

The Anvil's Horn

A Publication of the Arizona Artist Blacksmith Association

Issue No. 189 November 2017



*Celeste Flores with the Viking ship she created during the AABA demonstration on September 16, 2017.
"Grizz" LaBrash served as her assistant during the demonstration.*

President's Message

Dang – another year is close to being wrapped up. Overall it has been a wonderful 2017. It has been a very productive year on a personal level. I've had a great time serving as President of AABA the past two years. Jason LaBrash has stepped up to the anvil to take over for 2018. I may have told him one of the perks of being president is a free power hammer. Thankfully there is enough to keep him busy that he probably won't remember. I'm not going anywhere. AABA is too much fun. Stop on by my monthly open forges or chat me up at a meeting. I'll do whatever I can to help you have a great 2018 of hammering hot iron.

Paul Dief

Editor's notes

There are a lot of great things going on these days: the 2017 AABA Annual Banquet and Auction is coming up, the preparations are coming together for Winterfest 2018 next January in Tucson, and there are several good shows and classes coming up. But we have the sad duty to report that the blacksmith shop at Sahuaro Ranch in Glendale was destroyed by a fire on September 25. When the authorities complete their crime-scene investigation, we will pick up the surviving pieces and rebuild. Details on all of these things can be found in this issue of *The Anvil's Horn*.

Don't forget to vote for the AABA officers and board members for 2018. Your ballot is included in this issue.

Bill Ganoe

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	Shemer Arizona Arts Festival	Insert 1	Ballot for AABA officers and board members for 2018
	Tucson Botanical Gardens	Insert 2	Registration card for the Annual Banquet
	Pueblo Grande Museum - Ancient Technology Day		

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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 be obtained before publication. **Graphics.** High-contrast, high-resolution digital picture files and original drawings are preferred, but we can work with lower-contrast, lower-resolution graphics.

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AABA Annual Meeting, Banquet, and Auction **Sunday, December 3, 2017**

Fruit Packing Shed/Gallery at Sahuaro Ranch
Glendale, AZ

Check-in starts at 11:00 AM. Food service starts at noon
The Annual Meeting and Auction start at 1:00 PM

- **NOTE:** The location has been changed from the Maintenance Shed we have used in the past to the much nicer Fruit Packing Shed.
- The banquet will be catered this year.
- Meals of pulled pork, chicken, or a veggie option will be provided by AABA at no cost to you or your guests.
- To qualify for AABA-provided meals you must RSVP by Friday, November 24.
Use the reply card in this issue, call Jason at 602-717-1459, or email jason@grizzlyiron.com
- The annual meeting and the auction will be held after we eat.
Vote for the AABA officers and board members using the ballot included in this issue.
Return your ballot by November 27.
Election results will be announced at the annual meeting.
- The event will be in the Fruit Packing Shed.

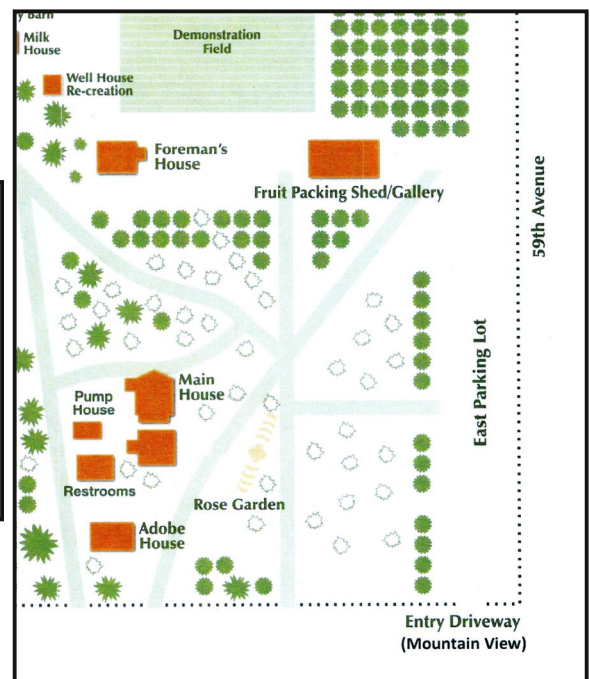
We encourage you to bring a contribution for the auction, but you will be welcome without bringing anything.

- You could make anything from a key chain or bottle opener to a table or mirror.
- Or you could bring extra tools or materials that you don't need.

Questions: Call Jason at 602-717-1459

Directions to the Fruit Packing Shed in Sahuaro Ranch Glendale, AZ

- I-17 to Dunlap Ave.
- West on Dunlap (which turns into Olive Ave.) to 59th Ave.
- North on 59th Ave. to Mountain View Rd.
- West on Mountain View
- Take first right into the East Parking Lot.
- Walk from the parking lot to the Fruit Packing Shed.



2017 AABA Annual Auction/Banquet

This year the auction will be held on Sunday, December 3 at Saguaro Ranch. Registration will begin at 11 am with food being served at 12 noon and the auction starting at 1 pm. There will be no cost for registration or lunch. AABA will cover the costs. We will need a head count, so please mail the reply card in the middle of this newsletter or contact Jason to RSVP. His contact information is at the bottom of this page.

The location of the auction HAS CHANGED from previous years. It will still be at the Saguaro Ranch, but this time we will be in a much nicer facility, the Fruit Packing Shed. Although the name might make it seem like it is a storage room, we can assure you that it is nicer than the previous venue.

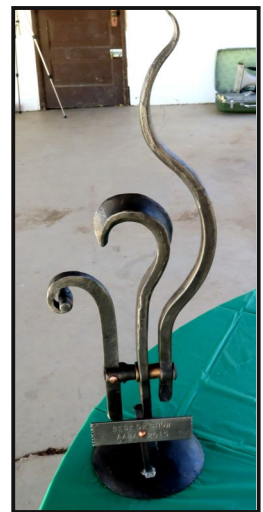
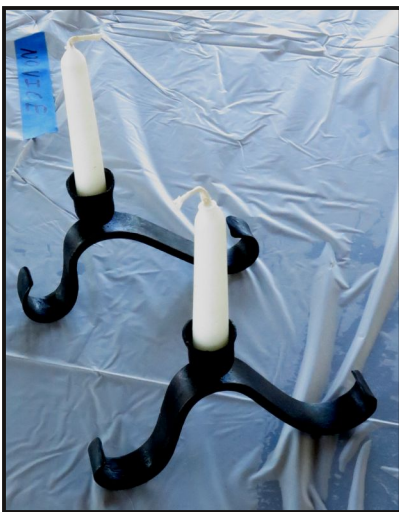
The auction is always a great time to reconnect with old friends and make new ones. This year the food will be catered by a local company, so everyone will have more time to relax and enjoy time with your blacksmith family. Please bring new friends too. We want to expand our blacksmith family, and, if you have a friend who would be interested in blacksmith or even just seeing some amazing blacksmith work, please invite them.

We have our auction annually to raise funds for the Read Carlock Scholarship fund. Blacksmiths can apply for a Read Carlock scholarship to help further their blacksmith and metalsmithing education. Items to be auctioned are contributed by AABA members and our demonstrators. Door prizes are contributed by vendors.

In recent years we've auctioned off items such as bottle openers, napkin rings, lamps, wall art, and even tables. You don't have to make a table to participate, but if you've got a project idea that you've always wanted to try, here's a great reason to make it. Maybe it's a centerpiece for a table, a unique door knocker, a bottle opener, or a garden bench. Every item donated, large or small, is welcome and appreciated. Craig Riggle, our professional auctioneer, will auction off all the items, and many people will go home with some amazing treasures.

We do need help during the auction with spotters and presenters, so, if you are interested, please contact Jason too.

Jason can be reached at 602-717-1459 or jason@grizzlyiron.com.



To get your creativity cranked up, here's a sampling of items donated in past auctions.

Coming Attractions

WINTERFEST 2018
Arizona Artist Blacksmith Association
February 2 - 4, 2018
Pima County Fairgrounds
Tucson, Arizona

Demonstrators:
Haley Woodward,
Jay Burnham-Kidwell
Zack Lihatsch
Rich Greenwood

Speaker:
Fred Borchardt

Registration:
Full Conference: \$50
Single Day: \$30
Saturday Banquet: \$16

Banquet with slide show
by attendees and an open
forge Saturday evening.



For full details & Registration:
www.azblacksmiths.org

Winterfest starts off Friday evening with a slide show by Fred Borchardt titled "50 Years of Sculpture". There will also be a formal dedication of the Fairground's blacksmith shop which houses equipment and tools from the William Flores & Sons Blacksmith Shop that was a Tucson landmark for decades.

The demonstrators will be scheduled for half a day each starting Saturday morning and running through Sunday afternoon.

Saturday evening will feature a banquet with your choice of a beef, chicken, or vegetarian entree. That will be followed by a show-and-tell session for attendees to show slides or ppt files of their work. Projectors will be provided for real slides and for Power Point programs on flash drives. There will also be an open forge Saturday evening at the blacksmith shop on the fairgrounds.

Tailgating is encouraged.

Meals will be available on-site and off-site this weekend.

Lodging: RV camping is available on the fairgrounds for \$25/day.

Motels and other camping options are available in and around Tucson.

Note that the first week of February 2018 is the beginning of the Tucson Gem & Mineral Show, so you should make your reservations as early as possible.

September Demo Report

Bill Ganoe

(Photos by Bill Ganoe unless otherwise noted.)

It was another bright and sunny day at Bill and Karen Morris' home in Camp Verde when over 40 members and guests came out for our demonstration on Saturday, September 16.

Celeste Flores was our demonstrator in September. She works in steel and bronze - and a bit in clay - in her shop in Oakland, California. She also does demonstrations around California and teaches classes at the Crucible, a non-profit industrial arts school in Oakland. Celeste noted that she started out working in clay. Today she gets little income from clay, but treating steel like clay helps her to shape steel.

Celeste demonstrated a coat rack in the shape of a Viking ship using steel and bronze. A key feature of the coat rack was a dragon head at the bow of the ship.

Celeste gave very detailed explanations of what she was doing. That is probably a habit she developed in teaching classes at the Crucible, and that is a good thing to bring to our demonstration. It never hurts to go back to the basics. Each demonstrator probably has different techniques or has a different variations on a common technique that might be useful for the rest of us. And a demonstration with lots of details could be very helpful for beginners in the audience.

Celeste started out by stepping through the forming of the oars (coat hooks) making the flat, oval paddle. She started with half face blows on the side of the anvil, but she advised rounding off the oval before flattening it. When she went to curve the paddles to form the hooks, she advised lots of little blows over the edge of the anvil rather than just a few quick, heavy flows.

Her advice at this point was to measure and mark on the anvil rather than the work piece. That makes it easier to get multiple pieces more or less uniform. Uniformity is good, but you can over do it. She reminded us that making measurements very exact and consistent produces a less artistic look.

Celeste advised doing tapers on the horn of the anvil. There is smaller area of contact, so the work piece stays hot longer. Then smooth it out on the face of the anvil.

The shields were made from cartridge brass from Alaskan Copper & Brass (<http://www.alascop.com>). She cut the circles on a band saw with a 1/4" blade. She has found that smaller blades tend to create a wavier cut.

One of the main points of the demonstration was forging bronze or brass: You have to watch carefully ALL the time when working brass or bronze. The forging range is fairly narrow. Bronze quickly melts above that range, and it crumbles if you forge it below that range. A good rule-of-thumb is that if it sags in the tongs it's ready to forge. But watch out: at that temperature, anything that touches the bronze leaves a mark.

Punching bronze is tough because of the narrow working range. Punching at cooler temperatures gives a cleaner hole, but, if you punch brass or bronze too cold, it will tear. People working in bronze usually just drill the holes. But the drills need to be shaped a bit differently than the common metal drills. Celeste explained how to grind regular drills to work well in brass or bronze. She then spent several minutes talking about the characteristics of various brass and bronze alloys.

Celeste used a slit pass-through joint to mount the ship's mast. That requires making a couple of blind slits. She pointed out that making such slits are hard with curved chisels. She used a chisel with a straight edge and a slitting bolster. The bolster could be two 1/8" plates held close together - or vise jaws just slightly open.

When making chisels, she noted that spring steel usually bends after making just a few holes. She said chisels made from A-2, S-7 or H-13 steel stay sharp and retain their shape longer. She hasn't personally had a problem with chipping or shattering. And A-2 doesn't need to be cooled during use.

She then went to work making the head of the dragon. As she used hand tools to create the face, her advice was to position the tool and then look at the top of the tool when you strike it. Don't focus on the work piece itself.

We would like to thank Bill and Karen Morris for being great hosts. And we would like to thank Celeste Flores for a great demonstration.

September Demo Report (cont.)



Gathering in the beautiful Verde valley



Checking out the Iron-in-the-Hat table before the demo



The beginning of the slotted pass-through joint



Forming the slotted pass-through joint



The mast in the slotted pass-through in the hull.



The finished Viking ship

September Demo Report (cont.)



The head and tail were joined to the hull with rivets made of copper tubing. The tubes were swaged over to form the rivet and the tube provided holes for mounting screws or nails.



Len was out of town this weekend, so Dief ran Iron-in-the-Hat.



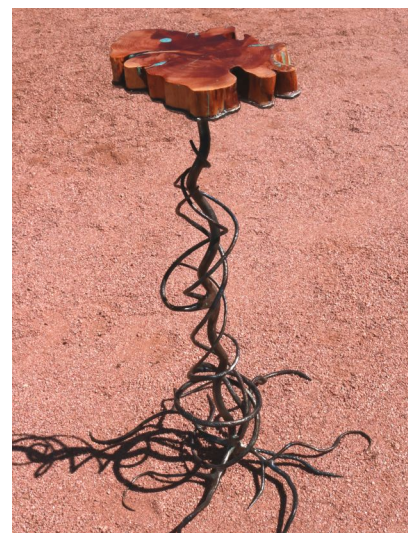
Show-and-Tell: Ray Rybar



Show-and-Tell: Ryan Bishop.



Show-and-Tell: Wade Smith



Classes at AABA Members' Shops

Grizzly Iron

1329 W. Lincoln St., Phoenix, AZ

Friday-Sunday, November 10-12, 2017

Belt Grinder Workshop \$1450

Build your own 2" x 72" belt grinder. The grinder will have a 2 hp motor with variable speed control. It will have a built-in stand, and it will have the ability to rotate horizontally. This workshop includes all parts, materials, and flat platen. The class has a minimum of 6 participants. 50% down payment must be received 45 days prior to the workshop (this event only).

\$100 or 50% down payment will hold your spot in each class. Downpayment is required 30 days before the class and the balance is due at the start of the class. We cannot guarantee your spot in a workshop without a down payment.

Friday-Sunday, November 24-26, 2017

3-day Damascus workshop \$475

Learn how to stack a billet to obtain a mosaic, how to manipulate the metal to create patterns, and how to etch to obtain the patterns.

Starts at 4 pm on Friday, November 24. This class is limited to 8 students.

Friday, December 29, 2017

Friday Night Damascus Workshop \$125

Learn the very basics of forging a simple Damascus billet. The workshop will be on a Friday night from 5-9pm. The billets will be preassembled, so we'll be able to dive right into forging. Materials are included. This class is limited to 6 students.

For more information or to register call Roger or Jason at 602-716-9660 or email jason@grizzlyiron.com

Hessen Iron Works

3230 S. Dodge Blvd, Unit #6, Tucson, AZ 85713

Friday - Sunday, November 10-12, 2017

Raising and Chasing Workshop with Douglas Pryor \$550

2 lesson styles to choose from this time, raising a copper bowl/cup that we intend to chase in a following course in the spring, and low-high relief chasing on copper or mild steel.

For more information or to register: <http://www.hesseniron.com/douglas-pryor.html>

Calendar 2017 - 2018

November 4, 2017	Open Forge	Ken Webb's shop	Tucson
November 11, 2017	Open Forge	Desert Rat Forge	Cave Creek
December 2, 2017	Open Forge	Sam Rivera's shop	Tucson
December 3, 2017	AABA Annual Banquet & Auction	Sahuaro Ranch	Glendale
December 9, 2017	Open Forge	Desert Rat Forge	Cave Creek
February 2 - 4, 2018	Winterfest 2018	Pima County Fair Grounds	Tucson

Welcome New Members

Brett Persson	Buckeye, AZ
Slim & Ali Merriman	Camp Verde, AZ
James (Jim) Costello	Gilbert, AZ
Mick Meilicke	Livingston, TX
Celeste Flores	Oakland, CA
Michaela Blake	Peoria, AZ
Bob Curtis	Phoenix, AZ
Hal Hoover	Phoenix, AZ
Dave Hymas	Phoenix, AZ
Devin O'Hanlon	Phoenix, AZ
Adrian Bryce	Prescott Valley, AZ
Dennis Van Gorp	Superior, AZ
Britton Wanlass	Tempe, AZ
Abigail (Abe) Kahler	Tucson, AZ

Sahuaro Ranch in Glendale

The blacksmith shop at Sahuaro Ranch was destroyed by fire on September 25. That shop has been around since the 1880s. At press time, the fire was still being investigated as an arson case. We will be cleaning up and rebuilding as soon as the crime scene has been cleared. Anyone interested in helping out can contact Ronald Wicklund at 623-776-5684 or twistedpickets@yahoo.com.

NB: This loss will not affect the 2017 AABA Banquet and Auction.

Submit Your Touchmark

Submit a JPEG of your touchmark(s) to Steve Miller, stevemiller.az@gmail.com, so it can be included in our AABA touchmark registry which will appear on our website soon.

Deadline for the January 2018 issue

November 30 is the deadline submitting photos and articles for the January issue of the Anvil's Horn.

Send articles, pictures, etc. by email to:

editor@azblacksmiths.org

or by regular mail to:

Bill Ganoe, PO Box 40233, Tucson, AZ 85717

Classes at Pieh Tool

Beginning/Intermediate Blacksmithing

- Beginning/Intermediate blacksmithing classes with Dylan Cook

November 17 - 19, 2017

December 1 - 3, 2017

Registration is \$550.

Students will make several simple projects to take home.

- Damascus classes with Master Bladesmith, Ray Rybar

October 20 - 22, 2017

December 8 - 10, 2017

Registration is \$550.00.

This is a basic class. Students will make one damascus billet - material will be supplied for one billet.

- Knifemaking class with Master Bladesmith, Ray Rybar

September 22 - 24, 2017

November 10 - 12, 2017

Registration is \$550.00.

Students will make one knife.

For more details call 928-554-0700 or browse to www.piehtoolco.com.

MCC Blacksmithing & Welding

The Mesa Community College blacksmithing program is an excellent deal - over 60 hours of instruction including material and propane! Saturday (Jaime Escobedo instructor) and evening classes (Dan Jennings instructor) are available. Blacksmithing is WLD 103.

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

Classes fill up early, but waiting lists are available. For more information go to: www.mesacc.edu

AABA Website: www.azblacksmiths.org

Open Forge: Tucson

Ken Webb will host the Open Forge on Saturday, November 4, 2017, from 9 AM to noon.

Ken's shop is at 425 E. Navajo Rd, Tucson. Go to the intersection of Ft. Lowell and 1st Ave, go one block north on 1st Ave., and turn west on Navajo. Ken's shop is about 1 1/2 blocks west of 1st Ave. on the north side of the street. Call him at 520-488-6831 if you have trouble finding the place.

Open Forge: Grizzly Iron

Don't have a power hammer? Use one at Grizzly Iron, 1329 W. Lincoln St., Phoenix, 4:30 PM to 8:30 PM every other Wednesday starting September 6. \$20 each night. Contact Rodger "Grizz" LaBrash at 602-716-9660 or grizz@grizzlyiron.com if you have any questions.

Also, check out classes at Grizzly Iron on page 9.

If You Are Attending An Open Forge...

You might not be aware but this, but these events are not funded by the AABA. 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 offer to donate to help out or help with the cost of replacing a item. Thank you! From all of your open forge hosts. **You will need to wear safety glasses. Hearing protection is recommended.**

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 New Member and Membership Renewal Form

Name _____

Address _____

City _____ State _____ Zip _____

Phone _____ Email _____

Professional blacksmith _____ Hobbyist _____ Farrier _____ Blade smith _____

Your main blacksmithing interest _____

Occupation or skill _____

Please check one:

Regular membership (\$35) _____

Family membership (\$40) _____

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

Make Check Payable to AABA

Open Forge: Desert Rat Forge (Phoenix area)

Paul Diefenderfer will host an open forge on Saturday, November 11, 2017; and Saturday, December 9, 2017 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. Desert Rat Forge is at: 40218 N. 78th St. Cave Creek. 602-509-1543 or dief@phoenixrockgym.com

Directions: From the center of Cave Creek (the 4-way stop at Cave Creek Rd & School House Rd.) head north on School House 1.5 miles to Highland Rd. (If you get to the 4-way stop at Fleming Springs you have gone a tad too far.) Turn right (east) on Highland. After about 1 mile the pavement ends. Keep going on the gravel road until the pavement starts up again. Turn right through the stone walls down a paved driveway. You are there!

(Dief will be working some temporary jobs in Florida on and off for the next few months. This will involve travel on Sundays, so he has rescheduled the next several open shops on Saturdays.)

Call to Artists

Shemer Arizona Arts Festival Shemer Art Center Phoenix, Arizona Saturday and Sunday, November 4-5, 2017

The application deadline has already passed, but Grizzly Iron has reserved a booth in this festival. They will be demonstrating a team-designed art piece as well as running a couple of teaching stations where visitors with little or no experience can create small projects to take home. There is room for more blacksmiths. You will be welcomed even if you can help just one of the two days. If you are interested, call Grizz at 602-727-1458 for more information. Check out the Shemer Art Center at <https://shemerartcenter.org>.

The Tucson Botanical Gardens Spring 2018

Ira Wiesenfeld has arranged for a Botanical Blacksmith Show at the Tucson Botanical Gardens for next spring. The show is set to open on April 7, 2018 and close on May 31, 2018. The theme of the show is sculptures using botanical forms. The Tucson Botanical Gardens (TBG) is looking for large, good quality sculptures. The size should be comparable to the larger pieces in the Botanical Blacksmith Show at the Arboretum at Flagstaff. (Example photos can be found the September issues of the Anvil's Horn for the past three or four years.) Proposals, if not photos of finished works, need to be sent to Ira, so he can submit the list to TBG by March 1, 2018. All pieces will be offered for sale to the general public. TBG will get 30% of the selling price. For more details call Ira at 520-780-9076 or treeira@hotmail.com. Check out the Tucson Botanical Gardens at <https://www.tucsonbotanical.org>.

Call to Demonstrators

17th Annual Ancient Technology Day: Prehistoric & Historic Pueblo Grande Museum Phoenix, Arizona Saturday, March 10, 2018

The Pueblo Grande Museum is presenting the 17th Annual Ancient Technology Day on Saturday, March 10, 2018. The Museum is looking for people to demonstrate ancient and historical technologies such as blacksmithing, flint knapping, pottery making, basket weaving, etc. If you are interested in demonstrating (no propane forges or electric blowers) at this event, contact Renee Aguiliar at 602.495.0901 or renee.aguiliar@phoenix.gov. The Museum expects to send out official application forms beginning sometime in November 2017. Checkout the Pueblo Grande Museum is at:
www.phoenix.gov/parks/arts-culture-history/pueblo-grande

AABA Member Gallery



Ira Wiesenfeld

*Car Door
Landscape*

*Circle of Life
Recycled Pond*



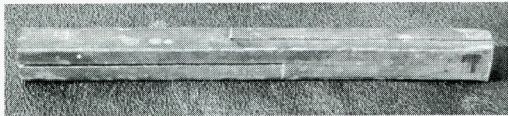
Peter Sevin



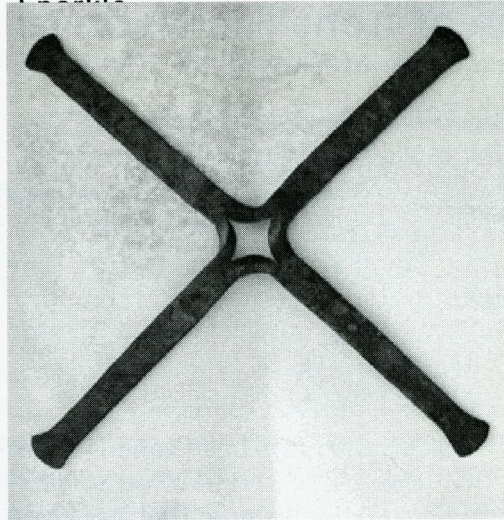
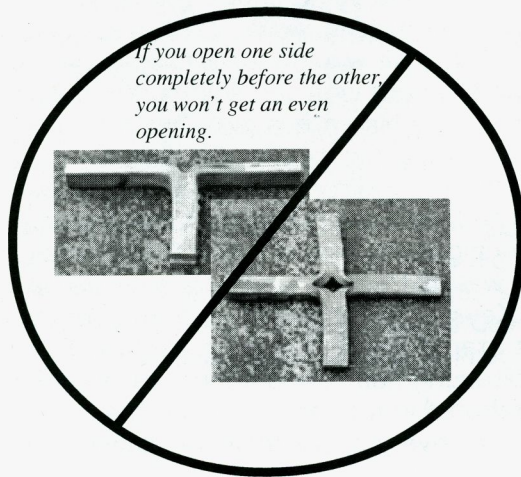
TRIVET of the MONTH

I guess this month's trivet is really a "quadrivet", if there is such a thing, since it has four legs instead of three. I'm sorry I didn't find out who made it, but I saw it in Bob Becker's Class at the Folk School. I found it interesting because it utilizes a technique that has been used most often in making decorative crosses. It is usually credited to Cristoph Friedrich, and it was popularized by its use in frequent demonstrations by Francis Whitaker.

(Doug Merkel's article on the use of the technique in making small crosses was carried in the *Hot Iron Sparkle* for July/August 2000, page 13.)



When I set out to reproduce the trivet I took a piece of 3/4" square stock 9" long. (I think 5/8" x 8" would have been better.) I sawed 5" on the center line of two adjoining sides from opposite ends. This gave a 1" overlap of the saw cuts. The amount of



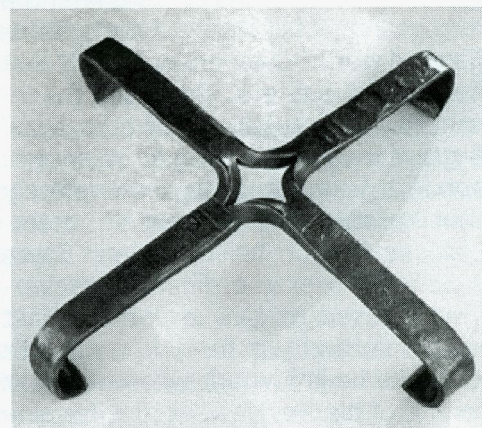
overlap controls the size of the hole that will open up. Of course, the splitting can be done with a hot cut if you don't have a band saw available and are not eager to saw that much with a hacksaw.

I then drew out the arms and flared the ends slightly. Turning a small scroll on the ends and bending over about an inch and a half created the feet for the trivet.



This is a neat project that can be done in a couple of hours. Grab some metal and get with it!

Bert



*Here's an idea for a really simple project - maybe a quick donation for the AABA Auction.
Reprinted from the November-December 2001 issue of The Hot Iron Sparkle, the newsletter of the North Carolina Chapter of ABANA*

How to Forge a Forge- Bob Pickens

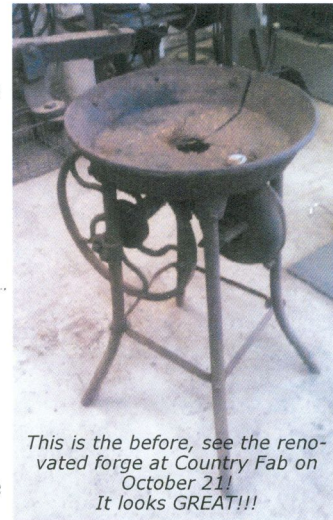
Have you run across a rivet forge that is in really bad shape? Thought about it, perhaps even bought it and are at a crossroads regarding how to fix it and put it back together? Rivet forges like this one (photo, right) can be brought back to life with some perseverance and care and add a little determination. Rivet forges like this one was commonly found on farms during the late 1800's to the early 1900's. They were easy to dismantle and reassemble on site. They were also used quite a bit on early structural buildings and bridges to assemble components.

Bob Pickens purchased this sad forge from Fred Hamilton with the hopes of bringing it back! He found the letter "C" cast into the metal which is believed to identify it as a Columbia forge. Champion products usually have the whole name spelled. First, disassemble all parts and examine for defects. What was in need of extensive repair was the firepot which had two major cracks and the impeller was missing all the blades.

How to repair the firepot.

Grind the cracks out, preheat to about 250 degrees, squeeze it back together. Use box clamps and /or furniture clamps to pull it together. Since it is cast iron you have two choices: weld with nickel or braze it. The

nickel did not work well because the cast iron was too degraded from heating and the nickel will not blend with the cast iron. Bob chose next to braze the firepot. The brazing was successful because it is more forgiving to expansion. After brazing, cover with a fire blanket and let cool slowly, you can also bury it in wood ashes.



*This is the before, see the renovated forge at Country Fab on October 21!
It looks GREAT!!!*

How to repair and impeller.

The impeller was in terrible shape, all the blades were missing. What Bob had to work from was a "homemade adaption". Many of these forges were left outside and water and rain would deteriorate this part first. If yours has a blade or part of a blade, you can trace it and make a pattern.

Bob had a similar forge, so he was familiar with the type of impeller he had to replicate. He made a pattern and had the blades cut from 1/8" plate also know as 11GA. Line them up with the shaft, braze or weld into position back onto the shaft with the impeller plate. Check for clearance and sand with a flapper disc.



How to repair bushings on the fan.

Since it is low speed and not severe service you can replace the bearing with a piece of copper tubing or brass pipe. Ideally, you might like to repour the babbit, but if you are unfamiliar with this process, a piece of pipe will work fine and give you many years of service.

Completion.

Clean all parts, prime and paint. On this particular forge the shafting is in excellent shape, the gear teeth are in excellent shape, and the ratchet is in good shape. The gear teeth, ratchet, shafting should be examined when purchasing. It appears that this forge was not used very much, but had been neglected by being left out in the weather. Interestingly, the wooden oak handle is believed to be original and in very good shape. You should also expect to replace the leather belt. Bob also replicated new legs for the forge. The originals were rusty and weakened.

The photo (bottom, right) is from a 1915 Sears catalog. It advertised the forge as a "Sears Lever Action Forge". The benefit was the pumping action in stead of cranking and not using bellows. It is very easy to use this type of forge and takes much less energy. The price at that time was \$4.42!



*Some of us have forges like this just taking up space. Pull it out and put it to use.
Reprinted from the newsletter of the Pittsburgh Area Artist Blacksmith Association, October 2017.*

Seeds of Creativity

More ideas for simple donations for the AABA auction in December.



*Handles/pulls for drawers and cabinet doors
by
Casey Abbs*



*Open Forge
Harold Hilborns' shop, Tucson
October 4, 2017*

Mark your calendars for ABANA 2018



The ABANA 2018 Conference
will held in
Richmond, Virginia
at the
Meadow Event Park
Wed Jun 27 - Sat 30 Jun, 2018

<https://abana.org/conference/2018-richmond-va>



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 and like us on Facebook and Twitter. Join or renew your membership at: 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.

The Arizona Artist Blacksmith Association is an affiliate of the Artist-Blacksmith Association of North America.

Classifieds

Classified ads are free to members and can be submitted by email to: 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.

Will buy your unwanted

blacksmith or horseshoeing tools and supplies.

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

For sale

Propane forge, 2-burner, made in one of Doug Kluender's forge workshops.
Miller Dialarc 250, power source for TIG or stick with cables, remote foot control, argon bottle and regulator
100 lb. anvil
Hand shear

Jack Friehe, 623-466-9889

Big Blu 65 Power Hammer

Like new! \$5,000
Mint condition. Used twice. Works perfectly. Comes with 2 sets of dies and a credit to Big Blu for another set of dies of your choosing.

60 Gallon Quincy Compressor - \$750.

Our shop is located in Phoenix, but we are willing to work out a deal to deliver. Please contact Michaela at 623-208-9358 or mjayde@cox.net

Coal for Sale

Dragonforge Ironworks has bulk coal for sale. \$25 per 50 lbs. Minimum order \$100. Small orders can be filled at our shop in Mesa. Larger quantities available up to 1 ton but are located at the Superstition Mountain Museum in Apache Junction.

Really great forging coal from the King Coal Mine in Colorado. Bulk only, chunk sizes vary from pool ball to bowling ball. Bring your own 5 gallon pails, 3 pails equals about 100 lbs.

Call Michael at 480.529.0206.

Wanted to Buy: Acorn Table

I am looking for an acorn table. I would prefer a 5' x 5' but I am flexible. Please email dhallikainen@gmail.com if you have one available. I am located in Phoenix, but willing to drive.

Marketing Assistance

Blacksmith's Wife Marketing provides marketing and promotional services, in both digital and print, to the metal working community. Also providing website design and consulting services. Contact April Witzke at (575) 535-4766 or visit www.blacksmithswifemarketing.com

Advantages of AABA Membership

IMS has offered AABA members two great opportunities. Thanks to members Doug Kluender and Wade Smith for the idea and contacts with IMS.

1) IMS has space for member metal work to be put on display in a glass case and on top of the cut metal rack inside the store. Contact Steve Miller, stevemiller.az@cox.net, to get your items on display. These items may be for show only or they may be offered for sale. Artists are responsible for any financial exchange. IMS will make a nice card to identify the piece, the artist, and the cost.

2) IMS is offering a 10% discount to AABA members. The discount is available at the Phoenix and Tucson stores. At the time of purchase tell the clerk you would like the AABA discount and provide your name and address. They will verify your membership with the list AABA supplies.

Don't forget that AABA members get discount pricing at the Vern Lewis Welding Supply stores in the Phoenix area.

Classifieds

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For Sale

Bridgeport M Head Vertical Mill with charring attachment for chisel shaping. Original vise, Van Norman Rotary Table 32 X 9 with autofeed x-axis. Three phase with VFD or 110/220 single phase . Multiple attachments: 90 degree quill adjustable, quill master MNT M2 tapered collets, end mill adapters, hold down set and lamp included . Weighs approx. 2000 lbs. \$3000.
HancockShopSale@gmail.com

Forging Coke for Sale!

High quality L-Brand coke
\$30 per 50 lb bag

Rodger or Jason, 602-716-9660

For Sale

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

For Sale

120# PETER WRIGHT anvil on stump, in good condition \$400.

165# TRENTON blacksmith anvil on stand \$450.

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Full service supplier of steel, stainless, brass, aluminum, copper. Discounts for AABA members.
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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

Vern Lewis Welding Supply

Discount pricing for AABA members. Various locations in the Phoenix area.
602-252-0341
Dan, 602-316-4140, for tech support.

Arizona Artist Blacksmith Association
Attn: Bill Ganoe
P.O. Box 40233
Tucson, AZ 85717
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The Anvil's Horn is the official newsletter of the Arizona Artist Blacksmith Association. Published every other month preceding the bimonthly meetings of the Association, the newsletter is oriented toward anyone interested in blacksmithing and related forms of metal work. Membership is available at the rate of \$35 for individuals; \$40 for families and includes a subscription to the *The Anvil's Horn* for one year. Every attempt has been made to ensure accuracy of information appearing here, but no liability is assumed by the Association, its officers or editor for errors, damages, or injuries resulting from any design, use, construction or application of said information. Uncopyrighted material may be used freely by other similar organization provided proper credit is given. Any copyrighted articles appearing herein should not be reproduced without permission of the author. Matters relating to newsletter submissions, corrections, etc. should be addressed to the editor: Bill Ganoe, P.O. Box 40233, Tucson, AZ 85717, Tel: 520-326-5478, or editor@azblacksmiths.org.

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