

Saltfork Craftsmen Artist-Blacksmith Association

September 2020



**John Taylor (Tennessee) Demonstrates the Eight Bar Pass
Through Grille (aka the “Devil’s Grille”)**

Page 17

**Saltfork Craftsmen
Artist-Blacksmith Association
Officers and Directors**

President/Workshop Coordinator:

Mandell Greteman 580-515-1292
409 East Broadway
Foss, Okla. 73647 mandell01@windstream.net

Vice-President/Conference Chair:

JJ McGill 580-369-1042
5399 Pete Nelson Rd.
Davis, OK 73030 jjmcgill88@yahoo.com

Director:

Byron Doner 405-650-7520
6520 Alameda
Norman OK 73026 byrondoner@esok.us

Director:

Ricky Vardell 580-512-8006
P.O. Box 461
Temple, OK 73568 Rickyv.vardell@gmail.com

Director:

Don Garner 580-302-1845
23713 E 860 Rd
Thomas, OK 73669 Call or Text

Director:

Eric Jergensen 405-414-8848
625 NW 18th
Oklahoma City, OK 73103 gericjergensen@gmail.com

Director:

Russell Bartling 918-633-0234
70 N 160th W. Ave
Sand Springs, Ok 74063 rbartling@ionet.net

Assignments:

Secretary:

Carol Doner 405-760-8388
PO Box 6057
Norman, OK 73070 caroldoner7@gmail.com

Treasurer:

Teresa Gabrish 405-824-9681
P.O. Box 18389
Oklahoma City, Ok. 73154 tgabrish@gmail.com

Editor/Regional Meeting Coordinator:

Russell Bartling 918-633-0234
70 N 160th W. Ave
Sand Springs, Ok 74063 rbartling@ionet.net

Webmaster:

Dodie O'Bryan
Pawnee, Ok scout@skally.net

Librarian:

Don Garner 580-302-1845
23713 E 860 Rd
Thomas, OK 73669
Call or Text. If you get voice mail, please leave a message.

Editor's Notes:

There isn't much new business to report in this section. We are still waiting on COVID to run its course and for various public gathering requirements to be fully relaxed again. So the holding pattern continues for now.

As expected, with increased contact due to businesses, schools and universities opening again the number of cases is increasing. So there is no telling how long it will be until we will operate again without thoughts of contagion in the foreground. I would be willing to be that many folks have developed improved sanitizing habits that will be here to stay.

In the mean time, I would hope that many members are finding time to work on projects in their shops with new found spare time. If that is you, please at least consider sending in a few photos of you finished work. Even better would be a number of step by step photos and some brief notes.

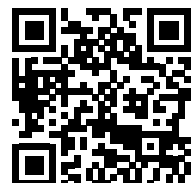
But either way, I know most of us are very interested to see what others are doing.

-Russell Bartling, Editor

The Saltfork Craftsmen Artist-Blacksmith Association, a non-profit organization Our purposes are the sharing of knowledge, education and to promote a more general appreciation of the fine craftsmanship everywhere. We are a chapter of the Artist-Blacksmith Association of North America.

Material from this newsletter may be freely copied without permission for non-profit purposes. Please credit the author and this publication.

Visit our Saltfork Craftsmen Website:
www.saltforkcraftsmen.org



President's Notes:

Hello everyone. I hope everyone is doing well.

It has been hot and dry in the western part of the state. I have been working in the shop a little bit. I need to have a meeting so I will have to clean my shop up a little. It looks like a bomb hit it.

We have been getting together with some of our local people every once and while just sitting around and telling stories.

I think everyone will be closer to each other mentally when this thing is over. I have an older sister that contracted Covid -19 along with four of her family and they all have recovered from it. She said she felt really bad for about three days and that was about four weeks ago. She is doing well now.

I have watched U-Tube a lot and seen different things but its not like watching in person. Brad Nance is planning to have a beginner class this fall and I hope every thing goes well. I told him I would help if I can. *(See page 10 for the beginner class details and registration info - Editor.)*

Keep forging on...

Thanks, - Mandell



All Regional Meetings are Free to Attend and are Always Open to Any Member or Guest...

New to Saltfork or just want to check out Blacksmithing but don't know where to start? These meetings are a great place for new members or guests who just want to see what it is all about to come network with like-minded people. If you want some pointers on how to get started, there is always someone happy to help get you started hammering. And guests are always welcomed.

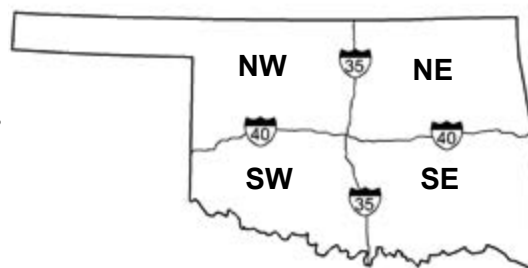
Want to host a meeting? The meeting hosting form can be found on the last page along with membership application form. If you want to host a meeting in any area, please fill out one of the host forms on the website under the calendar section or in the newsletter and e-mail the information or mail the hard copy form in as soon as possible. If you mail a form, please call or e-mail to verify that it is received. E-mail is the most convenient for me, but you can also phone in the information if you prefer. The sooner the meeting is scheduled, the more time there is to get the word out to potential attendees. -Russell Bartling 918-633-0234 or rbartling@ionet.net

What's My Region?

The four main regions are currently defined within the state by being separated by I35 and I40. (For example, the NW region is anything north of I40 and west of I35.)

All meetings are encouraged. These boundary definitions and regional meeting dates are a suggested framework to facilitate orderly meeting scheduling, planning and promotion with a minimum of overlaps and a maximum exposure to the greatest number of members. Not all meetings fit precisely within a rigid boundary definition and members in an area may want to hold meetings on a date that doesn't match their physical region or at a location other than their own region. This may be especially true in the center of state for areas that are close to the I35 and I40 boundary crossing. Special events such as shows, fairs, etc. may also dictate adjustments to the meeting dates within a region.

SCABA Regions



The regions are meant to be a simplification and clarification to the regional boundaries rather than a rigid restriction to any meeting scenario. ***Saltfork members all belong to one club.*** Regional boundaries are not intended to imply division within the club, but are intended to help spread distribution and promote monthly meetings.

Safety

Blacksmithing can be an inherently dangerous exercise. There is no substitute for personal responsibility and common sense and no list of safety rules can adequately cover every situation. Every person who attends a meeting, demonstration or event sponsored by the Saltfork Craftsmen Artist Blacksmith Association (SCABA) or its members does so at their own risk and assumes all responsibility for their own safety needs. The SCABA organization, its officers, members, demonstrators, volunteers and guests disclaim any responsibility for any damages, injuries, or destruction of property resulting from the use of any information or methods published or distributed by SCABA or demonstrated at workshops, meetings, conferences or other events. SCABA recommends proper attire and safety gear and standard shop safety procedures appropriate for blacksmithing and shop work during any event where blacksmithing and other related methods are involved. Safety attire includes, but is not limited to, appropriate clothing, eyewear, hearing protection, gloves, and face shields when appropriate. It is every individual's responsibility to provide for their own safety, to determine what safety gear is appropriate for each situation and to provide, maintain and use that gear as appropriate for each individual situation.

****Tulsa State Fair Canceled****

If you haven't heard yet, the Tulsa State Fair has been canceled for 2020. Just another victim of the COVID-19 pandemic.

For the last few years, Saltfork Craftsmen has had a demo tent at the fair which has been manned by various volunteers. The Saltfork exhibit has developed into a popular attraction at the fair and should be back in 2021. - Editor

Coronavirus Safety Concerns/Event Cancellations:

With recent developments concerning COVID19, a large number of blacksmithing related events have been canceled for safety reasons. It will be more important than ever to stay posted with websites, social media, etc. and to double check before assuming events will be held.

-Russell Bartling, Editor

Membership Dues:

Thanks to Eric Jergensen, starting with April, **your membership expiration date is now printed on the back of the newsletter.** Memberships are no longer limited to the March to March duration but are a full year from the date of registration or renewal. So, the back of the newsletter will now be a quick reference to check your renewal date. - Editor

2020 Workshop Schedule

Currently no workshops are scheduled but a beginner class is planned for November. See page 10 for details.

Have an idea for a workshop or class? If you have an idea for a workshop that you would like to attend (or teach), please let the workshop coordinator know so that details for time and place can be worked out.

**Mandell Greteman is the SCABA Workshop Coordinator.
Contact Mandell at 580-515-1292.**

Where is YOUR Part of the Saltfork Gate Project?



This is a community project that is open to all Saltfork members. The project is a four-foot-high by sixteen-foot-long gate to be displayed outside at the Route 66 Blacksmith Shop Museum at Elk City.

Secure your place in Saltfork History FOREVER!*

**(This statement has not been verified by God, Mother Nature, Father Time, Current Scientific Understanding of Metal Oxidation, or the Elk City Museum Management. But probably for a long, long time at least. - Editor)*

Participating members will be given a steel ring that can be filled with any (family appropriate) forged work that will fit in the ring and be permanently attached to it.

Mandell Greteman is coordinating the project and will provide the standardized rings. All of the rings will be provided to ensure they are a standardized size. Once the projects are returned, Mandell will weld them into the gate to be displayed at the museum.

You can submit multiple entries if you would like. If the gate fills up and we have extra entries, we can do additional gates.

Your Facebook post will most likely be forgotten in two days but daily visitors from around the world will see your gate project for years at the Elk City Museum. Don't forget your touchmark!

Contact Mandell if you have any additional questions or to find out where to obtain one of the project rings: **Mandell Greteman 580-515-1292.**

**** CANCELLATION NOTICE ****

The 2020 Annual SCABA Conference is Canceled

After much deliberation and attention to current events, the Saltfork Craftsmen Board of Directors has reluctantly concluded that we must cancel the Annual SCABA Conference for 2020.

Our primary focus is on the safety of the participants, demonstrators and volunteers that make the conference happen. We also want to present the same family friendly educational and entertaining blacksmithing experience and hospitality that Saltfork has become known for providing over the years.

Due to recent re-escalation of COVID-19 related cases and the resulting restrictions and safety guidelines, it has become apparent that we will not be able to present the conference to reasonably meet those minimum standards. It now appears that the safety guidelines and restrictions will remain in place through the remainder of the year. That includes international and state travel restrictions which impact our planned demonstrators. It also includes social distancing and meal prep/delivery guidelines that are impractical to implement for the planned blacksmithing demonstrations and venues available.

Unfortunately, it takes lead time to plan and implement a conference of this magnitude and we have reached the point where confirmations must be complete, or we have to cancel the process. And the current environment has proven that many confirmations either cannot be made reliably or cannot be made at all.

Rest assured, the Board does not make this decision lightly. And, assuming the COVID-19 situation will be under control by then, the Board is committed to continue bringing the same high level educational event back in 2021. The best is yet to come.

- Editor

2020 REGIONAL MEETING SCHEDULE

NE Region (1st Sat)	SE Region (2nd Sat)	SW Region (3rd Sat)	NW Region (4th Sat)
Jan 4th (Open)	Jan 11th (Byron Doner)	Jan 18th (Open)	Jan 25th (Rory Kirk)
Feb 1st (Open)	Feb 8th (Byron Doner)	Feb 15th (Open)	Feb 22nd (Monte Smith)
Mar 7th (Open)	Mar 14th (Open)	Mar 21st (Bruce Willenberg) CANCELLED	Mar 28th (Mandell Greteman) CANCELLED
Apr 4th (Open)	Apr 11th (Open)	Apr 18th (SCABA Picnic) CANCELED	Apr 25th (Don Garner) CANCELED
May 2nd (Open)	May 9th (Open)	May 16th (Ricky Vardell) CANCELED	May 23rd (Terry Kauk-CANCELED)
			May 23rd (SW-JJ McGill Boy Scouts-CANCELED)
Jun 6th (Open)	Jun 13th (Open)	Jun 20th (Jim Obenshain -CANCELED)	Jun 27th (Everett Timmons)
Jul 4th (Open)	Jul 11th (Open)	Jul 18th (Open)	Jul 25th (Mandell Greteman- CANCELED)
Aug 1st (Open)	Aug 8th (Open)	Aug 15th (Open)	Aug 22nd (Open)
Sep 5th (Open)	Sep 12th (Open)	Sep 19th (Ricky Vardell - JJ McGill - Sulphur Tractor Show) **CANCELED**	Sep 26th (Ron Lehen- Bauer as Host - Don Gar- ner as Contact Person)
Oct 3rd (Open)	Oct 10th (Open)	Oct 17th (Open)	Oct 24th (Rory Kirk)
Nov 7th (Open)	Nov 14th (Bill Phillips)	Nov 21st (Open)	Nov 28th (Bob Kennemer)
Dec 5th (Open)	Dec 12th (Open)	Dec 19th (Open)	Dec 26th (Open)

2020 Fifth Saturdays:

February 29th (Tong Making Class in Elk City - See Workshop Schedule)

May 30 (Open)

August 29th (Open)

October 31st (Open)

September 2020

NE Regional Meeting September 5th: Open.

SE Regional Meeting September 12th: Open.

SW Regional Meeting September 19th: **CANCELED.**

NW Regional Meeting September 26th: Will be hosted by Ron Lehenbaur (Don Garner as contact) at the Fairview Tractor Show. Directions: 1 ½ miles east of Fairview on Hwy 58. Watch for signs on the north side of the road.

The trade item is actually two items. The first is a blacksmiths double caliper with loop for hanging (Originally the trade item for last April's meeting which was canceled.) The second trade item (new for this meeting) is an adjustable trammel.

Forging will be set up outside under the shade trees with a six foot distance roped off between forges and spectators. Please bring your portable forge kit. We will attempt to comply with state and federal COVID safety guidelines as much as possible.

Lunch will be provided but please bring a side dish or dessert to help out. Contact: Don Garner 580-302-1845 if you have questions.

***This meeting and the tractor show are planned to take place at this time. But planning ahead is difficult and uncertain with COVID issues changing daily. If you plan to attend, keep an eye on the next newsletter, e-mail announcements, and the Saltfork social media posts for any updates. ** - Editor*

October 2020

NE Regional Meeting October 3rd: Open.

SE Regional Meeting October 10th: Open.

SW Regional Meeting October 17th: Open.

NW Regional Meeting October 24th: Will be hosted by Rory Kirk at the Route 66 Museum Blacksmith Shop in Elk City, OK.

The trade item is a Halloween spook, ghost or goblin. (See pic for an example.)

Lunch will be provided but please bring a side dish or dessert to help out. Contact Rory at 580-497-6426 if you have questions.



Around the State...

NW Region July Meeting: No Meeting was held.

NE Region August Meeting: No Meeting was held.

SE Region August Meeting: No Meeting was held.

SW Region August Meeting: No Meeting was held.

BEGINNER'S BLACKSMITH WORKSHOP

SATURDAY, NOVEMBER 14, 2020

MULDROW CITY PARK

8 A.M. to 3 P.M. \$40 Per person, all tools and materials provided.

We will be learning to taper, draw, twist and heat treat. If time allows we will also cover forge welding. Projects will include:

- An "S" hook
- A leaf
- A hot cut chisel

If time provides, we will also work on a flux spoon.

We will be working with VERY hot steel so please wear denim, or cottons, and sturdy footwear. Eye Protection is required, if you wear glasses, they will be fine. Leather gloves are optional. (but bring a pair, just in case) We will be working in teams of two. Limited slots available so please get yours early, as we usually top out. Payments may be made the day of the event, and cash is preferred. Lunch will be provided. For reservations please contact Brad Nance at 918 774 4291, or email at bradley.nance@cnent.com

NOTE:

Federal, State or Local COVID Safety requirements may be in place at the time of this event. There is no way to know for sure this far in advance what requirements will need to be followed. Common sense will be a minimum requirement but be prepared to follow the directions of the instructors at the time of the class. - Editor

Donation Opportunity:

Saltfork Members:

Did you see the article about Black Horse Forge helping veterans in the Summer 2020 Hammer's Blow? If you did not get the ABANA magazine, you can read up on Black Horse Forge on Facebook at:

<https://www.facebook.com/search/top?q=black%20horse%20forge%20for%20veterans>

and at their website: www.BlackHorseForge.com

I'm thinking we can all help this work by saw cutting blanks for Chris Friedrich crosses and sending those blanks to Black Horse up in Virginia.

As you know for a Friedrich cross, the cutting of the blank is what takes the most time.

I'm thinking each of us in Saltfork that has a saw could make 10 to 20 blanks and put them in small USPS flat rate boxes easily. I like the ones best that I make from 5/16" and 3/8" stock. Everyone has a slightly different pattern (cut lengths) that they like, so that would make this an even better project.

-Jim Carothers

Member Gallery

More Dragon Heads By Bruce Willenburg:

Bruce has continued applying dragon heads based on the how-to article by Rory Kirk in the July 2020 newsletter on some new projects. Bruce had not done dragon heads before Rory's article: These are ready to be finished and then be book ends on blacksmith book shelf. Thank you and Rory for the hard work you put into article in newsletter. Absolutely could not have done this without your guys help and encouragement. I am pleased with them and pleased with shelf I made for books and dragons. Gerald gave me two Mark Aspery books and just as I finished the bookshelf here was newsletter. As I finished a couple dragons I knew what to do. So it all just fell into place. When I get the finish on dragons I shall send you a triumphant picture of whole bookshelf. Once again thank you and Rory -Bruce



Member Gallery (Continued)

Dragon Wall Hook and Dragon Key Fobs By Bruce Willenburg

Rumor has it that Bruce is also thinking about making a dragon bottle opener. If he does, hopefully we will get a photo. Nice work Bruce! - Editor

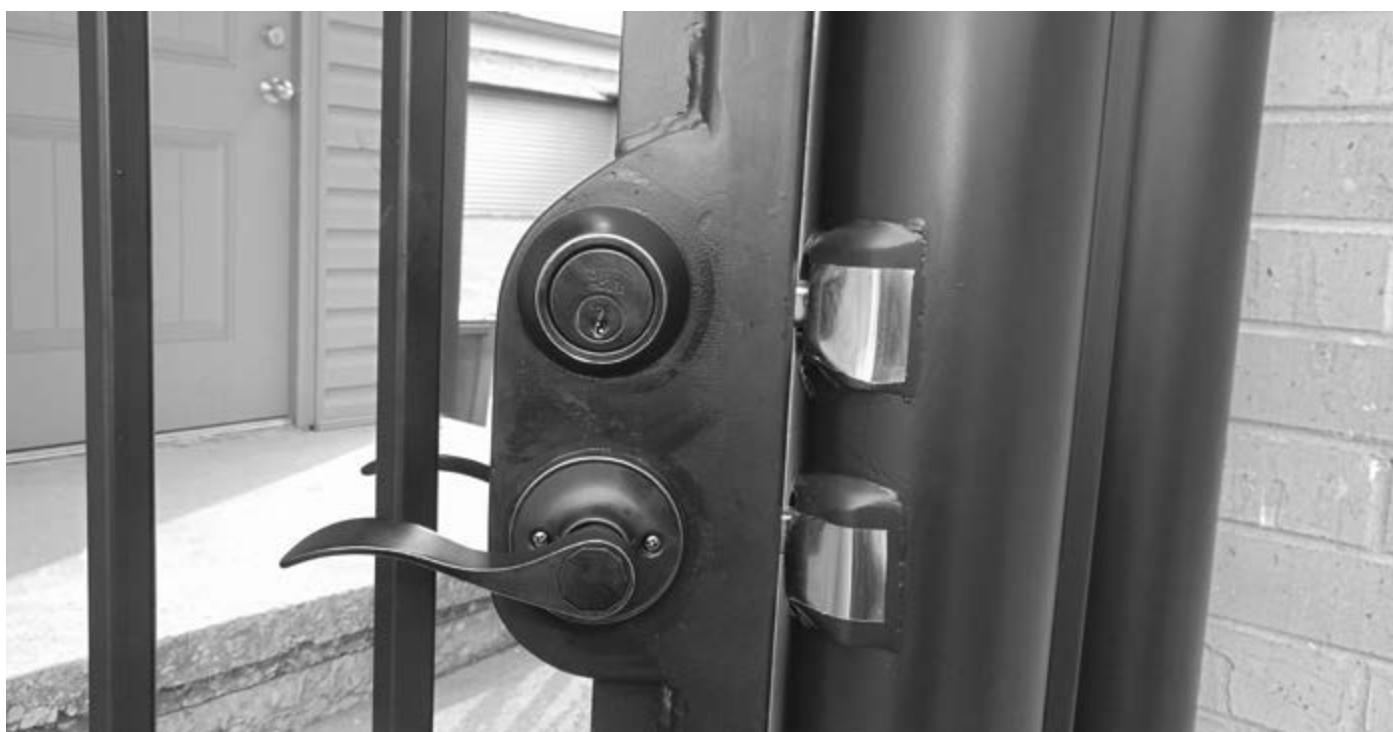


Member Gallery (Continued)

Gate for Newsong Church of God By Lloyd Turner

Here are some pics of one thing I have been working on during COVID-19. The material is 14Ga 1 1/2" square tubing, 3/4" tubing, 1 1/2" and 1 1/4" X 5/16 flat. This is a project involving welding and smithing. This is a gate for a church, a fun project. - Lloyd.



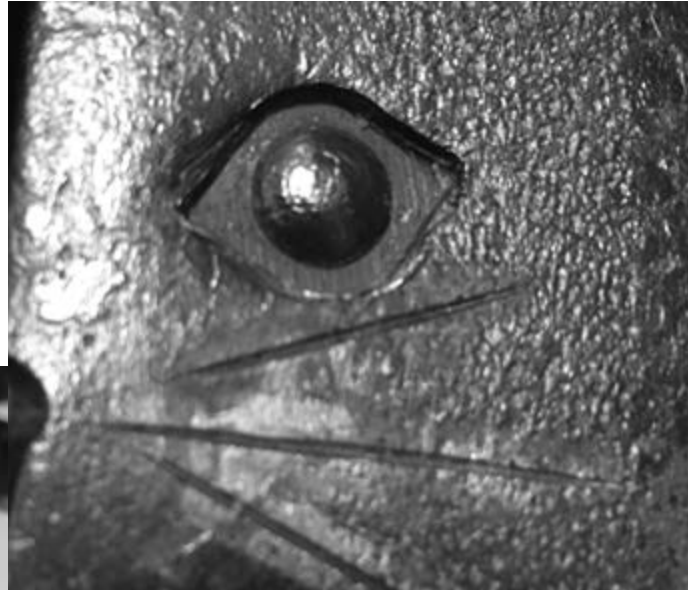


Member Gallery (Continued)

Black Cat By Byron Doner

Black Cat from Angle Iron like Torbjörn Åhman You-Tube demo:

<https://www.youtube.com/watch?v=jOQq4SXvkLQ>



The Eight Bar Pass Through Grille (aka “Devil’s Grille”)

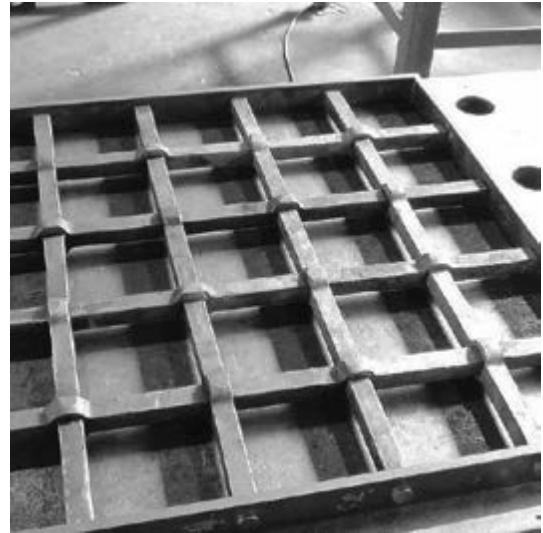
For a long time I have been curious about how alternating pass through grilles of more than six bars are put together. With six bars, it seems trivial since you can slide the bars onto each other. But after six, it doesn’t seem so obvious. At least not to me. Please note that these are the grilles where every pass through alternates on each bar. At first glance, it looks as if there would be no way to slide all the bars together.

In the July 2020 issue of “The Anvil’s Horn” (Arizona Artist Blacksmith Association newsletter) shared with ABANA affiliates, Editor Bill Ganoe included photos of such a grille demonstrated by Juan Ocampo. It happened to be demonstrated during Bill’s recent trip to Buenos Aires, Argentina. When I saw the issue, I thought “This is my chance!” “I will ask Bill how they did it!” Unfortunately for me, Bill was also busy demonstrating and was not even in the vicinity of the demo at the time. Back to Square one.

The Anvil’s Horn

A Publication of the Arizona Artist Blacksmith Association

Issue No. 205 July 2020



The Impossible Grille, aka The Devil's Grille

More on page 6.

(Photo: Juan Ocampo)

The July 2020 Issue of the Anvil's Horn

Shortly after Bill and I discussed this topic, I stumbled onto an online reference to John Taylor demonstrating one of these grilles. Those of you who are more active than me on Facebook may have already seen it. John was scheduled to do some demonstrating at the 2020 ABANA conference which was ultimately canceled. I contacted John by e-mail and he immediately gave permission to share his article in our newsletter and graciously sent a PDF copy to reprint. In his article, John gives credit to Juan Ocampo for inspiration.

In his article, John gives dimensions for a specific size of grille. But they can easily be scaled up or down. To some of you, this may be old news. But it was a revelation to me and solved the mystery. Thanks to everyone involved including Bill Ganoe for kicking off the process that ended with John Taylor’s article reprint that follows!

Now the next question: Can you use a similar method for more than eight bars???

- Editor



Jesús Morcy (l) and Juan Ocampo, both from Madrid, Spain, start work on an Impossible Grille.



*Partially completed grill
(photo: Peter Sevin)*

Photos of Juan Ocampo and the Buenos Aires Demo Grille from the Anvil's Horn

The John Taylor 8 bar Grille- Part One

Write up by John Taylor and Jeff Jarrett

Twice in February, John Taylor came to the city to teach us to grille!

1) We started with 1/2" square stock, 2 feet long, 8 of them. They are numbered, for clarity??

2) Mark the center of each piece (#1-8) with chalk or silver pencil. Center punch 6 15/16" to the right and 2 5/16" to the left of your center chalk mark on the front and back of pieces #1-#4 in the center of the stock face (Drawings are not to scale!). **Do not** center punch the mark in the middle of your pieces of stock. Set aside 4 pieces.



3) Using a 1/2" punch slit, create the slit at the center punch mark closest to your center pencil mark on pieces #1-4. Keep the slit centered and perpendicular to the surface of the face as you are working. Go most of the way through one side then the rest of the way from the other side. (that's why you mark both faces of your stock). Only one slit per piece of stock at this point.



4) Using a 1/2" round drift, open the slit, working from both sides until the opening is fully 1/2" open. If you are well centered with your slit and your use even heat while drifting you should end up with a hole with evenly thick metal ring around it.

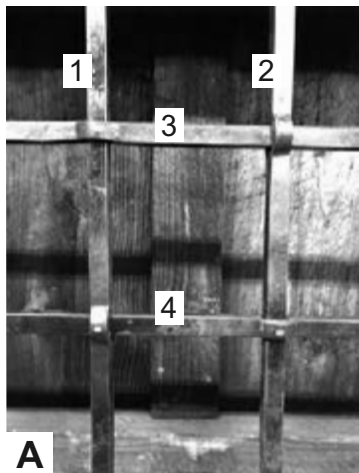
If you are off center apply more heat to the thicker/less open side of your opening when drifting.



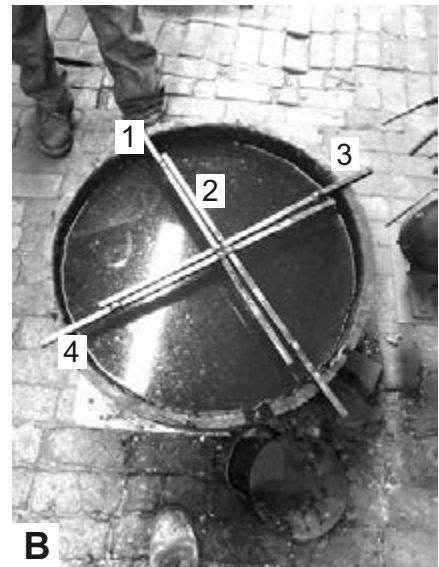
NOTE A: If you do not have the opening fully 1/2" open, when you use the 1/2" square drift during the next step, the corners will cut into the ring of metal around your drifted hole and thin it.

NOTE B: The slit and drift must be the same size as each other and as the stock you wish to pass through the opening. If the slit is too small the final drift will lengthen your bar. If it is too large the final drift will shorten your bar.

5) Using a 1/2" square drift, reshape your round opening to a square one. Keep the flat sides of your drift square with your stock. Repeat steps 3-5 on three more pieces.



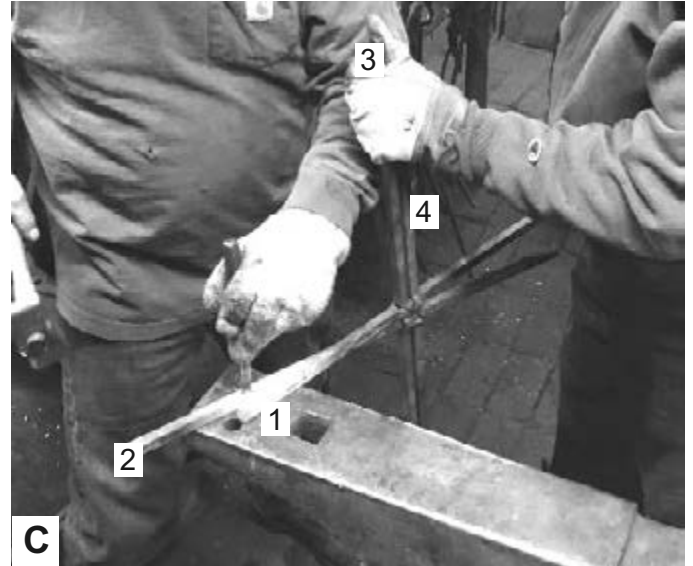
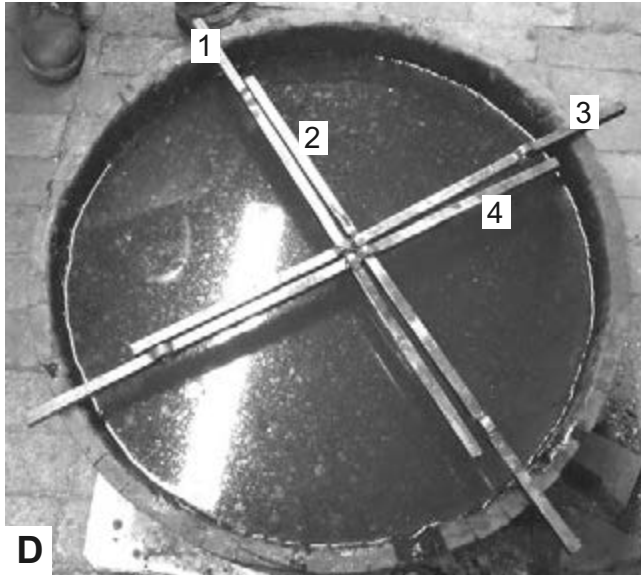
6) Slide the pieces together as shown on the photo **A**, and continue to slide them all the way together as seen in photo **B**. Wire them together loosely, temporarily, so the pieces don't slide around for the next steps but loose enough to allow you access to the center punched spot on the other side of the center mark. The completed results of step 7 are also shown in photo **B**.



7) Slit and drift the remaining holes on these initial 4 pieces at the center punch marks from step 2. See photo C.

NOTE C: All of your slit and drift is in the same direction as the one you did first in each piece.

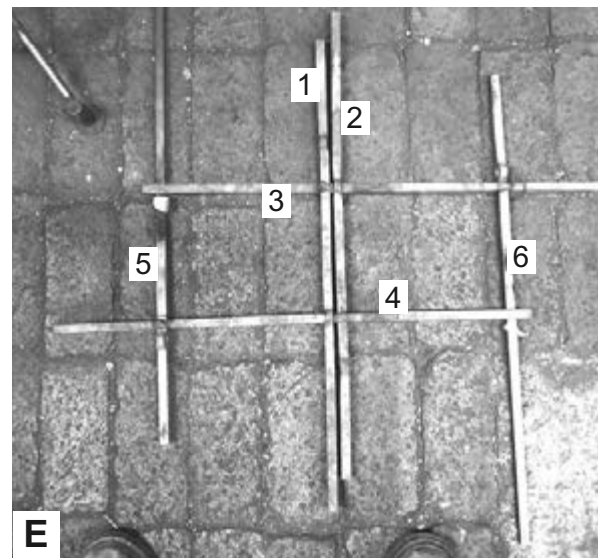
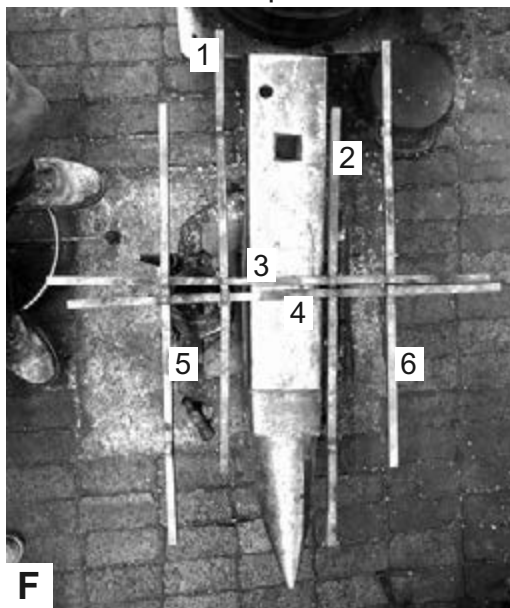
NOTE D: The enlargement caused by step 7 will 'trap' pieces # 1-4, so they will not come apart. See picture below.



8) Retrieve 2 of the pieces that you set aside in step 2. Repeat steps 3-5 at the center punch mark farthest from the center of each piece. These are now pieces #s 5 and 6.

9) Slide the long/undrifted end of piece # 5 through the open hole in piece # 4. Slide the long/undrifted end of piece # 6 in the open hole in piece # 3. See photo E.

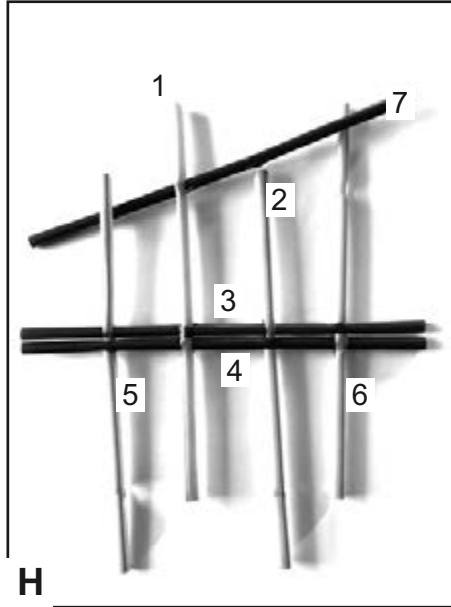
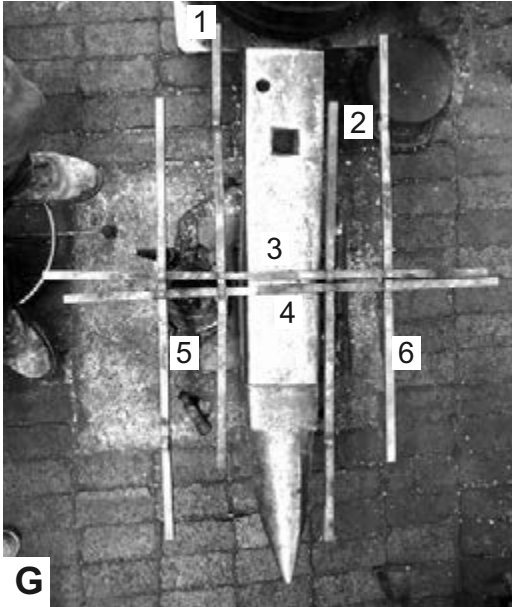
10) Repeat steps 3-5 at the remaining punch mark on the pieces # 5 and # 6. Pay attention to the orientation of the drifted hole (see **NOTE C** above). Configure the pieces as in the photo E, and put the end of piece # 3 through the second hole in piece # 5 and piece # 4 into the second hole in piece # 6. The work should now look like photo F (with some sliding of the pieces, # 5 toward # 1 and # 6 toward # 2)



11) Retrieve your last two pieces of stock set aside in step two and perform steps 3-5 at the center mark nearest the center line. These are now pieces # 7 and # 8.

For lack of actual photos, I will revert to the colored straws that John used to show how to get the order of the next steps correct. The straws are labeled identically to the pieces of steel in photo **G**. It is hard to take notes, take pictures, and do the task all at the same time!

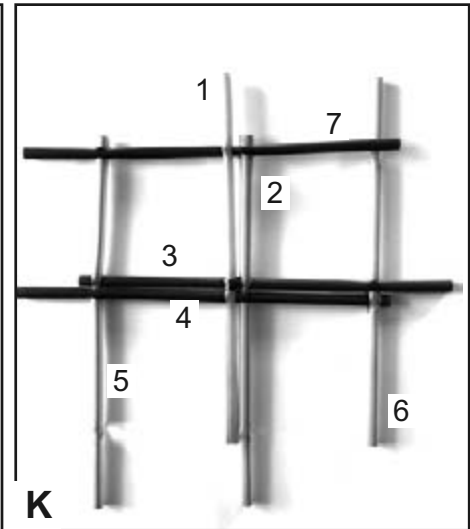
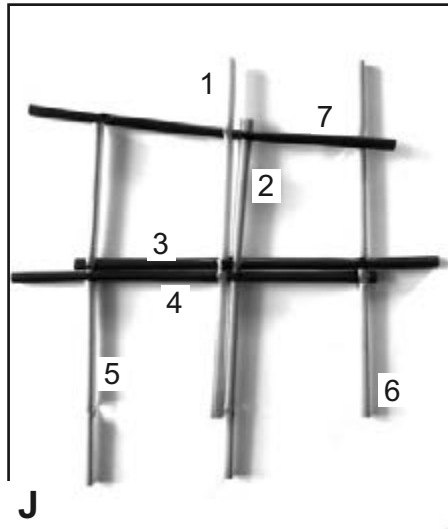
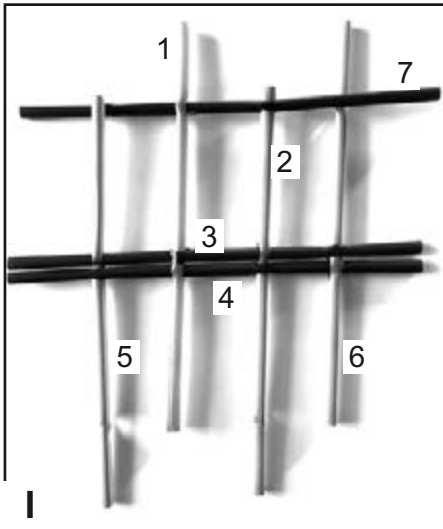
Credit for using the straws goes to Kelly Kring of Texas.



12) Pass the undrifted/ long end of piece # 7 through # 1. (photo **H**)

13) Push # 2 into the drifted hole of # 7. (photo **I**)

14) Slide # 1 and # 2 together to make drifting the remaining hole in # 7 easier. Slit and drift remaining hole in piece # 7 (photo **J**) and push # 5 into this hole (photo **K**).

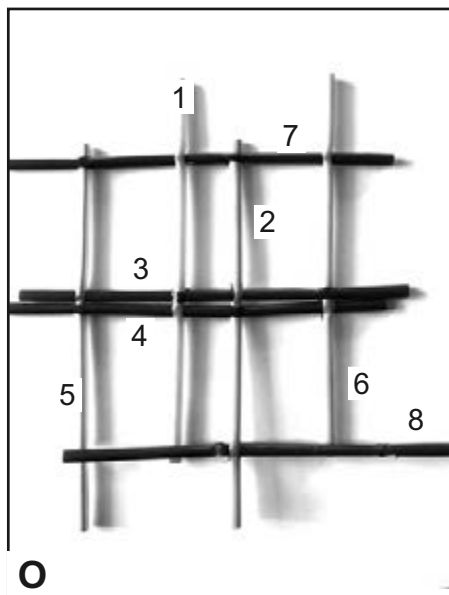
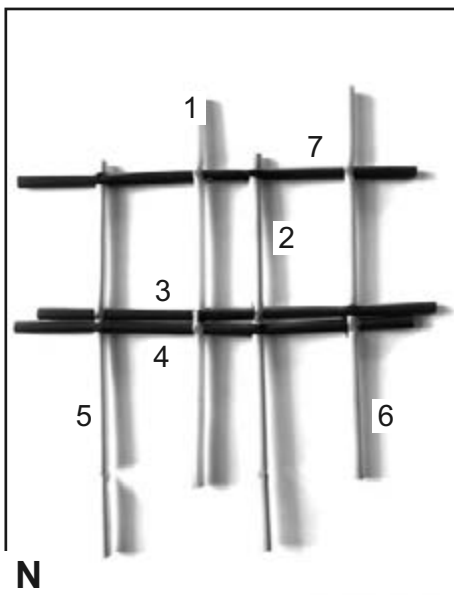
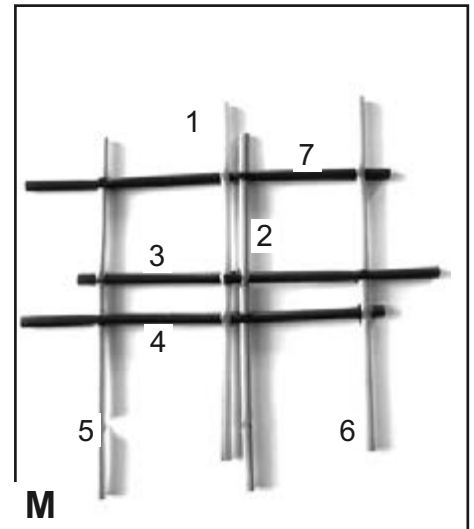
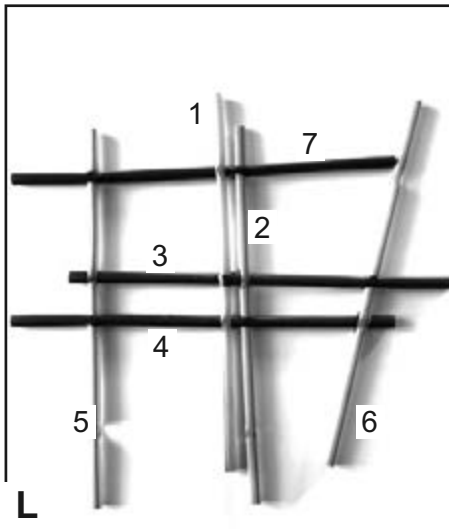


John gives credit for his taking on the challenge of a grille to Juan O'Campo of Spain.

While we were serious about the task at hand, there was good humor and fun had both days...

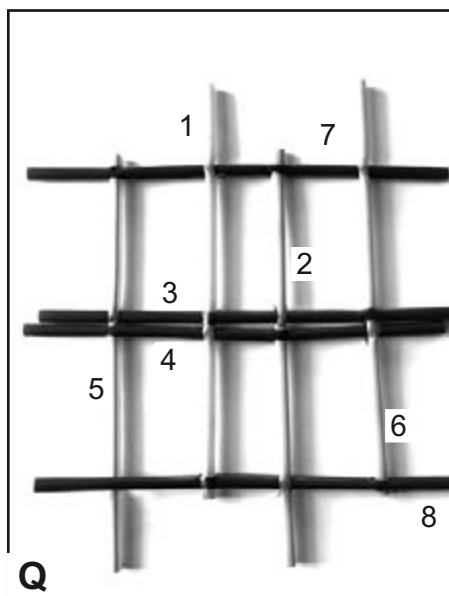
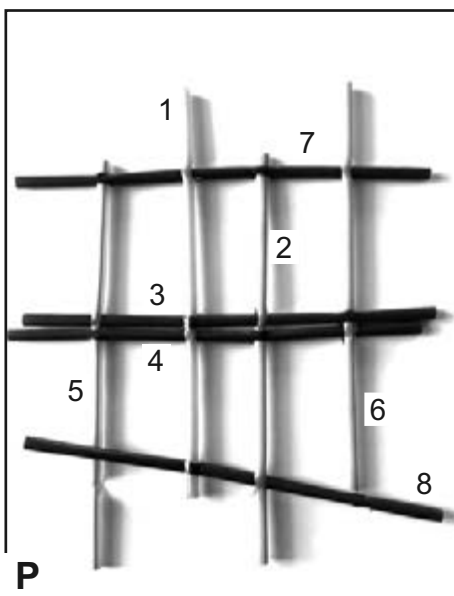
Stay tuned!

15) Separate parts # 3 and # 4 slightly to allow movement of part # 6 so it tilts away from # 7 enough to allow you to put # 7 in the hole in # 6.
(photos **L** and **M**)

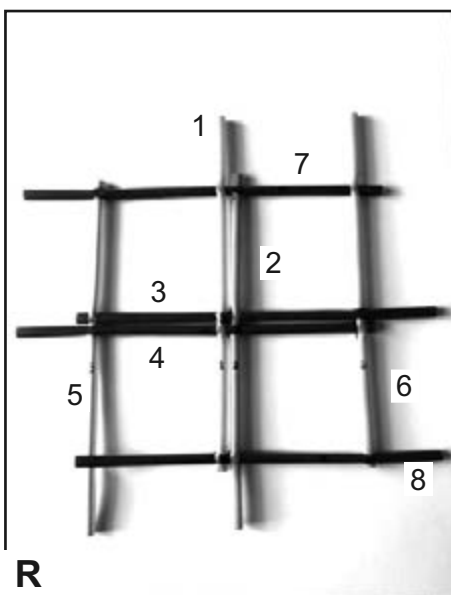


16) Push parts # 1 and # 2 together and put part # 8 through part # 2 with the long/undrifted end toward part # 6.

Slit and drift part # 8 at the remaining center punch mark.
(photos **N** and **O**)

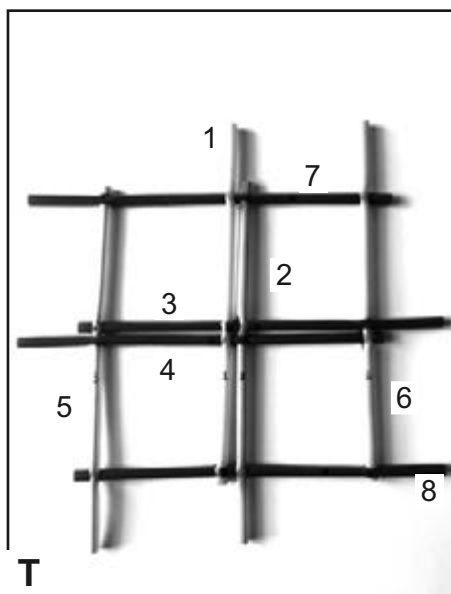
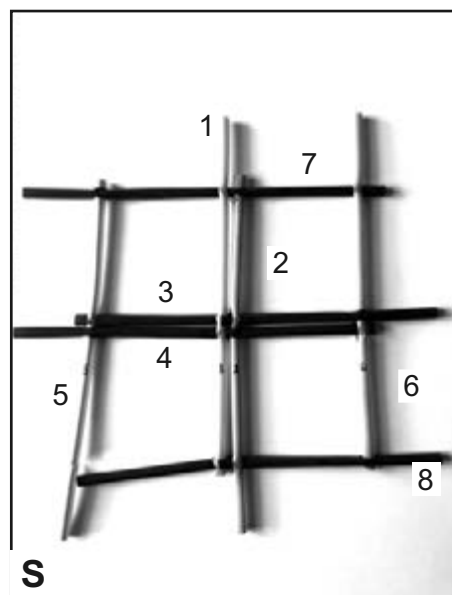


17) Push # 6 into the hole in # 8.
(photos **P** and **Q**)



18) Push # 1 and 2 together.
(photo R)

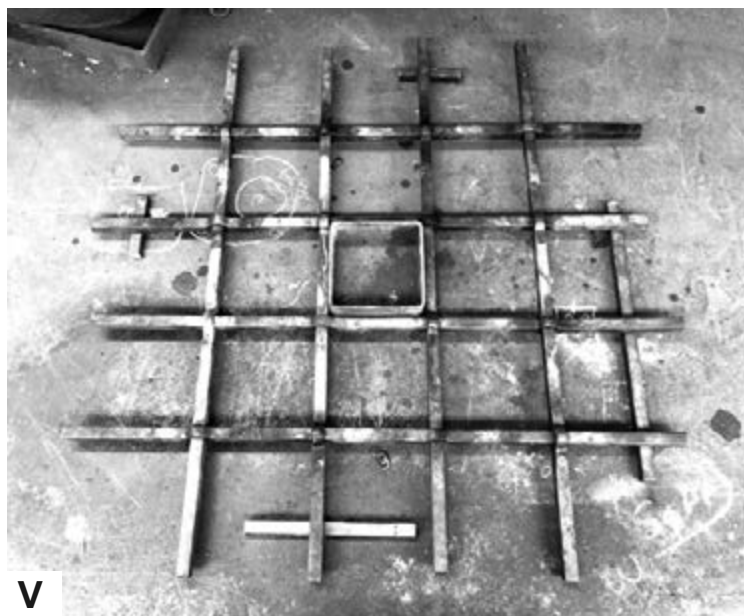
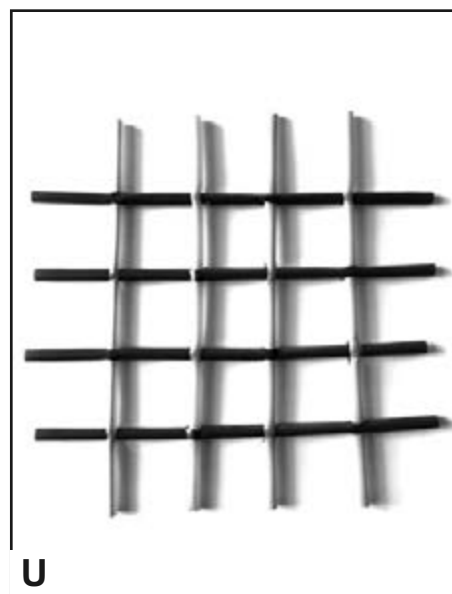
19) Bend (hot) part # 5 away
from part # 8 just enough to
push # 8 through # 5.
(photo S)



20) Straighten # 5.
(photo T)

21) Adjust pieces so that
squares are the same
dimensions and the grille is
flat. We used a piece of 4
inch square tubing and 1/2
inch scrap to hold the pieces
off the table to help with this.
(photo U and V)

**U too,
Can do!!**



The ring and assembly will
follow as **PART TWO** of
this project In the next
newsletter!

Here is the good humor and fun I promised you...

There was a whole lotta driftin' goin' on!



Steve, John, Jack, Herb, Bill and I worked and wisdom abounded.

"Every story needs a bad example" SG

"Everything I hit gets upset." SG



It aint what it is, it's what you can make out of it" JT

"The secret to success is what you learn after you know it all" SG

I guess there is little doubt about who had the most quotes that day!!



Thanks John for sharing and helping me write this up!!

Thank you to John Taylor for sending this article and giving us permission to print. And thanks to both John and Jeff Jarrett for a nice demo of a not so easy to reverse engineer project! -Editor

No Forge Bottom Fullers

By Gerald Franklin



Photo 1: 1" fuller made by Mark Aspery about ten years ago inspired this set of bottom fullers

I have used a quick, shop made 1" fuller, made by Mark Aspery, for about ten years (Photo 1.) Recently, while viewing a YouTube video on tong making, the smith used a piece of rounded $\frac{1}{4}$ " flat strap, held onto the anvil by Vise Grips, to fuller the space between the boss and bit of the tongs. Between the $\frac{1}{4}$ " temporary fuller and Aspery's 1" permanent fuller, this set of fullers came to mind.

Except for the hardy shank material, all of the fullers were made with short lengths of drops. The shanks were cut from $\frac{3}{16}$ " X $1\frac{1}{2}$ " flat strap. With a little grinder/file work, the shanks were sized to fit my European hardy hole on the diagonal.

The $\frac{1}{4}$ " fuller was made from $\frac{1}{4}$ " X $1\frac{1}{2}$ " flat strap. The other sizes were made from round bar with a corresponding square bar base. I cut all of these elements into 4" lengths (Photo 2.)

I drilled each shank corresponding with each size of stock. Then the slots were finished on the band saw (Photo 3.) Each shank then required some grinding and file work for a 45-degree angle fit into the hardy hole.

Note: I could have saved myself some work by drilling/sawing oversized holes and slots which would have allowed the shanks to fit up at 45-degrees without the grinding/filing exercise. Since the hardy stock is consistent at $\frac{3}{16}$ " thick, there should be a consistent oversize measurement to apply. I'll leave the arithmetic up to you.



Photo 2: Ready to cut:
 $\frac{3}{16}$ " X $1\frac{1}{2}$ " flat strap for hardy shank



Photo 3: Parts ready to weld. Square bar on bottom, round bar on top.
(Notice I slipped in a set of $\frac{5}{8}$ " material)



Photo 4: Everything welded and (sort of) cleaned up



Photo 5: $\frac{3}{4}$ " fuller on the anvil ready to work

After drilling, sawing and tweaking the shanks, it becomes a fit-up and weld job.

What's next? Build a rack for the fullers so that I can find them when I need them. I am also toying with the idea of case-hardening the round bars for more durability. - Gerald Franklin



Dragon Steak Turner

Write up and Drawing~

By Steve Alling, a MABA member

If you're out of Dragon Steaks these work well on beef too.

This project has two parts, one part is a lot of drawing out and the second is making the dragon. Dragon sightings are fewer than sightings of Sasquatch. So, some people say dragons have two eyes, others say three, some even say dragons have just one big eye in the middle so you can make your dragon look like the last one you saw.

1. This is made with a $\frac{1}{2}$ inch square mild steel bar. The length unfortunately I didn't keep track of I just drew out until it seemed to be flexible enough which turned out to be around 24 inches. On the edge of the anvil step off enough for the fangs. It's not good to make this step off too small or the metal will just sheer in cold shut. So, you will end up with too much metal for the fangs and you'll have to trim. Bring it to a point which you will spilt later for the two fangs.

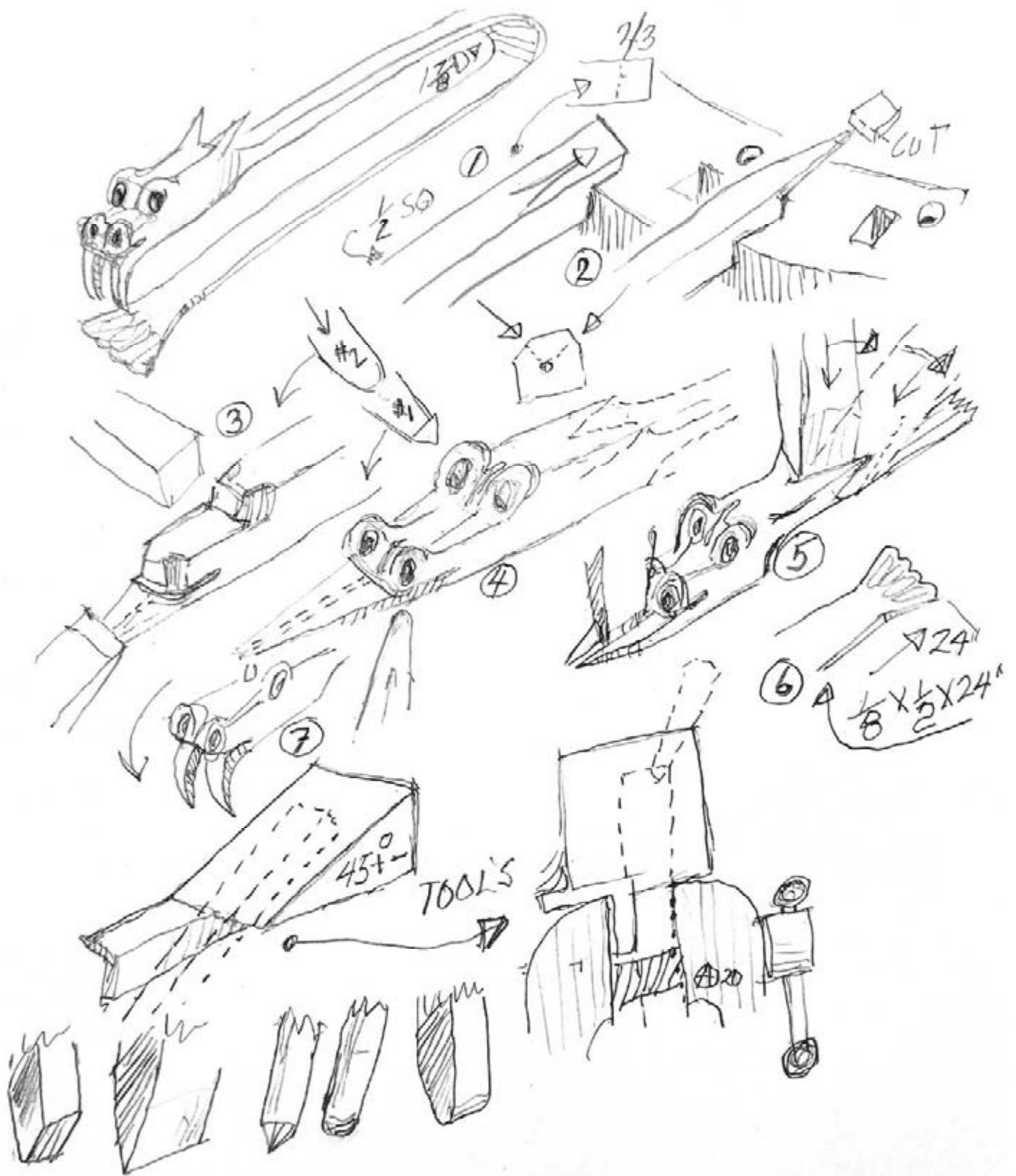
2. Step off over the edge of the anvil with half face blows for the forehead.
3. Blunt the corners for the nose and the eyes at a slight angle. Eyes look better if they're not facing straight ahead. Make a slit above the fangs, this will allow the fangs to bend down under the nose.
4. Make the dragons face. I find it is easier to use a sharp center punch to locate the center of the eyes and nose and then follow with a round punch. You want to start this punch heading for the center of the bar and as you drive it in lower your punch, which will push the metal up and form the eyebrows and give the face it's character. Then take a blunt chisel and put a furrow between the nose and eyes.
5. Split the fangs apart and raise the ears, but do not bend the fangs, Start the ear chisel straight down and as you hammer lower the chisel down and that will raise the ears. Now comes the fun part. You need to draw out the bar to $\frac{1}{8}$ x $\frac{1}{2}$ inch for a total of 24 inches. Since this is mild steel you need a lot of length so no one part is bent very severely.
6. Make some sort of a tail. I made a fish tail but I hear some dragons have heart shaped tails and other shapes.
7. Bend the fangs down and bend the body around a $1\frac{7}{8}$ inch mandrel, leaving enough gap to slide over the steak.

Notes: One thing about making any kind of face work easier is to make a tool to raise the face up to a working angle. It can be done just in the vise but it's much harder.

If you don't have a power hammer you might look at forge welding a piece of half inch square on a $\frac{1}{8}$ x $\frac{1}{2}$ inch flat bar. I haven't tried this.

This article is reprinted courtesy of the Michigan Artist Blacksmith Association "The Upsetter" newsletter Jul-Aug 2020.

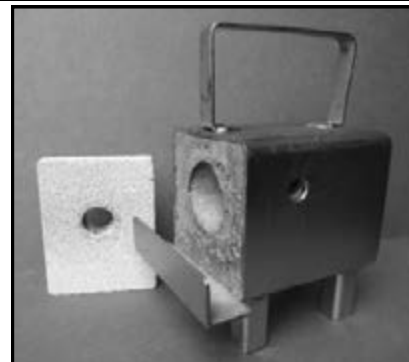
With all the dragon head projects following Rory Kirk's article in the July 2020 SCABA newsletter, it seemed like this might be another interesting variation to try. - Editor



Small but Mighty by Randy Palluch



Randy came up with an idea to design a compact forge because he was making small items and wanted a faster and more efficient way to heat parts. He was originally using just a propane torch which worked, but it took longer and there was a lot of heat loss. Randy used this forge to heat the rivets for the Greene County Poor House cemetery cross project and it worked perfectly! Randy uses a Bernzomatic 8000 torch with this forge, which fits perfectly.



General Fabrication:

To start with, he used a 5 1/2" by 3/16" walled steel tubing about 6" long. The back plate on the forge was made out of 1/8" plate welded to the back. He added four 1" X 1/8" X 2" long legs. To secure the forge to a surface, he placed two 1/2" square nuts press fitted into the front tubing feet which is more than adequate. The burner hole is a round 5/8" hole, 13/16" above center, 1 7/8" back from front of the tubing. This is to create a turbulent swirl flow pattern. These are **critical**

measurements. The door holder is 1 1/4" X 1 1/4" X 1/8" angle for the door support. (Make sure you attach this door angle **AFTER** you pour the refractory!) Handle is 3/4" X 1/8" bent to shape.

Photo Right: Note angle and placement of 5/8" pin, important location.

Preparation for casting refractory material:

Take a piece of 2" plastic PVC pipe which is 2 3/8" OD, about 12" long so you can handle it comfortably. Close one end with a 2 1/4" ball bearing or a rubber ball of similar size secured to pipe with epoxy. Place forge on its back and put a 1" shim on the bottom. Take a 1 1/8" shim and place on the side where the feet are (true bottom of forge). Set pipe with ball in forge vertically and push to wall. Clamp pipe to side with the burner hole making sure it is against the 1 1/8" bottom shim. Drill the 5/8" hole using the burner hole as a guide halfway through the pipe. Remove shims, clean inside of forge box thoroughly and place a 5/8" pin through burner pole to secure pipe. Randy recommends using Vaseline on the pipe and pin to keep refractory material for sticking to facilitate removal.

Contact Randy for information
call or text 412-200-0952
dograndy@comcast.net



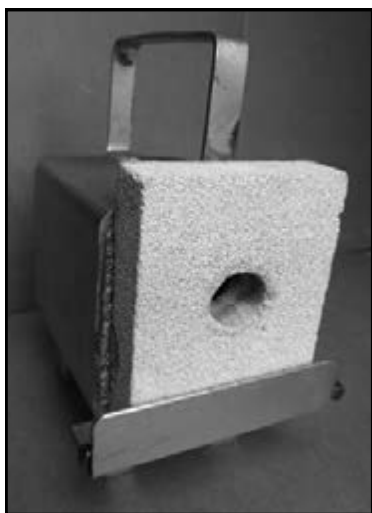
How to cast:

Randy used a powdered high temperature refractory material and mixed it according to directions. Amazon is a good supply source. After mixing, add the refractory, pour slowly and tap on the sides of the forge to prevent voids such as bubbles. Let set, remove pin and pipe, then allow to cure according to directions. The process may take several days.

Fabricate the door using light weight insulation brick approximately 1 1/8" thick, cut from a bigger block. Randy made his door 4 1/2" X 5 1/2" with the 1 1/8" hole 3 1/8" from the bottom of the 5 1/2" side and centered on the 4 1/2" side. That puts the hole at the very top of the opening. You can cut the brick on a band saw. This configuration site of the hole allows for placement of the opening to use various areas of the forge.

Add an Interior Ceramic Coating:

Cera Materials is one supplier Randy used. The purpose of the coating is it reflects infrared heat, forge performs efficiently, and it is good to 2300°. Apply to forge and door according to directions. After curing the recommended allotted time, make sure you break in the furnace gradually by placing a 150 watt incandescent bulb in the forge for several hours.



Above photo shows how the PVC pipe, attached ball and 5/8" pin sit inside forge for casting step.

Portable Folding Hammer and Tong Rack By Jacob Willson

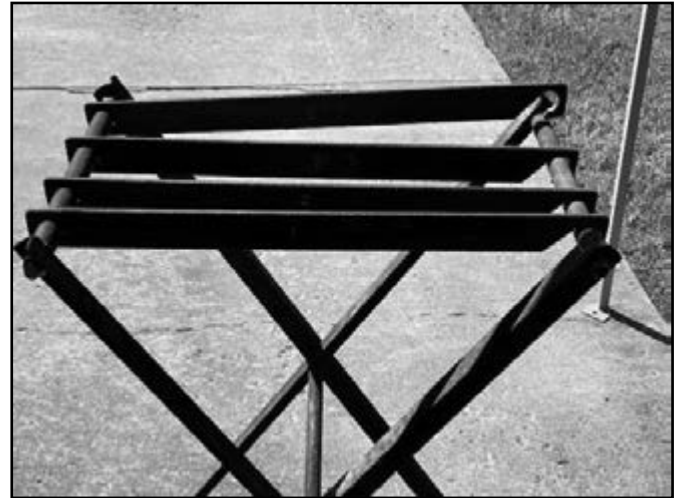


I don't have a dedicated shop for hot work and I do my forging in the driveway. I wanted a rack that would hold my hammers, tongs, and what I was working on. This rack would also need to be compact for storage when not in use. I wanted to share what I came up with to help anyone else in the same situation 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 Theorem) 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.



Two More Helpful Tips By Glenn Horr



This foot pedal is hard to pick up with gloves on. I put a handle on it so I can also hang it up. I painted it yellow to better see it, and added a Red Nonskid pad on the top half.

(Photo Right:) Here is a tip for clean up. A small roof/tar brush on a handle, you can get in places where you can't with a large floor brush.



This article is reprinted courtesy of the Pittsburgh Area Artist Blacksmith Association newsletter August 2020.

Wind Chime Hanger

By Rick Coleman of Huntsville Forge

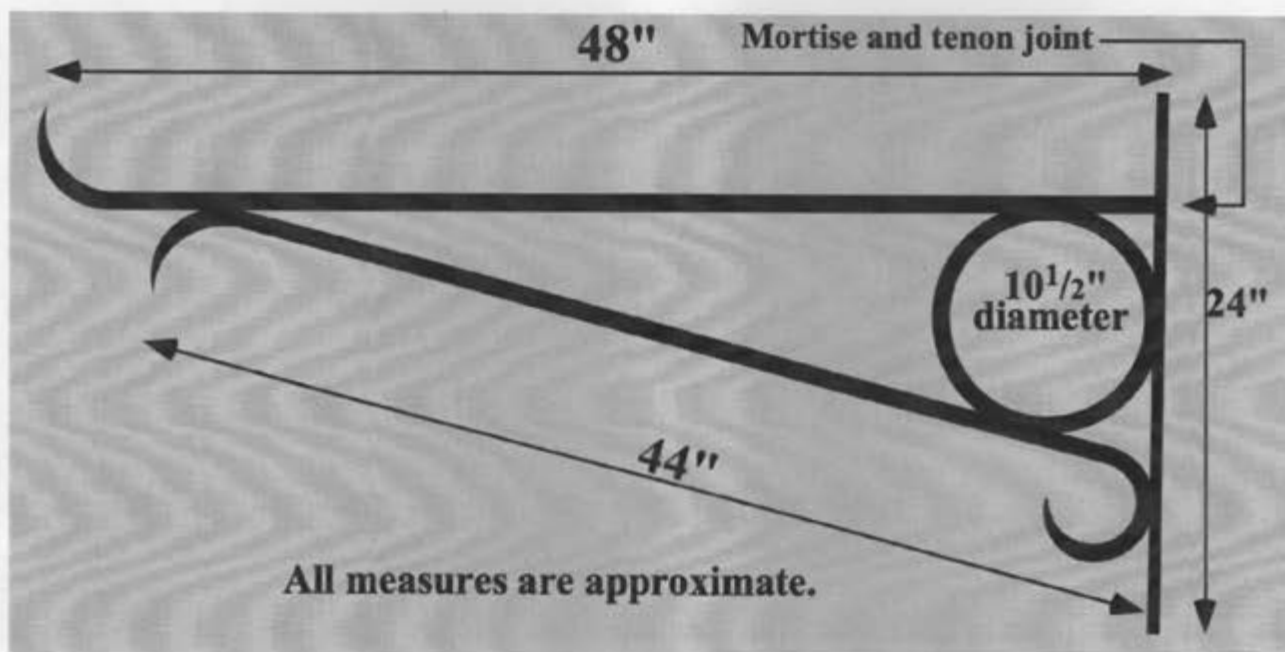
My wife, Lucy, and I have two large wind chimes each weighing approximately 30 to 35 pounds. When we moved into our new house a few years ago she decided she wanted them mounted on the side of our brick RV garage. The hanging rods that came with the chimes proved to be totally inadequate to support the weight of the chimes without bending so she challenged me to come up with a suitable hanger "with appropriate artistic decorations." I was not exactly sure what "appropriate artistic decorations" for a wind chime hanger were, but I came up with a plan and forged two hangers as shown on the facing page.

The drawing below shows the four parts of the hanger: a top rod, a bottom rod, a ring, and a mounting plate. All parts were made from 3/4" square mild steel except for the mounting plate which is 1/4" x 2" mild steel. For the top and bottom rods cut two pieces 48" long. For the ring cut one piece 33" long. The mounting plate is 24" long. Dimensions are approximate. I forged each piece to fit.

Forging the base

On each end of the mounting plate I forged a fleur-de-lis for decoration. You can create your own decoration for the mounting plate or just leave the ends of the mounting plate flat. [Rick's article about forging the fleur-de-lis is on page 12 of this issue - Editor]

Drill a 3/8" hole about 3 1/2" down from the top of the mounting plate to form a mortise and tenon joint. I felt like this would create a stronger joint than just welding the end of the rod to the mounting plate. The tenon forged on the end of the top rod will be inserted into this hole. Countersink the mortise hole from the back so that when the tenon is riveted flat it will not protrude and make it difficult to mount the hanger to a flat wall. I also drilled three pairs of 1/4" mounting holes to secure the hanger to the brick wall. Six mounting holes may be a bit of over-kill but I wanted to ensure a secure attachment to the brick wall. The best way to measure where these holes go is to hold the base against the brick wall it will be mounted on and mark the holes so they will be in the



mortar joints between the bricks. It is much easier to drill a mounting hole using a concrete bit by drilling into the mortar rather than into the brick itself.

Forging the top and bottom rods and the ring

For the top rod draw out one end to a point and form the curve. On the other end form a tenon about 3/4" in length and 3/8" in diameter. I happened to have the tenon forming tool used in forging a Spencer Table and used it to form the tenon on the top rod. Insert the tenon into the 3/8" mortise hole in the base, heat with a torch and rivet it flat against the back of the base. For the bottom rod draw out each end and bend them into an arc. For the ring, start with a piece of stock approximately 33" in length and bend into a ring. I made a simple bending gig

with a 10" diameter, also similar to those used in the Spencer Table, to form the ring then forge welded the ends of the ring together.

Final Assembly

Clamp the ring and the bottom rod in place against the top rod and mounting plate and attach. I used my MIG welder for a quick and easy assembly but if you wanted it to be more decorative you could forge collars to hold the pieces together. Rivets would also work. To mount use a concrete bit to drill holes in the mortar between rows of bricks and secure with concrete bolts.

Now we have very sturdy hangers for our wind chimes and can enjoy their harmonious ringing any time we are relaxing in the yard. Best of all, Lucy is very pleased with the results.



This article is reprinted with permission courtesy of the Alabama Forge Council "Bituminous Bits" newsletter July-August 2020. - Editor

2020 SCABA T-Shirts

For a LIMITED time, new 2020 SCABA T-Shirts are available. These were planned to be the Conference T-Shirts (an annual tradition) but since the conference is canceled, the design has been modified to acknowledge the reason for the cancellation. (And it infers how most people feel about COVID-19!)



Gildan Adult Heavy Cotton™ 5.3 oz. Pocket T-Shirt

	S	M	L	XL	2XL	3XL
BODY LENGTH	28	29	30	31	32	33
BODY WIDTH	18	20	22	24	26	28
SLEEVE LENGTH	15.625	17	18.5	20	21.5	22.875

Fabric

- 5.3 oz., 100% cotton
- Safety Pink, Safety Green, Neon Green, Graphite Heather and
- Heather Radiant Orchid are 50/50 Cotton/Polyester

Available Colors: View the Newsletter Online to See the Sample Colors Available



Graphite Heather



Heliconia



Irish Green



Orange



Red



Royal



Safety Green



Sapphire



Sport Grey



Remember When Choosing Your Colors: The Printing is Black and White so Lighter Colors Will Have the Best Visibility.



Example: Sapphire



Example: Graphite Heather

T-Shirt Order Form

First Name _____ Last Name _____

Address _____

City _____ State _____ Zip _____

Phone (Best Number to Contact) (_____) _____

e-mail _____

Size	Color	Quantity	Price Each	Sub-Total

Shipping: \$2:50 for first shirt plus \$0.25 for each additional shirt:

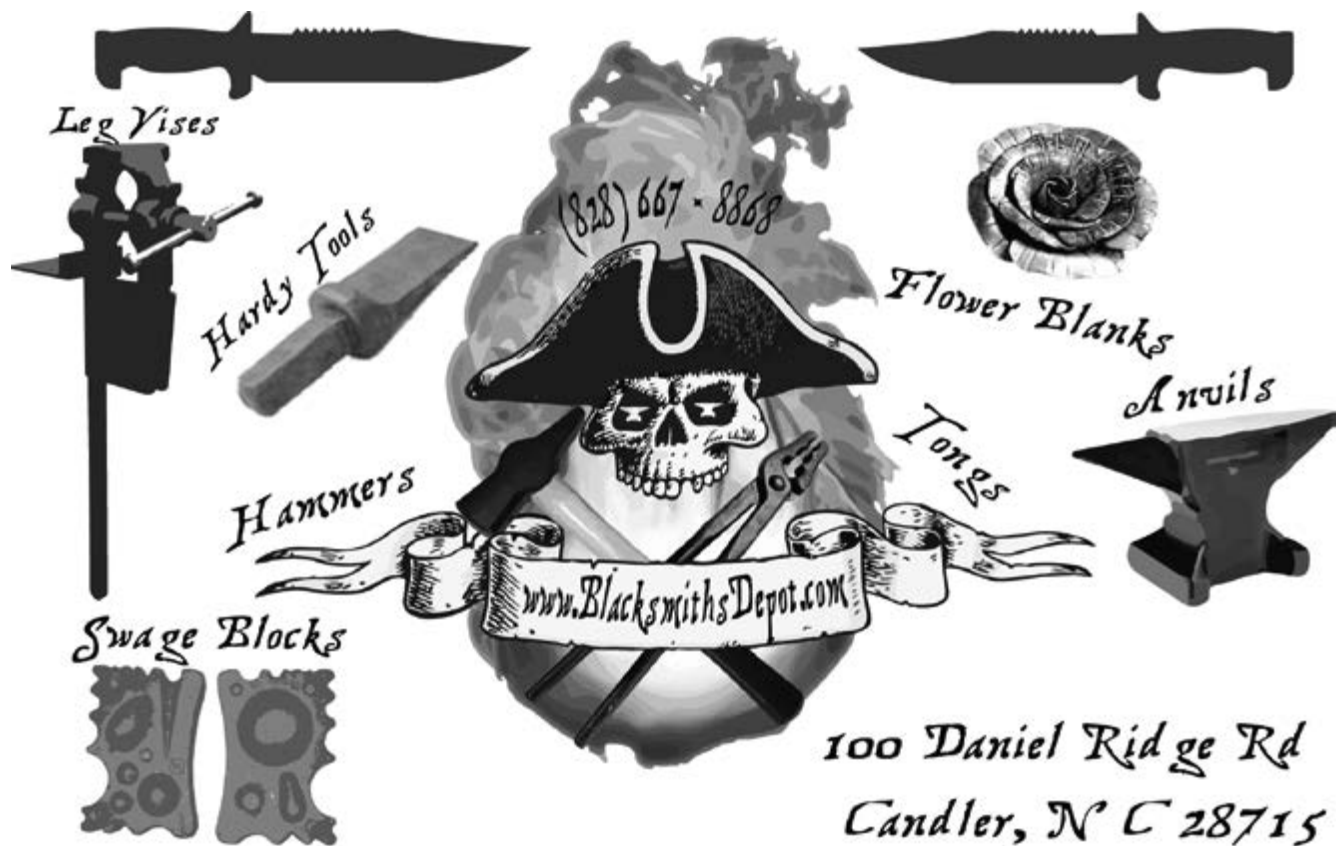
T-Shirt Price:	
Small to 3X:	\$15 Each
4X to 6X:	\$20 Each

Total:

Mail this form with payment to:

*Teresa Gabrish
322 Washington
Blanchard, OK 73010*

SCABA Shop and Swap



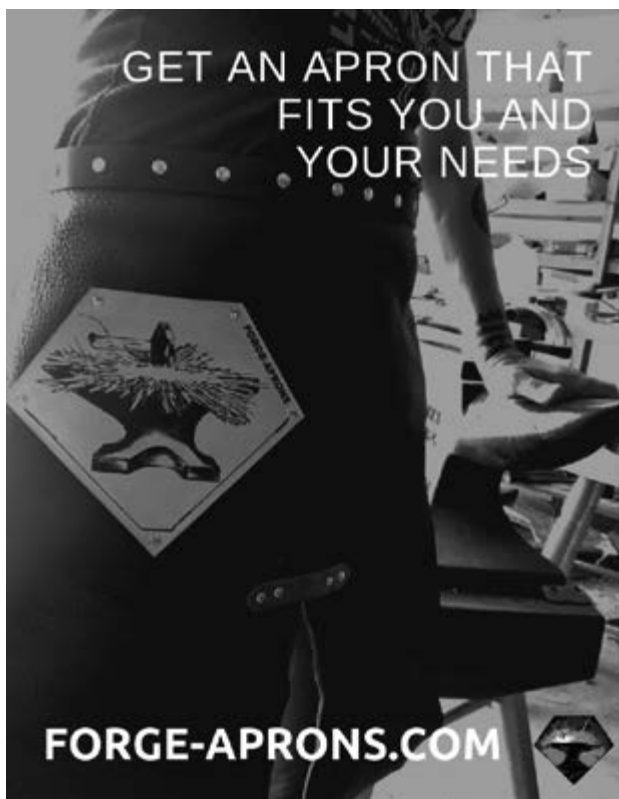
For Sale: 15 Lb Tire Hammers:

\$1,200 for everything from the base plate up. Two rounding dies included as standard. Has 1/2 HP 115V Motor. Contact: David Barfield - 580-595-1476



SCABA Shop and Swap

GET AN APRON THAT
FITS YOU AND
YOUR NEEDS



FORGE-APRONS.COM

KAYNE & Son -- Blacksmiths Depot

Custom Hardware, Inc.

100 Daniel Ridge Rd.
828-667-8868

Candler, N.C. 28715
fax 828-665-8303

Steve Kayne

- Tools for the Metalworker
- Hammers & Tongs
- Spring Swages & Texture tools
- Anvils, Vices, Slakes and Hardy tools
- Books & Videos
- Specialty Fasteners
- Blacksmithing
- Custom Hinges and Handles
- Thumb latch sets & Lock sets
- Exterior/Interior Hardware
- Builders/Architectural Hardware

BlacksmithsDepot.com - CustomForgedHardware.com



Ken's Custom Iron, LLC

37634 County Road 9
Avon, MN 56310
(320) 746-8161
mail@kensiron.com

Blacksmith Supply

Modern Tool For the Modern Blacksmith
www.blacksmithsupply.com

John Elliott

jelliott@blacksmithsupply.com
804-530-0290

P.O. Box
Chester, VA 23831



Blacksmithsupply
.com

Raker Knives & Steel

Ray Kirk ABS-MS



www.rakerknives.com
gadugiblade@yahoo.com

918-207-8076
Tahlequah, Ok

T STAR LEATHER



Brett Smith
310 E. Fry Terrace
Claremore, OK 74017
410-251-4463
tstarleather@gmail.com
www.TStarLeather.com

Fine Hand Crafted Leather Work
Craftsmanship, Detail, Creativity, Excellence



"T Star Smith"
SASS #72768



SCABA Shop and Swap



Call to Order Toll Free 24/7 - 866-627-6922

Thank you to our Conference Vendors who graciously donated items for the Conference Auctions!

Their contributions helped to support SCABA. Please consider patronizing these vendors to return the favor!



Reeder Products Inc.

3201 Skylane Drive, Suite 114
Carrollton, Texas 75006 United States
(469) 257-1000

Bill Davis Forge Welded Tomahawk DVD

This DVD is now available to members for a minimal cost (cost of DVD's is minimal to cover reproduction and shipping if applicable.) Contact the SCABA Librarian, Don Garner, if you would like to get a copy of this DVD.

Don Garner: 580-302-1845

(Call or Text. If you get voice mail, Please leave a message.)



For Sale:

Tire Hammer Plans by Clay Spencer

Send a check or money order for \$30 US to Clay Spencer, 73 Penniston Pvt. Drive, Somerville, AL 35670-7013. Or send \$32 US to Paypal.Me/ClaySpencer. E-mail me at clay@otelco.net. PDFs will be e-mailed outside US. Phone 256-558-3658

Beverly shear blades sharpened

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

For Sale: I have numerous old tools and collectible items of various kinds including blacksmith related tools and equipment. Too many tools to list them all. Inventory is always changing. Contact: Craig Guy (SCABA Member), Piedmont, OK
Cell Phone: 405-630-7769 (Call or Text)

SCABA Shop and Swap

SCABA Library DVD's Available:

This is a partial list of the DVD titles available to members from the SCABA Library. Contact the Librarian (Don Garner) if you would like to obtain a copy of any listed title or if you have questions on any other titles that may be available. Additional titles are listed on the website. DVD's are available for a very minimal cost to offset the blank disc and cases or sleeves. Shipping cost applies if you need these delivered by mail.

- Robb Gunter Basic Blacksmithing parts 1,2,3 and the controlled hand forging series
- Clay Spencer SCABA conf.2013 pts. 1,2 and 3
- Jerry Darnell 18th century lighting, door latches and hinges
- Brent Baily SCABA conf. 2011
- Mark Aspery SCABA conf. 2011
- Robb Gunter SCABA conf. 1998
- Robb, Brad and Chad Gunter 2009 joinery, forging, repousse, scrollwork, etc.
- Bill Bastas SCABA 2002 pts. 1 - 6
- Jim Keith SCABA conf.2007
- Power hammer forging with Clifton Ralph pts. 1 - 5
- Doug Merkel SCABA 2001
- Bob Alexander SCABA 2008
- A. Finn SCABA 2008
- Bob Patrick SCABA 2004
- Gordon Williams SCABA 2010
- Daryl Nelson SCABA 2010
- Jim and Kathleen Poor SCABA 2001
- Ed and Brian Brazeal SCABA 2006
- Ray Kirk Knives SCABA 2002
- Frank Turley SCABA 1997
- Frank Turley SCABA 2003
- Bill Epps SCABA 2003
- M. Hamburger SCABA 2007

Librarian: Don Garner 580-302-1845 (Cell)
Call or Text. If you get voice mail, please leave a message.

Have an Item for Sale? Item Wanted?

If you have any items that are appropriate for Blacksmiths that you would like to list in the Shop and Swap section (or items you are looking for), please send me your description, contact info, and any photos that you have.

SCABA Swage Blocks

\$200.00 plus shipping.
(Same price to members and non-members.)



SCABA Floor Cones

\$200.00 plus shipping.

(Same price to members and non-members.)

To order swage blocks or cones, contact our distributor:

**Nolan Walker at
Nature Farms Farrier
Supply in Norman,
OK.**

405-307-8031



SCABA Shop and Swap

Club Coal:

Saltfork Craftsmen has coal for sale. Coal is in 1-2" size pieces. The coal is \$140.00/ton or .07 /pound to members.

No sales to non-members.

NW Region coal pile located in Douglas, OK. If you make arrangements well in advance, Tom Nelson can load your truck or trailer with his skid steer loader for a fee of \$10 to be paid directly to Tom. Tom has moved his skid steer and must now haul the loader to the coal pile to load you out, hence the \$10 charge. You may opt to load your own coal without using Tom's loader. The coal can be weighed out at the Douglas Coop Elevator scales. Contact Tom Nelson (580-862-7691) to make arrangements to pick up a load. Do not call Tom after 9 PM!! Bring your own containers and shovels. Payment for the coal (\$.07 per pound) should be made directly to the Saltfork Treasurer.

NW Region Coal Pile in Thomas:

Don Garner now has a new pile of club coal available for sales to SCABA members. The shop is at 23713 E 860 Rd in Thomas, OK. (One mile west, then one mile north of Thomas.) Contact Don at 580-302-1845 (Cell Phone) to arrange details for purchases.

NE Region coal location:

****NOTICE****

Charlie McGee is no longer hosting the coal pile in the NE region. If you would be interested in hosting a location in NE, let one of the SCABA Board members know.

S/C region coal location: Club coal is now available at Norman at Byron Doner's place. Call Byron to make arrangements to come by and get coal.

SCABA T-Shirts!

2018 Saltfork Collector T-shirts are available with the 2018 Conference Logo. \$20.00 (plus shipping if applicable.) Contact Josh Perkins to check sizes and quantities that are still available.



Legacy SCABA T-shirts and long sleeve denim shirts are also available on clearance while supplies last. T-Shirts are \$5.00 and Denim Shirts are \$10.00. (Plus shipping if applicable.) Contact Josh Perkins to check sizes and quantities that are still available.

If you would like to purchase shirts, contact Josh Perkins (918) 269-3523.



Have an Item for Sale? Item Wanted?

If you have any items that are appropriate for Blacksmiths that you would like to list in the Shop and Swap section (or items you are looking for), please send me your description, contact info, and any photos that you have.



SCABA Membership Application

For Annual Membership

(Please Print Clearly!)

Date _____

New Member _____

Renewal _____

First Name _____ Last Name _____

Married? _____ Yes _____ No _____ Spouse's Name _____

Address _____

City _____ State _____ Zip _____

Phone (Best Number to Contact) (_____) _____

e-mail _____

ABANA Member? _____ Yes _____ No _____

I have enclosed \$30.00 for dues for one year membership from the date of acceptance.

Signed: _____

Return to: Saltfork Craftsmen, 6520 Alameda, Norman, OK 73026

Note: Registration online by Paypal OR credit card is available from the website.

www.saltforkcraftsmen.org

You do NOT need a Paypal account to use your credit card and registration/renewal is immediate.



Saltfork Regional Meeting Hosting Form

Region: _____ NE _____ SE _____ SW _____ NW

Date: Month _____ Day _____ Year _____

Name: _____

Meeting Address: _____

Host Phone (Best Number to Contact) (_____) _____

Host e-mail _____

Trade Item: _____

Lunch Provided: _____ Yes _____ No _____

Please provide detailed directions and/or a map to meeting location if possible. Meetings are scheduled on a first come basis.

Return to: Saltfork Craftsmen Regional Meeting Coordinator, Russell Bartling

70 N 160th W Ave

Sand Springs, OK 74063

You can also send the information in an e-mail or text or fill out the online form available on the website in the top banner of the Calendar Tab: www.saltforkcraftsmen.org/Calendar.shtm

Saltfork Craftsmen Artist Blacksmith Assoc. Inc.
6520 Alameda
Norman, OK. 73026

Non Profit Organization
U S Postage Paid
Oklahoma City, Ok
Permit #2177

Address Service Requested

