On the Anvil NEWSLETTER

PHILIP SIMMONS ARTIST BLACKSMITH GUILD
WWW.SIMMONS.ABANA-CHAPTER.COM

My rendition of Mr. Simmons' Snake Gate ring for the ABANA Ring Project

The last meeting for the Philip Simmons Blacksmith Artist Guild was held at the beautiful Magnolia Gardens on April 10, 010. The meeting was hosted by Linda and Bill Creek and the Magnolia Gardens. I would like to thank Jeff Hatfield, who did a great demo, we should be proud that we have so many talented smiths in our Guild. The Guild had another great iron in the hat; we took in close to $1000. Again thanks to all members who contributed to it.

We had three new folks to join the guild Roy Corbin, Josh Widener and Paul Alford. I would like to say welcome to the Guild.

A special thanks to Ray Pearre, Mike Dubois, Barry Myers, Ann and Jimmy Suggs for all their help with the Mark Asprey class. If it wasn't for these folks it the class would have not been as successful as it was. I'm working on getting another class for sometime in October or November.

There have been some members asking about having another hammer-in. We can schedule one any time the interest is there. Just let us know when you would like to have one and where the interest might be. Whether it be in flower and leafs or joinery, whatever, just let me know.

If you have any questions about the Guild, you can contact me by email at mike@tuckersforge.com or call me at 803 773-6853.

We also have a new web-master his name is Adrian Parks, 864-757-9695 glowmaster@gmail.com He has just recently joined the guild, too! Thanks, Adrian, for updating the website.

Keep Darwin Lamb's family in your prayers.

Sincerely, Michael Tucker

In the interim from when Mike wrote his letter, Jimmy Suggs passed away. Please see his obituary on the next page and keep Anne and others in Jimmy's family in your prayers.
Barry

Jimmy Suggs, 1942-2010

Jimmy Suggs passed away unexpectedly last Thursday night from a heart attack.. We miss him already. Jimmy was a great friend of the Guild and a good mentor to many of us. He served a term or two as vice president and was serving on our Board. He and Anne hosted many meetings at their home or other locations around Charleston. He demonstrated at the Olde Charleston Jail, look at the pictures on the website. He made some of the prettiest gates, again, look at the website Gallery. One of our most accomplished smiths, he was always learning, see the picture in my Mark Aspery article. He and Bill Creek have a gate at 118 Queen Street in Charleston. The memorial service on Sunday was well attended by his friends from all over the state. Two of his Masonic Brothers spoke well of him. The Guild was well represented.

Mike, Jimmy and Meck at the Jail

Jimmy Douglas Suggs, 68, of Ravenel, husband of Anne Scott Suggs died Thursday, May 6, 2010 at St. Francis Hospital.

A memorial service will be held Sunday, May 9, 2010 at 3 o'clock at James A. Dyal Funeral Home Chapel, Summerville. Burial will be private.

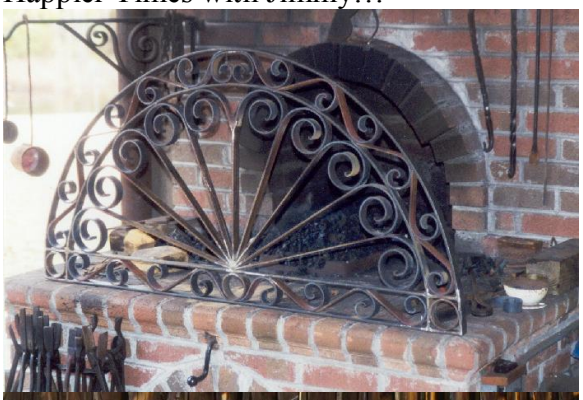
In lieu of flowers, memorials may be made to: Philip Simmons Blacksmith Guild or a charity of one's choice.

Jimmy was born April 13, 1942 in Conway, a son of the late Homer Melton Suggs and Ruth Cooper Suggs. He was a graduate of Conway High School, class of 1960. He was past master of the Old Jacksonboro Lodge in Ravenel and a former Shriner with the Indians. He was past vice president and currently served on the board of directors for the Philip Simmons Artist Blacksmith Guild. He retired from the Charleston Naval Shipyard as a foreman in nuclear inspection. After his retirement he became town inspector for the city of Ravenel for ten years. He owned and operated Village Iron Works and was currently teaching at Trident Technical College.

Surviving in addition to his wife are: 3 sons: Russell Suggs (Cindy) of St. Stephen, Terry Suggs (Renee) of Mount Pleasant and Jeffrey Suggs (Kristi) of Lancaster. 6 grandchildren: Todd Wilson, Kevin Suggs, Annabelle Suggs, Lauryn Wilson, Francesca Suggs and Gabrielle Suggs, brother and sister: Bobby Suggs (Pam) of Summerville and Donna Darby of Mount Pleasant. He was predeceased by his beloved grandparents: Homer and Sadie Martin Cooper.

A memorial message may be written to the family by visiting the Dyal website at www.jamesadyal.com

Happier Times with Jimmy…



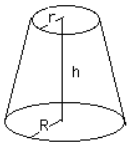
Iron-In-The-Hat

Item	Donated By:	Won By:
Scroll Fork	Mike Tucker	Jeff Hatfield
Ginko Leaf Candle Holder	Mike Tucker	Meck Hartfield
Mike Tucker Hammer	Mike Tucker	Richard Van Hulle
Scroll Jig	Jimmy Suggs	Larry Wiles
3 Abrasive Cut-off Wheels	Larry Wiles	Julian Thrasher
Hand Saw	Larry Wiles	Tara DuBois
Small Pry Bar	Larry Wiles	Richard Van Hulle
Tomahawk	Tony Etheridge	Bill Burgess
Another Tomahawk	Tony Etheridge	Ray Pearre
Steak Turner	Ray Pearre	Dale Shaver
Level	Johnny Marks	Dale Shaver
Second Level	Johnny Marks	John Tanner
Garden Snail	Linda Rossi	Darian Lopes
Napkin Rings and Napkins	Barry Myers	Layne Law
Really Large Copper Leaf	Mike Bell	Bobby Ikner
Somewhat smaller Copper Leaf	Mike Bell	Bobby Ikner
5/8" Die W-1 or M-1	Jesse Barfield	Mike DuBois
Tee Bolts	Jesse Barfield	Al Jenkins
Damascus Knife	Meck Hartfield	Meck Hartfield
Leather	Ashby Morton	Meck Hartfield
3 Copper Leaf Pendants	Robin Cruz McGee	Jeanne Myers
Large Circular Saw Blade	Erik Burglund	Jamie Stevens
2 Hydraulic Shafts	Charles Meyer	Larry Wiles
Coke	Mike DuBois	Robin Cruz McGee
Over Through (the Gov't????)	Doug Potter	Linda Rossi
Bird Bath or Feeder	Doug Potter	John Tanner
Funky Shelves	Al Jenkins	Tara DuBois
43 Families El Porvenier Coffee	Al Jenkins	Charles Meyer
Horse Shoe Rasps	Mackie Bryant	Tony Etheridge
Horse Shoe Rasps	Mackie Bryant	Al Jenkins
Horse Shoe Rasps	Mackie Bryant	Jack Ratliff
Horse Shoe Rasps	Mackie Bryant	Jesse Barfield
Horse Shoe Rasps	Mackie Bryant	Ed Tinsley
Horse Shoe Rasps	Mackie Bryant	Jamie Stevens
Horse Shoe Rasps	Mackie Bryant	Jamie Stevens
Horse Shoe Rasps	Mackie Bryant	Ed Tinsley
Horse Shoe Rasps	Richard Van Hulle	Pam Etheridge
Horse Shoes	Richard Van Hulle	Pam Etheridge
Horse Shoes	Richard Van Hulle	Paul Alford
Bucket 'o Metalurgical Coal	Layne Law	Martha Vann
Jamie Pot	Jamie Stevens	Dale Shaver
9 cutting disks	Jamie Stevens	Al Jenkins

The Iron-in-the-hat was a very successful effort. Thank you one and all. A very enthusiastic crowd donated over $857 to the Scholarship Fund. The Silent Auction of Meck's knife, Mike's candle holder and the Mark Aspery tools netted $110. Thanks again.

Mark Aspery told us he was going to demonstrate the making of a frustum! We were so excited! Then someone asked, "What's a frustum?"

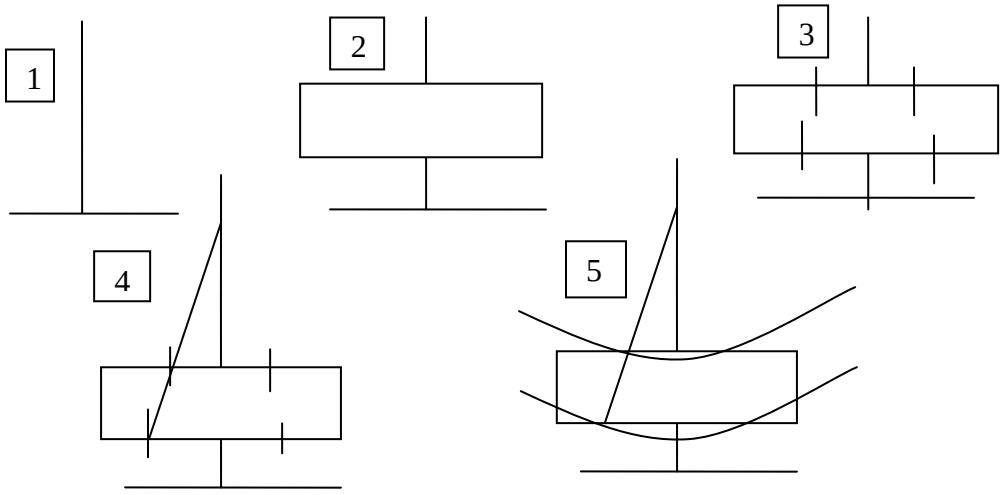
In geometry, a **frustum** [1] (plural: **frusta** or **frustums**) is the portion of a solid (normally a cone or pyramid) which lies between two parallel planes cutting it



So, it is a section of a cone, and Mark showed us how to make one. And, he showed us what he used it for – a guide to align the pass through of a round stock ring with a square stock on the diamond. But, once you know the technique, you can incorporate it for your own designs.

Stock used: 2 ¾" x ¼" mild steel stock.
To determine the length, calculate that using the desired top and bottom diameters of the frustum and find their average. The size desired at the top was 3" and 4"at the bottom
C=π d C=3 (close enough for blacksmithing) x 3 ½" C=10 ½"
But, this doesn't consider the thickness of the material
C=π (d - stock thickness) C=3 x (3 ½ - ¼) C=3 x 3 ¼ = 9 ¾

Now, to determine the arc to which the bar must be bent (the hard way) prior to making the frustum. (1) Draw a set of perpendicular lines on a flat fireproof surface. (2) Mark the width of the stock across the vertical line. (3) Mark the desired diameters, top and bottom, centered on the vertical line – smaller diameter away from the horizontal. (4) Draw a line from the end of the larger diameter through the end of the small diameter so that it intersects with the vertical line. (5) Using a string and a pencil or a compass, draw an arc through the intersect and the diameter marks.

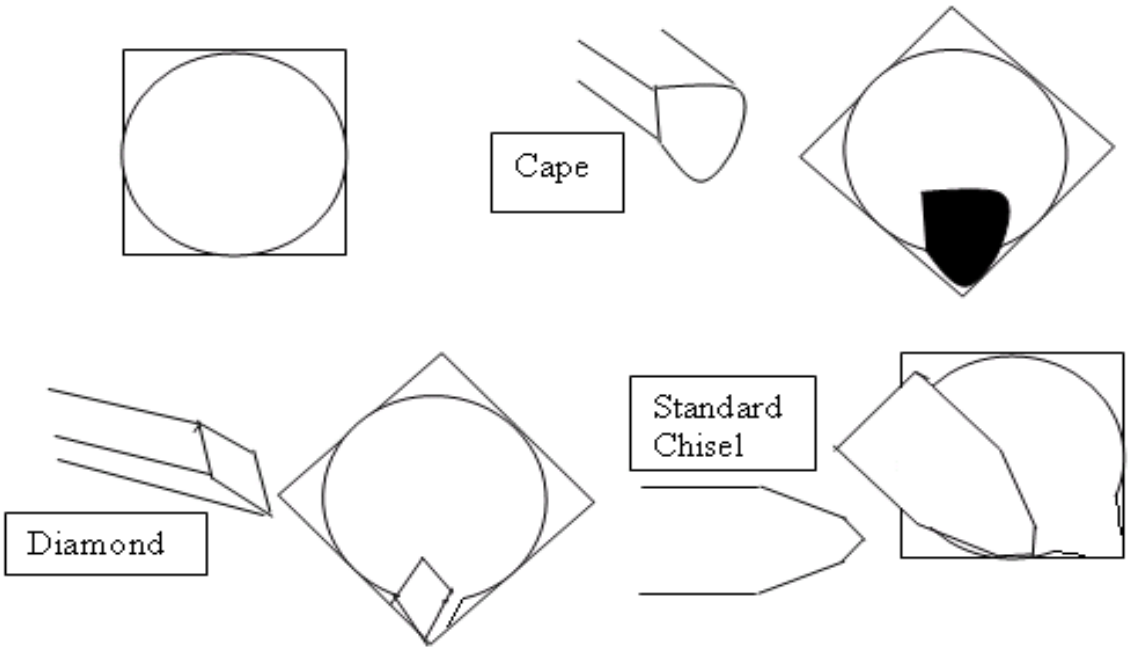


Upset the corners of the smaller-diameter-to-be side of the stock about a quarter inch.
An aside, but an important one: When you turn an eye for a hinge, the bar will cup. I have noticed this as many times as I have made hinges. To avoid this, make the bar convex before turning the bar and it will straighten itself in the final product!

So, cup the bar along its length in a shallow swage or between the table and the anvil face. Now, with the convex surface **DOWN**, start the bend (the easy way) by extending the bar across the anvil face and hammering. Place the blows on what will be the **outside** of the frustum against the anvil face. Heat the other end and again, from the inside work the blows to make the shape of the frustum. The use of hoop tongs seems to aid in forming to conical shape. True it up on the bick of the anvil.

Mark then used a portaband to saw out the section of the frustum (both sides) going from the larger end toward the smaller. The gap on one side includes the ends of the bar that hasn't been closed. It is through this gap that the half inch square will pass, on the diamond. Do not cut the two sides asunder as the remnant will hold the top together when the frustum is welded to the plate yet to be made.

To make the plate to fit the hardy hole, use a square solid stock that fits the hardy hole. Rather than just weld around the square stock sitting in the middle of the plate, Mark hogged out the hole in the ¼ x 4 x 4 plate to accommodate the hardy stock by first drilling a hole – in this case, 1 inch drill for 1 inch hardy. He then chiseled the corners using three different chisels.
The gouge (misnamed in my drawing below, but I can't fix it) chisel was used first, moving out the metal from the corners to the center. He then used a diamond to clean up the corners and then a regular cold chisel, ground to two angles, holding it to the sharpest angle which is on the front edge.After all corners are clean, the square stock is then welded as it now fits into the hole. This makes for a stronger setup. Now, place the frustum, big end down and centered on the plate, and weld all around. Remove the slug left to hold the frustum together.



Mark made the drift from a piece of ½ inch square. He isolates the heat into the center of the 6-8 inch bar. He upsets it by striking the end three times while holding the other end on the face. This slight upset is enough to make the hole sufficiently large for the ½ inch stock to pass after the hole is cold. Don't make the hole too small or a bad time will be had by you when you assemble the piece.

A special thanks to Mark for coming to South Carolina from his home in California to teach us some techniques that we may use in our craft in the future. Hopefully we are all better smiths for the effort. Barry Myers

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Items for Sale

Fire Creek Coal Not quite like Sewell, but hot. Layne Law 843-333-9964

"New" Centaur Forge Model C-36 coal forge
Cost $1349 Selling for $1000 Johnny Johnson 803.480.3401
"New" NC Tool Whisper Low-Boy Gas Forger
Cost $595 Selling for $500 Johnny Johnson 803.480.3401

1-150 lb anvils ($295), some kind of ship's blower ($125), 4" post vise ($125), 6" post vise ($375), # 20 cast iron pots for sale by Ben Hendrick 770-948-9842 Austell, Ga.

Have anything for sale? A business card for advertising? Send and I will post it!

Speaking of Business Cards or other printing, Ray Bryant, our printer, will print it up for you, contact him:***Bryant's Printing*** **203 Gregg St *Bishopville, SC*** (803) 484-3500
Barry.

Traditional Forgery: Slitting and Collars
by Jeff Hatfield

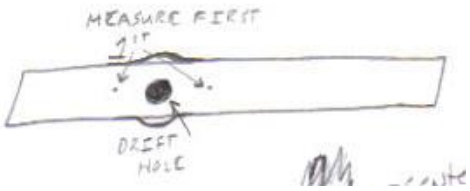
Let me start by saying thank you to the PSABG for allowing me the opportunity to attend John C. Campbell Folk School. I'm looking forward to demonstrating the techniques and procedures learned at the school. I would also like to thank Tal Harris whose patience and expertise go hand in hand together. His dedication to the craft and experience make for an absolutely perfect learning experience.

First off, you should always make test pieces for what you have in mind to do. Second you'll need to make a detailed drawing showing size of stock, different joinery to be used for assembly, and ornamental details such as scrolls, pass-throughs, flowers, etc. Your drawing should be full size and then transferred to a table (metal) or a piece of plate steel, so as not to keep burning up your drawings.

To do this you can take a large piece of chalk, sidewalk chalk works great, and cover the whole back of your drawing. Then tape down your drawing on to the plate steel or table. Trace the drawing completely with a pencil or pen. This will transfer the drawing to the steel. When complete, slowly un-tape and check first before removing it. Take a silver pencil and retrace your drawing again making sure all details are on the plate. This takes a good amount of time, but is a must and makes for a much easier referral guide during your project and it won't burn up.

Take a little time to re-forge your stock first to give it a more aesthetic look. This can be done either cold or at a very dull red. You don't want to change the size, just add a forged look to the whole piece. It is best to re-forge on the flats first, then on the corners. Leave some scale on your anvil to create a more aesthetic look. When the project or pieces are complete, hand sand with 80 to 100 grit sand paper, then use scotch brite to enhance the effect.

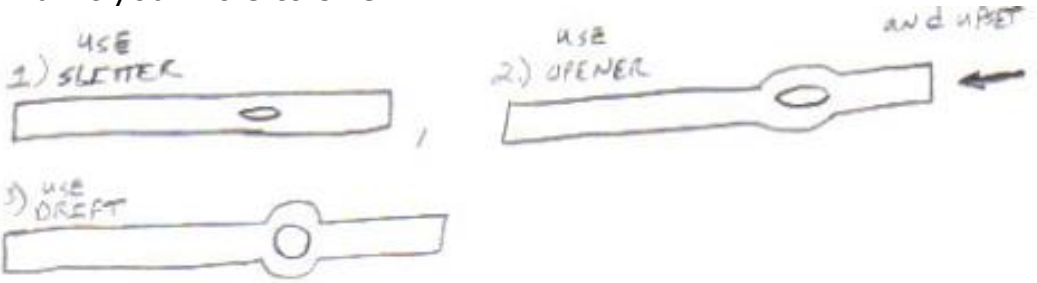
To slit and drift a hole, first, center punch its place and then make two more center punches, one on each side of original to be punched. Make sure these two are far enough away not to mistake them for the one you are punching. Measure between the two marks and write down.



Slit and drift your hole, then check distance again to see if you've gained or lost length between the two marks. This works to help calculate the rest of your piece.

When slitting and drifting, hold your piece in the fire horizontal to the flames to keep the heat even on the top and bottom where the center mark is.

Slit the first side, checking after the first blow to see if mark is where you want it. Then punch. Flip over and punch in the <u>center</u> of the <u>bulge</u>. Use a slitter to start, then either use an opener or upset the hole before you drift, then drift your hole to size.



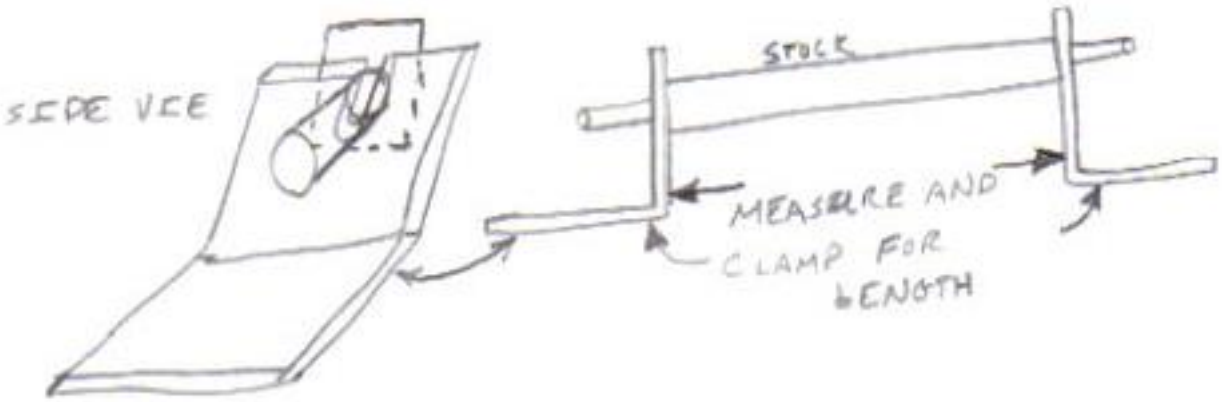
To drift a square hole, for example, use a slitter using this formula:
For a ½" square
Find perimeter = 2" divided by ½ = 1"
And deduct 1/8" = 7/8"
Make your slitter 7/8" wide

Slit hole first, upset, drift round first, then drift square.

To determine the size of a tenon, use a formula of half the size of the parent stock, except for ½" stock use slightly larger tenon such as 5/16" or 3/8".

Examples: 2" stock = 1" tenon
1" stock -= ½" tenon
¾" stock = 3/8" tenon

After that, figure the length needed. Pull a tenon on a test piece first to determine how much you get. If enough, then pull tenons on one side of your stock being used for project. Measure your length needed and mark, add appropriate length for tenon. Tenon length is regularly the distance through the stock plus 1 ½ times the diameter of the tenon. Re-measure again to be sure then cut off. Pull another tenon at the other end and check to fit using a tenon gauge. For example, a picket in a railing.

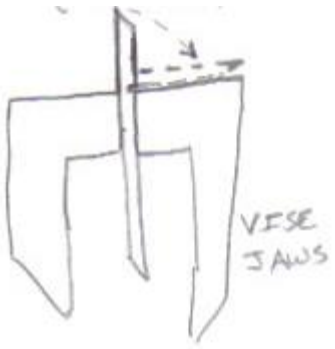


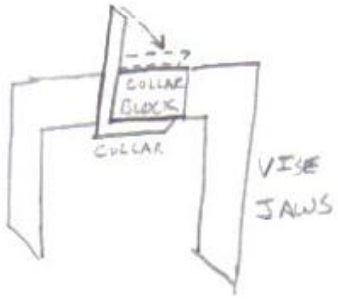
To collar, use this formula: find length around stock being collared, then, add thickness of collar stock times two and a half.

Example: 1/8 x 2 ½ = 1/8 x 5/2 = 5/16

Add 5/16" to length or perimeter. Find center and center punch on edge of stock. Then measure half the thickness being collared and mark and center punch in middle.

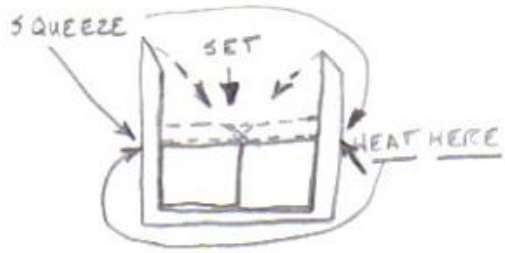
Draw small taper (45 degrees) at edge of collar stock on opposite sides first. Place in vise at this mark and forge over to 90 degrees





Place a collar block or cut stock of same size to be collared to use in making other 90 degree bend . Place in vise as shown

Place collar around stock and set then squeeze



Then heat up nearest to stock and forge it over, then repeat on other side.

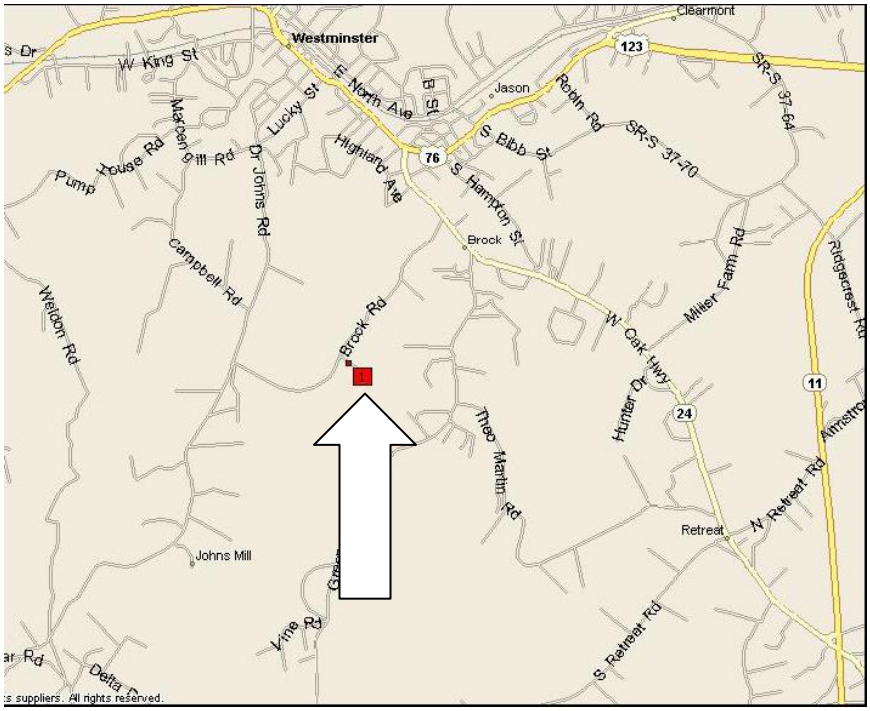
Two great books to refer to on making tools or how to use them are George Dixon's A Blacksmith's Craft Volume 1 and Francis Whitaker's The Blacksmith Cookbook. These two books have been a great help in answering almost any question when working on a traditional style project and much more.

Thanks again, Jeff

Saturday, June 26th 10 AM

Come to Roger and Gail Marcengill's in Westminster

See Eddie Rainey demostrate some forgery, possibly traditional



Bring a side, drinks or dessert and something nice for iron in the hat