

The Anvil's Horn

A Publication of the Arizona Artist Blacksmith Association

Issue No. 216, May 2022



Our March demonstrator, Kurt Fehrenbach, making a bushing.

President's Message

Greetings Blacksmiths,

The recent news of the ABANA conference cancellation is sad, indeed. I was looking forward to it after the 2020 conference cancellation. The Johnstown Festival last fall provided a good showing and support for the biannual conference. However, you can't keep a blacksmith down for long. There are other conferences to attend, CBA, Crossroads, & RMS to name a few that are relatively close.

Our May demo will take on a different approach. Instead of showcasing what folks have learned at the ABANA conference, we will have our very own Joe Madrid to demonstrate tong making and some special forge tools. So, I hope to see you at the May demo. See directions in this edition of *The Anvil's Horn*.

In the interest of a fun blacksmith project and continuing our collective skills improvement, I'm introducing the President's Project. At each demo a special project will showcase. This is a chance to show your work and get coaching, if you like, or share your skills with other smiths, but most of all have some fun forging. This is not a contest, and no prizes will be awarded. There will be a subject chosen in advance and shared in *The Anvil's Horn* President's Message. A sample will be shown in

the previous meeting. The intent is to have a simple forged item (electric-welded forged components are acceptable) that is not time-intensive. If you need a place to work, check out the offers for open forges within the Anvil's Horn. We will gather in the morning for a few minutes before a demo begins to show and talk about our work.

The May project will be a mushroom (see page 3), and the July project is a J hook. A really cool display of #366Hooks is coming to Sculpture Tucson in the June time frame. The size of the stock and item are up to each smith. Search online for ideas and how to make them. Let me know if there are any questions. I'm looking forward to seeing all your projects and sharing with our members. Forge On,



Steve Miller

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AABA OFFICERS and BOARD OF DIRECTORS

President: Steve Miller, Scottsdale, AZ, 602-989-6505, stevemiller.az@cox.net
First VP: Richard Rozinski, Gilbert, AZ, 602-803-7255, neongod52@gmail.com
Second VP: —
Secretary: Terry Porter, Gilbert, AZ, 480-313-7942, trp555@prodigy.net
Treasurer: Ali Merriman, Cornville, AZ, 612-385-5981, highwaystar1340@aol.com
Web Master: Paul Diefenderfer, Cave Creek, AZ, 602-509-1543, dief@phoenixrockgym.com
Librarian: Jay Griffin, Peoria, AZ,, 623-349-1422, jay.griffin@rtznj.com
Editor: Bill Ganoe, Tucson, AZ, 520-326-5478, editor@azblacksmiths.org
Directors: Dylan Cook, Bill Ganoe, Rich Greenwood, Ivan Hill, Jason LaBrash, Len Ledet, Joe Madrid, Sam Rivera, Peter Sevin, Ira Wiesenfeld

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Demonstration: Saturday, May 21, 2022 Desert Metal Craft

544 E. 24th Street
Tucson, AZ

Workshop: Sunday, May 22, 2022

Demonstrators: Rich Greenwood and Joe Madrid

9:00 - 12:00: Rich Greenwood

Grinding: It's Not Just for Bladesmiths

- Basic shop uses of a grinder
- Using a grinder instead of hand filing.
- Body mechanics for the blacksmith using a grinder

1:30 - 4:00: Joe Madrid

Making Simple Tools

- Tongs
- Punch plate
- Twisting tool, etc.



• 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 in the neighborhood.
- 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 workshop on Sunday is \$100. Students will make a small knife and work on grinding skills. Contact Richard Rozinski at 602-803-7255 or neongod52@gmail.com to register.

As always, safety glasses are required in the demonstration area.

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

Directions to Desert Metal Craft

544 E. 24th St. Tucson, AZ

- I-10 to the 22nd Street exit
- East on 22nd Street to 2nd Avenue
- South (right) on 2nd Avenue to 24th Street
- East (left) on 24th Street
- Desert Metal Craft is one block east at the railroad tracks.



The President's Project for May: Mushrooms

Weld the tops to the stems, practice your upsetting, or get really creative with other techniques.

Bring your mushrooms to discuss your challenges or to just show off around 8:45 Saturday morning.



Our May Demonstrator: Rich Greenwood

Rich was a contestant on the premiere episode of the History Channel's "Forged in Fire" series in 2015, which prompted Pima Community College in Tucson, Arizona, to invite him to teach a course on bladesmithing and blacksmithing. He established Pokabu Forge in 2016 and is a professional bladesmith with customers across the United States. Teaching the ancient art of blacksmithing inspired him to establish Desert Metal Craft. He is a strong believer in the hands-on method of learning and teaching, from which he derives his motto: "I never make a mistake – I either succeed or learn."



More at:

<https://pokabuforge.wordpress.com/>

or

<https://www.DesertMetalCraft.org>

**> Save The Date <
Winterfest V is coming
January 19-21, 2023**



March Demo Report

Bill Ganoë

photos by Bill Ganoë

We gathered at Grizzly Iron in Phoenix on Saturday morning, March 19, 2022, to watch Kurt Fehrenbach make tooling with and for power hammers. Some of the tools he made are shown below. You really had to be at the demo to get the most out of Kurt's demo.



Richard Rozinski (right) introduced Kurt .



Shaping a bushing



Several of the tools Kurt made.



An important job for Kurt's assistant was to sweep away the scale while the work piece was in the forge.



A leaf die and a leaf made with the die.

Interesting Weblinks

Blacksmiths Without Borders

- This group hosts a monthly Internet Blacksmith Gathering. Most of the webpages on this site have versions in English, German, Nederlands, and Spanish.
<https://blacksmithswithoutborders.com/treff.htm>
- Making a teaching video - tips for making a video with your cellphone (in English and German)
<https://blacksmithswithoutborders.com/doku-how-to.html>

Anvilsandtoolsforsale.com

- Historical anvils, vises, tools - mainly from the 17th and 18th Century. The site also has a page with some historical background
I haven't checked on pricing, but these things are probably not cheap. However, if you're interested in learning about these tools or in actually owning a piece of history, this looks like a great resource to check out.
<https://www.anvilsandtoolsforsale.com/>

Book Review

The New Spruce Forge Manual of Locksmithing: A Blacksmith's Guide to Simple Lock Mechanisms

by Denis Frechette and Bill Morrison

Reviewed by Bill Ganoe

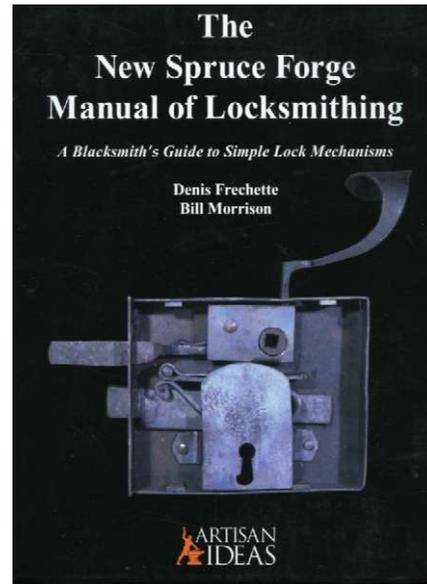
While locksmithing isn't a great interest for many blacksmiths, studying the design and building techniques of locks, especially of fairly simple historical locks, can provide valuable insights and shop tips that can be useful in almost any blacksmithing - or even bladesmithing - project.

This book is a great place to start studying lock design and construction. The authors created the original, paperback book, *The Spruce Forge Manual Of Locksmithing* in 1999. It was a paperback edition of 118 pages that included patterns and techniques to build five simple, "blacksmith made" locks based on antique originals. The authors hoped this would "introduce the smith to the range of possibilities that can be found using the simplest of tools."

The New Spruce Forge Manual of Locksmithing is a revised and expanded version of the original edition. It is a hardcover book of 304 pages with more than 800 color photos and drawings. The new edition is based on the five types of locks covered in the original edition, because the authors felt they provided the best examples of basic locking mechanisms. In addition to expanded and revised patterns and techniques for building those basic lock mechanisms, the authors added examples "to show how a standard lock mechanism can be adapted to build other types of locks."

The manual is divided into two sections:

In the the first section, **Technical Information**, the authors cover basic concepts and techniques, many of which should already be familiar to the average blacksmith. But any of the illustrations provide slight variations on the photos included in most blacksmithing textbooks such as Mark Aspery's *The Skills of a Blacksmith* series. Some of these variations might help improve your understanding of those basic techniques. Among things that might not



be familiar to many blacksmiths are a detailed section on forge brazing, a section on benchwork that includes the use of basic chisels and advanced filing. Other sections cover working with sheet metal, creating full scale patterns from a set of plans, and specialized tools that are used for building the locks described in the second section.

The second section, **The Locks: Patterns & Instructions**, provides patterns and detailed step-by-step instructions for 14 different locks. This section shows when and how to use the tools and techniques described in the first section.

The New Spruce Forge Manual of Locksmithing: A Blacksmith's Guide to Simple Lock Mechanisms is a goldmine of information about lock mechanisms and it would be a "must-have" book for anyone interested in basic locks. It would also be useful to blacksmiths who focus on other aspects of the smithing craft.

Hardcover, 304 pages, more than 800 color photographs and illustrations. Published 2022.

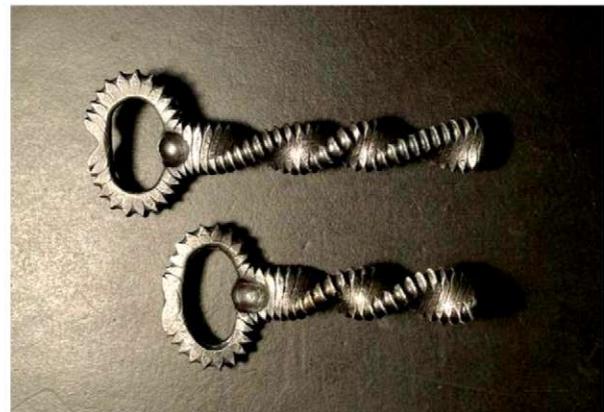
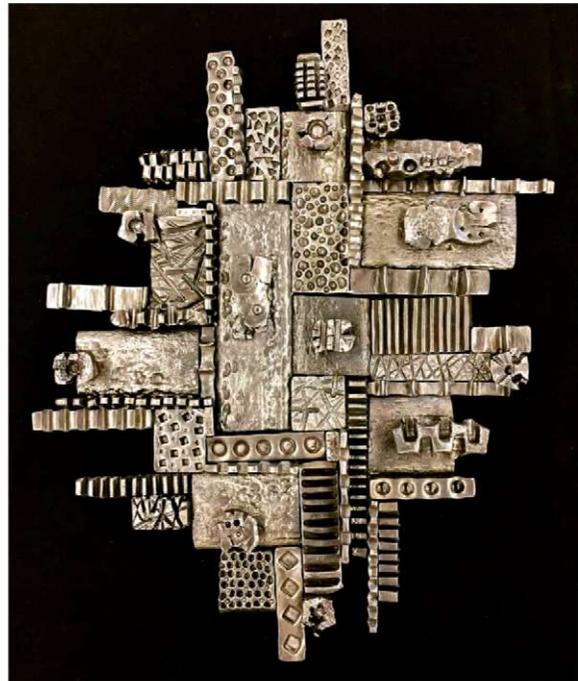
ISBN: 978-1-7333-250-0-4

Available from Artisan Ideas, www.artisanideas.com
\$44.95

Seeds of Creativity Creative Texturing

*This is work from a member of the New England Blacksmiths.
We need more AABA members to submit photos of their work. -Ed.*

MEMBERS' GALLERY



Dana Flanders

#366Hooks: Form and Design Revealed Over a Year's Time

Opening June 11, 2022

Sculpture Tucson

Brandi Fenton Memorial Park

Tucson, AZ

(Photos: Manitoba Craft Council)

#366Hooks started as a twelve-month personal journey to get through a creative rut.

In 2016, Matt Jenkins, of Cloverdale Forge in the Manitoba province of Canada, challenged himself to design and forge a different hook for each day of the year. Being a leap year, Matt created a total of 366 hooks.

From start to finish, the process averaged an hour each day. The forms and designs created in #366Hooks utilize a mixture of techniques and approaches — ranging from primary blacksmithing skills to inspirational details found in masters works.

Setting a long-term goal, a daily time allotment, and using materials and tools on hand, Matt discovered seemingly endless inspiration for hooks, including the metal scrap bin.

During the course of the year, the #366Hooks project amassed a following of creative tastemakers, including professional and hobby blacksmiths.

All viewers will appreciate the design and creative forms coaxed from the metal, while artist-blacksmiths will undoubtedly contemplate and attempt to decipher the starting stock and methods used to create each piece.



#366Hooks

Curated and produced by Cloverdale Forge and the Manitoba Craft Council, Manitoba, Canada

Toured in the USA by the Artist Blacksmith Association of North America (ABANA.org)

Matt Jenkins

Having picked up a hammer up at an early age, Matt feels at home in a room full of tools and especially around the anvil. Over the past 25 years, he has honed his skills and learned traditional blacksmith techniques while studying under master smiths around North America.

Matt Jenkins is an internationally recognized award-winning blacksmith. In 2009, he and Paul Garrett received an Honorable Mention in the team category at the World Forging Championship in Stia,

Italy. Returning to Stia in 2015, Matt took home the first place medal in Drawing and Design.

Matt has a reputation for highly crafted work and is extremely dedicated to designing and building each piece by hand. He leads small workshops at Cloverdale Forge, teaches at the John C. Campbell Folk School, and demonstrates at the Festival du Voyageur. Using hand tools and early industrial equipment, Matt creates designs with the timeless feel of handmade work.

Some of the hooks in the #366Hooks Exhibit



Member's Projects

Shop-made Chisel/Punch Holder

David Bridenbaugh

I got the idea for this chisel holder from ABANA Hammers Blow magazine (Volume 29, Number 3, Summer 2021). The article was very clear and detailed. It would be an excellent project to help develop your blacksmith skills. I took a couple short cuts though by using a 1/2" x 12" eyebolt and nuts from the local hardware store. The tubing I used was 1" x 1" x 10". The notches were cut with a bandsaw but a hacksaw or die grinder would work also. The plug at the bottom of the square tubing is a 1/2" square nut with the threads drilled out. Grind a taper on the sides, heat the tube and pound it in. The wall thickness of the tube you use will determine the size of square nut that will fit. You might need a larger size than 1/2".



AABA Calendar 2022

May 21	Demo: Grinding: It's Not Just for Bladesmiths	Desert Metal Craft	Tucson
Jun-Aug	#366Hooks exhibit	Sculpture Tucson	Tucson
July 16	Demo: Gordon Williams	TBA	Flagstaff
September 17	Demo: Mike Riemer	TBA	Camp Verde
November 19	Demo: Dennis Dusek	Grizzly Iron	Phoenix

Thank you to everyone who has renewed, and a reminder to those that haven't that the 2022 membership is due.

Welcome New Members

Deron Brofft	Scottsdale, AZ
Gary Bushman	Scottsdale, AZ
Raymond Deskins	Gilbert, AZ
George Goldman	Phoenix, AZ
Victor M. Valderrama Sanchez	Phoenix, AZ

#366Hooks Exhibit in Tucson

AABA is planning a hammer-in or demonstration at the opening reception for the #366Hooks exhibition at Sculpture Tucson in June. "#366Hooks" is the result of one blacksmith's project to make a different hook each day during 2016. Watch for exact dates and other details as they become available. See page 8 for more details on the #366Hooks project itself.

Xerocraft Makerspace in Tucson

Xerocraft, a Makerspace in Tucson at 6th St. and 9th Ave., is moving ahead to create a new blacksmith shop. It will be designed for teaching, doing, and developing blacksmith skills. AABA member Ed Snyder would appreciate your assistance in spreading the word, by any means, to anyone you think might be interested in getting started in blacksmithing or in building on their current skill set. Ed also needs help getting things set up and operational at Xerocraft in Tucson.

Anyone who thinks they might be interested should contact Ed at ejsblacksmith@gmail.com. Interested responders will be contacted only if they have questions or as plans develop and they chose to be involved.

Deadline for the July 2022 issue

June 1, 2022 is the deadline submitting photos and articles for the July 2022 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

MCC Blacksmithing & Welding Class

The Mesa Community College blacksmithing program is an excellent deal - over 60 hours of instruction including material and propane! Summer Session classes are on Monday, Wednesday and Friday for 8 weeks. Richard Rozinski will be teaching each day from 9:00 am to 1:30 pm and Robert Ratliff will be teaching each day from 4:00 pm to 8:30 pm. Blacksmithing is listed as **WLD103** in the class schedule.

Classes fill up early, but waiting lists may be available. For more information go to:

www.mesacc.edu

Classes at Pieh Tool in Camp Verde

- Beginning/Intermediate blacksmithing classes with Dylan Cook

May 20-22, 2022

Registration is \$585.

Students will make several simple projects to take home.

- Knifemaking class with Master Bladesmith, Ray Rybar

May 6-8, 2022

Registration is \$585.

Students will make one knife.

For full details call 928-554-0700 or go to

<https://piehtoolco.com>

AABA Website: www.azblacksmiths.org

Open Forge: Tucson

Regularly scheduled open forges in Tucson are on hold for the summer and will restart on the first Saturday of September or October. Pickup events may be organized during the summer on short notice. Details of these events may be sent out to the southern Arizona email list. If you would like to be included on this email list, send your email address to Bill Ganoe, editor@azblacksmiths.org.

Open Forge: Grizzly Iron

Don't have a power hammer? Use one at Grizzly Iron, 1329 W. Lincoln St., Phoenix, Wednesdays from 5:00 PM to 8:00 PM, more or less. Pre-registration is required. There may be changes in dates, times, and restrictions, and those changes may be made on short notice during the COVID-19 pandemic. Check <http://grizzlyiron.com/open-forge> or the **Grizzly Iron Open Forge and Workshops** group on Facebook for current details.

Open Forge: Desert Rat Forge (Phoenix area)

Paul Diefenderfer will host an open forge at Desert Rat Forge on Saturday, May 7, 2022 and Saturday, June 4, 2022, 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 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.

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 700ft 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.**

Classes and Events at AABA Members' Shops

Desert Metal Craft

544 E. 24th St., Tucson, AZ

“Desert Metal Craft is the only school in the southwest dedicated to teaching blacksmithing, bladesmithing and fabrication together with the modern science behind the craft of metalworking.”

- Rich Greenwood

The schedule at Desert Metal Craft features a wide range of classes and workshops. Check the DMC website, <https://desert-metal-craft-108715.square.site>, for on-line events, details of specific events, and to register for each class or workshop

Grizzly Iron

1329 W. Lincoln St., Phoenix, AZ

The schedule at Grizzly Iron features a wide range of classes, open forges, and workshops. For the current schedule, prices, and registration check the website: <http://grizzlyiron.com/classes-and-workshops>, or the **Grizzly Iron Open Forge and Workshops** group on Facebook.

Zeevik Gottlieb Style Horse

By Steve Alford

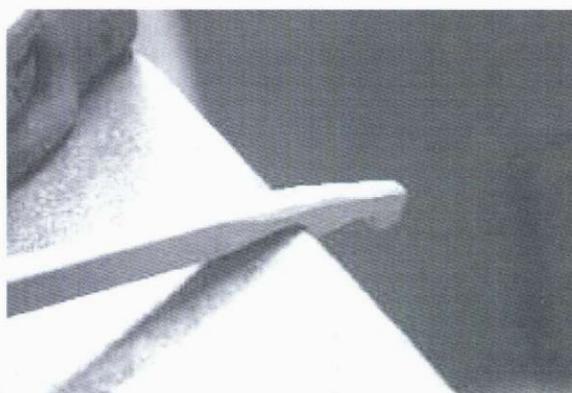
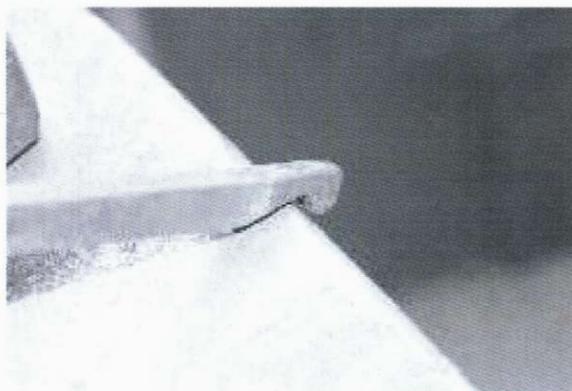
Two horse head key rings were Zeevik Gottlieb's first quick demo pieces at the 2021 Tannehill conference. I have good pictures from the demo but still missed a couple steps. And it's been a few months, so I had to work out some things for myself. It took seven attempts to get to something I considered passable. All that to say that Zeevik inspired these, and I think they're close, but not saying mine are just like his!

I'm using $\frac{1}{4}$ x $\frac{1}{2}$ -inch flat bar. The stock in the demo pictures looks about that size.

Zeevik started his horse with two sets of half-on-half-off blows to set the nose and the back of the jaw. I put the bar over the far edge of the anvil with the end just over the edge – less than half the width of the bar – and held the bar at a fairly high angle. It's easy to make noses too long when forging animal heads, so keep it shorter than you might think. I chose a spot on the edge of my anvil that's fairly rounded, but not too round.

To set the back of the jaw I used a sharper but still rounded spot on the edge of the anvil and held the bar at a much lower angle. I put the right side face down on the end of my anvil horn and struck the back side to get a hollow just behind the nose and ahead of the jaw.

I bent the head down a little and then used the cross peen to pull out the mane. This will also bend the head down a little more. This step is the last hammer-and-anvil forging. From here on it's punch and chisel work. I did all forging on the wide face of the bar on the right side, well, except for the one left-sided one I made.



Top: Half-on-half-off to set the nose. Bar at a high angle.

Middle: Half-on-half-off to set the back of the jaw. Bar lower, and a slightly sharper place on the anvil.

Bottom: Hollow just behind the nose.



Above: Bend the nose down a little and pull out the mane with the cross peen.

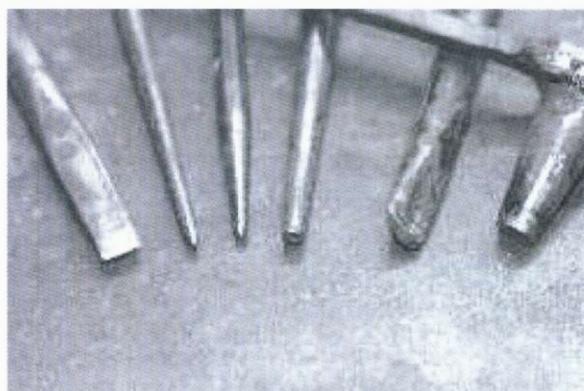
Below: Ear, mouth, eye, nostril, and the mane. That's actually three heats: Ear and mouth, then eye punch and nostril, and then the five marks for the mane.



Seven tries and then two that I approved

I used a straight chisel to cut in an ear and the mouth. Then put in the eye with an eye punch and a couple of center punches to make the nostril. Finally I used a, um, ah, kind of wedge shaped tool to forge the mane. Sorry, I don't know a name for that tool. But I decided I liked the look with five of the wedge-shaped marks. Each mark displaces metal and bends the head down a little more. You can tap the nose down or bend it up a little to get the look right if needed.

I remember Zeevik cut the head off the bar and then punched the hole for the key ring, but I used a 3/8 punch to make the hole while it was still on the bar. Then I found that cutting with a hot cut deformed the hole, so I just used a saw to cut off. Then I filed the cut edge round to match the hole and take off sharp edges or burrs. You can heat the horse head in the forge once more, and maybe give it a good wire brushing to take away the shine from the cut and filed places.



- Chisels and punches:**
- Straight chisel for the ear and mouth**
- Two center punches for the nostril**
- Eye punch**
- No-name wedge-shaped tool for the mane**
- Round punch**

Here is a useful punching tool, and the article includes several tips for working with H13 tool steel. - Ed.

Jeffrey Funk's Rectangular Punching Tool by Josh Swalec

This article is written as part of the generous scholarship I received through the NEB. I attended a class at The New England School of Metalwork last fall, named Unity of Form and Function, "Designer Tool Making", taught by Jeffrey Funk (the smith who forged an eyed axe out of igneous rock at the 2014 ABANA conference).

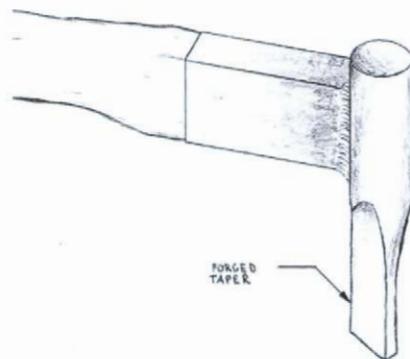
The tool which this article focuses on is a tool Jeffrey brought to the class, and we used it extensively to punch rectangular holes to forge hammer and mattock eyes. Upon return to my own shop I immediately built 2 different sizes of this type of punch, having had mixed results in the past using pointed slitting punches.

First, procure some H13 tool steel. This is very highly recommended, as it keeps its integrity at high heats. It is expensive, but in my opinion, worth it for punching and drifting tools. I ordered $\frac{7}{8}$ " diameter rod from Hudson Tool Steels in NH. Next time I would order 1" diameter, as it would make a beefier tool. (Don't buy it from Online Metals, I think they are price gouging.) I also needed 4" of schedule 40 1" steel pipe (1.05" ID) and an extra large size framing hammer handle (designed for rectangular eyes). I bought the handle at Sears, as it seemed I would be able to buy more that size in the future.

As seen in Figure 1, the H13 is drawn down to the rectangular working end. This can be done over the horn of the anvil or under rounded power hammer dies. The H13 must be worked at a good yellow heat. For punching full sized hammer eyes the tool end should be about 1" by $\frac{3}{16}$ " thick after grinding.

The 1" steel pipe is formed on a mandrel to become a rectangular tube into which the handle is inserted, and which is welded to the H13. This protects the wood handle from the occasional missed blow of the striker. Not having a handle eye also allows the punch to retain its full strength. After measuring my wood handle, I forged a mandrel on the end of a piece of 1" square bar to the dimension of $1\frac{1}{8}$ " by $\frac{3}{4}$ ", with a very slight taper down towards the working end. With 2 or 3 heats of judicious smushing and mandrel-driving, the pipe is formed into a rectangular tube. Use adequate heat, as the pipe likely will have an inherent seam weld which could fail.

FIGURE 1
RECTANGULAR PUNCH



Rectangular Punch Tool continued

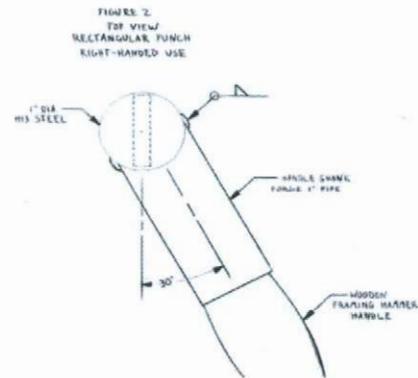
One end of the pipe is ground out a bit to fit against the diameter of the H13 in preparation for welding.

It is recommended to do a pre and post-heat treatment to weld to the H13, so you may want to weld before heat treatment.

The working end will likely get a nice high temper during the first use while it's stuck in a block of yellow hot steel regardless. As H13 has such a high tempering range, the following steps could also temper the tool if done carefully. As shown in Figure 2, the handle should stick out at a 30 degree angle from the line of the tool, so as to have a clear, comfortable view of the punching operation. I tacked it up, preheated to perhaps 800 degrees with a torch, and TIG welded all around with stainless filler rod, then hit it with the torch a bit more and put the tool in my (turned off) propane forge to cool down slowly.

Another method for heat treatment is to heat the tool to its critical temperature (around 1800 degrees for H13) and then immediately burying the struck end of tool in vermiculite, whilst leaving the working punch end sticking out to air-harden. Doing something of this nature is recommended, so as not to inadvertently harden the struck end and risk spalling/flying shrapnel during use.

Upon mounting the handle, I fit a foxtail wedge into the handle end before inserting it into the rectangular shank. If this punch is used accurately one will get a nice thin rectangular slug when finishing the hole.



Using the punch

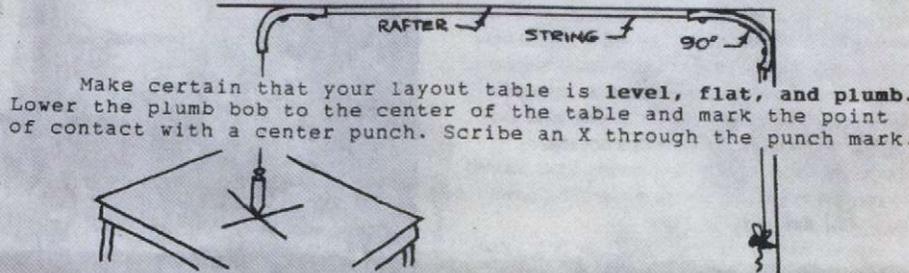
First, carefully mark the top and bottom of the piece you are punching with large center punch marks. If the distance between marks are a bit more than the length of your rectangular punch, the punch can be registered nicely on center of your desired hole. The following steps are all much easier with a striker. Use the first 1 or 2 heats to make clearly defined, centered, straight marks on both sides of your work with the rectangular punch. Then, drive the punch in from one side about $\frac{1}{2}$ to $\frac{2}{3}$ of the way through the work's thickness. Every 3 or 4 hammer blows, cool the tool end with water and lubricate, preferably with powdered graphite. The graphite will only stick to a wet tool so the tool must be cool enough. Then flip and drive the tool from the reverse side of your work, hopefully driving the slug out. Always cool the punch every 3 or 4 blows! If the tool gets stuck in the work, take forceful action to knock the work off of the tool and cool. Once the hole is formed, start stretching it out with a tapered rectangular drifting punch (another good application for H13). Then stretch and drift eye to desired shape.

This is a blast from the past that I found while looking for something else! It is from past member Dan Tull of Georgia. It is a good tip when you are trying to get your three legged stand to be plumb. The Bible verse isn't bad either...
Barry

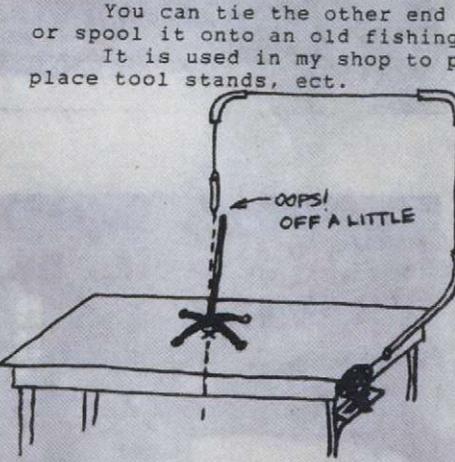
A LAYOUT TABLE PLUMB BOB DEVICE
SUBMITTED TO THE OCMULGEE BLACKSMITH GUILD CHAPTER NEWSLETTER
By Dan Tull (of Dan T's Inferno, Newnan, Georgia)

This device is extremely handy in any shop producing iron work that must be square and plumb. All you need to make it is a plumb bob (available from any lumber or building supply store), a piece of string, and two pieces of electrical conduit or pipe bent to a 90 degree angle. (You can probably get a pair of these from any electrician if you can't find them in the lumber store).

Take the two pieces of conduit and attach them with screws, nails or clamps to the ceiling over your layout table as shown.



Make certain that your layout table is **level, flat, and plumb**. Lower the plumb bob to the center of the table and mark the point of contact with a center punch. Scribe an X through the punch mark.



You can tie the other end of the cord to a nail on the wall or spool it onto an old fishing reel mounted to your table. It is used in my shop to plum vertical on hand rails, fire place tool stands, ect.

EDITORS NOTE:
DAN SAYS "SOMEONE PLEASE COME UP WITH A CLEAR EXTERIOR FINISH THAT WILL STAND UP TO GEORGIA WEATHER"
AMEN TO THAT DAN!

From the May 1983 Pounders Press

The following passage is an excerpt from the Catholic Bible, the Book of Ecclesiasticus, Chapter 38, Verses 29-31.

"The smith also sitting by the anvil, and considering the iron work, the vapor of the fire wasteth his flesh, and he fighteth with the heat of the furnace; the noise of the hammer and the anvil is ever in his ears, and his eyes look st upon the pattern of the thing that he maketh; he setteth his mind to finish his work, and watcheth to polish perfectly."

Reprinted from On the Anvil, the newsletter of the Philip Simmons Artist Blacksmith Guild, March April 2022.

This looks like a good idea to easily get your three-legged stand to be plumb PLUS easily get lots of other projects to be plumb - Editor.



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.

The Arizona Artist Blacksmith Association is an affiliate of ABANA.



ABANA 2022
May 11 - 14
North Texas State Fairgrounds
Denton, TX

Details and registration at: https://www.eventsquid.com/event.cfm?preview&event_id=12981

ABANA 2022 may have been canceled, but the Johnstown Festival 2023 is coming up. Details as they become available.

ABANA Education Grants

"Since its founding in 1973, ABANA has been committed to the education of its members. The purpose of the ABANA Scholarship Fund is to provide financial assistance to our Affiliates and members to assist them in the development of blacksmithing skills and abilities."

Available to:

ABANA affiliate organizations (such as AABA)

Individuals (who are individual members of ABANA)

<https://abana.org/education/scholarship-grants-and-scholarship-reports/>

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. 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

- 1 **Nazel 2b Forging hammer** with 3-phase motor, dies, and oiler, \$13,000.
- 1 **Little Giant 25 lb. Power Hammer**, single-phase. \$2,500.
- 1 **Little Giant** (not the one above) 25 lb. power hammer, single phase. \$3,000.
- 2 **5'x5' Acorn type platens**, \$2,500 each or \$4,000 for both.
- 4 **Post Vises**. Jaw widths: 4" for \$150, 4 1/2" for \$150, and two 6" for \$350 each.

Note: these are rusty and will need to be cleaned and lubed.

- 1 **P&H 300 amp Stick/TIG welding machine**, single-phase w/ foot pedal, no leads, torch, flow meter, or bottle. \$300.
- 1 **Cincinnati/Greeves** Vertical/Horizontal milling machine, w/ 10"x54" power feed table and tooling, 3-phase. \$1,500.
- 1 **3-ton air-powered crane hoist**. \$450

All items are located in Buckeye, Arizona. These prices include loading onto your trailer/truck. I can offer curb-side delivery for an additional fee.

Contact: jaegermax@msn.com
Please put "AABA Equipment" in the subject line so I don't delete it as junk.

For Sale
Pallets of firebricks. Many different sizes. All for \$400. Photographs available on request. Located in Prescott, Pick up ONLY. This is a lifetime supply. Steve Imms, **928-852-0881** or steveimms@cablone.net

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Casey Abbs, **520-869-8778**

For Sale
Swage Block. 160 lb. in excellent shape. Never been outside. \$450.
Post Vice. Good jaws, mounted on a steel base. \$200.
Larry Dorrell, **928-925-7091**

Gas Forge Building Workshop
Richard Rozinski is offering gas forge building workshops in his shop in Gilbert. Two person minimum. Call Rich 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

For Sale
Wrought Iron. 1 1/4" x 5" x 48". I have a few. \$100 ea.
Coal Forge, comes with some coal. I can text photos. Price is negotiable.
Dan Jennings, **480-510-3569**

Sources

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Toll Free: 877-795-1600

Bar U Bar Supply
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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.
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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
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Your main blacksmithing interest _____
Occupation or skill _____
Please check one: Regular membership (\$35) _____
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Mail to: Terry Porter
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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

Thank you to everyone who has renewed, and a reminder to those that haven't that the 2022 membership is due.



Open forge on April 2, 2022 at the Southern Arizona Farrier Supply store in Tucson. Mike Gorczyca was demonstrating things he makes with worn-out farrier rasps.