

On the Anvil NEWSLETTER

PHILIP SIMMONS ARTIST BLACKSMITH GUILD

Californian Bottle openers	2
Santa Ornament	3
The Sector	5
Hammer and Tong Rack	7
Frank Turley Obit	7
Get Hooked	8
Quench Oil Speed	9
Shop Tip	9
For Sale//Upcoming Evgnts	10
Madison Update	10
Officers' Page	11
Meeting Notice	12

Hello Blacksmiths!

Fortunately, the world is still turning, and we're all hammering on! November is finally here and I am seriously happy about the cooler temperatures. It's really early but I have an update from Jesse Barfield, our last president and all around great guy, about the upcoming SBA conference, It's Still on!

Speaking of Jesse, he also demonstrated with John Tanner at the state fair on October 13. He said, "There was a steady line of cars both days with attentive children, adults, and even the family pets were enjoying the show." I didn't get names of any other demonstrators so if I left you out I apologize! The SBA conference is scheduled for May 13,14, and 15 of 2021. As usual, we will need volunteers to hold up our part of the responsibilities. In the past we have built the toolbox and donated tools to fill it for the "Iron In the Hat" and even contributed a Forge. I am not sure about the toolbox but I ask you to be generous and donate a tool of some sort to fill the box. We will work on logistics of who gets the lucky job of collecting and holding on to the stuff in the interim. Once the group project is announced, those proud few that will get the privilege and honor to help build it will be volunteered and put to work for free of course! Last time, Ryan Calloway and his crew in Greenville did a fantastic job of representing the talent we have in South Carolina! Maybe Barry can stick a picture in this issue to show it off again!

The December Meeting is not cancelled as of this writing. We will make a final deci-

sion by 12/1. Notification will be sent out by Barry's email list, on Facebook, and on our Website. If you are not receiving Barry's emails send him one and ask to be added to his list.

IF WE HAVE THE DECEMBER MEETING, MASKS WILL BE REQUIRED, BRING YOUR OWN FOOD AND DRINKS AND CHAIRS, PRACTICE SOCIAL DISTANCING, AND BRING SOME GOOD STUFF FOR IRON IN THE HAT!

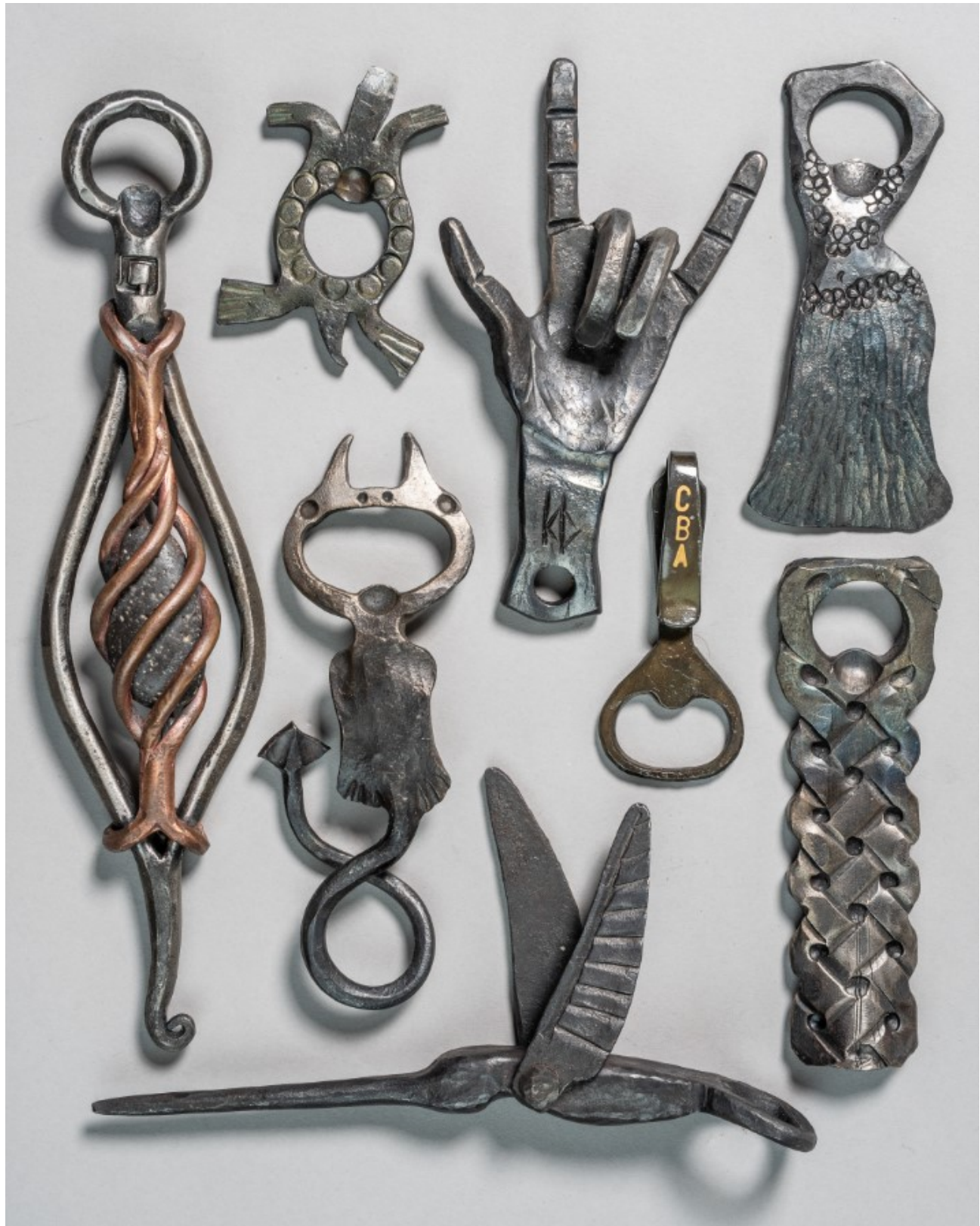
In closing, I wish you all well for the upcoming holidays. Keep those members in mind that are struggling with these difficult times. One of those to keep in your prayers is Past-President Mike Tucker, he is having a tough time in his fight with cancer.

Be safe and use PPE!

Stay safe, Jody



Here are some ideas from the California Blacksmith for some different carriers for your bottle openers. Some good Christmas presents here...



Santa

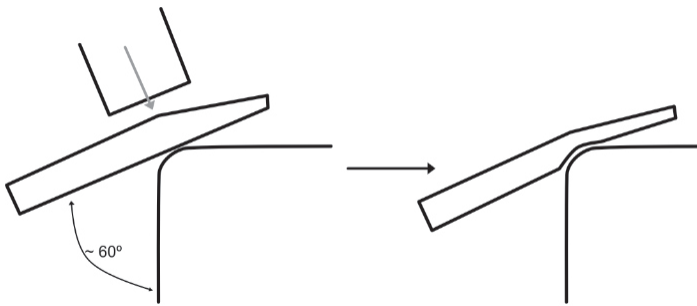
Gary Standke, West Hills

Stock: 1/4" X 1/2", a handling length that you'll cut off later.

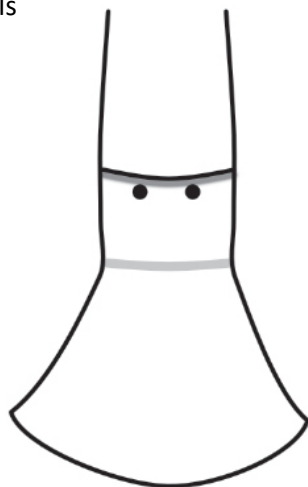
1. Upset end to 3/8" x 5/8". Limit the upset to the last 3/4" of the stock.



2. Cross-pein to spread the beard.
3. Indent for nose on near side of anvil, at 1" from end of beard.

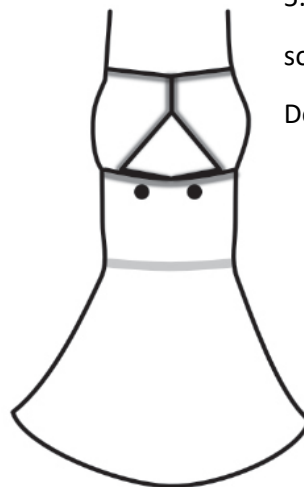


4. Punch nostrils



5. Punch eye sockets.

Define nose

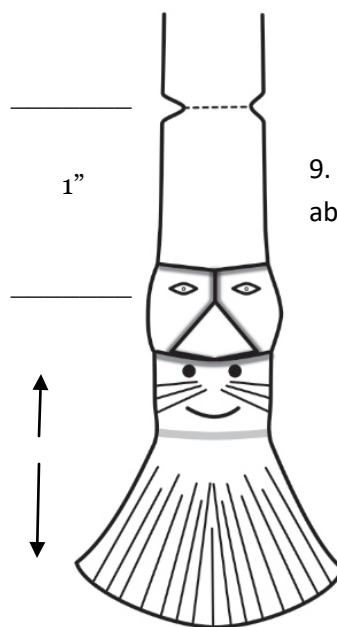
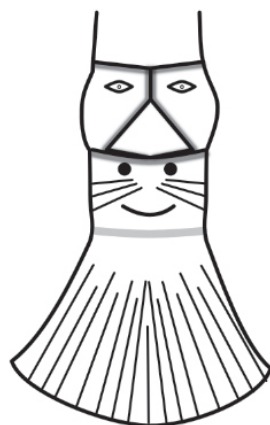


Santa Head (con't)

6. Punch smile.

7. Cut whiskers,
cut beard

8. Punch eyes



9. Cut handle off 1"
above eye sockets.

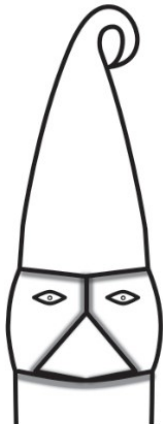
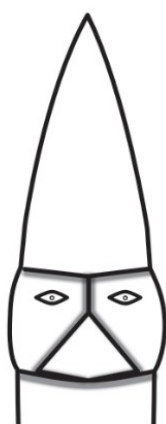
10. Taper hat

11. Curl top

12. Slit star

14.. Offset hat

13. Slit hat bands





The Sector

Look Mom no Fractions

By Steve Alling, a MABA member

The Sector is a simple tool that allows you to divide a line of any length into any number of equal parts. You can make a polygon in a circle of any number of sides, and if you know either the radius, diameter or circumference of a circle you can find the other two. Simply by using a pair of dividers to perform these measurements; therefore, you don't have to deal with any fractional dimensions.

The sector works on the principal of proportions therefore it can be made in any size that's convenient. The sector is laid out on two arms that are hinged together on one corner. And from the center of the hinge in this sector radiate 3 lines, one line is used to divide a line into equal parts, that line is called the line of lines. There is a second radial line that allows you to make polygon of any number if you know the radius of your circle. It's called the line of polygons. The third line allows you to find two of these three measurements, radius, diameter or circumference if you know one of them. This line is called the line of circles.

There are many other sectors that are used in all kinds of old fashioned pre calculator days and ship navigation, surveying, and art with vanishing points.

There are three sites you can look up on the internet to understand this tool.

The first is <https://www.burn-heart.com/sector> they have a nice tutorial showing you how to use the tool and they offer a workshop to make one.

The second one is <https://www.firstlightworks.co.uk/post/coronasector> and they will allow you to download a copy of the sector that they make and sell so you can make your own.

The third site is <https://redrosereproductions.com/sector/> they sell a ready-made metal one for \$200.00

I downloaded the free pattern from First Light Works and made up my own sector. The first thing I discovered was you could only find the circumference of a circle about 2 ½ inches in diameter. Because the sector is not accurate when opened beyond 45 degrees.

If you want to make this small sector, I suggest

you cut the pattern out with a razor knife being careful with the inside edge and the hinge edge. I would continue those two lines to the center of the hinge and then you can use that corner on the corner of your board. It's critical that all the sector lines radiate on the hinge pin. So, by lining up that corner you're assured you have them in line. You can then go ahead and do whatever relieving you need to place your hinge. To stick your pattern down there are a couple of ways to do this. There is the spray stick and contact cement but these are going to make it really hard to get things lined up.

There is a neat trick you can do with yellow carpenter's glue. With a squeegee spread a generous layer of glue on your board and allow to completely dry, then carefully place the pattern where it should be, cover part of it with a protective piece of paper and hit it with a hot iron for just a second or two. You don't want the glue to bubble.

Then you can go ahead and move on to the part you have been holding. This will not distort the paper so you get an accurate job.

So, to make a sector large enough to accommodate circles that would be used say in trivets and the like, the sector needs to be much larger, 6 or 7 inch-

es in diameter. Now you clever computer guys probably can take the downloaded pattern and increase it's size to what you need. I did it mechanically by making a pair of proportional dividers. The overall length was $33 \frac{1}{4}$ inches and the hinge was $7 \frac{3}{16}$ inch from one end. I used some pieces of scrap that were $1 \frac{1}{4}$ inch by $\frac{1}{4}$ inch and I made a saw cut in the end to accommodate finish nails which I epoxied in the slots and then ground to equal lengths and sharpened. This increased the sector to about 32 inches. I made it on two pieces of 1 X 4, the angle of the sector lines is not critical but they must radiate from the center of the hinge. I picked up the dimensions with the small end of the dividers always starting in the center of the hinge and transferred them to the new sector lines. This is not a terribly accurate way of doing it but it gets you very close. I approached it the same as the little sector by adding the hinge after all the sector lines were in place.

I'm looking forward to using it in the shop where I won't be straining my brain trying to figure out which little mark on the scale is the one for 32nds.

Reprinted from *The Upsetter* Newsletter of the Michigan Artist Blacksmith Association



Our own David Bush needed to possum proof his porch for all the obvious reasons South Carolinians are aware of. He could have gone to Lowes and bought some lattice, but I probably wouldn't have published that! Nice work, David!

Portable Folding Hammer and Tong Rack By Jacob Willson



I don't have a dedicated shop for hot work and I do my forging in the driveway. I wanted a rack that would hold my hammers, tongs, and what I was working on. This rack would also need to be compact for storage when not in use. I wanted to share what I came up with to help anyone else in the same situation or anyone that may like an extra table that folds up when not in use. I built this with materials I had on hand, it has a nice rusty patina, so feel free to modify with what you have.

The cross racks or tool holders are $\frac{1}{4}$ " x 1 $\frac{1}{2}$ " flat bar, 20" long and the legs are 1" angle, 36" long, making a table height of 30". (Tip - Pythagorean Theo-rem) The



racks have $\frac{7}{8}$ " holes on each end and one end pivot's on $\frac{1}{2}$ " pipe with $\frac{1}{2}$ " all thread through bolted to the legs. My original plan was to weld the flat bar to the pipe, but I'm still playing with the spacing and don't think it is really necessary. On the other end of the bars, I cut notches at an angle (see picture) to hold on the other end when in use. For the cross members holding the legs together, I used some rod with threads on the end from an old washing machine, that's why it is 12" deep. You can use all thread or weld bolts to a small piece of pipe, be creative.

To fold up, just pull the end cross members together and either flip the rack over or let them fall down. It folds up and stores pretty compact until it is needed again. It's nice to have all your tools needed for a project organized and readily available. It's portable and allows for easy storage.



Our friend and teacher, Frank Turley has passed away. We had Frank in for a class several years ago, and a good class it was. He taught us hinge, rose petal making along with forge welding. We had a good time and learned a lot from Frank.

Frank started the first modern blacksmith school in this country—Frank liked to brag that it was older than ABANA!

Last October 2019, the Turley School received the prestigious ABANA Heritage Award for Frank's well-deserved lifetime contribution of teaching the art of blacksmithing.

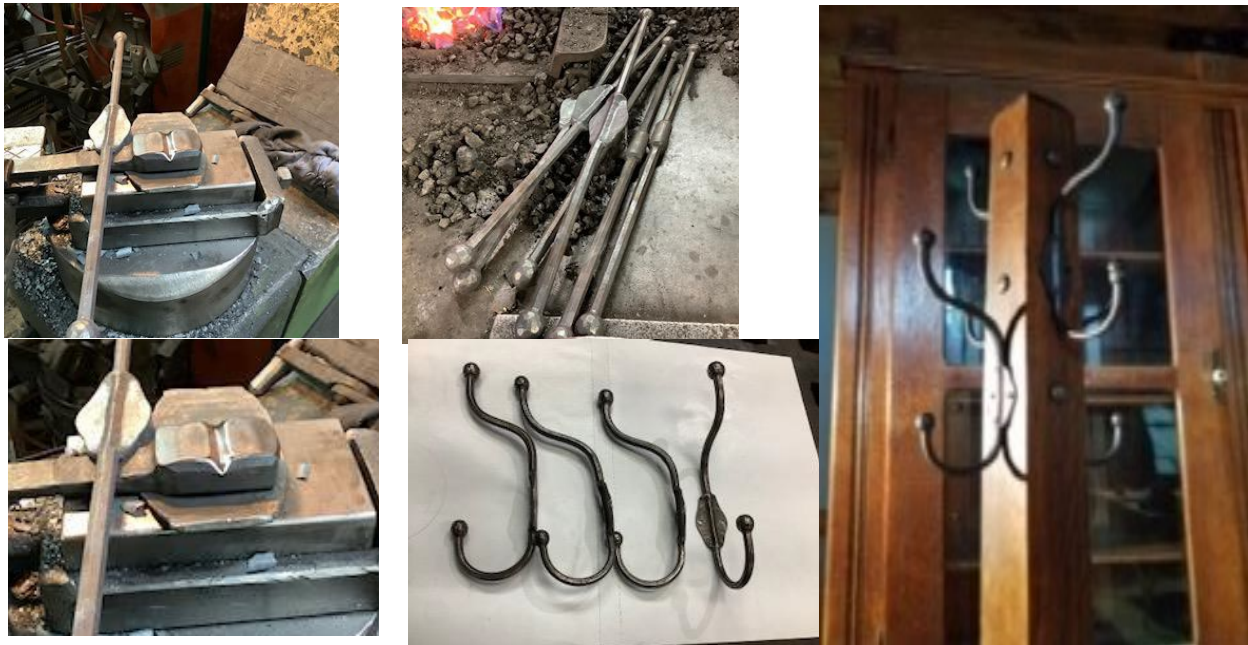
For the last three plus years, Parkinson's disease had taken its toll on Frank, and he finally had to move into The Taos Living Center for assisted living. The Living center had stayed off COVID-19 till several weeks ago. Frank caught COVID-19 and, combined with the Parkinson's, it took his life.

Frank will be missed

It's Easy to Get Hooked! By Glenn Horr

These traditional coat hooks made by Glenn Horr can be a perfect addition to your home or repertoire. Once you make the die, “you will be good to go” for a long time! The die is made from a fork lift tine (possibly 4140). To make the die, heat the material then drive in 5/8” square on the diamond approximately 1 1/2” long, and 5/32” deep, grind relief edges. The mass needed to forge is 1” long. For hooks, start with 5/8 round stock, 5 1/2” long. Glenn reduces 2/3 and 1/3 of the 5/8 round material leaving enough metal at the top and bottom for a spring ball die. (Allan Kress makes a wide range of spring dies). This project is also good for those of you that work with wood, a blacksmith/woodworker project!

Tool Tip: A favorite grinding disc Glenn uses is a Rhodius Vision Disc. It has notches designed in the disc so you can actually “see” where you are grinding. This is very helpful when you need a delicate touch. In fact, Glenn is a distributor, you can get in touch with him: 304-258-4058



Three Welding Tips From Glenn:

1. TIG rods holders. Made from pipe or EMT tube. Note: Each holder is painted a different color.
2. TIG torch holder fits in the table hole.
3. A third hand hold down, also ground cable attached. This is nice to hold small items to weld that may be hard to clamp, etc.



Reprinted from the *Pittsburgh Area Artist — Blacksmiths Association*

Measuring the "Speed" of Quench Oil

In Josh Foran's brut de forge knife forging demonstration he talked about quenching in an "11second oil". I've heard quench oils described that way before, but this time I really wondered what that means?

I found a paper, "Care and Maintenance of Quench Oils" by two engineers at Houghton International, D. Scott MacKenzie and I. Lazarev. Houghton makes quench oils.

Quench oils can be classified as normal, medium, or fast based on the General Motors quenchometer speed (GMQS) test. This test is also known as the nickel ball test or ASTM Method D 3520. This test calls for heating a nickel ball to 1620 degrees and then quenching in 200 mL (about 6.76 ounces) of oil. Nickel is nonmagnetic at 1620 degrees and becomes magnetic when it cools to 670 degrees. A magnet beside the container of oil attracts the ball when it becomes magnetic. Thus the time for the oil to quench the ball from 1620 to 670 degrees can be measured. This test can also show the effect of contaminants, age, and oil temperature on the performance of a quench oil.

Normal speed oil measures 13 to 20 seconds on the

GMQS test. Medium speed oil measures 10 to 12 seconds, and fast oils measure 7 to 9 seconds. The well known Park 50 is a 79second oil and Park AAA is a 911second.

From Houghton, HoughtoQuench K is a 79second oil and HoughtoQuench G is a 1012second oil. HoughtoQuench 100 is a slower, 1522second oil. Anecdotally, canola oil is said to be just slightly faster than an 11second oil.

Canola seems to be regarded as the best choice among the readily available cooking oils for use in quenching. Water is faster than any of these oils, but may shock and crack steels that are designed for oil quenching.

Advantages of engineered quench oils include reliability, longer and more stable life as a quenchant, and a cooling rate that varies as the steel cools for even hardening.

Finding engineered quench oils in reasonable quantities for home shops can be a challenge.

Many of the knifemaker supply outfits such as USA Knifemaker or Jantz Supply stock quench oils.

Reprinted from the Bituminous Bits, Newsletter of the Alabama Forge Council

Chisel - Drill - Punch Holder

Steve Bloom, Iron Flower Forge



Hanging onto chisels, drills & punches is always a bit problematical, especially when your fingers on the non-hammer side are close to ground zero. Here's a simple solution. A section of square hollow tubing (8" x 5/8" square), a length of all-thread (1/2x13), some beefy washers (two is a good idea), a washer and a nut. Slot the business end of the tubing as shown and grind in a fish-mouth on the other axis. Weld a washer to the end of the all thread to hold the tool. Tighten as needed.

Reprinted from the Clinker Breaker, from FABA

Correction: I appropriately credited Jered Hampton on the article on the twisted cross in last month's newsletter. His editor, Mike Mumford of the California Blacksmiths worried that Jered might achieve world-wide fame and the fortune that goes with it might ruin him. While Mike was pleased to have the article, Jered let him know that he did see the process on the internet. So, while it was not his design, Jered did figure out how to make it so he could help you and I understand it. Barry

For Sale

Fire Bricks – Brand New, Industrial Grade. \$1 ea. Ed Sylvester 803.414.2487

Tire Hammer plans by Clay Spencer. Send Paypal for \$30US to clay@tirehammer.com. Or check/money to 73 Penniston Pvt. Dr., Somerville, AL 35670. I can mail a copy or email PDFS.

Beverly shear blades sharpened. Remove blades, mail in small Flat Rate box, include check/money order for \$50, includes return postage. clay@otelco.net, 256-558-3658 .

Forklift tine sections for striking anvils, \$30. Jody Durham, 864-985-3919 ironsmith@gmail.com

Todd Elder is offering Beginning Blacksmithing and Knifemaking Classes. Contact him at (864-978-7232)

Guild Coal: 3 buckets, \$30; 6 buckets or 30 gal barrel—\$45.00; 11 buckets - 55 gal barrel - \$ 60.00; 15 buckets - 1/4 ton - 70.00; 30 buckets - 1/2 ton - \$140.00; 60 buckets - 1 ton - \$280.00. Contact **Walt Beard 803-464-8483**

Upcoming events:

Griz Hockwalt is demonstrating at the Bart Garrison Agricultural Museum of South Carolina for special events and tours. The museum is located off of highway 76 in Pendleton S.C, across from Tri-County Tech. Griz will be demonstrating the first Saturday of each month.

Batson Bladesmithing Symposium: April 2-5. Tannehill Iron Works, Bessemer, Al, Exit 100 off I-20
www.alaforge.com

2020 Meetings: To be determined...

SBA Conference May 13,14,15 - 2021:

Jesse Barfield

- 1) Group project is a rocking chair, full size drawings are being copied and will be sent to me. I will get them to Jody or whomever he designates. Not all affiliates are building rocking chairs, There will be 2 rocking chairs, 2 benches, 2 side tables and the other 2 affiliates will do something else??
- 2) Green Coal requires a forge trailer and someone to take the lead and identify green coal instructors. Ray Pearre has done this in the past, but Ray is tired of it and would like to see the Conference, so we need someone to head up our effort.
- 3) PSABG will run the Gallery again this conference, will need someone to take the lead check projects in and out, also tally the votes to identify the lucky winners.
- 4) Will need to identify and report the names of members that have died in the past two years for the memorial that's done each conference.

- 5) Always need tools for the auction and or the tool box in IITH.

These are some of the things we did in 2019 that are not presently designated.

- 1) Tool box build for auction or IITH
- 2) Provide / build a forge for the auction or IITH
- 3) There will be two professional demonstrators.
Liam Hoffman, Hoffmanblacksmithing.com
Matt Jenkins, Cloverdale Forge

Early Registration:	\$55.00
Registration at the conference:	\$65.00
Friday only:	\$25.00
Saturday only:	\$20.00

The SBA website has not been set up yet.
Next meeting Dec. 8 at 7:30PM

Thanks
Jesse

Philip Simmons Artist Blacksmith Guild

<http://philipsimmonsartistblacksmithguild.com/>

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Membership Application

___ New Member ___ Renewal

Name: _____ Address: _____

City: _____ State: _____ Zip: _____ Phone: _____

email: _____ Sponsor _____

Dues are \$15.00 per person/family, per year. **Make checks out to PSABG** Please remit to:

C. Ray Pearre, Jr., 4605 Durant Ave., North Charleston, SC 29405

ACKNOWLEDGEMENT AND ASSUMPTION OF RISK

I acknowledge that blacksmithing and related activities are inherently dangerous and involve risks and dangers to participants and spectators that may result in serious injury or death. I have considered these risks and I knowingly assume them. I agree that I am responsible for my own safety during Guild events, including wearing appropriate clothing and protective gear and remaining a safe distance from all dangerous activities. I agree to hold Philip Simmons Artist Blacksmith Guild and guest demonstrators of our craft harmless from liability and expenses arising from of my actions and/or omissions.

When was the last time you paid dues?

There is a note below your address on the last page of our newsletters. It will say something like...

“Dues Last Paid – 2019” or “Dues for 2020” are due” or “Dues paid 2020”

This note is updated for each newsletter. We appreciate your prompt payments.

December, 12/12, 10 AM

Magnolia Gardens

Ray Pearre 843.860.0532

Ray Pearre and Magnolia Plantation and Gardens are our hosts. MASKS ARE REQUIRED, NOT A HALLOWEEN MASK, ONE THAT WILL PROTECT YOU AND ME FROM COVID!

ALSO, BRING YOUR OWN LUNCH, DRINKS AND CHAIR.

WE REALLY WANT TO MEET AND WE WANT TO TAKE THE PRECAUTIONS TO KEEP OUR MEMBERS AS SAFE AS WE CAN. WE CANNOT GUARANTEE ANYTHING, IF YOU FEEL SAFE COME, IF YOU DON'T FEEL SAFE OR IF YOU CAN'T WEAR A MASK, DON'T COME.

We do not yet have a demonstrator. Want to Volunteer? Call Ray!

Sale of your blacksmith-made items to the public or our other members is welcomed!

