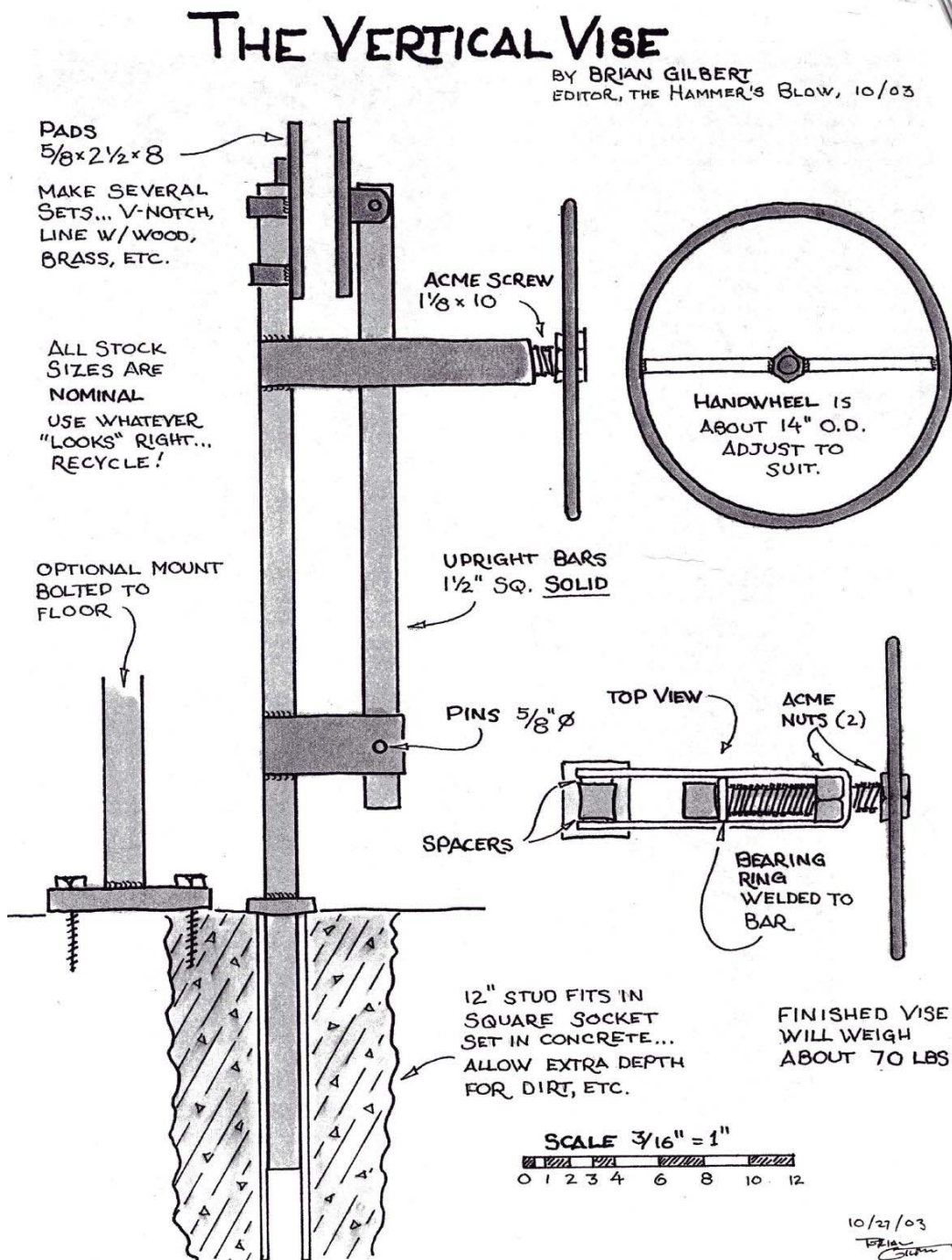
Brian turned the jaws so they are vertical.  
Is that a good idea?

Pivoting jaws?

How about the wheel instead of a handle?

I like the socket in the ground, but if we made it 2" we could use receiver tube and the whole vise would be stronger.

Ideas?  
Danshammer@cox.net

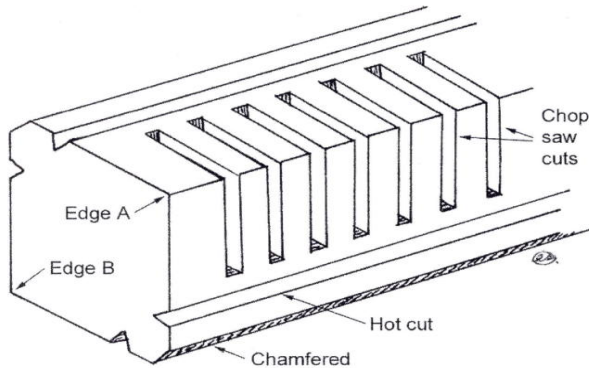
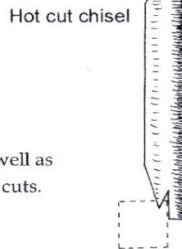




## Chop Saw Twist: *Dr. Iron's got a brand new kink.*

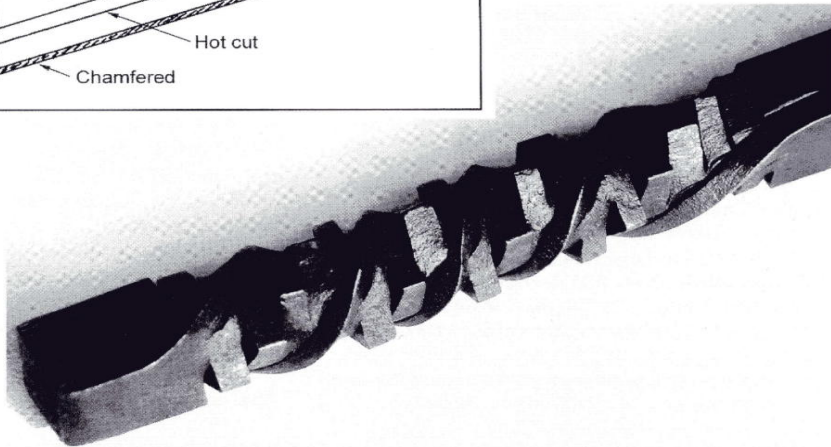
by Doug Hendrickson, Blacksmith Association of Missouri

1. Hot cut grooves.
2. Chamfer edges defined by hot cuts.
3. Chop saw (hacksaw- bandsaw) a series of cuts on edges A and B.
4. Heat it and twist to taste.
5. Experiment with placing the hot cuts, as well as the depth and frequency of the chop saw cuts.  
(see back cover)



## Chop Saw Twist

Reprinted from  
California Blacksmiths  
Nov/Dec 2006



---

## Air Hose Breakage by Bill Morris

Shortly after moving to Camp Verde I was filling a bicycle tire using the plastic coiled air hose that came with my small compressor. The compressor and hose had been used in my garage shop in Phoenix for about 5 years.

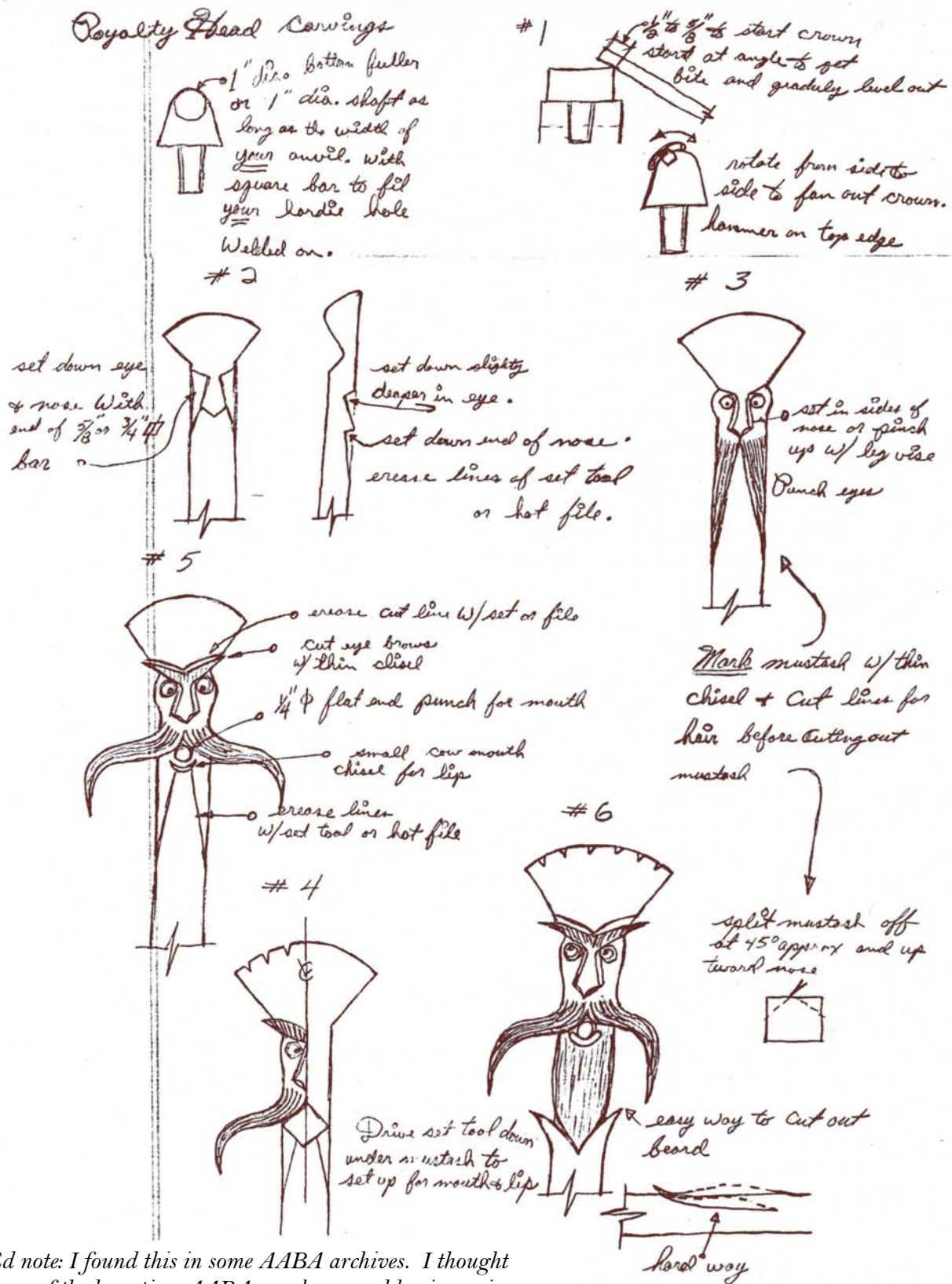
After filling the tire I tossed the hose out of the way intending to hang it up at my leisure. To my surprise there was a loud pop ( At the time it sounded like a nuclear explosion) and a piece of hose with the attached inflator flew across my shop floor.

Upon examination of the broken area I determined that the hose had become brittle and could easily be broken with very little effort. Fortunately I escaped injury but it I could have been badly injured if the thing was pointing at my face when the parting occurred. To say nothing of my modeling career.

Maybe I should have been doing it earlier and I'm sure there is an admonition in the instructions that came with the compressor but I now check my hose and fittings for any damage that might prove injurious.



# Royalty Head Carvings



Ed note: I found this in some AABA archives. I thought some of the long time AABA members would enjoy seeing it. Ron made a bunch of these that are still in many collections today. By the way, this is the original Ron Smith who passed away a few years ago—not the Ron Smith who still comes to AABA meetings.

By Ron Smith  
"88"

# Classifieds

Classified ads are free to members and can be submitted by email to: [danshammer@cox.net](mailto:danshammer@cox.net)

## For Sale at Boyles' Tool Service

100 Lb Little Giant---Kinyon air powered--- \$1500  
2---50 Lb little Giants, Kinyon air powered--- \$1300 ea  
2 Gas Forges-----Best offer  
Large Bar twister 3 ph-\$500  
4 or 5 Pedestal grinders--- make offer  
Metal Pallet Strapping machine---\$50  
Mig welder with 2 spools of wire, 3Phase---\$500  
Drill press 1/2" --- \$100  
Lots of Jack Hammer Bits "Good source of tool steel" Best offer  
Pat Boyle---480-834-1977  
Hammer questions? Ron Kinyon, 602-568-8276

**Wanted:** Smaller coal forge (One he can move around) with a working blower . Contact Larry Dorrell 928-776-5929 Prescott

S5 Tool Steel for Sale  
1", 1 1/4" and 2" Round  
12-14" Lengths. \$3 per pound  
602-716-9660  
Rodger or Jason

**Wanted:** Wrought iron Bar 1" or larger – the larger the better.  
Call Ira: 520-742-5274  
Email [treeira@hotmail.com](mailto:treeira@hotmail.com)

**Currently for sale at Barry Denton's:**  
Two 175 pound Post Vises with 8" jaws  
185 pound Haybudden anvil.  
Get them at the May demo or if you can't wait, contact Barry at Bar U Bar Supply below.

**Anyang 33 Power Hammer**  
Single Phase \$3000  
Karachi Fly Press \$1000  
Miller Trailblazer 251 Welder \$2200  
Miller S-32P Voltage Sensing Wire Feeder \$750  
Miller Spectrim 2050 Plasma Cutter \$1600  
Utility Trailer w/ boxes \$1600 (set up for transporting Trailblazer)  
Call Jim Lewallen, Jr. 602-510-0808

Kinyon Simple Air Hammer pneumatic kits. Includes cylinder, valves, fittings and hose.  
Ron Kinyon 602-568-8276

# Sources

**Rocky Mountain Smiths** have videos available of their conference demonstrators. Most of these are high quality edited, multi-camera videos. For more info go to: [www.rockymountainsmiths.org](http://www.rockymountainsmiths.org)

## Bar U Bar Supply

Several 65 lb. & 85 lb. swage blocks for sale. Your source for anvils, post vises, and other new & used blacksmith tools.  
Barry Denton ph 928-442-3290  
email: [barubarranch@gmail.com](mailto:barubarranch@gmail.com)  
website: [www.barubar.com](http://www.barubar.com)

**IMS** (formerly Capitol Metals). Full service supplier of Steel, Stainless, Brass, Aluminum, Copper. 5150 S. 48 ST. PHX. 602-454-1500

## Pieh Tool Company Inc.

Blacksmith Supplies, Coal, coke, & Kasenit #1 in 1# cans,  
661 Howards Road Suite J  
Camp Verde, AZ 86322  
888-743-4866 ,[www.piehtoolco.com](http://www.piehtoolco.com)

## Scottsdale Farrier Supply

Mostly farrier supplies, but has hammers, tongs and other blacksmith goodies. Ph. 480-838- 4455 863 E. Baseline Rd. Tempe 85283

**MSC Industrial Supply Co.** is a mail-order supplier of all kinds of industrial & metalworking supplies. You can get a 4500+ page catalog by calling 1-800-645-7270.

**A Copper Rose Metal Art** has Chasing / Repousse Pitch  
<http://www.chasers-pitch.com>  
Debra Montgomery  
P.O. Box 212 Dunlap, CA 93621  
877-685-7467 toll free

**Brent Bailey.** A blacksmith in California specializing in custom tools and ornamental forgings for artisans.  
[www.brentbaileyforge.com](http://www.brentbaileyforge.com)

**Pacific Insulation Company**  
Supplier of high temp insulating materials. Bricks, Kaowool and other refractories. 215 S. 14 St. Phoenix. 602-276-1361

## Blue Moon Press, Ltd.

Metalwork books, some of which are only available through them. [Bluemoonpress.org](http://Bluemoonpress.org)  
Toll free ph. 866-627-6922.

**Vern Lewis Welding Supply,**  
Discount pricing for AABA members. Contact: Chris Perella @ 602-319-7693  
Examples: Oxygen - \$12.30 (LG Cylinder) 75/25- \$39.38

Arizona Artist Blacksmith Association  
Attn: Dan Jennings  
2522 W. Loughlin Dr.  
Chandler, AZ 85224  
Address Service Requested

NONPROFIT ORGANIZA-  
TION  
U.S. POSTAGE PAID  
PHOENIX, AZ  
PERMIT NO. 5531

*The Anvil's Horn* is the official newsletter of the Arizona Artist Blacksmith Association. Published every other month preceding the bimonthly meetings of the Association, the newsletter is oriented toward anyone interested in blacksmithing and related forms of metal work. Membership is available at the rate of \$30 for individuals; \$35 for families and includes a subscription to the *The Anvil's Horn* for one year. Every attempt has been made to ensure the accuracy of information appearing here, but no liability is assumed by the Association, its officers or editor for errors, damages, or injuries resulting from any design, use, construction or application of said information. Uncopyrighted material may be used freely by other similar organizations provided proper credit is given. Any copyrighted articles appearing herein should not be reproduced without permission of the author. Matters relating to newsletter submissions, corrections, etc. should be addressed to the editor: Dan Jennings 2522 W. Loughlin Dr., Chandler, AZ 85224 Tel: 480-510-3569 Fax: 480-839-6339 Danshammer@cox.net

For membership info or address change, contact: Terry Porter 2310 E Melrose Street, Gilbert 85297 480-988-2070 trp555@prodigy.net

### *Brian Hughes March demo project*

*Someone's spell check turned Brian into Brain in the last issue. The AH crack editorial and proofing staff didn't notice until it was too late. Our apologies to Brian and our thanks for his gracious understanding. Of course, tagging Brian "the Brain" IS very appropriate*

