New Jersey Blacksmiths Association
"EAGLE"

N.J.B.A.

NJBA Volume 28, Issue 2 06/06/25
.http://www.njblacksmiths.org

NJBA Future

We need members to step up and help take NJBA into the future. Just because others have been doing it doesn't mean that they have the jobs for life. When NJBA started there more people wanting to be involved and the work load was much lighter. A few members stepping up to help can keep NJBA here. It cannot always be expected that someone else will do it or that everything should be free. Sometimes you have to work to make thing happen. Years ago we held more meets and workshops because people were involved in making the events happen, many hands made light work, being involved can be rewarding!

If you want to be a director, have ideas for a meet, a meet location or a workshop, step forward and talk or contact one of the directors.

NJBA Offical Address Change!
Our Address is now:
NJBA, 663 Casino Drive
Howell, NJ 07731

NJBA dues have changed!
The dues are now $30 a year, please renew as soon as possible to help NJBA continue!

Upcoming Events

NJBA June Picnic!

Saturday, June 28th, Rain or Shine
Marshalls Shop, 663 Casino Drive, HowelI

In case of rain, the picnic will be held in Marshalls pole barn -- which worked well for the Holiday party last December.
Set-up will be at 9 AM, with the activities to begin at 10 AM. Plan to show up at 9 AM if you can help with set-up.
There will be impromptu demonstrations at the forges (indoors or out) as we have quite a number of talented blacksmiths in our membership.
It will be a pot-luck, so plan to bring a dish to share. Hamburgers and hot dogs will be provided by NJBA.
There will be an Iron in the hat (Chinese auction) so plan to bring something to donate. (There are already a number of donations from a former member.)
There might be an auction of higher-value items, including a leg vise and a band saw to be determined.
Weather cooperating at all (and light rain notwithstanding) we'll set up some or all of the portable forges outside the shop for an open forge meet.
Since dues -- now $30/year -- are now due for 2025-2026 in June, you may bring them to the meeting.
(We shouldn't have to say that spouses, significant others, or dates are welcome to attend as well.)
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NJBA Board of Directors

NJBA Directors are not shown online

New Jersey Blacksmiths Newsletter
CHANGE OF ADDRESS!
Official NJBA Address
NJBA, 663 Casino Drive, Howell, NJ 07731

NJBA's Website:
http://www.njblacksmiths.org
NJBA's Facebook Page:
https://www.facebook.com/njblacksmiths/

Open Forge Meets

Anyone 18 years or older is welcome to try their hand one time at our open forge meets. NJBA members may participate any time the forge is open. (The application form is on the last page of this newsletter)
Monday Night Open Forge, Howell, NJ
NJBA Director Marshall Bienstock hosts an open forge meet every Monday evening at 7 PM, except major holidays. (Please call ahead on holidays to make sure the forge will be open.) 732-221-3015

Participation in Hands-On Events

Participation in NJBA-sponsored hands-on events is limited to adults (i.e., 18 years or older).
This rule was effected as of December 2016, when NJBA was having problems with its insurance coverage (which has since re-placed).
This policy applies to workshops, open forge meets, demonstrations, etc.
This policy does not apply to open forge meets and similar events that are sponsored by youth-oriented organizations such as scouts or schools with the aid of NJBA equipment and members.

NJBA Newsletter:

njblacksmiths.org/archive/index.htm
or use the link on the NJBA web site for the current newsletter.

Heart Hook With a Ball

By Steve Alling, a MABA member

The Achilles heel of this project is the problem of the two different sizes where the ball and the hook meet. If you're not careful it will crack at that joint. So, this is the process I followed to try and stress that joint the least.

1) Mark the stock out.

2) Put in the off set to start the ball end. Don't make this neck too thin, when the ball is being formed it will naturally thin.

3) Split the heart. Open up the sides and file any rag off. After you have cleaned up the cut, bring the two legs back together so you have a good place to hold when it comes time to form the ball. I notice a lot of people start with the file 90 degrees to the surface when they file these sharp edges. This makes the sharp edge catch in between the teeth of the file. So start on any sharp edge like this or corners by lowering the file closer to parallel to the surface, and as you push the file forward raise your hand. That way you won't end up with that chattery beginning.

4) Start the ball, this is where a lot of smiths get into trouble. They end up flexing this joint too much by not having the part under the hammer directly over the anvil. This is basically squishing the metal into a ball. The cold shuts won't affect the finish ball. This is where that old adage that the hammer hand is the brawn and the tong hand is the brains. Because you'll be raising and lowering the tong hand and also turning it side to side.

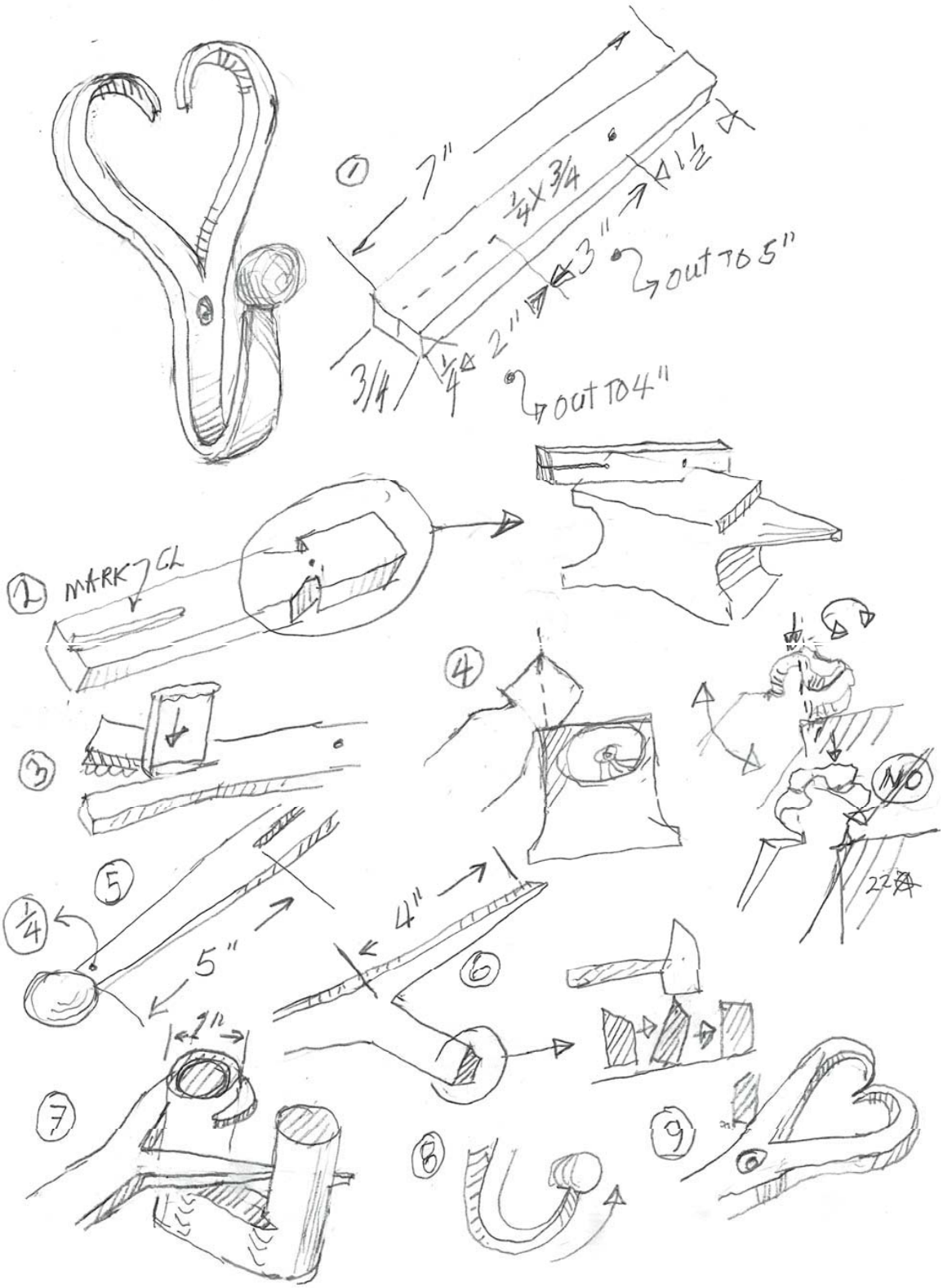
5) Draw out the hook. Here you want to be careful you don't stress the joint between the forging and the ball.

6) Draw out the sides of the heart. You can hold the work with a pair of bolt tongs, that way you won't put stress on the ball joint. These legs will have a angle side left from splitting. When you start forging you want to angle the sharp end up so you can square up the work, then you don't end up with a trapezoid.

7) I added a 1 inch OD (3/4 ID) piece of pipe to one leg of my bending fork which made a convenient size for the heart. When the two legs have been shaped, if they don't meet in the middle they can be tapped together.

8) Bend the hook for the ball.

9) Drill and countersink for hardware


1
7"
¼ X ¾
1½
3"
OUT TO 5"
3/4
¼
2"
OUT TO 4"
2 MARK CL
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4
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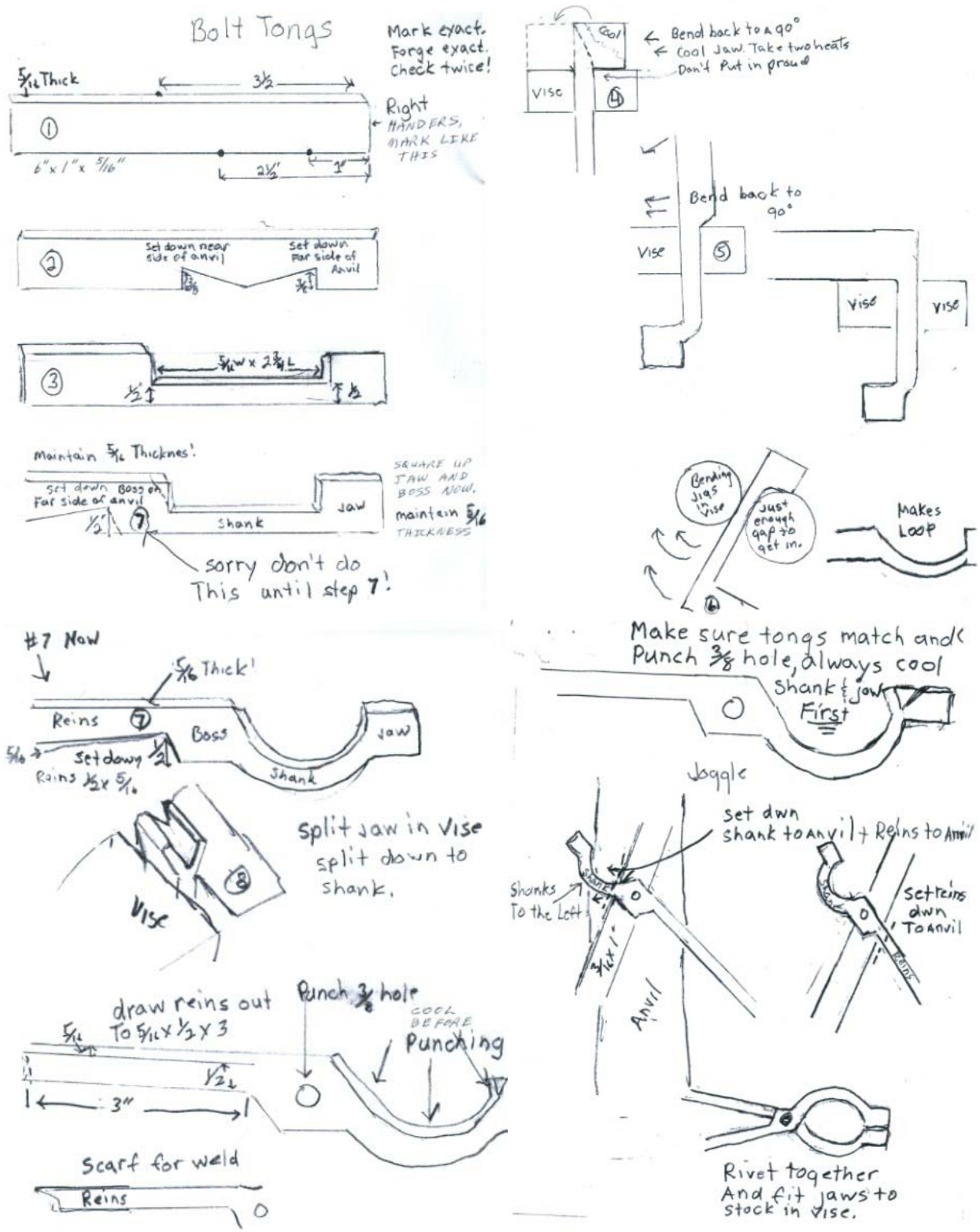
22°
5
¼
5"
4"
6
7
8
9


Bolt Tongs
Mark exact.
Forge exact.
Check twice!
5/16 Thick
3½
Right
HANDERS,
MARK LIKE
THIS
6" x 1" x 5/16"
2½"
1"
Set down near side of anvil
Set down far side of Anvil
5/16 W x 2¾ L
½"
½
Maintain 5/16 Thickness!
Set down Boss on Far side of anvil
½"
7
Shank
Jaw
SQUARE UP JAW AND BOSS NOW.
maintain 5/16 THICKNESS
sorry don't do This until step 7!
Cool
Bend back to a 90°
Cool Jaw. Take two heats
Don't Put in prawl
Vise
4
Bend back to 90°
Vise
5
Vise
Vise
Bending Jigs in Vise
Just enough gap to get in.
Makes Loop
4
#7 Now
5/16 Thick!
Reins
7
Boss
Jaw
Shank
5/16
Set down ½
Reins ½ x 5/16
Make sure tongs match and
Punch 3/8 hole, always cool
Shank & jaw
First
Joggle
Split jaw in Vise
split down to
shank.
8
Vise
set dwn
shank to Anvil + Reins to Anvil
Shanks
To the Left
Set reins
dwn
To Anvil
Anvil
draw reins out
To 5/16 x ½ x 3
5/16
½
3"
Punch 3/8 hole
COOL
BEFORE
Punching
Scarf for weld
Reins
Rivet together
And fit jaws to
stock in Vise.

Big Jobs Out of Little Jobs

How to Approach Larger Work

By John Crouchet

With the weather finally cooling off, I am headed back to the shop, like most of you. I am trying hard to remember what jobs I have promised to do and where I left the parts for those jobs, all extremely overdue at this point! As I separate the parts, however, there is one important thing I always remind myself:

There are no big jobs.

That's right. Everything is a small job. Even the largest blacksmithing job I ever worked on was just a series of small jobs. I try to remember that and I try not to be intimidated by the "big" jobs ahead of me. Something that we might all consider "a fair sized piece of work", like a set of courtyard gates, is only a collection of frames, scrolls, crossbars, hinges, and latches. None of those are frightening or impossible, one at a time. The trick is just to break it down into that one-at-a-time. Here is how I start:

1. **List the major steps to completion.** This is an exercise in thinking. Consider how the work must progress in order to maintain a piece that is level, square, and true, start to finish. Write it all down. Start filling it in, adding steps as you go. Properly prepared, this document will absolutely lead you through your job.
2. **Build frames first.** Anything that needs a frame, such as gates, pot racks, doorways, fireplace screens, etc. will need the frame built **first** because the rest of the construction needs that frame in place in order to remain true, square, and level. Take the time to insure the frame corners are truly square, the lengths of frame members are exact, and the frame sits level in any direction. Measure across the diagonals of the frame to make sure. If the diagonal measurements from corner to corner are not identical, something is wrong and out of square. Stop now and correct any problem because it will only cause you more and more grief as the job progresses.
3. **Build jigs.** Any large job is likely to have repeating elements, such as scrolls or curves. Take the time **at the start** to build a jig for each of those elements and you will save a lot of time and effort, as well as insuring that your elements will match well visually and, best of all, will fit inside the frame as they are supposed to!
4. Next, I would usually begin to **make the elements** from those shiny new jigs, working out any problems as I go. I always make a few extra of each element because iron is cheap and screw ups are expensive!
5. I next take my new elements and begin to **fit them to the frame**, modifying anything that needs filing, tweaking, or twisting as I go. When you see a problem, fix it early to insure that the work stays true as you build. This is the stage where I weld, rivet, attach, and screw things together, always continually checking the frame and my original plans to make sure I am where I am supposed to be.
6. **Build and fit the hardware.** This is the point at which I make the handles, hinges, latches, etc. for the project. You might wonder why I did not do this step right after building the frame. Experience has taught me (the hard way) that those handles, hinges, etc. will be in the way during all that previous construction. They prevent the frame from lying flat on my fabrication table and they are always in the way when I need to rivet or weld. Just hold off and do them later. You will be glad you did. A note: Hinges are always last. They must hang true in order to keep the gate (or door) square to it's opening. That means absolutely straight and level. I like to set up

the gate on blocks inside its actual opening, making certain that it is level and happy, with room to swing and side supports ready to go. Then I carefully clamp my finished hinges in place and lightly tack weld them to the frame. Next, I — very carefully — take the gate back to my shop to make the final attachment of the hinges to the frame. The last thing I do is to file or cut away the tack welds.

Finish out. Construction is finished. Now is the time to honor all that hard work by doing an excellent job on finishing. Dorothy Stiegler taught me that finishing will occupy about one third of your construction time. I like to keep mine simple. Frankly, I have never had good luck with any outdoor finish except good old enamel, carefully applied with a good primer. I like to use dark metal colors such as black or a bronze brownish color or something similar. Brighter colors just seem to draw attention to the paint, rather than the ironwork. For interiors, my favorite (and my clients' favorite) is still a waxed finish over clear satin acrylic with a carefully wire wheeled base. If I am putting temper colors over the interior piece, I use the wax finish over a gloss acrylic so that the colors are not muted.

8. **Congratulations!** You are done! I keep my blacksmithing books close at hand while I work because I don't know nearly as much as my clients think I do. Mark Aspery's series will answer a lot of questions as you go. Always make test pieces. **ALWAYS** make test pieces. You are **NOT** saving time by skipping the test pieces. My scrap bucket is full of embarrassingly poor test pieces that saved me from revealing my bad work in public. I build the test piece, fix what I screwed up, build another, fix the screw-ups on that one, etc., etc., until one finally emerges that I am willing to show to the public. As far as they know, that excellent final piece is how all my work looks! Then I quickly build the others while I still remember exactly how I built the first one! That is most of what I know. It has served me well. May it do you good.

Shop tips by Herb Gravitt

AABC Newsletter 2025

Failure Points On Coil Springs

Many of us use 5160 steel for tools although some might question it being a true tool steel. Another problem that presents itself when using coil springs is the number of compression cycles that the coil spring has experienced creating micro fractures that result in a potential failure mechanism after forging your tool. I gained a some insight on the coil spring failures when talking to the Shop Manager at the Tennessee Valley Railroad Museum. From his experiences working on rail car coil spring failures over the years they occur in the first 1 1/2 turns of the coil spring. There is no data involved just years of experience and observation. I found this really interesting, interesting enough that I will not use this section of a coil spring regardless of what type of vehicle the coil spring was used on. If you consider this information viable, hopefully it will give you a more successful result.

Scrolling on the Diamond

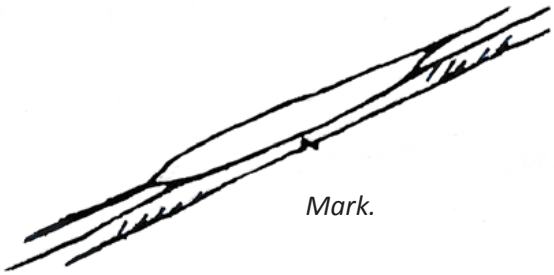
by Walt Hull

Scrolls never seem to go away. You see scrolls or related curves in modern as well as traditional iron work and on the sides of hotrods and Peterbuilts because they are an obvious and natural answer to the problem of what to do with the end of a line: curl it down to a theoretical vanishing point. A look I've been working with lately is the scroll on the diamond. The shadows on the stock set off the curve dramatically:

Branching scrolls are visually interesting because they demonstrate that just because you know where a curve has been doesn't mean you know where it's going. Remember that the next time someone gives you "the" mathematical formula for scrolls:

If you split square stock on the diamond you get two pieces with triangular cross-section. To get two branches with diamond cross-section, you have to put them together. Here's an example: cut a piece of 1/2" square bar 16 1/4" long. Mark with a chisel at 8 1/4" from one end and draw each end to 1/4" square, so that one end is 1'-0" from the mark and the other 1'-1" from the mark. Flatten each end on the diamond thus:

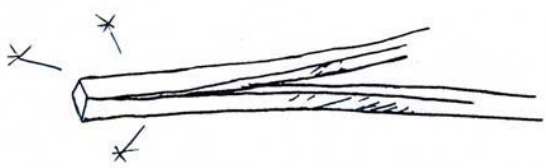
At the chisel mark, lay the piece in a V-block and flatten one side (on the diamond) for about 1" either side of the mark: *Hammer here.*

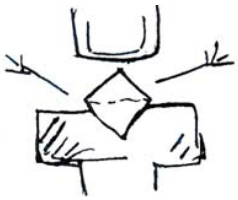


Mark.

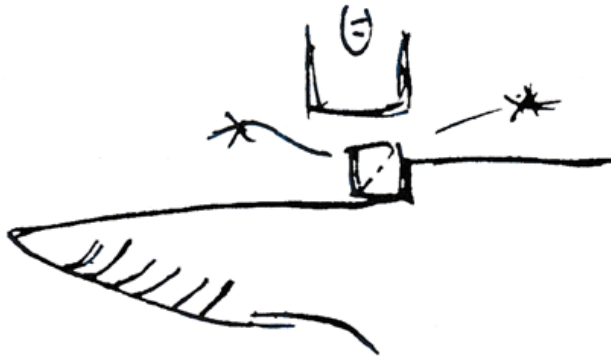
I also like to break the corners slightly with the hammer the full length of the stock for two reasons: I like the look, and if it is necessary to strike the corner in forming or leveling the scroll it won't show as a ding in an otherwise sharp corner.

Now chisel in at the mark and fold the two flats





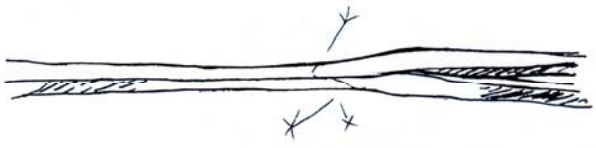
When I weld these I first tap them a couple of times in the V-block to get them stuck and then move to the step and weld on the square:



Once you've done a few you'll find it easy to move to the face and scarf in the same heat. Ignore the fact that the branches are on the diamond, and scarf on the square:

Taper and scarf a piece of 5/8" square to match (work on the square – don't let that diamond stuff confuse you at this point) and weld on your other piece.

You should end up with this:

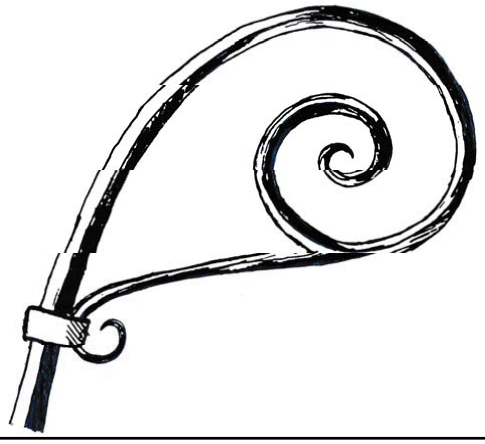


Work this transition smooth at weld heat.

Now you can scroll. Note that you have 2 choices as to how you branch:
Actually, you have to decide clear back there

where you flatten the ends, because the flat must lie at 90 to the plane of the scroll.

Scroll the long branch first then the other, and then the common part. Be especially careful at the part where they join, lest you get a kink where the thicker material provides greater resistance. Work hot, it is much easier to do this on a form. If you don't have a form for the scroll you want, make it. Use a scrolling wrench to pull the material tight to the form. Be careful to stay on the diamond. Twist is easier to prevent than to correct. Here's what I ended up with, but the possibilities are literally infinite.



Reprinted from the September-October 1997 BAM newsletter and MABA newsletter, JAN/FEB 23

HB

Forging and Twisting Triangular Barstock

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

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

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

First Tooling

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

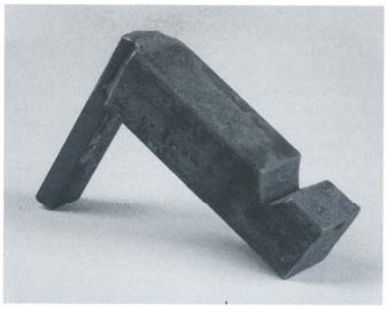


Image #1

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

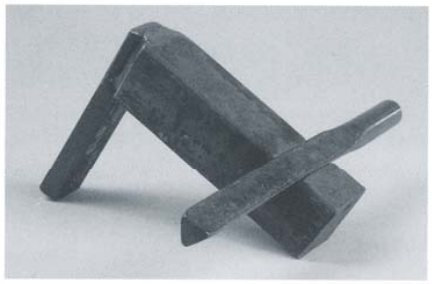


Image #2

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

Image #3

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

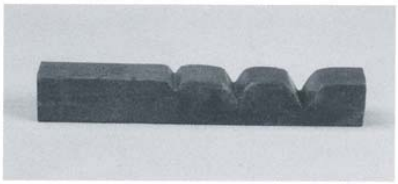


Image #4

More Tooling

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

Image #5

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

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

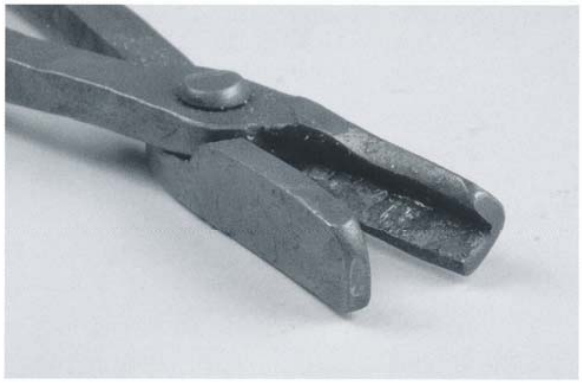


Image #6

Language/terminology/twisting

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

Image #7

Applications

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

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

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

Challenge

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

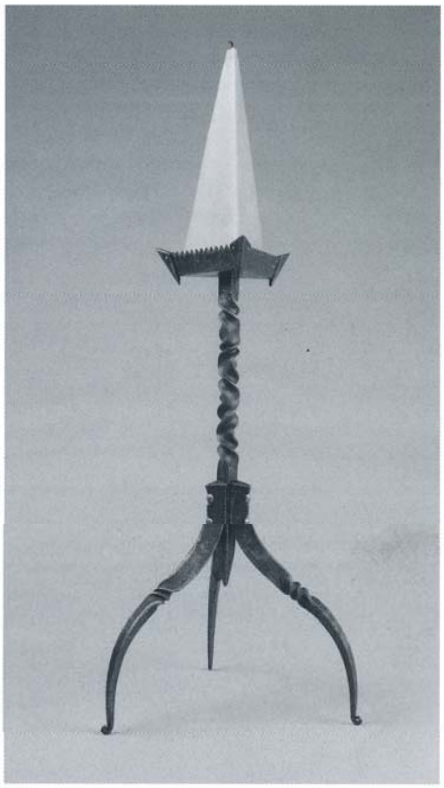
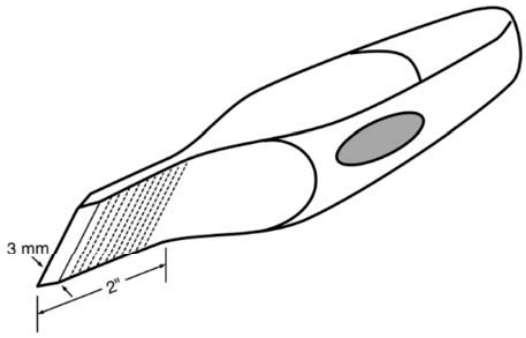


Image #8: Candle stand, by Travis Fleming. 16" x 7" . Travis also made the candle mold so a friend could pour a beeswax triangle candle for it.

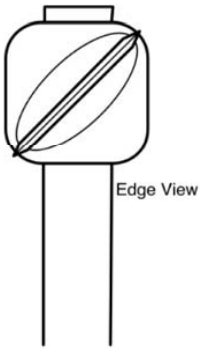
Sculptural Technique: Split Bar

Flavio Parra, Santiago, Chile

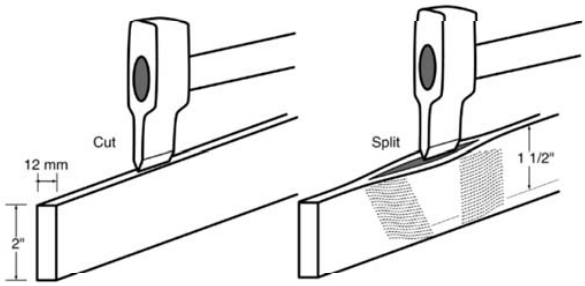
First: forge a "hammer chisel." The material is 1 ½" round 4140. Size your material to have enough to fit a 1" handle, with a 2" blade.



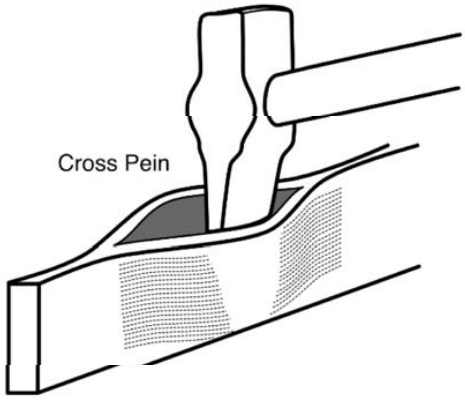
The blade is offset at 45° to the handle axis.



The template (or concept) for the process is to drive the hammer chisel into the narrow side of a piece of ½" x 2" rectangular bar. This will cut a tall, narrow slot part way through the bar (to a depth of 1 ½").



Next, open up, widen, and deepen the split.

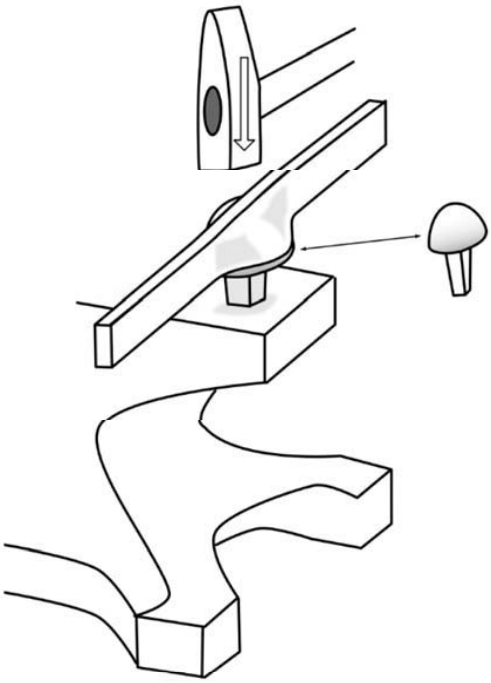


Flavio said that he was inspired to try this by the Stenico demonstrations at Spring Conference *2019*.

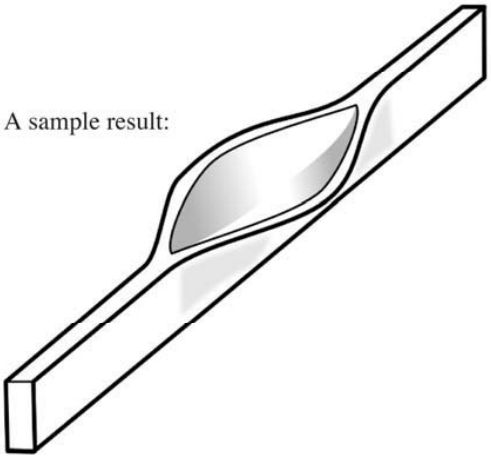
Editor's Note: As part of compiling this article, I gave this a try. Some thoughts based on my experiences:

-Working alone, in my shop, I found it difficult to hold the workpiece. I had to make up a special jig to keep the workpiece still.
-Watch out for the split chisel drifting off to the side.

Spread and widen over a mushroom stake.



A sample result:



Split-Bar Sculptures By Flavio

This article originally appeared in the California Blacksmith September/October 2022 and Jan/Feb MABA

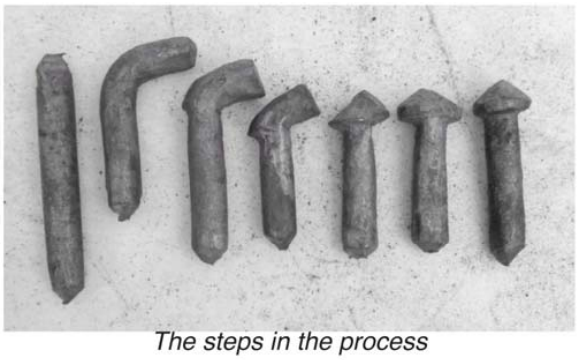
The Hockey Stick Rivet Method

Erin Simmons, Shingle Springs

As Demonstrated at
Hard Rock Hammer-In 2018

Create a forged rivet from rod stock. Erin showed this process at the Hard Rock Hammer-In 2018.

Erin said that this process works for rivets down to about 5/16" diameter - if smaller (e.g. ¼") the stock gets too twisty.

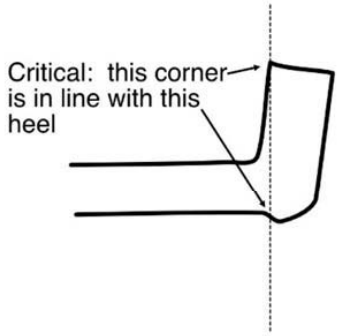


The steps in the process

Stock: round stock, your choice of size. (But, at least 5/16", as noted above).

1. Get it hot, then bend to a little less than 90°

2. Hammer the end down a little bit, over a soft far edge. Roll the stock a bit while hammering.



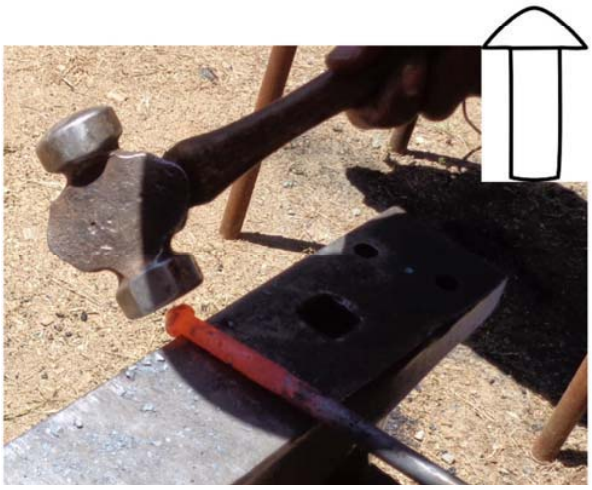
3. Re-heat, then work over a soft far edge to start a mushroom.

Hockey Stick Rivet

4, Start building the shoulder circumference.

You're kinda making the end into an oversize ball at this point.

5. Hit while rolling to form the head. Hammer at a steep angle, to form a somewhat conical head, and build the shoulders. Rolling while hammering helps keep the head even.



6. Make kind of a side chamfer all around, then complete the shoulder.

7. Clean up the underside on a sharp corner of the anvil, using light taps.

Erin said that he normally does this process in 3 heats:

(1) hockey stick
(2) set down
(3) clean

Note: if the shank is not round, true up in a top/bottom swage.

From the California Blacksmith May/June 2022 and the Jan/Feb 24 MABA Newsletter

I Can Make One Alike

By Steve Alford

Uncle Bill Richardson used to say "I can make one alike". Then he'd explain that if someone asks you to make two wall sconces, you really need to know where they're going to hang. If they're going to be on either side of a door, making them "the same" is a lot more challenging than if one will be by the front door and one by the back door. I've been thinking on Bill's remark through several recent projects. I believe there are at least four "levels" of difficulty when it comes to making more than one alike:

1. Make one well. The first challenge is just to make one item well, that is, with good hammer control producing an even finish, smooth straight tapers, graceful curves, solid joinery, and so on. Good basic craftsmanship.

2. Make another one (or more) the same as the first. "Same" might be defined by the eye of the smith, or by a customer or, um, significant other. A good, basic, practical exercise might be making tongs. The more "the same" you can make the two sides, the easier it will be to put them together and have them fit well!

3. Make "mirror images" - left and right or front and back. This adds another degree of concentration as you have to remember to do certain operations "the other way" but still the same. You may find that some moves are just easier when you're going one way or the other, but you still have to make them come out looking like they were meant to be together.

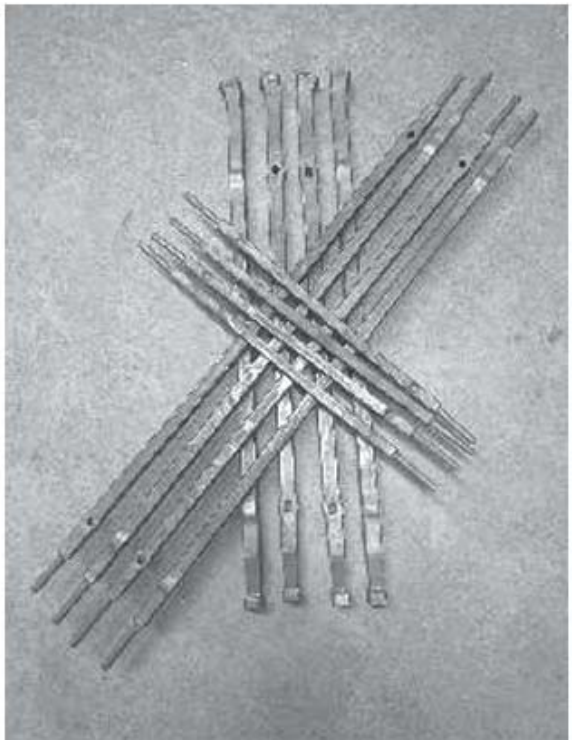
4. Make them like a drawing. You don't start out with a finished piece to compare, but with a drawing on paper.

Top: Several sets of tongs.
Above: My version of the element from page 75 of *Samuel Yellin Metalworker.*
Facing Page: Parts for an end table. All required making more than one alike, and sometimes mirror images.

The drawing may include dimensions and require that you forge within some tolerance.

The easy-to-say trick for making multiples is to start with identical blanks – the same length of the same size stock for each piece you need - and then do the same operations to each piece.

Rather than starting with the first piece and taking it all the way to completion, do the first operation to every piece, and then do the second operation, and so on. If making half a dozen S-hooks, for example, start with half a dozen pieces of stock all the same length, and draw the tapers on all six. Then go back and bend the hooks on one end of all six pieces, and finally bend the hooks on the other end of all six pieces.



How To Make a Wheat Pattern Steel Handle

Demonstration by Gary Gloden; Text &Photos by Jim Carothers

Long time Saltfork Craftsmen ABA member Gary Gloden demonstrated how he makes a “wheat pattern” steel handle for various tools such as fireplace or forge tools. These handles not only look good, but also have a nice solid feel in your hand and will add value to the pieces you make.

The starting stock Gary used was 1/4” round bar.

Cut four pieces 14” long. For each bar, find the center, heat locally, and bend the bar back double on itself at the center. Lightly hammer the bent end closed.

Take a good even heat. The key words here are “even heat” so that you get a uni-form twist in the stock. Clamp about 1” of the free (cut) ends of the now bent bar in the vise. Using a twisting wrench, grip the stock about 1” to 1-1/4” in from the folded end. Twist the bars an even number of turns; in this case it was four (4) full turns.

Note: Thoroughly wire brush right after the twisting is complete and while the stock is still hot. This helps to get the scale out before the full wheat pattern is made. After the handle is made it will be hard to get the scale out.

Twist two of the doubled over bars counterclockwise (right hand twist) facing the end of the vise.

Twist the remaining two doubled over bars clockwise (left hand twist) facing the end of the vise. It is important that each of the bars be gripped in nearly the same area and twisted the same number of turns. The only differences should be the rotational direction of the twists.

Pair up the "right hand" and "left hand" twisted stock as shown to form halves of the wheat pattern. Look at the parts in this photo carefully. When these "pairs" are put together they must again match up to right to left to make the wheat pattern. Double-check your pairings, and using an electric welder, tack weld the "pairs" together.

Tack weld the two pairs together to form the square wheat pattern in the handle. Alternately you could tie the four loose parts together with heavy wire and hold them aligned with specialty tongs for forge welding first one end then the other.

Trim off the ragged ends of the doubled over bars so that they will all be the same length; Gary used a chop saw. Forge weld the four bars in this end together and scarf for welding on the handle. In this demonstration, the handle stock was 1/2" square bar. Forge weld on the handle stock next. This will give you a good piece to hold onto while working the other end of the wheat pattern – you won't have to use tongs this way.

Forge weld together the pieces (loops) in the top end of the wheat pattern handle and draw this section out.

Note: After the forge welding was complete, Gary put a small fullered groove just above the "wheat pat-tern". This simple detail really makes the handle stand out nicely from the loop eye end.

Continue to draw out the end and form a Shepard's crook, loop eye, or other end detail. Wire brush hot and finish with your favorite wax, olive oil, or other surface preservative. This photo is of a campfire coffee pot tipper with a wheat pattern steel handle made from these notes.

Tooling tips with Bob Patrick

Drilling Jig for the drill press.

Most of you are familiar with using a steel channel to drill on instead of using a wooden block or clamping in a vise. Francis Whitaker introduced this to blacksmiths some time ago. When you drill on a block of wood the shavings collect on the surface and as holes drill into the wood it becomes harder to do accurate drilling. Francis introduced using a steel channel to drill over, which works well, allows a lot of holes before too many drill turnings accumulate, The problem I found was drilling small holes. I made this jig a long time ago and it consisted of a 1/4" plate with two 1/4"x 1" pieces about 3 " long welded to the plate in a V. This is handy as small holes can be drilled easily I have 2 lugs welded to the bottom that go through the slots in my drill press table that secure it and accurately locate it. By rotating and moving the table I center the drill in the width of the V I want to drill in, tighten the drill press table and I then drill as many holes as I need. When drill shavings accumulate I simply lift it and dump the shavings, and the jig is easily returned to the same position by putting it in the slots. I made this quite some time ago and have never had to make another.

Bending forks for sharp bends.

These are made of either grader blade or spring steel. One is for clamping in a vise, the other is a regular bending fork. Standard bending forks give rather a wide bend that you can sharpen over the edge of the anvil with some time and work. By grinding a 45 degree angle on the forks on one side I can bend very sharp bends that don't normally need to be refined. I can use the other side of the forks for standard wider bends. This has been really useful to me. I'm sure this has been done by other people, but I don't get out much and I figured this out for a particular job years ago. There is a lot of information on making bending forks, so I won't go into that. I simply took forks I had and ground the angles. And they still work fine to use the other side. If you just use welded up forks I recommend making ones out of spring or grader blade or other tough metal. After I made the first ones out of tough steel I never went back to welded forks..

Reprinted from Blacksmiths association of Missouri

NJBA Membership Renewal, Ballot and Volunteers' List

Mail completed renewal form along with check for dues, to:

NJBA, 663 Casino Drive, Howell, NJ 07731

Name_____

Address_____

City, State, Zip _____

Phone Numbers: Day _____Eve. _____ Cell _____

Email address _____

My check is enclosed: [ ] **$30** (regular membership dues), or [ ] $**50** (business membership dues)

NJBA Volunteers List

"Please put my name on the list of potential volunteers:" (Circle all that apply.)

Availability: Saturdays, Sundays, Weekdays

Interests: Demonstrating, Coaching, Novices, Assisting at Workshops

Experience: Novice, Intermediate, Experienced, Professional

Vote for NJBA directors

[ ] Re-elect All

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