

NJBA Volume 22, Issue 4 May, 2019

Upcoming Events

Many of our meets feature an "Iron in the Hat" drawing (fund raiser), so be sure to bring a contribution and cash to buy tickets. Tailgate sales are permitted at many of our events. See p. 2 for Directors' contact information.

Sat., June 8 Handle Workshop

You will be guided in the making of a knife handle. Some experience required. \$75 for the class, \$25 for materials. Contact NJBA Director Mark Morrow for further information.

Mon.-Fri., Aug. 5-11. Middlesex Co. Fair

We will once again be demonstrating the blacksmith's craft to fairgoers between 5 and 9 PM each evening. We're seeking NJBA members to come out and help demonstrate. You needn't be expert to do so. Please contact NJBA Director Bruce Freeman for more information, specifying which days you would be available.

Sat., Aug. 24. Red Mill Meet & Picnic

See announcement on page 3.

Sat., Sep. 14. Open House

NJBA Director Bruce Ringier will host an open house on September 14 @ 10AM. 56 Paterson Ave., Newton NJ 07860, Unit 7 (Red door with sign.) Park in driveway. For more information, contact Bruce Ringier at [his email address].

Autumn Steel Bloom Smelt

Although we still plan to hold a steel smelt demonstration, difficulties obtaining supplies have put it off till autumn at the soonest. This smelt will be run by Mark Morrow.

Autumn Gas Forge Workshop.

We still intend to hold a workshop to construct a

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gas forge for each participant. We are still looking into the design for this forge and will make further announcements later.

Blacksmith Workshops at Allaire Village

Allaire Village (in Allaire State Park) which boasts the largest blacksmith shop in New Jersey, with 4 working forges, is offering blacksmith workshops to the public, and mentoring through our guild programs for volunteers. The next public workshop, scheduled for Saturday, Aug. 24, 10 AM–2 PM, "Intermediate Blacksmithing" is \$35 per person. Visit their web site at: www.allairevillage.org under the "Events" tab for additional information or visit them on Eventbrite to enroll in classes.

Reminder

**This will be the last Newsletter
printed and mailed to you
unless you subscribe (for \$10),
*so please be sure that we have
your correct email address!***

Any NJBA member may print his own copy from the emailed pdf version, or from the copy posted at our website, NJBlacksmiths.org, if desired. If you don't use email, you may subscribe to the printed edition for an additional subscription fee of \$10 per year. Please submit this fee using the application form on the back page. (If you paid your dues years in advance, this subscription fee will still apply.)

New Jersey Blacksmiths Newsletter

NJBA Board of Directors

Ryan Amos

Ron Jani

William Barrett

Tom Majewski

Marshall Bienstock

Mark Morrow

Larry Brown

Bruce Ringier

Eric Cuper

Thomas Santomauro

David Ennis

Ben Suhaka

Bruce Freeman

Damian Toryak

Blacksmith Coal and Coke Available to NJBA Members

NJBA has purchased ten tons of “nut” coal of good analysis. In addition to using this coal for our demonstrations, this coal will be available for purchase by NJBA members at 20¢ per pound, on a bring-your-own-bag and bag-it-yourself, honor-system basis. The coal is located across the drive from the larger door to Marshall’s pole barn, formerly the site of the coke pile. We still have some coke available at the same price, *behind* this same bin. (Walk around by the path to the left of the bin). Plastic bags of at least 3-mil thickness are recommended. (A spring balance, *not legal for trade*, has been mounted beside the bin for your convenience in *estimating only*.) Please inquire of Marshall Bienstock for more information and to make payment.

We like to thank those who joined NJBA as Business Members:

Marshall Bienstock & Eric Cuper

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The Picnic and Tailgate Sale at the Red Mill is Saturday, Aug. 24

Please plan to attend. Bring all your old stuff for the tailgate sale! Please bring a contribution to the Iron-in-the-Hat fundraiser for NJBA. Please bring money to buy IITH tickets and tailgated items.

The picnic is free to NJBA members & families, but contributions to help offset expenses are much appreciated. Admission to Red Mill Museum and Grounds is free to NJBA Members, and tailgaters may park on the grounds, inside the gate.

The Red Mill address is 56 Main St, Clinton, NJ 08809.

4-H Blacksmithing

A program to introduce blacksmithing to 4-H members is in the making. At present, no such opportunity is available and the idea has drawn the attention and enthusiastic support of Monmouth County 4-H director Mr. Matt Newman, of the Rutgers Extension Service in Freehold.

Simply described, small groups of interested young members would gather for demonstration/instruction on the premises of various farms and under direction of experienced blacksmiths (volunteer NJBA members) to explore aspects of the craft.

4-H covers the insurance liability for on-site, sanctioned activities making it possible to garner the interest of young folks under 18 years of age; a problem which has kept interested young people from pursuing blacksmithing.

Several farms in Monmouth County have shown interest in hosting the program. Some locations would have equipment available. NJBA has portable equipment.

What is needed are enthusiastic NJBA members who would be interested in mentoring and sharing their skills with serious 4-H youth. Interested NJBA members considering involvement may contact Bill Ker...

Blacksmithing Opportunity

The Old Wall Historical Society located at the shore in Wall Township NJ is refurbishing a 19th century

carriage shop. The building is part of the Allgor-Barkalow Homestead Museum, with farmhouse and renovated Blansingburg school house. The brick carriage shop has been renovated and has forging equipment, but is in need of expertise in bringing the shop up to operating status. Once fully functional it will serve to accommodate demonstrations for the visiting school groups and general public.

NJBA has several local members within the area who might find this opportunity of interest. Surely the Historical Society would welcome the help. Look up Old Wall Historical Society for information/description or contact Bill Ker by cell ...



NJBA T-Shirts Available

NJBA T-shirts are still available for purchase. These navy blue heavy-duty pocket T's bear the anvil logo on the pocket and the vise logo on the back. Prices are \$20 for sizes M, L & XL, or \$25 for sizes 2XL & 3XL. *The NJBA Sweatshirts are still available at \$25 each for all sizes.*

These T-shirts and sweatshirts may be purchased at the above prices at our Monday evening open forge meet at Marshall's Farm, and we expect to have them available as well at our upcoming workshops and meets.

If you wish to order them by mail, a postage and handling charge of \$10 will be charged for one sweatshirt or up to two T-shirts. For further information, contact NJBA Director Bruce Freeman.

If you send money for T-shirts or sweatshirts, please specify the size(s) desired. It is best to inquire before sending money, as available sizes may be limited.

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Open Forge Meets

(See "Rules for Participation in NJBA Hands-On Events" on page 5 of this issue).

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.)

Donations for Marshall's Open Forge Meet

Those of you partaking of the open forge meet at Marshall's shop will find a donation box under the sign-in sheet. This is an attempt by the NJBA Board to offset the costs of running this open forge meet. Contributions will be collected on the honor system, with a suggested donation of \$1-\$2 per person per evening. A limited supply of steel stock is available (behind middle forge) for a suggested donation of \$1 per (approx. 4') stick.

Sunday Open Forge, Smithtown, LI, NY

From the beginning of November through the end of April, Ron Grabowski will open his forge in Smithtown, LI, NY, to NJBA members. Please call ahead to confirm and get directions...

Sunday Open Forge, Lambertville, NJ

The Holcombe-Jimison Farmstead and Museum and Blacksmith Shop will be open on Sunday afternoons from 1:00 PM to 4:00 PM starting on the **first Sunday in May until the last Sunday in October.** The shop is located at 1605 Daniel Bray Highway (Re. 29) just north of Lambertville, NJ. (holcombe-jimison.org, 609-397-2752) Anyone, blacksmith, novice, beginner or anyone wishing to try smithing for the first time is welcome. **(Note: The Museum is not subject to NJBA's age restriction.)** There is an annual fee of \$25.00 due on the first day of your arrival. This is for insurance purposes only. You are welcome to come and work on any Sunday we are open, the only Sunday we are closed is to attend the annual meeting and picnic at the Red Mill Museum. This year the meet and picnic will be Saturday, August 24, so we should be open every Sunday. Standard safety precautions apply. Safety glasses, leather shoes, and cotton clothes are a must. We do have coal and a limited number of tools. You may bring your own tools and projects to work on.

Official NJBA Address

**NJBA, P.O. Box 224
Farmingdale, NJ 07727-9998**

NJBA's Website:

<http://www.njblacksmiths.org>

NJBA's Facebook Page:

<https://www.facebook.com/njblacksmiths/>

NJBA's IForgeIron subforum:

Scroll down at

<https://www.iforgeiron.com/>.

NJBA Newsletter:

njblacksmiths.org/archive/index.htm

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

Request for Blacksmiths

East Jersey Old Town (1050 River Road, Piscataway, NJ 08854) is looking for Blacksmiths. They are open Wednesdays through Fridays 10:00 AM to 4:00 PM and Saturdays and Sundays 12:00 Noon to 4:00 PM. They will be open until 8:00 on Thursdays in June, July and August. Days are flexible. You may work whatever you schedule allows. These are paid positions. Please contact Mike Boylan

**Please Renew NOW
Please Vote NOW
Please Volunteer
NOW**

See the last page of this Newsletter
for the form.

New Jersey Blacksmiths Newsletter

On the Founding of a Blacksmiths' Club

by Ryan Amos

I started blacksmithing in the spring of 2015 out of my parents' backyard, back in New Hampshire. As I grew older I moved out and came here, to New Jersey, to be a graduate student at Princeton. Even before I arrived here, my dream has been to bring year-round blacksmithing to Princeton's campus. As many of you know, Princeton and the NJBA host an annual hammer-in to teach the undergraduates the basic of blacksmithing, but that wasn't enough for me!

Starting from this event, I began a journey to expand students' access to blacksmithing. I started by bringing students to the NJBA open forge, to show that there was student interest in blacksmithing — it turns out you can occasionally learn useful things at a liberal arts school. We spoke with the materials science department (PRISM), and with the help of Craig Arnold, the PRISM department chair, and Sandra Lam, the PRISM programs coordinator, and many others, we put together funding and made a plan.

Around once a month, we set up a temporary smithy outdoors and start hammering. Currently, we've got two gas forges, three anvils, a leg vise, and a lot of spirit. Most of our members are novices, picking up a hammer for the first time with our group. It's a great opportunity for students at a largely theoretical school to pick up some practical skills.

Moving forward, we still face several challenges. We'd like to expand our equipment so we can handle more people, especially since (apparently) people don't like bumping into hot steel. We'd also like to find a permanent space... this stuff isn't exactly made of feathers, so tearing it down after just a few hours feels like such a shame. Lastly, I need to find a successor. As a graduate student, I'll be leaving soon enough, and if I don't find someone to lead in my absence, the club will fade into darkness.

Starting this group has been a rollercoaster, but it's been a fun ride. I'm looking forward to seeing where it takes us.

Rules for Participation in NJBA Hands-On Events

These rules apply to workshops, open forge meets, demonstrations with hands-on components, etc.

1. Participation in NJBA-sponsored hands-on events is limited to adults (i.e., 18 years or older). This rule was effected as of December 4, 2016.

- This policy **does not apply** to open forge meets and similar events that are sponsored or co-sponsored by youth-oriented organizations such as scouts, 4H groups, schools or other venues (including the Holcombe-Jimison Blacksmith Shop).

2. Workshops are intended for the purpose of teaching certain skills and/or completing certain projects, and are subject to the authority of the workshop leader or instructor. Accordingly (as per a vote of the NJBA Board on Jan. 28, 2018.):

- A workshop participant shall work *only* on the project at hand and not on any other projects, *without exception*. (Any NJBA member may attend an NJBA open forge meeting to work on his own project.)

- Every participant of a hands-on workshop will be required to follow the instructions of the workshop leader, especially any instructions pertaining to safety, or he may be ejected.

- A person who has a history of failure to follow instructions may be refused admission to any workshop, at the sole discretion of the workshop leader.

Please Renew NOW
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NOW

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Al Mottram - in Memorium

NJBA Director Al Mottram passed away at home on February 13, 2019. He is missed by his wife Barbara, son Andrew, daughter Amanda, grandson Clifford, family members and the New Jersey Blacksmith Association community. He served in the United States Army, had a MBA from Fairleigh Dickinson University and worked for many years in the pharmaceutical industry. He was a descendant of Liverpudlian blacksmiths, steel dressers and American welders.

Skilled in metal fabrication, he joined NJBA in May of 2016 and, after helping out at the Middlesex Fair, Lake Solitude house, and Princeton open forge meet, quickly was elected as member of the board in March 2017. He attended meetings at Marshall's and using his welding skills assisted with fabrication of the lightweight portable equipment for demonstrating at NJBA events. Al assisted at the Red Mill Hammer Ins and set up and administered the NJBA Yahoo News Group. He demonstrated at Wild West City in Stanhope, NJ and East Jersey Olde Towne in Piscataway. Al was helpful at EJOT. He designed and rebuilt the draft hood on the forge. It improved the performance and enhanced the demonstrations. He will be greatly missed by all. May he rest in peace. - *Bob Bozzay*

Greg Phillips - in Memorium

From Kelly Scott Anson via the Northeast Blacksmith Association Facebook Page:

Very, very sad news. We have lost one of our own. Our good friend and blacksmith brother Greg Phillips has passed away. Greg hosted hammer-ins at his shop in Montgomery, NY for many years. He, his wife Nancy and their 3 sons were always generous and kind hosts. <https://www.gofundme.com/f/gregory-j-phillips-memorial>

From the above GoFundMe page:

It is with great sadness that we say goodbye to a great man. Gregory J Phillips passed away on 5/19/2019 from a sudden heart attack. We have all lost something in just knowing Greg! Greg leaves behind the love of his life, Nancy, and his three boys MacKenzie, Hunter & Travis who were his everything. He was so proud of his boys. Greg was smart & savvy in all aspects of life. He was not just my brother-in-law, he will forever be Uncle Greg to all of his nieces and nephews he left behind. They will remember him as being fun, loving and he taught them all something that will last a lifetime. He always took time out to give them each a little extra attention. Greg had a passion for the great outdoors and he was an avid Blacksmith. He hosted his fellow Blacksmith's every spring for a "Hammer-In" event at his shop for several years. Greg's unexpected loss is a shock to his family and friends, the community of Montgomery where he grew up, and to all that knew him. Especially, Nancy and their 3 beautiful boys.

From the obituary posted on www.millspaughfuneralhome.com:

Gregory J. Phillips of Montgomery, NY, passed away Sunday, May 19, 2019, in Newburgh. He was 58. The son of the late Richard Phillips and Juanita Koshinski Caldwell, he was born July 27, 1960 in Greenfield, Massachusetts. Gregory was the proud father of three sons. He and his wife own A Sure Sign of Montgomery. Greg had a great passion for the outdoors and was an avid blacksmith. He lived every day to the fullest. Survivors include his his wife Nancy, 3 Sons MacKenzie, Hunter & Travis, brother Grant & wife Linda, brother Geoff & wife Jenn, many nieces and nephews, stepsisters Diane & Terri, stepfather Dick Caldwell, his transplant Donors Bonnette and David, many friends and in-laws.

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Editorial - *Volunteers Essential*

Okay, I know -- you're *tired* of reading my frequent exhortations for volunteers, but this time I need you to pay attention:

I've served on the NJBA Board for all 22 years of its existence, in every possible role. After David Macauley's death, I assumed the roles of acting Chairman, Treasurer and Membership honcho. Al Mottram had, as of Jan. 1 this year, assumed the last role, but with his passing (See p. 6) it is once again up to me to handle. For a variety of reasons, Larry Brown transferred to me some of his responsibilities as Newsletter editor.

The time these duties consume deprive me of time either to work at my own forge or to run NJBA workshops, formerly my principal contribution to NJBA. I would like to run another gas-forge workshop. I'd like to run a workshop to fabricate various tongs for NJBA and for workshop participants. I'd like to run several more workshops than these, but can't even begin to plan them when my time is taken up by other NJBA duties.

I'm approaching seventy years old, now, and can't keep it up forever. Ryan Amos has assumed the chairmanship, which helps a lot, but it is my intention to divest myself of additional responsibilities as well. If nobody steps forward to assume these responsibilities they *will not get done*.

The next of these divestments will be the Newsletter. As announced elsewhere, we will no longer be printing and mailing a newsletter. We are looking into other means of assembling and disseminating this information -- probably by an emailed Newsletter.

Recently we've seen a slight increase in our membership, and we'd like this to continue, but we can't hold the membership meetings and workshops we *need* to hold to attract and keep members without increased participation from our existing members.

As you renew your membership, using the form and ballot on the back of this Newsletter, please indicate the degree to which you'd like to participate actively in NJBA. Filling out the volunteer form does not represent a firm commitment on your part -- only a request by you to be contacted by NJBA when help is

needed. Please do so today.

- Bruce Freeman

Volunteer Opportunities:

- Assist at upcoming open forge meet at Princeton University (not yet scheduled, but possibly July and/or October).
- Demonstrate blacksmithing at Middlesex Co. Fair, Aug. 5-11, 5-9 PM. (Choose your evenings.)
- NJBA Board Membership. (See below.)
- Maintain the NJBA Facebook page.
- Maintain the NJBA IForgeIron page.
- Maintain the NJBA Yahoo news group.
- Assist with the NJBA Newsletter with reports, photographs, how-to articles, or editing.
- Assist at NJBA workshops and membership meetings.

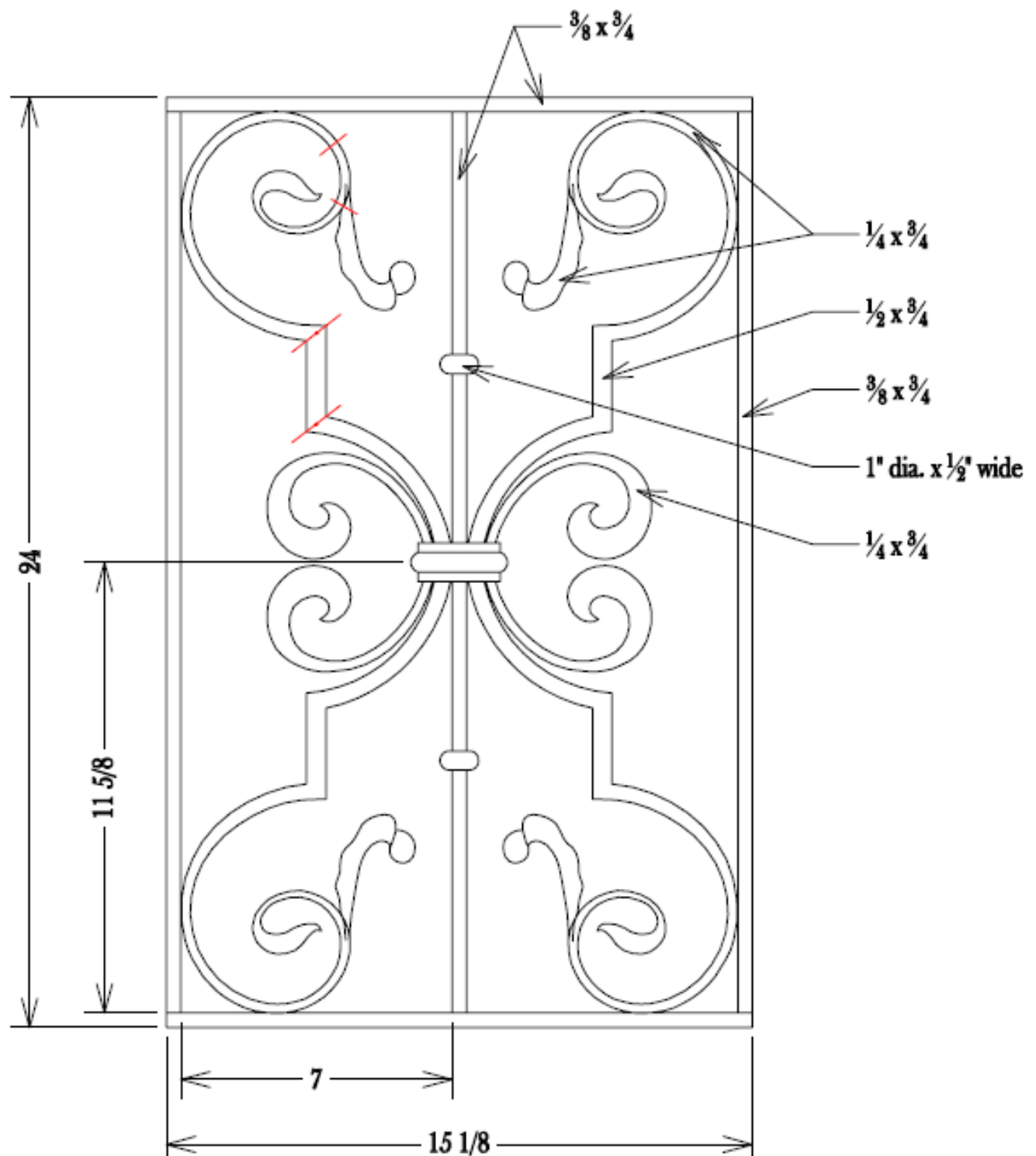
Want to Join the NJBA

Board of Directors?

NJBA has an unusual nomination and election process. While you may be nominated by a Director, you may also self-nominate, and the Board may elect new Directors at any time. If you're interested in helping to run NJBA, please email any director (or all of them) and self-nominate. (Be aware that there's a work commitment involved! See the By-laws on our website for more information.)

While the each Director reserves the right to use any criteria he sees fit in judging whether to vote for you, the criteria typically boil down to whether you've shown that you're willing to work to help run NJBA. Tell us how, when, and where you've participated and helped out in the past. Tell us what you'd like to help with in the future. Give us some understanding of your relevant experience and how it would benefit NJBA. This experience need not be in blacksmithing, though that helps. Writing, photography, Internet, and organizational skills, for a few examples, can be just as valuable to NJBA. If interested, let's hear from you. For further information, visit NJBlacksmiths.org and read our Bylaws.

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McLellan Blacksmithing
6961 Horseshoe Bar Road
Loomis, CA 95650
(916) 652-5790 Fax (916) 652-5784
www.McLellanBlacksmithing.com

ABANA National Curriculum Grill Project

Grill			Sheet Number	000
Date	09/08/07	Revised	02/17/11	
Scale	3" = 1'-0"	Drawn by	John McLellan	

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The Beveled Leaf Scroll.

Article to suport ABANA's National Curriculum
Mark Aspery 2011

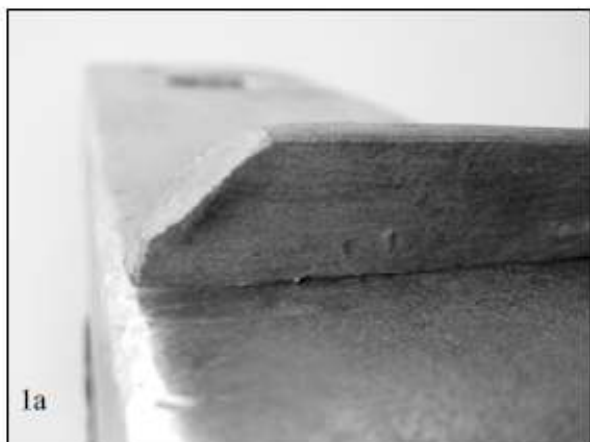
This scroll is found in the grill project of
ABANA's national curriculum.

The ABANA grill project calls for water leaves
to be added to each scroll about 5 inches from the
scroll tip. This article will concentrate on mak-
ing the scroll end and turning the simple scroll. A
future Hammer's Blow article will focus upon the
turning of the scroll/leaf combination.

Forge a short point on the end of the bar. The
taper will be flat on one side and curved on the
other. Thin the point down as it adds to the effect.
Try to keep the taper no longer than the width of
the parent bar-stock. Step 1 - 1-C below.



Next, define the leaf by forging a set transition.
Shown is a half faced blow over the offside edge
of the anvil, but this could equally be forged
over the bick to produce a slower transition. The
important thing to remember here is to keep the
leaf short; perhaps the width of the bar stock. The
leaf may look a little small after this move, but the
leaf will, dare I say, "grow" during the beveling
process. Steps 2 through 2B.



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After defining the leaf, the bar needs to be bent through approximately 90-degrees. Keep this bend short, within an inch to an inch and a half, just behind the leaf. Step 3 through 3B below. These type of scroll are one sided, there are two of each within the grill. If you place the leaf on the anvil with the bend going to the left, you will forge a left branching scroll and of course visa versa. The example shown is for a left branching scroll.



At this time the leaf portion of the scroll needs to be blown back. This can be done later with a pair of scrolling tongs, but you run the risk of gauling the leaf with the tongs. Step 4 through 4B. Decide on the direction of your scroll and using a ball-faced hammer, chamfer the edges.

Note that chamfering the outside edge will tighten the bend while chamfering the inside edge will open it. It would be nice if, after chamfering, the bend were returned to its original position. Step 5 through 5B show the bevel.



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In order to better understand how to scroll this type of scroll, get a piece of cardboard (a breakfast cereal box will do nicely) and draw the outline of your forged scroll on the cardboard. Cut the cardboard scroll out with a pair of scissors.

Holding the cardboard in one hand between the thumb and forefinger, start about halfway down the leaf and make a bend 90-degess perpendicular to the center line of the leaf. Feed out about 1/4-inch and do the same thing again. Continue this along the entire scroll.

You should find that the leaf and the bend have made a slow 90-degree turn and are now resting in line with the rest of the scroll. That knowledge helps you when you go to the anvil.

You can turn these scrolls off the side of the face of the anvil if you didn't need the clearance for the turning leaf.

As such, we turn these scrolls on the end of the bick as it allows us the clearance that we need for the turning leaf and scroll.

As you feed the leaf and scroll over the bick, make sure that you keep the centerline of the scroll 90-degrees to the centerline of the bick.

I like to use a small leather mallet here in order to protect the bevel line. Step 6 through 6e



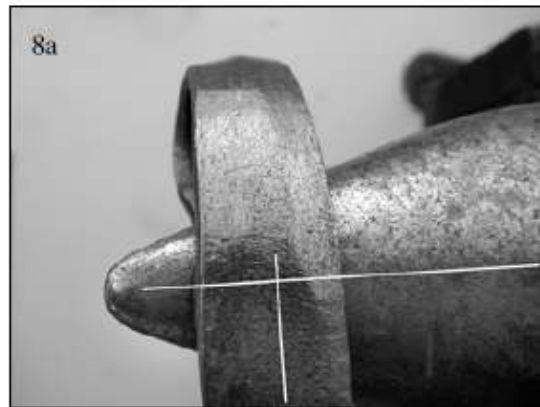
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Before you turn the complete scroll, stop and bend the tip of the leaf back in the other direction.

This move can sometimes cause a bit of frustration. Rest the leaf on the end of the bick and make sure that you do not move the hand holding the scroll as you bend the leaf.

Moving your hand now can cause the scroll to open rather than the tip of the leaf to bend. If you are having problems, consider quenching the bend of the scroll up to 1/4 way up the leaf and then give it a go. Step 7 and 7 B

Re-heat the scroll and continue to bend. At some point you may want to continue scrolling using either a dog wrench and horns or with a pair of scrolling tongs. Step 8 with 8 b showing the point at which the use of scrolling forks (dog wrench) and tongs can become useful.



The 'C' Scroll above used slightly longer leaves than the process previously described.

The ABANA grill has a water leaf welded to each scroll about 5 or so inches from the tip of the scroll. This does add to the degree of difficulty in turning the scroll, making it a more tool intensive process.

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The ABANA 2020 conference chain making competition

ABANA 2020 Conference competitions #2
Chain-making - Intermediate Category

Mark Aspery, California.

You are to forge two links of chain from 6-inch long pieces of $\frac{3}{8}$ -inch round bar, and a repair link from a piece of $\frac{3}{8}$ -inch square stock, the length of which is unknown at this time.

The repair link will have an included mortise, either formed by punching and drifting, or by welding an eye.

For punching the eye, you'll need either a $\frac{3}{8}$ - $\frac{7}{16}$ -inch wide slot-punch or a slitting chisel and a round drift. I use a tapered round drift as I find it suits my needs better than a parallel sided drift. You will also need a hot cut chisel and maybe your own pair of $\frac{3}{8}$ -inch tongs, as these will be at a premium during the event.

If you intend to weld the eye, you may need a mandrel as well as a drift.

Either method is appropriate, with welding perhaps more suited to wrought iron and its grain.

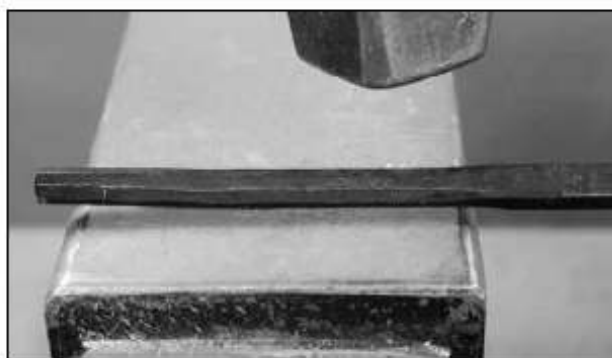


Here is the repair link applied

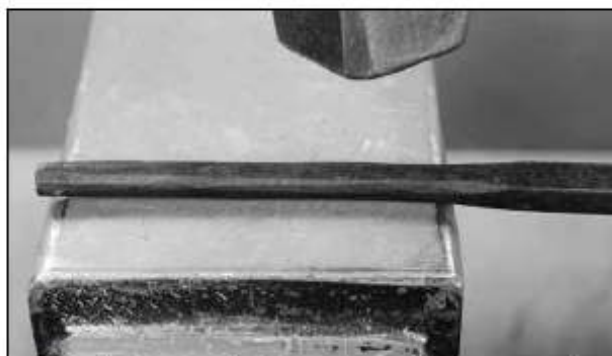
Start by drawing down a section of the square stock and forging it into a $\frac{3}{8}$ -inch round cross-section. I estimate a need of around 4-inches (finished) of drawn square stock, that will be further forged to a length of $4\frac{1}{2}$ to 5-inches of $\frac{3}{8}$ -inch round stock, the remainder of the bar being left $\frac{3}{8}$ -inch square.



Draw down a length of $\frac{3}{8}$ -inch square bar on the bick



Draw down a 4-inch length to a $\frac{5}{16}$ -inch square cross section



Dress the forging and take to octagon and then on to round



Aim for a $4\frac{1}{2}$ to 5-inch length of $\frac{3}{8}$ -inch round bar when finished

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Mark Aspery

Once you have drawn down the end of the bar to a round cross section, you have a choice of working methods; your decision may be made for you depending on the room in the forge pan, length of original stock etc.:

1. Sever the material that you think that you need from the parent bar and punch or weld the mortise.
2. Punch and drift the mortise before cutting the repair link from the bar.

I prefer not to cut the project away from the parent bar until after I have finished the link. Keeping the project on the bar makes it much easier to punch and drift as well as turn the link to thread the eye.

Cutting the link away from the bar also creates a problem with the corners of the cut bar creating 'rabbit's ears' during drifting, but it maybe a needs-must situation, depending on forge room etc.

I show both methods in the photograph progression below to cover to all eventualities.

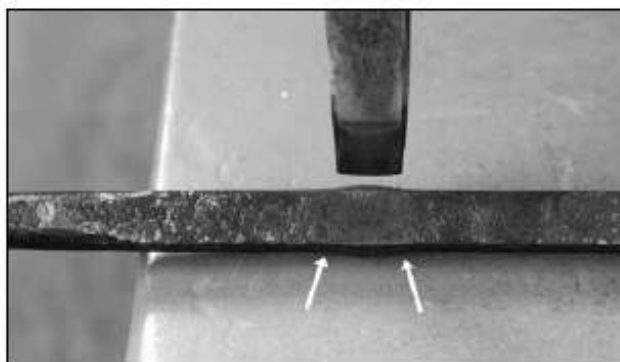
If you cut the project from the parent bar, you have a couple of options. You can cut the bar straight across and be left with a flat end, or you can use a curved chisel (or hardy cut-off) and leaving a curved end. Both methods have their shortcomings.

You need 1¾-inch to 2-inches of un-forged square stock on the end of the forged round stock, to complete the repair link. I find that a length of 6½-inches from the end of the bar to the start of the mortise is about the right length of material for the link.

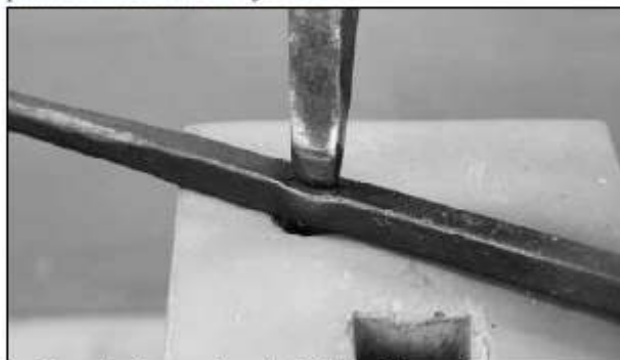
I like to punch from both sides of the bar pushing the resultant swelling to the middle of the bar, rather than to one side, and leaving a uniform look.

Use the swelling created by punching from the first side to landmark the punch on the second. Clear the slug over the pritchel hole.

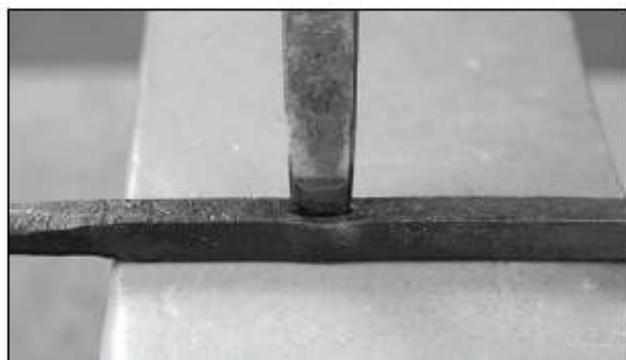
My preference is to use a tapered round drift to finish the mortise, working from both sides of the bar and teasing the hole into its final shape.



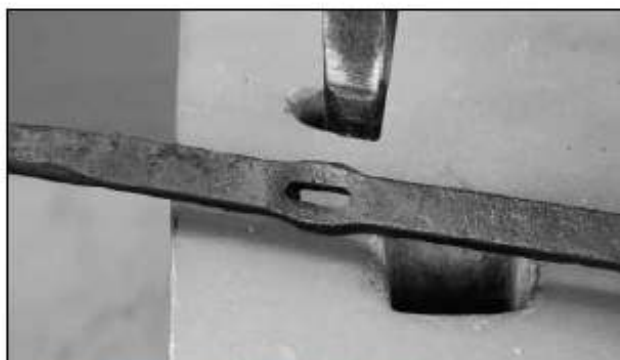
Use the swelling created by the initial punching to locate the punch on the second side of the bar



Clear the slug over the pritchel hole of the anvil



Punch to slightly past halfway from one side of the bar



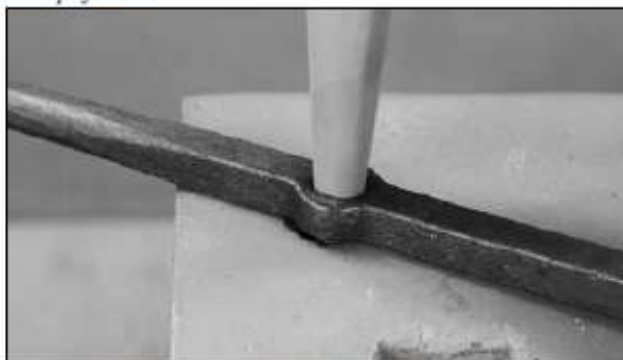
My slot punch is slightly over ¾-inch wide

New Jersey Blacksmiths Newsletter

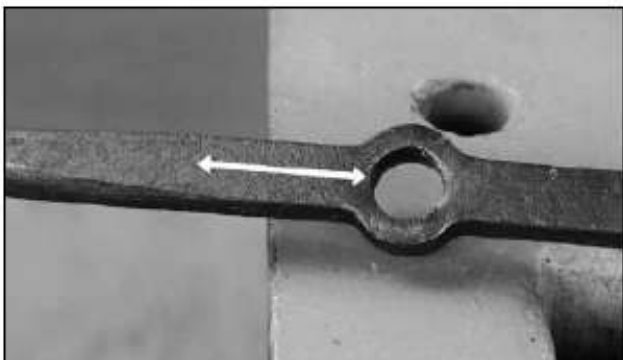
The ABANA 2020 conference chain making competition



I use a tapered drift when drifting the mortise, but that's personal preference.



Work from both sides of the bar as you drift



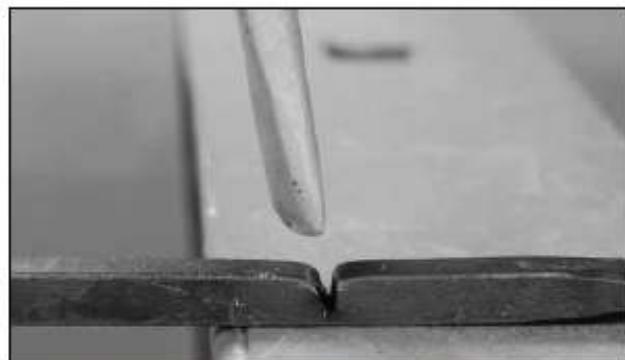
I like about 6 1/2-inches of length from the start of the mortise to the end of the round bar

If you have a flat cut you can either hot rasp the end now or later, although delaying it until after you have drifted the mortise might be more appropriate.

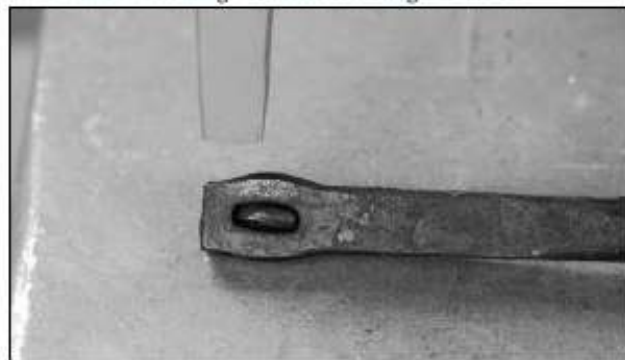
My slot punch is about 1/16-inch thick and a little over 3/8-inch wide. When placed along the centerline of the bar it will leave 5/32-inch on either side of the punch.

If you cut the project from the parent bar, theory suggests that you leave that same amount from the edge of the punch to the end of the bar. Theory and practice don't always align, and this is one time when they don't.

The end of the bar, having minimal support, is stretched and thinned by the drifting action of forming the eye. To accommodate for this, pad the measurement from the edge of the punch to the end of the bar to allow for this - not by much, a 1/32-inch or so, a little more if you are going to hot-rasp the end.



Sever the piece from the bar 1 3/4-inch past the transition area. Note that I am holding the chisel at an angle to the bar



Leave an allowance at the end of the bar for cleanup and drift movement when you punch.



Hot rasp the cut end after drifting to round

New Jersey Blacksmiths Newsletter

Mark Aspery

The size of your slot punch and drift must reflect the size and shape of the round end of the repair link.

Once the mortise is formed, you will need to bend the end of the round bar to slightly past 90-degrees.

Lay off about 1 3/8-inches past the centerline of the bick to locate the bend.

Make the bend at an area of the bick or horn that reflects the inside dimension of the chain - around 1-inch in diameter.



With an allowance of material needed to make the bend, turn the link



Lay off about 1 3/8-inch from the center of the bick



Take the bend past 90° if you can, making it easier to catch the bick when you turn the link over



Bending the bar to slightly past 90° makes it easier to thread into the mortise

Bend the bar so that the tenon is headed towards the mortise. Make the bend around the area of the bick that best represents the inside diameter of the chain to be repaired.

There should be no square stock within the bend.

Close the link and give the whole thing a brushing. Cut the repair link from the bar using either a curved or a straight chisel. There is no set way the end should look, curved or flat, so long as the end doesn't interfere with the joined chain when applied.



Finish the bend over an appropriate part of the bick, leaving an ID that matches the chain link



This is as far as I go on the bick before moving to the face of the anvil

New Jersey Blacksmiths Newsletter

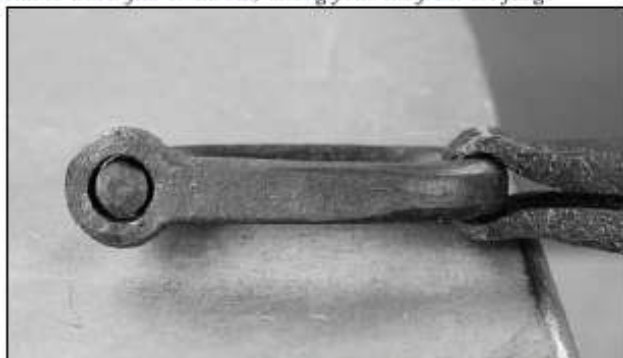
The ABANA 2020 conference chain making competition



Close the link on the face of the anvil and give it a good brushing before returning to the fire



Sever the repair link from the parent bar and hot rasp the cut end to either flat or curved, taking your cue from the judge



This is the end after hot rasping, showing the fit that I am looking for in the mortise



Open the repair link ready to apply the two chain links

Re-open the link sufficiently to accept the chain links with either a pair of tongs or at the bick.

Hopefully, at this time, you've already moved the material for the two chain links nearer to the fire to pre-heat them ready for forging.

A variation on this theme is to create a hammer-finished tenon on the end of the round bar section. Forego the drawing down of the bar at the bick, moving straight away into octagon and round. This move leaves the round bar oversized, and able to accommodate a tenon of the requisite size for the mortise.



The judge may or may not want the repair link closed on the day. Practice both and get a feel for the time needed



A variation on the theme is to create an appropriately sized hammer-forged tenon on the end of an oversized round section

The judge on the day *may or may not* want the repair link to be closed on the links, practice closing the repair link to get an estimate on the time needed should the need arise. Good luck!

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ABANA 2020 Conference

Register for the conference at:

www.ABANA.org -or-
www.ABANA2020.com

NJBA Membership Renewal, Ballot, and Volunteers' List

Please Renew Now for 2019-2020. Please Vote for the Board of Directors. Please Volunteer.

If you want to continue to receive printed Newsletters by mail, please remit an extra \$10. (See p. 1 Editorial)

Mail completed renewal form and ballot, along with check for dues, to:
NJBA Election, P.O. Box 224, Farmingdale, NJ 07727-9998

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 ☐ \$40 (business membership dues)
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Ballot for the Election of the NJBA Board of Directors

Vote for each Director by checking the box by his name.

Nominee	Nominee	Nominee
<input type="checkbox"/> Ryan Amos	<input type="checkbox"/> Eric Cuper	<input type="checkbox"/> Bruce Ringier
<input type="checkbox"/> Billy Barrett	<input type="checkbox"/> Dave Ennis	<input type="checkbox"/> Tom Santomauro
<input type="checkbox"/> Marshall Bienstock	<input type="checkbox"/> Bruce Freeman	<input type="checkbox"/> Ben Suhaka
<input type="checkbox"/> Larry Brown	<input type="checkbox"/> Mark Morrow	

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
Blacksmithing Experience:	Novice	Intermediate	Experienced Professional
Other Experience:	Welder	Fabricator	Other Metalwork
	Writer	Editor	Photographer
	Facebook Contributor	Yahoo Group Management	Videographer
	Other:		IForgeIron Contributor