N.J.B.A. Newsletter

NJBA Volume 10, Issue 3 10/01/05

.Editors Soapbox

Its been a hot Summer and now we're into a cool Fall, its time to get out and get to some meets! We have several excellent events scheduled and some more in the works. Tim Miller and Tom Ryan demonstrating at Tim's shop followed by the holiday party at Marshall and Jan's home will be a great way to wrap up the year. The first scheduled NJBA event in February of 2006 will be at Eric Cuper's shop in Easton, Pa featuring Rick Smith as the demonstrator, so read on and see what you will be missing if you don't come out to the meets.

Upcoming events for 2005 and 2006

Get you calendars out and mark these events down. Please bookmark our web site and check for meet information. Remember most of our meets have an "Iron in the Hat" drawing, so be sure to bring something.

November 12th—Meet at Tim Millers Shop in Bayport Long Island. Details on this page.

December 4th— Annual Holiday Party and Jan and Marshall's. Details on page 3.

February 4-5 — Meet at Eric Cuper's shop in Easton, PA. Demonstration on Saturday the 4th and workshop on Sunday the 5th. Details on page 3.

November Meet at Tim Millers

On Saturday November 12 At 9:30 the New Jersey Blacksmiths will be holding a meet at Tim Miller's shop in Bayport NY. I would urge you to come It is a rare chance for blacksmiths from NYC and Long Island to get together.

Things you will need, a chair, because they don't have enough, some safety glasses and pictures of your work if you have them. Also bring something for iron in the hat, a useful tool or blacksmithing related item you don't need. Tailgating space is available but limited. Please Check out the NJBA web site for further info.

Tim will be demonstrating along with Tom Ryan. Tom Ryan works for Koning Ironworks In LIC. He has executed many large scale railing and gate Jobs And posses a high level of skill. He has received training in Europe and is considered a expert in traditional joinery. Tim's demonstration will be covering nonferrous forging and will be from 9:30 until lunch time and he will also cover tooling and some of our shop equipment. Tom's demo is yet to be announced.

For those of you who don't know Tim, he has been a blacksmith for about 12 years He is half owner of Spirit Ironworks with his sister Rachel Miller. He has a wide range of metal working experience. He has received a BFA in fine art/metals from SUNY New Paltz. His shop handles a wide range of work in many metals.

Mark the date on your calendars, we hope to see you there. Feel free to forward this to anyone you may feel would want to come.

Please bring a DONATION for the Iron In The Hat!

Timothy Miller
Spirit Ironworks
736 Montauk Hwy
Bayport, NY 11705
631-419-1185

Directions:

Take the Long Island Expressway to Exit 62, Nichols Road South. Follow 97 to the end at 27A.
Make a right onto 27A (Montauk Hwy). Go about 4 blocks, Spirit Ironworks is on the left hand side behind ABC Billiards.

The NJBA Web Site!

The NJBA Web Site is up and running at:

http://njba.abana-chapter.com/

The Newsletter is at:

http://
members.bellatlantic.net/
~vze25jcc/index.htm

Official NJBA Address

NJBA
P.O. Box 761
Mt. Laurel NJ 08054

Rather than use room in the newsletter, All correspondence between ABANA and NJBA is now being posted on the NJBA web site. If you cannot access it there, contact me and I will send you copies

NJBA Board of Directors

NJBA Holiday Party!

The holiday party is to be held on December 4th at Jan and Marshall's house starting at 2PM. Many thanks again, to Marshal and Jan for opening their home to us in the holiday season. Guests are asked to bring a covered dish, salad, desert, etc. and your favorite beverage. Please coordinate with Jan on what to bring. NJBA will pick up all of the utensils, plates, cups, and some soda. Members are asked to also bring various trivets, candle holders, or other holiday items they are making to the party. Despite the emphasis on blacksmithing, members are encouraged to bring their families.

Directions to Marshalls' Home:

Marshall and Jan's "cabin" is not on Marshall's farm, but about 3 miles east of it on the same road. Casino Drive is just off Rt. 9, about 3.5 miles north of interstate I. 195 (exit 28). and about 4 miles south of Rt. 33. Either of these routes can be easily reached from the major north-south highways including the Garden Sate Parkway, the NJ Turnpike. 1-295, Rt. 18 or Rt. 34. From Rt. 9 northbound. make a right onto Casino Dr.; southbound. take the jug handle to make a left onto Casino Dr. Continue past Marshalls' Farm to #301 Casino Dr., Howell, N.J.
(ph# 732-938-6577) jlfmib@optonline.net

February Meet at Eric Cuper's Shop

On Saturday February 4th there will be a demonstration by Rick Smith on Sheet forming and repousse. Rick's method of sheet forming is not like Latane or Renzetti, it's not the classic fine repousse. Rick moves more volume creating more abstract shapes and forms. It involves creating volume while the metal is hot then defining form and edges cold with stakes and planishing. On the following day Sunday February 5th there will be a workshop which will be limited to about 16 participants and is anticipated to cost $30 plus materials each. The workshop will be to explore and try the techniques demonstrated the previous day under the direction of Rick Smith. Please bring items for the Iron in the Hat and some donations may be auctioned.
Cuper Studios
1301 Lynn Street
Easton, PA 18042

RICK SMITH

Artist Statement:

My work is a direct reflection of strong visual observations and experiences. Certain concepts such as time, stability, order, disorder, technology, or mathematical concepts are a part of the visual information that becomes the palette from which I work. I choose to work with simple, stable forms. Often these forms are made using a combination of materials or the forms themselves are broken up by intermittent structural or patterned details. These breaks and the choice of materials make reference to the built world. The use of deeply rusted steel implies the presence of time and the relationship of structure to the order of nature.

Artist Biography:

Rick Smith received his MFA in blacksmithing in 1990 from Southern Illinois University. He has taught classes at many prominent crafts schools including: Penland School of Crafts, Haystack Mountain School of Crafts, and Peters Valley Craft Education Center. His work has appeared in Smithsonian, American Craft, Metalsmith, and Anvil's Ring. Smith was a resident artist at Penland School of Crafts until accepting a position on the faculty at Southern Illinois University at Carbondale (SIU-C) in 1997. Currently, Smith is over seeing the blacksmithing program at SIU-C, while maintaining his status as a producing artist.
Artist Fellowshop Crafts Recipient 2001

CUPER STUDIOS

Eric Cuper, Artist Blacksmith

Cuper Studios specializes in architectural, functional, sculptural, hand-forged ironwork and restoration.

Eric Cuper, the founder of Cuper Studios, holds an MFA in Blacksmithing from Southern Illinois University at Carbondale. While at SIU, Eric won the prestigious Rickert-Ziebold Trust Award, a senior competition in art and design. He was also the First Place winner at the James Renwick Alliance student competition. His work Odyssey was auctioned to benefit the Renwick Gallery of the Smithsonian Institute. Eric's work is exhibited and collected nationally. His art has been published in Dona Meilach's books, Architectural Iron Work and Fireplace Accessories.

Reports

State Fair in Sussex County

The NJ State fair went surprisingly well . We had paper makers, potters, jewelers, puppet makers and of course Blacksmiths. I demoed almost every day and Dick and John R and Jim W as well. It was great fun all of us made a lot of contacts for future commissions. Report by Bruce Ringier

Red Mill Museum Meet And NJBA Picnic

On August 21st Adam Howard and the Red Mill Museum hosted the NJBA Picnic and Tool Swap Meet. During the day Adam Howard demonstrated in the shop and ran around helping to get needed items. John Chobrda brought the BBQ grill and the cooking expertise to go with it. Thanks to all who brought dishes to the meet and Adam and John for what they provided. We had a very good Iron In The Hat, Many tailgaters were there and except for the heat that day the meet was a success. Adam has suggested an October meet next year, perhaps a harvest festival, hope to see you all there next year.

Old Time Engine Show

This September, for the third year in a row the New Jersey Blacksmiths Assn. was present at the Delaware Valley Old Time Engine show in Washington's Crossing State Park. The weather was very co-operative and we had three days in a row with out rain, Sunday being the nicest day weather wise.

Friday was a set up day with not that many visitors, some forging was done and a few people stopped by to observe. Saturday and Sunday were much better attended, with Sunday having the largest turnout. Mike Erdie, Mitch Swirsky, and John Chobrda were present all three days, Jeff Morelli and Larry Fogg put in time at the anvil Saturday and two young brothers whose father was showing his tractor spent Saturday and Sunday cranking the forge blower for us .Other members who stopped by were Bruce Freeman, Josh Kavett, Tom Eden, Marshall Bienstock and the lovely Jan.

This year because of the good weather there was a large turn out of antique engines, tractors and trucks, this is an annual event held every September at the park and you should mark your calendar for next year and make it a family event. There is good food, wagon rides for the kids, and a metal heads flea market, this is also a good venue to turn some of your forged items in to cash. More information on the next show in next summers newsletter. Report by John Chorbda.

Peters Valley 5th Annual Pig Roast

As a participant this years Peters Valley Pig Roast was a sucess. I have no idea how profitable is was in the end but the food was excellent and there was plenty of it. There were several members of NJBA attending out of the many there. Demonstrations were given in the shop by Andy Dohner and others throughout the day. There was a band playing, an auction led by Bruce Ringier and a Anvil and a Gas Forge (Donated by NJBA) raffled off. A very good time and I encourage as many who can attend to go to next years event. Next years schedule of classes will be posted soon so check their web site or contact them for more info.

Peters Valley Craft Center
19 Kuhn Rd.
Layton, NJ 07851
(973)948-5200
fax: (973)948-0011
pv@warwick.net
www.petersvalley.org

Monmouth County Fair

Marshall with some help from the Longstreet Farms people did get our equipment set up at the Monmouth county fair. Norm Nelson and I did demonstrations on Saturday and Sunday. I was joined by Spencer (don't have his last name) who is one of the older kids at the Pine Creek Railroad. Spencer has been working/playing around the Railroad for many years, but I think he really enjoys blacksmithing. He made some nice hooks at the fair. Spencer also help me break down the site on Sunday. Tom M. and I picked up the equipment with the trailer on Monday night - pretty easy. One thing that is definitely missing from the trailer is our sign. IT is probably hanging around Marshall's somewhere. At some point I would love to have a new fabric banner made with New Jersey Blacksmith Association on it. I think it would be a great idea if we could also make some kind of banner stand.

Peters Valley Craft Center Announces Guest Artist Residencies

Available from January 2006 - April 2006

Layton, NJ: From January through April, Peters Valley Craft Center will welcome practicing artists for one to three month residencies. Participants pay a modest fee of $500/month for a private room and studio access (studios include: blacksmithing, ceramics, fibers, fine metals, woodworking, photography, etc.). Residencies provide artists the opportunity to concentrate on their artwork, without interruptions, in a supportive atmosphere.

Through support from the Geraldine R. Dodge Foundation and the NJ State Council on the Arts, twelve, one month scholarships are available for NJ resident artists. Additional help is available for Hurricane Katrina victims.

Please call for additional information and application requirements (973)948-5200. Visit www.petersvalley.org to learn more about Peters Valley.
Application Deadline: November 30th

Chasing & Repousse with Valentin Yotkov

(He's not too far from most of us, anyone interested in a class with him please contact him directly and let others know how it went, Larry Brown NJBA Editor)

To: ABANA Affiliates representatives

My name is Valentin Yotkov. I am a professional silversmith and instructor in Chasing and Repousse. My studio located in Brooklyn, New York is the only school in the United States specializing in chasing and repousse instruction. I also teach at other schools, Arts centers and private studios in the US and abroad.

Recently there has been a growing interest among blacksmiths to learn these techniques. Chasing and Repousse allows for sculpting directly in metal and dramatically enhances the work of a blacksmith. A number of blacksmiths who have discovered its potential have attended classes or workshops at my studio, and now seek additional training to master their skills.

In response to this growing interest, I am writing to you to propose a workshop specifically oriented towards the needs of blacksmiths. It may be held at my studio or at any properly equipped facility of your choice. The ABANA annual conference would be the perfect place for a Chasing and Repousse demonstration open to all members, followed by a three or four day intensive workshop. There is no doubt that the blacksmith's community would greatly benefit from such a workshop. Please, feel free to contact me with any questions or suggestions you may have. For more information visit our web site at www.valentinyotkov.com

Thank you for your time and I look forward to speaking with you about the possibilities of teaching a Chasing and Repousse workshop in your area or at my studio.
Respectfully,
Valentin Yotkov

Valentin Yotkov Studio
68 Jay Street, Suite 501A
Brooklyn, New York, 11201 USA
Phone: 718-852-8640 studio@valentinyotkov.com

Blacksmith Equipment for Sale

Jan. 27-28, Fri. & Sat; Contents of complete blacksmith shop from anvils, forges, drill press, hand tools, grinders, cut-off saw, welders, foot hammer, benders, raw steel & more. L. Curtis Tindall, 124 Muse St., Falling Waters, WV, 81S, 8 miles from Hagerstown, MD. call 304-274-2572 for more info. Kathleen Tindall <strawberries4kathy@yahoo.com>

2nd Annual Bill Gichner Memorial Hammer-In

The 2nd Annual Bill Gichner Memorial Hammer-In, or 25th Annual Bill Gichner Hammer-In (depending on how you want to count) will be the weekend of 7-8 Jan 2006 at Dave Hutchison's farm in Cordova, MD (MD Eastern Shore, just a few miles outside of Easton). Featured demonstrator is Nol Putnam. Festivities unofficially start Friday evening. If you are coming Friday night, say so in when you register, so they have a headcount for Saturday evening meal. Schedule pretty much the same as in previous years. Be sure to bring something for the iron-in- the hat, and for the auction if possible. Send checks payable to MASA to Nancy Zastrow, 12800 Hammonton Rd, Silver Spring MD 20904-3523 The fee this year is $35 for the weekend.

A Special Thanks
to Lincoln Wolfe
for his gift to
NJBA of $100

Blacksmithing Workshops and Classes:

Peters Valley Craft Education Center
19 Kuhn Rd., Layton, NJ 07851 (973)948-5200
pv@warwick.net www.pvcrafts.org

Academy of Traditional Arts
Carrol County Farm Museum
500 South Center St. Westminster, MD 21157
(410)848-7775 (410)876-2667

Touchstone Center for Crafts
R.D.#1, Box 60, Farmington, PA 15437
(724)329-1370 Fax: (724)329-1371

John C Campbell Folk School
One Folk School Rd.
Brasstown, NC 28902
1-800-365-5724 www.folkschool.com

Red Mill Forge
Contact Adam Howard about workshops and per diem use of the shop (908)735-4573

BLACKSMITH TOOLS FOR SALE!
John Chobrda

Has a large selection of tools for sale.
Anvils – Forges - Leg Vices—Blowers
Tongs – Hammers
Will also repair and/or resurface Anvils
Call John for prices and availability
Evening (609) 443-3106

Business Members
We would like to thank those who joined with our new Business Membership category
Please show them our support

Marshall Bienstock
663 Casino Dr., Howell, NJ 07731
(732) 938– 6577, (732) 780-0871
John Chobrda, Pine Barrens Forge
231 Morrison Ave., Hightstown, NJ 08520
609-443-3106 JChob@earthlink.net
Eric Cuper Artist Blacksmith
109 Lehman Lane, Neshanic Station, NJ 08853
908 642-6420 ericuper@msn.com
Bruce Hay, Jr.
50 Pine St., Lincroft, NJ 07738
Jayesh Shah Architectural Iron Design
950 S. 2nd St., Plainfield, NJ 07063
jay@archirondesign.com

Open Forges

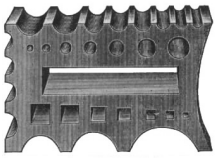
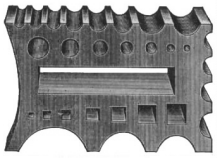
We are looking for members who are interested in opening their forges up to members as a open forge. This does not have to be a weekly forge as is Marshall's the others can meet once or twice a month. Please contact, Larry Brown, Editor.
We want to encourage all to join us at:

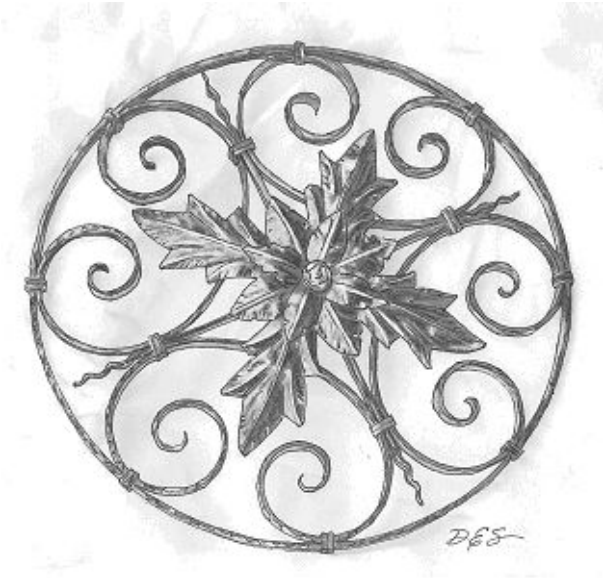
Monday Night Open Forge in N.J.

Marshall Bienstock is hosting an open forge in his shop at 7 pm almost every Monday night (Please call ahead on holidays to make sure , (732)780-0871)

Open Forge in Long Island

Sunday from 10:00 am to 6pm.
Starting the 1st Sunday in November until the end of April. Please call ahead to confirm and get directions.
Ron Grabowski, 110 Burlington Blvd. Smithtown, NY
(631) 265-1564
Ronsforge@aol.com



Forging for a Living

the methods and tools of

Ray Spiller

article and illustrations by
Dave Smucker

Part I

Ray Spiller was one of the featured demonstrators last fall at the Alabama Forge Council's Tannehill Conference. In this two-part article, I will cover some of the methods and tools that Ray showed during his two demonstration sessions.

Ray Spiller lives and works in the Nashville, TN area and, as I say in the title of this article, does "Forging for a Living". During his demonstrations, Ray shared not only his approach to blacksmithing, his methods and tools but also how he approaches the business side. In this article, we will include aspects from all of these areas.

Being in Business. Early in his career Ray, like many other blacksmiths, worked the "craft fair" circuit but then moved on to doing mostly architectural ironwork. In making this move, he is primarily a sub-contractor to major Architectural and Structural Iron Work Contractors in the Nashville area. Ray said that he has about 4 structural steel folks that he regularly works with and sells to "wholesale". These firms take Ray's work, add their mark up to it, and include it with other work they are providing for a given job. Generally, these firms do the sales side, customer interface and installation work. In other words, Ray doesn't spend any time or money on marketing or sales nor have to estimate his time for the installation.

This "wholesale work" accounts for between 2/3 and 3/4 of Ray's work. The remaining part is direct retail work that comes from customers that may already have some of Ray's pieces in their ironwork or are referred to Ray because the major Architectural and Structural Iron Work Contractors don't want to deal with the small size or type of work. Again, this means that Ray doesn't spend much time on marketing or sales for this type of referral work.

At this point, you may have the same basic question that I had – why would the Architectural and Structural Iron Work Contractors go to Ray for work if they are already doing that type of work in their own shops? Well, it turns out that, for the most part it is because Ray does the type of specialized architectural work that they really don't like to do or don't really know how to do well. Leading this list is scroll work and work with specialized architectural elements such as the one shown on the cover and lead to this article. Ray also does many of the "curved" stairways in the Nashville area.

Even with all of this, Ray has to be very competitive on his work or it will go elsewhere. After all, the contractors are bidding on these jobs and the contractors are not going to give Ray the work because they like him – but because he can deliver good work at a cost-effective price that allows them to get the overall successful bid on the job. To do this cost-effective quality work Ray has developed his own personal methods and tools.z

Working Safe. Safety is critical to all of us but if you work by yourself and make a living with the work of your hands, safety is all-important. If you injure yourself and can't work the work isn't done and you aren't paid. Ray's comments on safety include that he wears earplugs, safety glasses and almost always wears gloves. Ray uses exclusively a propane forge for heating his metal and has found gloves important

for his work. In many cases he works many multiple pieces at one time and the gloves let him handle stock that may be hotter overall than many of us are used too.

For safety glasses, he likes to use didymium lenses that allow him to look at the forge and hot metal all day long without eyestrain. They also provide the protection of safety glasses.

Ray is right handed – and likes to have the anvil horn pointed to the right, when facing the anvil. This allows him to work with the hardie hole to the left and any hardie tools out of his way. Still I did not see him ever leave a hot cut in the hardie – where he might run into it.

Making Scrolls. Ok let's look at Ray's methods for making scrolls – many scrolls.

To start you have to have a "plan". In other words, you need to have a master scroll you are going to work from or you need to generate a full size drawing you can use to be your master scroll.

Scrolls, of course, can be made 100 percent by forming on the anvil with a hammer. Alternatively, they can be started on the anvil and finished with bending forks. However, if you are going to make very many scrolls and you want them all to be of the same size, then there is great aid in making a scroll jig. If you have never made any scrolls – then I suggest that you first do some basic practice work to get a feel for the process and then make a scrolling jig.

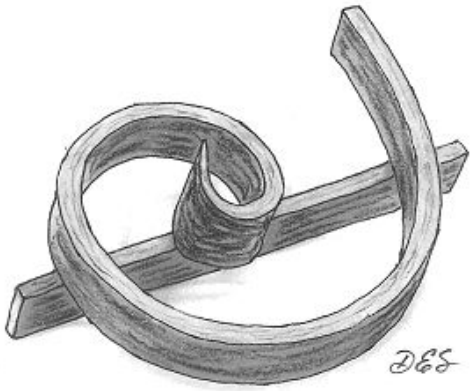
To make scrolls in almost any form you will need to make several bending forks. It is also extremely helpful to have a stationary fork that you can either use in your hardie hole or hold in the vise. Ray has a number of forks – made from leaf springs like the one shown. To make these you can anneal the spring stock, then saw out the fork slot followed by carefully rounding the slot edges with files and emery cloth. Ray notes that it is very important that the faces of the slot be parallel. If not you will have great problems bending with the fork and make corkscrews rather than scrolls. Draw out the remaining portion and form a return loop as part of the handle. Ray likes to use a set of forks with one loop pointed up as shown and one loop pointed down. This allows you to pass the handles of the forks by each other as you work.

Here is Ray's version of a fixed fork for mounting in your hardie hole or vise. It has two round pins welded to a flat bar and the hardie tang (stem) welded on the side of the bar. A good material to make the pins from is the unthreaded portion of a grade 5 or grade 8 bolts. This is a higher strength and tougher steel than using just mild steel for your pins. Work to keep those pins parallel so that you don't have the corkscrew problem with this tool too.

Ray does an interesting thing with many of his hardie tools. He welds the tang or stem on the side of his tool base rather than on the bottom. This does two things – it means you don't have to grind the weld to have it sit flat on the anvil and it also means that for a lot of tools you don't have the problem of them falling through the gap when used in the vise.

You can also make bending forks the same way that this fixed fork was made – by welding pins into a bar or handle. Another interesting set of bending forks is shown in this month's Tool Box article and is an adjustable set made by welding pins onto vise grips as the adjustable handle.

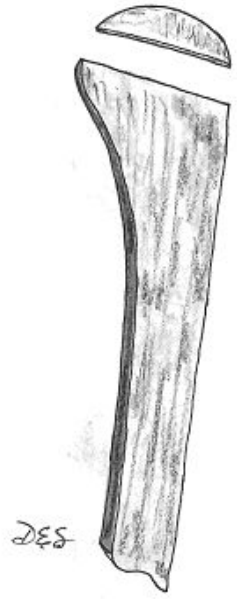
OK we have bending forks – what does this scroll jig look like.



This jig has the basic scroll form - the outside of the jig will be the inside of our scrolls - and a bar welded across the bottom. This bar does two things. First, it gives us something to hold the jig with in the vise and second it strengthens the scroll form so that it doesn't change shape with repeated scrolls bent around it. Ray notes that there is nothing like making 50 scrolls and finding at the end that each one got a little bit smaller and smaller.

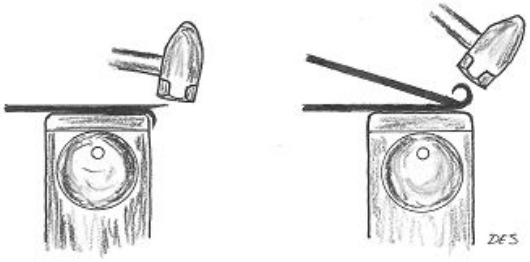
For making the jig, Ray likes to use a 1 inch by 3/8 inch bar. The first step is to draw out one end of the bar into a broad fish tail and then to off set this fishtail all to one side. You do this by working the edge off the far side of the anvil and over the horn. Now clip off the end of the fish tail to give a straight edge at right angles to the bar. Ray does this in a shear but it can also be done on your hardie or with a hot cut.

We will see Ray using this idea / method of cutting a small scrap piece to obtain a straight edge or fixed length as a key method to work at a commercial pace. You could fool around a long time working the end to forge it straight when a quick cut will do it in seconds. This concept is really important if you are making a 100 scrolls per day but we can learn from it too as a method to make uniform and repeatable work.



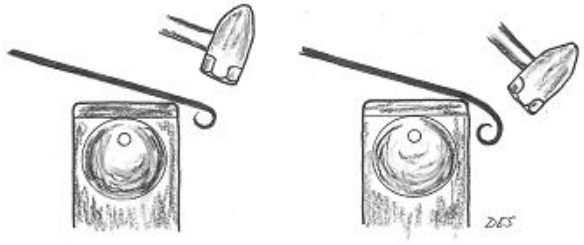
Ok, now that we have our scroll jig stock ready we need to "form the scroll". You can do the whole scroll over the edge of the anvil or you can start it at the anvil and do the larger portions of the scroll with bending forks. It is most likely that you will have to do at least some adjustment with bending forks as you go anyway. For myself, it is very helpful at this stage to have the scroll drawn full size on a piece of metal or on your metal work table so as you develop the scroll you can lay it hot on the table to make adjustment with a pair of bending forks. Use chalk or soap stone to trace your pattern on the metal.

First, you want to start the beginning of the scroll at the anvil.

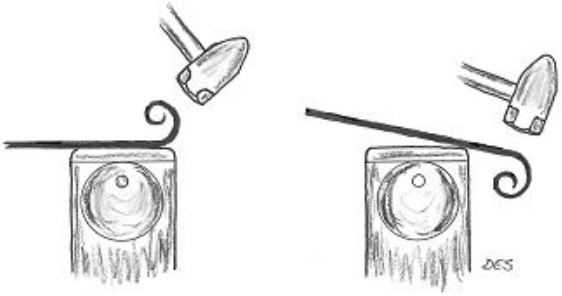


You are going to do this just as you would start the end of a hook. Extend the end of the scroll just past the edge of the anvil and lightly forge it down. Flip it over and bring the curl back towards you.

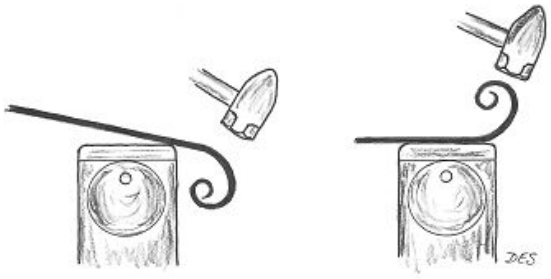
Raise the stock up off the anvil as you work the curve. Use many light hammer blows - and as Francis Whitaker used to say, "never hit it in the same place twice".
Now that you have the end started, continue the process by working another section of your stock. You may have to take another heat at this point and each time you do take a heat try to heat a little longer section of your bar.



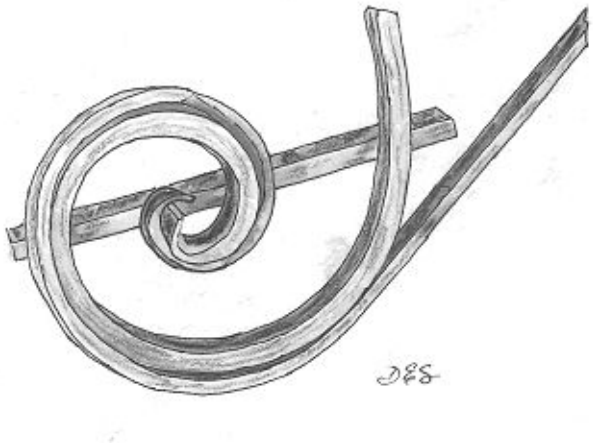
Again, work over the far side of your anvil bending the scroll downward, then flipping it, and working the curl back towards you. Don't work too hot - the orange / red range is best. From time to time, lay your scroll flat on the face of the anvil and adjust it to keep it flat. Don't let it spiral away from you in any form of a corkscrew.



Heat again and keep extending your scroll. Each time you take a heat extend the heated area to a longer section of your bar and expend it farther past the edge of the anvil as you work the curve.



Keep checking your scroll back against your pattern drawn on the worktable. If you get a kink - don't despair - you can straighten this section and continue to work. Ray showed fixing such a problem and made it look easy. Above all, don't quench your stock. Quenching the stock will provide hardening that will make it very difficult to do any adjustments cold. There is enough carbon and manganese in most of our common hot rolled steels to provide quite a strength difference if you quench the material.
How much of forming the scroll jig on the anvil vs. how much you do with bending forks is up to you. There is no correct answer - what works for you works for you.
Now that we have a completed scroll, we can weld a bar across the bottom and have a finished jig as show in our previous sketch. Below you see a sketch of this jig in use forming scroll.

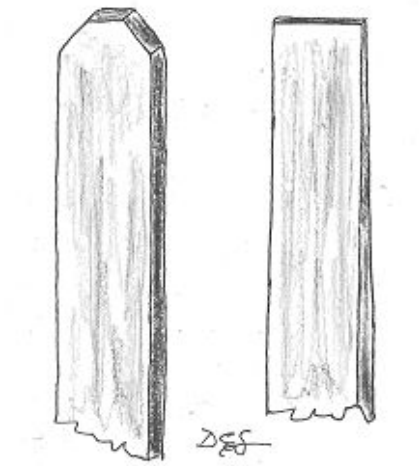


To use your new jig you will first need to start a scroll end over the edge of the anvil just as we did when making the scroll jig. In the demonstration that Ray did he was using 1/4 x 3/4 bar. Once you have a "start" you can then reheat you bar and wrap it onto the jig, forming the scroll. It is not necessary to clamp the start to the jig - it should just hook itself in place and let you wrap the heat bar around the jig. Why does it hook or lock? Since the scroll is an ever-increasing spiral it may slide a small amount until it matches the jig but then it will lock. Don't try to bend beyond the area that you have heated - go back and heat some more otherwise you will kink your bar.

What kind of start do you want to your scrolls? You can use many options. You can start the scroll with a simple ribbon end or open up that ribbon into a fish tail. Other options include a rolled end, snub end, a hey (or half) penny end, a leaf end and many others you might come up with.

Let's look at a couple that Ray showed and talked a little about his way of making them and why he likes these for commercial work. I also might at this point mention that Ray was making C scrolls for this example. It was quite important for the finished product that he make four C scrolls, actually 8 scrolls, all the same size.

The ribbon end is very simple and is quick to do. First you put a flat taper on the end of your stock. For C scrolls you are going to do this flat taper on each end having already measured your pattern and decided the total length needed for your C scroll. To prevent or limit fish tailing, first forge the corner of the bar in and then finish the flat taper.



First forge the corners in

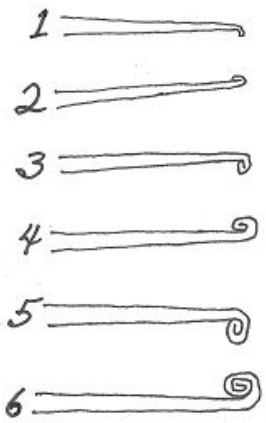
Then forge the taper

Don't start your scroll yet. First, you need to do the same flat taper on the other end of your bar and do it on the other 3 pieces (or however, many C scrolls you are going to make). This is a very important step to making all of your C scrolls the same size. After you have the 4 bars, clip the ends of the flat taper as necessary to make all of the bars exactly the same length. Ray Spiller uses a shear to do this but you can do it with a hot cut, hardie or saw too. This is one of those little simple steps that lets Ray work at a high commercial pace without lots of extra tweaking and reworking to get things to fit.

Now form your scrolls. You can make final adjustments to your C scrolls cold. If hit on the top of the C you will make the scroll shorter because you increase the curvature of the C. If you hit on the back of the C, you will make it longer because you are decreasing the curvature of the C.

Many folks like a snub end to the scroll because of its "look" and I think because it is harder to make without getting a cold shunt between the main part of the bar and the snub itself. In general, Ray doesn't use a snub end but instead uses a rolled end and has a neat little trick for making these too. Personally, I like the rolled end better and it is historically more correct for many examples. It was widely used by blacksmiths from Britain.

To make the rolled end the way Ray does, first fish tail the end of your bar and make a rather long taper. Once again, do this for all of your bars. Now trim the end of each fishtail flat (as we did when making the scrolling jig) adjusting each bar to the same length.

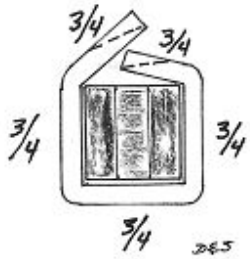


Rollin', Rollin', Rollin', Keep them doggies Rollin'

Here is the fun, rolling the end. You do this by starting the end just a hair over the edge of the anvil then flipping it over and close a fold. Repeat, repeat and repeat then reheat, repeat etc. etc. until you have rolled up the end. You will now have a rolled end with the wide part of the fish tail sticking out to the sides of the center of the roll. Here come Ray's rather neat trick - turn the roll end on its side and forge the fish tails into the center of the roll. Bang! you have filled up and made a tight center to your rolled end.

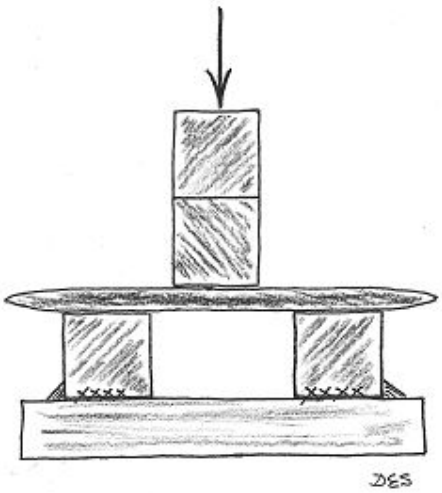
Do this 7 more times and then form your 4 C scrolls. Some folks worry about having a rolled end scroll outdoors. Ray says he never has a problem. I think the reason is that with the tight wraps of the rolled end it will just plain suck the paint (finish) into the area between wraps by capillary action. (In my old day job, on large uncoated metal coils, we had great problems with this if we got any water on a coil - it would be sucked 6 to 12 inches into the sidewall of the coil and cause bad staining. We would then have to scrap the metal.)

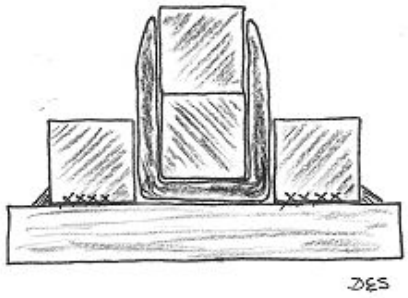
Now that we have the C scrolls complete it's time to look at another part(s) for the total assembly. Let's look at how Ray forms and prepares collars. We will look at their use in the final assembly process next time.
How does Ray size his collars?



Let's look at the example Ray used for this demonstration. There will be two sizes of collars. One size for the C scroll to outer ring and the other size for the 3 element joint between the 2 C scrolls and the cross element. It is the perimeter of the joint that counts. All of the elements themselves are 1/4 x 3/4.
So in the case of the C scroll to the outside ring we have 1/4 x 3/4 plus 1/4 x 3/4 equals a section of 1/2 x 3/4. In the case of the joint between 2 - C scrolls and the cross element we have 3 pieces of 1/4 x 3/4 which equals a section of 3/4 x 3/4.
Now if we were to wrap this with a collar with a full overlap we would have:
3/4 + 3/4 + 3/4 + 3/4 + 3/4 = 3 and 3/4 inch. Rays then says to subtract 3/4 of an inch and then draw out each end of the collar by 3/8, which will become the overlap. Therefore, the cut length for this collar will be 3 inches.
For the other joint, we have:
1/2 + 3/4 + 1/2 + 3/4 + 1/2 = 3 inches, but subtract 3/4 from this and draw out each end by 3/8. Therefore, we have a cut length of 2 and 1/4.

Ray uses 3/16 x 1/2 stock for all of these collars. Cut your stock to length, heat and draw out the ends each by 3/8 and then fuller a groove in the center of the collar. Ray fullers these on the treadle hammer.
One key thing Ray suggests for your shop is to put lots of length marking when doing this kind of work. Mark your anvil at 3, 3 and 3/8 and 3 and 3/4 for example. Put a lot of this kind of dimensioning out - on your anvil, worktable and treadle hammer. Then you don't have to pick up a scale or tape when making these items - saves lots of time and time is money. Make lots of collar pieces - and make a bunch of extras. You may lose some etc. and it is always easier to make some extras up front than have to come back and make some from scratch when doing the assembly.





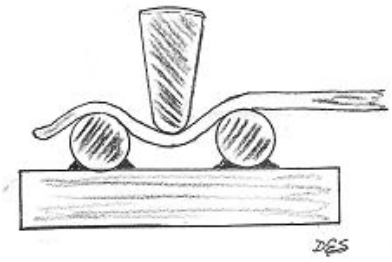
Ray uses the simple type of jig shown here to form the collars under the treadle hammer. Note that when he needs a piece of 3/4 by 1 and 1/2 half he simply tack welds two squares of 3/4 x 3/4 together. He welds a simple strap handle of 1/4 x 3/4

to these two blocks to make the top tool. After forming the "U" in the jig, Ray gives the sides an inward squeeze by a quick clamp in the vise. You can use the same type of jig on your anvil; you will just have to set your tongs down after placing the hot collar stock on the jig and pick up your hammer to hit the top tool. (Unless of course, your are blessed with a striker.)

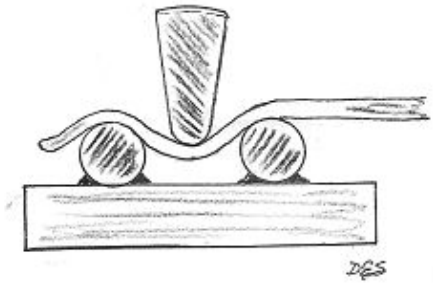
Ray tumbles all of his collars to remove the scale before use. The tumbler is a large slowly rotating drum in which the parts and a tumbling medium are placed and "tumbled". The action of the parts and the medium falling on each other many times removes the scale. I think for a medium Ray uses small punch press punchings. I will not go into detail on the construction and use of a tumbler in this article but it a very useful and important tool to the production smith making a living with this type of work. (It would make a great article for some smith out there to write for a future newsletter.) We talked about the use of collars to join the C scrolls to the center cross element but not how to make that element itself. It is an interesting element with its simple but very visual "wiggle" end. You might also call this a "flame" end. There are many places it can be used and I have seen it many times as the top finial on gates in Europe.

To make this "flame" end, first draw out your stock to what I would call a soft compound taper. By this, I mean that the 1/4 x 3/4 will have a gentle taper in both directions and a rounded end.

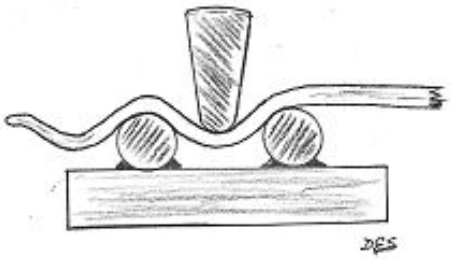
To form the "wiggle" Ray uses a bottom and top tool under the treadle hammer. You could do this with a striker too. It would be tough to do alone even with the jigs unless you came up with a way to hold the top tool in an arrangement somewhat like a spring fuller. I will leave such an arrangement up to your imagination. Here are the bottom and top tools from an end view, with the stock in place forming the first wiggle or depression.



Once you have made the first depression or wiggle, turn the stock over and advance it so that the first depression falls over the far pin. Now form a second depression with your top tool.



Flip the stock again, advance it one-step and make the next depression. Flip (rotate 180 degrees) and advance as many times as you require to make the length of flame you want.



In the next part of these articles I will show you the simple jig that Ray uses for making the center bends that allow the two pieces of the cross to pass over each other. Also in the next issue, we will look at the tooling and methods that Ray uses to make the acanthus leaves that are the center of this architectural piece. Then we will complete the assembly process.

Make a Spring Rope Swedge

This is my way and it is by no means the only way . I use a piece of 1/4 x 1 x 33" and two pieces of 1 3/4" x 1 1/4 x 1" of 4140, mild steel would last for a long time, but I had 4140 on hand.

Weld the two blocks on the ends of the long piece. Make sure you get good penetration of the weld and use plenty of rod. This swedge is for 1/2" sq. stock.

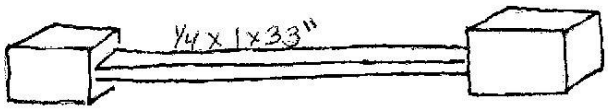
To make the dies weld the 1/4" rod together and grind flat on the back. Heat one of the blocks to a good orange heat. If you don't have a treadle hammer or power hammer get some one to strike for you. Use a flatter so you get a good eve impression. Drive the rods flush with the top of the block. It will automatically give you the draft angle. Now weld the 4 pieces of 1/4 round to finish the other block. I use a long enough rod so I can have one on each end. Weld two sides and grind flat, leaving the crease on opposing sides. Bend the long piece so the blocks match up.

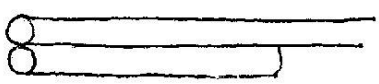
Heat the new block to orange, leaving the other black cold. Locate the 4 rods in the crease of the cold block and drive the blocks together using a flatter. Round off the edges where the rods sank into the blocks.

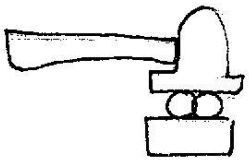
You never want the sharp edges on a tool unless it is used for cutting.

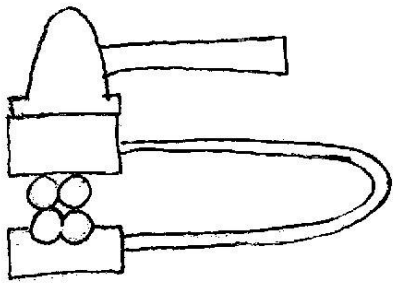
To use the swedge, heat a 1/2" square bar. Put it in the swedge and drive it down. Turn it 90 degrees as you drive it together. Don't try to drive it together without turning it several times. Your bar should look like this. When you twist it will look like a rope.

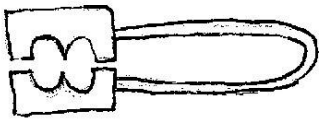
Hope You can understand this—
Ken Dettmer.

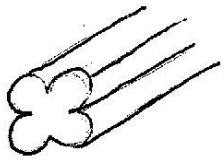












From the Indiana Blacksmiths,
The Forge Fire Newsletter, October 2005

Some details on self-closing hinges

by Jack Slack and Maria Cristalli

Sharp-eyed observers of the picture of Maria's 'Rose Garden' gate in our most recent issue may have wondered why the upper journals on the back stiles are longer than would seem necessary. For those who attended our (outstanding!) Spring Conference, Maria revealed the answer in one of her demo's - they're to accommodate the action of Self-Closing hinges.

For those who missed it, we thought we'd set out a few of the details.

Note that we're not talking here about Door (or Gate) Closers; that is, external devices such as weights, springs, motor operators, or the like, but about modifications to the hinges themselves, to make a gate close under its own power.

One common way to make a gate close by itself is to offset the hinge pins; those who have ever hung a gate or door will have discovered that for themselves! Moving the bottom pin slightly out of plumb biases the gate to swing shut, whereas moving the top pin does the opposite.

Hinges on Rose Garden Gate.

A disadvantage, though, is that this method only allows swing in one direction. There are, however, commercially available hinges that rather cleverly allow swing in both directions. They're commonly used when safety is a concern; take a look at the swimming pool gate at the next motel you stay at.

If you'd like to find out more about this 'offset pin' method, Jock Dempsey has a brief write-up at <http://www.anvilfire.com/ iForge/ tutor/jdhinge/ top_index. htm> (about halfway down the page).

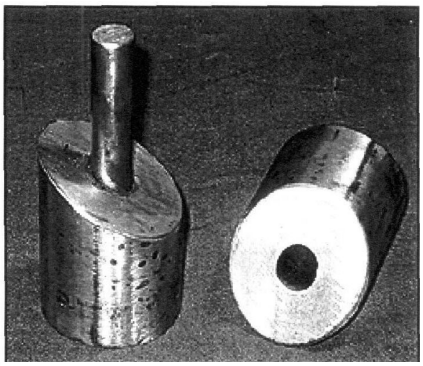
But we're Blacksmiths, so we can make our own hinges!

The simplest method of making a selfclosing hinge is to slice the hinge bearing surfaces at an angle. An example is shown (courtesy of David Lisch) in the photos on the next page showing the hinge disassembled, and showing the hinge as it would be with the gate partly open. Note that there is no requirement that the hinge halves be circular in section, only that the sliding surfaces must provide for a circular path.

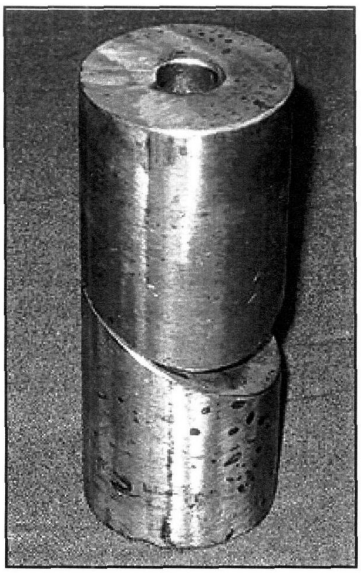
In situations where the gate is not too heavy, and where there is a lock bar for the gate to shut against, this method works fine, although there are a couple of disadvantages:

- without a lock bar the gate will waggle about a bit when closing, rather like the saloon doors in old Western movies. Also, the angle of the hinge faces is important; too steep and the gate will be hard to

Self closing hinges



A simple solution for self-closing hinges - slice hinge bearings at an angle.



open, and will slam shut (against any lock bar or stop) rather resoundingly (we'll have more to say about angles further on).

Maria's challenge was to find a system that would work on a double leaf gate without a lock bar, and still close positively, without waggling about. She researched available commercial options and asked around the group; Jack was able to provide a solution he'd used in similar situations in the past, and that's what we'll describe here.

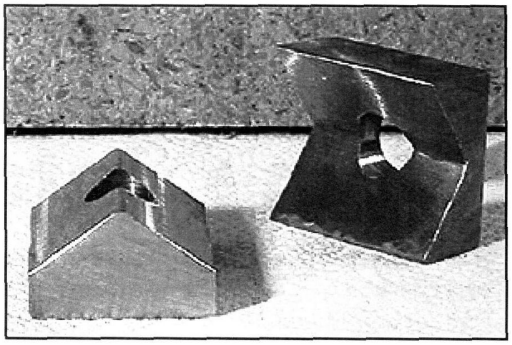
A gander at the top photo on the right reveals the secret workings; the lower element in bronze, the upper in steel. As in David's sample, the wear surface describes a circular path, so the section shape can be anything you want that will contain that path (Maria's is rectangular).

The second shot shows the hinge assembled with its pin in the closed position. Note how the hinge provides its own built-in stop.

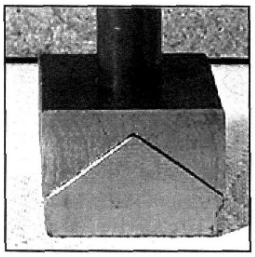
The photo that shows the hinge slightly ajar pictures it at about the point that positive 'close-to-a-stop' is taking effect.

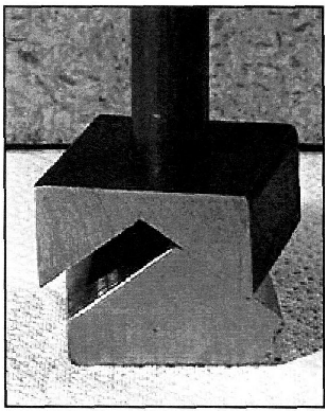
In the bottom shot you can see a perhaps unexpected bonus; when fully open (90 degrees), the gate will remain open by itself! While not strictly necessary, a small notch can be filed in each side of the upper member to provide for a small detent action in the open position.

Now that note about angles that we promised above. Too steep has already been discussed; too shallow and the gate may close too slowly (or not at all!), so some experimentation will be required. The most critical factor is the weight of the gate; a secondary consideration is the amount of lift that can be accommodated.



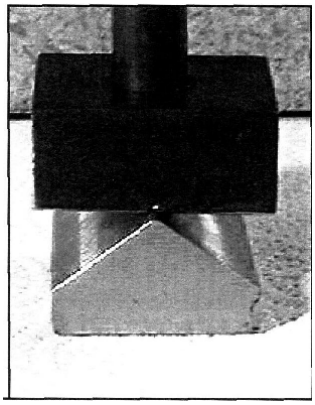
The wear surface of these hinge parts (above) describes a circular path.





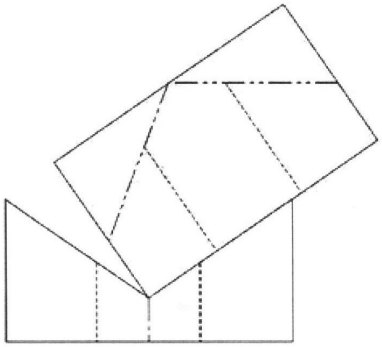
The closed hinge provides its own, built-in stops, while, when slightly ajar, there is a point that "close-to-a-stop" takes effect.

Fully open the gate remains open by itself.



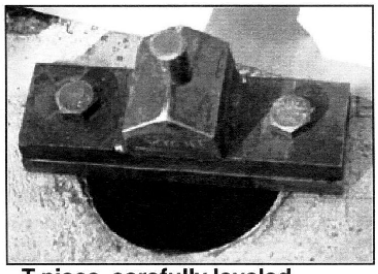
Maria made a gate mock-up and several samples at different angles to determine the optimum angle to allow easy opening and positive closing without overshoot. The final angle chosen for this situation is 33 degrees (measured from the horizontal).

For the production hinges, Maria sawed out the top half, taking care to maintain equal angles and a smooth surface. As a milling machine was available, Jack milled the bottom half; a shaper, or careful work with hacksaw and files would have worked as well. A method for using the top half as a jig to aid in finishing the bottom half is shown here.



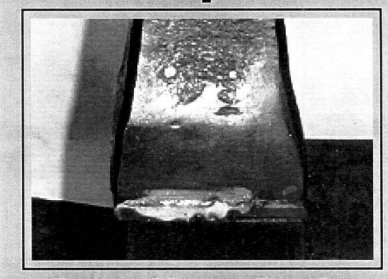
Production jig as another method for finishing the bottom half of the hinge.

Production jig as another method for finishing the bottom half of the hinge. For application to the gate, the back stile was upset to match the top half, which was then welded to the bottom of the back stile, and the stile drilled to accommodate the pin. A cross-hole in the stile intersects to allow installation of a grease fitting. The bottom half was welded to a small plate; this plate, with slotted holes to allow for adjustment, sits atop a T-piece which was carefully leveled and grouted into the foundation hole. Exceptional care taken to insure that everything was level and plumb.

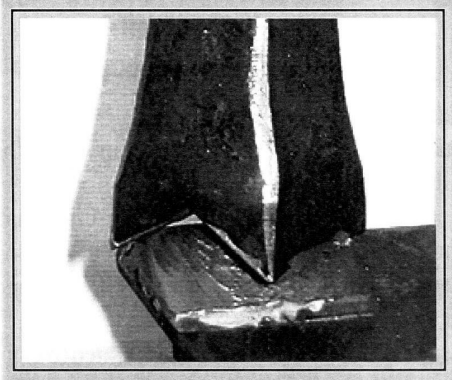


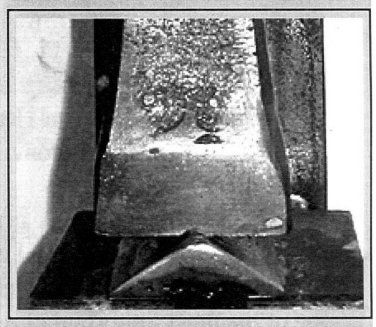
T-piece, carefully leveled in foundatin hole.

Test Bed samples

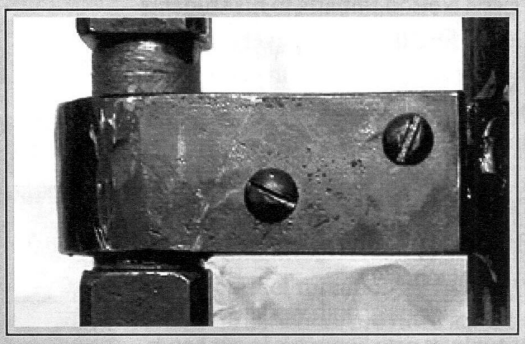


Bottom hinges closed, open, and (left) ajar. Note that bottom is well greased.

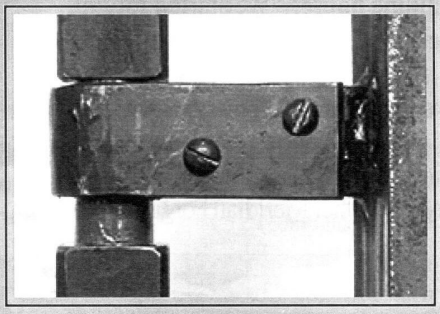




With the system in the fully open position one of the 'detent' notches can be seen on the top half. Also visible is a slight rounding at the apex of the bottom half, just to break the shart edges.



Over enthusiastic applicatin of the file is counterproductive, as the apex points form part of the principle wear path, and they'll soon bed in by themselves.



Nuggets

By Charlie Orlando

Rules To Forge By

- Keep it straight as long as you can, for as long as you can.
- Keep a handle on it as long as you can.
- Use the lightest hammer for the job.
- Do the hardest things first.

Economy of Motion

- Hit the hardest when it's the hottest
- Aim for the center of the anvil.
- Use only the muscles you need to accomplish the task. (for example, keep the elbow tucked in close to the body and pivot the arm at the shoulder for heavy blows and at the elbow for the lighter ones. That results in pivoting only one hinge rather than two for the same blow.
- Use the lightest hammer needed.
- Grip a hammer loosely when hammering. Throw it at the anvil, tightening you grip at the last moment.

Tips

- Always cut on smaller dimension before cutting on the flat.
- When drawing out, start at the end and progress inwards. It's easier to move the metal and to adjust the taper.
- Three– to– one rule: A rectangular bar whose thickness is less than one-third the width will curl when hit.
- Use Plasticine (available at art stores) to practice forging.
- A square bar will contain almost 25% more metal than the same size round bar.

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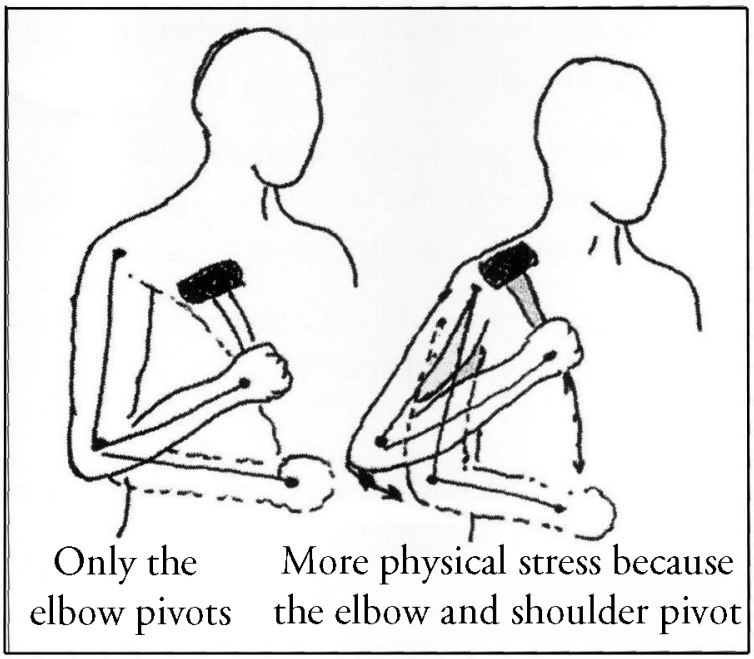

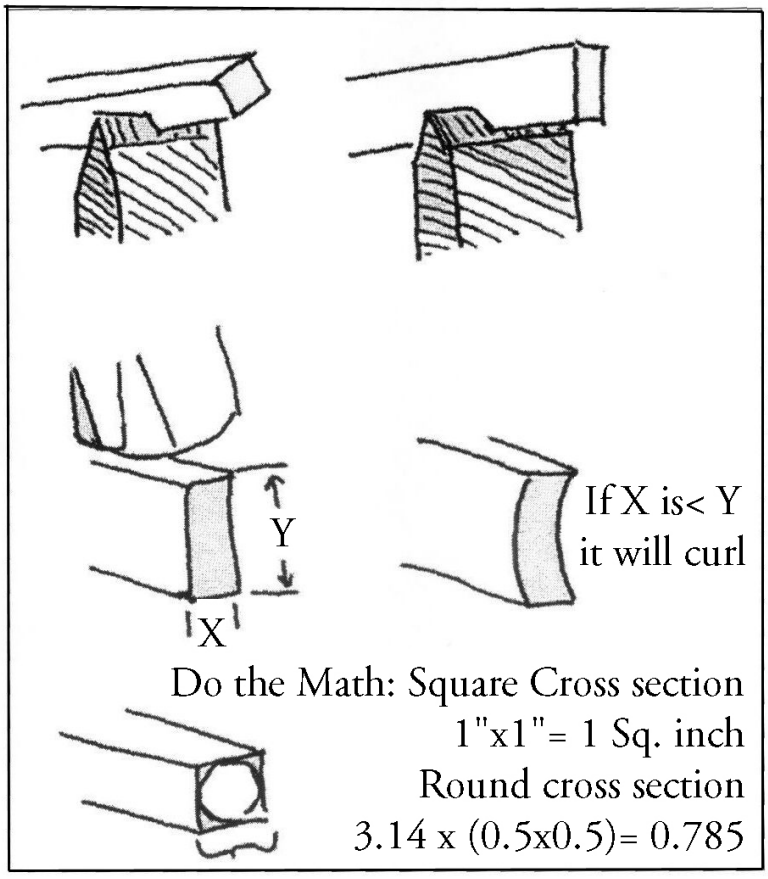

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Northeast Blacksmiths Association

Northeast Blacksmiths holds its meets twice a year at the Ashokan Field Campus in New York State.

The Ashokan campus is located in Olivebridge, N.Y., several miles west of Kingston, N.Y. The meets are held the first weekend in May and in the first weekend in October every year. The main demonstration is in the blacksmith shop and there is a "Hands On" workshop for beginners. A main demonstrator is brought in for each meet, food and bunk-house style lodging are provided as part of the cost of the weekend long meet.

Contact : Tim Neu
to register for hammer-ins
or subscribe to the newsletter;
Tim Neu, Ashokan Field Campus,
447 Beaverkill Rd.
Olivebridge, N.Y. 12461 [914]657-8333
For more information check out the web site; <http://nba.abana-chapter.com/>

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Suggestions for PABA demonstrations _____

What is your skill level?
O Beginner O Intermediate O Advanced O Professional

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Treasurer Gene Degenhardt
271 Stoney Lane
Lancaster, PA 17603

PABA Membership Application
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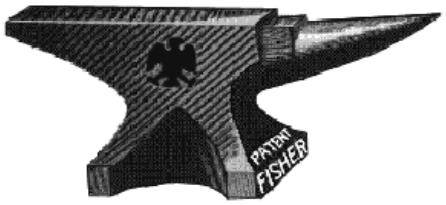
PENNSYLVANIA Artist BLACKSMITHS' ASSOCIATION

New Jersey
Blacksmiths Association
90 William Avenue
Staten Island, New York 10308
Attn: Larry Brown, Editor

New Jersey Blacksmiths Association



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