

On the Anvil NEWSLETTER

PHILIP SIMMONS ARTIST BLACKSMITH GUILD

INSIDE THIS ISSUE

Iron in the Hat.....	2
Blinded by the light.....	3
Aluminum Forging.....	4
Keyfob progression.....	4
How to forge a forge.....	5
Neck knife sheath.....	6
Special Holdfast.....	7
Spring Loaded Bolster Plate.....	8
For Sale//Upcoming Events.....	10
Chisels.....	10
Next Meeting Notice.....	12



Our demonstrator for our April get together at Magnolia Garden was Josh Weston, he is a full time Artist Blacksmith and Bladesmith. Josh has been a contestant on the popular TV series Forged in Fire two times winning the \$10,000.00 prize on his last competition. Forged in Fire has a new program airing called Knife or Death, Josh will be competing in that one in an upcoming show. Back to the demo; Josh produced a beautiful copper dipper with a railroad spike handle, he described every step in the process with information and details on the movement of the metal, how to keep the dipper thicker where the handle attaches, and how to keep the metal soft by annealing. Josh says copper is a good entry level metal for beginners to forge, it doesn't require a lot of heat to anneal and you can learn how metal moves while under the hammer. We thank Josh for his expert instruction and demonstration.

We had an excellent meal provided by our hosts Bill Creek and Ray Perrier and the fantastic cooks of our Guild brought numerous sides that filled the 45 of us to capacity and in some cases over capacity.

Some of our members have been busy at various events around the state and out of state:

- The Battle of Aiken; Barry Myers and Todd Elder.

- Living History Park in Augusta; Bob Kaltenbach and Barry Myers.
- Tartan Day Festival, Columbia; John Tanner and Rick Thompson.
- The Battle of Charleston, Johns Island; Bill Creek, Ray Pearre, Jim Pender and Ed Berry. Loris, SC; Bill and William Creek.
- Musgrove Mill; Bob Kaltenbach and Heyward Haltiwanger.
- Fire on the Mountain, Spruce Pine, NC; Duke Baxter and Chuck Baldwin.
- Pontiac Elementary School, Jamie Herndon, Heyward Haltiwanger, Todd Elder and Barry Myers.

These folks, and others who I don't know about, are ambassadors for our Guild and craft providing an important link between blacksmithing and the public. Everywhere I go I see people interested in the craft, some want to learn more and become blacksmiths / members others not so much. We are indeed fortunate to have dedicated people like these that take the time to share their knowledge and talents. They certainly aren't in for the money!

Please keep Turner Hammett in your prayers, he has achieved an important milestone in his treatment but he still has a procedure scheduled for late this month.

Iron in the Hat produced \$677 with lots of forged items made by our blacksmith members. Thank you.

Our new members include: Kirk Boland, Kelly Duane, Brandon Griffin, Robert Lewis, Cindy Lundhagen, David Chambers and McLean Nordine. Welcome!

Hope to see you at Westminster in June. It will probably be cool, so bring a light jacket...

Thanks for supporting Guild and Share your Knowledge

Keep Hammering, Jesse

IRON IN THE HAT

Item	Donated by:	Won by:
Blacksmith Puzzle	Jesse Barfield	Jason Charlton
Flint and Steel	Jesse Barfield	Jamie Herndon
Hay Rake	Jason Charlton	David Bush
Fire Poker	Jason Charlton	Jesse Barfield
Cross	Duke Baxter	ML Tanner
Ball Bearings	Charles Meyer	Jesse Barfield
		John Tanner
		Robin Andrews
		Tony Etheridge
Jack Hammer Bit	Charles Meyer	John Tanner
		Landy Young
Drill Bits	Charles Meyer	John Tanner
		Jamie Herndon
Twisting Wrench	Ray Pearre	Micky Thompson
XL Tee Shirt	Jody Durham	Jesse Barfield
Two Gas Forge Burners	Sergio Smith	Todd Elder
Scales	Sergio Smith	Bob Kaltenbach
		Charles Meyer
Jerry Darnell-style Trivet	Barry Myers	Perry Thomasson
Tomahawk	Todd Elder	Nathan Flake
420 SS	Nathan Flake	Sergio Smith
Herron Shucker	Josh Weston	Sergio Smith
Corkscrew	Todd Elder	Barry Myers
Medalion	Pam Etheridge	Bob Kaltenbach
Ugly Horse Head Bottle Opener	Jim Pender	John Tanner
Center Finder/Scribe	Perry Thomasson	Barry Myers
Bearings	Perry Thomasson	Jim Pender
Bearing Races	Perry Thomasson	Tracy Hartfield
		Chuck Otep
Decorative Hook	Bob Kaltenbach	Jamie Herndon
Harness Hook	John Tanner	Jason Charlton
Cable Damascus Knife	Meck Hartfield	Duke Baxter
Knife	Tracy Hartfield	Duke Baxter
Oyster Shucker	David Bush	Sergio Smith
Horseshoes Hoof Rasp	David Bush	Patrick Walters
Adjustable Bending Fork	Jack McCoy	Patrick Walters
Anvil Ring Magazine	John Tanner	Johnny Marks
		Meck Hartfield
		Jason Charlton
Letter Opener	Lucus Andrews	Patrick Walters
Center Punch	Cayne Lawson	John Tanner
Triangle	Patrick Walters	Ray Pearre
Breakdrum and SC Cutouts	Jamie Herndon	John Tanner
		Landy Young
		Ray Pearre
		Jason Charlton
Demo Copper and RR Spike Spoon	Josh Weston	Curly Lawson

Not seeing the Content you want? Submit requests for the kind of info and articles you are interested in, or better yet, submit an article yourself!

“I have been impressed with the urgency of doing. Knowing is not enough; we must apply. Being willing is not enough; we must do.”

• Leonardo Da Vinci



Model of a forging hammer designed by Leonardo, from “Da Vinci Live!” at the Science Museum of Virginia.

Reprinted from the central Virginia Blacksmith Guild

Blinded By the Light

Be Careful How You Look

By Bob Dixon Gumm

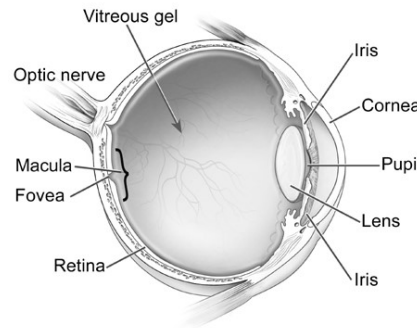
Shortly before the holidays, I was working on a welding project. The object that I was MIG welding had many prongs sticking out from it. While welding another prong, I noticed what appeared to be a weak weld. Lifting up my helmet, I poked my head in for a closer examination. What I failed to do was to move the MIG gun away from the project and rest it in the table holder. The outcome is easy to imagine. The gun was near my face, and as I got even closer to the weak spot, I accidentally pushed the trigger against one of the prongs. This was followed by a bright flash, a very warm feeling against my eyes, and a wait of about five minutes before I could resume welding. Once the bright spot in my eyes had gone away, I thought everything was fine. I worked for another hour, ate a meal, and sat in front of the television to see, 'How the Grinch Stole Christmas'.

It was soon after when I felt that I had a small grain of sand in my left eye. I lifted my eyelid back, hoping that tearing would remove the grain. My eyes cried a river, but the irritant only seemed to grow larger and the pain more intense. It wasn't long before my right eye began to express its outrage over my failure to secure the MIG gun. Convinced that I had a flash burn, I went to the urgent care clinic. They confirmed this, and provided antibiotic ointment and an ophthalmologist appointment. After about a week, my eye felt as good as new. I was lucky.

Most of us have heard of flash burn. But what exactly is it? Flash burn can be thought of as sunburn in the eye. If you imagine yourself lying on a beach, you know that there are greater things to worry about than being chomped on by a shark. Sunglasses, sun block, that bird doo looking stuff that lifeguards wear on their nose, and an umbrella all point to the greatest danger: sunlight. Sunlight is ultraviolet (UV) light, and UV risk comes to us in many different ways: sun-lamps; nearby lightning flash; halogen lamps; reflection of sunlight off water and snow; and most important for us - any type of welding light, be it gas, SMAW, MIG, TIG, and forge. The latter causes are reason why the condition is known as 'welder's flash' or 'arc eye'.

A flash burn is a (painful) inflammation of the cornea. It produces a sensation similar to that of a corneal abrasion. But flash burn generally affects both eyes, though one eye usually is more irritated, whereas corneal abrasion usually

occurs in one eye. The cornea is the clear tissue that covers the front of the eye. For our purposes, think of the cornea as the glass lens on the front of a camera. The cornea covers the iris (the colored part of the eye), focuses light on the retina, and protects deeper structures of the eye by acting like a windshield. Although the cornea is clear, it consists of cells that are similar to those in the skin. If you've ever had sunburn that resulted in blistered or peel-



ing skin, then imagine the damage that UV light can do to your eyes.

What do you do when you receive a flash burn? The first step is to make arrangements to get to a doctor or care center. You should never attempt to drive yourself there. In the interim, flushing your eyes with water provides some pain relief. Once your eyes have been attended to by a doctor, you must be vigilant about applying prescribed antibiotic drops or ointment to your eyes. You may also wish to use OTC artificial tears, anti-inflammatory, and pain medications. Do not wear contact lenses and do not apply topical anesthetics. They will only prolong the condition. It is important to wear sunglasses whenever you're outside, and if the doctor determines that you need to wear a patch, ask for one of the black, pirate looking ones. They're rather dashing.

If you've followed doctor's orders carefully and have refrained from the activity that caused your flash burn, you can expect the cornea to repair itself within a few days, and all irritation or discomfort to end within a week. Typically, flash burn usually heals without leaving a scar. More severe cases may take longer.

Like the time in my Navy days when our ship was in the shipyard. A young seaman who was having second thoughts about his enlistment was assigned as fire watch to a welding crew. While maintaining vigilance, it occurred to him that flash burn might just be his ticket out of the Navy. And so he stared at welding arcs. Instead of getting a pirate looking patch, as one expects for a sailor, the corpsmen taped big wads of cotton and gauze on top of his eyes. So rather than Blackbeard or Barnacle Bill, the poor guy looked like a human fly. Whenever he was led past shipmates who were standing around with nothing much to do, they

would yell, "Help me!," and then bust out laughing. Far be it from the Navy to provide no opportunity for fun. Several of his bunkmates waited through the night, and when they were certain he was asleep, took magic markers and drew owl eyes on his bandages.

The crew thought it was a hoot! For blacksmiths and welders, we know that working with hot metal is fraught with danger. We all fear the black hot burn that leaves an impression on our fingers of the thing we just picked up. Skin, like eyes, is an organ, but an organ with the capacity to replenish itself and go on working as if nothing happened.

What's a little scar among blacksmiths, right? It may get you bragging rights or a cup of coffee. The eye, unfortunately, is not so capable. A severe flash burn can produce scarring, and this can obstruct vision to some degree. If the flash burn is not treated, an infection may start. This is as serious a matter as setting a shard or miniscule piece of metal stuck in your eye. If infection sets in and goes untreated, the result may be partial vision loss or a blind eye.

reprinted from the Blacksmiths' Guild of the Potomac,

Aluminum Forging Tip-Bob Pickens

You may have heard of using a pine paint stick or a Sharpie marker to test the temperature of aluminum to forge, but here is a tried and true way handed down from some old timers. The optimum temperature to forge aluminum is relatively between 900 –1,000 degrees. If you see a 6061-T6, the "T-6" is the heat treat number, in this case aviation aluminum, which is high strength. This must be heated to forge or it will crack worked cold. To easily recognize aluminum at a forging temperature, use an acetylene torch with the oxygen turned off, (use acet-ylene only), put a black soot all over the aluminum where you want to forge. Then set the torch normally, heat the aluminum slowly until the black soot disappears...you are now at forging temperature.

Reprinted from the Pittsburgh Area Artist Blacksmith Association



Bad news.



It hurts worse than it looks.

Remember!

?? *Arc rays can injure eyes and burn skin*

?? *The welding arc is brighter than the sun*

?? *Precaution must be taken to protect your eyes and skin from UV radiation*

?? *Wear correct eye and body*



Leaf Keychain Series by Eric Jergensen...

Reprinted from the Saltfork Craftsmen Artist-Blacksmith Association

Note that Eric made the rat tail end prior to removing the stem from the master bar.

Barry

How to Forge a Forge— Bob Pickens

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

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

How to repair the firepot.

Grind the cracks out, preheat to about 250 degrees, squeeze it back together. Use box clamps and/or furniture clamps to pull it together. Since it is cast iron you have two choices: weld with nickel or braze it. The nickel did not work well because the cast iron was too degraded from heating and the nickel will not blend with the cast iron. Bob chose next to braze the firepot. The brazing was successful because it is more forgiving to expansion. After brazing, cover with a fire blanket and let cool slowly, you can also bury it in wood ashes.



How to repair an impeller.

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

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



How to repair bushings on the fan.

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

Completion.

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

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

This was also from the Pittsburgh Area Artist Blacksmith Association and Bob Pickens



Blacksmith Neck Knife Wooden Sheath

created by Ray Plank

To make a rectangular wooden sheath, take a block of wood about . to $\frac{3}{8}$ inch thick, trace the blade outline on the wood and then carve out for the blade. I usually cut the outline with a utility knife, then I use a small chisel to remove the wood. Glue about . inch thick piece on top. I use Elmer's Wood GlueR. Be careful not to fill the cavity you just carved out with glue and make sure the knife still fits before the glue dries with lumps of glue in the wrong place.

[Note: When the blade is laid down on the board facing in this direction, it is for a left-handed person. For a right-handed person, you need to flip the blade so that it is facing towards the top of this page.] Then carve out a place



on the back, making the hole as deep as you can without breaking through to the knife cavity. Epoxy in a Rare Earth magnet. I get magnets from scrapped computer hard drives or round Rare Earth magnets can be bought online.



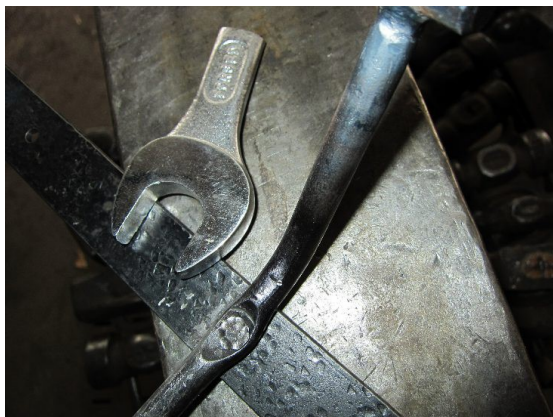
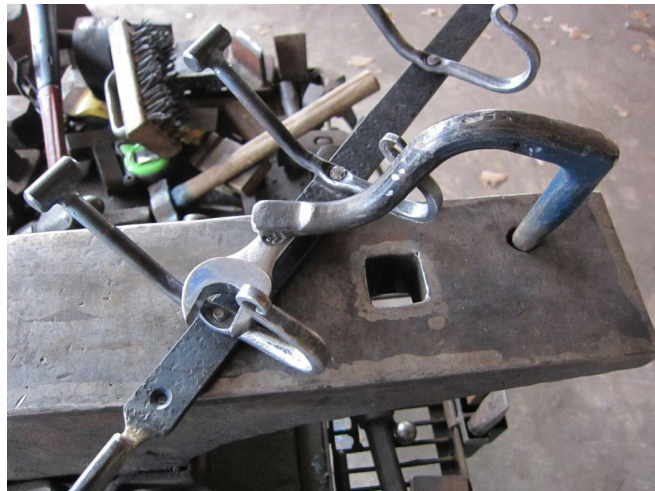
Drill two holes at the top for string or braided sinew. You can cover the wooden sheath with leather, paint, burn designs or just leave it natural wood (my preference). If the wooden sheath is not covered in leather or paint, finish it with some type of protective coating and your Blacksmith Knife Sheath is done.



Reprinted from **Now and Then**, The Newsletter of the Shenandoah Valley Blacksmith Guild. (This is a good article, but Ray gets most of his articles printed because he sleeps with the **Now and Then** editor...just sayin', Barry)

Setting Rivets By Jim Carothers 12-19-2017

I do most of my blacksmithing work by myself; some simple tools lend a third and often needed hand. Holding pieces tightly together for riveting has been a challenge for me. In these photos you will see how an end cut off a wrench has become a tool for helping to set rivets. The open wrench end used with a hold fast keeps the joint tight while I set the rivet.



I learned how to make the hold fast by watching Peter Ross and Roy Underhill on the PBS TV program “The Woodwright’s Shop”.

That video is Season 37 and titled “Forging The Hold Fast”. <http://www.pbs.org/video/forging-the-hold-fastut7ymw/> [This video is no longer available from PBS, look on Youtube, there are others. Barry]

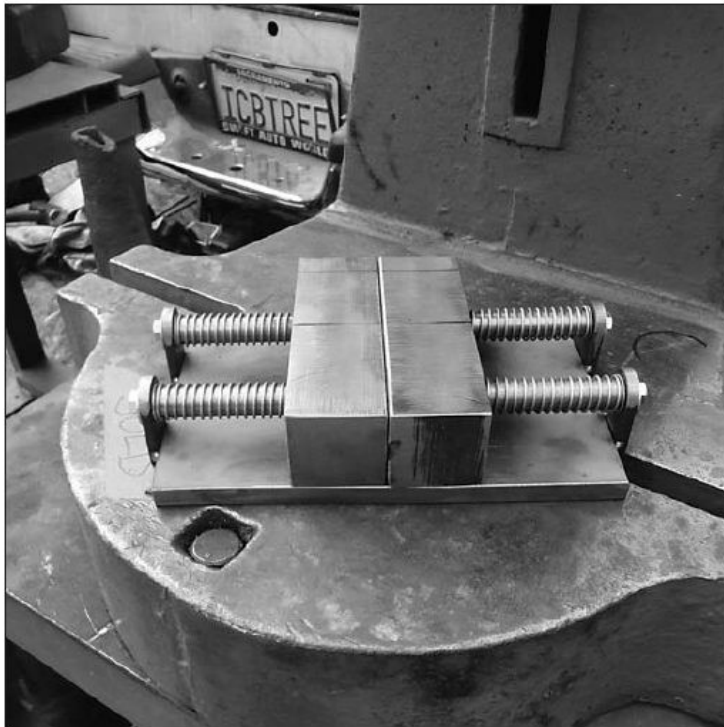
(Photos by Jim Carothers)

Reprinted from the Saltfork Craftsmen Artist-Blacksmith Association

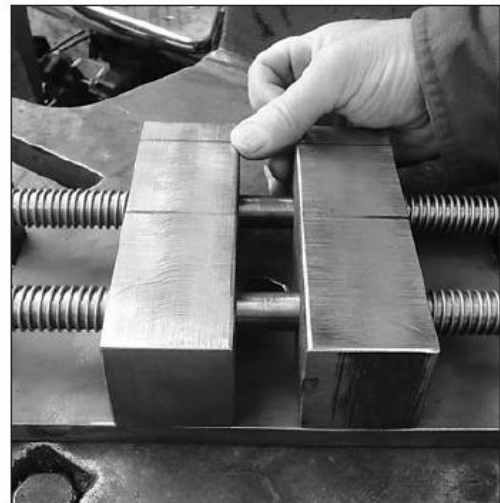
Spring-Loaded Bolster Plate

Peter Clark, Summerville, Oregon

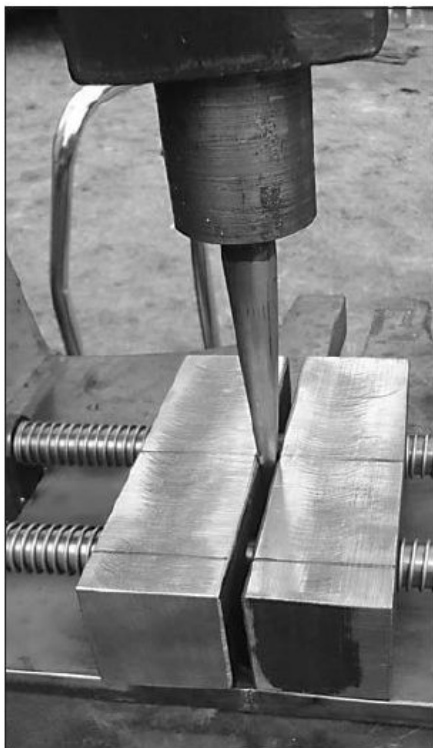
Follow your interests. Adapt this idea to your own requirements.



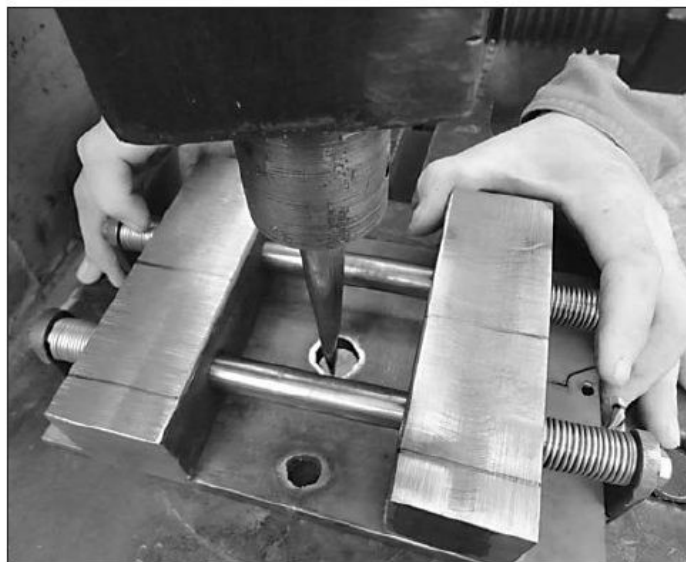
The Basic Design. Two massive blocks sliding on a baseplate, rods with springs for alignment.



Peter's hand shows the scale.



With the tapered drift.



Don't forget the clearance hole. ♣



Familiar faces at the Haygood Community College Bladesmithing Symposium: Jason Knight, Bob Kaltenbach, Heyward Haltiwanger, Tony Etheridge, Jonathan Lynch, Richard Lynch, and Bob's friend John Ross.



Josh's demo spoon of copper and rr spike.



Eager minds learning to forge copper...or waiting for lunch...at the Magnolia Gardens meeting in April

For Sale:

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

Tire Hammer Plans: Send a check or money order for \$30US or send \$32US to Paypal.Me/ClaySpencer. clay@otelco.net. PDFs will be e-mailed outside US.

Beverly shear blades sharpened. Remove your blades and send in USPS small flat rate box with check for \$41US Clay Spencer 73 Penniston Pvt. Drive, Somerville, AL 35670-7103.

Blacksmith Classes: Beginner to Advanced. Glen Owen, Hemmingway. Contact Glen at forgeontheridge@yahoo.com or www.forgeontheridge.com.

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

Upcoming Events

2nd Saturdays Blacksmith demonstrations at Roper Mountain Science Center, Greenville, SC, Anthony Palacino. contact.864-386-5546

3rd Saturdays Blacksmith demonstrations at Hagood Mill, Pickens, SC. Often, our own Griz Hockwalt.

History Days 7 July at Magnolia Gardens, Charleston. Ray Pearre contact.

August Meeting at Historic Camden. August 11

State Fair October 12, 13, 14 John Tanner Contact

October Meeting. Todd Elder at his Columbia (the city) shop. Date TBD.

December Meeting: Lexington County Museum, Hayward Haltiwanger to host.

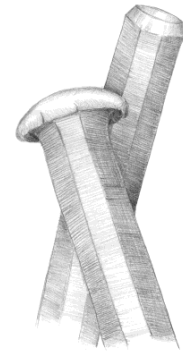
2019 Meeting Schedule: February—Conway, April—Magnolia Gardens, June—Marcengil's, August—Camden, October—Lexington County Museum, December—Ryan Calloway's in Greenville.

Chisel striking end mushroomed: a way to tell if mild or tool steel article

The striking end of chisels are not hardened, and therefore tend to gradually mushroom as they are beaten on. The picture below shows a badly mushroomed tool in front, and what it should look like in back.

A mushroomed chisel-head (front) and the same one, properly trimmed (rear).

Mushrooming makes the chisel harder to strike accurately and the rolled edge eventually breaks up, leaving sharp edges. Keep the ends close to their original shape by touching up periodically with a bench grinder. If you don't have a bench grinder you can lock the chisel in a metal vice and use a small angle grinder to clean it up. Very often flea-market tools are found in this condition. If you are buying old chisels to re-grind into sculpture tools, the mushrooming can be a clue to the quality of the steel. As a rough rule of thumb, deep cracking and broken off chunks around the edge of the rolled steel edge indicate higher carbon content. This is a good thing for stone tools. If some segments have broken off, so much the better. If the steel rolls around little cracking, it is probably a milder steel that will not harden as well when heat-treated. You can verify this by grinding on the bench grinder. Tree like branching sparks indicate high carbon. Low carbon steel tends to make sparks that form long straight lines.



This article reprinted from the Blacksmith Guild of Central Maryland

Once at a demo, a man told me that as a boy his dad had gone to town and, to surprise him, the lad forged his dad a cold chisel. When his dad returned, the boy presented his present. He said his dad never laughed so loud and long. He had completed the chisel as he had seen all other chisels—mushroomed head and all. Barry

Philip Simmons Artist Blacksmith Guild

<http://philipsimmonsartistblacksmithguild.com/>

President: Jesse Barfield

2423 Stribling Circle, Lancaster, SC29720

803-287-0929

jesstersforge@gmail.com

Vice President: Jody Durham

767 Lynnhaven Dr., Seneca, SC29678

864-985-3919 ironsmith@gmail.com

Librarians: Tony and Pam Etheridge

420 Prestige Ct, Orangeburg, SC 29115

803-682-5529

auntpam1957@gmail.com

Secretary/Treasurer: Ray Pearre

4605 Durant Ave.,

N. Charleston, SC29405

843-860-0532/pearrecr@att.net

Newsletter Editor: Barry Myers

1847 Pigsaw Rd, N. Augusta, SC29841

803-640-5504/ blmyers647@gmail.com

Webmistress: Jamie Herndon

414 Henry Stabler Rd, Swansea, SC 29160

803-665-7083 herndonblacksmith@gmail.com

Board Members

Todd Elder

708 Vista Farm Court, Lexington, SC 29073

[864-978-7232](tel:864-978-7232)/elderusc13@gmail.com

Duke Baxter

1104 Eagle Dr.

Rock Hill, SC, 29732.

[803 370 1455](tel:803-370-1455)/dukeb@comporium.net

Jason Jaco

29 Woodpine Ct

Columbia, SC 29212

803-799-1865/texasstreet@hotmail.com

Josh Weston

6925 Tanner Hall Blvd.

Hanahan, SC 29410

734-709-9677/josh.a.weston@gmail.com

Membership Application

___ New Member ___ Renewal

Name: _____ Address: _____

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

email: _____ Sponsor _____

Dues are \$15.00 per person/family, per year. 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 – 2017” or “Dues for 2018” are due” or “Dues paid 2018”

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

JUNE 9th, 10 AM

The June Meeting will be at the Marcengill's in Westminster.
132 Ringing Anvil Drive, 864-647-1132

Roger and Gail and Jerry and Bessie Fowler are our hosts. Jerry is thinking about demonstrating shoeing a horse—no he isn't... We are still deciding on who will be worthy to demonstrate for you!

Bring a side, drinks or dessert to contribute for the lunch. Also, bring something nice, maybe something forged for iron in the hat. I guarantee that you will have a good time, or not. Barry

