

Saltfork Craftsmen Artist-Blacksmith Association

March 2022



**Good Meeting Weather is Finally Here! There Are Plenty
of Meeting Dates Still Available for 2022!**
(See Page 6 for Meeting Schedule)

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

President/West Workshop Coordinator:

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409 East Broadway
Foss, Okla. 73647 mandell01@windstream.net

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Director:

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106570 S. 4690 Rd
Sallisaw, OK 74955 bradley.nance@cnet.com

Director:

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Oklahoma City, OK 73103 gericjergensen@gmail.com

Director:

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70 N 160th W. Ave
Sand Springs, Ok 74063 rbartling@ionet.net

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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:

Saltfork Craftsmen 2022 Director Elections:

The terms for four SCABA directors are up this year. Eric Jergensen, J.J. McGill, Rory Kirk and Russell Bartling are all up for re-election. (Rory Kirk agreed to an appointment by the board to finish out the remainder of Ricky Vardell's term.

If you would like to run or nominate someone else to be on the Board of Directors, please do so as soon as possible. We will hold elections for these positions at the Annual Picnic in April.

Please contact the Secretary, any current Board member or the newsletter editor as soon as possible if you would like to run for a director position or if you would like to nominate someone (with their approval, of course.)

-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.

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Visit our Saltfork Craftsmen Website:
www.saltforkcraftsmen.org



President's Notes:

Hello Everyone,

I hope everyone made it through the ice and cold weather and everyone is doing well. By the time you get this we will have had another beginner class at the Elk City museum. It was already overbooked so it looks like we will have another class later this spring. It is great to see the interest in blacksmithing coming back strong.

We had a meeting last Saturday and we had a great turn out with a lot of younger people (young to me anyway!) who are really wanting to learn.

Our annual picnic is April 30th at Sulphur, OK and it will be here before you know it. I look forward to seeing everyone and I hope you can make it.

Our conference will be October 15th and 16th with two good demonstrators. Make your plans to be there and watch for more details in the coming newsletters.

I look forward to going to more meetings in the state when I can. Hopefully, we will get back to the number of meetings we had before covid.

The ABANA conference will be in Texas in May. If you would like to help, you can call Dan Richman at 1-972-978-9063. These events can use all the help they can get. And Saltfork members who volunteer for four hours get the rest of the day to see the conference for free. I think it will be something to see and it probably won't be this close to us again for a long time.

Be safe.

- Mandell



**** SCABA Board of Directors Meeting ****

There is a Board of Directors meeting scheduled for **2:00 PM Sunday, March 20th, 2022** at Byron Doner's shop in Norman.

Board meetings are open to any member to attend. This is the best place to offer any comments, ideas or criticisms you have on how your club operates. Feel free to attend. If you plan to attend and have an issue that needs addressed, please send your topic(s) to the Secretary, Carol Doner, to get on the agenda prior to the meeting date. - Editor

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.

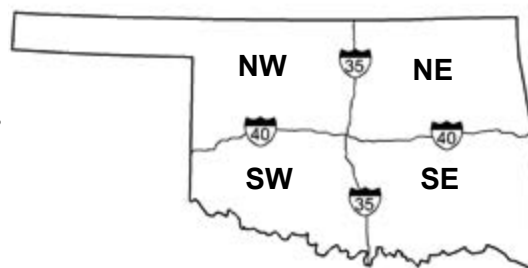
Want to host a meeting? The meeting hosting form can be found on the last page along with membership application form. If you want to host a meeting in any area, please fill out one of the host forms on the website under the calendar section or in the newsletter and e-mail the information or mail the 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.

2022 Workshop Schedule

The Board of Directors and the Workshop Coordinator are always looking for feedback from members on what workshops you would like to see from fundamentals to advanced. Please let them know! If there is group interest in a specific workshop topic, they will work hard to try to make it happen.

BLACKSMITH BEGINNERS' WORKSHOP

WHEN: Saturday, March 5th

WHERE: Route 66 Museum Blacksmith Shop, Elk City, OK

Saltfork Craftsmen will be conducting a beginners Blacksmithing workshop on Saturday, March 5th, beginning at 8 A.M. and running until complete. All tools and materials will be provided.

Slots are limited so please reserve yours early.

To make reservations, or for questions, please contact:

Rory Kirk @ 580-497-6426

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.

We have two workshop coordinators:

Western Areas: Mandell Greteman is the SCABA Workshop Coordinator.
Contact Mandell at 580-515-1292.

Eastern Areas: Brad Nance is the SCABA Workshop Coordinator.
Contact Brad at 918-774-4291.

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

2022 REGIONAL MEETING SCHEDULE

NE Region (1st Sat)	SE Region (2nd Sat)	SW Region (3rd Sat)	NW Region (4th Sat)
Jan 1st (Open)	Jan 8th (Open)	Jan 15th (Open)	Jan 22nd (Doug Hyde)
Feb 5th (Open)	Feb 12th (Open)	Feb 19th (Open)	Feb 26th (Rory Kirk)
Mar 5th (Regional Meeting OPEN) (Beginning Blacksmith Workshop-Elk City)	Mar 12th (Open)	Mar 19th (Open)	Mar 26th (Dorvan Ivey)
Apr 2nd (Open)	Apr 9th (Open)	Apr 16th (Open)	Apr 23rd (Everett Timmons)
May 7th (Diana Simon Cherokee Strip Museum)	May 14th (Open)	May 21st (Open)	May 28th (Mandell Greteman)
Jun 4th (Open)	Jun 11th (Open)	Jun 18th (Open)	Jun 25th (Don Garner)
Jul 2nd (Open)	Jul 9th (Open)	Jul 16th (Open)	Jul 23rd (Terry Kauk)
Aug 6th (Diana Simon Cherokee Strip Museum)	Aug 13th (Open)	Aug 20th (Open)	Aug 27th (Open)
Sep 3rd (Open)	Sep 10th (Open)	Sep 17th (Open)	Sep 24th (Ron LehenBauer as Host - Don Garner as Contact Person)
Oct 1st (Open)	Oct 8th (Conference Setup)	Oct 15th (Conference Weekend)	Oct 22nd (Monte Smith)
Nov 5th (Diana Simon Cherokee Strip Museum)	Nov 12th (Open)	Nov 19th (Open)	Nov 26th (Open)
Dec 3rd (Open)	Dec 10th (Open)	Dec 17th (Open)	Dec 24th (Open)

2022 Fifth Saturdays:

January 29th (Open)

April 30th (SCABA Annual Picnic!)

July 30th (Open)

October 29th (Open)

December 31st (Open)

March 2022

NE Regional Meeting March 5th: (Open.)

There is a Beginner Blacksmith Workshop on this date in Elk City. See Page 5 for details.

SE Regional Meeting March 12th: (Open.)

SW Regional Meeting March 19th: (Open.)

NW Regional Meeting March 26th: Will be hosted by Dorvan Ivey at the Route 66 Museum Blacksmith Shop in Elk City.

Trade item is a forged rose.

Lunch will be provided but please bring a side dish or dessert to help out.

Contact Dorvan Ivey at 580-821-4771 if you have questions.

April 2022

NE Regional Meeting April 2nd: (Open.)

SE Regional Meeting April 9th: (Open.)

SW Regional Meeting April 16th: (Open.)

NW Regional Meeting April 23rd: Will be hosted by Everett Timmons at his home shop: 9300 Cottenwood Springs Trail, Borger, TX 79007.

Trade item is a kindling cutter. There are a lot of different designs for these. You can see many examples on the Internet or use your imagination. There are two examples below to get you started.

Lunch will be provided but please bring a side dish or dessert to help out.

Contact Everett Timmons at 806-930-0052 if you have questions.



May 2022

NE Regional Meeting May 7th: Will be hosted by Diana Simon and the Cherokee Strip Historical Society at the new Blacksmith Museum and Shop. 2617 W. Fir Ave, Perry, OK 73077. The shop is located approximately 1/4 mile east of Exit 186 from I-35 on north side of the road (Hwy 64 or Fir St.)

The trade item is whatever you want to bring or make.

The meeting is planned to start at 9:00 AM. Lunch will be provided.

Contact Diana Simon at 580-572-8290 or dsimon@okhistory.org if you have questions.

SE Regional Meeting May 14th: (Open.)

SW Regional Meeting May 21st: (Open.)

NW Regional Meeting May 28th: Will be held by Mandell Greteman at the Route 66 Museum Blacksmith Shop in Elk City.

The trade item is a pair of vee jaw tongs for 5/16" or 1/4" material.

Lunch will be provided but please bring a side dish or dessert to help out. Contact Mandell at 580-515-1292 if you have questions.

June 2022

NE Regional Meeting June 4th: (Open.)

SE Regional Meeting June 11th: (Open.)

SW Regional Meeting June 18th: (Open.)

NW Regional Meeting June 25th: Will be held by Don Garner at the Route 66 Museum Blacksmith Shop in Elk City.

The trade item will be a pair of hold downs for the anvil. One 3/8" and one 1/2" to fit the pritchel hole.

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

Newsletter Items:

There are several items related to the newsletter that I would like to pass along:

- **New Editor!:** You probably already know by now but we have a new editor that will begin production of the newsletter soon. Depending on her work load, it may begin with the April newsletter. There will be some transition period where we work together as needed but I think she will be up and running immediately.

I always thought this transition would be harder when it got here. But I am excited to see new energy and creativity to come and I believe I am leaving the newsletter in good hands. I started as editor with the January 2015 issue and I have really, really enjoyed the opportunity. But recently, I have had more difficulty than ever contributing enough time to do a decent job. Thanks to everyone who helped me with material and quality control for our newsletter over the years. And please do all you can to help provide good content to the new editor!

If all goes as planned, look for an introduction from your new editor in the April newsletter. I, for one, can't wait to be surprised by the content that shows up each month!

- **Newsletter Delivery:** The hard copy newsletters have been getting delivered later than I would like to admit in recent months. We have had some issues with printing and mailing that have added to the overall time but I have also been finding it very difficult to work the newsletter in to my schedule lately. More difficulty than I have ever had. That is finally what led to my call for a replacement (which thankfully was answered in record time!) Hopefully, with a new editor and covid in the rear view, we will be able to get delivery back on track.

For this issue, I have added two extra months of meeting details to try getting the info out ahead of slow delivery. Please check back often with follow up newsletters and online calendars though. As the weather gets nice, new meetings are likely to be added and these printed versions will become out of date.

- **Politic Free Zone:** The blacksmiths I know personally are all pretty similar in their amazing ingenuity and creativity but there are some pretty diverse backgrounds. We generally don't discuss politics, etc. when we get together. Even if we did, we might disagree without jeopardizing friendships. And, generally, the newsletter is a "politic free zone." I am only pointing this out since the last issue has an article on a "Russian Candle Holder." If anyone chooses to be shocked or offended by the inclusion of "Russian" with the context of current hostilities in mind, please consider that the article was produced before any conflict was the primary news cycle focus. Additionally, it was a nod to the original idea for the style of candle holder which was believed to originate from Russia.

Around the State...

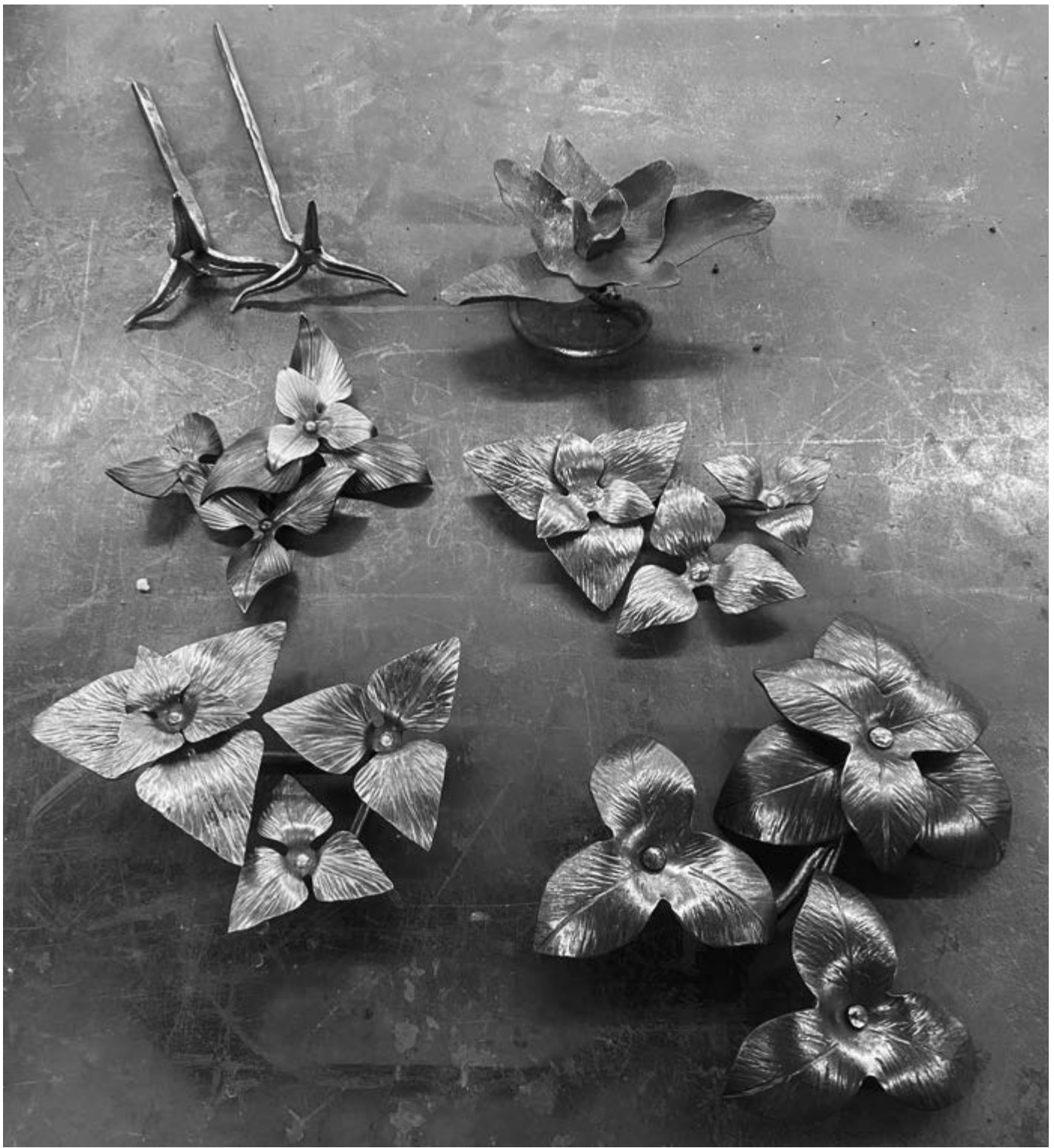
NW Region January Meeting: The January meeting was hosted by Doug Hyde at the Route 66 Museum Blacksmith Shop in Elk City.

The trade item was a trillium flower and there were some nice examples.

Thanks to everyone who attended the meeting.







NE Region February Meeting: No Meeting was held.

SE Region February Meeting: No Meeting was held.

SW Region February Meeting: No Meeting was held.

ABANA Conference 2022

May 11-14 Denton Fairgrounds, Texas

Folks,

Just to get the word out, Put a bug in your ear, Registration is OPEN for the ABANA 2022 Conference May 11 – 14 here at the North Texas Fair and Rodeo grounds in Denton Texas.

2022 is just getting started and I know one of the things on your bucket list is to attend this year's ABANA conference. You certainly don't want to miss it. Just look at the demonstrators we've nailed down.

Anton Yakushev, Zeevik Gottlieb, Douglas Pryor, Ellen Durkan, Frederic Crist, Randy McDaniel, Sue Howeter, Patrick Thaden, Jeffrey Funk are all coming. We've got Farrier **Cotton Elliot** demonstrating and **Steve Hotz** in the Veteran's tent. Bladesmiths **JD Smith, Shane Stainton, and Pep Gomez** are in!

Tool Smiths: **Lyle Wynn & Mark Ling** will be demonstrating.

We've got an outstanding set of instructor/demonstrators in the teaching tent lead by **Mark Aspery** with **Annie Arthur, Jennifer Petrilla, Lisa Geertsen, Becky Shimpff, Victoria Ritter,** and **Carol De Maintenon**

The clubs hosting this event include:

Saltfork Craftsmen Artist-Blacksmith Association (SCABA) – Oklahoma
Louisiana Metalsmiths Association (LAMA) – Louisiana
New Mexico Artist Blacksmith Association (NMAB)– New Mexico
Houston Area Blacksmith Association (HABA) – Houston Texas
Balcones Forge – Central Texas
Four States Iron Munchers Blacksmith Association – Texarkana Texas
Texas Knifemakers Guild - Texas
North Texas Blacksmith Association (NtxBA) – Dallas / FtWorth Texas

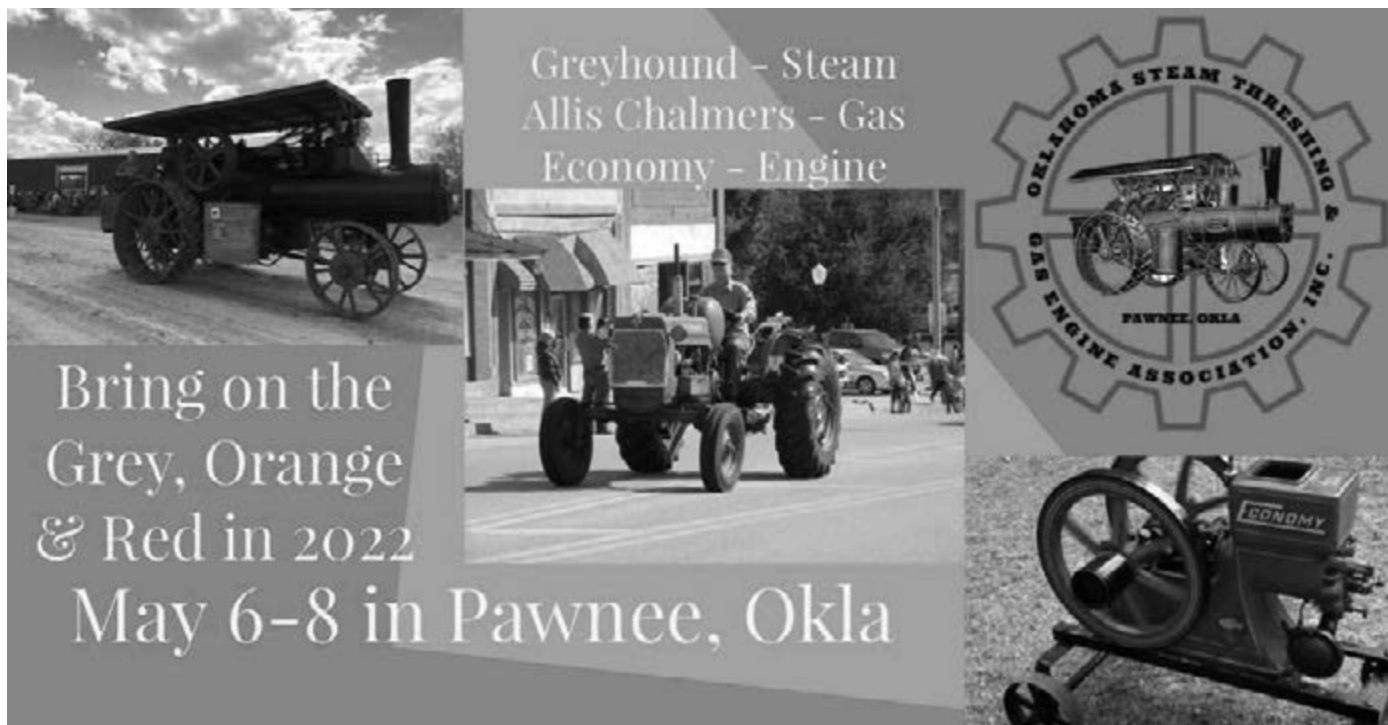
We're fix'n to make the Texas ABANA Conference the best yet! There's lots of places to stay, lots of things to see and do. Y'all need to come down to where chili was invented, and barbeque was perfected! For all the details get on your horse and go to:

abana.org/2022-abana-conference

Saltfork members who would like to volunteer for 4 hours will get the rest of the day free.

More details to come, SEE Y'ALL THERE!! - *Fred Cole, North Texas Blacksmith Association*





Oklahoma Steam and Gas Engine Show

May 6, 7, and 8, 2022

Steam Park Grounds

Pawnee, Oklahoma

Gates open at 8am

\$10 single day per person. Free with club membership.
Kids under 12 are free.
Friday is School Day. School Groups Accompanied by a teacher are admitted free.

Exhibits include:

Antique Power Exhibits
Saw Mill
Machine Shop
Wheat Threshing
Corn Grinding
Shingle Mill

Schedule of Events:

Demonstrations running off and on all day:

100 Ton Corliss Steam Engine in the Power House
(listed on the national register of historical places)
Steam Powered Sawmill/Shingle Mill * Blacksmith
Commmeal Grinding Demonstration and Discussion
Baker Fan Horsepower Testing at the Prony Brake * Rock Crusher
- Working Gas Engines Display - Line Shaft Driven Machine Shop
-Food Vendors * Arts & Crafts * Retail Vendors * Live Entertainment

Friday

09:00 a.m. National Anthem
10:00 a.m. Old Time Threshing Lecture & Demonstration
11:00 a.m. *Steam Plowing – North Field
11:00 a.m. Powerhouse Demonstration
Noon Steam Whistle
Noon Bluegrass Music Pavilion
12:45 p.m. Steam Games
02:00 p.m. Powerhouse Lecture

02:00 p.m. Old Time Threshing Lecture & Demonstration
03:00 p.m. Parade of Power
04:30 p.m. Tractor Games
Dark *Spark Show at Prony Brake

Saturday

09:00 a.m. National Anthem
10:00 a.m. Sanctioned Kiddie Tractor Pull
10:00 a.m. Old Time Threshing Lecture & Demonstration
11:00 a.m. *Steam Plowing – North Field
11:00 a.m. Powerhouse Demonstration
Noon Steam Whistle
Noon Bluegrass Music Pavilion
12:45 p.m. Steam Engine Games
02:00 p.m. Powerhouse Lecture
02:00 p.m. Old Time Threshing Lecture & Demonstration
03:00 p.m. Parade of Power
04:30 p.m. Tractor Games
Dark *Spark Show at Prony Brake

Sunday

08:00 a.m. Worship Service
09:00 a.m. National Anthem
10:00 a.m. Powerhouse Demonstration
10:30 a.m. Old Time Threshing Lecture & Demonstration
11:00 a.m. *Gas Tractor Plowing on Grounds
Noon Steam Whistle
Noon Parade of Power
03:00 p.m. Final Steam Whistle

*Subject to equipment and weather conditions

All events subject to change



30th Annual Ozark Conference

April 28th - May 1st, 2022

Missouri State Fairgrounds
Sedalia, MO

pre-registration must be postmarked by April 1st



~ Demonstrators ~

KIRK SULLENS

Kirk Sullens has been a smith for 30 years, and a full-time professional blacksmith for over twenty-eight of them. Best known for his wildlife creations, which decorate Bass Pro Shops/Outdoor World stores throughout the United States and Canada, he is now based near Orlando, Florida. An artist-blacksmith by trade, Kirk is inspired by the beauty he sees in the ordinary details that surround him. He uses his skill and creativity to transform unyielding iron into a vast collection of delicate and powerful works of art. Kirk enjoys passing along the art and craft of blacksmithing through teaching and demonstrating. He has worked with aspiring smiths of all ages, from absolute beginners to those seeking to broaden or deepen their skills. Kirk is a past BAM president, alias El Presidente.

JOHN LOVIN

I began blacksmithing in 1981, learning through practice, hammer-ins, and conferences, plus I have had several mentors that guided me along the way. Our work is anchored in the traditions of the small town, small shop blacksmith, ready to accept any work that comes through the door, but having our regular stock items.

We attend 12 - 20 craft shows annually, plus keep a retail store stocked. Our demo will showcase 25 -30 of our best-selling items, products that can be produced with a minimum of tools and tooling. We will discuss how to choose good craft shows, develop a product, and dealing with the public. We will discuss the business side of blacksmithing, paying taxes, and issues such as liability and insurance.

If you are interested in selling ironwork as a part time or full-time venture, our demo and discussion can help you through some of the pitfalls.

30th Annual Ozark Conference April 28th - May 1st, 2022

We will meet again at the Missouri State Fairgrounds (MSF) in Sedalia, MO. Located just 19 miles South of I-70 on US-65 at the junction of US-65 & US-50.

Don't forget our traditional fund raisers: Benefit Auction, Raffle, and BAM Boutique—as these are BAM's major source of income for the year. Items deemed to be valued at more than \$25 should be donated to the Auction.

Please be courteous to our instructors and fellow attendees by keeping your personal conversations outside the demo areas and remain seated so that others are able to see.

Due to safety concerns, safety glasses are required at all events. Please keep a safe distance from forges and demonstrators unless invited to move closer.

Thank You.
Conference Committee

Questions?

Contact:

Mike Gorzel
(636) 336-6347

mo.blacksmith.conference@gmail.com

VENDORS AND TAILGATERS

Sites are still free to registered participants in designated areas. Vendor spaces will be assigned and tables will be available from the Fairgrounds at \$8 / table. To make arrangements please contact:

Karen Bouckaert
1-636-673-1996

~ Demonstrators ~

LIN RHEA

I've always appreciated the look and feel of a good knife. Being raised in a county setting, a knife was a necessity, not just for looks. When I found out about the bladesmith school in Old Washington, Arkansas, I was amazed that there was such a school. At first, I tinkered making knives, but wasn't happy with the results. Finally, my wife, Kay insisted that I attend a class with the school. It was the most interesting two weeks of learning I can remember. Joe Kessler and Greg Neely shared their love for the forged blade. A year later I was able to take the Damascus class under Bill Fiorini. This broadened the possibilities.

My favorite steels to use in my knives are 5160 and 1084 for carbon blades. For My Damascus, I like L-6 and 1095, 1080 and 15N20. I don't farm out any aspect of my knives. I do all the work on my knives and believe this will advance my skills and set my knives apart.

I am a member of the American Bladesmith Society with a Mastersmith rating, which I received in 2009. I am also a member of the Arkansas knifemakers Association.

Forging a Unicorn

by Barry Myers

I have grandchildren. I like to make things that will last for them. Hooks are popular with them and are useful for kids. Two of them are girls. When I asked what kind of hooks they needed to go with the other animal head hooks I have made, one of them said, "A Unicorn!"

That had me scratching my head as I can look in a myriad of books for horse, mule, most any animal you can think of – but no unicorns. I didn't know how to get the mass of the horn into the forehead of a horse as I can no longer weld after having a pacemaker installed a couple of years ago. Go ahead, I can take it – could you weld before? Okay, got that out of your system?

I thought about it and came up with a rather simple solution that seems to have worked well. My youngest granddaughter was elated and took hers home yesterday. Here it is:

Make your favorite horse head. Mine is just a simple horse head on a half inch square bar. Although I show the horse with ears in the pic, I found that I should wait until the horn is installed prior to cutting in the ears. It allows more access to the horn when grinding.

Next, drill a #7 blind hole into the center of the horse's forehead as deep as you can go. I used this size drill as I used a 1/4" bolt for the horn.

Thread the hole with a 1/4-20 tap and install the bolt.

To form the horn, (1) I have removed the bolt,

cut it to a length and forged the horn, preserving the threads and returning it to the hole or (2) cut it to length after removing the bolt and grinding the horn to shape, or (3) leave it installed and grind it to shape with the bolt/horn installed. I found that #2 seemed to produce the best result. I think on the next one, I will remove the bolt and put it in my portable drill and grind on the belt grinder to get a more uniform horn.



This article is reprinted with permission courtesy of the Philip Simmons Artist Blacksmith Guild Newsletter Jan-Feb 2022.

Connections

**Jay Burnham-Kidwell,
Golden Valley, AZ
CBA Spring Conference 2017**

Common connections in blacksmithing include, but are not limited to, the following:

1. Hot Connections:

Forge Welding

Arc Welding

MIG Welding

TIG Welding

Oxy/Acetylene, Oxy/Propane Gas Welding

Forge Brazing

Forge Soldering

Oxy/Acetylene, Oxy/Propane Gas Brazing and

Soldering

Mortise and Tenon

Hot Rivets

2. Cold Connections:

Rivets

Collars and Wraps

Claydon Connections

Tension Connections

Nut and Bolts

Articulated Connections

Socket Bearing Connections



These may be used singularly or in any combination desired. Furniture joints/connections generally require some definite stability due to it's use, thus: the more rigid, where needed, the more stable the structure. The connections can also be used simultaneously as accent points or ornament.



Connections

Square Tenons

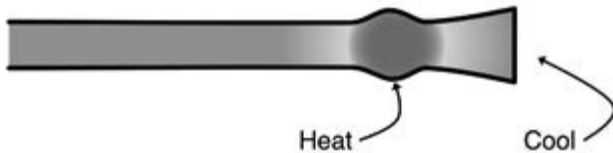
This is one method of forming tenons, by hand. Dies, power hammers, hydraulic presses and the like will make the job easier, but if you can't do it by hand, machines won't do it for you.

Measurements are important. "Measure twice, cut once." Material in this example is 5/8" x 5/8" mild steel.

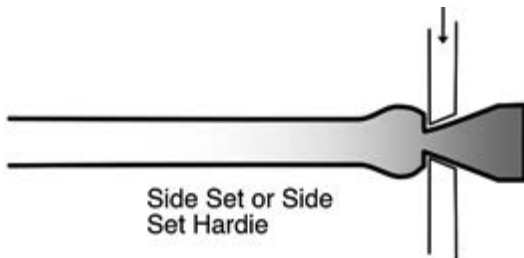
1. Upset end of bar approximately 1/2".
2. Localize heat and upset.
3. Use Side Set or Spring Fuller to establish tenon and



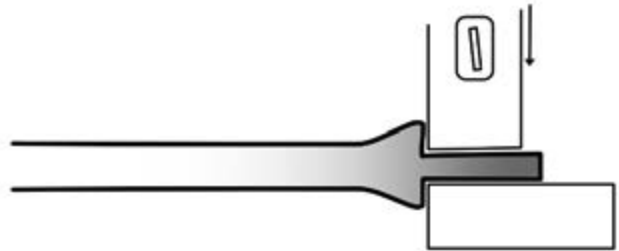
shoulder.



Side set (side set hardie may also be used).



- 4 Use Set Hammer and Bottom Tool (or square anvil edge) to square up and draw out tenon. The Post Vise works well as a "poor man's screw press" for evening up tenon.



5. Even up shoulders and upset with Monkey Tool.



6. Hot rasp shoulder and tenon square with Horseshoer's Rasp - check for size and fit with mortise. Tenon should extend about 1 1/2 times diameter of tenon through mortise hole.

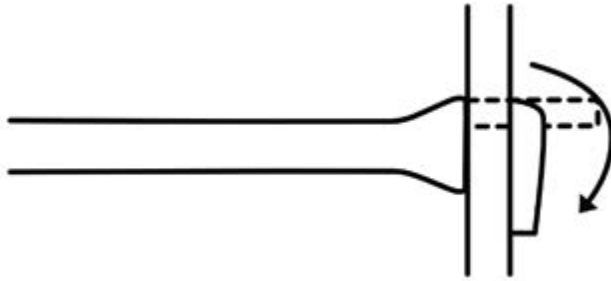


Connections

Tenon Variations

Here are a few mortise and tenon variations for your information. The techniques, variations, and applications are innumerable.

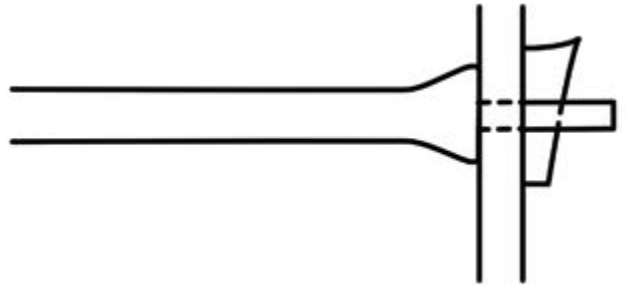
1. Single shoulder side bent to 90°.



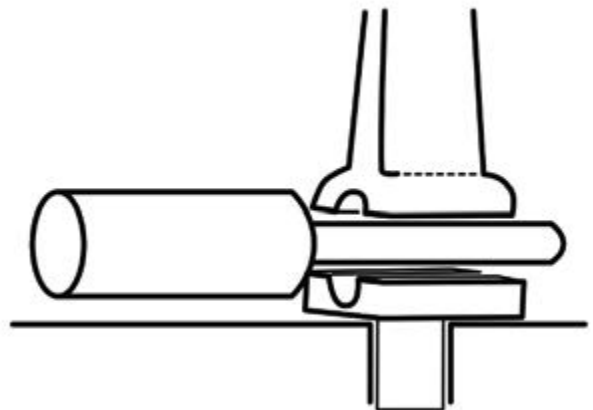
2. Flat stock tenon: Hot cut initially, no upsetting required, stock remaining forms shoulder.



3. Tenon with inserted wedge. Tenon must be punched to accept wedge tightly.



All tenon connections require careful consideration as to application to design and object, strength and accurate measurement. Square tenons will not rotate in the work - an important aspect of furniture making. Round tenons will require SOR forging and the use of top and bottom swage tools.

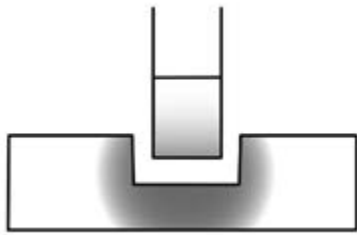
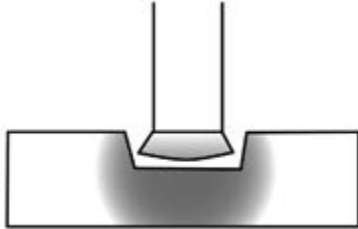


Connections

Slot Punching

Measure and Mark! Use a test piece ("sketching in iron") to determine material stretching or shrinking in length, if any.

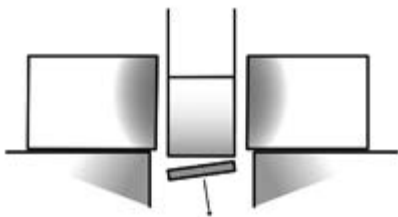
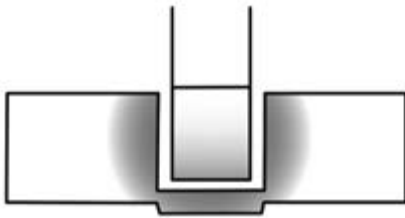
1. If using a Slitting Chisel, the chisel width is approximately 1 1/2 the width/length of the hole desired.



2. If using a Slot Punch, the punch is approximately the same width/length of the hole needed.

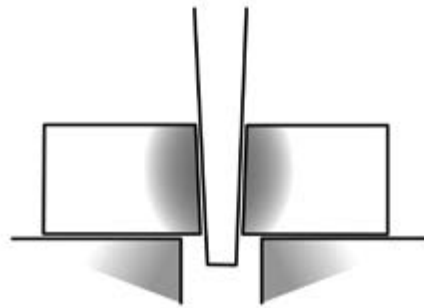
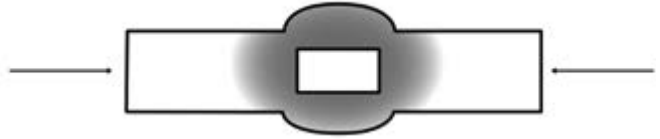
Cool the Tool repeatedly!! Use coal dust or oily scale in hole to keep tool from sticking, cool the tool to prevent it from mushrooming in material. (BAD).

3. Punch or Slit through about 95% of stock thickness.

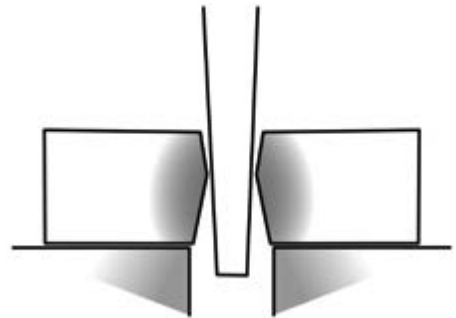


4. Flip stock over Hardie Hole, Pritchel Hole, or use a bolster, punch slug out.

5. Localize heat and upset shoulders of hole; a post vice comes in quite handy here.



6. Use an opening punch to enlarge the hole to size, again over hardie, pritchel, or bolster.



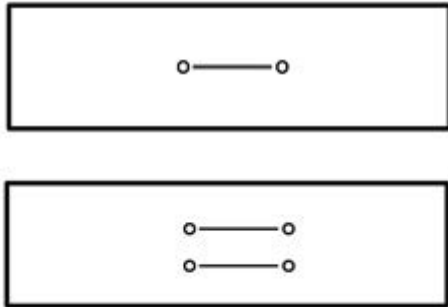
7. Drift hole to size from both sides. In some cases, the punch may be used as the drift. Experiment!

Connections

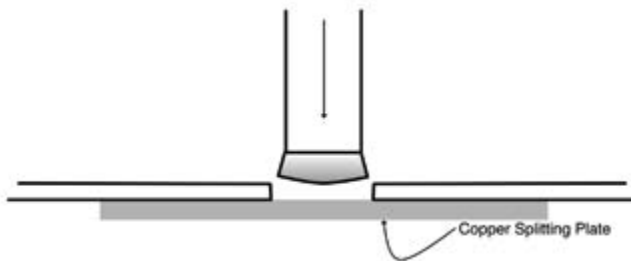
An Introduction to Pass-Throughs and Connections

The following are some pass through techniques which may or may not be of use in your designs.
As always: **Measure and Mark.!**

1. Center punch and register marks (cold chisel).



2. Slitting chisel (same width as split needed).

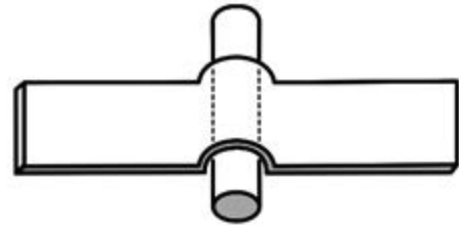


Finish split over hardie, pritchel, or bolster hole.

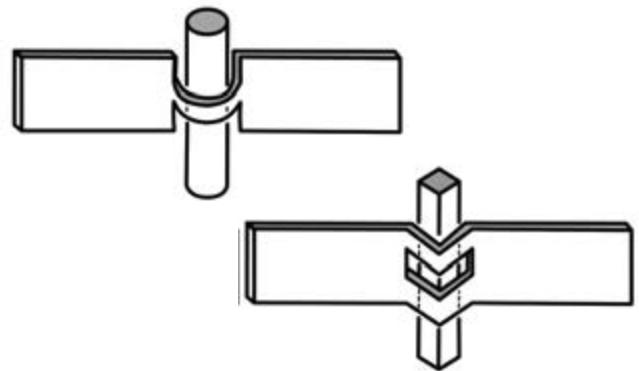
- 3.. Use pass-through stock to establish channel openings - opposite sides.



4. Use pass-through stock to drift slits to size.



5. Double and triple split pass-throughs are more stable.



The variations of this technique can accommodate virtually any cross-section of stock.
Experiment! Have fun with it!



Connections

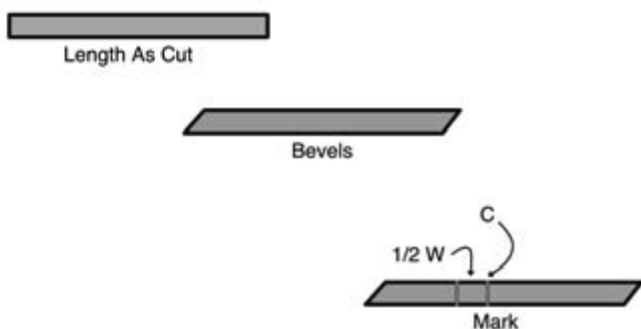
Collars and Wraps

Hot Collars

Most collar connections are put on hot, usually with an Oxy/Acetylene or Oxy/Propane torch for spot heating. I have seen (but not had much success in doing so) collars that were preheated in the forge and driven on while still hot. I have better luck using a torch for heating the collar. The collar, when driven on tightly hot, will shrink when cooled and thus tighten the joint even more.

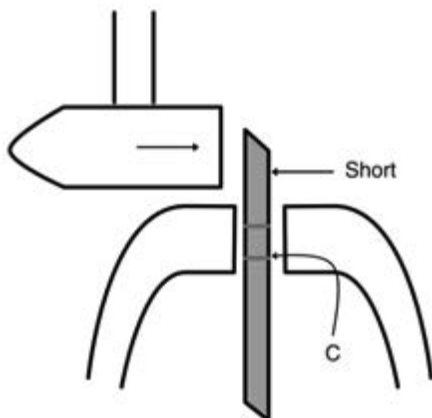
To determine the length of the collar material: measure **around** the pieces to be collared, plus 2 1/2 times the **thickness of the collar material**. This will be the cut length before beveling the ends.

For example: if 3/16" stock is used for the collar, add 5/32" to the length. Bevel both ends on **opposite** sides of the collar. The bevel length is 2 times the collar thickness; with 3/16" stock, this would be 3/8."



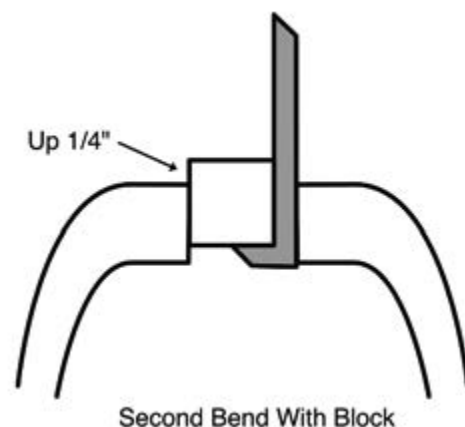
Find the center, and mark 1/2 of the desired width of the collar on one side of center.

Place the long end down in the vise and make the first bend to 90°.

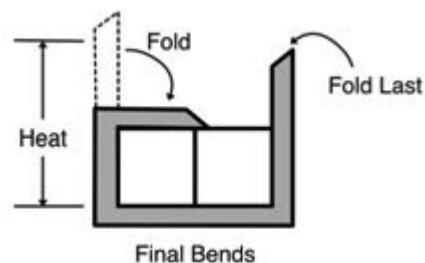
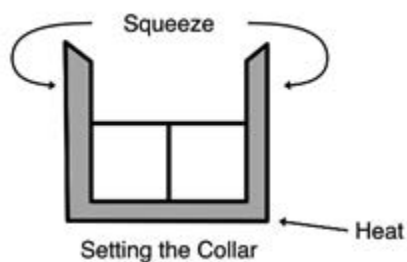


If you put the short end down and bend the long end, you will lose material towards the center and the collar will not come out with even ends.

To make the second bend, make up a **die block** of the material to be collared; grind off the sharp edges, the block can be slightly smaller (a few thousandths) than the material to be collared. With the die block held in the vise the second bend can be made.



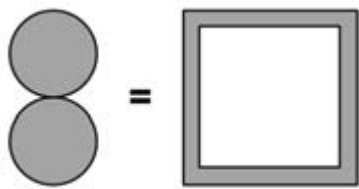
To set the collar, place it in position **cold**, drive the material into it with a set hammer -- **tightly**. If the collar spring open, heat the lower corner and squeeze it at the ends to make the collar fit tight at the bottom. Then heat about halfway up the collar to the bevel, fold over quickly with **sliding hammer blows**. Repeat on the other half. Let cool.



Connections

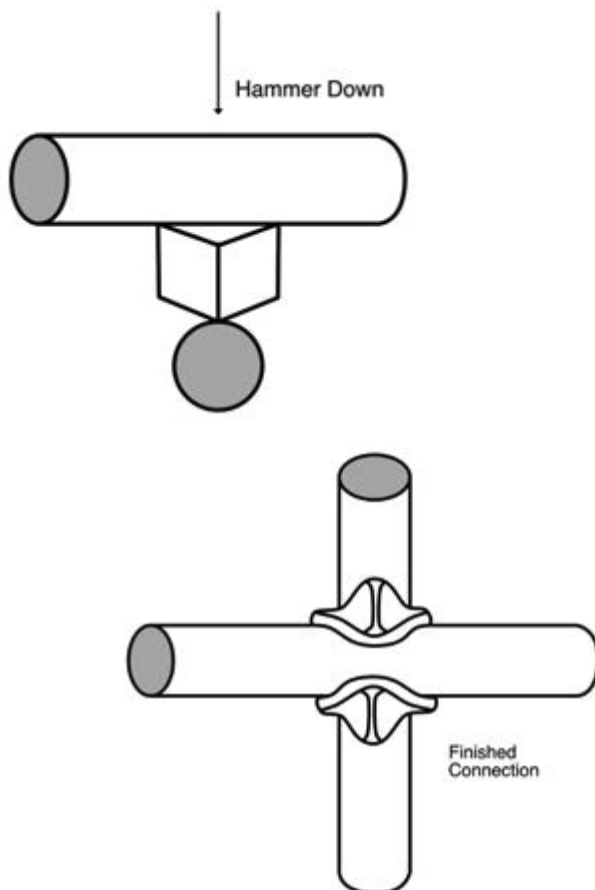
Claydon Connection

This connection was developed by Stuart Hill, a British blacksmith, in the late 70's. It uses a combination of solid and tubular stock as the connecting device. It is not a completely solid connection, as in most collars and wraps, but also doubles as an ornamental device.. The tube (we will use square tubing on round stock) is approximately twice the thickness of the pieces to be joined. With 1/2" stock, use 1" schedule 40 square tube.



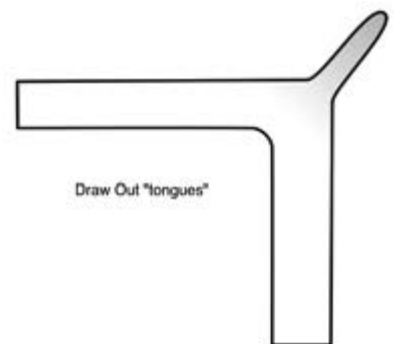
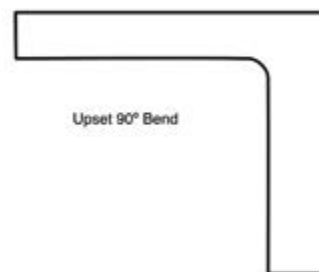
Measure Tube to Stock

Cut the tube to size, heat to yellow in the forge. Place the tube between the round stock, hammer quickly down. Do not over hammer, and let cool.



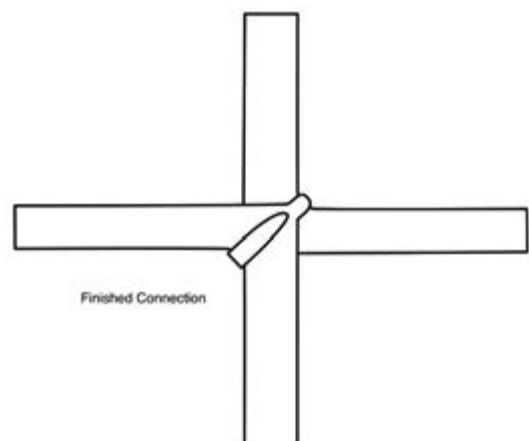
Arno Muller's Corner Connection

I saw this trick in Germany at Manfred Bredohl's shop in Aachen. It was developed by Arno Muller, one of the apprentices, for his journeyman's examination piece. Take square stock, upset at point of bend, make a 90° square bend.



Using a set hammer or the corner of the air hammer die, hot forge the bend corner out to a "tongue." Repeat with another 90° bend piece of stock.

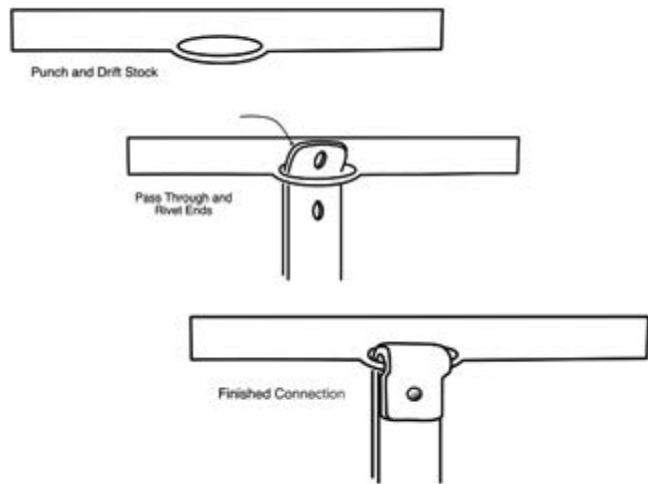
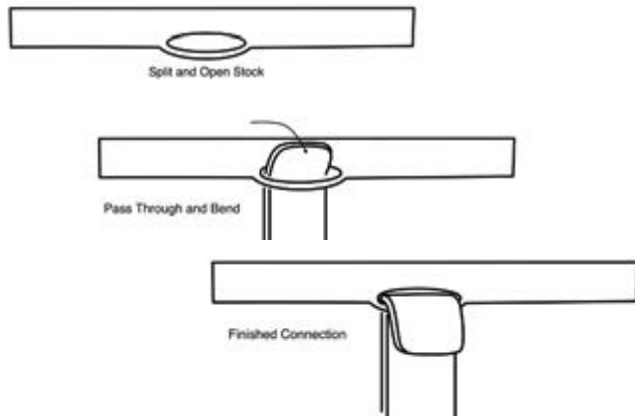
The corners may be welded (Arc or MIG) for extra stability, and the "tongues" hot wrapped around the stock.



Connections

Pass-Through Connections

These connections can be readily used at vertical and horizontal junctions. There may be some movement, but if place **hot and tightly**, they will usually shrink and the tension will hold the connection snugly.



These connections can be readily used at vertical and horizontal junctions. There may be some movement, but if place **hot and tightly**, they will usually shrink and the tension will hold the connection snugly.

Nuts and bolts, articulated (moveable) connections and socket bearing connections can also be employed. The above are but a few of a technique that is almost endless in the variations, applications, and combinations possible.

Have fun with it! Experiment! Take chances! Happy hammering, and remember: **Share the Knowledge!**



Connections

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Photos by John Graham and Michael Horgan

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March/April 2022

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ABANA'S Education Committee Announces the National Curriculum

From ABANA: We have some exciting news from the Education Committee; ABANA has fully adopted the National Curriculum (NC), based on the curriculum of the CBA (California Blacksmith Association).

As our core mission is to perpetuate the noble art of blacksmithing, we recognize it's incumbent as a national blacksmithing organization, to share a successful and practical working curriculum with members, affiliates, and the blacksmithing world at large.

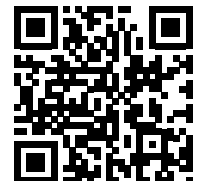
What is the National Curriculum? The NC is a departure point for those that seek a structured program of study that can be used at schools, conferences, meetings, and individual shops through one on one, small groups and self-guided study.

We present the curriculum as one way to learn blacksmithing, but certainly not the only way. From this set of goals, lessons, and benchmarks, smiths at any skill level can pick this up and continue their education. The curriculum provides the framework for the student to progress through increasingly challenging projects that focus on the skills expected of a journeyman smith, culminating with the Level III Grille. - ABANA Education Committee.



If you are interested in finding out more about the curriculum, information on all three levels is available on ABANA's website:

<https://abana.org/abana-curriculum/>



Mark Aspery has shared a series of articles from the CBA related to the Level III Grille Project and its associated tooling. I will include this series in upcoming newsletters for those who are interested. This is essentially the same information that ABANA is adopting and additional information and resources can be found on their website. - Editor

THE CALIFORNIA BLACKSMITH ASSOCIATION LEVEL III GRILLE (PART 7)



The Forged Center Collar. CBA Level III

If you have the inclination, a forged collar, with square corners can add a great deal of interest to your grille.

There is no gain without a little pain, of course.

What follows is a description suitable for a smith working alone. If you have access to a striker, you can simplify the process considerably.



A forged collar ready to be opened and hot fitted to the grille.

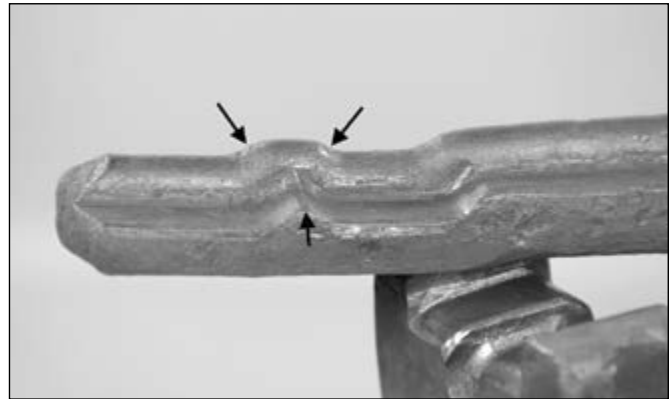
I'm going to start with thicker stock and draw away, leaving an excess of material in the area of the proposed corners. If you completed the Miner's Candlestick project, it's the same technique.

For this collar, I start with a $\frac{3}{4}$ -inch square bar, to form the collar material.

The result is a thicker collar material; I'd say that the back-strap is around $\frac{3}{8}$ -inch thick instead of the previous $\frac{1}{4}$ -inch thick.



A comparison of the two different collar stock sections. Left, intended for the forged collar, Right for a wrap collar



Additional stock allocated to the bead to compensate for material stretch during bending

The bead is small, and doesn't impact the position of the bend point on the collar significantly.

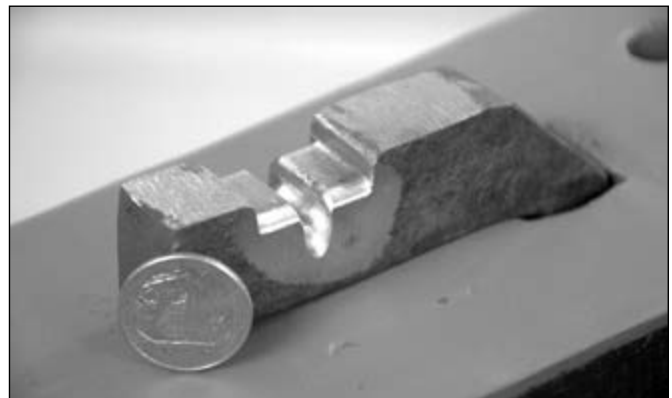
This means that the bead will stretch as it gets pulled around the corner. To counter for this, I'm going to leave more material for the upset corner on the bead, than I will for the back-strap.

This makes the upset square corners as much of a tooling issue as anything else.

I'll show a simple tool that may succumb to damage after a few collars. Better tooling can be made as needed later.

I'm going to fit a bar to my hardy hole, bend it over and then create a depression that looks like the collar material.

Start with a 1-inch square bar (you can go bigger, but not smaller) about 7-inches in length. Lay of 4 inches onto the face of the anvil, set the bar down until it becomes $\frac{13}{16}$ -inch thick.



A simple tool can be made from a minimum of 1-inch square stock, and made to fit your hardy hole

A one-sided shoulder is fine, no need to center the forging on the remainder of the parent bar.

You can go as thin as $\frac{3}{4}$ -inch thick, but $\frac{7}{8}$ -inch thick is going to cause you heartburn later.

If your hardy hole is less than 1-inch square, draw down the peg material to a tight fit. Don't be tempted to use a square bar smaller than 1-inch.

To help with the bend, I drive a $\frac{1}{2}$ -inch diameter rod of fuller into the area of the bend. The resultant depression will open out during the bend giving a nice result for a little less effort.

The fullered groove has other advantages, it helps bring the bottom side of the stock into a single plane, it will also prevent the stock from falling through the hardy hole as you make the bend.

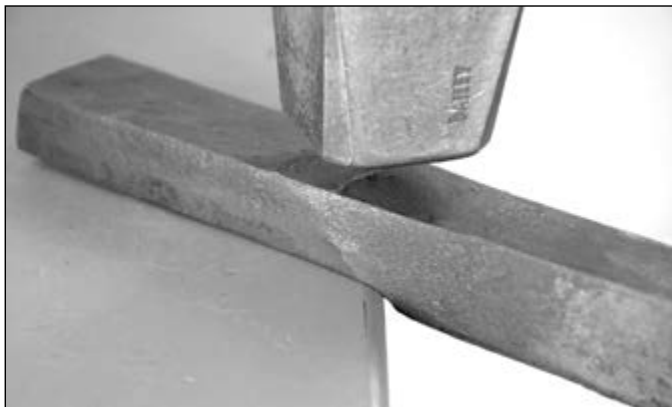
I use a flatter to help bend the stock, feeling that it helps to prevent damage to the bar by my hammer.



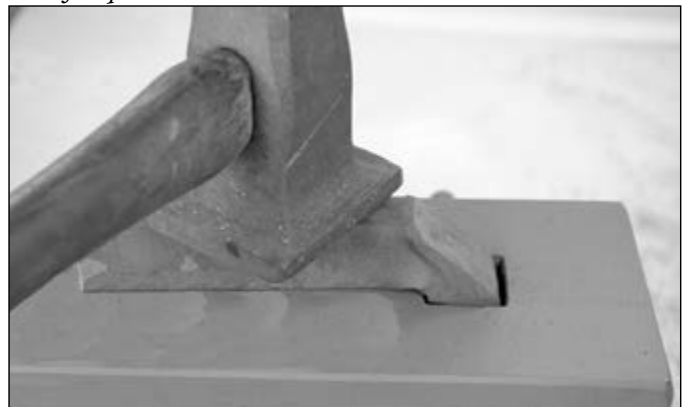
Stop before you get to the halfway point



Place the square bar into your hardy hole, forging to suit if required



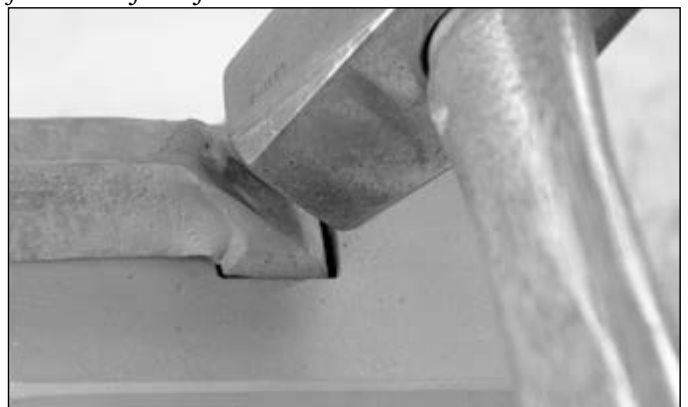
Flatten the stock on the face of the anvil, allowing for growth in all directions. A single shoulder is fine



Bend the bar away from the fullered groove to lay flat on the face of the anvil



Drive a fuller in at just below the transition area



Dress the bend area

Once the bar is resting on the surface of the anvil, check and correct for any twisting along the bar, and dress the bend area.

I create the collar material depression in much the same way as I do the larger bottom swage;

With the bar lying flat on the anvil face, drive in a 1/4-inch round bar first, and then follow up with a section of collar material.

I find that working with the 1/4-inch diameter rod bar initially helps me keep the depression square with the material.

Drive the collar material into the swage, stopping when the depression of the back-strap is 1/4-inch deep of so.

Check that the tool is lying flat on the anvil, and correct it if it is not.



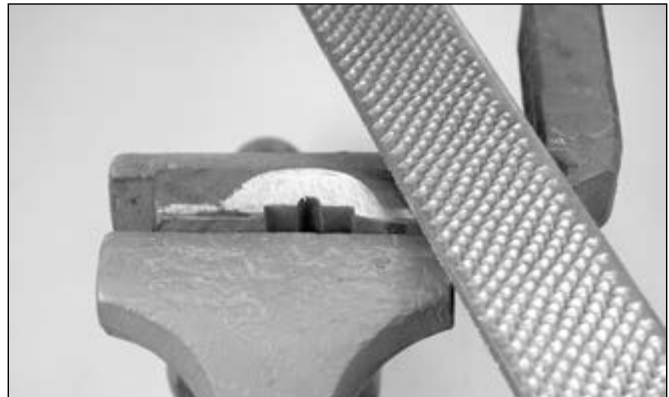
Use a 1/4" rod to start the depression for the collar material. I find that the rod helps square the depression



Result



Follow with some forged collar material. Reducing the width of the material will aid in filing to size later



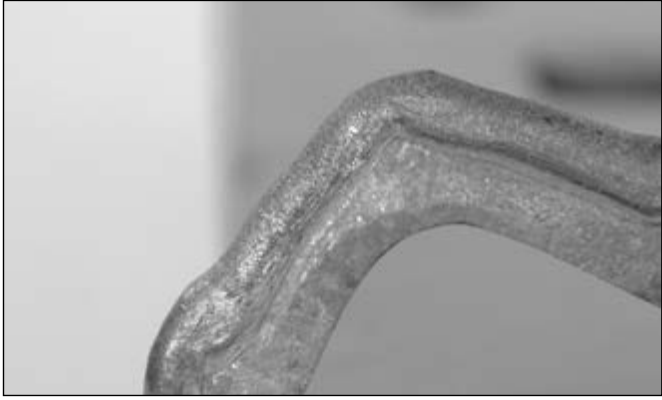
Dress any increase in width caused by making the depression with a hot-rasp or grinder



Continue to drive the collar material down, until the back of the bar is level with the top of the swage

Let the tool cool slowly in preparation for filing or grinding/sanding, or if you prefer, hot rasping. Bring the sides back down to 13/16-inch, at least in the region of the depression.

The measurement of the stock can flare out towards the bottom of the tool; this may even be desirable, as it would give the tool more structural support and strength.



This bend was made over the edge of the anvil, no effort to prevent the gusset forming, note the bead stretch

Back to the theory.

The collar material will bend close to the center of the mass of the stock, and the bead is not very consequential in that regard. We can therefore predict that the bead material will be drawn around the corners, getting stretched as it makes the journey.

We need to leave more material in the bead area for the corner than we do for the back-strap.

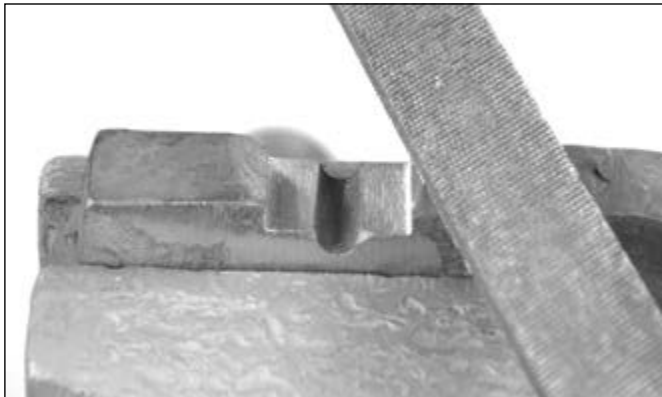
You cannot leave so much bead material that it becomes unwieldy, but you do need to leave more than that of the back-strap corner.

With a 1-inch-wide flat file, dress the flat recess for the back-strap of the collar material to a smooth finish, centering the bead if required.

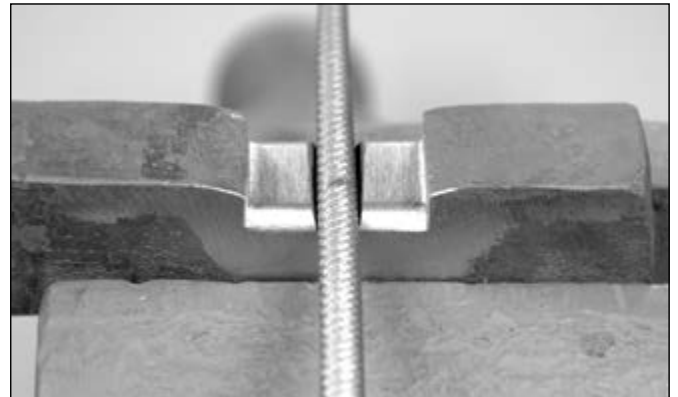
Roll the offside and nearside edges so that they come back $\frac{1}{8}$ -inch on either side of the tool.

You might take a moment to dress the sides of the groove so that any flash can be forged back into the back-strap without causing cracks.

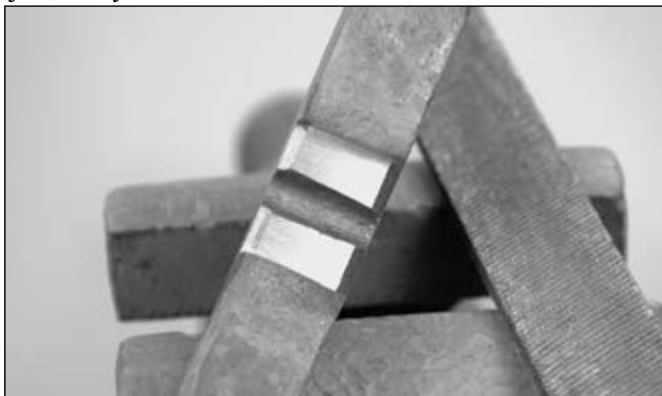
That should leave you with a flat spot of a little over $\frac{1}{2}$ -inch wide in the middle of the tool.



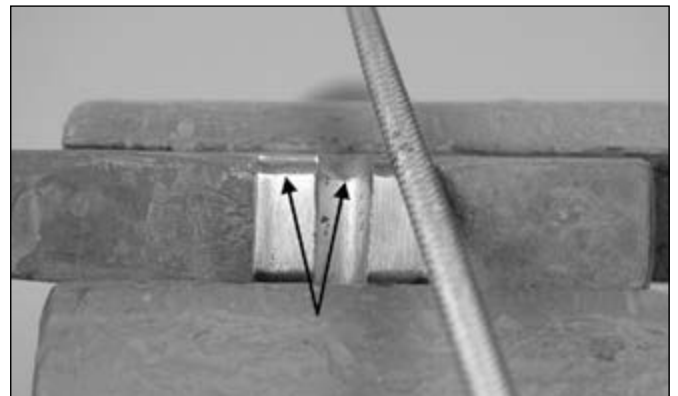
File the flat area of the depression, centering the bead if necessary



Dress the half round depression of the swage



Relieve the edges of the filed surface to a $\frac{1}{4}$ -round profile



Recess the half round depression back to level with the top of the rolled flat edges

The rolled edges are going to leave a nice, curved, transition in the collar stock.

Having round edges means that you can feed the collar stock into the tool when you need a longer distance between the isolated corner material such as the front of the collar.

With a 1/4-inch round file dress the bottom of the bead area.

Recess the edges of the bead on the tool by about 1/8-inch per side, to level with the top of the rolled edges of the back-strap.

You can feather out to the sides of the tool over about 3/8-inch or so, leaving a stronger tool.

Now, roll the edges of the bead so that the toll of the rolled edges finished about 1/8-inch in from the rolled edges of the back-strap.

Take care of any sharp edges in the bead to back-strap transition area.

Again, the rolled edges will allow you to feed collar material into the swage when extending the depression between corners, for the longer runs of the collar.

Wait until after a trial run before case hardening the swage, just in case adjustment is necessary.

Looking at the actual requirements for the collar, you have a group of 5 elements located at the center of the grille. Mine read like this:

Outside: ----- 1/4-inch thick beveled scroll

Mid: ----- 5/16-inch thick scrolls

Inside: ----- 3/8-inch center stile

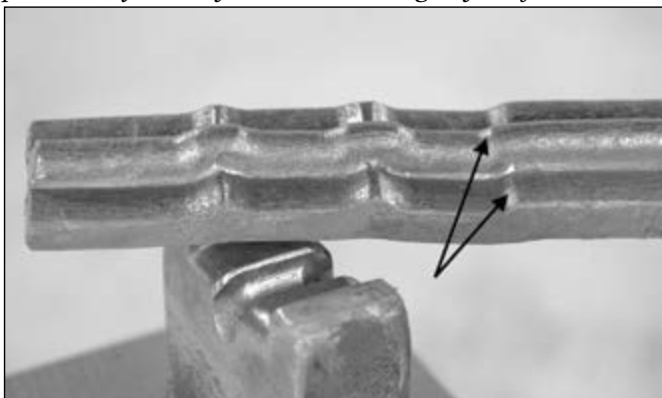
Adding these together, I get a combined width of 1 1/2-inches by 3/4-inches in thickness.



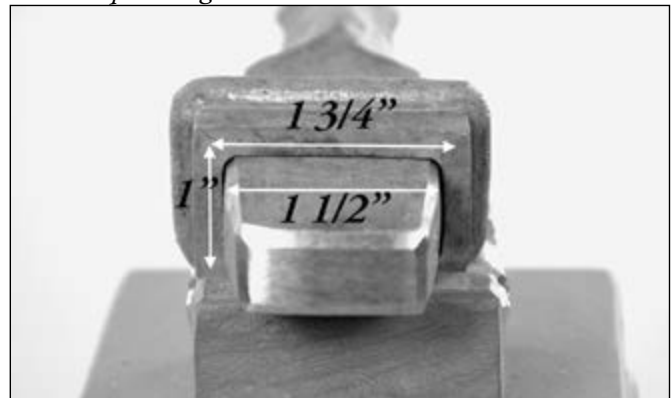
Roll the edges of the half round depression to finish approximately 1/8" in from the rolled edges of the flats



The forging for what will be the front of the collar, which requires a greater distance between the corners



The shoulders left by the edges of the tool can be forged in when you need a greater distance between the corners



The neutral axis of the collar material showing the bend points, and distance between the apex of the corners

I consider the bead of the collar to be insignificant in terms of how it will affect the bending action of the collar.

The back-strap of the collar is $\frac{1}{4}$ -inch thick when finished.

With the neutral axis of the bend being mid back-strap, that adds $\frac{1}{8}$ -inch per side [or combined, the thickness of the collar which I am putting at $\frac{1}{4}$ "] to the dimensions of the block.

Therefore, the distance between the join at the rear of the collar to the nearest corner must be $\frac{7}{8}$ -inch after forging the corners.

I typically go big initially, and then trim to suit, that way I'm not trying to balance a hacksaw blade at the edge of the stock. And, the extra length at the end of the bar can aid when bending the collar around the mandrel.

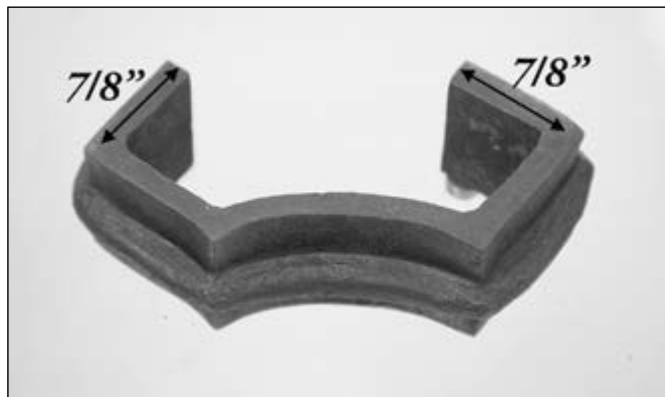
I like to leave at least $\frac{1}{8}$ -inch gap between the two ends prior to forging the corners over the mandrel, leaving room for them to grow in length.

If the corners touch prior to forging the corners, it would be the same as fitting a welded collar where the ends touch, it will never shrink down to fit, the sides will always buckle outwards.

The same can be said of the width of the collar material, it will increase in dimension as you forge the corner material. More later...

Start at the end of the bar, matching the end of the bar to the offside edge of the swage. Drive the stock into the swage, dressing the edges as you work, until the back-strap is $\frac{1}{4}$ -inch thick.

You have completed the initial side of corner #1 on the nearside edge of the swage. A bump of material should be seen at the tip of the collar bar, but that can be taken care of later, AFTER you have measured the distance between corners.



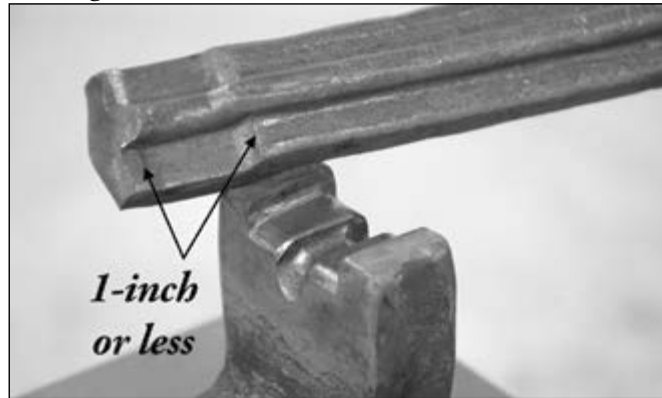
The two end measurements AFTER forging the corners



Dress the sides of the collar material as you work in the swage



Match the end of the bar to the offside edge of the swage, and drive the material down



The 'blip' at the end of the bar can be forged in and removed after checking the distance between the corners

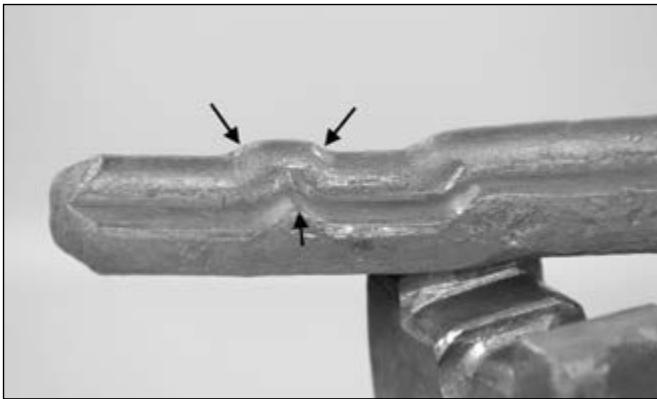


Match the top of the corner to the offside edge of the swage

Measure the distance between the corner material at the top of the slope.

At this point, the distance between the corners must measure 1-inch or less. We know that the neutral axis of the sides measures 1-inch in length.

If you have more than that now, you will need to adjust your swage before going on.

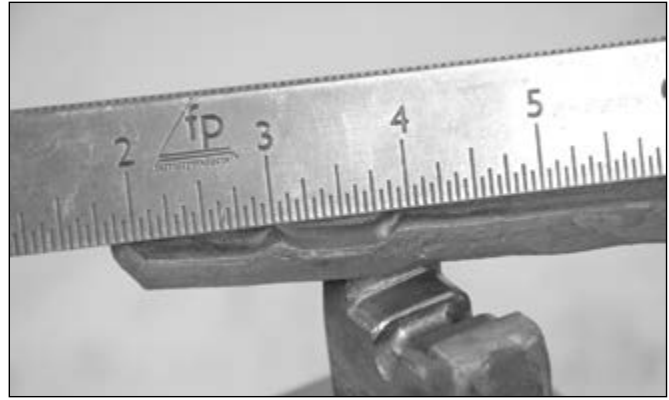


The difference in corner material allocations created by the bottom swage

Don't cheat yourself of material length at the end of the collar as it can come back to bite you.

Then, you need about 1-inch, corner to corner, for the first side of the collar.

My swage measures a strong $\frac{13}{16}$ -inch in thickness. A test piece result allows me to match the apex of corner 1 to the offside edge of the tool and drive the collar material home, and not exceed my 1-inch gap.



Forge the side of the collar material to 1-inch between the apexes of the corners

With my tooling, by the time I have worked the back-strap down to $\frac{1}{4}$ -inch thick, it comes out to short of 1-inch in length between corners.

Drive the collar material into the swage to form the first side of the collar.

The extra recess that you put into the bead area of the bottom swage should now be apparent with a much longer corner apex when compared to that of the back-strap

If an apex has a flat spot on it, I want you to take the measurement from where the apex should be, there will be plenty of opportunity to crisp up the corners later when working over the mandrel.



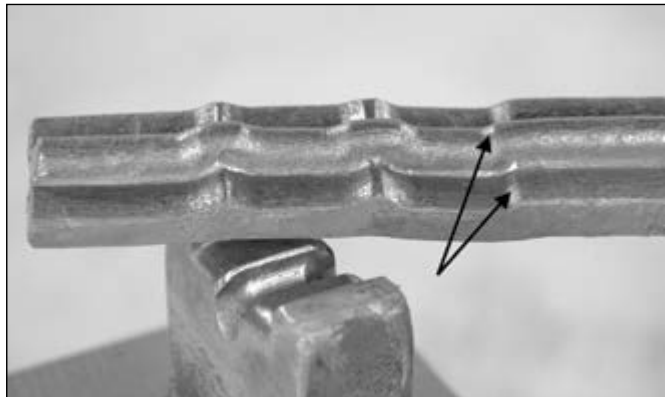
After checking your measurements, match corner #2 to the offside edge of the swage

If you need to increase the length of the depression between corners, feed a little material into the swage, knowing that the measurement will increase as you forge the back-strap material down.

I'm a little more than a $\frac{1}{16}$ -inch short, so a little push against the stock as it is held in place should do it for me. I don't take the full inch.



Drive in the collar material, finishing corner #2



The slope to the edges of the swage allow for the forging to be extended without forming cold shuts

I crowd the measurements between corners, as I find I get better results when bending the collar in the bending jig.

The bar will skip away from the swage as you try to lengthen the gap between corners, because of the two slopes being a little miss-matched.

Match the apex of corner #2 to the offside edge of the bottom swage and repeat. Due to the rolled nearside and off side edges of the swage, any forging can be extended without forming cracks.

Set the collar material down to $\frac{1}{4}$ -inch thick, finishing corner #2.

I move corner #2 out from the offside edge about $\frac{1}{2}$ -inch and complete the front side of the collar - between corners 2 & 3.

I aim for $1\frac{5}{8}$ -inch to $1\frac{3}{4}$ -inch [no more than] between the apexes of both corners, 2 & 3, when measured against the back-strap.

Match the apex of corner #3 to the offside edge of the swage and set down the collar material, dressing the sides as you go. Aim for slightly less than 1-inch between the apex of corner #3 and the apex of corner #4.



Move corner #2 out from the offside edge and extend the forging between the corners #2 & what will be #3



I'm looking for around $1\frac{5}{8}$ " to $1\frac{3}{4}$ " between corners #2 & #3



Here is my collar material waiting to be cut from the bar. I'd recommend making at least two collars.

Move corner 4 out to the offside edge, and repeat. You will want at least 1-inch of cleanly forged collar stock on the end of the collar.

The fussier you are now, with the measurements between corners, the easier time you will have when forging the collar over the mandrel.

Allow the collar to cool, then center-punch the mid-point of at least one of the two front corners.



Center punch the bend points on the two front corners. The other corners will look after themselves

Your center punched corner is your first bend, make sure that you have in the correct place.

Cut the collar material from the bar.

As you will be forging this collar over a mandrel, you will at some stage have a finished collar in your hands, not fitted to anything.

Having the finished collar available pre-fitting to the grille allows you to spend some time at the bench with a file, dressing the sides and maybe beveling the top and bottom edges.

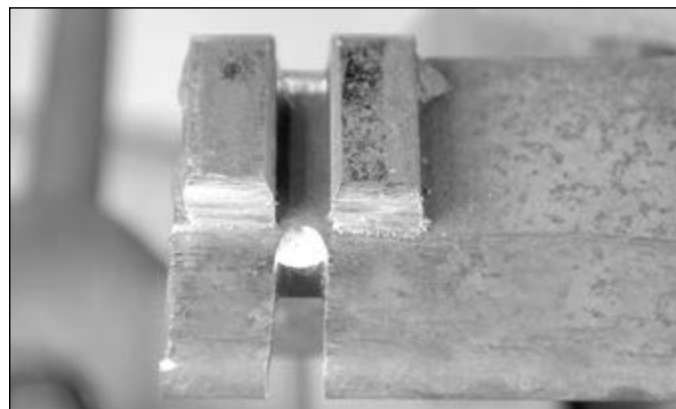
Don't worry about trimming the ends just yet.

As you will be working over a mandrel to forge the corners, you can trim the ends to suit as you are folding them in to the mandrel.

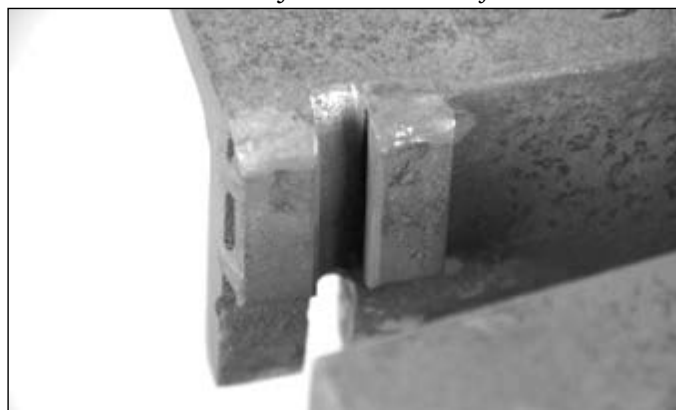
Waiting allows you to get the seam in the middle of the center stile.

In reality, I trim the ends to leave a 1/8-inch gap before forging the corners. This gap will be closed when you forge the corners over the mandrel.

This job is ideally suited to a smith and striker team, but as I stated earlier, I'm presuming that you're working alone. And, that you have some sort of jig created to assist you in bending the first two corners of the collar over.



One face of the bending jig with the cut-outs for the corner material [shown from beneath the jaws]



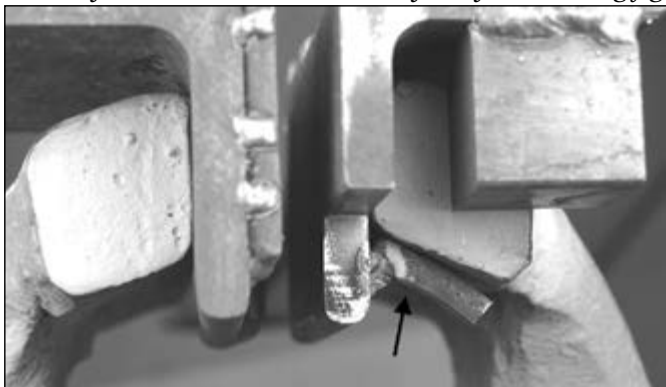
Tool shown from above the jaws



The collar material held against one side of the bending jig. Note the room for the corner material



The collar material with the center punch mark held 1/8" (half the thickness) above the surface of the bending jig



Tab to prevent the ensemble from rotating out of the vise during use. Note the cut-out of the angle iron

See end of this chapter for a more complete look at the bending jig that I use.

It is important that whatever jig you come up with to assist in making the bends of the collar, that it allows room for the increase in materials at the drawn-away corners.

At this stage, I want to look at some of the other tooling that will be required to forge the collar.

You will need a mandrel to forge the collar around, preventing the collar from collapsing.

A mandrel can be made from a series of bars welded together to create a bar of the correct size, or a single bar of the correct size.

I had a bar of the correct size on the shelf, but I wouldn't have run out and purchased that bar if I hadn't already had it on-hand. It's an expensive bar.

The important thing for me, as an aid to prevent or at least minimize frustration, is to taper the tip of the mandrel in such a way that it is easy to shed the collar to re-heat or cut the ends shorter.



The mandrel has a compound taper at the tip, and is slightly crowned facilitating the removal of the collar



The taper should be sufficiently long so that the collar falls off the end of the mandrel

To help prevent cracks at the inside of the square corners, I chamfer the corners of the mandrel in keeping with the chamfers on the corners of the scroll stock.

You will also need a top tool that fits your collar material, and a bottom swage that accommodates the bead of the collar.

The top tool should be short of a fit, allowing the bead to be slightly forged before the bottom of the tool contacts the back-strap.



The top tool fits the bead but doesn't touch the back-strap, allowing for the bead to be forged



The top tool helps form the corners of both the bead and the back-strap of the collar



You will sometimes use the top tool on one side of the bead or the other as you work up the collar

Ensure that all edges, inside and out, are chamfered to facilitate in the forging process without leaving cold shuts.

There are times when you will move the top tool one side of the bead or the other and treat the tool as a set hammer, with the [chamfered] outside edge resting against the edge of the bead.

Working with the collar material bottom swage now, as you form the corners, you will find that the collar gets pinched inside the edges of the tool after a few hits and will need dressing.

Certainly, not insurmountable, and it does have the advantage of centering the bead on the collar, but it can be frustrating at times, and the job will be frustrating enough.

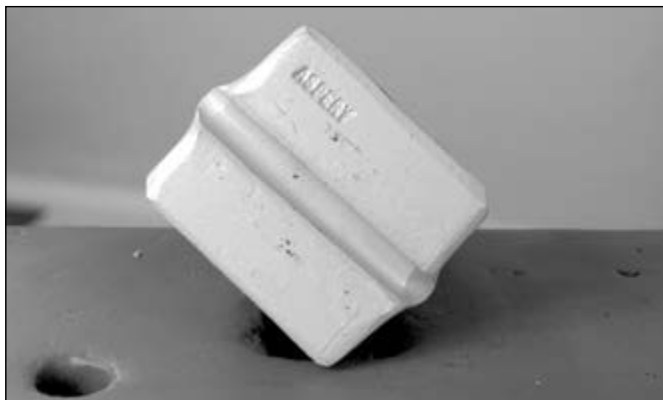
Using this method, I tend to get three or four good hits in before I need to dress the edges of the collar at the vise with my hot rasp if I use the collar material swage as a support when forging the corners of the collar.



If you use the collar material swage as a backing, the collar will get pinched between the edges as it spreads

You will have to take care of the growth in collar width regardless of the method used.

A faster for me method is to use a bottom swage that only features a depression for the bead of the collar, allowing the back-strap to grow in width as you work without getting stuck.



A simple bottom tool that allows room for the bead while allowing the back-strap of the collar to spread

To bend the collar to fit the mandrel, I use a purpose made jig that fits my vise (see end of chapter for full description).

I find a propane forge works well when forming and forging the collar, as it gives a nice even, heat without burning. Using propane, I find that I am a lot busier with my brush than I normally am.

The pivot points [center punch marks] of the bends are held above the top surface of the bending jig by half the thickness of the collar back-strap material, or 1/8-inch in this case.

I use either the purpose built top-tool or a hide mallet to make the bends in the collar stock.

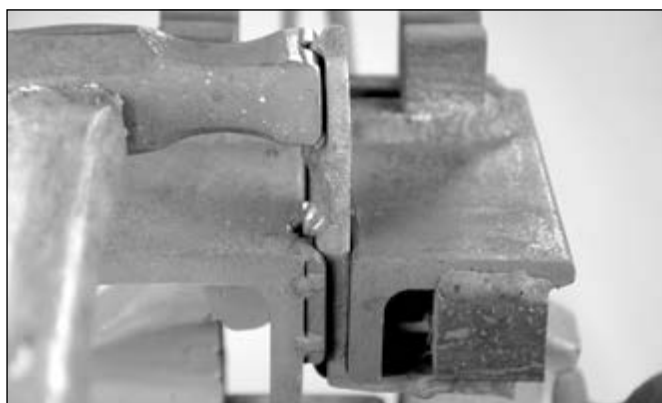
Rightly or wrongly, I wait until I have the ends turned before I trim them, as I don't want to trim away too much material, and not be able to recover. You will trim again due to stretch of the collar.



The jig forces the excess corner material out almost forming the square corner on the back-strap



A close up of the first bend



The cut in the angle iron of the jig positions the material ready for the second bend



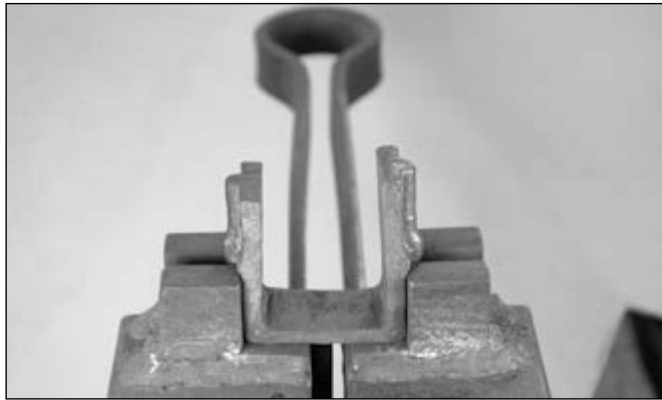
The center-punch mark is held half the thickness of the collar above the bending jig



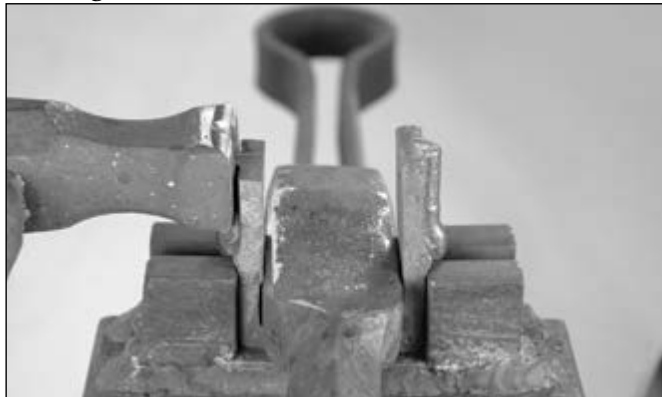
Dressing the second bend using the top tool

Typically, when bending over the two ends, I work across the bending jig, bringing the ends towards me. That means either swapping sides at the vise, or turning the collar around in the bending jig as I work the second end.

The collar, at this stage, can look a little rough. Trying to bend the thicker corners material while the thinner material next to it has the same heat can prove to be frustrating.



The bending jig captures the U-shaped collar constraining the lower corners



Topping up the heat, bend at least one of the ends into position, then allow to cool and trim the ends



Typically, I'm standing to the right in this picture, reaching over the tool to make the bend

The good news is that the collar takes shape quite quickly when forging over the mandrel.

I like to work the corners related to the front side of the collar before I start work on the two rear corners.

Some of the same rules apply to forging the collar as for forging an upset, square corner bend. Keep the centerline of the top tool inside of the internal edge of the material.



I don't usually meet a lot of success making this bend unless I change position or turn the collar around



I like to work the corners on what will be the front of the collar first. Some of the work is an upsetting action



Dressing the rear corners, note that I need to cut more of the ends away before they interfere with each other.

How you use the top tool varies as to which part of the collar you want to have an influence over as you work.

There are three moves, working on the offside edge of the back-strap, working on the nearside edge of the back-strap, and then working the bead and both edges together.

Working the back-strap material only can stand the bead material up a little, proud of the back-strap. This can be useful if you're needing a little more material in that area.

Set the jaws of your vise to be slightly wider apart than your mandrel. If you are having difficulty fitting the collar to the mandrel, you can support the collar on the jaws of the vise as you tap the mandrel into place. This isn't much of a blow, and I find that my tongs hold up just fine.

My mandrel is designed to be held in tongs, and I fit the reins of the tongs with a clip for security, so they are attached to the mandrel.

We are obliged to forge the corners to a 90°-angle now, because we are working over a mandrel. Hopefully, the chamfering of the mandrel's corners will go a long way in preventing any cracks from forming on the inside of the bend.

Work a little, swap sides or corners, and work a little more - while keeping an eye on the two ends to ensure that they don't interfere with each other. Trim the ends if they do.

Also keep your eye out for the collar racking [twisting] on the mandrel, it can happen.



Fitting the collar to the mandrel at the vise. My tongs [usually fitted] have been removed for clarity



Working the nearside edge. The edges of the tool are relieved to match the bead to back-strap transition



Working on the offside edge of the back-strap with the top tool.



This is the collar shown on the previous page taking shape. This is the end of the second heat

Hot rasp the edges at the end of a heat. You should see your center-punch marks disappear. While you're there, rasp all the faces.

With the bead standing proud of the back-strap, and stretched considerably when you bent the collar in the bending jig, the prospect of getting sharp corners on the bead is remote.

For a lower, wider bead, square corners can be attained using the methods described previously.

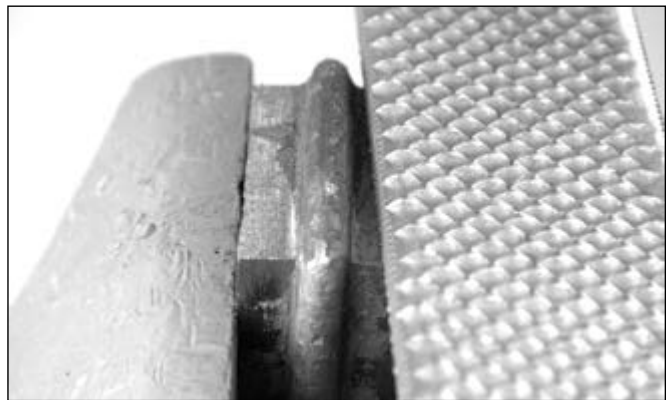
To chamfer the bead at the corners, I use a purpose build hand-tool.

Supporting the collar in the bending jig for stability dress the corners with the hand tool. If you don't have such a jig available to you, then work over the open jaws of the vise.

Work with the mandrel in place regardless of where you work, vise or bending jig.



I find that using rivet tongs are helpful when working with the collar. The ability to grab the bead can be key



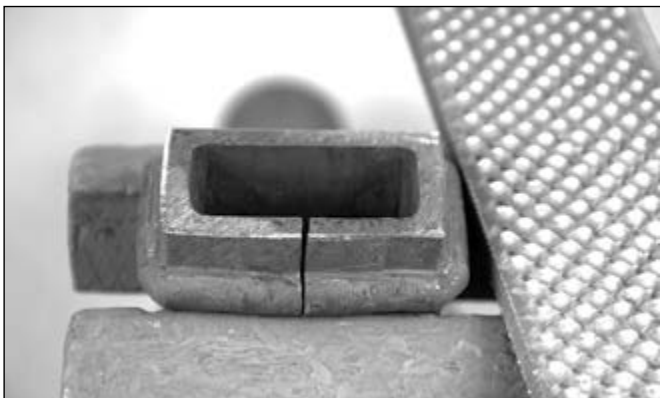
File the flat surfaces while you're at the vise



In this case the ends are interfering with each other before the corners are finished. Cut another gap



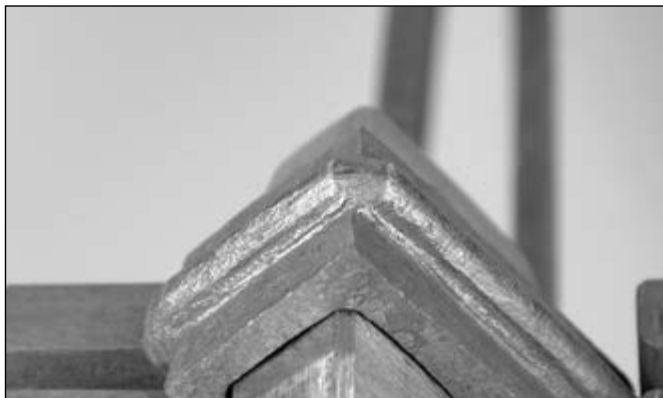
A look at the front of the collar after rasping the edges at the vise



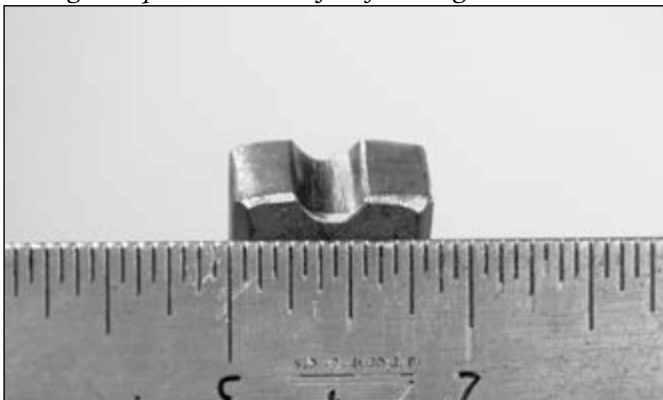
While waiting for the collar to cool, so that I can trim the ends, I hot rasp the top and bottom edges



With the collar supported in the bending jig, and using a dedicated tool, dress the corners of the collar



My tool has a shallow recess for the bead, preventing hitting the square corners before finishing with the bead



This is the working end of the hand tool that I use on the collar



Use scrolling tongs to open the collar, don't open the gap much more than 1-inch, as it's hard to close later.



Check that the mandrel will fit in through the opening. If the mandrel fits, so will the grille

The hand tool shown has a rectangular end with a shallow recess for the bead. And yes, the rectangular face can obscure your vision in some circumstances, but it means that the tool can be used on the flat surface of the back-strap if you need to, without leaving marks.

My bead recess measures a strong $\frac{1}{8}$ -inch deep. Don't forget to relieve all edges.

Once the collar has been forged and filed to your liking, it's time to take a general heat, and open the collar (carefully) to accept the grille.

I use a pair of scrolling tongs for this, with the jaws inside the collar on the open side corners.

Don't open the collar too much more than 1-inch, until you check for fit with the mandrel. Getting the collar closed can cause damage, so the less work that you need to do later, the better.

Fixes:

I have had occasions where forging the collar didn't go as swimmingly as I was wanting at the time (read British understatement). A corner may have bent in the wrong place, or I dinged a corner as I was trying to accomplish something else.

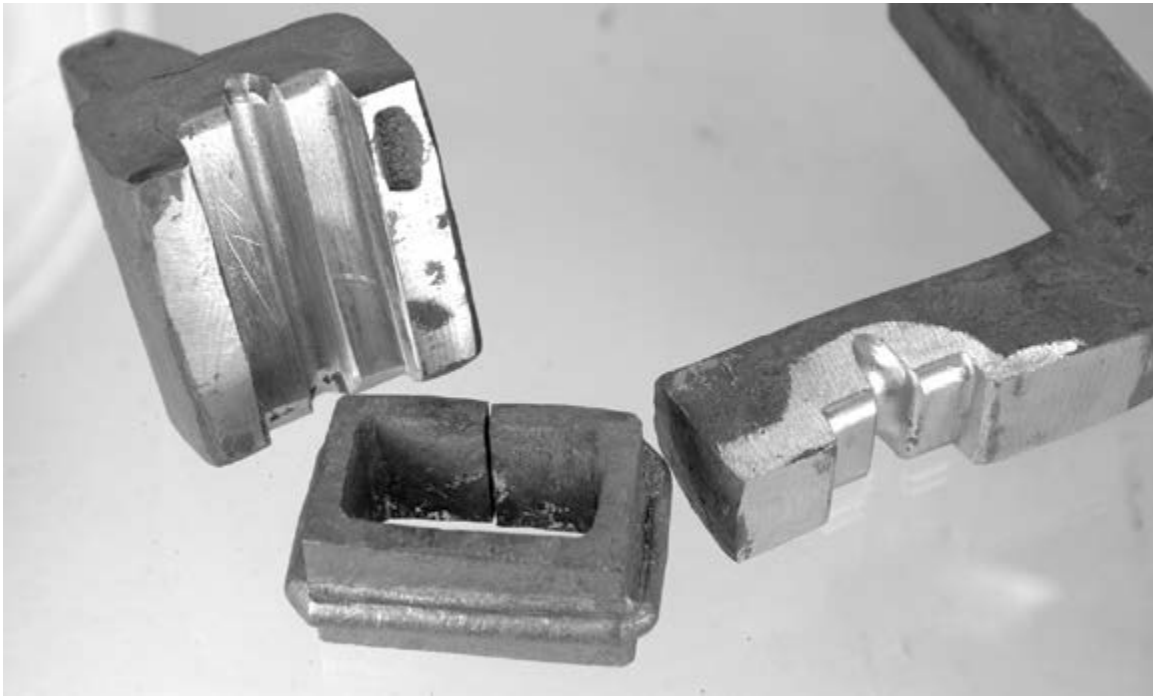
Many these issues can be fixed with a hot-rasp at the vise.

Dress the top and bottom sides to flat and parallel first, then grip the collar between the jaws of the vise and rasp the flats of the offending sides either side of the bead.

This may even be desirable even when you aren't fixing errors, as it dresses the surfaces of the collar, and gets rid of any pitting caused by scaling.

Mark Aspery is a CBA Education Team member and regularly contributes to CBA training events.

Check out his books at markaspery.com.



This lengthy article on one small part of the National Curriculum Grille (the collar) is reprinted with permission from Mark Aspery. There is more work to this piece than with the previous method but the grille project is about skill building so this is an added opportunity if you choose to use it.

The next article will wrap up this series with overall assembly of the grille. - Editor

ABANA Affiliate Newsletter - February 2022

Artist-Blacksmith's Association of North America
47 Walnut Street, Suite 200
Johnstown, PA 15901-1521

2022 ABANA Conference

ABANA's 2022 Conference registration is now open. Please join us for what will be an outstanding event May 11 – 14 2022 in Denton Texas!



30th Annual Ozark Conference

30th Annual
Ozark Conference
April 28th - May 1st , 2022
Missouri State Fairgrounds
Sedalia, MO
pre-registration must be postmarked by April 1st

We will meet again at the Missouri State Fairgrounds (MSF) in Sedalia, MO. Located just 19 miles South of I-70 on US-65 at the junction of US-65 & US-50.

Don't forget our traditional fund raisers: Benefit Auction, Raffle, and BAM Boutique—as these are BAM's major source of income for the year. Items deemed to be valued at more than \$25 should be donated to the Auction.

Please be courteous to our instructors and fellow attendees by keeping your personal conversations outside the demo areas and remain seated so that others are able to see.

Due to safety concerns, safety glasses are required at all events. Please keep a safe distance from forges and demonstrators unless invited to move closer.

Thank You.

Conference Committee

Questions?

Contact:

Mike Gorzel

(636) 336-6347

mo.blacksmith.conference@gmail.com

Sites are still free to registered participants in designated areas.

Vendor spaces will be assigned and tables will be available from the Fairgrounds at \$8 / table. To make arrangements please contact:

Karen Bouckaert

1-636-673-1996

ABANA Affiliate Newsletter (Continued...)

ABANA Mission Statement

The Artist-Blacksmith's Association of North America (ABANA) is dedicated to perpetuating the noble art of blacksmithing. A blacksmith is one who shapes and forges iron with hammer and anvil. ABANA encourages and facilitates the training of blacksmiths; disseminates information about sources of material and equipment; exposes the art of blacksmithing to the public; serves as a center of information about blacksmithing for the general public, architects, interior designers, and other interested parties.

Affiliates!!!!!!!

Submit your stories or pictures to be displayed in the Affiliate Newsletter or potentially the Hammers Blow or Anvils Ring. Email submissions to ironcloverforge@gmail.com
Kind regards,

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Jerry Boyd

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For Sale: Coal Forge - \$300 OBO

Very nice heavy duty forge with removable hood. No blower.

33" Tall, 32" Wide, 33" Deep

Contact: Mark Carter (Before 10:00 PM) at 405-613-5215



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For Sale:

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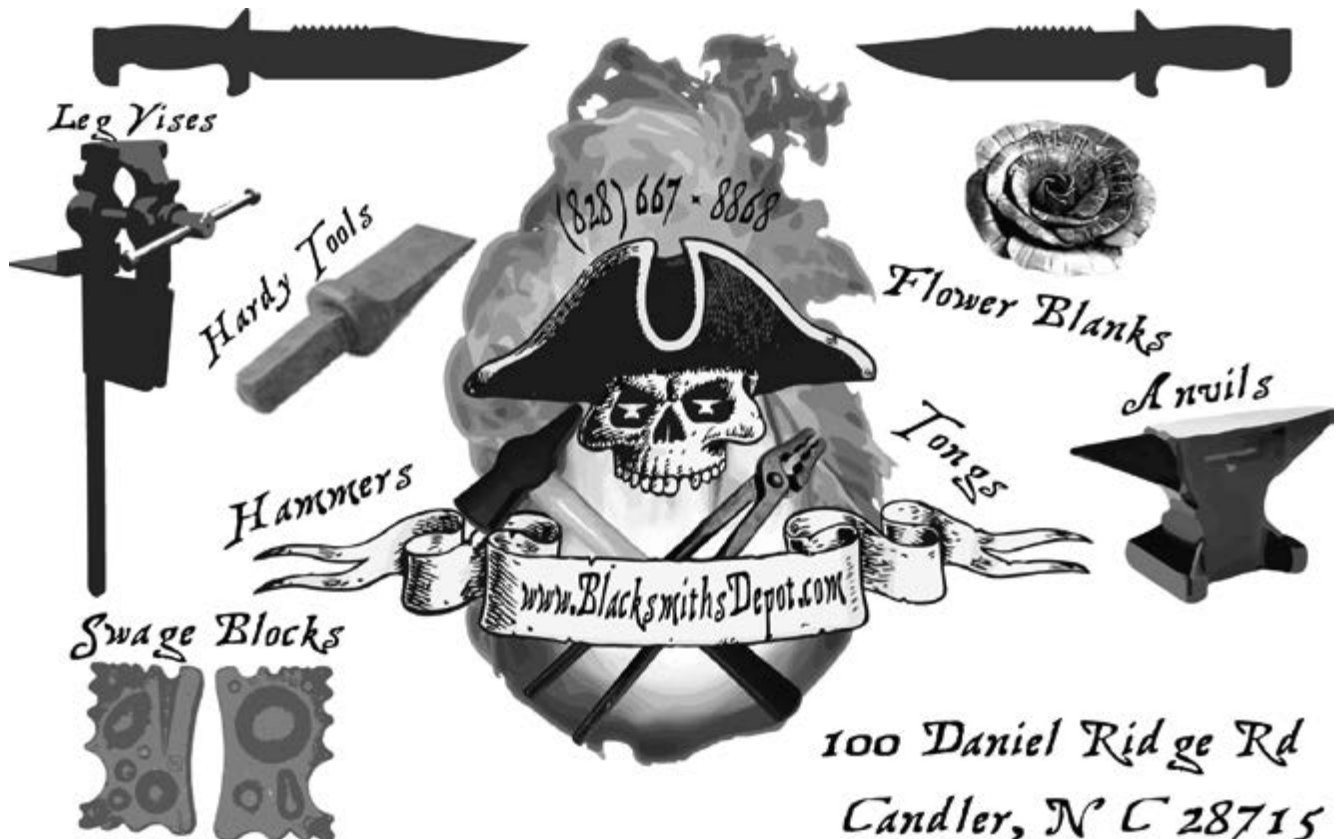
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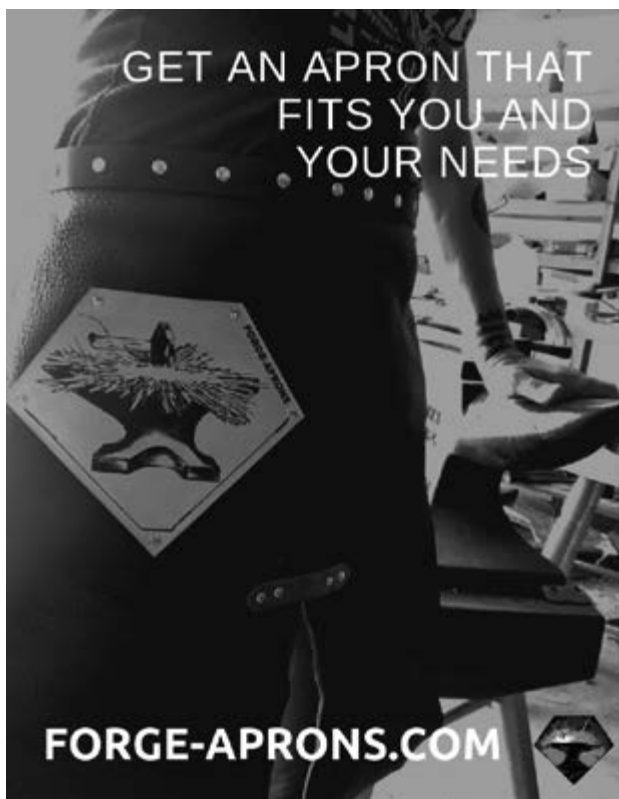
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Don Garner: 580-302-1845

(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

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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
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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.

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SCABA Shop and Swap

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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 (\$.15 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. \$5.00 (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 _____

Newsletter Preference:

☐ No Print Copy

☐ E-mail Alerts for New Newsletters

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

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