

# *The Anvil's Horn*

**A Publication of the Arizona Artist Blacksmith Association**

Issue No. 223, July 2023



*Chile pepper bottle opener made by  
Sam Rivera at our May demonstration.*

# President's Message

Hello Blacksmiths,

I really look forward to the July demo each year to get out of the Phoenix heat. This year will be a little different for me. After applying for 2 years, I got accepted into the Forging Focus program at the Center for Metal Arts in Johnstown, PA. I'm excited to see how many new tricks this old dog can be taught. I should have plenty of material to share with you when I return.

Since I won't be at the July demo, I'm postponing the July President's Project. It will resume in September.

Included in this newsletter is a reorganized list of helpers needed for the Winterfest Conference. Without several folks stepping up, we won't be able to continue putting on this great conference. Everyone that attends has a great time and enjoys all that is offered. The list is organized to pick a subject area and just focus on that small item. With enough folks, we'll be able to fill the staff positions and continue this great event. We have plenty of members in AABA to pull this off. Please consider giving back in this way and allow our blacksmithing knowledge to be shared for generations to come.



See you around the forge,

*Steve Miller*

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Material submitted for publication in the Anvil's Horn may be edited or rejected by the editor. Material submitted must be your own work, not plagiarized. By submitting material, you agree to allow AABA to edit, print, or post on the AABA website. You also give permission for the material to be reprinted by other blacksmith publications (i.e. publications of ABANA and of ABANA affiliates). **Copyright.** The creator may retain copyright for the work. If we publish a copyrighted item, consent of the copyright holder will need to be obtained before republication. **Graphics.** High-contrast, high-resolution digital picture files and original drawings are preferred, but we can work with lower-contrast, lower-resolution graphics.

*The Anvil's Horn* is printed by Sundance Press, Tucson, AZ  
*The Anvil's Horn* is created with Scribus 1.4.8

**Demonstration: Saturday, July 15, 2023**  
**Workshop: Sunday, July 16, 2023**  
**Northern Arizona University**  
**Flagstaff, AZ**

**Demonstrator: Dylan Cook**

Dylan plans on forging and constructing a simple, versatile table base that will work well for many different types of table tops. He will focus on mortise and tenon joinery.

- Registration begins at 8:00 AM, the demonstration starts at 9:00 AM.
- Registration fee:
  - \$15 for members, \$20 for non-members
- Lunch is on your own.
  - There are several good eating spots nearby.
- Tailgating is encouraged. Tailgaters, please consider donating to Iron in the Hat.
- Bring things for Iron-In-the-Hat and Show-and-Tell.
  - Be sure to put your name on anything you bring for Show-and-Tell.
  
- The Dylan Cook workshop on Sunday is \$100.
  - This workshop will give students hands-on experience with the joinery Dylan demonstrates on Saturday.
  - Contact Richard Rozinski at 602-803-7255 or [neongod52@gmail.com](mailto:neongod52@gmail.com) to register.

**Remember Iron in the Hat**

Thanks to all of you who have participated in Iron in the Hat. By purchasing tickets and donating items, you help support AABA events and projects. Items for donation can be a tool, piece of art, something you made specifically for iron in the hat, something you don't need in your shop, a great book, a t-shirt, a hat ... something an AABA member would enjoy.

**Directions to the NAU Sculpture Studio**  
Flagstaff, AZ

- North on I-17
- Exit McConnell Dr (First exit north of I-40)
- Turn right on McConnell Dr
- Turn right on Pine Knoll Dr
- Turn right into Parking Lot for Facility Services (Marked "Parking" at the east side of the map on page 4)
- The Sculpture Studio is building 84 (black arrow) on the map on page 4.

**Safety glasses are always required in the demonstration area.**

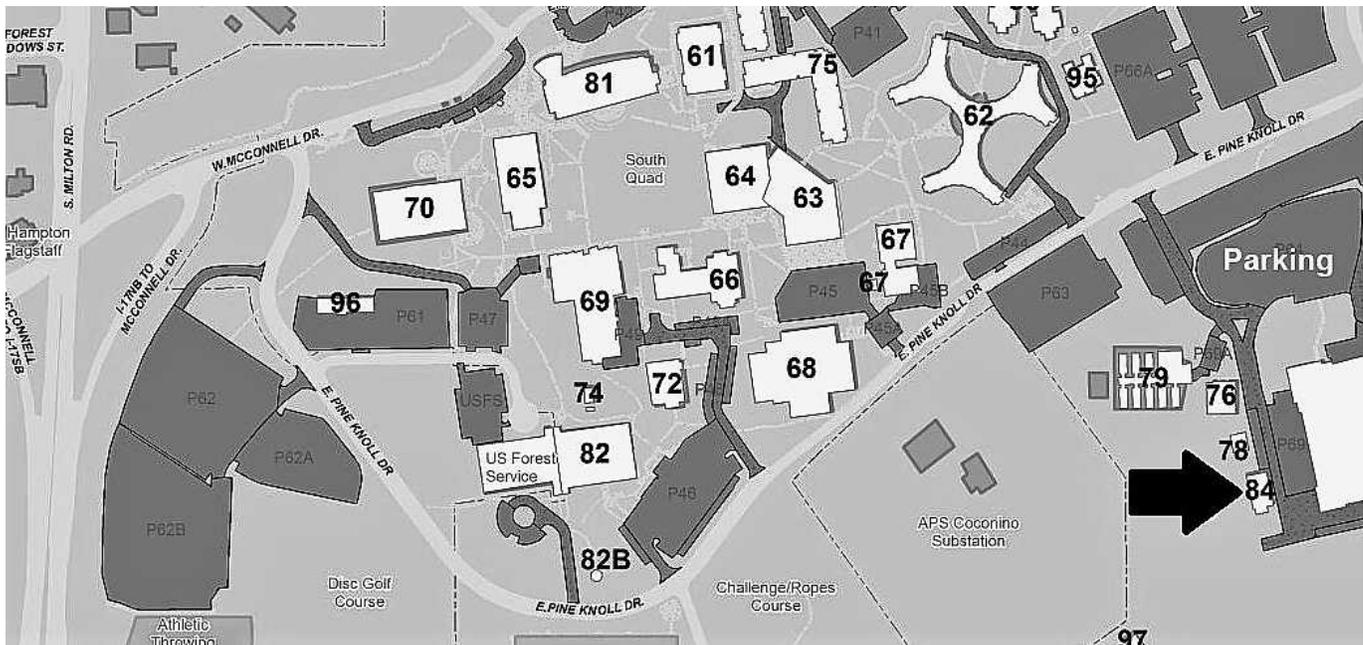
Hearing protection, closed-toe shoes, and long clothes of natural fibers are recommended.

**Also, observe the safety requirements of our host, the NAU Sculpture Studio**

People need to wear good leather shoes that cover their feet. No Sandals! Also, people need to wear long cotton pants with no holes in them, long sleeve cotton shirts, something to cover their head, and something to tie back their hair if they have long hair.

## Our July Demonstrator: Dylan Cook

Dylan Cook began blacksmithing in 2008 after being introduced to the art by Mike Reimer. In 2012, He started a blacksmith program at the Orme School in Central Arizona. After leaving Orme in 2016, Dylan began teaching the blacksmith class at Pieh Tool Company in Camp Verde, Arizona. Currently, he works out of his shop in Prescott, Arizona where he takes on ornamental, architectural and sculptural ironwork as well as private workshops. Dylan enjoys spreading his love for forged ironwork through education and stewardship of the trade at Pieh Tool Company and Grizzly Iron in Phoenix, Arizona.



*The south end of the Northern Arizona University campus in Flagstaff.  
The arrow points to the sculpture studio. I-17 (Milton Rd.) is at the far left.*

## Other Events of Interest

We encourage everyone with an interest in blacksmithing, the metal arts, etc., to come to the Hammer-in at Roaring Camp. It will be open to the public for viewing; everyone will be able to watch as our demonstrators push the boundaries of hot metal, bring ancient techniques to life, and share with the larger community their talent and dedication to the blacksmith's craft. However, only CBA members who pay the registration fee may work at the anvils and forges.

DATE: August 18-19, 2023

LOCATION: 5401 Graham Hill Road, Felton, CA

Full details at:

<https://calsmith.org/event-5258674>



# May Demo Report

Bill Ganoe

*Photos by Bill Ganoe unless otherwise noted.*

Our May demo at Desert Metal Craft in Tucson on May 20 featured two presentations. Liz Cameron, a co-founder of, and an instructor at Desert Metalcraft, gave us a short course on heat-treating steel in the morning. In the afternoon, Sam Rivera, who operates Designs by Sam in Tucson, demonstrated the forging and finishing of one of his famous chile pepper bottle openers.

Heat treating can get into some pretty heavy detail that can lose many ordinary blacksmiths, but Liz took a lot of that esoteric detail and made it understandable by relating it to things that most of us are already familiar with. She's good at making science accessible to non-scientists. (Liz teaches a more extensive online class on heat treating at Desert Metalcraft. Check it out at

<https://www.desertmetalcraft.org/enrolldmc>)

Liz started out by noting that most heat treating procedures (times and temperatures) have been developed in the lab for 1" cubes of metal. She recommended the book, "Knife Engineering" by Dr. Larrin Thomas, because it covers heat treating for odd (not 1" cubes) shapes like knife blades.

She went on to describe the various sections of the typical phase diagrams for steel. I still can't discuss all of the details involved after just a quick look at a particular phase diagram. But, when I sit down with a textbook full of those diagrams, I can understand what the authors are talking about. It's no longer just a bunch of obscure smoke and mirrors.

Liz included several useful tips for the average low-tech smithy. For example, she noted that Rob Gunter's Super Quench would be good for low-carbon (less than, say, 1030), but there's good chance of cracking any work piece with a greater carbon content.

Why does quenching in warm oil work better than quenching in cold oil? Because warm oil is less viscous than cold (or cool) oil, so it slides over the surface of the work piece more easily, and cools the work piece faster and more uniformly.

When tempering, it can be a challenge to judge the color of your work piece. If you're working with less-than-ideal lighting conditions, you can get a rough idea of the temperature by spraying a little water on your work piece. Water starts to bead up at

about 400 degrees (F).

Are you trying to use a toaster oven to temper small pieces? Those ovens are notorious for wild variations in temperatures. You can even those variations out by putting a large thermal mass, like a cast iron skillet full of sand, in the oven. Let the oven heat up that mass, and then put your work piece in.

At the end of Liz' presentation, Rich Greenwood demonstrated the importance of heating steel to the correct temperature (range) and quenching it in the appropriate medium for the specific type of steel. He treated three pieces of high-carbon steel (recommended temperature and oil, too hot and water, and recommended temperature and water), and then broken them to show how the grain structure is affected by the changing the conditions of the heat treatment.

Sam Rivera started his chile pepper bottle opener with a piece of 1", schedule 40, black pipe. He quickly made a chile pepper with a stem that formed the bottle opener loop. He then demonstrated the high tech finish he uses to put the eye-popping, translucent finish on the chile pepper.

His process starts by sanding or wire brushing the metal to a bright, shiny finish, then he uses a metal dye that is mixed with acetone and then painted on the metal. It doesn't grab your attention at this point, but Sam then applied a clear coat, and the color burst forth. These days, Sam usually uses a clear epoxy called Cerakote that needs special protective equipment like spray booths, respirators, protective clothing, etc. But for this demonstration, Sam used plain old Krylon clear coat in a spray can. It chips and cracks much more easily than Cerakote, but the visual effects were still stunning.

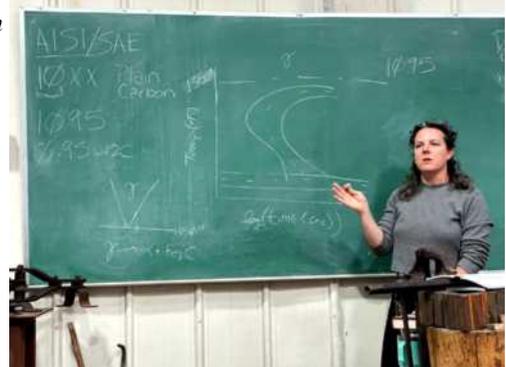
The metal dyes Sam uses are expensive (\$160 a pound) and require a fairly big minimum order from the supplier. You can get a wide variety of colors, but you can mix up almost any color you want with just three primary colors (cyan, yellow, and red). But it would still cost you about \$480 for three one-pound containers of those colors. Sam filled several small jars with an ounce of so of dye powder and sold them to people at the afternoon demonstration.

# May Demo Report (Continued)

*Photos by Bill Ganoe unless otherwise noted.*



*Rich Greenwood and Liz Cameron*



*Lots of graphs*



*Rich Greenwood breaking the demonstration pieces.*

*The grain structure of the center piece (heated way above the recommended temperature) is much coarser.*



*Sam Rivera starting his chile pepper bottle opener*

*Applying the metal dye.*



*Finished bottle opener*

## Show and Tell



*A manually operated centrifuge found by Ira Wiesenfeld*

*Darla Selander*





# Winterfest 2024

January 18-20, 2024  
Sculpture Tucson, Tucson, AZ

It's hard to believe next year's conference will be its 6th year. It keeps getting better and better with something new every year. In order to maintain the quality conference, you have grown to know we need your help. So, the Winterfest committee is forming now. We'll start having face to face meetings at a food venue to be determined. Bring your ideas and enthusiasm. Below is a list of managers we need to make this happen. Hoping you will join us for some fun and fellowship along with a little bit of work. Please let your Winterfest Co-chairs, Steve ([stevemiller.az@cox.net](mailto:stevemiller.az@cox.net)) or Richard ([neongod52@gmail.com](mailto:neongod52@gmail.com)), know which area you would like to manage.

- Marketing/Advertising – 1 to 2 People 9 months to 2 wks prior to conference  
Develop and manage advertising or the conference
- Buy cake, snacks, & utensils several days prior to and the day of the conference
- Printing – 1 Person prior to the conference  
Print gallery labels & Auction forms
- Refill propane tanks – 2 people several days prior to the conference
- Setup Education Tent  
Unload Education Trailer
- Pickup steel for demonstrator projects, education tent, forging contest
- Clean shop – 2 to 3 people the day before the conference
- Table setup – 4 to 6 People 1 day before the conference  
Setup tables in the tent for seating, displays, TV monitor,
- Setup bench seating in Barn – 1 to 2 People the day prior to the conference
- Setup the Projector in the tent – 2 People the day prior to the conference
- Parking lot - 2 People 1 day prior to the conference  
Setup the parking lot to keep driveway clear
- Gallery Setup – 2 to 3 people the day prior and 1st day of the conference  
Get pedestals out of storage  
Receive and set up gallery items
- Gallery Security – 3 to 4 people during conference
- Camera - 2 to 4 people the day of the conference  
Setup cameras, cables, & TV monitor  
Run cameras during conference
- Demonstrator Drivers – 2 to 3 people prior to, after, and during the conference  
Shuttle Demonstrator between their hotel and the conference
- Trash removal 1 to 2 people during conference  
Remove trash, replace trash bags
- Photographer – 1 to 2 people  
Take photos before and during the conference, submit photos to the editor
- Retail Monitor 3 to 4 people  
Manage retail sales
- Silent Auction – 2 to 4 people  
Arrange items, complete forms, provide security
- Banquet – 2 people Saturday of the conference  
Setup food tables for banquet
- Iron in the hat sales – 1 to 2 people during the conference  
Sell Iron in the Hat tickets
- Cleanup – 4 to 6 People after the conference  
Tear down Education Tent, pack up Education Trailer, remove trash, inspect entire grounds

# Recap of Botanical Blacksmiths Shows

Tubac - November 2022 - April 2023

The Arboretum at Flagstaff - May 2023 - September 2023

Cathi Borthwick

*Photos by Cathi borthwick*

The Botanical Blacksmith exhibits at Tubac in the winter months and The Arboretum at Flagstaff in the summer months continue to provide AABA members a chance to show and sell their outdoor ironwork in beautiful garden settings. The two exhibits work in harmony with one another providing a chance to move work between the two venues for more exposure to different members of the public.

We just completed our second rendition of the exhibit at the Tubac Presidio. Thirteen smiths, which included several new participants, exhibited 31 pieces in the gardens. As usual, the work demonstrated a variety of styles and techniques. Included were sculptures featuring animals such as spiders, roadrunners, dragonflies, butterflies, and whales while others featured botanical themes or a more abstract style. Functional pieces, including a gate, bird baths, and garden lights, were also part of the exhibit. Once again, the exhibit was well received by the public but, unfortunately, sales weren't as robust as last year. There was a new director and the Presidio, like many other places, is trying to regain its footing post-pandemic which affected promotion of the exhibit. Hopefully, this will be rectified for the third rendition. If anyone has good ideas about promotion, please speak up.

A smaller rendition of the Botanical Blacksmiths exhibit remains up at the Tubac Presidio through the

summer and will be replaced by the full exhibit come fall. The smaller show consists of 13 pieces by 5 artists. Visitation falls off considerably in the summer months, but the Presidio staff appreciates having the artwork in the gardens as it adds to the visitors' experience.

Meanwhile, some pieces from Tubac and many new pieces made their way to the grounds of The Arboretum at Flagstaff for the twelfth rendition of the exhibit there. Things were delayed a bit as the Arboretum still had a few feet of snow on the grounds in mid-April and, as the snow melted, it uncovered the effects of the tough winter on the buildings, parking lot, and road which all needed to be repaired prior to opening. So the opening of The Arboretum and the Botanical Blacksmiths exhibit was delayed by a couple of weeks. The Botanical Blacksmiths exhibit officially opened May 20 and will run through September 15. It is set up in a new area this year, still among the giant ponderosa pines and beautiful gardens but closer to the area where many events, such as concerts, weddings, etc. take place, so hopefully this will give the show even more exposure to the public. The exhibit this year includes 26 pieces by 13 artists and features work by members of AABA as well as pieces created by Brian Painter and some of his NAU sculpture students. There is a delightful variety of style and design.

## Don't Forget!

The July AABA demo is scheduled for July 15 in Flagstaff at NAU. It would be a great time to come up to the cool pines, enjoy an excellent demo on Saturday, and then stay over for a visit to The Arboretum on Sunday to take in the Botanical Blacksmiths exhibit and the gardens which should be in full bloom.

And then start imagining what you can create to enter into the next Botanical Blacksmiths exhibit.



***The Sentinel***

*by  
Jerry Harris  
(In Tubac)*



***Roadrunner***

*by  
David Flynn  
(In Tubac)*

## Recap of Botanical Blacksmiths Shows (cont.)



**Circle of Life**  
by  
James Schremp  
(In Flagstaff)



**Naksu**  
by  
Liz Carlier  
(In Flagstaff)



**Dancing Flames**  
by  
Steve Miller  
(In Flagstaff)



**Desert Whale**  
by  
Ira Wiesenfeld  
(In Tubac)



**Alice's Garden**  
by  
Cathi Borthwick  
(In Tubac and Flagstaff)



**Scar**  
by  
Steve Grater  
(In Tubac)

## AABA Calendar 2023-2024

July 15 & 16	Demo: Dylan Cook	NAU	Flagstaff
September 16 & 17	Demo: George Witzke	Dead Horse Ranch	Cottonwood
November 18 & 19	Demo: Mark Ling	Grizzly Iron	Phoenix
December 3	Annual Banquet, Meeting, and Auction	TBA	Phoenix area
January 18 - 20	Winterfest VI	Sculpture Tucson	Tucson

**Your dues for 2023 are due!**  
**Renew now!**  
**Don't let us drop you from our mailing lists.**

### Classes at Pieh Tool in Camp Verde

- Beginning/Intermediate blacksmithing classes taught by Dylan Cook  
No classes were scheduled at press time.  
Registration is \$585.  
Students will make several simple projects to take home.
- Knifemaking class taught by Master Bladesmith, Ray Rybar  
No classes were scheduled at press time.  
Registration is \$585.  
Students will make one knife.

For class dates when they become available, for full details about the classes, or to register call **928-554-0700** or go to <https://piehtoolco.com>

### What Inspires You?

Is there a project, tool, ornament you would like to see at an AABA demonstration? Is there a particular demonstrator you would like to see? Send your request(s) to the AABA 1st Vice President, Richard Rozinski, **602-803-7255** or [neongod52@gmail.com](mailto:neongod52@gmail.com)

Is there a particular project or technique you would like to see in The Anvil's Horn? Is there a general topic you would like to see covered? Send your request(s) to the editor, Bill Ganoe, by email to:

[editor@azblacksmiths.org](mailto:editor@azblacksmiths.org)

or by regular mail to:

Bill Ganoe  
PO Box 40233  
Tucson, AZ 85717

### Deadline for the September 2023 issue

August 1, 2023 is the deadline submitting photos and articles for the September 2023 issue of *The Anvil's Horn*.

Send articles, pictures, etc. by email to:

[editor@azblacksmiths.org](mailto:editor@azblacksmiths.org)

or by regular mail to:

Bill Ganoe, PO Box 40233, Tucson, AZ 85717

### MCC Blacksmithing & Welding Class

The Mesa Community College blacksmithing program is an excellent deal - over 60 hours of instruction including material and propane! Summer 2023 classes are in session. Registration for the Fall 2023 semester starts August 19, 2023. Richard Rozinski and Michael Johnson will be teaching various sections of the class during the week. Jaime Escobedo will be teaching a section on Saturdays. Blacksmithing is listed as **WLD103** in the class schedule. Check the Mesa CC website for details. Classes fill up early, but waiting lists may be available. For more information go to: [www.mesacc.edu](http://www.mesacc.edu)

### Welcome New Members

Carter Calhoun	Gilbert, AZ
Megan Hiller	Tempe, AZ
Donna Phillips	Tempe, AZ
Elizabeth Cameron	Tucson, AZ
Dan Fletcher	Tucson, AZ
Stephen Young	Tucson, AZ

### In Memoriam

Ken Walters, Cathi Borthwick's partner for over 30 years, passed away on February 26, 2023.

"Ken passed away, peacefully at home, on 2/26 after living with dementia for 5+ years. There was a celebration of his life at the (Flagstaff) Nordic Center on 3/26 to remember Ken and all his backpacking, skiing, and climbing adventures as well as his achievements as a photographer and educator. The celebration went on in the midst of a snow storm which was a fitting farewell. We might hold another get-together this summer, more around the time that I scatter his ashes."

-- Cathi Borthwick

# AABA Website: [www.azblacksmiths.org](http://www.azblacksmiths.org)

## Open Forge: Tucson

AABA open forges in Tucson are not scheduled until next fall. Watch for listings here or watch for Tucson area email. If you aren't on that email list, send a request to [editor@azblacksmiths.org](mailto:editor@azblacksmiths.org)

## Open Forge: Grizzly Iron

Open forges at Grizzly Iron have been paused. See details below under Classes and Events.

## Open Forge: Iron Rhino Forge

2051 E. Cedar St. Suite 6, Tempe

**Open forges** every Tuesday evening, 6 PM - 10 PM  
Free to watch or \$30 to participate. Details at <https://www.arizonablacksmith.wtf/open-forge>.

**Teen Social Open Forges**, first Sunday of every month from 5 pm to 9 pm. Come practice your blacksmithing skills with other youths, have some pizza, and make new friends! For ages 18 and under. Parents invited as spectators. Details at: <https://ironrhinoforge.as.me/youthsocial>

## Open Forge: Desert Rat Forge (Phoenix area)

Paul Diefenderfer will host an open forge at Desert Rat Forge on Saturday, July 1, 2023 and Saturday, August 5, 2023, from 9 AM to noon followed by lunch (You gotta' buy your own.) at the world famous Big Earl's Greasy Eats in Cave Creek. Have fun with a propane or coal forge, flypress, powerhammer, widgets and gadgets.

Desert Rat Forge is at: 7645 E. Highland Rd., Cave Creek. 602-509-1543 or [dief@phoenixrockgym.com](mailto:dief@phoenixrockgym.com).

Directions: From the center of Cave Creek – 4-way stop at Cave Creek Rd & School House Rd. Head north on School House 1.2 miles to Highland Rd (if you get to the 4-way stop at Fleming Springs you've gone a tad too far) . Turn right (east) on Highland After about 1 mile the pavement ends. Please drive slow to avoid kicking up dust. As the gravel road makes a turn to the left there will be a single lane gravel road on the right with a sign for 7645. Drive down this road for bit until you see the big anvil. You are there! Park in the pullout if there is room – please do not park on top of any vegetation! If no room, return to main dirt road, park along the north edge, and walk the 700 feet back to property.

## If You Are Attending An Open Forge...

These open forges are part of AABA educational activities, but AABA does not provide funds for these events. They are hosted by our members for all of our benefit. So if you participate in forging, welding, use shop materials, or accidentally damaged something, please put something in the donation box to help our hosts with their expenses. Thank you! From all of your open forge hosts.

**You will need to wear safety glasses. Hearing protection is recommended. Also, observe the safety requirements of open forge hosts.**

## Classes and Events at AABA Members' Shops

### Desert Metal Craft

544 E. 24th St., Tucson, AZ

The schedule at Desert Metal Craft features a wide range of classes and workshops. Check the DMC website, <https://www.desertmetalcraft.org>, for on-line events, details of specific events, and to register for each class or workshop. Check out the scholarship opportunities.

### Grizzly Iron

1329 W. Lincoln St., Phoenix, AZ

Grizzly Iron has indefinitely paused open forges, classes, and workshops because of the heavy current business work load. Check the website: <https://grizzlyiron.com/core-classes/> or <https://grizzlyiron.com/master-classes/>, or go to the **Grizzly Iron Open Forge and Workshops** group on Facebook for changes as they develop.

### Iron Rhino Forge

2051 E. Cedar St. Suite 6, Tempe AZ

The Iron Rhino Forge has a wide range of special blacksmithing and knifemaking classes, demos, and workshops with local instructors and master-level guests from around the country and the world! Classes coming up soon include:

**Blacksmith Business Fundamentals** taught by Nick Rossi, July 22-23

**Knife Sharpening** taught by Corey Dunlap, who sharpens knives for chefs all over Phoenix, August 12

Details at <https://www.arizonablacksmith.wtf/>

# Zeevik Gottlieb Demonstration at Iron Rhino Forge

David Goodman, Len Ledet, and Bill Ganoe

Zeevik Gottlieb came out to the Iron Rhino Forge in Tempe on April 11, 2023, for a special demo of figurative sculpture. Almost 50 people, attended this demo. During the demo, Gottlieb turned a 20" piece of square tubing into a graceful, flowing sculpture as well as creating other pieces that showed his technique and design approach.

But this wasn't just another demonstration of shaping hot steel. It was fund raiser to support the AABA scholarship fund.

Zeevik Gottlieb gained international acclaim when he won first place at the Iron Forging World

Championship in 2009 in Stia, Italy. He has since been invited to participate in competitions and to guide workshops around the world.

Gottlieb has been heavily influenced by master blacksmiths Uri Hofi (Israel) and Claudio Bottero (Italy). Uri Hofi died on March 14, 2023. On his deathbed, Hofi urged Gottlieb to continue transferring knowledge and cultivating the next generation of blacksmiths and artists. This demonstration raised \$550 that was donated to the AABA scholarship fund in memory of Uri Hofi.

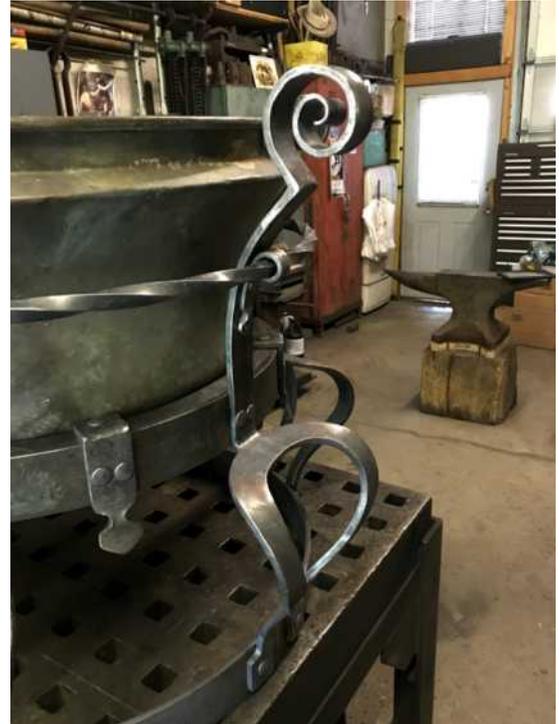


*Zeevik Gottlieb and Jaime Escobido at the demo*

*Odette  
by  
Zeevik Gottlieb  
(not done at this demo)*



## Members Gallery Brian Hughes



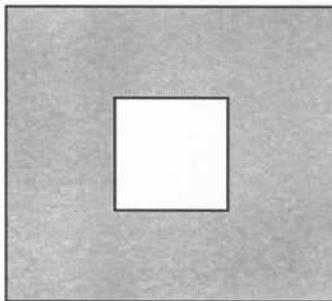
A stand for large copper cauldron. The stand is all forged, approximately 3' tall x 3' wide. The scrolls are 3/8" x 2". The hoops were turned on a 100 year old tire roller.

## Square Bolster Plate

*Daniel Miller, North Carolina*

At a 2012 class with Dan Miller at the John Campbell Folk School in Brasstown, North Carolina, he mentioned a simple way to make a square bolster plate. Rather than drill and file and file and file, he made two straight cuts in a section of plate, then welded it back together.

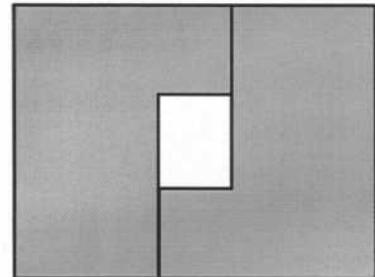
*To make a bolster plate like this.*



*Cut two plates like this.*



*Then flip one section over and weld it back together.*



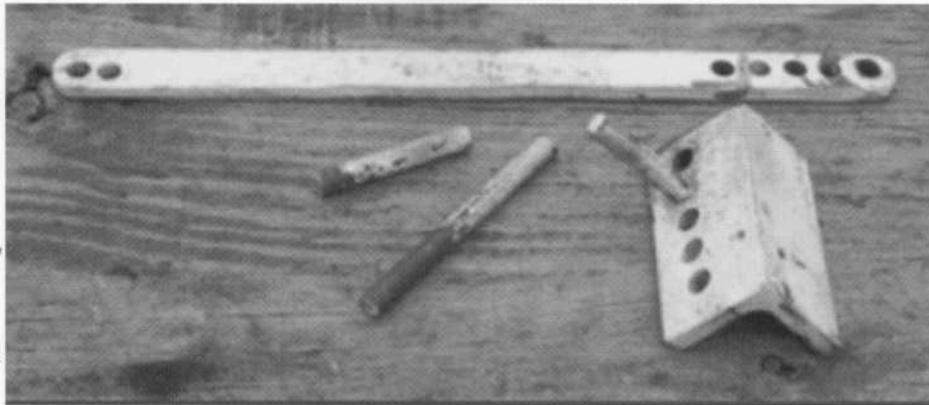
*This article was reprinted from the **California Blacksmith**, January 2017*

## Shop Tip

### Making a Simple Bender By Bob Ehrenberger

A couple years ago, I had a friend lose the handle to her violin case. She had sent it off, with all the rest of the hardware, to get it brass plated, and the plating company lost it. They needed a replacement and it had to match the original. It needed to be made out of 1/8" round stock with four sharp bends. Pretty simple, right. Wrong, when I bent it in the Hossfeld bender the radius on the bends was way too big. When I tried to clamp it in the vice and bend it over with a hammer, there were marks on the piece from both the vice and the hammer.

What I needed was a miniature bender that would make tight bends in light stock and not leave marks. The solution was simple. I drilled several 5/16" holes in a piece of 1-1/2" x 1-1/2" x 1/4" angle iron. I then drilled a series of holes in the end of a 5/16" x 3/4" flat bar. I rounded off the end of the bar to reduce the clearance required. I cut

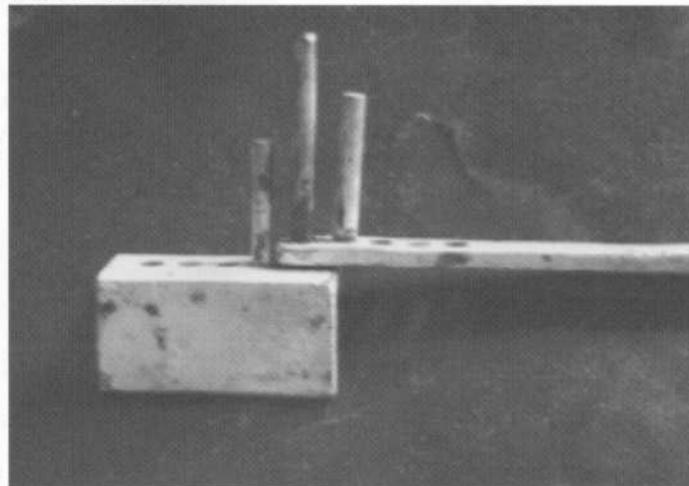


*Bender parts, handle, base, three pins*

3 short pieces of 5/16" round stock and I was done. The first set of holes were too far apart for the 1/8" stock, so I ended up drilling the opposite end of the bar, with the first hole real close to the pivot hole. The bender worked nicely and I was able to make the violin case handle in no time.

Since then, I have used my little bender on a regular basis for all kinds of bending operations. It can handle up to 1/4" cold and 5/16" hot. I have discovered that I really only needed one position for the pins, since by the time you get to where you needed to move the pins for clearance, the bender was not heavy enough for the job any way. When I tried to skip a hole and put the pin in the next one, it was too far out. So I use one end of the bar for 1/8" and 3/16" and the other end for 1/4" and 5/16" stock.

You could probably scale this up using a larger angle iron and a larger bar for the handle. It wouldn't be as good as a Hossfeld, but it would be portable and really cheap.



*You could make this bender in 15 minutes, from scrap lying around your shop.*

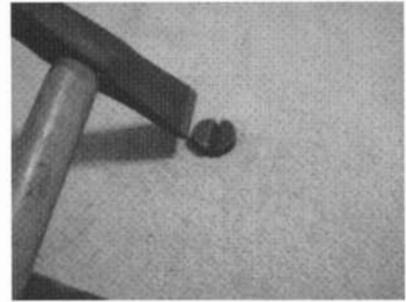
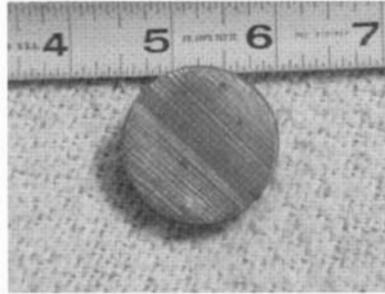
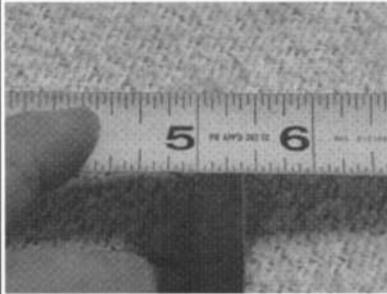
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*This article was reprinted from the Winter 2014 newsletter of the Appalachian Blacksmith Association.*

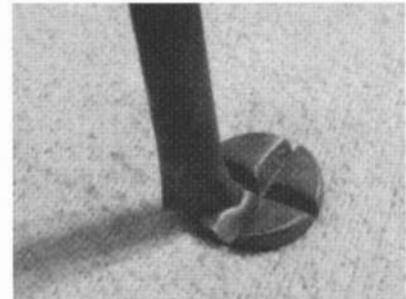
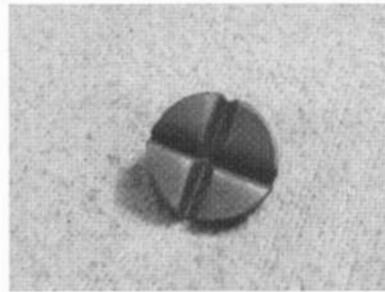
## A Forged Rosette

Here is a way to forge a rosette that can be applied to any number of pieces. You could rivet this onto a larger piece, or weld it onto a threaded shaft to make a small door pull... whatever you dream up.

Start by sawing off a slug of round stock. The one shown is around 1 3/4" diameter by 7/16" thick, but anything approximating those proportions will work.



Get it good and hot and using a hot set or a hot cut chisel bisect the disc to a depth of around 3/4 the thickness. Repeat with the hot set 90 degrees to your first incision. You are dividing the stock into 4 equal parts.



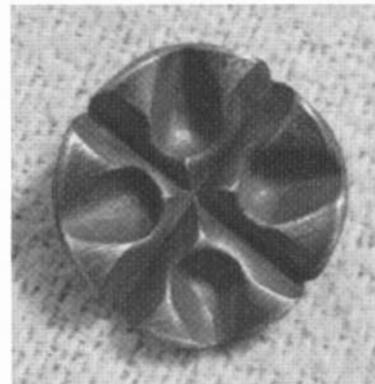
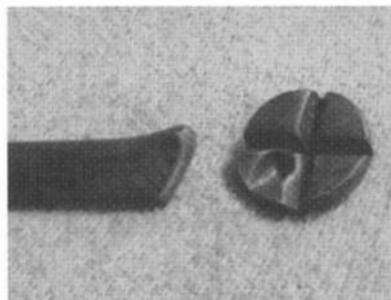
Using a "Teardrop" shaped punch, shape the 4 resulting flat spots by sinking the wide section of the punch close to the center of the circle and the narrow end pointing toward the edge.

To make a teardrop punch forge some round alloy steel as if you were making a simple chisel, but after the first few blows change you hammer angle from making an even thickness edge to one that is thick on one side and thin on the other. Liberal grinding of the punch to get whatever shape you are after is okay.

Repeat on all 4 quadrants of the stock. What makes this element look good is the deformation of the straight chiseled edge when the tear drop punch sinks into the adjacent material. Don't be afraid to really send the punch into the work piece.

Lightly sand and then oil with your finish of choice.

Judson Yaggy, VT Rep.



# Sandpaper Guillotine Tool

by Mark Teece and found at Peter's Valley School of Craft

While I was at Peters Valley School of School, I noticed a clever guillotine tool for cutting sandpaper. Turns out it was used in the woodworking shop and had been transferred to the blacksmith shop. It consists of an old hacksaw blade screwed to a wooden board. You slide the sandpaper underneath the blade and pull up! A perfectly cut piece of sandpaper in seconds, and you no longer have to use the edge of the bench or your teeth!



ANVILS CHORUS

WINTER 2022

24

*This shop tip reprinted from The Anvil's Chorus, the newsletter of the New York State Designer Blacksmiths*

## Interesting Web Links

Área Académica de Metalurgia  
<https://www.areametalurgia.com/>



*Simple tricks to bend metal bars*



*Trick for bending round tube.*

This site has a collection of photos and videos with interesting ideas and tips for the shop, although they aren't directly related to forging. You may quibble about some details and techniques, but the basic ideas may be very useful. And many of these tips and tricks involve shop-made tools and jigs rather than expensive, commercial equipment. The site is basically in Spanish, but the videos don't usually include much audio, and most of us should have little trouble figuring out the tools and processes that are shown.



## **Artist-Blacksmith Association of North America**

ABANA is widely recognized as the preeminent organization of blacksmithing in the world. Visit us online at [www.abana.org](http://www.abana.org) and like us on Facebook and Twitter. Join or renew your membership at: [www.abana.org/membership](http://www.abana.org/membership)

Blacksmithing, the cornerstone of all crafts for centuries, has come back to life. Once rendered nearly obsolete by the Industrial Revolution and 20th Century technology, this ancient craft has undergone a contemporary renaissance. A new appreciation of the honest, enduring qualities of forged metal has developed.

At the heart of this revival has been the Artist-Blacksmith's Association of North America, Inc., a non-profit educational association dedicated to the dissemination of knowledge about the art and craft. Started by a handful of isolated blacksmiths in Georgia in 1973, ABANA now serves nearly 4,000 members.

As part of your Membership Benefits you will receive 4 issues of the Anvil's Ring and 4 issues of the Hammer's Blow Magazine each year you are a member. These magazines can not be subscribed separately but are only received by our members. We have recently added a youth membership at a reduced rate, this membership available to those 18 or under includes a subscription to only the Hammer's Blow magazine.

### **ABANA National Conference**

June 6-9, 2024  
Johnstown, PA

Watch the ABANA website ([www.abana.org](http://www.abana.org)) for details as they become available.

### **New feature on the website: Smiths to Remember** at <https://abana.org/smiths-to-remember>

This is a page of memorial tributes to smiths who have passed on recently, such as Joe Koches, who opened and operated The Blacksmith Shop in Ferndale, CA, and Frank Turley, who taught many contemporary blacksmiths, well-known and not-so-well-known.

### **A Win-Win for You and for AABA**

Now through October 31, 2023, when you join ABANA or renew an existing membership, be sure to list your local ABANA Affiliate Organization (Arizona Artist Blacksmith Association). By doing so, both YOU and the AFFILIATE (AABA) will be automatically entered into a drawing!

Four times throughout the year, we'll do a random drawing. The individual drawn will win a 1-year membership to their local ABANA Affiliate (AABA), compliments of ABANA. The organization drawn will win \$100 to help with operational expenses, courtesy of ABANA.

Just remember to list the name of your local ABANA Affiliate (AABA) when you join or renew and we'll do the rest. It's that easy!

# Classifieds

Classified ads are free to members and can be submitted by email to: [editor@azblacksmiths.org](mailto:editor@azblacksmiths.org). Ads will run for 3 issues. You can renew your ad if you need to run it after the third issue.

Please let the editor know when you no longer need to run the ad.

I am including photos, but, if space runs short, photos will be dropped as needed beginning with the oldest..

**Will buy your unwanted** blacksmith or horseshoeing tools and supplies.

Barry Denton, **928-442-3290** any day before 7:00 pm.

**For Sale**

TREADLE Hammer in excellent condition, with tools. Located in Phoenix.\$1,985

Call for photo and additional info. Len Ledet, **480-221-7411**

**For Sale**

Welding instructor from Mesa Community College is downsizing and selling his blacksmithing equipment. Includes a homemade 35 lb.power hammerl, and multiple handtools. Call him at **928-587-3706** or Richard Rozinski at **602-803-7255**

**For Sale**

- 3 Gas Forges \$150 each
- Lg Dayton Grinder on stand, 1 hp \$400
- 3 sm Bench Grinders \$25 each
- Sm Gas Welding outfit on cart \$300
- 4" Pole Vise \$165
- Baldor Belt Sander with grinding wheel, 5 hp, 2x48 belt \$400

Pick up in Gilbert AZ (forklift available for loading)  
Ray Brown **(480)993-9315** or [lainne@aol.com](mailto:lainne@aol.com)

**Picture Rock**

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Ira Wiesenfeld, **520 780-9076** or [circleofiron74@gmail.com](mailto:circleofiron74@gmail.com).

**Gas Forge Building Workshop**

Richard Rozinski is offering gas forge building workshops in his shop in Gilbert. Two person minimum. Call Richard for scheduling and prices. **602-803-7255**



**For Sale**

Titanium Tongs - All sizes and shapes, 50 pairs. Get them while they last. \$100 per pair. Bernhard Heer, **715-205-8786**

**Basic blacksmithing and metal forming workshops**

Richard Rozinski is offering basic Blacksmithing and metal shaping work shops in his studio in Gilbert Arizona. Class sizes and complexity vary. Class topics range from basic blacksmithing, copper vessel raising, pewter construction and abstract sculpture fabrication.

For details text or call **602-803-7255**

# Sources

**AZ Tool Steel**  
 520 S. 52nd Street #201  
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 Phone: 480-784-1600  
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**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  
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 Discount pricing for AABA members. Various locations in the Phoenix area. 602-252-0341  
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 I can mail a copy or email PDFs.

**Tucson Iron and Metal**  
 Steel, aluminum, stainless, copper and brass for sale by the pound. Open Monday - Friday 8 - 4:30. Also 1st and 3rd Saturdays 6:30 - 8 am. specifically for metal artists.  
 690 E. 36th St., Tucson  
 520-884-1554

## AABA Membership

Benefits for members include:  
 Member discounts at vendors around the state: See page 18 of this issue for more details.  
 Reduced registration fees at demonstrations and workshops  
 A one year subscription to the bi-monthly newsletter, *The Anvil's Horn*  
 Connection to members throughout the state who can answer questions and give advice  
 Free classified ads in the *Anvil's Horn* and on the AABA web site.  
 eMail notices when event details change or new events are scheduled on short notice.

**AABA Membership Form: New Member  or Renewal**

Name \_\_\_\_\_

Address \_\_\_\_\_  Do not publish

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

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

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

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Please check one:  
 Regular membership (\$35) \_\_\_\_\_  
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Mail to: Terry Porter  
 2310 E. Melrose St.  
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**Make Check Payable to AABA**

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For membership information or address change, contact:  
Terry Porter, 2310 E. Melrose St., Gilbert, AZ 85297, 480-313-7942, [trp555@prodigy.net](mailto:trp555@prodigy.net)