



N.J.B.A.

NJBA Volume 29, Issue 1 07/16/26
<http://www.njblacksmiths.org>

NJBA Picnic — Saturday, July 25th!

Rain or Shine
Marshall's Shop
663 Casino Drive, Howell, NJ

Join us for a great day of fellowship, food, and blacksmithing fun at the NJBA Picnic! If it rains, the picnic will be held in Marshall's pole barn.

Schedule;
Set-up: 9:00 AM
Event: 10:00 AM – 4:00 PM

If you're available to help with set-up, please plan to arrive at 9:00 AM.

We'll have impromptu forge demonstrations throughout the day featuring many of the talented blacksmiths in our membership. NJBA will provide hamburgers and hot dogs.

There will also be an Iron in the Hat auction, so please consider bringing an item to donate. We may also have an auction for a higher-value item, as well as a beginner blacksmith toolbox made up of tools donated and/or made by NJBA board members.

Membership dues are now \$30 per year, so if you haven't renewed yet, you can pay your dues at the event. This picnic is for NJBA members and their families, so feel free to bring the family along. If you're not yet a member, you can also join NJBA at the event.

Open Forge Event at Princeton University

The New Jersey Blacksmiths Association will be hosting our annual hands-on blacksmithing open forge event for students of Princeton University on Saturday October 31st.

We are looking for people with experience in blacksmithing to volunteer in helping us teach basic blacksmithing to the students at Princeton University. The event runs from 12 to 4, but we'll be setting up the equipment before that time. The University will be providing a catered lunch.

The New Jersey Blacksmiths Association will be bringing six forging stations, each with coal forge, anvil and vice and tools. Steel will be provided by the University. For more info and if you are interested please email Daniel Lapidow at dlapidow@verizon.net

NJBA Board of Directors

NJBA director information not available 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.

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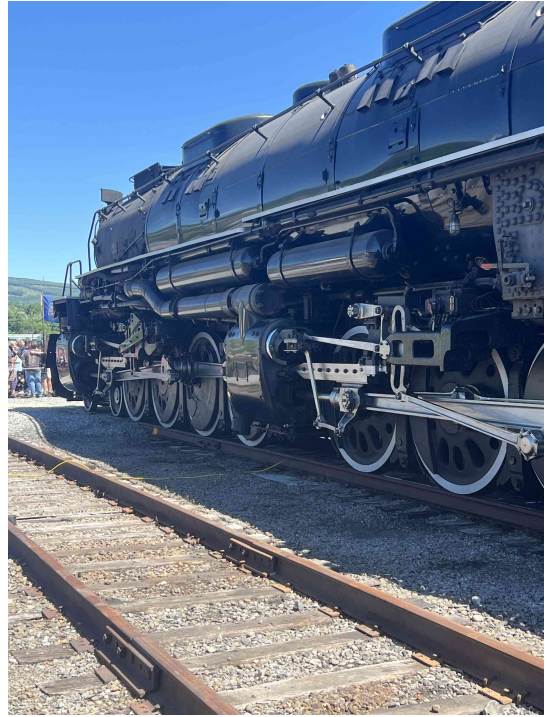
njblacksmiths.org/archive/index.htm

or use the link on the NJBA web site for the current newsletter.

Big Boy No. 4014

I decided to go see locomotive Big Boy 4014 while it was in Steamtown, in Scranton, Pa on June 16.

I didn't get to see it underway but it is an amazing piece of machinery! When I was a kid (long time ago) I saw it's sister engine 4012 when Steamtown was in Vermont and I remember getting yelled at for climbing all over it. 4012 was sitting on the track along side 4014 Big Boy and it was nice seeing them together, especially since one is restored. Check out the pictures that people have posted on line or if possible try to get to see it in person or underway! There is a lot of heavy forged iron in these locomotives which makes them a sight for blacksmiths!

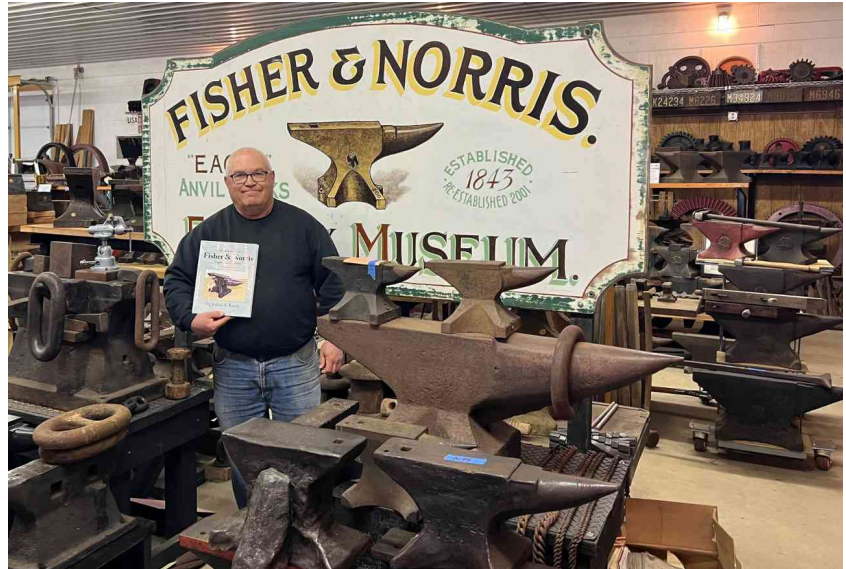


Fisher Norris Museum Closing

It was sad news when on Facebook on May 2nd, Joshua Kavett posted that, over the next few years, he was going to liquidate about 95% of the inventory in the Fisher Norris Museum. He says items will be sold individually or in collections if they should stay together. All sales will be by appointment only. He has worked very hard over the years to build this collection and it is amazing. He has a row of anvils going from small to very large with every size anvil, special anvils, swage blocks and Fisher Norris twin screw and other vises. He has the patterns used in the manufacturing of many of the items.

I have known Josh since pretty much the beginning of NJBA and I remember him telling me of his trip to Crossley Machine Company that started it all!

Crossley Machine Company did their last iron pour on 12/17/ 1979, after which many items in the foundry were sold or discarded. Items in the pattern room were not thrown out as it wasn't worth the effort at the time. Josh visited in March of 1999 and found them the process of shutting the company down. Hope eventually obtained the remaining patterns and documentation which spurred the ideas of the museum and the book on the company's history.



The book is very well written, starting with a time line of the company's history and his involvement with the end. It has biographical information about the firm's owners and manufacturing over the years. It is an excellent read with loads of information.

Josh collected and catalogued an unbelievable amount of anvils and other items made mostly by Fisher Norris but also has a small (in relation to the Fisher Norris items) collection of anvils and other items by other manufacturers. He built a building to house and display the collection. He then organized an incredible display of the collection.

I understand his decision to close and liquidate the collection, as we all get older and our lives change. This way he also has control of the process and can hopefully get it to good homes (shops).



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It's hard to believe it's been 27 years since he found Crossley and began this process. Starting the museum and writing the book was an inspiring story!



As a side note, I found a brand new Fisher #100 anvil in a hardware store by me in 1985, I went back two weeks later after being paid and someone else had bought it! They said they couldn't believe it was gone as it had been there for years! I remember it had black paint and the label on the side. Took many years before I got that close to a new anvil again!



To arrange an appointment to visit the museum and view available items contact him at;

NJanvilman@gmail.com

To purchase the book and other items go to;

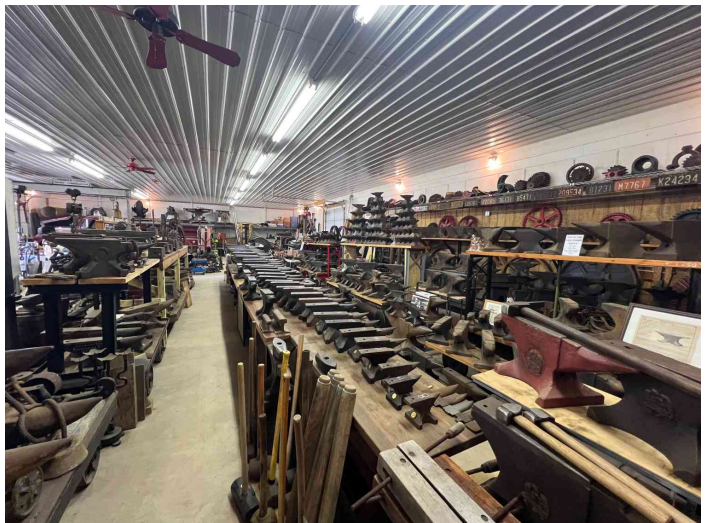
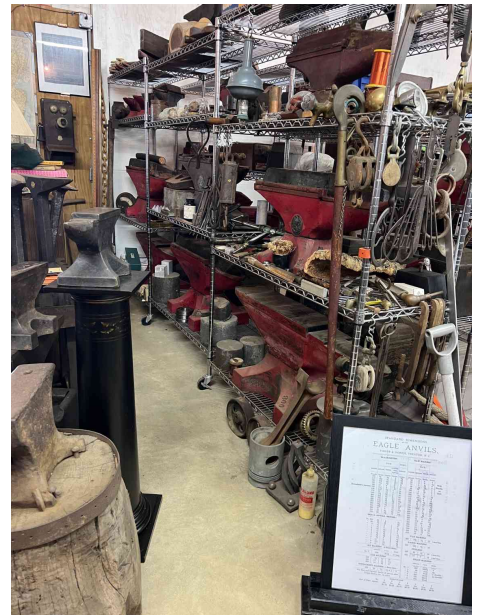
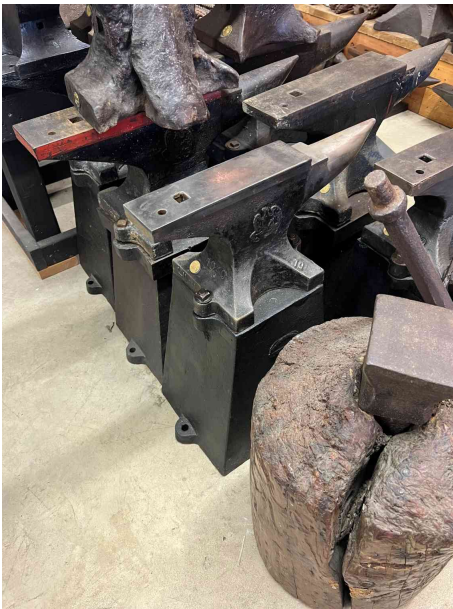
<https://shop.fishernorris.com/>

There are also pictures of the shop on the site.

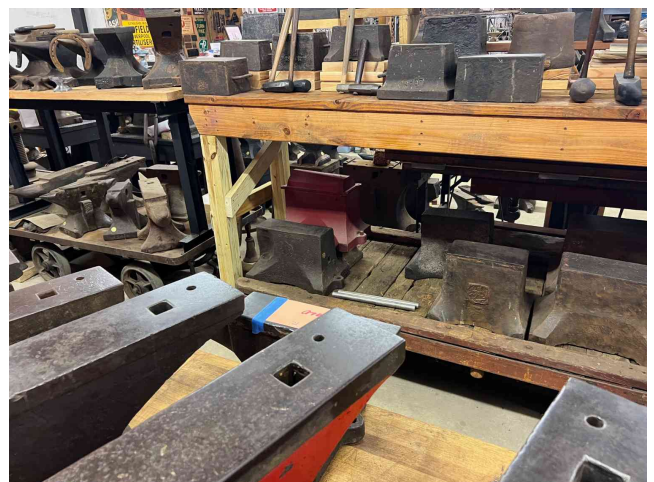
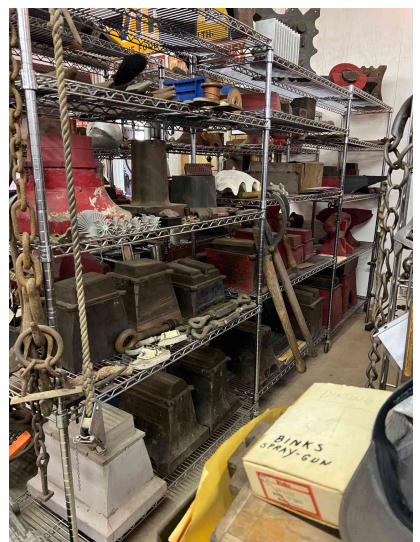
All these pictures were taken at the museum when I visited on May 14th, 2026, many thanks to Josh for setting up the appointment for me to visit, talk about Fisher Norris and take pictures!



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Iron Works Weekend Eric Sloane Museum, Kent, Connecticut

Bruce Freeman and I decided to go on a small road trip and attend the bloomery smelt at the Iron Works Weekend on May 16th and 17th, at the Eric Sloane Museum.

We spent the whole day there Saturday. When we arrived in the morning they were still heating the furnace with a full charge of charcoal and breaking the iron ore up into smaller pieces. In a little while they started adding equal amounts of iron and charcoal by weight about every ten minutes. In the midafternoon they tapped the slag from the bottom of the furnace and closed the opening for a while. When the charge had burned a good portion of the way down they tapped the bottom of the furnace open and removed the bloom.

They then quickly went to work consolidating the bloom by having 5 strikers and one person holding the bloom on a wooden stump. After it started to get solid they cut it in half to make it easier to refine further on the anvil. I lost my notes, so can't remember if the entire bloom was about 15 pounds or if half was, I'm not sure, I think it was half.

The group doing the smelt was the, Southern New England Apprentice Program, Bloomery Iron Smelting. The Apprentice Program has programs for several different crafts.

The Eric Sloane Museum is located in Kent, Connecticut near the New York border and has a lot of items from early crafts and farming especially from New England. The drawings in his books are from many of the items on display. Anyone interested in crafts should checkout his books as the drawings are detailed and give a lot of information. The museum is not huge, but I feel is well worth the visit! Some pictures are of the museum and some of the event!

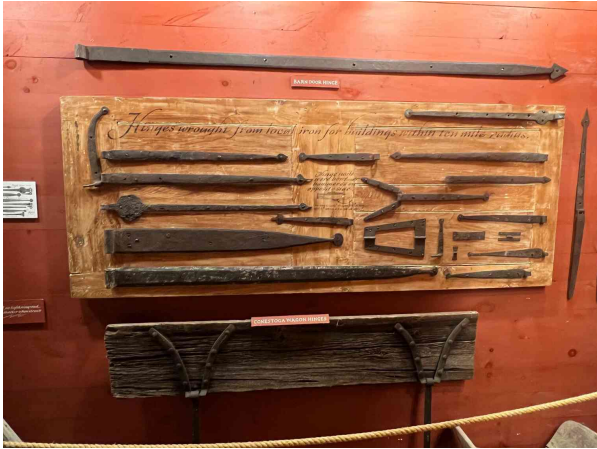


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Eric Sloane Museum



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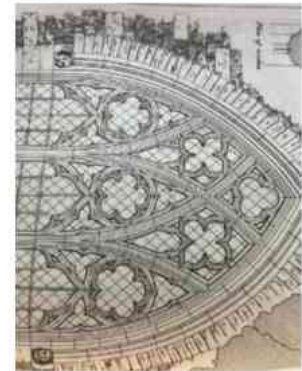
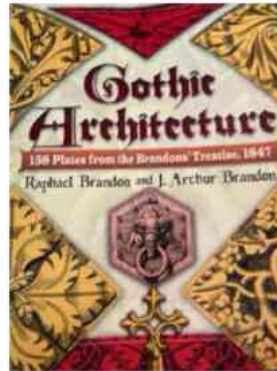
Back in September 2022, the AABA demonstration in Jerome, AZ, featured half-lap joints on the diamond. That seemed to be a pretty popular subject, so here's some more material about forging on the diamond. This 5-page article was reprinted from the January 2025 issue of Bituminous Bits.

Gothic Elements on the Diamond with John Taylor

John Taylor has a really strong sense of “if they did it back in the day, why can't we?” Lots of great blacksmith projects have started with paging through a book. John was looking at Gothic Architecture by Raphael and J. Arthur Brandon, admiring ornate crosses and trefoils and thinking “how did they do this?”. Another epic quest was underway!

Great epic quests in ironwork start with drawings. Drawings establish dimensions and materials requirements. Sometimes it's not easy to determine from pictures how big an historic piece of wrought iron really is. Sometimes there may be a caption with some overall dimensions. Sometimes there's a person or something like a residential door or window in the picture to give a sense of size. In this case, John decided he wanted to use 5/8-inch square bar and he wanted to recreate the pieces with the square bar turned to the diamond orientation. The corner-to-corner dimension of 5/8 square is 7/8 inch, so he made copies of the images in the book, scaled to make the cross and trefoil bars 7/8 wide. Eventually the full-size drawings were transferred to a steel layout table in chalk to allow direct comparison with hot pieces.

My vicarious interest in this quest began when John posted test pieces on Facebook. The first piece was a sort of Y-shaped trident shape. After several tries at getting all the facets and lines to meet and flow correctly, John came up with “mommy, daddy, and the baby”, three pieces forged on the diamond, bent to fit together, and then forge welded. Actually John used a couple of MIG tacks to hold everything



Above: The book, *Gothic Architecture*, and a drawing from the book that provided the inspiration.

Right: John's copy of the trefoil with his drawing scaled to make the bars 7/8 inch wide to match the corner-to-corner dimension of 5/8 square bar.



Below: Cross and trefoil transferred to chalk on a steel layout table



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together for the forge weld. In centuries past the joint might have been wired together or multiple helpers might have heated the individual pieces before bringing them together in a v-block and top tool for welding. John made the weld in a set of dies in a tire hammer. There were a lot of tools made to complete this project!



CW from above: "Monmy, Daddy, and the Baby", tacked and then welded.



Above, some of the tools John made for this project;

1. Bending die for making the smooth curves of the cross in 5/8 square stock on the diamond.
2. Die for flattening the square bar to a triangular cross section half square.
3. Spring tool for welding on the diamond.
4. Tool for making the spring tool #3. 5/8 square bar split on the diamond with a wedge welded in.

John pointed out the value of a rawhide hammer for truing up the bends and the finished pieces without marring the corners.

The cross required four identical pieces to be bent to identical smooth curves and the ends prepared for welding. Weld preparation required one side of the diamond to be forged flat, leaving a right triangle cross section at the weld. John did use a flap wheel to clean the faces to be joined. After welding the two right triangles again formed a square bar on the diamond. Careful prep and welding in dies resulted in welded corners with the bar edges and facets flowing together.

Right: Cross pieces with flat sides forged in the weld area, curved, and fit together ready for welding.

Below, right: Top two pieces welded together. The faces fit together and the corners flow smoothly from two bars into one!

Below: Bottom two pieces welded together and fitted to the top half.

The finished cross is shown on page 16.





Above: Tooling for forming right angle on the diamond, set up in a vise.

Below: Three right angles on the layout table before bending.



Moving on to the trefoil, there was more tooling to build. John built a jig that fits in a vise with a top tool to make square corner bends on the diamond in 5/8-inch square bar, and then another jig to smoothly bend the sides of the trefoil so that the acute corners would meet up for a forge weld. Again there were dies to enable welding the diamond shape in a tire hammer. Some hand hammer work cleaned up and pointed the acute corners after welding.



Above: two legs of the right angles bent and the ends flattened and fitted for welding. John bent and fitted all three lobes of the trefoil before welding.

Below: The trefoil with the corners welded and forged to clean points with facets and corners neatly centered.



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The book Gothic Architecture has a subtitle on the cover, "158 Plates from the Brandons' Treatise, 1847". The original Gothic style in architecture lasted from the 12th to 16th century in Europe. One wonders, when was the last time a blacksmith made crosses and trefoils this way before John took up the challenge?

John credits Ernie Dorrill as a big influence on his interest in this style of ironwork, and Travis Fleming for helping him learn to figure out the processes involved.

Below: The finished cross and trefoil resting on John's anvil for a group photo.



The fascination was this, and remains this; iron has a strength no other material has, and yet it has in it, at the same time, a capacity for being light, graceful, and beautiful. It has this capacity but no desire.

All the desire and all the knowledge of how to impart this desire to the iron, must come from the smith.

- Francis Whitaker

Fire tending and striking are good ways to learn.

You get to see everything up close.

-Dustin Patterson

From the Anvils
Horn, Arizona
Artist Blacksmith
Association

My Favorite Tongs

By Steve Anderson, a MABA member

My Favorite Tongs are a unique design which allows forging a larger bit with less work to draw out the reins. They are extremely versatile and their light weight makes them feel like an extension of your hand.

Stock Size	Stock Length (2X*)	Rivet Size	Bit Drill Size
3/8" round	11" (22")	3/16"	3/16" or 1/4"
7/16" round	12" (24")	1/4"	3/8"
1/2" round	13" (26")	1/4"	7/16" or 1/2"

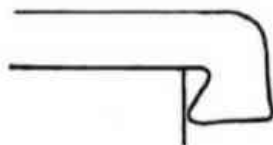
*cut the stock twice as long and forge bits on both ends, then cut in center to avoid having to use tongs.



Bend the stock up 90 degrees. Bending 3/4" of an inch for 3/8" stock and 1 inch for other dimensions.

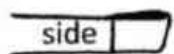


Upset.

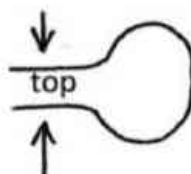


Square up bit ends.

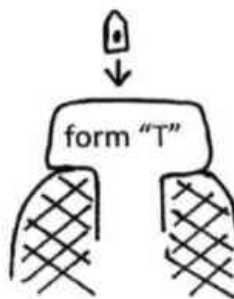
Repeat upset and square steps to drive bit end further down to almost as thick as stock, keeping it square.



Forge upset down to stock thickness at welding heat.

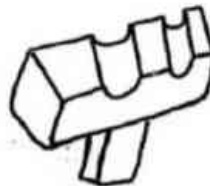


Slightly flatten sides.



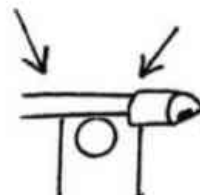
form "T"

Form "T" in post vise, then square ends on anvil.



Round the bits in a swage.

Drive a 1/4" rod into the ends to form a groove.



Form an arch by hitting alternately on both sides of the horn NOT on top.



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Spread pivot point with ball pein, and then re-flatten.



Draw out reins to length and align as shown above.

Slit and drift rivet holes and drill to size.

Assemble with a temporary bolt and set bits, offsetting them as shown.



Grind bits to match, and then hold in vise just behind the pivot with a thin spacer. Hold bits together with vise grips and drill hole for bit size from chart.

File groove in bits to taper back and soften edges.



Reset bits if necessary, finish with a file, and rivet.



Forge Welding in a Gas Forge - Mark Aspery

A riveting way to deal with forge welding in a gas forge.

I recently taught the basket handled poker at a gas-forge-only school in the L.A. area.

I'm not very practiced in a gas forge, so I tried the class at home in a farriers gas forge.

I found that I could weld faggot welds, that is, stock sister'ed to another piece of stock, but that jump welds (drop tong welds) were quite a bit harder to deal with effectively with repeatable success.

For the basket, I chisel cut the slope to the scarf and thinned the toe slightly. For the $\frac{3}{8}$ -inch square bar that makes the shaft, I upset and created the slope to the scarf only. I eliminated the step for a normal scarf in both pieces, and drilled a $\frac{1}{4}$ -inch hole just behind the scarf area.

The two pieces were then riveted together with a length of $\frac{1}{8}$ -inch round bar. The 'rivet' held the two bars together, but didn't stop sideways movement - just for the record.

I used a washer as a spacer when riveting the bar, giving me spare material to head the second side of the rivet.

The pieces were heated and then fluxed and returned to the fire. There wasn't a whole lot of brushing involved.

Angling the basket down slightly as I approached the anvil helped straighten the two pieces back into alignment.

The weld, now a faggot weld, worked great. We had over 20 students in the class and everyone got their welds, both at the handle and at the poker end.

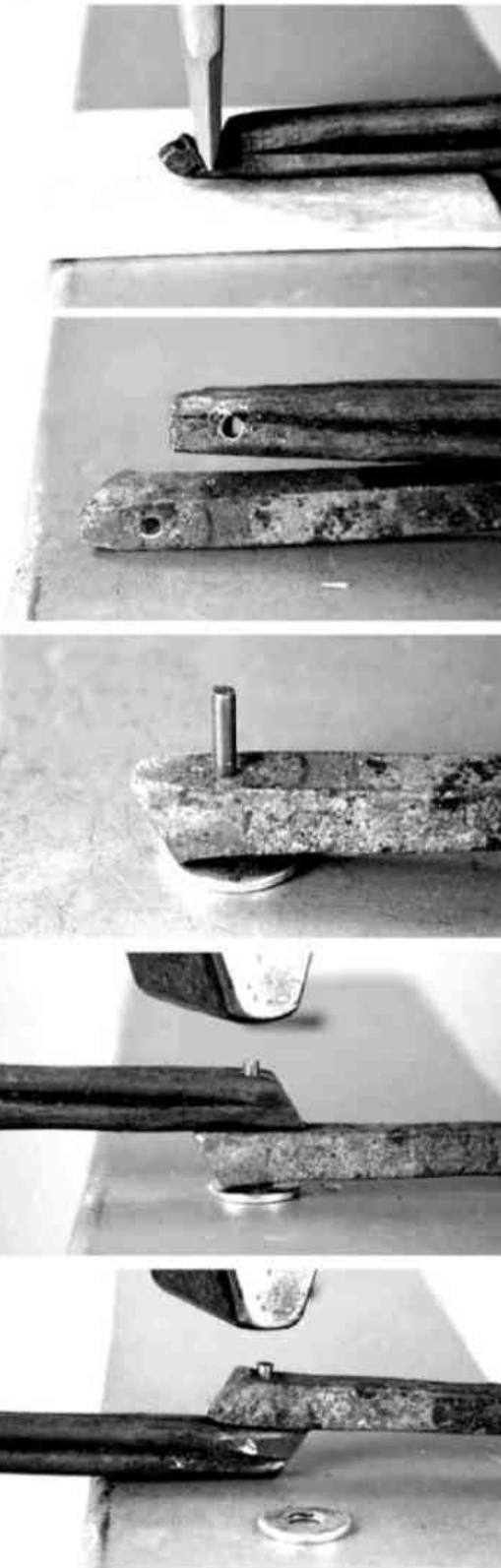
The idea of pinning two pieces together before welding is not new. It was used during the wrought iron era.

In the UK, you can find gates where leaves had been riveted on prior to forge welding - where the leaf has long since rusted away, leaving the hole for the rivet - which was not in a welding plane. - Mark Aspery.

Mark has a brand new Youtube video on this process:

<https://www.youtube.com/watch?v=dNHSC0m7K0g>

Thanks Mark! - Editor



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If attending the NJBA picnic dues may be paid then!

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