



# The Anvil's Horn



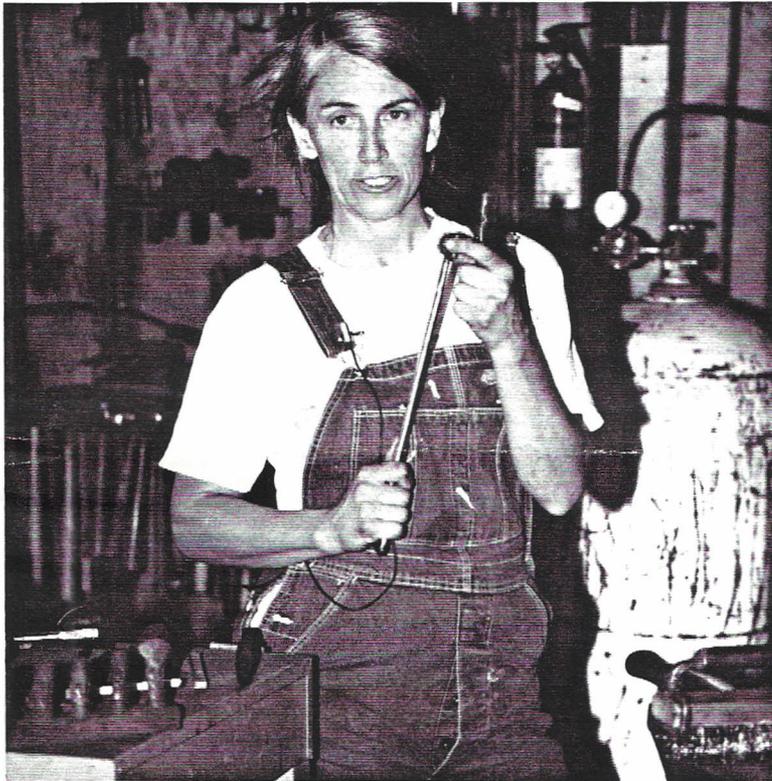
A PUBLICATION OF THE  
ARIZONA ARTIST BLACKSMITH ASSOCIATION



Issue NO. 61

ed. #62 SEPT 1995

JULY 1995



*left:  
Kathey  
Borthwick at  
Flag Forge*

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**SATURDAY  
SEPTEMBER 23RD  
PLACE: FLORES BLACKSMITH SHOP  
724 N. MAIN  
TUCSON, AZ 85705  
PHONE: (520) 623-1248**



8:00 A.M. REGISTRATION  
9:30 A.M. DEMONSTRATION  
12:00 NOON..LUNCH  
1:00 PM. IRON-IN-THE-HAT DRAWING  
1:30 P.M. DEMONSTRATION  
CONTINUES

## DEMONSTRATORS: Mike Boone and Shad Gunther

Your President, Ron Kinyon has lined up two excellent demonstrators for the Tucson Meeting. Mike Boone and Shad Gunther will demonstrate ornamental iron work. Both are known for their organic forms and high quality iron work.

ADMISSION: \$10 FOR MEMBERS  
\$15 FOR MEMBERS & FAMILY OR NON-MEMBERS (FIRST TIME)

**INSIDE**

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Inside, you'll find ANOTHER of Bob RUMMAGE'S GREAT ARTICLES. THE FLAGSTAFF MEETING GENERATED MORE PICTURES THAN USUAL SO I ADDED A COUPLE OF PAGES ALONG WITH A BIT ABOUT THE MEET, IN CASE YOU DIDN'T MAKE IT. IF YOU MISSED IT, YOU MISSED A GREAT ONE. HOPE YOU GET TO THE ONE IN TUCSON, BECAUSE IT'S STACKING UP TO BE A CLASSIC. SEE YOU THERE.

YER ED., Mike COOPER

**ABOUT OUR DEMONSTRATION**

Our President, Ron Kinyon, has searched high and low looking for demonstrators for the Tucson Hammer In. He went as far as Colorado, where he found us two of the finest blacksmiths in the West. Mike Boone and Shad Gunther will be at Bill Flores' Blacksmith Shop on the 23rd to show us their stuff.

If the name Boone sounds familiar, that's because Mike is a direct descendant of *the* Daniel Boone. Perhaps you didn't know that Daniel was a blacksmith as well as a pioneer. According to Mike's bio, Daniel studied under George Washington! Mike seems to have inherited his skill from his forebear as the many awards he has earned at exhibits will attest.

Shad Gunther's name should ring a bell, too. His dad is Rob Gunther who has demonstrated for us in the past. He seems to have passed his talent to his offspring, as well.

Both men will demonstrate their organic style of ornamentation, so be sure to bring pad and pencil, video camera, etc. Pictures of their work appear elsewhere in this edition.

For those of you who have never visited Flores' shop, you're in for a treat. The shop is a historic site filled with metalworking

machinery, both old and new. There are usually carriages in various states of restoration around as Bill is one of the few smiths remaining involved in the restoration and repair of hay powered transport.

Bill's family always puts on a great lunch spread for a very reasonable price, so if you like Mexican food, bring your appetite. Joe Hernandez has arranged for bleachers to be delivered so you'll have a good view of the proceedings.

Iron-In-TheHat has been a bit slim lately so be sure to bring a piece of your handcrafted work to donate, and don't forget the contest. See you in Tucson!

**MEETING ROSTERS**

Here are the proposed rosters for demonstrations and Board of Directors meetings for 1995:

Demos	Board Meetings
Sept. 16, Tucson	Aug. 26
Nov. 18, Open	Oct. 28

Unless notified otherwise, Board Meetings are at the downtown Ramada, 401 N. 1st. St.

Venue for and Nov. is still not firm. Watch this space for more info. Contact any Board Member with suggestions or requests.

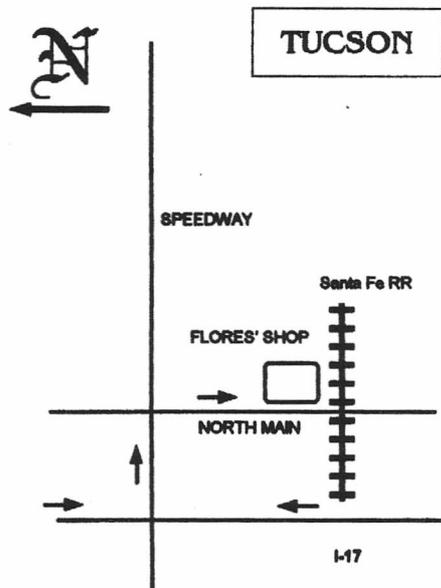
**CONTEST**

Entries at the last demo were once again too few to judge. Here's a schedule of future contest subjects. This schedule will appear in each newsletter to give everyone plenty of lead time to prepare that masterpiece.

Sept. 16	Demons, Dragons, Wizards or Beasts
Nov. 18	Horse around! Western or cowboy stuff

Remember, the items must be signed and will be held in the Association's display for 2 years.

**ROUTE TO FLORES FORGE:**



**LIBRARY STUFF**

Jerry Fuller would like to build the library into a reference for the Association, so he needs contributions.

If you can donate or you know the whereabouts of material that may belong to the Association, please contact Jerry or any Board member.

Dave Hawkins, one of our new Board members, has volunteered to tape each of the demos he attends for the library. When you see him trying to get a better vantage point at the demos, please give him room to work.

Jerry can be reached at: 705 N. Orlando Cir., Mesa, AZ 85205, (602)924-4026.

## COAL AT LAST

We finally have a good supply of coal. We got 25 tons of high quality coal and delivered about half of it to Tucson and the rest is stored at Boyles Tool Service in Mesa.

The coal was a little bit cheaper this time, but the transportation and bagging pushed the price up. The price per 100 lb. bag is \$20 and if you have the means to haul it in bulk without bagging you can have it for \$300 per ton.

If you're in the Tucson area, contact Joe Hernandez at (520) 743-9032.

In the Phoenix area, contact Pat or Calvin Boyle at Boyles Tool Service, (602) 969-7196.

## VISIT THE COOP

We paid a visit to the COOP to see what's available. They have blacksmithing tools for reasonable prices, although they lean towards farrier's stuff. The anvils are farrier pattern and most of the tongs are for hayburners too. They have a huge hardware store and tack shop with very good pricing. Pay them a visit sometime just for fun. They're on Jackson just east of 18th street.

## ELECTIONS TIME AGAIN

Election time is fast approaching. It's time to grade your Officers and Board on their performance and perhaps stand and deliver, yourself. If you have a preference for someone to fill a position and it's ok with them, contact a current board member or officer so we can get them on the ballot.

As we've said before,

**It's Your Organization!  
Get involved!**

## the TOWN TOO TOUGH TO DIE

Gary McCauley who operates the Tombstone Smithey in, you guessed it, Tombstone, is in a fix. He has more business than he can handle. Tourists from all over the world are hot for hand crafted work and Tombstone seems to be the place they all land.

Gary is offering space in his shop for anyone in the association to exhibit samples or stock. Put your price on it and he'll mark it up 40% and sell it for you. He needs Candle Holders, Brands, Fireplace Sets, Book Shelves, you name it. All price ranges are selling and he's connected with galleries world wide! If you have something you'd like him to show for you, contact him at Tombstone Smithey  
600 E. Fremont Box 222  
Tombstone, AZ 85638  
(520) 457 2326

## TOOLS NEEDED

Be sure to bring items for sale to the next meeting, especially tools. Bring your show-and-tell items too. And the Iron-In-The-Hat table has been a bit sparse lately, not to mention contest entries.

There is always someone needing tools, and they always sell well at the meetings. People are always interested in the show-off table where they can get their imaginations fired up and talk about techniques to the makers. The contest started out well, but participation has tapered off lately. This is a chance to get something on display and attract some interest and maybe even business.

**Participate!**

**Share!**

**Just Do It!**

## BLACKSMITH SCHOOL

Once again, it's time to think about the Basic Blacksmithing School. These schools have been very successful in the past and we'll be conducting another one in the Spring. If you're interested, contact one of the Board Members so you can get on the list, because the roster has always been filled early.

We'll bring you more info on the location and cost as soon as it's available.

## SUGGESTIONS PLEASE

We need your ideas for activities and demonstration subjects. If you know of someone you'd like to see demonstrate or a subject you'd like to see demonstrated, contact a Board Member. If you have an idea for an activity or a place to meet or technique... you get the idea.

Call us, write us, catch us at a meeting.

How about a meeting in Tombstone or Bullhead City? We've had offers from blacksmiths in both places to host demos but we need to know what you think.

While your at it, if you liked an article in the newsletter, let the author know so he'll write more. We all run on feedback and we lose interest if we don't get any.

## HERE'S ONE

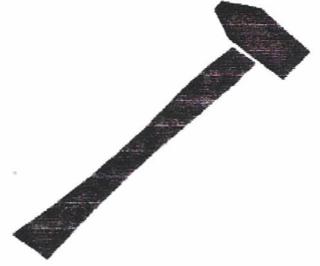
Great idea from the New England Blacksmiths' Newsletter:

Next time you're looking for a place to mount a vise when you're on the road, take a look at that trailer hitch receiver. If you mount a vise on a plate welded to a piece of 2X2, 1/4 inch wall square tubing, you can stick it in the receiver on the back of your truck.



# AABA

## President's Message



Well, believe it or not it's fall! At 109 degrees it's hard to be enthusiastic about a hot forge and tools already too hot to handle.

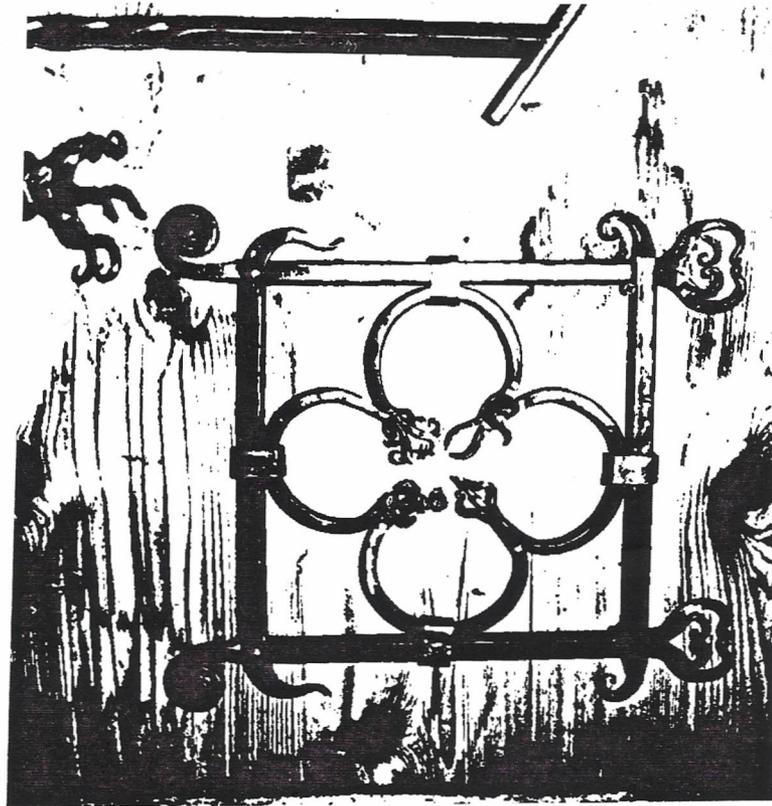
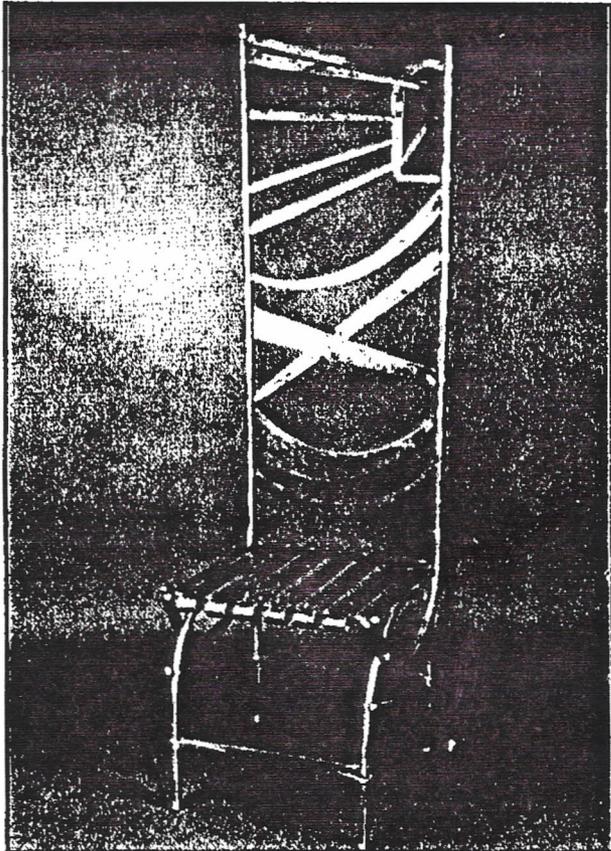
I was in Colorado for a few days last week and stopped by to see one of our September demonstrators. With cool air and the smell of burnt coal and a look at the items Mike Boone is going to demonstrate, my enthusiasm is on the up swing.

Our fall hammer-in in Tucson promises to be a good one. Mike Boone and Shad Gunther both seem to be proud and enthusiastic about the craft.

I hope it rubs off onto the rest of us.

Happy hammering and be safety minded!

Ron Kinyon





## PRESIDENT'S MESSAGE August 1995

The good old summer time! Right? Well maybe but right now I have some reservations. Lately has been so hot in my neck of the woods, and a lot of other places too, I am told by the weather channel, that you can almost work the steel without firing up the forge. That is stretching it a bit but record high temperatures are being recorded in quite a few places.

With the results of the News Letter Editor of the Year recently in I expect the editors are already watching each other to see who comes out at the top next time around. As you know the recent vote went gave us two winners, Donnie Fulwood and Jim McCarty. Don't let my reference to winners lead you astray, there are no losers. We have a great team of editors and I urge you to read as many of the chapter news letters as you can. They contain a wealth of useful information.

Check all of your sources of dates for upcoming events that involve or are related to blacksmithing and plan to attend the ones you can. Even during this, the hottest time of the year a lot is happening and with the coming of fall the events will pick up quite a bit. Many of these events offer great opportunities to spread the good word about our chapters and about ABANA. Many of our rock solid members had their interest in blacksmithing sparked by a chance attendance of a smithing get together.

Not much has been said lately about ABANA finances. The only thing I have to report right now is that our financial stability has not faltered. Next month I will give you a condensed review of our financial activity for the first six months of 1995. Our committee heads will soon be starting work on their 1996 budget requests. With the continued efforts of the ABANA board members we look for ways to expand member benefits, to the extent they can be supported by available income. Your membership dues are our biggest source of income and we want you to receive value for those dues.

One more time I sincerely request that when you receive your ballot you vote for the candidates of your choice to serve as ABANA directors for the next three years. I hope we have the largest number of votes cast in the upcoming election that we have ever had. Your support is needed and it will be appreciated. Please vote.

Getting back to the subject of the first paragraph, the hot weather, do what you can to offset its ill effects. Remember, proper dress, proper ventilation, protection from the sun if outside and drink plenty of fluids. Don't let the heat end your forging. Without due care it could happen.

Sincerely,

Joe Harris  
ABANA President



## PRESIDENT'S MESSAGE September 1995

By the time you read this, time will be nearing to count the ballots cast to elect five ABANA directors for three year terms. I hope all ABANA members have marked their ballots for candidates of their choice and mailed them in time for the counting.

In our effort to form a chapter in Virginia, we failed to give due recognition to an ABANA Chapter that is already in Virginia. The Blacksmith's Guild of the Potomac [3608 Military Rd, Arlington, VA 22207] has been an ABANA Chapter since they were chartered in 1986. We erred. We upset some people. We apologize. Our efforts were sincere. What we had in mind was a chapter that would serve Virginia Blacksmiths that are located too far from Arlington to make it convenient to attend meetings in that area. That is no excuse for failing to give due recognition to a hard working and dedicated group of smiths that make up the Blacksmith's Guild of the Potomac, a Virginia Chapter of ABANA. These folks have no quarrel with starting a new ABANA Chapter. In fact they are willing to help. They just did not appreciate the fact that we failed to recognize them as a Virginia Chapter, and rightfully so.

We do spend a lot of time and effort trying to gain new chapters and new ABANA members. But we spend even more time trying to improve services to our present chapters and members. We appreciate your support, but we don't mind being told when we have done something wrong. In fact we appreciate that as well.

Here, as promised last month, are some brief comments about ABANA's financial condition at the end of the first six months of 1995. You will recall that the 1995 budget showed \$183,200 income for the year and a like amount for expense. If we had ended the first six months exactly on budget, our income and expense each would have been \$91,600. Posted figures show our income through 6/30/95 as \$126,700. So, we are running more than \$35,000 ahead of budget on income. Posted expense for the first six months is \$83,000 so our expense through June 30, 1995 is \$8,300 less than budgeted.

We have always had some wide swings from month to month for both income and expense. I doubt that year end will show the wide gap between income and expense that we had at mid-year but I do think we will end the year with income adequate to cover expense. We are financially sound.

You will notice that the Chapter Liaison Newsletter is not included in this mailing. John Pollins III has been blacksmithing all month, attending various workshops and was not able to publish his portion of this mailing to the chapters.

We trust you have had a safe summer and hope you keep safety in mind as you prepare your shop for the coming winter. Be safe, be happy.

Joe

## THE ROAD NORTH and other stories by Mike Cooper

The month of July was another record breaker and as we headed for Flagstaff, we were looking forward to some cool weather. We always anticipate a great hammer-in and a chance to get in some hammer time at the Borthwicks place, and we weren't disappointed this year.

Kathy started us off with a demonstration of decorative surface treatments. She talked about her inspiring visit to Samuel Yellin's museum and of talking to George Dixon. Her technique involves using full sized drawings on paper which are then glued on the work piece. The piece is marked cold and then tooled hot using deep cuts for best texture. The treadle hammer and some handled hot chisels are used here. In the afternoon, Kathy provided some stock and guided participants in a hands-on session.

In the evening, the men displayed their culinary skill, chopping, stir-frying, and baking a supper that was second to none. There were plenty of victuals and they were scrumptuosos! The food was so good, this is sure to become a regular feature of the Flag Meet.

After the place was tidied up, we began to think about the traditional evening project. Joe Donathan came up with the idea of forging a larger version of the humming bird he learned to do during the afternoon. Thus was born the **HUMMER FROM HELL!** Made from a piece of two inch bar, the thing took three men to handle under the power hammer and although we labored until nearly midnight, we were unable to finish the monster. We'll finish it next meet.

Sunday, we had the great fortune to have Michelle Dore demonstrate her method of chasing or stamping decorations in the surface of the jewelry and hardware she makes. The display of chased copper pieces she displayed on a denim jacket caught everyone's attention and the larger tooled steel cabinet handles in the form of rabbits, quail and other animals were also very popular.

Michelle's tools are made from coil spring sections. She forms, oil hardens and tempers to "straw" color. She likes to use 1/8" steel because it gives the best texture and definition. She cuts the blanks to shape with a plasma cutter and follows with hammer work to add texture to the surface and edges. The design is laid on with a silver pencil. She emphasized the need to be able to sketch in three dimensions to help visualize work. The design is hand chiseled. That's lots of hammer time, folks! When she's satisfied with the surface, it's lightly brushed and followed with a light coat of spray paint wiped with thinner after ten minutes for extra texture.

Most of her jewelry is made using a pitch pan. She uses pitch (carried at most jewelry supply stores) mixed with plaster or linseed oil to adjust the consistency. The pitch must be heated until sticky (CAREFULLY heat from the top side with a heat gun. Do NOT use a torch or heat from the back. Exploding pitch can cause a major change in your disposition).

We left the Borthwicks' late Sunday morning hoping to have lunch in Prescott. The drive through Oak Creek is always a treat for me and a trial for Fran. It's beautiful, but she's not comfortable with the winding road. We turned off in Sedona and climbed into Jerome for a look see at the town sliding down the hill. Beautiful place, but the trail was a little too exciting. By the time we got to Prescott, Fran didn't feel much like lunch, so we pressed on for home.

I still don't know exactly what the cause was. We found out much later that Fran has had a minor heart condition for some time, so maybe that was aggravated by heat, the queasy stomach, no lunch; we may never know. She just turned to me and said something that didn't make sense and then began to have a seizure. It took a few minutes to get turned around and back to the last place we passed that might have a phone, and a few more minutes for the emergency folks to arrive, but by that time the worst was over. After a short trip back to Prescott to the Yavapai Medical Center

and a week of intensive care, they let us resume our trip back to Phoenix.

Fran's doing fine now. A hand full of pills and a little exercise each day and she's doing better than she has in a long time. She typed most of the copy that appears in this newsletter, as usual, and she still takes better care of me than I deserve. And thanks to some very dedicated people at Yavapai, we're both looking forward to seeing all of you in Tucson on the 23rd.

## THE GALLERY Pictures on the following pages

Clockwise from upper left.

Page 7, the Cookery:

Ron Kinyon serves a hungry blacksmith Thad and Bob Rummage in the bakery. VP Jon deMasi directs Dave Bental and Morgan Alsup in the use of the shape things.

Ron Kinyon in a stirring performance.

Tina Hawkins fueling up.

Thad Rummage, Biscuitsmith!

Jake Brookins and Dave Hawkins.

Page 8, Ladies Hammerfest:

Teresa Warner supervises as dad and brother Brian prep her iron.

The audience.

Read Carlock gets the hang of it.

Tina Hawkins hammering for two!

Kathy Borthwick persuading the iron.

The result.

Treadle hammer music.

Mrs. Branstrator demonstrating the technique to Jon.

Center: Kathy's table leg.

Page 9, The Chase!

Copper 'n' Denim

Michelle Dore and hardware

Rabbits, Quail and other creatures.

One of the 10,000 strokes.

Butterfly Door Pulls.

Page 10, The Nummer From Hell!

Russ Borthwick holding, Joe Donathan

cutting, Gene Bland supplying the Kinetic Energy.

Bob Rummage and Ira Weisenfeld take a hand.

More Kineticism.

A fuller tail, please.

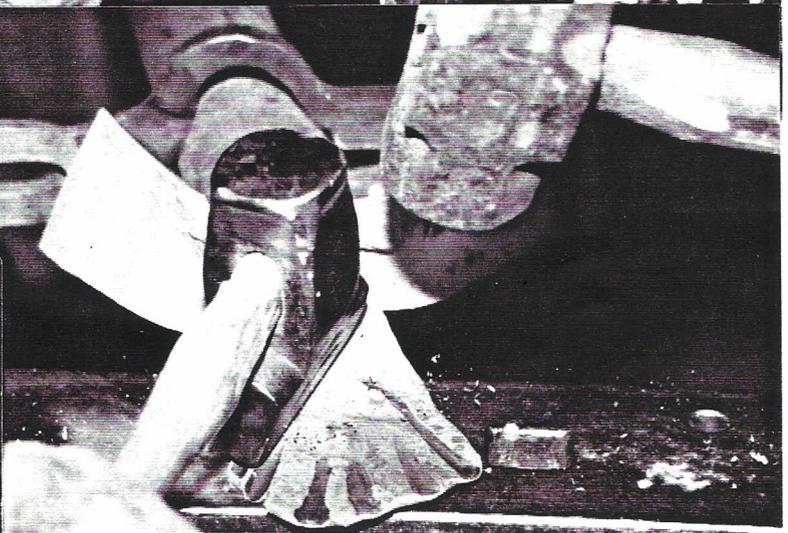
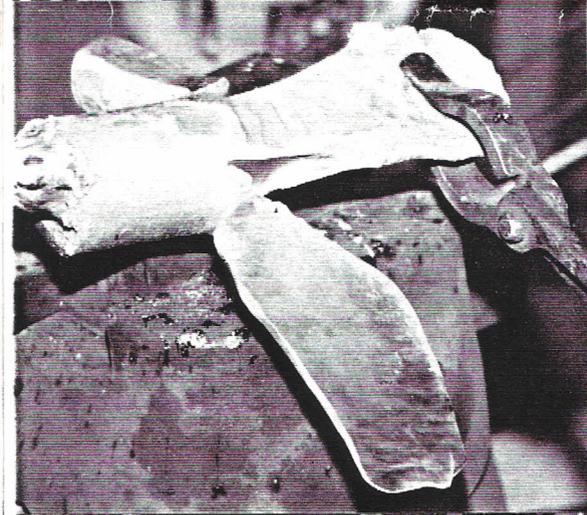
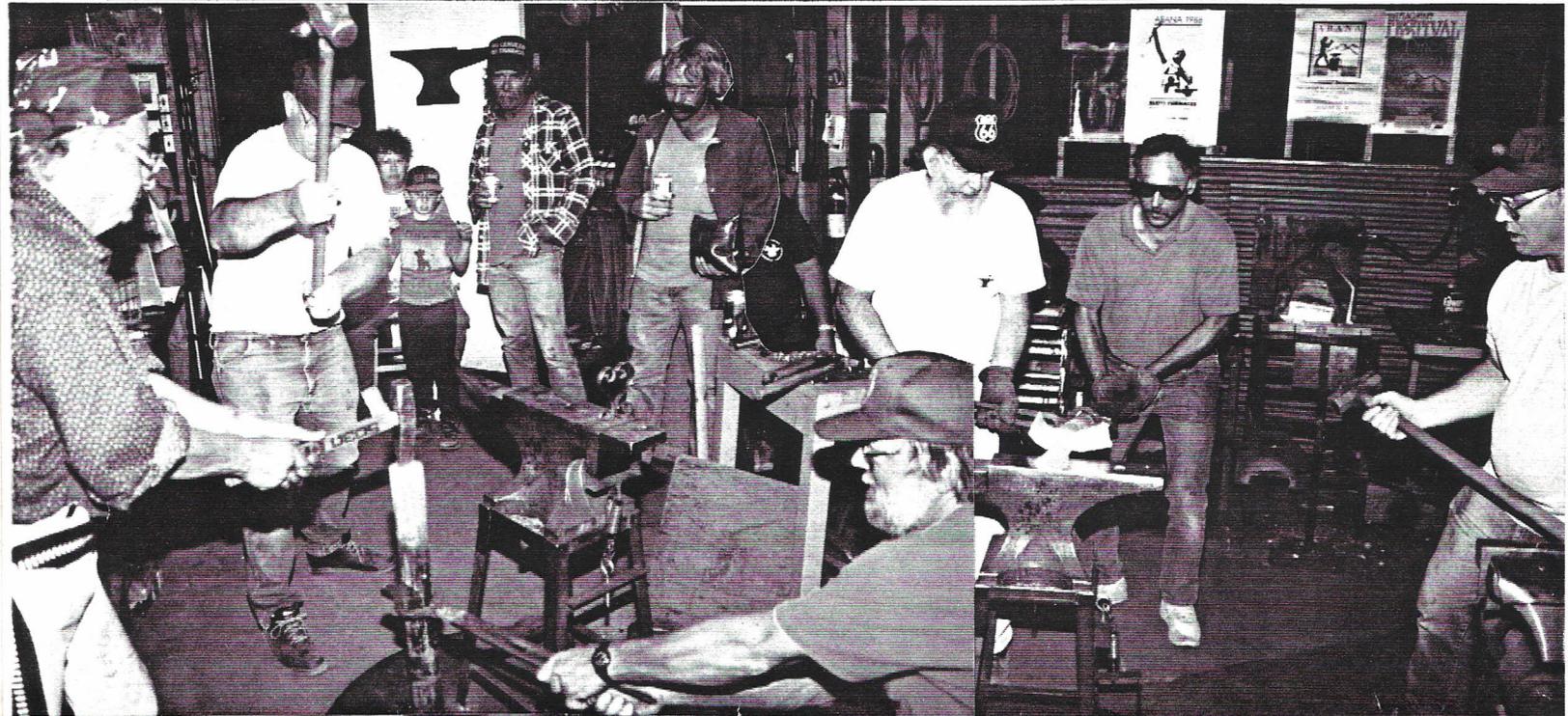
TEAM!

The Very Bird!









# SHOP MATH REFERENCE

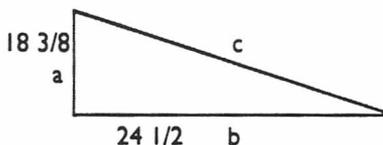
## POCKET CALCULATOR

I keep a pocket calculator within easy reach in the shop, on my desk, and in my truck at all times. They are cheap and a few simple formulas can help out. The formula that helps me the most is the old favorite  $a^2 + b^2 = c^2$ . This is a real work horse. With a \$5 calculator (it must have square root) you can find out how long to cut that piece, or how long the piece should have been cut, and make sure your work is perfectly square. When you can't fit your framing square in there, this is your ticket. This is the same as the old 3-4-5 trick, except you can use real numbers easily with the formula.

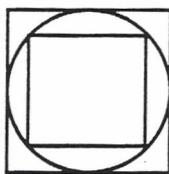
### Key Strokes for Triangulation

a press  $\boxed{\times}$  press  $\boxed{=}$  press  $\boxed{M+}$   
 b press  $\boxed{\times}$  press  $\boxed{=}$  press  $\boxed{M+}$   
 Press  $\boxed{\text{Recall M}}$  press  $\boxed{\sqrt{\quad}}$   
 c = answer on screen

### EXAMPLE



$18.375 \boxed{\times} \boxed{=}$  = 337.64062  $\boxed{M+}$   
 $24.5 \boxed{\times} \boxed{=}$  = 600.25  $\boxed{M+}$   
 $\boxed{\text{MRC}}$  = 937.89062  $\boxed{\sqrt{\quad}}$  = 30.6249 = 30 5/8  
 Answer: c = 30 5/8

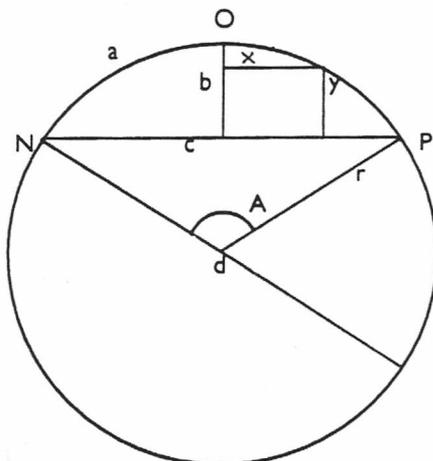


Diameter of circle outside square  
 = 1.414 x side of square  
 Side of square inside circle = 0.70711 x diameter  
 Diameter of circle of equal periphery to a square  
 = 1.27324 x side of square  
 Side of square of equal periphery to circle  
 = 0.78540 x diameter

Copy this sheet and keep it right in the shop. This is not Rocket Science! This is high school geometry. It will save you lots of time and trial and error.

-Bill Wojcik

## PROPERTIES OF A CIRCLE



d = diameter  
 r = radius  
 c = length of chord NP  
 a = length of arc NOP  
 b = rise of arc NOP  
 A = inscribed angle NAP, in degrees

$$a = \pi r A / 180 = 0.017453 r A$$

$$A = 180 a / \pi r = 57.29578 a/r$$

$$r = (4b^2 + c^2) / 8b$$

$$c = 2 \sqrt{2 b r - b^2} = 2 r \sin A/2$$

$$b = r - 1/2 \sqrt{4 r^2 - c^2} = 1/2 c \tan A/4$$

$$= 2 r \sin^2 A/4 = r + y - \sqrt{r^2 - x^2}$$

$$y = b - r + \sqrt{r^2 - x^2}$$

$$x = \sqrt{r^2 - (r + y - b)^2}$$

Circumference = 6.28318 r = 3.14159 d =  $\pi$  d  
 Diameter = 0.31831 circumference  
 Area = 3.14159 r<sup>2</sup> =  $\pi$  r<sup>2</sup>

1 inch = .08333 ft.

Above data from the American Institute of Steel Construction

## THE FIBONACCI SERIES or Is this a new style of Italian Pasta?

A small group of us were passing time before the demo at Russ & Kathy's shop at the July Hammer-In—mostly socializing, when I noticed the Feb./March 1995 issue of AMERICAN CRAFT magazine that Moe Hamburger had brought to the Hammer-Inn. On the cover was a photograph of Tom Joyce's Baptismal Front. I quickly turned to p. 38 to re-read the article about him and remembered he had commented on how his bowls were loosely based on the Fibonacci series. I kept repeating Fibonacci numbers this—Fibonacci numbers that—blah, blah, blah,—hoping someone would question me about the series because I have been wanting to say something about them in this article for sometime. Finally, Kathy Borthwick fell for it and said, "what the heck is a Fibonacci Series?"

Thank the woman for having an inquiring mind!  
Filius

Bonacci, son of Bonacci of Pisa, Italy, was born in AD 1175. He showed great talent with numbers and was sent to be educated among the Mohammedans of Barbary. There he learned the Arabic (decimal) system of numbering and Alkarismi's teaching of algebra. When he was 27 he returned to Italy and there published Liber Abaci (the book of Abacus). This work demonstrated the great advantage of the Arabic system of numeration over the Roman. You will agree that it is easier to write 98 than XCVIII. Fibonacci's work was the standard for two hundred years and the principle means of introducing the Hindu-Arabic system of number notation to the educated class of the Christian Empire. Remember this was

during the Dark Ages.

Well, "what the heck is a Fibonacci series?" OK, OK, Fibonacci discovered a numerical series after studying the leaf formation on a plant (sneeze wort). The series was 1, 1, 2, 3, 5, 8, 13... etc. (see fig. 1). Now some of you with inquiring minds will set out to discover how this series generates itself - that is - can you determine the next number - and the next? (It's 21 & 34.) Well mathematicians have a formula for this:

$$U_n + 1 = U_n + U_{n-1} \quad (U_0 = 0, U_1 = 1)$$

Now for large values for n we have:

$$U_n \approx 1/\sqrt{5} * ((1 + \sqrt{5})/2)^n$$

This may look too complicated for your investigation, but it is the name of our old Greek friend  $\phi$  (phi) (see Anvil's Horn #57, August 1994). What it means is that you can take any two numbers and divide the second by the first and get the approximate ( $\approx$ ) value of  $\phi$ . The larger numbers in the series give you the closer approximate of  $\phi$ .  $13 / 8 = 1.625$ , but  $21 / 13 =$

$$1.61153846 \text{ AND}$$

$$4181 / 2584 =$$

$$1.61803! \text{ High}$$

speed computers have done this to numbers in the series with 4 & 5 thousand digits and the result is the same  $\phi$ . Thus, as the terms of the series increase, the common ratio of

the series is none other than the golden ratio, phi that I have discussed in several of the newsletters.

In nature, the Fibonacci series is found in the genealogy of drone bees, breeding of rabbits, history of atomic electrons, and leaf arrangements, to name a few.

In blacksmithing, we have at least Tom Joyce's Fibonacci bowls. I have not talked to Tom to find out how his bowls are loosely based on the Fibonacci series but when I do I'll let you know. Inquiring minds want to know!

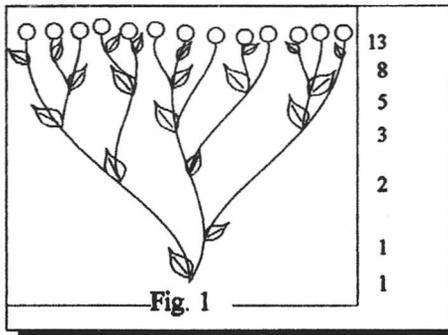


Fig. 1

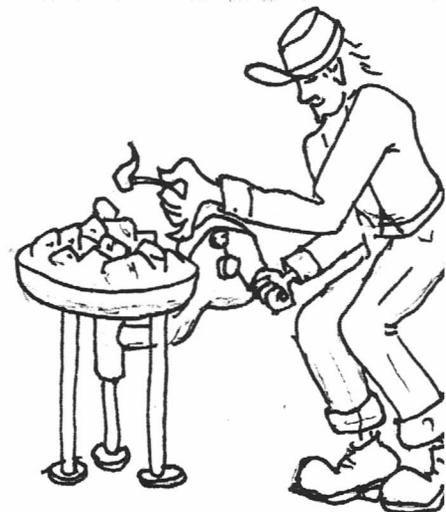
## BOOK REVIEWS from the Hammer and Tong Blacksmith Guild of Central Maryland by Albin Drzewianowski

*HOOKS RINGS & OTHER THINGS*  
An Illustrated Index of New England and Iron, 1660-1860  
by Frank T. Barnes; 237 pages  
published by Christopher Publishing House, Hanover, MA; 1988.

An interesting book which has a high probability of being added to my list of "Essential Books for a Blacksmith's Library". Divided into 14 sections from Animals, Architecture to Transportation, Wells, there are over 1200 hundred line drawings of iron artifacts from early New England, collected by Mr. Barnes. The book covers mostly forged work, but includes some cast iron also. Each item has a short commentary, a few lines; the date of the item, where it was found and often a detail of the item is drawn, one or two dimensions. Also if there are any marking or stamps on the items they are referenced in the text, and indicated on the drawing. The book includes an index and a bibliography. There is an appendix which very briefly addresses ironworks and ironworking in early America.

This book could be invaluable when it comes to identifying "what-is-

(Continued on page 13)



## BLACKSMITHING CLASSES

Camp verde Blacksmith Shop will be holding a class in wizard making. The class will be Oct. 21st. and 22nd. from 9:00 AM to 5:30 PM. Each participant will learn how to make the wizard and turn it into a project of choice. Also, they will make all the tools that are incorporated into this project which they will be able to keep. All students will have their own forge and anvil and all materials are provided. No forging experience is necessary. Cost is \$100. For more information please call Gordon Williams at (602) 567-3681.

## METAL CLUB

Gentleman:

We are interested in adding a forge and foundry operation to our existing metal working club. We now have sheet metal, welding and machining. The forge and foundry would be the missing links of a complete metal club. We work/play for enjoyment and personal satisfaction, not for dough. We have a not-for-profit-status with the IRS. We are looking for a Treadle hammer, a small power hammer, a gas furnace and other tools for the trade. We have no product to tool up for, just small dreams to keep us looking ahead for tomorrow. Maybe I should have told you we live in a retirement community and are spending our golden years doing what we want to do. If you have any item that you feel we can use, please send information and price to.

Thomas J. O'Lear  
13427 Shadow Hills Dr.  
Sun City West, AZ 85375  
Ph. 602-584-5182

## BOOK REVIEWS

from  
*the Hammer and Tong*  
**Blacksmith Guild of**  
**Central Maryland**  
by Albin Drzewianowski

(Continued from page 12)

its". There are a number of unusual items documented in this book, for example, iron knuckles from 1825, a universal tool for the kitchen, oxbow pins, a tooth elevator (for extracting teeth), and many more. The book includes many examples of items for the hearth, boot scrapers, and of course many different types of hooks.

*"SUNDIALS: Their Theory and Construction"* by Alber E. Waugh, 228 pages; published by Dover Publications, New York, 1973

This book has everything you could ever want to know about how sundials work and how to make them. Many different types of sundials are presented. Of particular interest to the blacksmith is chapter 17, The Armillary Sphere which is a globe made of a number of metal hoops and a long thin rod, the gnomon. There is a lot of astronomy and math in the book, but the author had mercy for those who are interested in the practical aspects and include simplified explanations.



**"CLASSIFIEDS"**

**Joe Hernandez** has a 100 lb. Little Giant Power Hammer for sale. He says it's never been used and he wants \$6000 for it with motor. Contact him at (520) 743-9032.

**FOR SALE:**

*101 Metal Projects for the Novice Blacksmith*

How-To Manual by Al Cannella.  
\$29 Postpaid.

A & L Enterprises, 1310 Walter Reed Rd.

Cookeville, TN 38501, (615) 526-4969

**50# Little Giant Trip Hammer**, electric motor, Mfg. 1916, still has Meyer Bros Decal. \$2500.  
David Vnuck-(419) 832-0277

**Hand crank blowers**

\$75 & up. Post vises \$65 & up. Post drills \$75 & up. Cleveland phone (615) 559-0207

Always have **Swage Blocks**-custom cut (my design or yours) All sorts of blacksmith tools on hand. Trade videos and tapes.-David R. Oliver, P.O. Box 3452, Bristol Tn 37625-Phone (615) 878-5712.

**Hossfeld No. 2 bander and dies.**

For more info call Randy Langston at (404) 241-1212 or write  
1936 Wee Kirk Rd, Atlanta GA 30316

**LARGE ANVILS**-Peter Wright 250 lbs.-300 lbs.& 400 lbs.

Dan Tull, Phone (404) 253-839

**1,000 lb. Anvil & 700 lb. Anvil.** Power hammer, parts machined to specifications.

Russell Cashion, phone (615) 731-3215

**BROOMS TIED**

Brooms tied for your Hearth broom handles.

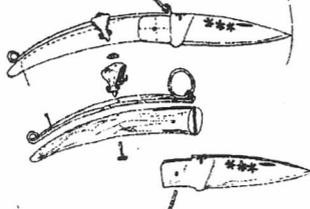
Bill Keener, 4013 Sunbeam Avenue Chattanooga, TN 37411, (615) 698-4088

**WANTED****ANVIL**

Contact Tony Varela, Desert DoDads, 1809 N. Evergreen St. Chandler, AZ 85224, (602) 963-1927.

**WANTED****SWORDS AND ARMOR**

Contact Wiley Stewart  
(602)939-1452

**Antler and Iron II**

*A forty page booklet on building an antler handle Mt. Man folder, step by step. 100+ photos and illustrations.*

\$14.00 postpaid. Wa St. Tx \$ 96

\$1.00 for brochure

Gene Chapman, Bladesmith, P.O. Box 1038, Kingston WA, 98346

**Jere Kirkpatrick's  
Valley Forge  
& Welding**

30-C E. San Francisco St.  
Willits, CA 95490

*Tools & Supplies  
for the Artist  
Blacksmith*

**FREE GIFT WITH  
EVERY ORDER!**

**WANTED**

All types of old cowboy gear; saddles,

spurs, whips, holsters etc. Call Doyle Conner, Jr. 904-922-9435

**WANTED**

**Small tire bender** under \$300. Large cone mandrel. Call Bill Robertson (H) (904) 668-2876; (W) (904) 681-0881.

**WANTED**

I would like to buy a **Sandia Gas Forge** from a fellow member who would like to sell his. Contact Ronnie Flower at Falcon Crest Forge Your can call collect at (904) 467-3215.

Plans for a **Hydraulic Forging Press**, \$25 + postage.

176 Brentwood Lane, Madison AL 35758.

**Treadle Hammer Drawings.**

12 pages of drawings and a list of materials; show dimensions for all parts and assembly.

\$7.50 postpaid. Clay Spencer, Route 2, Box 509-C, Murphy, NC 28906.

Melonie Thompson will tie her **Beautiful Brooms** on your iron handle. Flatten the end and put a hole through it (no sharp edges).

Call for prices; (205) 974-1862, 2001 Country Rd. 208, Danville AL 35619.

Bill Gichner has **Old Books, Tools, Power Hammers.**

Box 8, Bethany Beach, DE 19930  
(320) 539-6274

**Laurel Machine & Foundry Co.**  
P.O. Box 1049/ 810 Front St. Laurel, MS 39440, (601) 428-0541. Anvils, Swage Blocks, Large and Small Cones, Fire Pots & Clinker Breakers.

**HELP WANTED**

**WANTED:** Full-Time artist blacksmith. Lauderdale, Florida area. Call Robert Ringer at Amazing Metalcraft for details. (305) 791-7085





ADDRESS CORRECTION REQUESTED

THE ANVIL'S HORN  
3533 W. BANFF LANE  
PHOENIX, AZ 85023

## SOURCES OF SUPPLY

**The Blacksmith's Cookbook** by Francis Whitaker  
Recipes in iron to improve your blacksmithing skills. It can be bought from any blacksmith book seller or an autographed copy may be ordered directly from Francis at Colorado Rocky Mountain School, 1493 County Road 106, Carbondale CO 81623 for \$31.50

**Francis Whitaker's Biography** is now available from Norm Larson or John C. Campbell Folk School. Autographed copies are available from Francis at above address for \$45. All Proceeds above costs go to the Francis Whitaker Blacksmith Scholarship Foundation.

**Arizona Specialty Metals**, 4020 E. Washington, Phoenix AZ 85032 (602) 276-8407, has a pile of H13 tool steel for sale cheap. In a special arrangement with Tom Yeager, they'll sell H13 rems for \$1.00 a pound. This is high temp, air hardening steel that's great for

hammer dies and anvil tools. See Jim or Allison and say Tom sent you or identify yourself as an AABA member to get the special price.

**Marks Bolts**, 7617 N. 76th Ave., Phoenix, (602) 939-9312, is a surplus store that has a great selection of black square headed bolts that are so hard to find these days. They also have left hand thread bolts and all thread (for making turnbuckles?), tarps and new cast iron anvils (about 150 lb.).

**Centaur Forge**, P.O. Box 340, Burlington, WI 53105, has a complete line of books and tools. Send for their catalog.

**Jim Bomba of the Red Pepper Forge** is starting a monthly production of "The Blacksmith of the Month". It will include a professional 8X10 color photo of a noted blacksmith plus an info sheet consisting of 18 questions that the blacksmith has answered.

Individual photo and info sheet  
\$12.00

Binder for 2 yr. of sets.

\$12.00

1 yr. subscription rate.

\$120.00 (Savings of \$24)  
Send check or money order to:  
The Red Pepper Forge  
PO Drawer C  
North East, MD 21901  
(410) 287-7851

*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 \$15 for individuals and \$20 for families and includes a subscription to the *The Anvil's Horn* for one year. Every attempt has been made to ensure the accuracy of information appearing here, but no liability is assumed by the Association or its officers 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 organizations provided proper credit is given. Any copyrighted articles appearing herein should not be reproduced without permission of the author. Matters relating to membership, newsletter submissions, corrections, etc. should be addressed to the editor:  
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Phoenix AZ 85023 (602) 938-1495