

The Anvil's Horn

A Publication of: The Arizona Artist Blacksmith Association

Issue No. 131

March 2008

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



Wildlife sculpture by Roger LaBrash
People's Choice award winner
2007 Reed Carlock Memorial Auction

President's Message:

I hope that those of you who were at my shop for Jim Pepperl's demo enjoyed it; I did. He gave us a lot of information and techniques on door hardware; Sunday morning's lecture was excellent. I also had fun at the Sat PM BBQ and slumber party, and Ivan's breakfast was a treat. I spoke to Jim last week and he said that he's making us not one but two door latches. He suggested that we auction one off and keep the other to start an AABA collection. The Board will meet in March after the Sat. demo, and will discuss this idea. Members are welcome to attend our Board meetings, so if you'd like to see how the wheels turn, feel free to sit in.

The outreach committee has been formed; Ron Unger, Rick Miller, Rich Rozinski, and myself. We'll work to enlist new members by getting the word out about what we offer, and by making new attendees feel welcome. Please help us by bringing friends to meetings and by introducing yourselves to new faces.

I was sorry to hear that Lorelei was injured and could not demonstrate. Doug is working to bring her next year. I'm really looking forward to seeing Ray Rybar demonstrate. He is a world class smith and demonstrator. Can't wait to find out how he makes iron from black sand! I've never been to the Mesa Art center, but hear it is quite a place.

See you all in March!

Ira

AABA OFFICERS and BOARD OF DIRECTORS

PRESIDENT: Ira Wiesenfeld 1801 Overton Rd. Tucson 85737 520-742-5274 treeira@hotmail.com

VICE PRESIDENT: Lucy McEvilly-Schwab 7 E Helena Dr. Phoenix 85022 602-942-2402 ohlucy2@cox.net

SECRETARY: Mary Ann LaRoche 1775 E. Ocotillo Road Phoenix 85016 602-279-6702 maryann.delp@cox.net

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

EDUCATION COORDINATOR: Doug Kluender 73 W. Holly St. Phoenix 85003 602-818-1230 dougkluender@msn.com

LIBRARIAN : Roger LaBrash 1329 W. Lincoln Phoenix 85007 602-716-9600 Grizz1329@aol.com

EDITOR: Dan Jennings 2522 W Loughlin Dr. Chandler 85224 phone and fax: 480-839-6339 danshammer@cox.net

DIRECTORS: Mike Cooper, Debbie Devine, Ivan Hill, Ron Kinyon, Doug Kluender, Roger LaBrash, Leonard Ledet, Lucy McElvilly-Schwab, Rick Miller, Bill Morris, Michael Sobrado, David Starr, Ron Unger, April Witzke.

March Demo: Saturday. March 15, 2008

Location

Mesa Arts Center

Demonstrator

Ray Rybar

Registration 8:00 demo starts 9:00

Ray has been an artist blacksmith for over 30 years. He is an ABA Mastersmith, winner of numerous awards and has authored several articles about bladesmithing.

Recently, Ray has been smelting iron from ore he collects in Arizona.

“As an artist blacksmith I direct my primary effort to cutlery. I am most known for having bold damascus patterns and intricate mosaics. I conduct my business under the premise that if art is your master it will become your idol, if it is your servant it will become your ministry.”

Even if you are not into knives, you will find his information on smelting and mosaics interesting and applicable to other aspects of artist blacksmithing.

Mesa Arts Center is at the SE corner of Main and Center street in Downtown Mesa.

Parking is at the SE corner of the facility on 1st Ave and Center. The MAC is a very impressive facility with extraordinary classroom/labs. The Metals, Lapidary and Jewelry shops will be open for your inspection.

Kinyon Mod 2 Air Hammer will be on site for Ray to use during his demo and for you to try out. Be sure to take advantage of this opportunity to see Ron's latest creation.

Tailgating. Park and bring your stuff. Be sure you can secure your items in your vehicle when we are not around.

Iron In The Hat and Show and Tell. Bring something for either or both.



*Rybar mosaic says:
“Little Giants
never die they just
get new black-
smiths.”
Find out how to
make one.*

Directions to the Mesa Arts Center.:

From I-10 in Tempe:

Merge onto US-60 exit 154 toward Mesa
Exit on Country Club Dr.
Go north on Country Club Dr. to 1st Ave
Turn right on 1st Ave to Center.
Parking lot is on the NE corner.

As always, safety glasses are required.

January Demo Report: Jim Pepperl

Our apology to Jim for spelling his name incorrectly in the last issue. We think this is the correct spelling



New President and demo host, Ira ,started the day barking up a few branches.

Above: Ira uses very aggressive dies to get the texture.



Jim Pepperl



Jim's work is very impressive and he brought a fair amount to show.



John Kruger looks duly amazed



Filing vise Jim used to hold parts, like the rosette above, while he adds detail.

2007 Reed Carlock Memorial Auction Report

Am I Dead Yet? by April Witzke

Have you ever heard the saying, "The day you quit learning, you are dead"? Thank goodness I'm still learning! A great example of that is the recent AABA Auction held back in October. This was the third year I organized the auction and I was just sure it was going to be the least successful. From the beginning, the formula was wrong. You know the formula I'm talking about. The one you learn in any business, the one I learned in retail, the one we learned on the road doing art shows for ten years; more customers equal more income. This year's auction had few early registrations and overall half as many people in attendance as the first year I organized it. The prognosis was dismal, yet contrary to the formula, this was the most successful auction yet raising over \$5,000 for the Reed Carlock Scholarship fund!

What the formula doesn't take into account is generosity, that of the donors as well as the bidders. That's not to say we had any \$750 cakes. In my opinion, everything that auctioned went for far less than the retail value. As the photos show, there were many lovely pieces of art auctioned off but the difference this year was the number of tools. There were over 40 non-forged items like a gas forge, a swage block, several hammers and tongs, punches, patinas and instructional DVD's. That and we still had 30 door prizes.

I predict next year's auction will be even better. I have a new formula; three categories of forged auction items plus X number of tools multiplied by generosity equals a successful auction. Like I said, thank goodness I'm still learning!

Thanks to all of the following who donated items that helped make 2007 auction a huge success:

1. A Cut Above- abrasives 800-444-2999 acutabove.com
2. ABANA - 865-546-7733 abana.org
3. Artisan Ideas- books 908-272-2666 artisanideas.com
4. Brent Bailey- hand forged tools 530-865-4176 brent-baileyforge.com
5. Blacksmiths Journal 573-237-8882 blacksmithsjournal.com
6. Blue Moon Press- books 866-627-6922 bluemoonpress.org
7. Brown's Farrier and Forge Supply 480-838-4455 in Tempe
8. Chile Forge 520-360-2141 chileforge.com
9. Capitol Metals - 602-454-1500 capitolmetals.com
10. Centaur- blacksmith supply 800-666-9175 centaurforge.com
11. Gilders Paste - faux finishes 1-800-825-0029 gilder-spaste.com
12. Kayne and Son -BS supply 828-667-8868 blacksmithsdepot.com
13. Norm Larson Blacksmithing- Books 800-743-4766
14. Oak and Iron Publishing- Hot shop books 360-297-2495
15. Pacific insulation- kao wool 323-278-8350
16. Page Steel- steel supplier 1-800-874-0184
17. Pieh Tool Co- blacksmith supply 928-554-0700 piehtoolco.com
18. Pure Iron-Wagner Co 888-243-6914 pureiron-source.com
19. Red Pup- books/software 928-422-1000 ornamentalpro.com
20. Ron Young- patinas 760-432-8242 sculptnouvea.com
21. Striker- power hammers and tools 866-290-1263 strikertools.com
22. Sumter Coatings- satin shield 888-471-3400
23. Superior Steel Touchmarks- 216-431-6460
24. Teaching Tapes- 877-866-3688 teachingtapes.net
25. TimberLine Bronze- brz embellishments 541-426-4126 timberbronzeonline.com

Auction Items Photographed by Wally Warnke



Ray Rybar



Doug Kluender



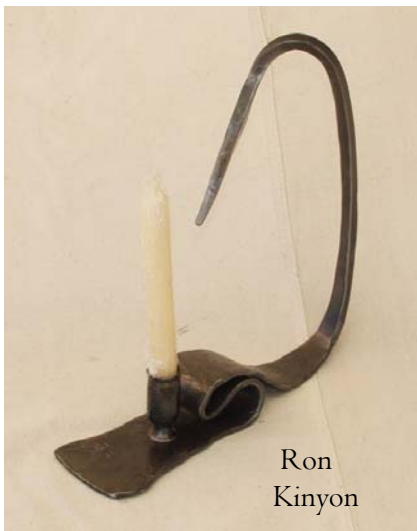
Doug Kluender



Len Ledet



Ray Brown



Ron Kinyon



Wayne Parris



George Witzke



George Alexander



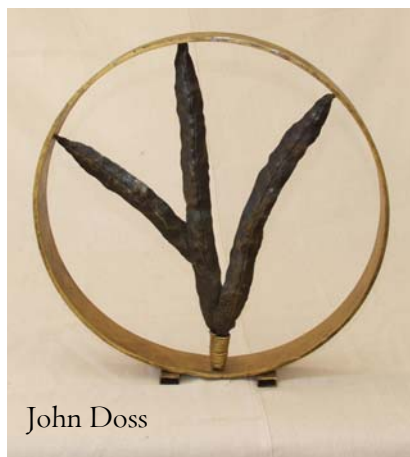
John Doss



Wally Warnke



Dan Jennings



John Doss



Rick Miller

Ivan Hill's Horse shoe hat rack and Jim Remondini's Pot rack somehow missed the photographer's booth and did not get photographed.

Make your Stainless Steel Glow

From an article by Pete Stanaitis of the Guild of Metalsmiths

A situation that often comes up is, "Hey, my stainless steel is rusting! Why? What can I do to fix it?" Stainless steel is stainless because of the protective chromium oxides on the surface. If those oxides are removed by scouring, or by reaction with bleach, then the iron in the steel is exposed and can be rusted. Stainless steel is also vulnerable to contamination by plain carbon steel, the kind found in tools, food cans, and steel wool. This non-stainless steel tends to rub off on the surface (due to iron-to-iron affinity), and readily rusts. Once rust has breached the chromium oxides, the iron in the stainless steel can also rust. Fixing this condition calls for re-passivation.

Passivating stainless steel is normally accomplished in industry by dipping the part in a bath of nitric acid. Nitric acid dissolves any free iron or other contaminants from the surface, which cleans the metal, and it re-oxidizes the chromium; all in about 20 minutes.

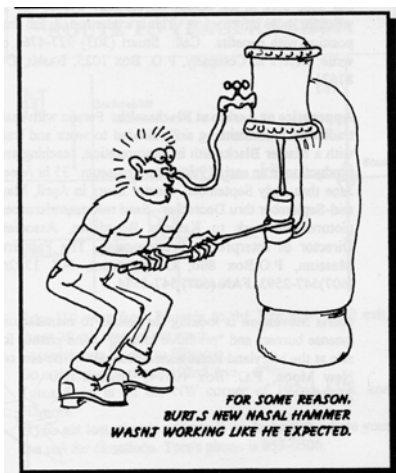
But you don't need a nitric acid bath to passivate. The key is to clean the stainless steel to bare metal. Once the metal is clean (and dry), the oxygen in the atmosphere will form the protective chromium oxides. The steel will be every bit as passivated as that which was dipped in acid. The only catch is that it takes longer—about a week or two.

To passivate stainless steel at home without using a nitric acid bath, you need to clean the surface of all dirt, oils and oxides. The best way to do this is to use an oxalic acid based cleanser like those mentioned below, and a non-metallic green scrubby pad. Don't use steel wool, or any metal pad, even stainless steel, because this will actually promote rust. Scour the surface thoroughly and then rinse and dry it with a towel. Leave it alone for a week or two and it will re-passivate itself. You should not have to do this procedure more than once, but it can be repeated as often as necessary.

Oxalic Acid based cleansers

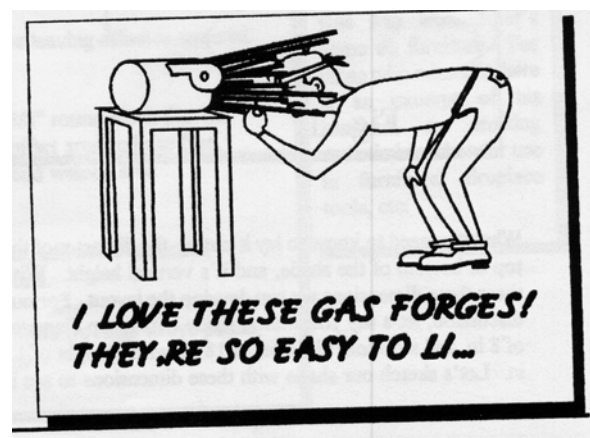
There are oxalic acid based cleansers available at the grocery store that are very effective for cleaning stains and deposits from stainless. They also work well for copper. One example is Revere Ware Copper and Stainless Cleanser, another is Bar Keeper's Friend, and another is Kleen King Stainless Steel Cleanser. Use according to the manufacturer's directions and rinse thoroughly with water afterwards.

Not all stainless steels behave the same and you'll have to do more research on your own if you want more details. To get the list of hundreds of Internet hits, through which I searched, I simply typed in the word "passivate" and went from there.



*From the
Anvil's Horn
archives..*

*No artist is
listed*



MORE FORGING MATH

OF

HOW I FOUND HAPPINESS IN AN ELLIPTICAL RELATIONSHIP

by Bob Rummage

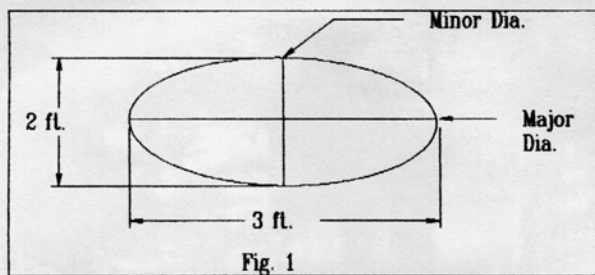
From time to time people have asked me how to do something pertaining to their blacksmithing project. Often their question has to do with the math involved in sketching or lay out of their project. In this article I will try to explain some of the basic math used to answer these questions.

One of the most frequently asked questions concerns the ellipse. "I want to make an elliptical coffee table (or mirror), but I don't know how to lay it out. Can you explain now to make an ellipse with given dimensions?" Well, let's examine this problem from the start with a definition:

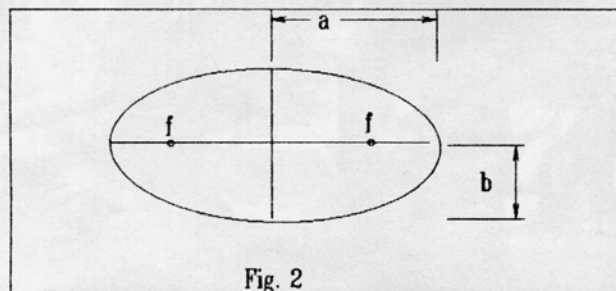
Def: An ellipse is a locus of points (a curved line) that is a constant sum of the distances from two fixed points (foci, f) in a plane (flat surface).

Now an ellipse has two diameters - a major diameter (the longer) and a minor diameter (the shorter). The greater the difference between these two diameters, the flatter the ellipse. Note: Conversely, if it were a locus of points from one fixed point the major diameter and minor diameter would be equal and you would have a circle.

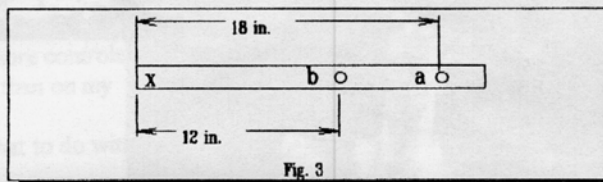
The usual problem is to draw an ellipse whose dimensions are given as a length and width. In the case of our coffee table, we want one that is 2 feet by 3 feet. Let's now look at Fig. 1 to visualize what we've just read.



One of the ways to draw an ellipse is to use the string method. To use the string method you have to know the focal points (f) and half of the major diameter (a) and half the minor diameter (b). See Fig. 2. Perhaps you are now

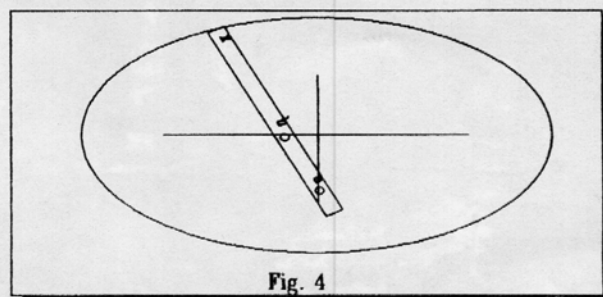


wondering how do you find the focal points (f)? They must be computed algebraically or geometrically. It is not necessary, however, to compute the focal points since the string method is not the way to draw an ellipse in the blacksmith shop. It is too difficult to keep the pencil exactly perpendicular at all times and maintain even string tension (the string will stretch), not to mention it's hard to nail a tack in a metal table top for the focal points! So, how do you do it? It's really simple and accurate if you use the beam trammel method. For a 2 ft. by 3 ft. ellipse take a piece of 1/8 in. by 1/2 in. by 2 ft. flat stock. From one end measure half the major diameter (a) or 18 in. Center punch this measurement and mark it with an (a). From the same end measure half the minor diameter (b) or 12 in., and center punch the measurement and label it (b). Label the edge that you measure from with an (x). Drill 3/16 in. holes where the center punched marks are. These holes are peep sights for the layout that follows. See Fig. 3.



On your layout table (or paper), draw your two diameters (major - 3 ft. and minor - 2 ft.). Be sure that they are perpendicular! Now place the trammel so hole (a) is on any part of the vertical axis and hole (b) is on the horizontal axis. The end of the trammel marked with (x) is a point on the curved line of the ellipse. So, whenever hole (a) is on any part of the vertical axis and hole (b) is aligned on the horizontal axis, the edge marked (x) will be on the curve of the ellipse.

Move the trammel along the two axes, marking as many points as necessary and connect the points with a smooth line. See Fig. 4.



Since an ellipse should be symmetrical, I only do half the layout and duplicate when making the piece. I also join the two pieces at the ends of the vertical axis since the curve transition is curved less.

CALENDAR 2008

March 15	Demo: Ray Rybar	Mesa Arts Center	Mesa, AZ
March 17-21	Class Adv skills Mark Aspery	Sahuaro Ranch	Glendale, AZ
March 26	A Day At the Ranch	Sahuaro Ranch	Glendale, AZ
May 17 & 18	Demo: TBD	Bar U Bar	Skull Valley, AZ
July 19 & 20	Demo	Pioneer Museum	Flagstaff, AZ
September 20 & 21	Demo Verde Valley Smiths	Bill & Karen Morris'	Camp Verde
November 15	Demo	Grizzly Welding	Phoenix, AZ

BAM Hosts

I7th Annual Ozark Conference

May 1, 2 & 3, 2008 at the Missouri State Fairgrounds in Sedalia, MO.

Demonstrators: Josef Habermann and Heiner Zimmermann, plus US smiths Bob Patrick, Darryl Nelson, the team of Michael Bendele & Joe Bonifas, and the team of Steve Mankowski & Shelton Browder from Colonial Williamsburg.

For more information contact: Kirk Sullens
Kirk@kirksullens.com or phone 417-863-8628 or visit
www.bamsite.org or see the AH November 2007 issue.

Coming Attractions

May at Skull Valley is always a hit. Barry and Laurel are sure to have great activities and entertainment planned. A pot luck cook out and songs around the campfire usually round out the day.

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 repouse 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.

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.

A Day at the Ranch: Spring Break

A crowd of 300 to 500 is anticipated at this event. Planned activities include craft demonstrations, storytelling games and tours of Ranch facilities.

Come on out and demonstrate your Blacksmithing skills.

Wednesday March 26, 2008 10 AM to 2 PM
Sahuaro Ranch Historic Park 9802 N. 59th Ave.
Glendale, AZ

Deadline: April 9 for the May 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

2008 Dues are Due. Don't forget to send yours. Use the form below

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 overlooked. Contact Roger LaBrash: GrizzI329@aol.com or 602-716-9600

Mark Aspery Returns!

March 17 through 21, 2008, Mark will teach an Advanced Skills class at Sahuaro Ranch. Featuring Traditional gate making, Large Scale Joinery and Stake Repousse, the course will focus on individual skill development and technical expertise.

While instruction will be offered on making tooling, the tooling will be supplied so that more time can be devoted to learning the joinery and repousse skills.

Course related materials and tooling will be provided.

- Cost: \$550.00 including fuel and materials.
- Limited Enrollment. First paid, first served
- Info: Call Doug @ 602-818-1230 or Email: dougkluender @msn.com

Bill Pieh Resource for Metalwork at Pieh Tool Camp Verde, Arizona

Beginner/Intermediate Blacksmithing

Gordon Williams, instructor

March 28-30, 2008

April 18-20, 2008

May 1-3, 2008

Intermediate/Advanced Blacksmithing

Gordon Williams, instructor

March 14-16, 2008

April 11-13, 2008

(Classes limited to 6 students)

Lodging now available on site.

Classes are \$455 and include materials

www.piehtoolco.com or 888-743-4866 or

928-554-0700. 661 Howards Road Ste J.

Camp Verde, AZ 86322

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

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) _____

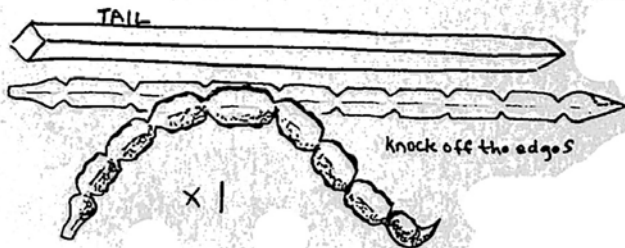
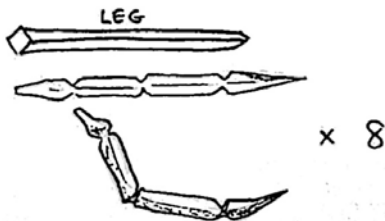
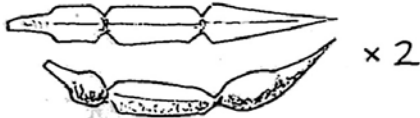
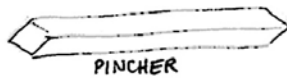
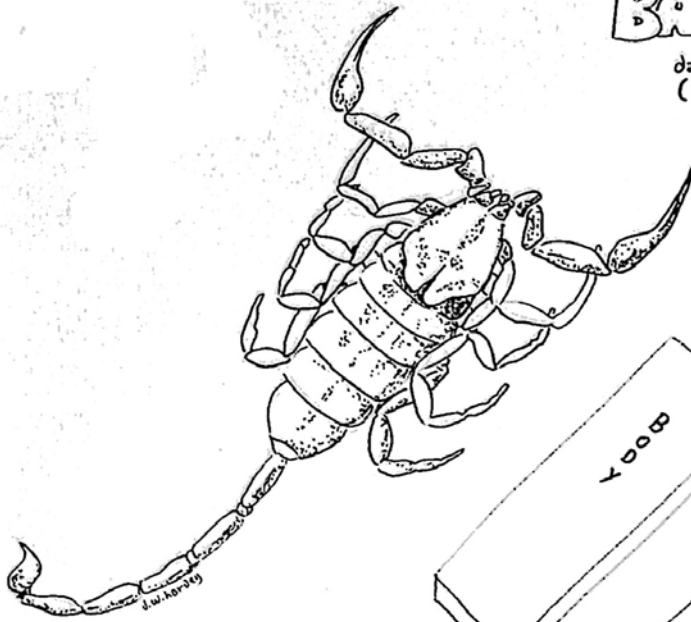
Make Check Payable to AABA

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

BARK SCORPION

daleharvium arizonainsus L.
(subspecies dossigan)

chisel
punch
curve
sculpt

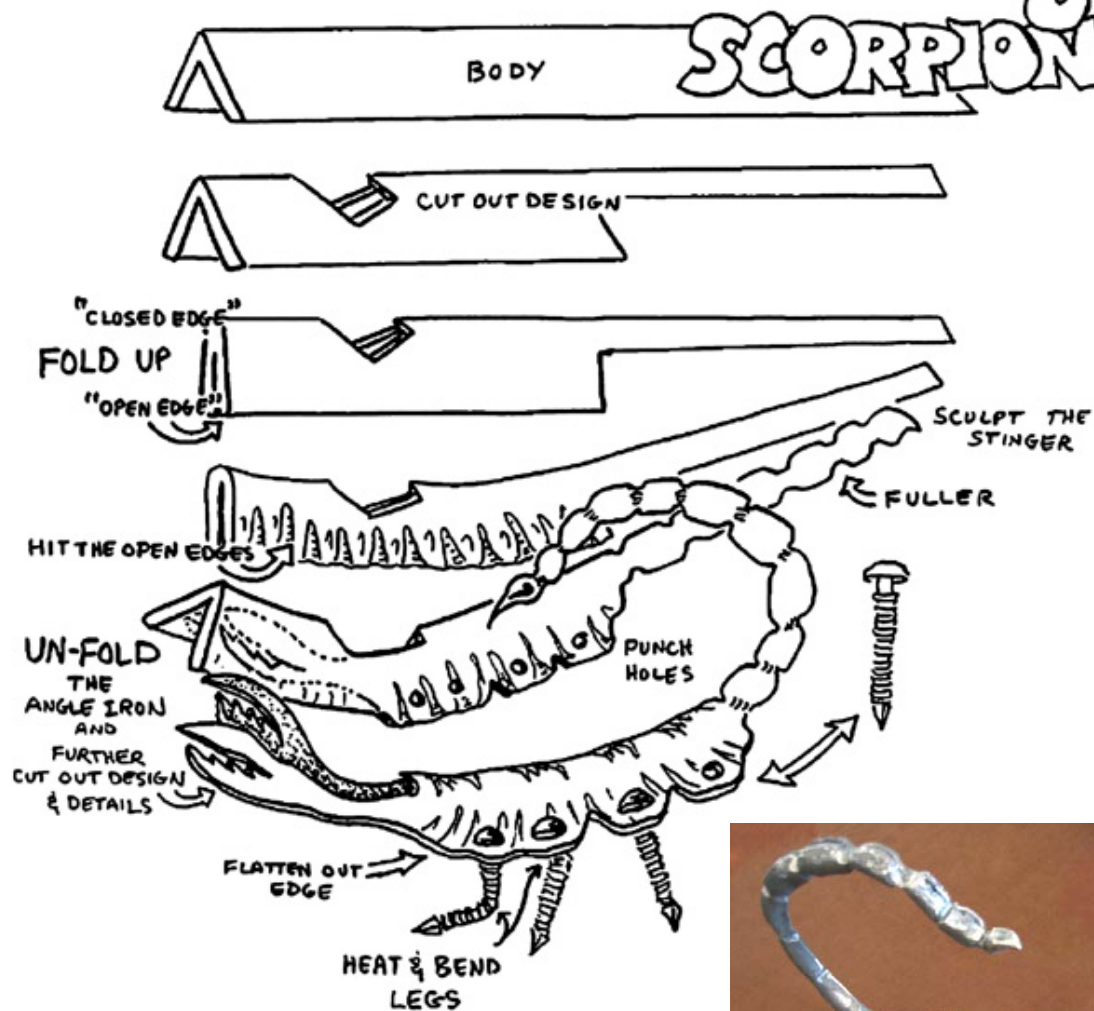
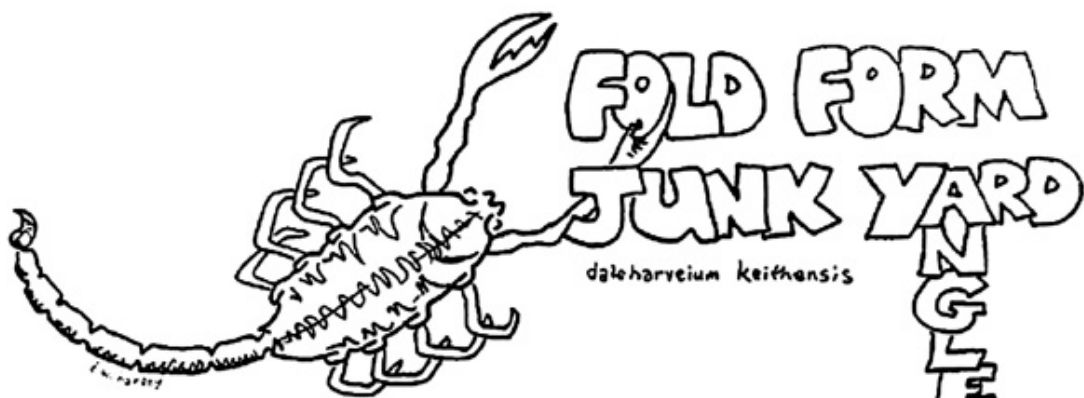


taper
fuller
rivet
sculpt
tenon



d.w.harvey

Ed note: Those attending the November demo got to see examples of Dale Harvey's exceptional drawing talent. Dale has agreed to provide the AH with drawings on a regular basis. We are looking forward to including new ones in each issue. John Doss is helping with the technical aspect of converting the poster size drawings to digital format suitable for publishing.



New Work by John Doss and Keith Jones

John and Keith of EnviroSmithAZ, Inc. had the unique opportunity to work on Talking Rock's Idea House which was featured in *Phoenix Home and Garden*. This was their first big architectural project. Great job guys!



*Large range hood in the main house.
(copper with steel frame)*



*Front gate of the main house
(1 x 3 tube)*



*Range hood in the guest house.
(steel)*



*Large range hood in the main house.
(copper with steel frame)*



*Fire screen in the guest house.
(steel and copper)*

New Work



*Shelf brackets by
Don
Dumler*



*Ok, we all know how this works: "Honey, I need shelf brackets."
"Sure," he says "I can knock out a couple shelf brackets in an hour or two."*



"By the way, did I mention I need 10."



*Ribbon sink
support
By
Doug
Kluender*



*Calla lilly napkin holder by
Mary Ann LaRoche*



Sample of a railing Len Ledet and Maurice Hamburger did in conjunction with Phoenix Forge. Traditional forged joinery sets the style for this 28 foot railing project.



Basic Blacksmithing at Turley Forge

By Wally Warnke

This past April I attended the 6-day blacksmithing course at Turley Forge in Santa Fe, New Mexico. Frank Turley has been operating this school since 1970, making it the oldest of the modern blacksmithing schools. Located on the outskirts of Santa Fe, the school is still just a few minutes from downtown. There is much to see and many good places to eat in Santa Fe. Frank's brochure lists several reasonably priced places to stay nearby. We towed a travel trailer and stayed at a trailer park, about 10 minutes away. Many students rent a bed in the bunkhouse at one of Frank's neighbors. I did hear some complaints about "nothing to do" in the evenings there – they have no television. So take a good book along,



or if you're one of those who can't live without a TV you might prefer one of the local motels.

The school is housed in a clapboard building with dirt floor and six student forges surrounding a central worktable. At the front of the building are Frank's demo station, blackboard and lecture area. At first glance, the whole setup can appear pretty rough. But after looking a bit closer and taking a moment to sort out what's important, you find that all the anvils have good faces and edges, hammer handles are tight, there are plenty of tongs and other tools, the blowers turn easily, forges are sound, the hoods draw well and

instruction is second to none. Oh yes, did I mention all the work is done at coal forges with hand-cranked blowers?

The focus of the class is to provide many of the lessons that, in another time, an aspiring blacksmith would learn during an apprenticeship. We started with fire building and management, working with large lump coal obtained from a local farrier's supply. Rather than breaking up the lumps, we simply pushed a couple up to the edges of the fire. As it burned, the edges of the coal lumps turned to coke and flaked off into the fire. Just keep pushing the lumps toward the fire as they coke up and break off. With the fires going we moved right into forge welding, starting with an excellent demo of judging temperature by color, particularly welding temperature. We started with faggot welds on the end of 1/2" square bar and moved into lap welds for the handle and shank of a fireplace shovel.

Basic forging technique and hammer control were taught through a series of different scroll ends. Then back on the fireplace shovel we moved into fullering, twisting and drawing out with a striker. Everyone got plenty of practice as both smith and striker. Finishing up the shovel there were demonstrations of sheet metal work and rivet making. Yep, forged our own rivets in a header tool, not quite as easy as Frank makes it look. Having made two good





white-out as a gauge for keeping the head centered. Keep the fire deep, clean and compact. Frank is a patient teacher, a gentle, thoughtful man with an encyclopedic knowledge of blacksmithing and the people in blacksmithing, and a comprehensive collection of dirty jokes. There were lots of good blacksmithing books to look at and it seemed like every lecture included references to one or more of the best books on that subject. This is one class where you should definitely bring a notebook. I came away with 28 pages of notes, and should have taken more.

No blacksmithing class would be complete without a discussion of tool steels, heat treatment, spark tests at the grinder and some practice making basic tools. Usually you end up making that cold chisel from a piece of sucker rod or possibly coil spring, good for the student because they are relatively forgiving to forge and don't get hard enough to shatter, even with less than perfect hardening and tempering. With Frank, we used W1 tool steel and got to see first hand how it cracks on hardening if you forge it too cold. And after trying again, enough times to get it right, we got to see first hand how good a really well made tool can be.



rivets (out of about 20 tries) I will now feel no guilt at all about buying them by the sack from Pieh Tool.

Throughout the lectures and subsequent practice sessions were scattered little gems of technique, always aiming at teaching the lessons of an apprenticeship: correct forging sequences for the various scroll ends, upsetting and scarf formation for the lap weld, judging heat, how to work as a striker, and how to work with a striker.

Straighten on your side of the horn, bend on the far side. Twist at a bright heat, too cold and the corners will tear, leaving stretch marks. When filing a curve, start downhill and finish uphill. Draw a small circle on the rivet header with



The last day, local Santa Fe smith Winslow Morgan stopped in to help finish out the class. Winslow did a traditional apprenticeship in Germany, the experience quite evident in the look of his work and the confidence with which he approaches forging. Winslow summed up the continuing appeal of the school and the experience at Turley's in a few words, "this is a legendary place". Indeed it is.

L: Frank Turley (on the right) demonstrating striking technique .

Material Choices for Pattern Welding

Reprinted from BAM March 1992

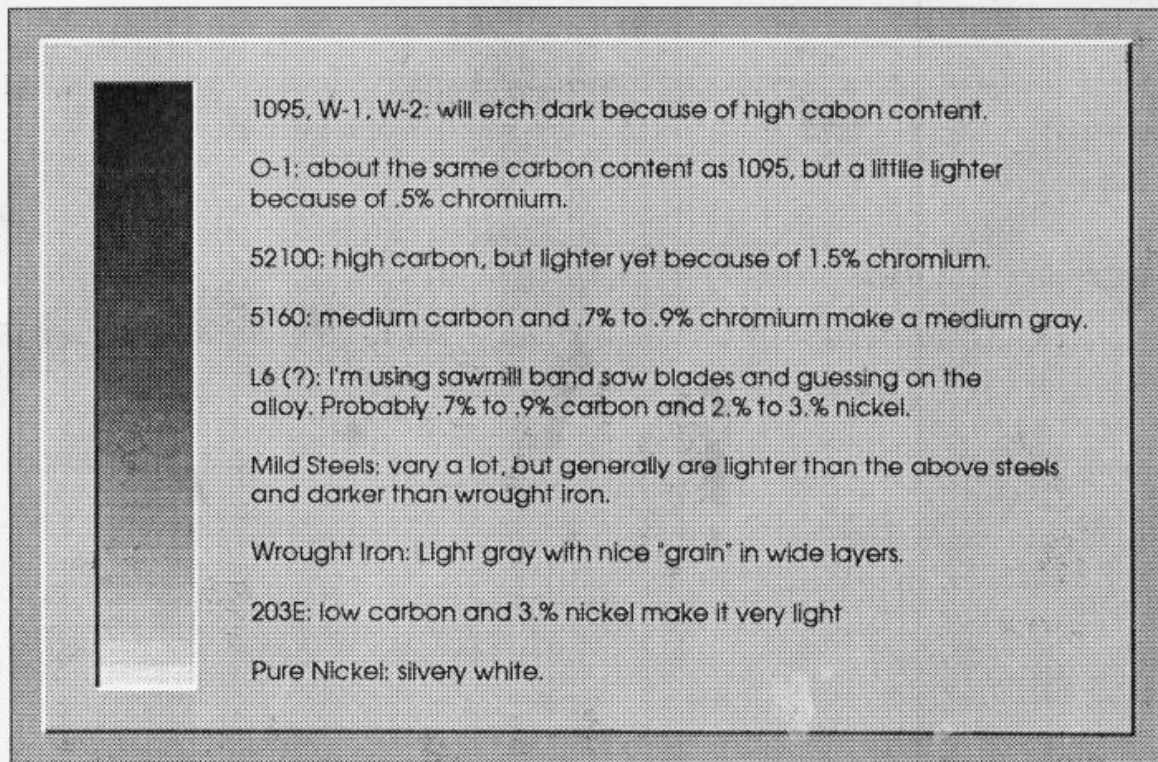
The choice of materials used in a pattern welded object will be a major factor in determining both its visual appearance and its physical characteristics. Being able to predict a material's lightness or darkness after the etch is a great help in planning a billet.

In my experience, the higher the carbon, the deeper (darker) a steel will etch. Conversely, the lower the carbon and higher the percentage of chromium or nickel the lighter an alloy will etch. The following is a list of the steels that I commonly use and their approximate place on the gray scale.

Notes:

Contrast is more important than position on the scale. The farther apart on the above scale the greater will be the contrast.

I usually etch in muriatic acid or ferric chloride. Ferric chloride seems to be better when the pattern contrasts depend on carbon differences. I use the muriatic acid as it comes out of the bottle and dilute the ferric chloride with about three parts water.



Ed Note. We thought this chart might help you understand some of the subtleties of Ray Rybar's demo. Armed with this info you should be able to get an idea of the materials Ray uses to get the various colors. Of course, since he makes some of his own metal it might not apply in all cases.

Classifieds

Stick Welding Rod: Steel, stainless, and hard facing. Silfos 5 and 15 brazing rod for non ferrous. Most in original sealed containers. Asking about 1/3 of new cost. Steel remnants, most shapes \$.15/ lb. Tom Woods 602-841-1218

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

I beam. Various sizes and lengths up to 8'. Ralph Montenegro is willing to donate it to members instead of having to haul it away himself. 520-748-7457 (Tucson)

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

Doctor says: stop doing heavy work. So, equipment that might tempt me to do heavy work is going up for sale. Antique PELS gear & cam operated ironworker, large tall cone, 19th century wagon tire bender, 50# Little Giant, large heavy welding table, antique bending forks, Champion hand crank blower, Doall band saw, 150# +/- swage block with original cast iron stand, soft coal, misc. bench tooling, etc. Most of this equipment came from an east coast shop that began operations in 1892. Power equipment on site to load your truck or trailer. Ralph Shepard, Sierra Vista, AZ. Email: mayo_shep@msn.com for details, pictures, and prices. 520-378-2829 (home) 520-266-0446 (cell)

Plasma Cutter LITEC PCM-750i. Never used commercially, hobby use only. LITEC was bought by ESAB. This unit works perfectly, cuts up to 3/4", severs up to 1". Uses shop air. I have extra tips, etc. Selling since I bought a new one for my CNC setup. Paid \$2300 for it, will sell for \$1000 OBO. I also have for sale my box of horse shoeing equipment. Hammer, nippers, file, crimper, hoof stand, etc. \$100 for all. Call Bill Micka . 520-299-6299 or email wmicka@earthlink.net.

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

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

Sources

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

Bar U Bar Supply

The source for anvils, post vices, 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

Brown's Farriers Forge Supply

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Brent Bailey. A blacksmith in California specializing in custom tools and ornamental forgings for artisans. www.brentbaileyforge.com

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Dan Jennings 2522 W. Loughlin Dr. Chandler, AZ 85224 Tel (480) 839-6339 Fax (480)839-6339 Danshammer@cox.net