On the Anvil
PHILIP SIMMONS ARTIST BLACKSMITH GUILD
NEWSLETTER

INSIDE THIS ISSUE

Iron –in-the-Hat /Butch Shealy tomahawk tool 2
Blacksmith Folder 3
Tong Jaw Tip 6
Forging Twisting Triangular 7
Forging a ball 9
Spring Tips/Sales/Events.....10
Officers Page.....11
Next Meeting Notice 12

Hey Blacksmiths and friends!

The June meeting at the Marcengill's shop was a hit! Owen ReDeisel demonstrated making dividers from 1/4 inch material. He had a set made and whitesmithed and finished that he donated to the iron in the hat which was pretty sweet!

The ones he forged for the demo will need to be hand filed and dialed in to be completed. My buddy Mike Lamarre always says, "Forging is finite, but tweaking is forever!"

This could also be talking about filing, filing is a tedious process and a few blows with a hammer can save an hour with a file.

We had almost 40 members in attendance at the meeting, A little lower turnout than in the past but you guys' generosity really made the iron in the hat shine! We were able to raise $593for the Guild's scholarship and operations funds.

During the meeting, we formally announced the new board position changes and welcomed them into their new jobs! If you didn't know Ray Pearre is retiring from secretary/treasurer duties and is training our new guy, Ben Secrist to fill the position, They are some big shoes to fill but Ben is more than capable for the task.

Todd Elder has stepped down from Vice President for personal reasons. I again want to thank Todd for all his support and work in his role. David Bush is stepping up to fill Todd's old spot, Dave is a great guy with a level head so hopefully he'll keep me in check!

That leaves two spots on the board, Chris Carroll and Pat Walters are filling those spots until the February meeting so that they can be voted in by the Guild during our usual elections.

Welcome our new members Richard Whitehouse and Andrew Watkins, and also returning member Charley Harper. Welcome!

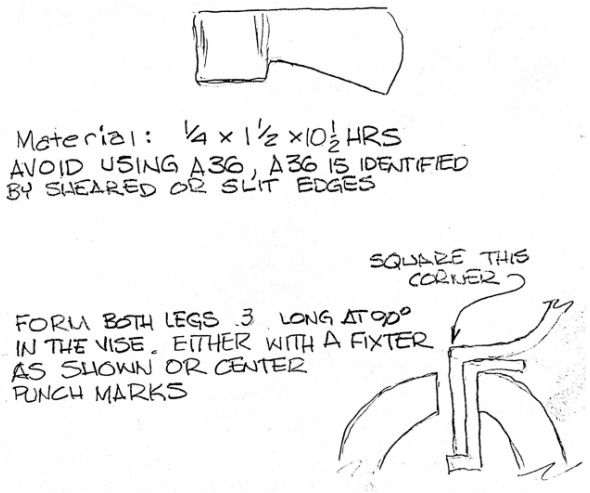
Thats all for now. Be sure to look through the newsletter, we have some really neat forging/ learning opportunities coming up in the next few months!

Jody Durham

Iron in the Hat

Item	Donated By	Won By
Frederick's Cross	John Tanner	Bruce Hester
Leaf Spring	Dave Bush	Rick Gifford
Adjustable Bending Fork	Dave Bush	Bruce Hester
Coat Rack	Chris Carroll	Charly Harper
Treble Cleft Key Chain	Shawn Ellis	Weston Haviland
PSABG Coasters	Angie Robinson	Gail Marcengill
		ML Tanner
		Chris Carroll
Copper Sun	Roger & Gail	Marcye Brown
Knife w/sheath	Jerry Fowler	Charly Harper
Hummingbird Art	Rick Gifford	Rusty Osborne
Spring Steel		Rick Gifford
Magician Frame	Rusty Osborne	Dave Bush
USA Stamps	Chris Carroll	Pam Etheridge
Hammer Handle Covers	Rusty Osborne	Jody Durham
Charleston Ironwork Book	Ryan Calloway	Jesse Barfield
Artistry Shirt	Ryan Calloway	ML Tanner
Tool Coat Rack	Ryan Calloway	Pam Bush
Igloo Cooler	Bruce Hester	Pam Etheridge
Blueberries	Pam Etheridge	Marcye Brown
Callalilly	Jacob Bendt	ML Tanner

Item	Donated By	Won By
Hummingbird Bracket	Jody Durham	Bruce Hester
Steel Die	Jody Durham	Charly Harper
Turned Tool Handles	John Stine	Penny Pippin
		Pam Etheridge
Chain	Jesse Barfield	Chris Carroll
Heart Wall Kit	Jim Carothers	AJ Charles Dodson
Frederick Cross Kit	Jim Carothers	AJ Charles Dodson
Dividers Demo Piece	Owen Riedesel	Dane Prince
Steak Turner	Charles AJ Dodson	Rich Whitehouse
Fiddlehead Ferns	Rich Whitehouse	Pam Etheridge
Coil Spring	Jody Durham	Rich Gifford
Quail Eggs	Marcye Brown	Jody Durham
Knife Care Oil	Ben Secrist	Gail Marcengill
Frick Museum Prints	Ted Mays	Jacab Bendt
		Dave Bush
		Jacob Bendt
		AJ Charles Dodson
		Marcye Brown
		John Stine
		Chris Carroll

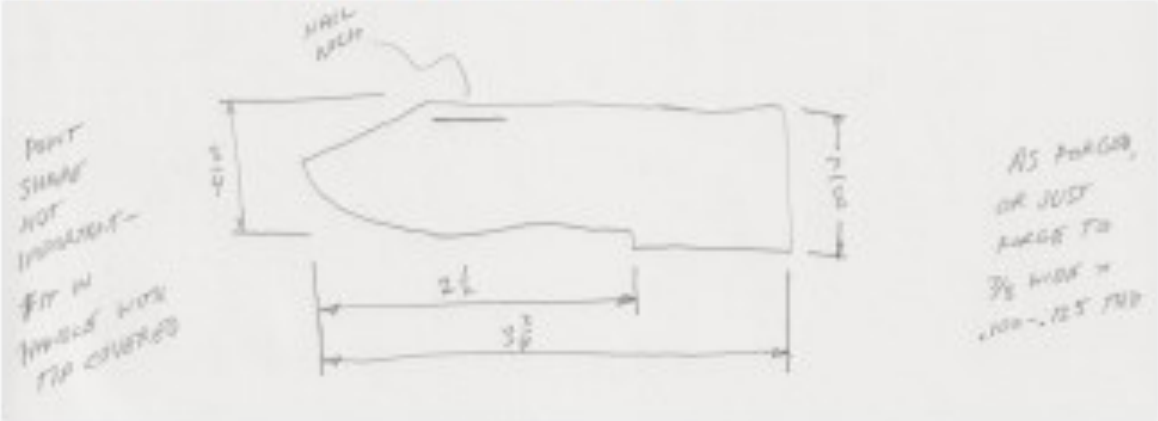


I've seen Madison demonstrator Butch Sheally before and have known him since 2006. Here is a tool that Butch uses to gauge the length of the forward lips of his tomahawks. It makes it easy to make the lips the same length every time! Barry

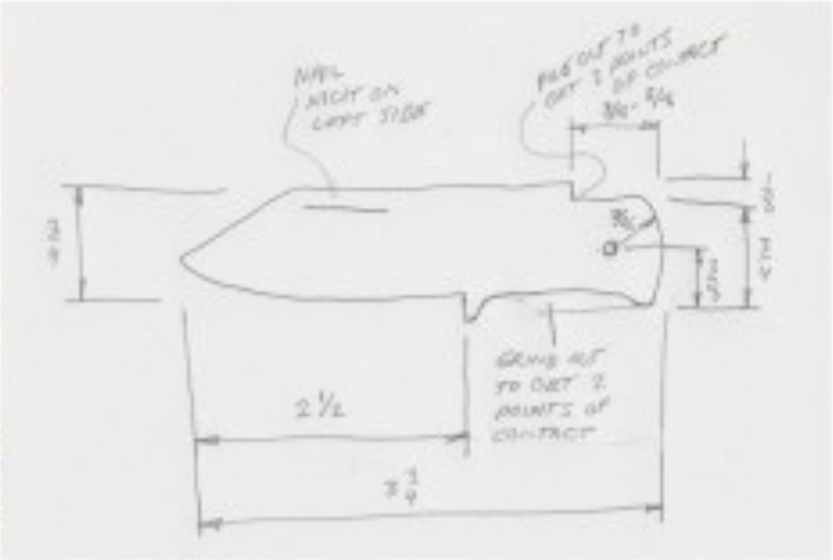
Blacksmith Folding Knife with Steve Alford

Blade

Any good blade steel seems to work. I've used 6150, 5160, 1084, and 15N20. My favorite is 0.090 15N20 like bladesmiths buy to make damascus. I just saw or grind it to shape, forge in the nail nick, and heat treat. Other blade steels tend to come in thicker sections, so I forge those at least to thickness, often put in the point, and of course the nail nick.



When forging blade thickness tends to come out around 1/8 or just under. Cools too fast to easily get down less than that.



Normalize, normalize, normalize. Drill and grind to dimensions before heat treat. Even with normalizing I often use a carbide bit to get the pivot hole in the blade. I grind bevels after heat treating and installing in handle.

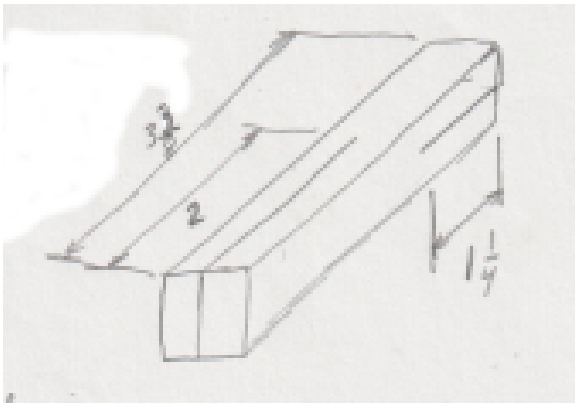
Heat treat depends on the steel you use. But if you don't have an oven the quench process is pretty much the same: Heat to non-magnetic, quench in oil. Then temper for the hardness you prefer. Harder holds an edge better but might chip. Softer is easier to sharpen but might roll.

Blacksmith Folding Knife with Steve Alford

Handle

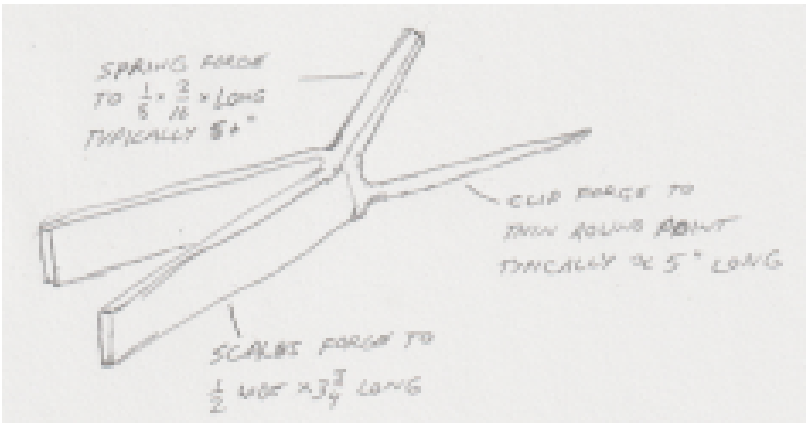
Mild steel is fine. I have started with spring steels like 5160 or 6150 and heat treated for spring, but found that mild steel, as forged, works, so don't bother with spring steel for the handles any more.

"Blacksmithing is a constant volume process." Start with any stock that gives enough mass (volume) to get the desired result. I started with 3/16 x 1 or 1/4 x 1 flat bar for a lot of folders. Then thought of starting with 1/2 square bar. Seems a little easier and allows for a pocket clip.



I make the initial cuts in the blanks with a bandsaw.

1. Fuller at the base of the spring and clip to about 1/4 thick.
2. Seperate the scales, then draw to 3-3/4 long. One side will probably be cut thinner. Do that one first, then make the other match.
3. Close scales together so you can use them for a handle while forging the spring and clip.
4. Seperate the spring and clip. Use the thinner side of the split for the clip.
5. Draw the spring to 1/8 x 3/16; length will probably be well over 5 inches.
6. Draw the clip long, round, and pointy. Length will probably be around 5 inches. Forge some of the curly-Q on the spring but leave it straight back from the scales. It will make a nice handle while getting the scales and spring in place.
7. Space the scales. If using a blade 0.100 or thinner I make them 1/8-inch apart. If using a more typical forged blade around 1/8 thick, I space the scales 3/16 inch.
8. Bend the spring around, nearly touching the scales at the blade end.



Blacksmith Folding Knife with Steve Alford

Assembly

I use copper washers I make from roofing copper, about 0.020 think. I punch 5/32 holes and then cut them out with snips.

My pivots are 1/8 x 1 rivits. They're longer than I need, but I grind the ends to a short taper to make it easier to fit the rivet through the stack of handle, blade, and two washers.

Drill 1/8 through both handle scales. I use a bit of wood between the scales so the top one won't flex away from the bit. Hole should be centered in the width of the scales and 1/4 back from the blade end.

Hold the blade on the scale with the holes lined up. I drop a rivet through the holes to keep them lined up. Mark the spring where it would hit the stop with the blade in the open position, then cut off a little long.

Install the blade in the handle. I have a little wedge I made from 1/8 x 1/2 flat to pry the spring up to get pressure off the blade. No washers yet, this is a temporary assembly for fit. Open and close the blade a few times. File the end of the spring so it's straight when open. Make sure the point is inside the handle when closed. You can reshape the point by grinding, or you can make small adjustments in how it sits in the handle by filing on the bottom of the tang where it rests on the spring in the closed position.

Put the wedge back in to relieve spring pressure, take it apart, and reassemble with the copper washers. Cut the rivet off so about 1/8 protrudes from the scale. File off any burrs and break the ends a little, then peen the rivet over. Work the blade back and forth a few times. Sometimes a shot of WD40 helps.

Grind the bevels, being very careful not to overheat the already-tempered blade. Sharpen. Might use a little more WD40 to help get rid of any water in the pivot from quenching while grinding.

I usually finish with Renaissance Wax. Also used carnauba or Minwax sometimes.

Steve Alford did this demonstration at the SBA Conference at Madison. It was well watched by our members and one member, who had brought his forge, worked on and made one at the Conference! This article was provided by Steve! Steve is the newsletter editor for the *Bituminous Bits*, newsletter of the Alabama Forge Counsil.

JAKE JAMES

Tong Jaws to Minimize Kick-Open

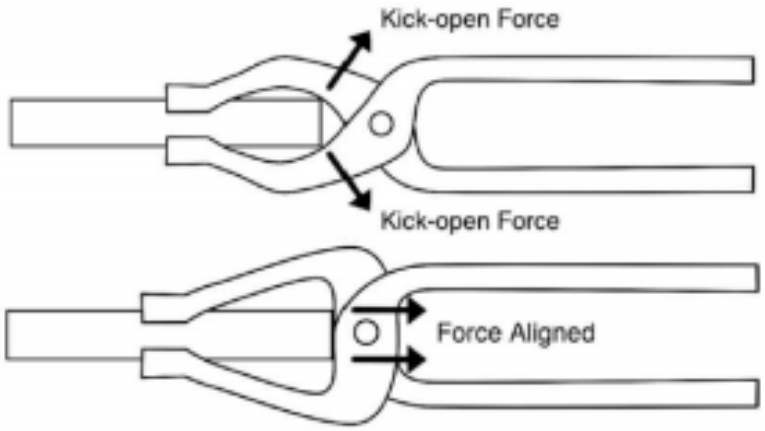
Shared by CBA & AABA March 2025

Examples used by Frank Trousil and Mark Krause at Spring Conference 2016

Examples from RoadRunner Forge

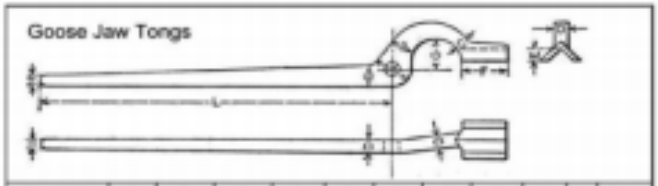
Jake James showed this idea at the April 2016 sculpture workshop at Adams Forge. His concept is, simply, to arrange the pivot design of tongs so that stock kickback will not kick the jaws open. I.e., design the pivot area so that the force exerted when the stock bottoms out against the jaws does not tend to force the jaws open.

Here's the idea:



Besides the practicality of these: enjoy the art-nouveau styling!

Visit this link to read more about Krausian-style tongs: http://www.hammerwhisperer.com/tongs.htm (where you can also find the above photo and the chart to the right).



Capacity In.	A	B	C	D	E	F	G	H	I	L	Rivet
1/4 - 5/16	5/8	1/2	7/16	5/16	1/8	1	1/2	5/16	1/4	14	1/4
3/8 - 7/16	3/4	9/16	1/2	5/16	3/16	1-1/8	5/16	5/16	1/4	16	5/16
1/2 - 5/8	7/8	5/8	9/16	3/8	1/4	1-1/4	5/8	3/8	5/16	18	3/8
3/4 - 7/8	1	3/4	5/8	7/16	3/8	1-1/2	3/4	3/8	5/16	20	7/16
1 - 1-1/8	1-1/8	7/8	11/16	1/2	1/2	1-3/4	7/8	3/8	5/16	20	1/2
1-1/4 - 1-3/8	1-1/4	1	3/4	9/16	5/8	2	1	7/16	3/8	22	1/2
1-1/2 - 1-3/4	1-3/8	1-1/8	7/8	5/8	3/8	2-1/8	1-1/8	1/2	3/8	24	9/16
1-7/8 - 2-1/8	1-3/8	1-3/16	15/16	11/16	1	2-1/4	1-1/4	1/2	3/8	26	5/8
2-1/4 - 2-1/2	1-1/2	1-1/4	1	3/4	1-1/8	2-1/2	1-1/2	9/16	7/16	28	5/8
2-5/8 - 2-7/8	1-1/2	1-5/16	1-1/16	3/4	1-1/4	2-3/4	1-3/4	9/16	7/16	30	3/4
3 - 3-1/4	1-5/8	1-3/8	1-1/8	3/4	1-1/2	3	2	5/8	1/2	32	3/4
3-1/2 - 3-3/4	1-3/4	1-1/2	1-1/4	3/4	1-3/4	3-1/4	2-1/4	5/8	1/2	34	3/4
4 - 4-1/4	2	1-5/8	1-5/16	13/16	2	3-1/4	2-1/2	11/16	9/16	36	3/4
4-1/2 - 4-3/4	2-1/8	1-5/8	1-5/16	13/16	2-1/8	3-1/4	2-3/4	11/16	9/16	38	3/4
5	2-1/4	1-3/4	1-3/8	7/8	2-1/4	3-1/2	3-1/4	3/4	5/8	40	7/8

HB

Forging and Twisting Triangular Barstock

by
Travis Fleming of Artistic Anvil
and
Al Stephens of Pequea Valley Forge
Athens, Alabama

Have you ever noticed that when you're looking at a recently completed project, the angel on one shoulder tells you "*That's really nice,*" and the devil on the other shoulder says, "*Yeah, but what if ...*?" Anytime a blacksmith is admiring, dissecting, or re-engineering something, that "*What if ...*" moment always comes around.

One day, while looking at some new twists at Travis Fleming's *Artistic Anvil* forge, Al said that he had never seen a twist with an equilateral triangle cross section. (That old "*what if?*" is a sneaky devil.)

First Tooling

Several days later, Travis stopped by to show Al a perfectly forged equilateral triangle. To form it, he made a bottom tool by cutting a triangle out of a block that could be used under a power hammer. They found that 5/8" round stock was the perfect size to start with.

Image #1

Al then took a 5/8" round piece of S-7, and used his 60 degree "V" tool to make a long triangular top tool and punch.

Image #2

Travis had already made several twists, and found he needed a special twisting wrench to hold the triangle material securely. When Al made the wrench, he punched a round hole first, then drifted it with the triangle punch.

Image #3

Al made a block for his power hammer and forged three triangular notches into it, each progressively deeper. He hoped this tool would allow him to work with smaller stock sizes.

Image #4

More Tooling

However, "*what if?*" kicked in again. "*How would they forge a triangle taper?*" Well, they used the S-7 top tool to make a tapered swage block. Al made one for the anvil. Travis made some for the power hammer.

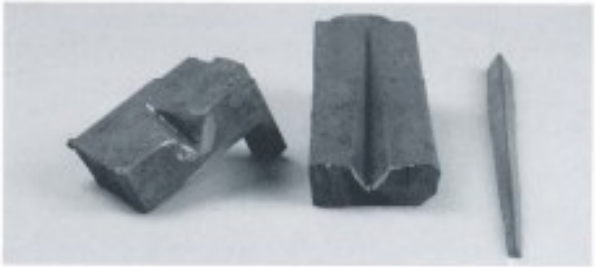


Image #5

This was used first to make a tapered punch by forging a round taper, then forming in the swage so different size twisting wrenches could be made.

Next, they made tongs to hold triangular stock properly. Vise blocks were made next. They discovered that a three-jaw chuck on the lathe would hold stuff perfectly.

Image #6

Language/terminology/twisting

By this time they realized that they were having problems even talking about what they were experimenting with. They couldn't describe a twist using the standard 1/4, 1/2, 3/4, or full-twist terminology. It had to be 1/3, 2/3, or full. (Or 120 degrees, 240 degrees, or 360 degrees.) They also talked about the number of "flats" or "edges" they counted when twisting. They even numbered the flats on both ends of a piece to help on some early stuff.

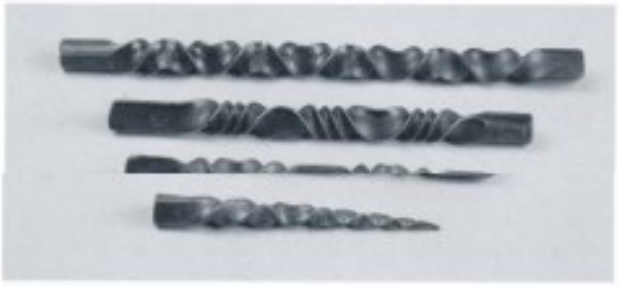


Image #7

Applications

Now, what were they going to use these tools, experiments, and terminology to make? A computer search for *"hand forged triangles"* produced a large variety of dinner bells, some earrings, bracelets and necklaces, and a musical instrument. They found anvil devils and triangle files, but nothing else. Most items used a two-dimensional triangular shaped design element. Al uses flat triangles in several of his production candle holders.

About this time Al had shoulder surgery and was forced to assume old "what if's?" place. Travis began working on a three-legged candle holder, and more "problems" surfaced, such as, *"How do you orient a three-sided leg to show off the fact that it has three sides? Why does a straight twisted shaft appear crooked from different sides? Why does a triangle candle pan only look like it's centered from two points of perspective?"*

A triangular twist can be used anywhere any other twist can be used. The distinction is very subtle, and might be missed, despite all the work that goes into it. Travis and Al have not yet tried splitting, drifting, or mortise and tenon joints with this triangular cross section yet. Perhaps this is why you don't see blacksmiths forging and working with triangular stock.

Challenge

So here's the challenge: Where can we blacksmiths, the undisputed and most talented artist-craftsmen, go with this shape? ■

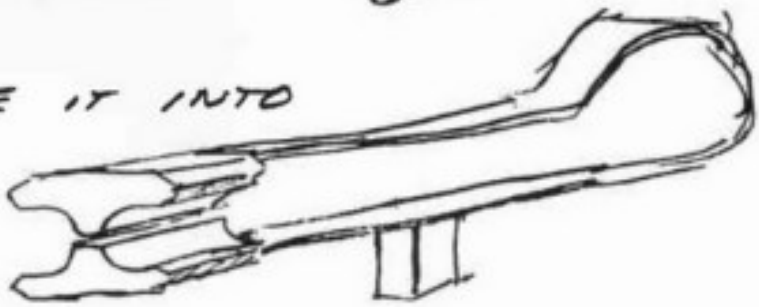
Image #8: Candle stand, by Travis Fleming. 16" x 7" . Travis also made the candle mold so a friend could pour a beeswax triangle candle for it.

ONE WAY TO FORGE A BALL
WALT Hunt

1. MAKE THIS SWEDGE:

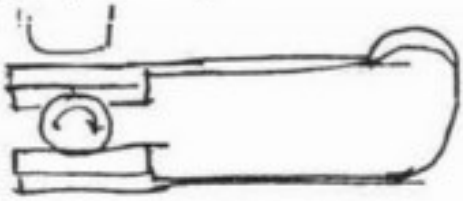
2.  HAMMER SQ. BAR INTO SWEDGE ON DIAMOND TO MAKE THIS:

AND MAKE IT INTO THIS



WHICH YOU USE TO MAKE

THUS



THESE TO YOUR HEART'S CONTENT
Wt

Reprinted from the 1994 newsletter of the Blacksmith Association of Missouri

Failure Points On Coil Springs

Many of us use 5160 steel for tools although some might question it being a true tool steel. Another problem that presents itself when using coil springs is the number of compression cycles that the coil spring has experienced creating micro fractures that result in a potential failure mechanism after forging your tool. I gained a some insight on the coil spring failures when talking to the Shop Manager at the Tennessee Valley Railroad Museum.

From his experiences working on rail car coil spring failures over the years they occur in the first 1 1/2 turns of the coil spring. There is no data involved just years of experience and observation. I found this really interesting, interesting enough that I will not use this section of a coil spring regardless of what type of vehicle the coil spring was used on.

If you consider this information viable, hopefully it will give you a more successful result.

Herb Gravitt

For Sale

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

Several hand crank blowers and blower parts for sale. Barry Myers 803-640-5504

We have coal. 3 bucket minimum - $50, 6 buckets (30 gal barrel), $100, 11 buckets (55 gal barrel) $150, 30 buckets (1/2 ton) $500, 60 buckets (1 ton) $1000. Located at John Tanner's, 803-422-4714 in Swansea, SC. Weekend pick up is preferred. You must provide your own buckets or barrels and payment is expected at time of pick up (cash or check made out to PSABG).

Clay Spenser's Tire Hammer Plans and his new book on *Flat Dies Power Hammer Tools*, each $30. clay@tirehammer.com or check/mo to 73 Penniston, AL 35670.

Upcoming events:

40th Annual AFC Blacksmithing Conference, September 4-7, 2025, Tannehill State Park, McCalla, Al

September 5-6, Hammer-in at Rat Hole Forge, 3833 SC707, Socastee, SC! Pat Walters is contact, 843-446-6676/

September 12-14, Gathering at Oconee State Park, Hammer-in on 9/13-14. We are going to make strap hinges and pintles for the Park! Contact Rusty Osborne, 803-374-7987

SC State Fair is October 10, 11, and 12. . John Tanner is our contact. Let him know if you plan to come. 803-422-4714e

October Guild Meeting, 10/18 at the Lexington County Museum. Contact Dave Bush, 803-940-0923

Mythical and Medieval Fest, November 8-9, 15-16. 3833 SC707, Socastee, SC! Pat Walters is contact.

December Guild Meeting: December 6 at Ryan Calloway's Artistry in Greenville.

Philip Simmons Artist Blacksmith Guild

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Membership Application

___ New Member___ Renewal

Name: _____Address: _____

City: _____ State: _____ Zip: _____Phone: _____

email: _____ Sponsor_____

Dues are $20.00 per person/family, per year. **Make checks out to PSABG** Please remit to:

Ray Pearre, 4605 Durant Ave., N. Charleston, SC29405

ACKNOWLEDGEMENT AND ASSMPUMPTION 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 2024, Dues for 2025 are Due, or Dues Paid for 2025"

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

Send an email to Barry Myers to get on the email list, address above

COME to Historic Camden!

August 9

Demo beginning at 10AM

People may show up much earlier!

Bring a side, dessert, or drinks and something forged (or not) for the iron-in-the-hat

Thomas Bosse will be doing the demo.

222 Broad St, Camden

Rick Thompson 803-269-5584