

The Anvil's Horn

A Publication of: The Arizona Artist Blacksmith Association

Issue No. 132

May 2008

Get a color version of the Anvil's Horn. See Page 10



by Dale and Bonnie Harvey
See page 14 for Dale's How-To drawing

President's Message:

In the 20 years that I've known Dan Jennings I've heard him say 2 interesting things. I'm sure he's said more than two; I just can't remember them. The first one I disagree with; he repeated Francis Whitaker's saying that when a glove gets a hole in it its no longer a glove. Why, any frugal blacksmith knows that when a glove gets a hole in it you just go to the pile of holey gloves and find one with a hole in a different place to put over the first holey one. As the layers accumulate one may lose a bit of sensitivity (and circulation) in the fingers, but think of the money saved. That's recycling at its best!

The second interesting thing Dan said made more sense; that there's no way to plan AABA projects or programs unless there's someone to head up the effort. Some brave soul needs to step up to the plate (or anvil) and be the Honcho, or Honchette. Another iteration of this concept is stated as "to bitch is to volunteer". If you don't like something, help to change it! We need people, whether on the Board or not (and some have recently agreed to help-thanks) to help make this an even better organization. You younger smiths especially; us old timers are wearing out, (but not rusting out) and need your energy and ideas.

I'm looking forward to seeing everybody at Barry and Laurel's in May. Jim Keith is a blacksmithing legend; at the Calgary blacksmithing competitions he's won everything there is to win! Lets bring our equipment to the meeting and do some serious forging Sunday morning. We can help the new people and ask our friends to show us how they made that thing that was so neat. I'm going to practice up for that, but first I've got to find a glove with the hole in the right place.

Ira

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May Demo:

6th Annual Bar-U-Bar Spring Round up

May 17 & 18, 2008 Doors open 8:00 am Demo begins 9:00

Laurel & Barry Denton's Bar U Bar Ranch, Skull Valley, Arizona

Saturday's Featured Demonstrator: Jim Keith

Jim has over 50 years experience in ornamental & structural blacksmithing, tool making, and horseshoeing. In 1991 he was the World Horseshoeing Champion. He was twice the Creative Forging Champion at the World Championship Blacksmith Competition in Calgary Canada. He has conducted educational clinics across the US, Canada, Europe, South America, Mexico, Japan, and the Caribbean for over 20 years. In 2007 & 2008 he was named the "Super Clinician" by the World Champion Blacksmiths Competition. He currently manufactures blacksmithing and horseshoeing tools which can be seen at his website: www.jktools.com

Jim will show us his amazing dragon heads and several other useful projects.

Other Saturday activities include Forging contests, Blacksmith games, and live western entertainment around the camp fire.

Sunday Activities: Forging contests. Open forge so you can try out what you learned from Jim on Saturday.

For information and photos of the ranch check out www.barubar.com

Details, details, details.

Demonstration Cost: Members \$10.00 per person. Non-members \$15.00 per person.

Meals:

Saturday Lunch: Laurel's Fantastic Bunkhouse Buffet available **for the first 75 people** at \$7.50 per person. **(If you are planning to arrive late, please don't count on Laurel's Buffet.)**

Saturday Dinner: Pot luck, bring your own main course and a dish to share.

BBQ grilles will be provided.

Sunday Breakfast: Prepared by Jon deMasi:

Bob Rummage's Famous Blue Corn Pancakes, sausage, juice, fruit & coffee. \$5.00 per person.

Other Meal options: There is a great steak house in Skull Valley (5 miles) and many choices in Prescott. (15 miles) or Bring your own.

Accommodations:

FREE dry camping on site.

Motels available in Prescott (about 15 miles)

Tailgating:

Tailgating is encouraged and Barry has blacksmithing tools for sale, so bring your stuff and your \$\$\$\$.

**Remember to bring items for Show and Tell
and Iron in the Hat.**

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: Ray Rybar At the Mesa Arts Center

Perfect weather, wonderful location, and a fantastic demonstration made this a great day.

Ron Kinyon brought his Mod 2 air hammer which needed 200 feet of hose to get to the compressor, but it still operated flawlessly. It is a great, compact, hard hitting hammer with low air consumption.

Michael Sobrado worked with the folks at the Mesa Arts Center, who were very accommodating.

Ray Rybar, is a world renowned knife maker, who is regularly featured in various knife making magazines. He shared the details of his mosaic techniques, with an easily understandable presentation that everyone could follow and, I'll bet, many do.



L: Ray is not grilling brisket on a barby.

B: Ray explains the importance of hitting all four sides of the mosaic to prevent distortion. He often uses Nickel and high carbon steel to provide a strong contrast. The nickel stays silver; the high carbon steel turns black when etched.



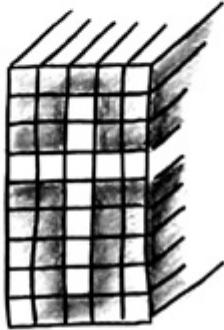
Ray brought several books and magazines that had featured his work.

Ray's focus is on religious themes. Although he is not Jewish, he is a recognized expert on Jewish history and symbols. His work often includes these symbols. He is creating religious artifacts that some future Indiana Jones might risk his life to procure.



MOSAIC DAMASCUS DEMONSTRATION

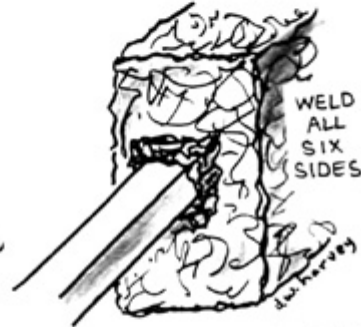
by RAY RYBAR




THIS FIGURE HAS ONLY 45 BARS... THE DEMONSTRATED MOSAIC BAR HAS 255 BARS OF 1095 HIGH CARBON STEEL AND NICKEL, HEAVILY OILED BARS (NO FLUX)

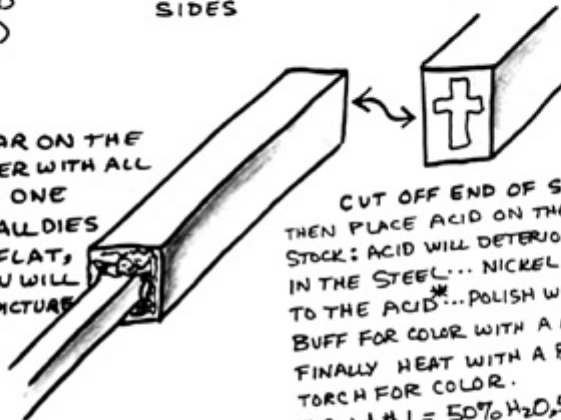


HOLD STACK WITH LIGHT WIRE FIRST, THEN HEAVY TIE WIRE $\times 10$... TWIST EACH WIRE... WELD TO HOLD... THEN WELD UP ALL FOUR SIDES



WELD ALL SIX SIDES
ATTACH A HOLDING BAR AND WELD UP EACH END... FORGE WELD SOLID & DRAW IT OUT... YOU MUST ALWAYS MARK THE NORTH/SOUTH - top/bottom OF YOUR BILLET HANDLE

DRAW OUT BAR ON THE POWER HAMMER WITH ALL DIES  TO ONE ANOTHER... ALL DIES STRAIGHT & FLAT, OTHERWISE YOU WILL DISTORT THE PICTURE



CUT OFF END OF STOCK, THEN PLACE ACID ON THE END OF THE STOCK: ACID WILL DETEGRATE THE IRON IN THE STEEL... NICKEL IS IMPERVIOUS TO THE ACID... POLISH WITH 600 GRIT, BUFF FOR COLOR WITH A MIRROR FINISH. FINALLY HEAT WITH A BENZOMATIC TORCH FOR COLOR.

* Acid #1 = 50% H_2O , 50% $FeCl_3$.
* Acid #2 = 50% H_2O , 50% Nitric Acid.
(neutralize with H_2O & baking soda, then with WD-40)



SAFETY MATTERS !!!

NICKEL FUMES & DUST ARE KNOWN CARCINOGENS. NO AMOUNT OF EXPOSURE IS SAFE. ITS DUST & FILINGS ARE HAZARDOUS. TAKE RESPONSIBILITY FOR YOUR OWN SAFETY. IT IS BEST TO WEAR CLOTHING THAT COVERS ALL YOUR SKIN & A RESPIRATOR SO YOU DO NOT BREATHE IT IN.

A Dale Harvey Presentation

Training and Education Committee News

Comprehensive Curriculum

The training committee has been at work during the past few months developing a comprehensive Blacksmithing curriculum. We started with a broadly defined end outcome and then identified the skills needed to reach it. This allowed us to arrange the order of course offerings in a logical sequence.

Broadly, the program looks like this:

Level 1 begins with safety and good work habits. Hammer technique and control is fundamental to becoming a skilled smith. Basic forging and forming techniques are then taught. These skills are used to make tools that will be used in future classes. The fundamentals of heat-treating and metallurgy are covered. Small projects using the techniques and tools round out the course.

Level 2 combines the skills learned in Level 1 to complete more complex projects. Scroll work, leaf work, traditional joinery, collars and the related tools are an integral part of this course.

Level 3 incorporates the skills of the previous classes. The emphasis is on forging to dimension. Additional skills of stake forming and related tools are introduced. Stylized leaves and other complex design elements are included at this level.

Level 4, the culmination of the program, is completion of a forged grille or gate that incorporates all of the techniques and skills taught over the series of classes. Inherent in this project is the manufacture of the necessary tools, e.g. drifts, punches, swages, tongs, hammers, etc. that are required to complete the project.

A checklist of skills is under development. The list will contain the skills necessary to show mastery of each skill. The checklist, to be completed by consultation of the student and instructor will follow the student throughout the courses. The intent is for students to be able to assess their progress and work on skills

they will need to be successful in the next level of classes.

The committee recognized that many people have not been able to take 5 days out of their schedule to take *Mastering the Fundamentals* with Mark Aspery. The week long Mastering the Fundamentals course taught by Mark Aspery will continue to be offered, but there will be other options.

We have committed to offering classes at other times throughout the valley. Most will start in the fall, however, there will be one starting in May. (See below)

Committee members are: Bonnie and Dale Harvey, John Doss, Keith Jones, Mary Ann LaRoche, Len Ledet, Dan Jennings, Michael Sobrado, Rodger LaBrash, Jon DeMasi, Steve Fisher and Doug Kluender.

Novice Blacksmith Class Starts May 14

Level 1—Getting Started

This is an 8-week course taught by Dan Jennings in Chandler. This course is geared to the beginning smith. It focuses on developing the essential skills of Blacksmithing at the Anvil. Included will be: hammer control, safety, tapers, slitting, drifting, punching, twisting, bending, and upsetting and tool making. No power tools will be used.

Course Details:

Level 1—Getting Started

Wednesday evenings 6:30 to 9:30 PM
2522 W. Loughlin Dr. Chandler, AZ

Cost: \$275.00 includes materials and supplies.
Limited to 6 students. First paid, first served.

To sign up, or for additional info contact:
Dan Jennings 480-510-3569 or
email: Danshammer@cox.net

Class Report: Large Scale Joinery and Stake Repousse

Photos by Jerry Brink



March 17-21 these guys were busy at Sahuaro Ranch with this advanced blacksmithing class.

L to R: Jon deMasi, Roger LaBrash, John Doss, Mark Aspery, Chris Contos, Jerry Brink, Doug Kluender, and Alfonso Inguez.



Making the tools is always a big part of Mark's classes



Education And The Blacksmith

By Barry Denton

We were planning a demo the other day and someone mentioned that they thought students should be able to attend the demo for free. I was rather shocked at this concept as I feel that the student has the most to gain by attending a demo. When the student attends a demo he or she will take home many ideas and notes that will improve his or her skills. In contrast the grizzled veteran of the trade will be lucky to take home one or two ideas that will help him in his daily work. So who stands to benefit the most from the demo? Obviously it's the student and I see no reason not to charge a student for a demo, especially when demo admission is ridiculously inexpensive to begin with.

Students for the most part will not realize how lucky they are to be able to attend these demos until they become the grizzled veterans. When most of the grizzled veterans were students there was no such thing as blacksmith demos to learn from. You either had to teach yourself or go to work as an apprentice. If you did go to work as an apprentice you were sworn to secrecy in regard to not sharing information with other smiths. Please realize this was not 100 years ago, but only about 30 years ago. Where I came from there was no sharing of knowledge. Many of the old smiths were raised during the "Great Depression" and trade secrets were precious. The only way you stayed ahead of your competition was to know more than he did and not share what you knew.

In the 1990's the information age came into vogue and blacksmith demos sprung up all over the country. All of a sudden there was blacksmithing information available on the internet. There are so many wonderful tools available today for students such as books, videos, TV shows, etc.

I know that if I were a student I wouldn't want the disgrace of having something handed to me when everyone else has to pay a fee. It goes back to the old adage "You don't end poverty by giving people money". You end it by teaching them how to work. In my book, by not charging you are giving the students money which they

are not deserving of, nor are they learning a lesson in responsibility. If you want something in this life pay for it and take it. If you want to attend a blacksmith demo and the fee is \$10 then go out and earn it at a night job or whatever you have to do. You must realize that no one owes you an education or a living. Charity is for people that can't work.

My apprentice program always required an investment from the apprentice. For example I would require the apprentice to come up with a lump sum before the apprenticeship started. The lump sum would be put in a bank account for one year. As the apprentice worked he would receive an agreed upon portion of the lump sum back as his paycheck each week. At the end of the year the apprentice would have two thirds of his money back and I as the teacher would receive one third for my teaching efforts. Because the apprentice had invested in his own education he tried to learn as much as he could and worked hard at it. Since I was getting a portion of the money I felt compelled to teach as much as I could. It was a winning situation for both of us. By the way, each apprentice I did this with, went on to have a thriving business later in life.

If you want to go to college you have to pay for it. Why shouldn't you have to pay for an education in blacksmithing? I grew up as poor as anyone, so don't tell me you can't get what you want if you work hard and smart. Blacksmith demos are very inexpensive to attend. If you are a student get an extra job, drink less beer on Friday night, and attend a demo. You'll like it!

Forging with Charcoal by Beth Holmberg San Diego, California Reprinted from the March/April 2008 California Blacksmith

I needed a forging fuel that wouldn't offend my neighbors. (My lot is 40 feet wide, and I forge in the driveway.) But I don't like the noise or equipment involved with propane. I decided to go retro and try the fuel used by blacksmiths for most of our history: charcoal! I'm not talking about briquettes of compressed sawdust and who-knows-what; this is solid lump hardwood charcoal. Here in Southern California, that means mesquite charcoal. (The neighbors really don't mind the smell.) In other areas you might get oak charcoal or charcoal made from mixed hardwood lumber scraps leftover from furniture building (green charcoal?). Any of these will work. Overall, I'm pretty satisfied with charcoal as a blacksmithing fuel, but I've learned a thing or two about working with it that might be helpful.

Where do you find it? For a first try, many grocery stores carry 8- or 10-pound bags of hardwood lump charcoal. Quantity buying makes it a whole lot cheaper though, so look for better sources by looking for charcoal and firewood in the yellow pages. Also, you might try sources that provide wood and charcoal to restaurants.

Isn't it expensive? A few years ago, coal was definitely cheaper to use. But with the recent transportation cost jumps, big bags of local charcoal are starting to look downright cheap. I'm able to get 40-pound bags for \$16, which seems pretty good to me for nothing but carbon!

What's weird about working with it? It isn't as dense as coal so you go through more volume than you'd expect - a bit disconcerting, but I think it's about the same weight in the end. It's not sticky like coked-up coal so the fuel pile tends to collapse a bit each time the metal goes in. A larger, slightly curved fire rake is handy for managing this. It doesn't go out on its own, even if you break up the fire. To keep sparks from escaping, I put an old barbecue lid over the forge when I'm done at the end of the day.

What are some advantages over coal? No objectionable smell, no black, gritty soot, no clinker! Just some nice fluffy light grey ash. It's easy to get going with only a little newspaper. It doesn't require a huge fire to work well. If I'm working on small projects, I can use the fire well with less than a pint of fuel burning. I find that it takes less effort at the blower to get forging (or welding) temperatures. The scale only forms outside the fire, indicating the fire is more reducing than a coal fire. My successful flux-free welds have all been with a charcoal fire. And at the end of the day, you can even cook dinner over the last of your fire!

Holy cow! What's up with this mesquite? OK, I'll admit that mesquite charcoal can be a little weird. It often comes in log-sized chunks so my first step is always cutting it up with a hatchet to about 2" pieces (maybe you could hire a youngster to do the job). When you burn it, it spits and sparks enough to be scary! The resin that makes it smell so great also causes this bad behavior. The best solution I've found is similar to the old tradition for coal: soak it in water. An overnight soak makes it much better behaved and also makes it easier to break up the logs to useful sizes. I treat fresh, wet mesquite charcoal like green coal, packing it around the outside of the fire, and pulling it after it has cooked a bit to drive off the resin. Two other anti-sparking hints: keep a spray bottle of water around to keep things controlled, and if you're still getting lots of sparks, you are probably overblowing the fuel - back off on the cranking!

What about making charcoal? Go for it! I don't have the space for it, so I can't offer specific advice. Plans for small collier setups made from things like 55-gallon drums can be found in cyberspace. Maybe someone else can share their charcoal-making secrets.

CALENDAR 2008

May 14	Class Level 1 (6:30 pm)	Traditions in Iron	Chandler, AZ
May 17 & 18	Demo: Jim Keith	Bar U Bar	Skull Valley, AZ
May 17	BOD Meeting (3:30 pm)	Bar U Bar	Skull Valley, AZ
July 19 & 20	Demo: Christmas Gifts	Pioneer Museum	Flagstaff, AZ
September 20 & 21	Demo Verde Valley Smiths	Bill & Karen Morris'	Camp Verde
November 15	Demo	Grizzly Welding	Phoenix, AZ
January	Demo Henry Pomfret	Sahuaro Ranch	Glendale, AZ

Basic Class Of Wednesday Eves

AABA will offer a Level 1 blacksmithing class on Wednesday evenings, 6:30—9:30. Starting May 14. See page 6 for details.

Coming Attractions

July in Flagstaff is a new venue with new activities. Several smiths have agreed to show you how to make hand forged holiday gifts. It is not too early to start on becoming the Francis Whittaker of your family. This will be a hands-on event so bring your tools and giftware ideas and share them. Think "Summer Snowflake and Christmas in July".

Camp Verde in September. Bill & Karen Morris host the event. This year in addition to Blacksmithing demonstrations we are planning self guided tours of several Verde Valley Blacksmith shops. Bill and Wally will sing and play around the campfire. If you have musical talent plan to bring your instrument and join in.

November at Grizzly Iron Grizz has arranged a great demonstration of repousse techniques. Don't worry about trying to crowd into the front row. This time we are arranging video monitors so everyone can see the work.

January Demo: Look for another British invasion. Henry Promfret is scheduled to show his skills at Sahuaro Ranch.

Vessel Challenge!

The November Demo at Grizzly Iron will feature a challenge to bring a vessel of your making. The vessel can be any container—it doesn't have to hold water. It should be metal, however.

Workshops

The following one day workshops are in the planning stage. They will be held in central Phoenix during the first part of 2008. Workshops include:

Forge Building

A 1 day workshop where you build your very own propane forge.

Anvil Stands

Tired of that termite infested stump? Build a sturdy 3 leg metal stand.

Vise Stands

Build a sturdy, light weight, easy to move stand for your vise.

The Ins & Outs of Security Doors

Learn the "trade secrets", sources of materials and how to avoid costly mistakes in this informative 1 day workshop.

Members interested in any of these workshops should contact Doug Kluender at 602-818-1230 or email Dougkluender@MSN.com.

Workshops to be scheduled based on interest and mutual convenience.

BOD Changes

Lucy McEvilly-Schwab tendered her resignation from the vice presidency and the board (she has taken a full time job, and is also helping care for her sister-in-law. We hope things will get a little easier for her and we will get her back in the near future).

Roger (Grizz) LaBrash has been appointed to the office of Vice President.

David Starr has moved to Texas and resigned from the BOD.

Betsy Miller and Richard Rozinski have been appointed to replace David and Lucy on the board.

2008 Dues are Due.
If you have not paid for 2008 This is your last newsletter

Website: AZ-blacksmiths.org

Library

Librarian, Roger La Brash is working on plans to make the library more accessible to members. Videos are the most sought after items and the BOD has approved a budget that will add more.

We still have several books and videos that are checked out and overdue. Please check your book shelves and return anything that may have been over looked. Contact Roger LaBrash: Grizz1329@aol.com or 602-716-9660

Chris Contos Teaches at Yavapai

Forging Line and Design
Yavapai College Art Workshop
Prescott Az

June 23 through 27 Five Full Days

Focus on forging, welding, riveting, and designing steel sculptures

Open to beginner and advanced students

For info contact Chris Contos:

928-778-4601 or eaglesanvil@cableone.net

Anvil's Horn Via Email

This service is available to members only and we ask that you do not forward the newsletter to non-members. To sign up, email

webadmin@AZ-blacksmiths.org

and type "Yes- AABA newsletter" in the subject.

Doug Kluender Appointed To the ABANA BOD

It's official, Doug has been appointed to the ABANA Board of Directors. Doug fills the position that became vacant when Dorothy Steigler resigned.

Doug brings the desire for fiscal responsibility and a working knowledge of not-for profit organizations that ABANA so desperately needs.

AABA is happy to again have a representative on the ABANA board and we believe his skills and knowledge will help put ABANA back on track.

Referral on the Website.

The AABA board has a Referral page for our members who would like to be listed. Our website attracts a lot of people looking for iron work. To be listed on the Referral page check the website for the form or email:

webadmin@AZ-blacksmiths.org.

and type Referral in the subject.

AABA can not and will not recommend any individual blacksmith or company. This listing is for AABA members only.

AABA New Member and Membership Renewal Form

NAME _____
ADDRESS _____ CITY _____ STATE _____
TELEPHONE _____ EMAIL _____ ZIP _____
PROFESSIONAL BLACKSMITH _____ HOBBYIST _____ FARRIER _____
INTERESTED IN THE ART _____ TEACHER _____ OTHER _____
OCCUPATION OR SKILL _____

PLEASE CHECK ONE:

REGULAR MEMBERSHIP (\$30) _____

FAMILY MEMBERSHIP (\$35) _____

Make Check Payable to AABA

Mail to: Mary Ann LaRoche
AABA Membership
1775 E. Ocotillo Rd.
Phoenix, AZ 85016

Dumb Things Not to Do

The Load

by Doug Kluender

The load was well secured. Tied off in all four directions with mule tape, there was no way it was going to shift or escape. The loose ends were tucked under the load to keep them from blowing around.

Mule Tape is that slick, woven, soft strap material that electricians use to pull wires through conduit. It is cheap, plentiful, fairly strong and relatively easy to cut with a pocketknife. It makes great tie downs.

About an hour later, cruising down Interstate 10 and there is a bang from the back of the truck, followed by a slapping sound under the floor. Pulled over quickly and locate the source of the noise.

One end of the mule tape had come loose and slipped between the bed and the cab. The free end eventually wrapped around the drive shaft. It wound around the drive shaft and pulled until it reached the breaking point. When it let go there was a resounding boom. That was the front edge of the bed where it bent the front of the bed. The heart stopping slapping noise came from the loose end that was still wound around the drive shaft as it whipped against the floor.

Fortunately there was no damage to the truck other than the crease in the bed. It could have been much worse

. When the free ends of tie downs come loose they can become entangled in the wheels. They have been known to wrap around trailer wheels causing them to lock up. This can send both truck and trailer out of control.

Make sure that the loose ends of all load-holding devices are properly secured. Use tie wire or duct tape to keep the free ends in place.

It is good insurance.



The Tumbler

by Dan Jennings

Every tumbler I have ever seen looks just like mine – there is so much powdered carbon around them I'm always amazed that any of them still work. In my case carbon is piled up on every horizontal surface and mounded underneath. Maintenance is nasty, so it is avoided for years at a time.

I was forging several plates that required me to wait while they heated. Thinking about getting them in the tumbler when they cooled, I remembered I needed to do some repairs on the tumbler before I could use it. So I dragged the welder and a grinder over, ground off the broken weld and welded the part back in place. With the plates in the forge now hot enough, I ran back and forged them, putting a new round in the forge. I wondered back to the tumbler to take care of the grinder and welder. Smoke was poring up from the powdered carbon down in the bowels of the machine. (Did you know carbon burns? Well, duh!) No problem, I grabbed the Co2 fire extinguisher and gave it a squirt.

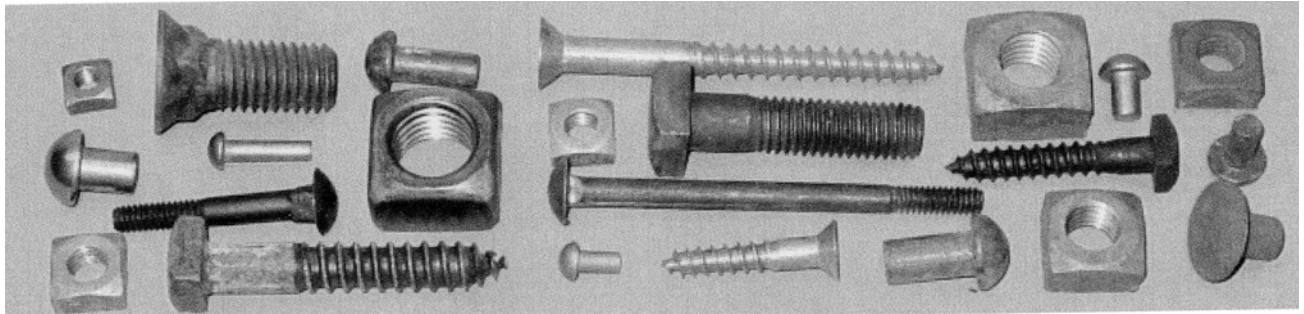
Wow, does that have a lot of pressure (full CO2 tank with no regulator)! It blew the smoldering carbon all over the place. Did I mention the 3" thick layer of dried leaves sharing space with the carbon powder under the tumbler? This is starting to look serious.

Let's see, what is at risk? The welder – better move it. The compressor – can't move it. Unplug the tumbler – don't want an electrical fire. Move the propane tank stored there. Better turn off the forge. Now the wood that encloses my tumbler was beginning to smolder and there was the smell burning leaves.

A good dose of water killed all the embers. A light blow with the air hose moved everything to the ground (and into the air). A broom dragged it out from under the tumbler. More water. Wait a while to see if any more smoke appears. What a mess! The combination of slurried carbon powder, water, burned leaves and the airborne carbon left me dirtier than a Pennsylvania coal miner.

The moral – stop fixing the tumbler – it is just too messy.

Www.blacksmithbolt.com



Here is a website I ran into. I haven't purchased from them, yet but their site looks like just what we need.

"In the image above, you will find the cornerstones of our inventory: Square Head Lag Bolts, Square Head Machine Bolts with square nuts, of course, slotted head wood screws and solid iron rivets.

We also have a few Iron Tire Bolts, Plow Bolts, Step Bolts and Carriage Bolts in stock. We also have flat washers and split lock washers for these and other bolts.

Nothing ruins the appearance of a nice piece of metalwork faster than a hex-head bolt or a Phillips head screw. Accordingly you will not find any of either one of these items here.

Recognizing that the majority of blacksmiths and other metalworkers may wish to make their fasteners more than simply functional, we have chosen not to carry zinc-plated or hot-dip-galvanized fasteners. The material finish will be either plain and oiled or black oxide. No one really wants to have to burn the zinc off their fasteners before re-working them."

Square heads with no plating and rivets, too !

July Demonstrators Needed

Here is an opportunity to show your stuff. The theme for the July Hammer- In is Sizzling Summer Snowflakes.

We are looking for ideas and techniques for gift items that are made at the anvil. Share your favorite, old or new, and teach others how to do it. This is going to be an interactive hands-on event. Step up and help make it a fun weekend.

July is the time to get started on making your holiday gift items (as well as your scholarship auction piece).

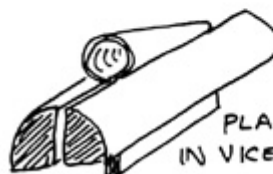
Call Doug Kluender to reserve your time in the spotlight.
602-818-1230 or Dougkluender@msn.com



BUTTERFLIES & MOTHS

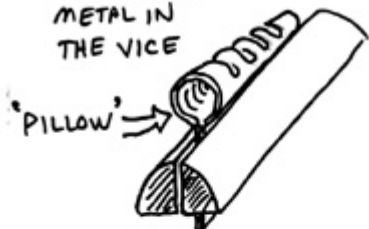


BEGIN WITH A LOOP FROM
A RECTANGULAR PIECE OF
METAL



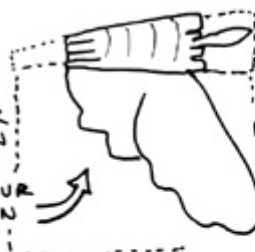
PLACE LOOP
IN VICE & CLAMP

CHASE THE
METAL IN
THE VICE



DRAW YOUR
DESIGN

CUT OUT YOUR
DESIGN



FORMING: T-folds with or without pillow; Line-folds;
Embossing

TEXTURING: Mordants=acid etch; Sanding; Chasing

COLORING METALS

PRISMACOLOR PENCILS

no single approach to style is advocated
colored pencils are transparent (semiopaque)
wax bloom = too many layers
The "dimensions" of color:
Hue = a color's name (red, blue, etc...)
Value = lightness or darkness of a hue
Intensity = purity of color ... vivid or dull
the key is to layer lightly on metal ... go slow!
you can lift color with tape
Scratchplate Technique = inscribe lines w/ a sharp tool
wax base pencils ... pigments w/ wax

PERMANENT INK MARKERS (Sharpie)

nothing tricky here!
unintimidating &
inexpensive

PERMANENT INKS (Daler Rowley **FW** Acrylic Artist Ink)

use as is, or
mix w/ water, or
mix w/ themselves...
best to let dry overnight

LIVER OF SULPHUR ... stinks!
short life (1/2 hr. to 1 hr.)
dispose down the drain w/ H₂O
turns copper & brass many
colors but w/ exposure,
brown (liver) to black

d.w. harden

New Work From “the Pres”

Think of an old boomer sitting in his rocking chair, thinking about his life. All the big events of our generation are represented on the chair. It is being shown in Tubac Center of the Arts in “The Human Element” and won best of theme.

Ira



Project

Shelf Bracket

Stock: 1" X 3/16" flat 14" long
3/8" X 3/8" bar 9" long

Glue a copy of the pattern onto each end of the 1" X 3/16" stock. Rubber cement works well on small patterns.

Lightly chisel through the pattern, cold, with the appropriate curved chisel. This transfers the pattern onto the steel. Take a heat and carefully chisel out the pattern. Cut progressively around the pattern to avoid distortion. Dress with a file as needed.

Mark the center of the 1" X 3/16" flat stock with a center punch on the opposite side from where the pattern was applied. Take a heat and bend the piece as shown (Fig 16). Forge the bend square.

True up the lines of the finished piece and set it aside.

Take the 3/8" X 3/8" bar, measure in 1 3/4" from each end and mark it with a center punch. Put both marks on the same side. At a forging heat, bend one end of the bar at the punch mark keeping the mark on the inside of the bend. Forge the corner square. Repeat the process on the other end of the bar (Fig 17).

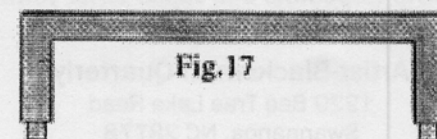
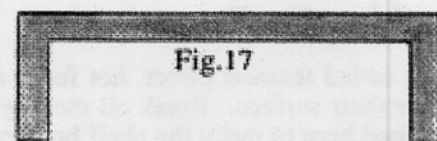
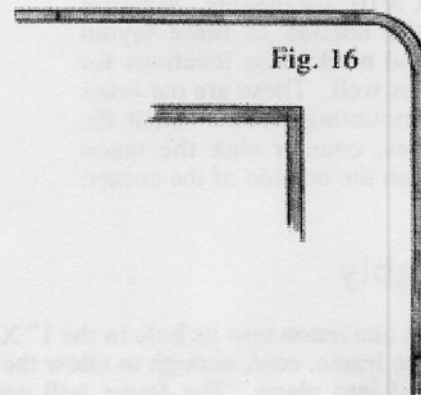
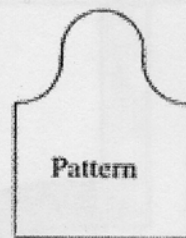
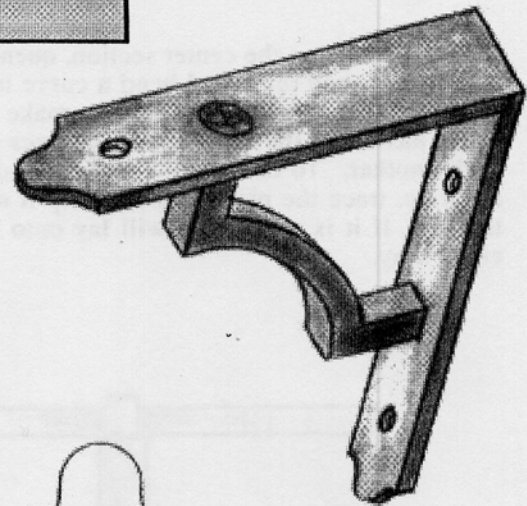
Make sure that the legs are even in length from the bends. Either upset or trim the long one if they are uneven. Measure in 1/4" from each end and mark around the bar in preparation for forging a tenon.

Butcher in on the line and forge a 1/4" diameter tenon. The stock allotted should give you a tenon about 3/8" long, trim this to 5/16" repeat the process on the other leg (Fig 18).

by George Dixon

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www.traditionalmetalsmith.com



Continued from Project, pt1.

Take a heat on the center section, quench the corners to maintain them and bend a curve in the piece as shown (Fig 19). Use a square to make certain the curve has taken the two legs 90 degrees apart from each another. To be sure the corners and curve are accurate, trace the piece and then flip it over on the tracing. If it is accurate it will lay onto the tracing either way.

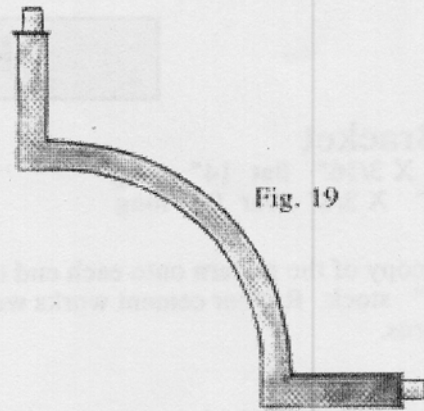


Fig. 19

Lay the finished 3/8" bar on the side of the 1" X 3/16" bent frame so that the tenoned shoulders are equal distant from the corner. Mark the 1" X 3/16" for drilling. Measure 1" on the outside of these layout marks and mark these locations for drilling as well. These are the holes for the mounting screws. Drill the four holes, counter sink the tenon holes from the outside of the corner.

Assembly

Insert one tenon into its hole in the 1" X 3/16" frame. Spring the frame, cold, enough to allow the other tenon to be rotated into place. The frame will now close down onto the shoulder of the tenon. Set both tenons flush into their respective countersinks.

Something To Try

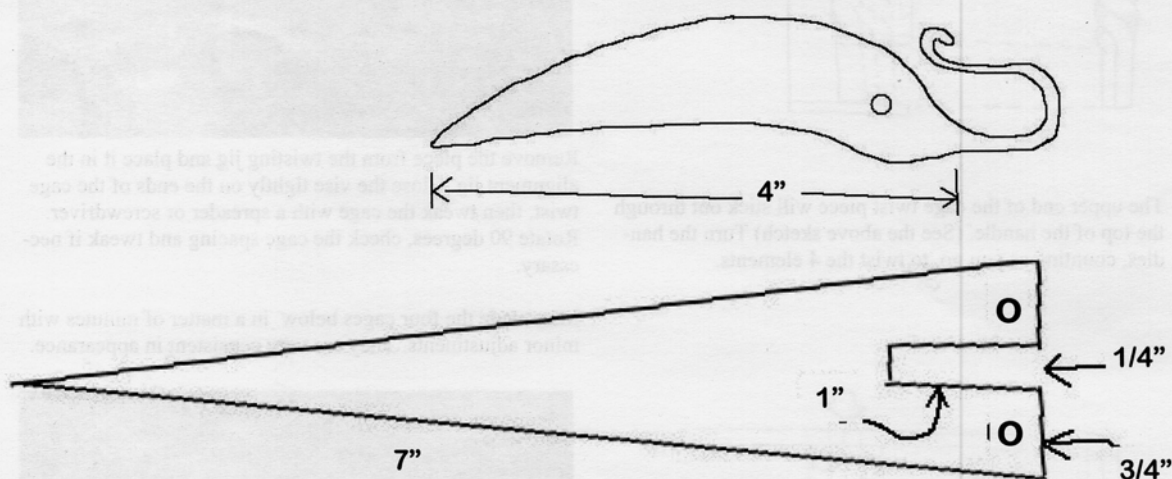
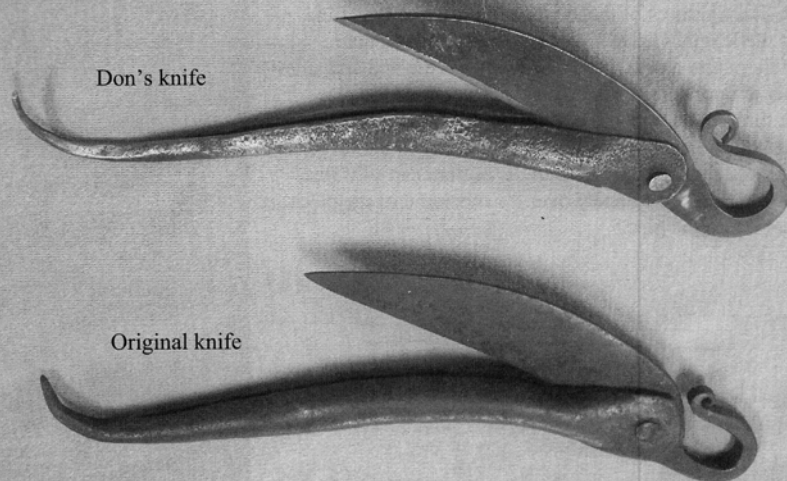
For an added textural effect, hot forge the entire length of both pieces of stock with light hammer blows over their surface. Break all the edges slightly and then true-up the stock and proceed with the steps outlined here to make the shelf bracket. Prior to final assembly, take 60 grit emery cloth and hand sand the surface of the work until the high points are silver-gray. The work will darken with age so try taking it to a medium/bright finish. Coat the assembled bracket with polyurethane or with linseed oil mixed with turpentine and Japan Drier followed with paste wax for inside use.

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by George Dixon
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Chinese Clasp Knife

By Don Drake-
a MABA member



The original purpose of this knife was to hang from a cord around the neck of Chinese fishermen. The pointed end of the handle was used to enlarge the vent of the fish before inserting the blade. There are other options for the hooked end of the handle that would be far less hazardous to the wearer such as rolling up to a ball or another curl or even just cutting it short to a blunt tip.

Blade material 3/8" garage door spring

Handle material 1/16" sheet per dimensions given

1. Draw end of spring to a short point (this becomes the knives tip)
2. Forge approx 4" of spring material to the thickness of a quarter at top of blade as you thin out at blades edge

3. Draw out to a 3" fine taper and curl for thumb grip and hanging loop
4. Cut handle material from 1/16" sheet steel
5. Form into cone but leave enough of an opening for the blade to fit into (try rolling the hot steel around a punch held in a vise)
6. At this point you can decide to match the handle to the blade shape or vice versa
7. Flatten ends of handle where pivot pin will go and then determine where to place pin holes in blade and handle.
8. Harden & temper the blade before putting the edge on it
9. Rivet with soft steel pin and peen over ends (an 8 penny nail works well)

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Classifieds

Classified ads are free to members and can be submitted by email to: danshammer@cox.net or by mail to Dan Jennings 2522 W. Loughlin Dr. Chandler, AZ. 85224

Need Coal? Joe Hernandez is bringing in a truckload. This high quality coal is in 50# bags. Minimum of 10 bags would be appreciated. Call Joe to reserve yours.
520-682-2546

Wanted Horseshoer's Rasps for the AABA training program. If you have any used rasps we can use for hot filing we would appreciate the donation. Thanks.
Dan Jennings 480-510-3569
or
Doug Kluender 602-818-1230

For Sale: 50 lb. Little Giant Power Hammer - \$2000.
Call Jim Lewallen at 928-684-1669, Wickenburg area.

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

The AH needs great color photos of your projects for the front and back page. Send'em, along with your tips, articles and drawings. Your newsletter is only as good as your input.
Danshammer@cox.net

For Sale, used Striker air hammer, low hours, 88 Lb, Self contained, 5 Hp, spare dies, 1500 Lb base, \$6900.
Call Ron Kinyon
602-568-8276

Two new/old e-books. Weiner Kunstschmiedearbeiten (1928) and La Fidelle Ouverture de l'Art du Serrurier (1627). Now eight titles are available on CD \$4 ea. Or all 8 for \$24 postpaid.
www.hammerguy@bellsouth.net
or Brian Gilbert, 3404 Hartford Dr. Chattanooga, TN 37415

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

Enco Metalworking supplies. 800-873-3626 or shop online at:
use-enco.com

Bar U Bar Supply

The source for anvils, post vises, and other new & used blacksmith tools. Barry Denton ph 928-442-3290 email: barubar@hughes.net website: www.barubar.com

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

Blacksmith's Journal

Monthly journal. 1 yr \$37. Complete set of back issues (1900+ pgs) \$480. Ph. 800-944-6134. PO box 1699 Washington, MO 63090 website: www.blacksmithsjournal.com

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Call John Doss at 623-229-8335 or email: cnc@enviromithaz.com

Brent Bailey. A blacksmith in California specializing in custom tools and ornamental forgings for artisans.
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
Toll free ph. 866-627-6922.

Jim Keith at the anvil

Over 50 years of ornamental and structural blacksmithing experience.

Jim is our featured demonstrator on May 17.
See page 3 for more info



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