



N.J.B.A. Newsletter

NJBA Volume 18, Issue 2 02/20/14
<http://njba.abana-chapter.com>

Editors Soapbox

News letter is late, so I apologize , I need to get myself back on the old schedule. But its only by a few weeks this time.

NJBA has suffered a blow and we need some members to step up from the shadows and fill in some big gaps.

David Macauley our Chairman, treasurer and events coordinator passed away from a heart attack on January 1st. David took on a lot of responsibility's in NJBA and we have some large shoes to fill. No one person has to do all that David did but we could use several to help cover the needs. Bruce Freeman has been working to cover some of what David did, but he cannot be expected to cover it all.

We need to repaint the trailer, probably in April. We may do it on a Monday night or weekend, If you want to help call a board member, in particular, Bruce Hay

We are working on setting up meets with opportunities to learn, forge or teach others what you know. Come out and chat or get your hands dirty! Let's boost the attendance at the upcoming meets. If you are interested in helping please contact one of the board members listed on page 2.

Larry Brown, Editor

Upcoming events for 2013

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

Meet information starts on this page and continues on page 3.

April 26th Damascus workshop

Info on this page

May 18th Tuckerton info on page 3, date may be changed

May 18th Walnford info on page 3

June 7th Eric Cuper Studios in Easton, PA more info to come

September 14th Red Mill

December 7th—Annual Holiday Party, Marshall and Jan's house.

Please check the web site for updates and changes.

Damascus Workshop

Saturday April 26th

This will be a basic damascus steel class for knives or specialty tools led by Mark Morrow (<http://www.swordsmith.net/>). This will be a beginner level class. We will be making a simple pattern bar of folded steel in both gas and coal , coke forges, tools and forges will be provided. Attendees will need to bring leather gloves and safety glasses. The patterns will be twist , ladder and random , also covering types of steel to use , grinding methods and heat treat of finished blades and how to bring out the pattern in the steel.

Charge to be \$125 per person. (Open to members only, but anyone may join NJBA on the day of the event.) To be held at Marshall's shop. Mark's email address is; swordsmith2001@verizon.net and also the shop phone 732-458-5823 , we need a at least a \$20 deposit and balance at the door. There is a minimum of 4 participants and a maximum of 10.

Directions on page 3.

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The NJBA Web Site!

The NJBA Web Site is:

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

The Newsletter is at:

<http://www.lightningforge.com/njba/index.htm>

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

Official NJBA Address

NJBA

P.O. Box 224

Farmingdale, NJ

07727-9998

**Rather than use room in the newsletter,
All correspondence between
ABANA and NJBA can be found on the
ABANA web site.**

**If you cannot access it there, contact me
and I will send you copies.**

NJBA Board of Directors

Directors are not listed on line

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Directions:

Marshall's farm is at 663 Casino Drive, Howell (Monmouth Co.). NJ, which is about 1/4 mile east of Route 9. Casino Dr. is a few miles north of I-195, and a few miles south of Rte. 33. Either of these routes can be easily reached from the major north-south highways, including the Garden State Parkway, the NJ Turnpike, I-195, Rt. 18 or Rt. 34. Marshall can be reached at his shop at (732) 780-0871.

Tuckerton Seaport, May 18th Open Demonstration

This may be changed due to the conflict with Walnford, check the web site for updates!

On Sunday May 18 NJBA will be doing a demo at Tuckerton Seaport, at their Annual Bluegrass & Barbeque Festival. We did this event a few times before and always had a good time. So come on down, or up, depends where you live, and spend some time with us. Do a little blacksmithing, enjoy the music, the food, and the seaport.

Set up time is around 9:00 am. To get to the seaport take the Garden State Parkway to Exit 58 Rt 539 go east or follow the signs at the top of the ramp to Rt 9 (Main St) in Tuckerton make a right the seaport is on the left. Hope to see you there.

We were promised good weather this year. But just in case here's my cell phone number,
201-815-0746.

Don't be afraid to call in the morning I'll be up.
Tom Majewski

For information on the seaport go to
www.tuckertonseaport.org

Meet at Walnford Park May 18th

We will be demonstrating and holding a membership meeting at Walnford Park on September 30th. Walnford is also known as Crosswicks Creek Park and is in Upper Freehold, N.J.

Hammer in and demo at Walnford Park. Please come out especially with your family to enjoy a

day at the hidden jewel of the Monmouth County Park system - Walnford Park. NJBA will have the trailer with three forges at the demo. We will be immediately across from the working gristmill. There are many activities for children so this is another great family event.

Historic Walnford is the 36 acre Historic District at the heart of Crosswicks Creek Park. This country estate and former mill village provides a window to view more than a century of social, technological, and environmental history in Western Monmouth County.

The site includes a large home built for the Waln Family in 1774, an 1879 Carriage House, and assorted outbuildings and farm structures. Much of the site's interpretation is connected to the newly restored and operating late 19th century Gristmill.

Directions

Directions: Please note: If you choose to do an internet search for directions to this address, be aware that the parking lot on site is not accessible from the Walnford Rd/Hill Rd intersection. Directions below. From the East Via I-195: Take Exit 11 (Imlaystown/Cox's Corner) and turn left onto Rt.43 (Imlaystown/Hightstown Rd). At the first intersection, turn right onto Rt. 526/Red Valley Rd. At the first light, turn left onto Sharon Station Rd and follow approximately 2 miles. Turn right onto Rt. 539 North. Travel a short distance and turn left onto Holmes Mills Rd. Make first right onto Walnford Road which leads directly into the park. From the West: Follow I-195 to Exit 8 (Allentown), Rt. 524/539. Turn right and follow Rt. 539 through Allentown. Turn right onto Holmes Mills Rd and then right onto Walnford Rd, which leads directly into the park. From the North: Take Rt. 9, 79, or 34S to 537W to Rt. 539 in Upper Freehold. Turn right onto Rt. 539 (Forked River Rd), then left onto Burlington Path Rd. Turn right onto Holmes Mills Rd and then left onto Walnford Rd, which leads directly into the park.

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June 7th Cuper Studios

More information next newsletter, so mark the date!

Middlesex 2014 Fair Dates:

Monday, August 4 through Sunday, August 10. No word from them yet which days they want us there.

Historic Cold Spring Village (HCSV)

-July 12th - 13th, Celtic Festival

Historical Cold Spring Village

-August 23th and 24th

Seafarer's Weekend

Cape May NJ.

-Canal Day Wharton NJ

August 23rd

These are a few of the events that David Macauley used to demo at and run. If you want to take over the coordination of these events or demo at them please contact a board member. If you participated at these in the past we would appreciate the assistance in keeping them going.

Millstone

David had been working with the people of Millstone who are rebuilding a building for a blacksmith shop. Anyone who wants to help them set up the shop or demo after it is completed should contact them about volunteering. I made recommendations during a phone call about laying out the slab for the shop and may help them otherwise as time allows. Their web site is: <http://www.mtfriendsofhistory.org>, Pam D'Andrea, (732)446-1936

Higgins Armory

By Bruce Freeman

On Dec 19, 2013, Larry Brown and I drove up to Worcester, MA, to see the Higgins Armory. It was essential to go before the end of the year, because it will be closing permanently on Dec. 31, after being in existence for 70 years or so. (The collection will be transferred to the Worcester Art Museum, but it sounds like it might take a while before it's back on display.) I had picked up a book about the Armory many years ago, and had seen it a few years ago on a trip through that area, but Larry had never seen it at all.



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The museum is an all-steel construction, two wings arranged in a symmetrical "L", 4-story high, with two elevators (fortunately). You start the tour in a little orientation room on the first floor, where they have a few objects and a couple videos playing, then take the elevator to the 4th floor, which is a balcony overlooking the great hall, and has some ex-

hibits of arms and armor along. The great hall (the 3rd floor) has mannequins posed as knights on horseback, and knights combatant, as well as a lot more of displays of arms and armor. (Judging from the video, the complete collection contains a lot more complete suits of armor, but they aren't on display.)



By Larry Brown

I had heard many times about the museum but I never got the time to go there as I usually don't travel that direction. When I heard they were closing/relocating I wanted to get up there and figured it would be worth a special trip. The museum is supposed to move to the Worcester Museum of Art with more being displayed as time goes on.

Bruce, said he'd be interested in going and said he had seen it before and it wasn't that big, so we should look for other things to see on the trip. We planned on other places to stop and we took off on our journey. The weather, previous snow storms and traffic sucked a lot of time from our trip, but it was a go/no go type of thing as our time frame was dwindling.

We only saw the museum which had some impressive items in it, I'm going to keep my eyes open for the book as the pictures I took of the armor in glass cases weren't great, good to remember it but not to reproduce.

They had a leg vise that had a carved face in the front of it and tightened by the screw from the back, a one of a kind item, a real combination of art and function. I had a good time looking at the armor and swords of all

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kinds and I hope they are able to display the entire collection in the new location in a few years time, the plans sound good, but we all know what happens with museums, plans and budgets. Now I want to get up to the Met in NYC for their arms and armor, which I haven't seen in a few years, a trip I highly recommend.



**Master "EFB"
Anvil, 1763
Perhaps Central Europe
Wrought iron, steel**

EXTRA

From Wikipedia article on Magnesium Sulfate (Epsom salts):

The use of Epsom Salts is an effective method of "drawing out" stubborn or buried slivers. Simply placing a pinch of Epsom Salts over the area of skin in which the sliver is lodged and covering with a Band-Aid for 24 hours will normally remove it or effectively facilitate its removal.

Your Skill

"Labor" is commodity delivered en masse.

When a laborer works merely with his muscles like a horse, he delivers horsepower. The market value of horsepower is 1 cent per H.P. hour. Falling water and burning coal satisfy this demand. Much as we require and admire well developed muscles, physical achievement requires co-ordination of other faculties.

A Craftsman is a trained worker who utilizes his hands, his nerves and his head. When he also utilizes his heart in appreciation, imagination and creative effort, he becomes an artist.

Every artisan who strives to become an artist will become a better craftsman, and oh, how the world needs better craftsmen to raise the standard of living in this Man Age of Mass Production!

Your highest goal is skill-physical skill, mental skill, and spiritual skill.

Seek skill through intelligent practice.

John W. Higgins
1922

(From a wall plaque in the museum)

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David Macauley, 1960-2014

By Bruce Freeman

It is with much regret that I report the death of David Macauley, acting chairman of NJBA and one of our most active directors. I understand that David died in his sleep of a heart attack on Jan. 1, 2014.

I have known David since the mid-1990's, almost exclusively in his avocation as a blacksmith. I met him while we were historic reenactors and volunteer blacksmiths at Historic Allaire Village. When some of us blacksmiths decided we needed an ABANA chapter in New Jersey, David became a founding member and director of the New Jersey Blacksmith Association. He soon assumed a leading role in the group, and remained one of the most active members in the group almost to the day of his death. His participation was so all-encompassing the NJBA board is now scrambling to pick up the loose ends resulting from his untimely death.



David at Cold Spring Village at

Historic Allaire Village, and over the years we each improved our skills, attaining some degree of competence in the art, and sometimes attending the same classes in blacksmithing at the Peters Valley Craft Center, in Layton, NJ. I sometimes teased him with an anecdote from our past: Many years ago, we were attending a blacksmithing class at Peters Valley when a reporter / photographer showed up to do a story. David cooperated fully and was posed for many minutes in many positions at work at the anvil. Then the story appeared -- with my picture in it instead of his. It seems the photographer hit the shutter at the perfect moment -- my hammer coming down on hot steel on the anvil, with the forge fire in the background. Naturally, David was miffed and I had a good chuckle.

But, over the years, I watched as David improved his skills beyond mine, simply by spending more time at the anvil than I ever did. He developed a certain repertoire that he was good at and comfortable with, and he frequently made these pieces when doing blacksmithing demonstrations before the public: A leaf keychain attachment, a simple, elegant candle holder, a courting candle holder, and a few others. He probably made dozens of these pieces over the years, and I imagine that some of them grace homes around the state.

David ran many of the state-wide NJBA blacksmithing demonstrations, sometimes single-handedly, and literally thousands of people have seen him demonstrating. David championed NJBA demonstrations at Cold Spring Village in Cape May, sometimes vacationing with his family in the area. He was the coordinator and chief proponent of the NJBA demonstrations at the Middlesex County Fair. The list goes on: Historic Speedwell Village, Peters Valley Craft

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Center, Wharton Canal Day, Walnford Day, Waterloo Village, Princeton University PUMRS "Man of Steel" day, and others.

David also coordinated his interests in blacksmithing and the Boy Scouts by inviting Scouts to participate in NJBA demonstrations at various events, especially the Middlesex County Fair. I lost count how many boys, over the years he coached at the forge and anvil. He took this interest to the national Boy Scout Jamboree, at least two times. He didn't limit this enthusiasm to young kids, but jumped at the chance to demonstrate at Princeton University (to name one), where, in all-day workshops, students got to try their hand at the anvil. (photos: www.princeton.edu/prism/news/archive/?id=8347 and www.princeton.edu/prism/blacksmith2013/photos/) David also frequently attended the open forge meetings, run by another member, at which NJBA members can work at the forge and anvil and get coaching from more experienced smiths.

In fact, the ONLY activity I know that David preferred to blacksmithing was skiing. I often quipped that he was ne're to be seen during skiing season. But the share of the load that David shouldered more than made up for his occasional absence at an NJBA board meeting.

I knew David before he met his wife, Kathy, and have watched their daughter, Molly, grow up. Kathy and Molly have frequently attended many NJBA events such at the Middlesex County Fair, Walnford Day, and workshops we held in Howell, NJ. Kathy, who is herself a skilled potter, often contributed food such as soup or cookies. They always attended the annual NJBA Holiday Party. I can attest that David was a devoted husband and father. He stayed by Kathy's side for hours on end when she had a stay in hospital. He bragged about Molly every chance he got, but it was always clear he had good reason for bragging.

David will be missed by me, by the NJBA, by the several historic sites and other institutions that he worked so closely with, and by the many people whom he assisted in their interest with blacksmithing.

I would add to this but I can't say it any better, He will be missed by us all, L Brown



Relaxing at the Red Mill



David and Kathy at Cold Spring Village

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An Invitation to the Board, with an Introduction to the NJBA Bylaws

by Bruce Freeman

I think it important for NJBA members to have a general understanding of the NJBA Bylaws. It is too much to expect each member to read the bylaws so I am summarizing the key provisions. (If you'd like to read them, you'll find them posted to the website. [Left side main page])

I cannot emphasize enough how important these provisions are. Literally, any member who works to further the objectives of NJBA can become a director, very quickly. If you are an active NJBA member, consider joining the NJBA board of directors.

Quoting the Bylaws:

The New Jersey Blacksmiths Association (NJBA) is an independent forum and voice for blacksmiths in New Jersey and adjacent areas.

NJBA is structured to be a vital group in which the most active, interested persons rise quickly to positions of responsibility. Accordingly, there are no elected offices, but only elected directors who divide all responsibility between themselves at every board meeting. To rapidly involve new people in the activities of NJBA, the board is authorized to add to its own membership. To keep the board beholden to the membership, directors are reelected annually by the membership. To provide stability and continuity of the board, directors may serve an unlimited number of terms.

At each board meeting, the directors shall divide among themselves the responsibilities of the organization in any manner they see fit.

There is no upper limit to the number of directors. The board of directors may increase its size at any time by electing as a director any active, participating member in good standing of NJBA. ... Any member who lives within the area served by NJBA, and who shows leadership in or works on behalf of NJBA is qualified to serve on the board and shall be considered by the board for election as a director, and may petition the board on his own behalf for such consideration.

Active participation may include ... any of the following activities: Acting as newsletter editor or treasurer or keeping membership records. Running or hosting a membership meeting at least once per year, running or hosting a board meeting, hosting an open forge meeting, providing major assistance at a membership meeting, such as by demonstrating, by running the iron-in-the-hat, by assisting with a picnic or other activity, etc., Attending at least two of the board meetings per year. Writing, or providing photographs or other materials for newsletter articles. Acting as a liaison to an outside organization of importance to NJBA (such as Peters Valley Craft Center). An active director will typically perform several of the above activities. There is no explicit minimum number of activities a director must perform, but it must be clear from his actions that he is actively supporting NJBA's goals.

If you decide you're interested, email any board member(s) to introduce yourself and to remind us of what you have done to support NJBA goals. If you're known to the board and we agree your activity warrants it, we can elect you at the next board meeting or even sooner. If few of us know you, we can invite you attend the next board meeting to introduce yourself. Give it some thought.

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Albert Paley

I get an email from a bookseller advertising a book on Albert Paley's sculpture display on Park Ave in Manhattan. The display was from June 29th to November 8th. Unfortunately this is the first time I hear about it and it is due to be removed in eight days. It has been there for months but I never heard about it. So I ran up there with my camera and tried to get some picture before they were removed and without getting run over (Park Ave at midday, hoping for decent light, is not a good place to stand in the street).

There were thirteen sculptures to start and I got pictures of 11 of them. Some had already been removed but most were there and as usual his work is on an impressive scale. He uses a combination of heating and forging to create the pieces which a then welded together.



Progression, Painted steel

Some were stainless, some powder coated and painted and some rust finished. Here are a few of them (The online newsletter will have them in color). I might post more on the web site if I have time, so check!



Cloaked Intention, Weathering Steel



Between The Shadows, Painted and Weathering

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CONTROLLED HAND FORGING

ABANA'S HAMMER'S BLOW

Lesson One: Drawing Out

By Peter Ross and Doug Wilson Illustrations by Tom Latané

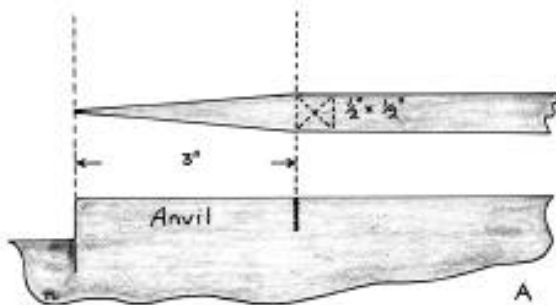
Lesson Number One— Draw a sharp point on a 1/2" square bar. The taper should be straight, three inches long and in line with the axis of the parent bar. The cross section of the taper should be square. The surfaces of the bar should be smooth with no discernable hammer marks. The beginning of the taper should be a crisp line. Intent: Students will learn to draw out tapers of specified length and check their results for accuracy.

Tools Needed: Forge, anvil, hammer, ruler, square.

Materials: 24" of 1/2" square mild steel bar (this is enough material to practice the exercise several times).

Method: When working to a specified length, establish the point first, then extend the taper to the desired length.

Step One: Mark the anvil with soapstone or marker three inches from the anvil step. This is the finished length of the taper you will forge.

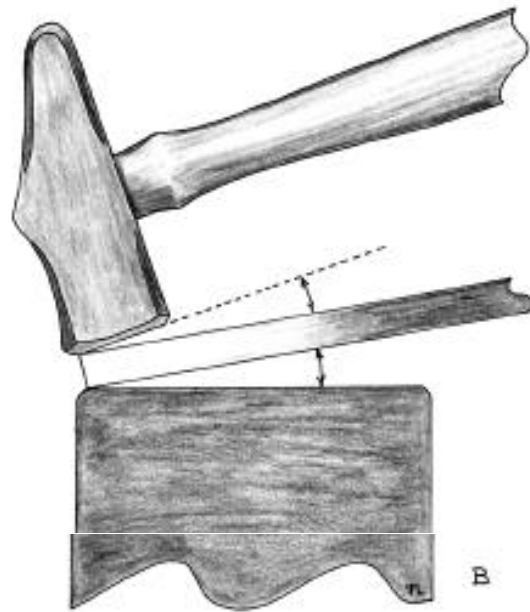


The measured piece held over the anvil.

Take a yellow-white heat on the end of the bar. Place the bar on the anvil so that the end of the bar is at the far edge of the anvil and only the

end of the bar is touching the anvil face. This way, the hammer won't strike the anvil surface if it overhangs the hot bar. Strike a blow on the end of the bar with your hammer. The hammer should strike at an angle. There will be a wedge-shaped daylight space between the hammer face and the anvil face which corresponds to the angle of the taper you want to forge.

As you work, adjust the height of the bar as you hold it on the anvil and the angle of your hammer blows. If you hold the bar too high it will bend down in the middle; too low and the bar tip bends down. The bar will remain straight if you are gauging the angles just right.



Placement of steel and position of the hammer blow.

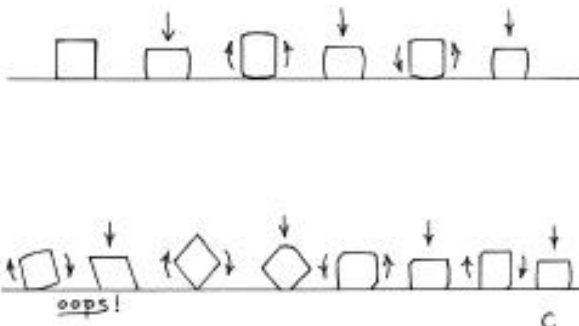
Rotate the bar 90 degrees after every one or two blows to keep the bar from getting too wide as the forging progresses. Hit, turn 90 degrees, hit and turn 90 degrees back again. You need only turn the bar back and forth as

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the underside of the bar is worked against the anvil. Continue this sequence of forging until you have made a sharp point.

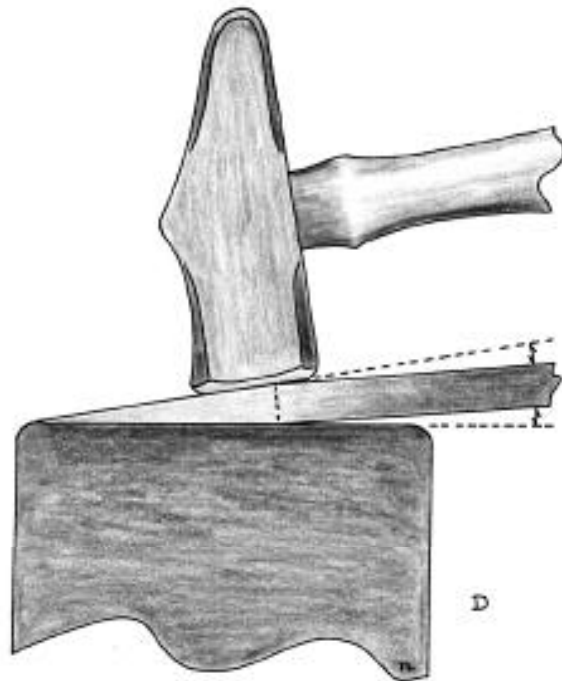
Hint: It is very important to rotate the bar exactly 90 degrees each time. Use the original flats of the bar as a reference. If the turn is either more or less, the bar will become a parallelogram in cross section and that makes it difficult to attain the desired result. If the bar does become a parallelogram, hit the corner of the long diagonal; then return to forging the flats of the bar. The sooner you catch and correct this error, the better. Keep a square cross section

Step Two: Once the point is established, start working back from the point until the taper is 1/4 " short of the desired length . Work with heavy hammer blows at a bright heat while you are reducing the cross section. Lighter hammer blows at lower heats will help you refine the shape of your taper and smooth the surface. Establish a clear and well-defined beginning of your taper.



Rotation and deformation of the bar by the hammer, and correcting a parallelogram.

Step Three: Now focus on smoothing the surfaces and straightening the taper at the same time. Make the taper straight and true. Refine the shape of the taper with light overlapping hammer blows. Do this as the bar cools to dark orange and red color. The bar scales less at this

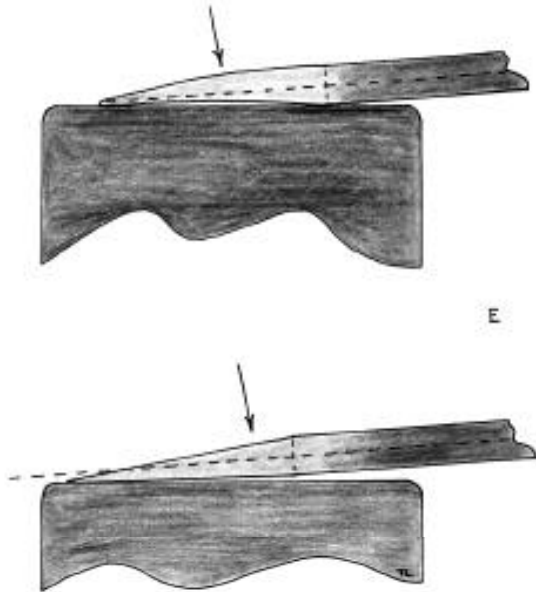


Angle of the bar and hammer when dressing the final taper.

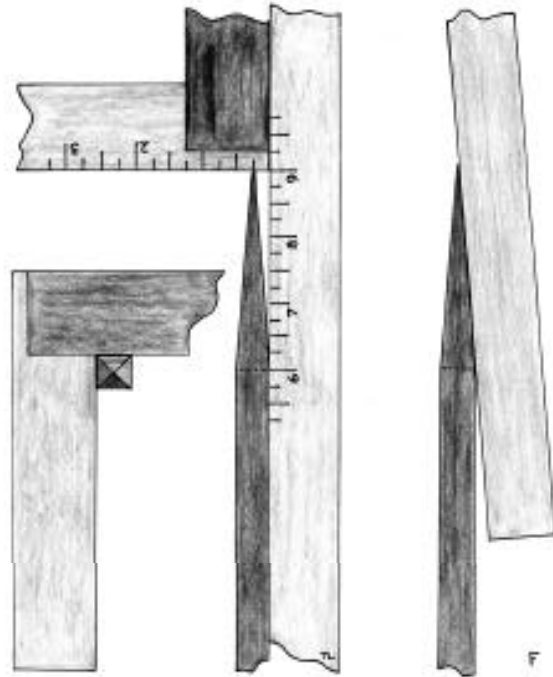
lower heat and you will get a smoother surface. Sight down the length of the bar for straightness. Straighten with light blows at low heat. Another way to tell if the taper is straight is to stand the bar up with the point on the anvil face and spin it in . If it is straight there will be no wobble. The four flat sides of the taper should be in line with the original flat sides of the bar and the taper should align with the original centerline of the bar. Any deviation should be corrected with your hammer at the anvil.

Targets: Try to draw out and finish the taper in two heats. Beginners may take several extra heats. Maintain a square cross-section in the taper. Check this with a square. Hammer-finish with smooth surfaces and without discernable hammer marks. Maintain a perfectly straight axis in the bar and in the 3" long taper. Check this with a rule and also practice sighting down the length of the bar until you can attain the

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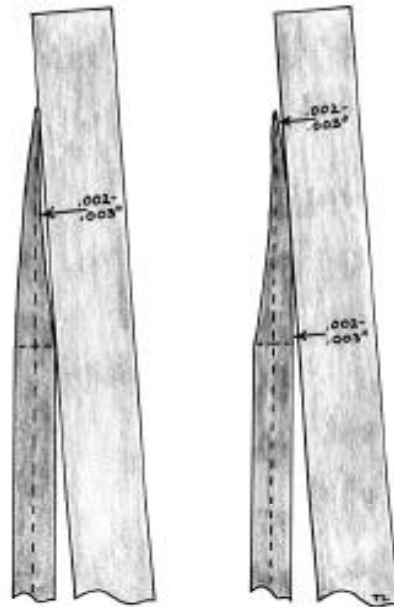
Straightening a bent point (above) and centering an off-center point (below).



Methods of measuring the dimensions.

same results by eye. Measure your results using a square and a rule. The four flats of your taper should be straight within two or three thousandths of an inch, length within 1/16" and square in cross section. With practice you should be able to forge to this accuracy by eye. Repeating this exercise with care and attention will enable you to achieve these results quickly and consistently.

Forging Dynamics : Angle of the bar and hammer when dressing the final taper. In this exercise, when the square bar is struck, it gets thinner top to bottom but wider side to side. When you turn the bar 90 degrees and hit again, (you are restricting the spread of the bar, but allowing lengthwise stretch. Repeating this hit, turn, hit, turn sequence results in creating a taper. You are redistributing the mass of the bar with your hammer. As the bar become thinner it becomes longer. Notice that the thinner steel heats faster. It also chills faster. This is because there is less mass. Also note how much the bar you tapered has stretched in length.



Exaggerated deviations show how to measure goal tolerance.

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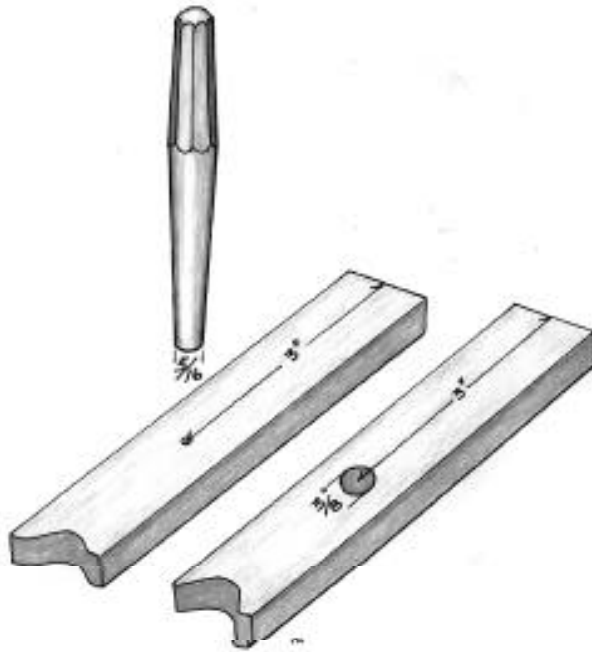
CONTROLLED HAND FORGING

ABANA'S HAMMER'S BLOW

Lesson Two: Hot Punching

By Doug Wilson

Illustrations by Tom Latané



Punching- layout and specifications

Lesson Number Two-

Create holes or recesses in bars or plate by driving punches into or through hot material. (Holes or impressions can be made any shape you can make a punch.)

Punch a 3/8" round hole through the center of a 3/8" x 1" bar with the hole's center 3" from the end of the bar. Drift (stretch) the hole to finished size.

The finished hole should be 3/8" round, with clean sharp edges.

The hole should pass through the bar at 90 degrees.

The wide surfaces of the bar should be flat with no discernible hammer marks.

The bar should remain 3/8" thick.

The bar will bulge out slightly on either side of the hole.

The original edges of the bar should be straight in line on each side of the hole and without any twisting.

Intent: Students will learn to hot punch clean accurate holes and to check their results for accuracy.

Tools Needed: Forge, anvil, hammer, round punch, center punch, square and ruler.

Materials:

24" of 3/8" x 1" hot rolled mild steel.

24" of 3/8" hot rolled round bar (to check final size of punched hole).

Method:

When working to a specific hole size, start with a punch slightly smaller than the finished hole size. After the hole is made it can be enlarged to final size by drifting (stretching) with the punch.

The Punch

The punch may be made of plain carbon tool steel at least 5/8" in cross section, forged to shape and normalized (air cooled until room temperature from a red heat). W1 or O1 drill rod, available at industrial supply shops, would be a good steel for this punch.

The business end of the punch should be a tapered round cross section 2 1/2" long, 9/32" to 5/16" round at its end and filed or ground flat with sharp edges after normalizing.

The top end should be tapered slightly to reduce mushrooming in use.

A hand held punch should be 10" to 11" long.

A punch held in tongs should be 3 1/2" to 4" long.

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Some different styles of punches

Step One:

Make a center punch mark in the center of the bar 3" from its end. Take a bright yellow heat where the bar is center punched. Place the bar flat across the face of the anvil, center punch mark up. Carefully place the punch over the center punch mark. Strike a single solid blow to sink the punch into the hot bar. Make sure the end of the punch is still where it is supposed to be. Continue striking solid blows until the punch is nearly through; another two or three blows. The punch will feel solid against the face of the anvil. If you have done this quickly the bar will still be at a bright orange heat.



Correct and incorrect alignment of the punch

Hints:

Wear a glove on the hand that is holding the punch.

Quench your punch after every four or five blows. This will help to prevent the punch from deforming.

A few soapstone X-marks on the center punched side of the bar will help you get the punched side of the bar facing up when you

first put it on the anvil.

Scraping the surface of the bar with your hammer will help you locate the punch mark.

(Scale will fall into the punch mark leaving a small black spot.)

Learn to hit the punch directly and hard on the first blow. Avoid aiming blows.

The cold end of the bar can be supported on your thigh or on an adjustable stand set anvil high.

Step Two:

Immediately turn the bar over on the anvil.

Look for slight bulges on either side of the hole and a dark spot where the punch was driven into the first side of the bar. Position the end of the punch exactly over the dark spot. Strike several heavy blows. You will feel the punch solid against the anvil face again. Move the bar, with the punch in the hole, over the pritchell hole (the round hole in the heel of the anvil). Strike one or two more blows over the pritchell hole and a small slug will be driven out of the hole. Now, straighten and flatten the bar with light hammer blows on the anvil face. (The bar should still show color during this part of the process.)

At this point you will have a hole. It should be a bit smaller than the desired size.

Notes:

If the punch doesn't clear the slug from the hole it is likely because the punch was misaligned when the bar was turned over or because the punch didn't have sharp edges on the business end. The slug should be driven out from the second side of the bar. Avoid the temptation to turn the bar back over to the first side and try to drive the slug out.

See illustration of misaligned punch with slug hanging from one side of the hole.

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Step Three:

Now you need to drift (stretch) the hole to the desired size. Heat the bar to an orange heat again if necessary. Place the hole over the pritchell hole, insert the punch and drive it in a bit further. Remove the punch, turn the bar over and drive the punch from the second side. Continue this sequence until the hole is just large enough for the 3/8" round bar to fit through easily. The drifted hole should be just a bit larger than the 3/8" round bar so that when it is cool the 3/8" round will still fit through the hole.

Hints:

When drifting, work a bit from one side of the bar and then from the other. This will make the hole more uniform in size. If you only drift from one side the hole would be wider on the top than on the bottom.

Finally, straighten and flatten the bar with light blows and a low heat.

Targets:

Try to punch and drift the hole and straighten the bar in one heat.

(Beginners may need a second heat to accomplish this.)

Check you results using the 3/8" round bar, a square and a straight-edged rule. The 3/8" round bar should just fit through the hole you punched. The hole should pass through the bar at 90 degrees. The bar should be flat and uniform in thickness. The bar should be straight and without twist. The surfaces of the bar should be smooth with no discernable hammer marks.

Forging Dynamics:

The flat bottom of the punch pushes the steel beneath it outward as it is driven into the hot bar. The sides of the bar bulge outward slightly.

When the bar is turned over and punched from the second side the sharp edges of the punch end shear out a small slug.

Driving the punch further into the hot bar stretches the hole larger, increasing the bulges on either side of the bar.

Steel expands when it is hot and shrinks as it cools. When hot, the drifted hole should be just a bit larger than the 3/8" round bar so that when it is cool the 3/8" round will still fit through the hole.



Artist- Blacksmith's Association of North America



The next ABANA Conference will be held in Harrington Delaware at The Delaware State Fairgrounds, August 13—16th 2014. Register by 30 June 2014 and avoid the \$50.00 Late Fee.

Cost to Attend the Conference;

ABANA Members only \$175.00

Non - Members \$225.00*

Registration can be done through the web site, www.abana.org or call: (423) 913-1022

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EXPIRATION DATE _____

Join ABANA or Check out other area chapters!

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, The Ashokan Center,
447 Beaverkill Rd.
Olivebridge, N.Y. 12461 [914]657-8333
 For more info check out the web site;
<http://www.northeastblacksmiths.org/>

Join The Pennsylvania Blacksmiths Association!

Name _____

Address _____

City, State, Zip code _____

Home / work Phone # _____ E-mail (optional) _____

New Member ___ Renewal ___

Do you have any particular skills (welder, accountant, carpenter, doctor) that may be helpful to the group or membership?

 Suggestions for PABA demonstrations

What is your skill level?

Beginner Intermediate Advanced Professional

Membership paid by ___ Cash ___ Check # _____

Send your completed application with \$ 25 (one year dues) to:
 PABA, Jeff McComsey, Treasurer
 124 W Franklin St
 Strasburg, PA 17579
 (make Checks payable to PABA)

PABA Membership Application
 Membership is from Jan. 1 — Dec. 31

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



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How to Join or Renew your Membership in NJBA:

NJBA Dues are \$20 per year.

NJBA Business Dues are \$40 per year

Please make your check out to: “NJBA”

Please mail checks to:

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

Please include payment with the information listed below.

"I want to join NJBA, and I am enclosing my check for \$20 (\$40 for a business) to cover annual membership dues and newsletter subscription. "I understand and acknowledge that NJBA dues are credited from June to June, that I will receive for my first years dues the current volume, and that dues will be payable again in June."

The following information will be listed in a roster available to other members.

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