New Jersey Blacksmiths Association
"EAGLE"

N.J.B.A. Newsletter

NJBA Volume 11, Issue 1 05/01/06

Editors Soapbox

We have a demonstration item workshop this month at Marshalls, come and learn how to make demo items or teach others what you know and a make your own damascus billet workshop in early June, so come out and make something!

Upcoming events for 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.

May 20— 9am,
Demonstration item workshop at Marshall Bienstocks shop. Details this page.
June 4th and 5th—
Damascus billet workshop at Kerry Rhoades in Delaware. Details on page 3
July 22—23rd—
Cold Spring Village. Details on page 3.
July 26-30-
Monmouth County Fair. Details on page3.
August 20th?
Possible meet/ picnic at the Red Mill more information in next newsletter in August
September 15—17
Old Time Engine show at Washington Crossing, Information in next newsletter.
October 7th Pig Roast at Peters Valley. Information in next newsletter.
October 14th
Demonstration by Johnathan Nedbor at Marshall Bienstock's Shop. Information in next newsletter.
December 3rd
Holiday Party at Marshalls home in Howell. Information in next newsletter.

Demonstration Item Workshop at Marshall Bienstocks Shop

Saturday, 20 May 2006 9:00 AM,
Marshall Bienstock's shop, Howell, NJ.

The point of this free, hands-on, workshop is to increase number of NJBA members trained in forging simple items in demonstrations for the public. Several experienced smiths will be on hand to provide instruction in the forging of simple pieces such as leaves, strikers, nails, etc.

If you would like to pick up a few demo item ideas, or if you have a favorite demonstration item you'd like to share, please join us. This will be an informal meet, with plenty of time to instruct or to receive instruction. If you wish to instruct others in forging an item of your choosing, please observe the following guidelines:

1) The emphasis should be on forging - changing the shape of the steel - as this is the unique work of the blacksmith.
2) The item, when mastered, should take no more than 15 minutes to forge. The limitation here is the attention span of the audience.
3) The work should not include welding. This is mainly because demonstrations are done outside and the sunlight makes judging welding heat very difficult. (It's embarrassing to flub a weld in front of an audience!)
4) The item should not require unusual or unavailable tools or starting materials. KISS principle should be applied.
5) Ideally, the item should use a single piece of steel. Multiple pieces are likely to make the item take too long. However, joinery, such as collaring or riveting, may be demonstrated if the individual pieces made (such as scrolls) are themselves interesting demonstrations.
6) If possible, please write down the steps of your project. If you're ambitious, you might illustrate it as well - or bring illustrated instructions from

Continued on page 3.

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`

or the site may be linked to from the NJBA web site.

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

Marshall Bienstock, June, 2007
663 Casino Dr., Howell, NJ 07731
732-938-6577 732-780-0871
jlfmib@optonline.net

Larry Brown. Editor, June, 2007
90 William Ave., Staten Island, NY 10308
718-967-4776
lp.brown@verizon.net, brownln@hotmail.com

John Chobrda, June 2006
231 Morrison Ave., Hightstown, NJ 8520
609-443-3106
jchob@verizon.net

Eric Cuper
109 Lehman Lane
Branchburg NJ 08853
908 369-3913, 908 642-6420 ericuper@msn.com

Tom Eden, June 2007
152 Oak Lane, Hightstown, NJ 08520
609-371-0774
njirrigation@msn.com

Bruce Freeman, June, 2006
222 Laurel Place, Neptune, NJ 07753
732-922-8408, 609-716-2827
freemab@pt.fdah.com

Bruce Hay, Jr, June 2007
50 Pine St., Lincroft N.J. 7738
732-747-4758

Thomas Majewski, June 2007
165 Robertsville Rd., Freehold NJ 07728
732 462-2453 v2e4mab9@verizon.netv

Adam R. Howard, June 2007
Red Mill Forge
56 Main Street, Clinton NJ 08809
908-735-4573 kunstschmeide@aol.com

David Macauley, Chairman, June, 2006
4 Patricia Ct., Howell, NJ 07731
732-206-1568, 732-949-8422
drmacauley@att.com

Jeff Morelli, June 2007
234 Rahilly Road, Wrightstown, NJ 08562
609-723-5990, 732-494-9061x1162

Nate Pettengill, Treasurer, June, 2007
300 Vine St, Delanco, NJ 08075
856-764-5639, nate.pettengill@lmco.com

Bruce Ringier, June, 2007
346 Rt.565 Wantage, NJ 07641
973-702-8475 <yllwbrnfrm@aol.com>

Tim Suter, June, 2006
1112 Ladner Ave., Gibbstown, NJ 08027
856-423-4417

newsletters or other sources. We can try to add some pictures taken during the workshop. This would be a great benefit to other smiths trying to replicate the project.
6) Please be prepared to demonstrate the project as you would to the public, and then to repeat the demonstration at least one more time at a slower pace so the rest of us can catch on to the process.

Bring money for lunch. We will either break for lunch at a diner or sub shop, or send out for pizza or sandwiches, depending upon consensus.

Remember to bring a contribution to the IITH, and there is an invitation to all interested to tailgate.

Directions;
Marshalls farm is at 663 Casino Drive, HowelI (Monmouth Co.). NJ. which is about 1/4 mile east of Route 9. Casino Dr. is a few miles north of 1-195. 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. 1-195. Rt. 18 or Rt. 34. Marshall can be reached at his shop at (732) 780-0871.

Kerry Rhodes Damascus Workshop

NJBA will be holding a "Damascus" knife making workshop on June 3rd and 4th at the Forge of Kerry Rhodes in Delaware City, DE. The workshop will be limited to 6 hands on participants; any one who just wants to watch and learn is encouraged to attend. During the two days each participant will forge weld their own billet, then forge and grind it to a blade. The cost for this hands on work shop will be $65.00 to NJBA Members and $100.00 to any non members.

The workshop will begin at 9:00 A.M. each day and end at 3:00 P.M. (or later). Even if you don't attend the hands on you can still attend (no charge) and learn by watching. The first six paid attendees will be notified and all other checks returned. Kerry's shop "Forged Creations" is located at 124 Clinton Street, Delaware City Delaware. Checks should be made payable to NJBA, and sent to:
NJBA c/o John Chobrda P. O. Box 78 Delaware City, DE 19706

Directions:

Take Rt. 13 So. Towards Dover from the Delaware Memorial Bridge, after Rt. 13 merges with Rt.1, take the first exit, Delaware City. Go left at the top of the ramp; proceed thru 4 lights, past the refinery on to Rt. 9. At the first light after the refinery make a left, this is Clinton Street, proceed 5 blocks and Forged Creations will be on your left (a large two story weathered wooden building) Shop phone # 302-832-1631 John's Cell # 609-610-3501

Cold Spring Village in Cape May

June 16th—18th David Macauley will be demonstrating in the shop at the Village and on July 22nd and 23rd we have been invited to demonstrate in conjunction with their Folklore themed weekend. We are still waiting for confirmation from HCSV for these events.

Monmouth County Fair East Freehold Park, NJ

July 26th—30th, 2006 7PM

NJBA members will be providing a blacksmithing demonstration during the County Fair running July 26th - 30th. The fair times are Wednesday through Thursday 5 PM - 11PM, Friday through Saturday 11AM - 11PM, Sunday 11AM - 6PM. The general meeting will be held Friday Night starting 7 PM at the NJBA demonstration booth.

Blacksmiths are encouraged to submit some of their work for a display at this venue on Friday night. All work will be displayed at the exhibit. This is a great opportunity for us to advertise NJBA and individual members. We can distribute business cards, brochures and talk to the public regarding our work.

Our trailer with forges, several anvils, some tools, stock and Coal will be kept at the fair site for demonstrators. We intend to set up our demonstration area on the Monday before. Please

check with David Macauley (Directors Page and below) as to the times and locations to help. with the setup and teardown on Sunday. We really would appreciate any help setting up and tearing down.

From Garden State Parkway:
Garden State Parkway to Exit 100, Hwy. 33 west. Follow Hwy. 33 to Kozloski Rd., turn right. Follow signs to Park. State Hwy. 9 to Hwy. 33 east, south of Freehold. Follow Hwy. 33 to Halls Mill Rd. North exit. Follow Halls Mill Rd. north to intersection. Road name will change to Kozloski Rd. Follow Kozloski Rd. to Park on left.
From Rt. 18;
Rt. 18 to Exit 22, Rt. 537 west. Take Rt. 537 west to Kozloski Rd., turn left. Follow to Park on right. It has also been recommended that to avoid traffic approach from Rt. 537

For more information contact:
David Macauley
732-206-1568 or drmacauley@att.com.

February Meet and Workshop With Rick Smith at Eric Cuper's Shop

Report by Bruce Freeman

The February 4th NJBA membership meeting was held at Eric Cuper's studio in Easton, PA. This proved to be a spacious shop with forges, hammers, metalworking machines, and a high-water line seven feet up the wall from last year's floods. Eric assures us he now knows how to remove his equipment to high ground on a few hours' notice

Our demonstrator was Rick Smith of Southern Illinois University. Rick demonstrated sheet forming and repousse. Rick's method of sheet forming is 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. Although his finished pieces on display were all quite angular— almost like cityscapes - he begins a piece by sinking it over a hollow. (Some members may remember John Rais forming a dish of heavy steel in a similar manner at a demo a few years ago at Peters Valley.) Only after the metal is sufficiently stretched does he introduce the angularity.

On the following day, about nine of us attended a workshop to explore and try these techniques. Mostly we relied on Erics equipment for this, but Marshall Bienstock and Bruce Freeman brought up a couple forges and vises, as well as some stakes of various sorts. Eric used his landlord's power shear to cut the metal into ~12" squares. We had 1/8" and 16-gauge steel available to us, but apparently most of us chose the former, which is harder to work but less likely to cut through.

As Rick had demonstrated, we first sketched our intended design with soapstone or paint pens onto both sides of the sheet of metal. Next we stretched the metal in the appropriate areas by sinking at a red heat. To define edges, we reversed the metal sheets and worked over the square, but not sharp, edge of a stake, using half-faced blows.

As we achieved defined the shapes further, we used tools Rick had brought along to better define the edges. These were typically ~1/2"-square, punch-like tools, with a slight incline at one end, and a square, but not sharp, working edge. In some cases, square edges were defined by upsetting from the two directions.

The results were quite varied. Most participants imitated the angularity of Rick's work, but few of us tried more "organic" forms. This workshop was enthusiastically received by the participants, and Rick seemed quite pleased with the progress made on projects. There was general agreement that the workshop had been very worthwhile.

Report on Road Trip To L&B Metals

Report by John Chobrda

It's 5:15 A.M. and the alarm is buzzing, what the heck did I set it for? Oh yea, it's Saturday the 15th and the L&B Metals road trip is today. Seriously some of us must be crazy, leaving home on a foggy Easter Saturday morning, to drive over an hour and a half, and wander around in a scrap yard. Yeah, but what a scrap yard, this place makes Fazzio's look like a part time operation. Just imagine about 20 plus acres of STUFF.

Road trip continued.

On the 15th of April four members of NJBA took a road trip to L&B Metals scrap yard just NW of Oley PA. Larry Brown, Tim Sutter, Tom Majewski, and John Chobrda spent a couple of hours wandering through this metal heads candy store. Tim and John left with close to 75 lbs. of square head bolts and square nuts, some thing I might never use but who knows, at 50 cents a pound it was too hard to pass by.

After touring the scrap yard, the four of us then went to L&B Metal's other site located in the city of Reading Pa., and spent a few more hours delving through more STUFF. L&B maintains two old three story mill buildings in Reading that are crammed full of factory clean outs. Reading is "Outlet City" so this can be a family outing, while the wife and kids are at the Vanity Fair Outlet complex, the boys can head for L&B.

L&B's two buildings are located at 213 So. 11th St. and 210 Maple St. (within a block of each other) in the city and are open 7 AM to 4 PM Friday and Saturday only, the phone numbers are 610-375-4180 and 610-376-9965. The scrap yard is located approx. ten miles north east of the city on Hartz Road, just off of Rt. 73 north west of Oley, Pa. If you go take something to tote your treasures home in, I always take a couple 5 gal. buckets.

New NJBA T-Shirts Are Available!

New NJBA T– shirts are available after making their debut at the February meet at Eric Cuper's shop. The price is $15.00 and helps to off set the costs of workshops, demonstrations and dues.

At this time sizes Medium to 2X are available. They are dark Blue with White lettering are are currently at Marshall's shop. Either stop by at an open forge meet or contact him about bringing them to a meet;

Marshall Bienstock,
663 Casino Dr., Howell, NJ 07731
732-938-6577 732-780-0871
jlfmib@optonline.net

Demonstration Opportunities!

We have received requests from the below people looking for demonstrators at their events. Those interested please contact them directly.

Red Bank Battlefield

I am the curator at Red Bank Battlefield, in Gloucester County. We are a Revolutionary War site with a park and a historic house museum. We offer a wide range of public programs at our site, including a re-enactment of the battle each fall. As you can imagine, craftsmen who demonstrate and interpret period-appropriate trades are an excellent way to engage and educate our visitors.

I would love to bring blacksmithing to Red Bank. To that end, I have been trying to find blacksmiths who can set up on-site demonstrations.
Please Contact:
Megan Giordano
6 Blackwood-Barnsboro Road
Sewell NJ 08080
Red Bank Battlefield phone #856-853-5120
Email: mgiordano@co.gloucester.nj.us

Ringwood Highlands Fair

My name is Joyce Egan and I am on the committee for the Ringwood Highlands Fair which will be held on September 16th at Shepherd's Lake in Ringwood State Park. I am looking for a blacksmith who would both demonstrate his craft and possibly sell things at the fair-something like is done at the country fairs held at Ramapo College in Mahwah, NJ. We'd mostly be interested in getting someone from the local area in NY or NJ.

The event is the Ringwood Highlands Fair at Shepherd's Lake in Ringwood State Park in Ringwood, NJ. The date is Saturday, September 16th, 11 AM to 5 PM with a tentative rain date of Sunday, September 17th. We'd want someone who both sold their products and demonstrated. They can contact me at:
Joyce Egan
104 Upper Lakeview Avenue
Ringwood, NJ 07456
Email: joy4food@optonline.net
(973) 962-0968

Employment Opportunities

Phil Fraley Productions, Paterson, NJ, needs Metal Workers with proficiency in multiple areas of steel work to fabricate armatures for fossils. Desired skills include welding, cutting, smithing, bending, patination, casting and machining. Must be a team player. Interest in dinosaurs a plus. Minimum starting salary: 30K/yr. plus benefits, Pay may be higher DOE. Candidates must be able to show recent portfolio, resume, and references with phone numbers. Interested parties should contact Scott Lucas, at: (800) 914-2458.

Phil Fraley Productions is building armatures for 11 dinosaurs from the Carnegie Museum in Pittsburgh, PA. Positions are for our studio in Paterson, NJ, just outside New York City. Positions may be available at a later date in Pittsburgh, PA.

For examples of the work we do, visit: http://www.philfraleyproductions.com/fraley/index.htm

Clip Fom The Forge List

Sent to the Forge list by Bruce Freeman

I've been an advocate of using vinegar to pickle scale from steel. One downside to this is that vinegar is volatile, and the smell gets bad (metallic) with steel pickling inside.

So, I finally got around to trying a sodium bisulfate pickle. Sodium bisulfate is available at pool supply stores for keeping the pH of pool water neutral. It comes as fine white crystals, packed in one- or two-quart containers.

After some experimentation, I used about 1 to 2 cups per gallon of water. (I used a rectangular plastic storage box - available in NJ from Cost Cutters - as my vat.) The crystals go into solution fairly easily, producing no discernable heat on dissolving. (Strong acids produce lots of heat when mixed with water.)

Much of the scale soaked off the steel within a couple hours. Some was more persistent, but came loose with overnight soaking. The resulting steel was nearly charcoal gray in color. Where it was not under the solution, the steel acquired a lovely rust patina - probably more from the humidity than anything else - but this largely sponged off. The scale did not completely dissolve. Much of it simply fell to the bottom of the vat. I plan to filter this off through a cloth when I transfer the acid solution to a jug for storage.

I did this on my kitchen counter. There was virtually no odor. Once or twice I splashed a little solution on my hands. I rinsed them soon after, and experienced no problems (acid burns). I DID wear glasses, however. I don't care to get this stuff in my eyes.

Mid Atlantic Smiths Conference

The MASA Summer Conference being held on June 17, 2006 at the Sandy Spring Museum in Sandy Spring, Md. just north of Wash, D. C.. Cost is $20.00 per person which includes morning snack, lunch, and hot or cold drinks. Tailgating is encouraged but you must be registered.

Send your:
NAME, ADDRESS, CITY, STATE, ZIP, TELEPHONE, EMAIL and the names of additional people registering with payment for each. Make all checks payable to THE MID ATLANTIC SMITHS ASSOCIATION and mail it along with your application to; David Collier

16373 Oakland Rd.
Henderson, Md. 21640

If you would like to have confirmation of your registration please supply us with your email address and we will confirm via email.

Remember that safety glasses must be worn by all participants and spectators during the demonstrations. Also remember to bring something for the iron in the hat drawing and for the brag table. There will be visitors coming through the museum during the demonstrations and it would be a good time for them to see your work.

The address for the Sandy Spring Museum is:
Sandy Spring Museum
17901 Bently Road
Sandy Spring, MD. 20860

If you need anything else please contact:
Remwillow@hotmail.com,
phone 301-253-2084.
Bob Morris
Contact Larry Brown Editor for the Registration form if needed, requires the same info as above.

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

Brookfield Craft Center
286 Whisconier Road
P. O. Box 122
Brookfield, CT 06804-0122
203.775.4526

Dick Gambino is involved in a project forming an artisan work community in Rahway, NJ. Interested Metal workers with a juried portfolio can contact him through his web site http://www.gambinometal.com about this opportunity.

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 609-610-3501

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

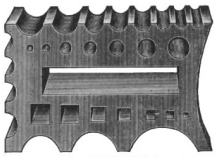
We are looking for members who are interested in opening their forges up to members as a open forge. This does not have to be a weekly forge as is Marshall's the others can meet once or twice a month. Please contact, Larry Brown, Editor.
We want to encourage all to join us at:

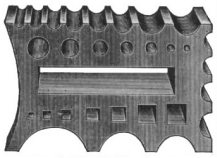
Monday Night Open Forge in N.J.

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





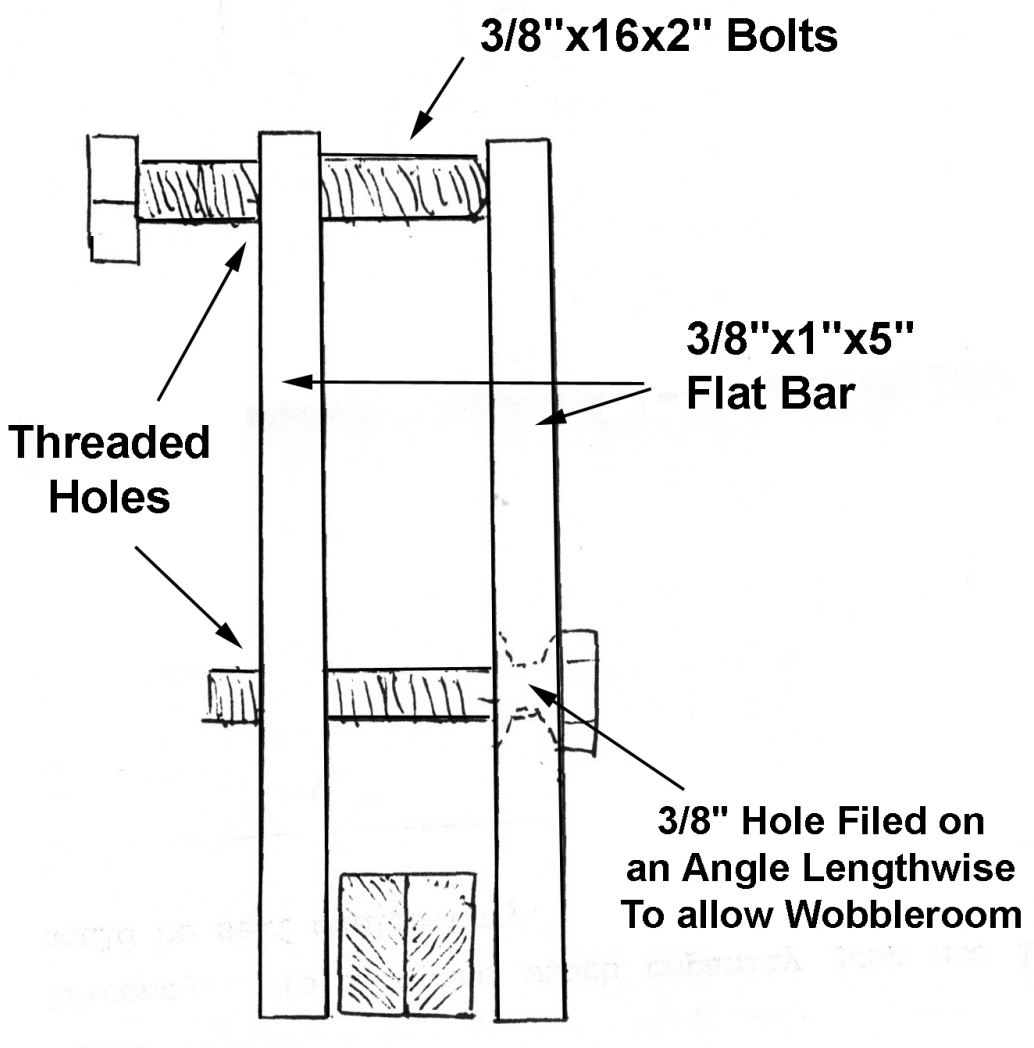
SHOP TIP

Have a shop tip?
Send it into the newsletter editor and help others get new ideas.

I was working on a head and foot-board, bed project as a wedding present for yet another grand-daughter. Each is made up of ten scrolls enclosed in a half ellipse and bottom rail. I wanted to pre-assemble all the parts and hold them firmly in position on the full size layout to assure the proper location and alignment of holes for rivets and tenons. I have done this before with a menagerie of "C" clamps, vise grips, dogs and wedges and whatever else to accomplish the job.

This time I decided to make clamps, similar to machinist clamps. I made six for starters. These worked so well and efficiently that I immediately made six more. Very easy to make, simplicity is the key to efficiency. To increase width capacity just use longer bolts. The sketch should be self explanatory.

Tim Suter
1112 Ladner Ave.
Gibbstown NJ 08027



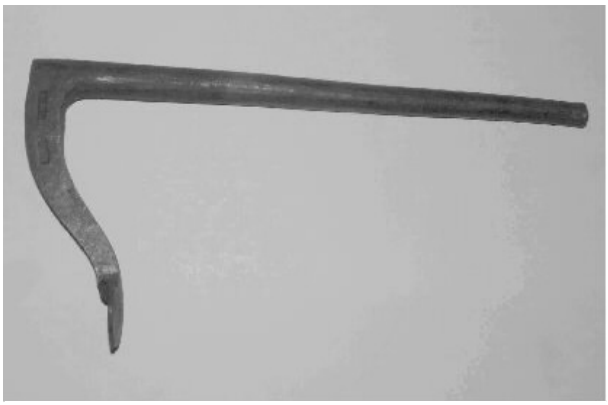
A Day at the Anderson Forge in Williamsburg, VA. Feb 25, 1788

These notes have been assembled by Bruce Freeman, Marshall Bienstock and Don Plummer

The day begins with a general gathering in the office for coffee and donuts at about 8:30 AM. All the resident smiths are in attendance and soon Peter Ross, the former Master of the Shop, also shows up. The blacksmiths include Ken Schwarz, shop supervisor, Steve Mankowski, Shel Browder, Mark Sperry and Chris Furr. Ken gives a few welcoming comments and lays out the days agenda. We deal with some administrative stuff and trek on over to the shop at about 9:30 AM. The weather is largely damp and overcast...about typical for Tidewater Virginia and February.

Ken begins by demonstrating the making of a holdfast such as might be used in a workbench or even in the pritchel hole of the anvil. You insert it in a slightly oversize hole, tap it on to the surface of the piece you want to hold and the slight cant and spring in the device locks everything nicely in place. A simple upward angled whack quickly loosens it.

Holdfasts are frequently made by simply putting a right-angle bend in a bar of steel, then finishing the two ends into a shank and arm with foot. Certainly a most obvious and rapid way to make one. However, this technique gives an internal right angle which could be a bad thing. Ken has recently had the opportunity to closely study three samples he knows to be from the 18th century. All three were welded up of two pieces. The arm is welded to the shaft with a cleft weld.

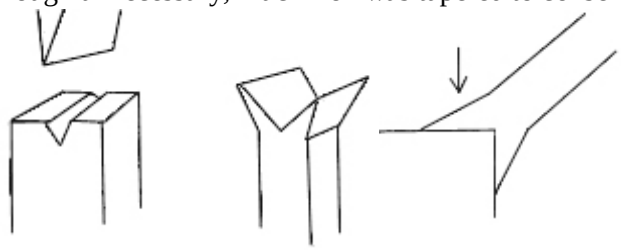


Holdfast; Wrought Iron; February, 2005 by Ken Schwarz, Anderson Forge, Williamsburg.

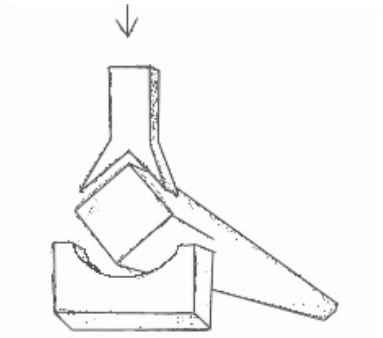
This is what Williamsburg is all about. They do all the ironwork for Williamsburg in the 18th century way. They take the time to study how things were done in Colonial America and then learn how to replicate that task. Ken has learned how to make this two piece, forge welded holdfast in the very same way it was likely done two hundred plus years ago.

A probable reason for welding it up of two pieces has to do with the characteristics of wrought iron. Putting a sharp bend in this sometimes difficult-to-work material will often cause a cold shut that will soon fail. It will begin as a very small tear and soon work it's way across the entire thickness. Forge welding helps assures the tool will do its job for the next couple hundred years. (Shel contributed that the cleft weld to be done here with wrought iron, also works well with standard A-36.)

For his demonstration, Ken had prepared two pieces that would become the shaft and arm for the holdfast. The shaft portion was about 12" long and approx 1" square on the upper end, tapering smoothly to about 5/8" in diameter on the lower end. This had been drawn out from square bar. Ken advised that although unnecessary, much iron was tapered to conserve iron and add to the general appearance. The stock that will be the arm is 3/4" x 1" x 5" long Ken begins by splitting the end of the arm with a chisel, then opens it up over the edge of the anvil. The two sides of the end are thinned/scarfed for welding to the shank. Having a striker like Shel can be a great advantage in making this piece.

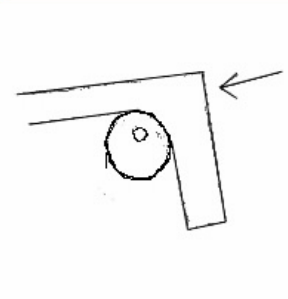


Make sure to keep shaft straight to facilitate the cleft or jump weld. The top of the shaft is placed in the swage, corner up. After achieving welding heat, and using borax for flux (which was true to the period); the cleft of the arm is placed over the corner of the shaft and with the arm vertical; and the end of the arm is hammered downward to make the weld. Note that a swage is used to hold the shank for the weld and to facilitate the rounding of the shank.



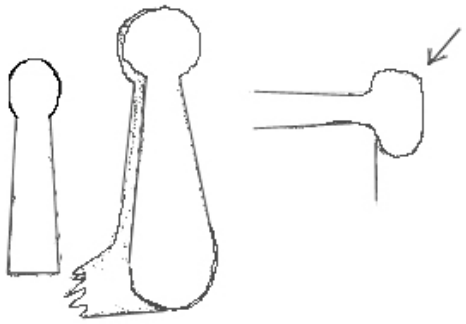
The weldment is again placed in the swage, with the arm vertical, and hammering on the end of the arm rounds off the back of the piece in the swage, while further securing the weld. All at welding heats.

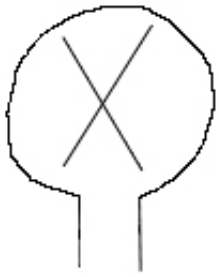
Ken noted that a good weld will cool evenly with no dark colors that would indicate thinner areas not fully welded.



The inner corner of the holdfast is placed over the horn of the anvil. Horizontal and vertical hammering was used to refine the shape. Ken took a few welding heats to finish and refine the weld.

Shape the arm in sequential steps that begin with leaving a small lump on the end that will be the foot. To spread the disk (to make the foot), make an "X" from the top with a fuller. This leaves a transition between the arm and the flat. Then flatten the remaining portions of the foot on the edge of the anvil.

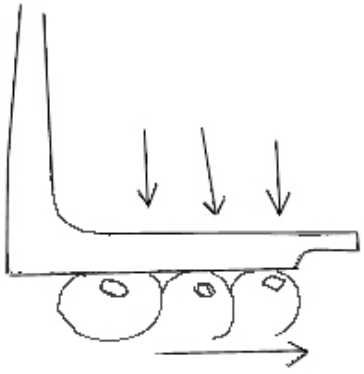




Ken emphasized that the round or oval shape of the foot comes from the forging before the flattening operation. Not from subsequent filing or trimming.

The illustration shows the two fuller marks made from the top of the foot. Notice that at this point, much of the foot remains the full thickness of the metal, with only these two fuller marks thinning the metal.

This illustration shows how Ken put the offset into the arm. He took a high heat on the arm, then quenched the 90-degree angle, placed it upside down over the anvil horn, and hammered on the end of the shaft.



Ken spent some time assuring himself that the angle was square and the foot was flat and square to the shaft. He frequently used various angles of the anvil to help measure these angles.

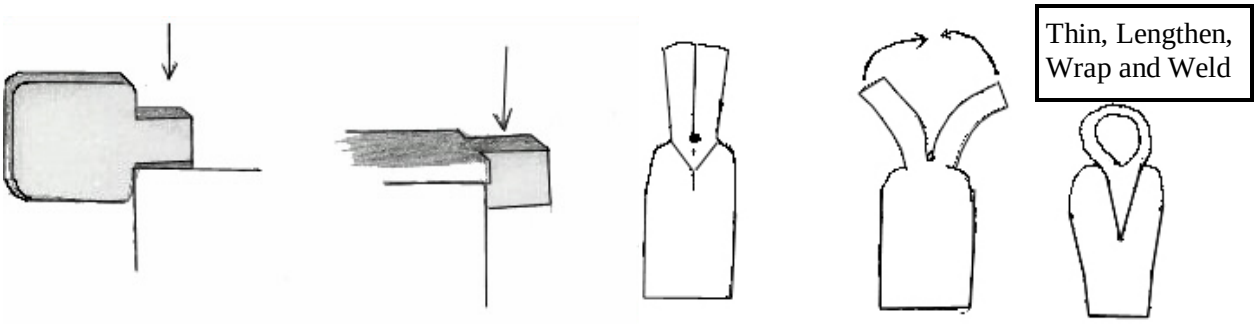
This demonstration took about one hour from start to finish. But Ken says he can make one in about 30 minutes without discussion and questions.

The final dimensions of the holdfast are: Shank length 15”, arm length 6-7/8”, arm width varies from 1” to 1/2”, shank width varies from 1” to 5/8”, foot pad is 2-1/2” x 1-1/2”.

Steve Mankowski demonstrated the forging of a hoe from a single piece of stock.

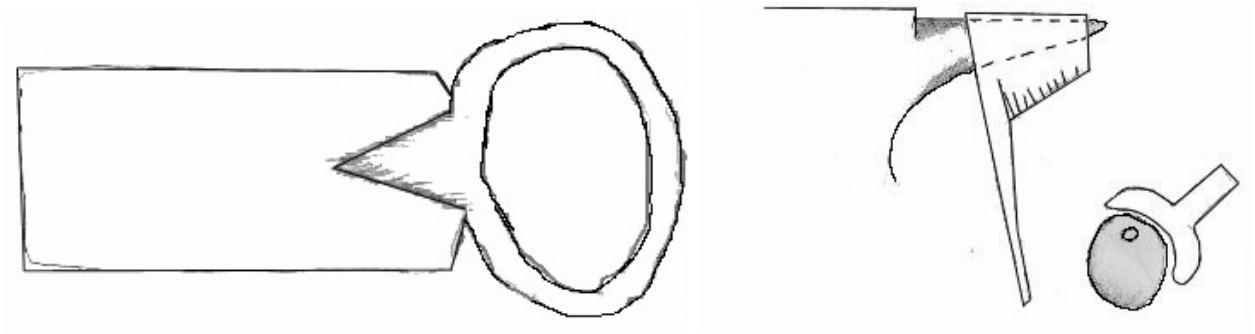
The Anderson forge has explored the traditional 18th c making of hoes from either one or two pieces. Recently, they have been studying those made from one piece. Steve has been working on this and has come up with a plausible way of making these hoes from one piece of stock.

The starting stock was 5/8” x 2" x 5" but he retained the full bar at first as a handle. From this stock the process proceeds as shown below. Steve begins by drawing the handle eye over the edge of the anvil. Some of us might do better with a set hammer, fullering tool or treadle hammer. The eye is then hammered down in the other dimension with half-faced blows.



The eye portion is then punch marked and chiseled open from the top to form a cleft. It might also be punched or drilled at the terminus of the slit. These are opened up, lengthened, dressed and scarfed for welding. At this point Steve cut the hoe from the longer bar he was using as a handle.

After good welding, again using borax as a flux, the eye is stretched and drawn out over the anvil horn and further shaped. A fullering tool and swage can be an big help here.

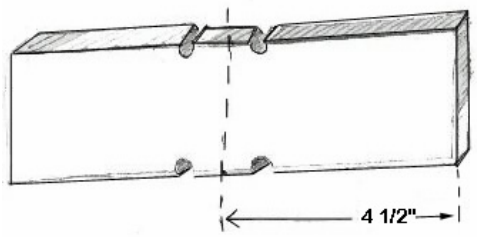


Before spreading the blade it is fullered over the anvil edge to provide stiffness, form and guides. Spread from the center towards all three edges. Use a set tool to help delineate the transition from the eye.

The hoe was also made of wrought iron...which is not without its hazards. While spreading the blade a split occurred at the edge. Steve dealt with this split by first offsetting the two sides of the split. Then he peined them to spread them sideways, so they would overlap. Finally, he welded them together. Steve noted it could also be patched with another piece of wrought iron welded on at cross grain.
Finish any shaping of the eye at a welding heat.

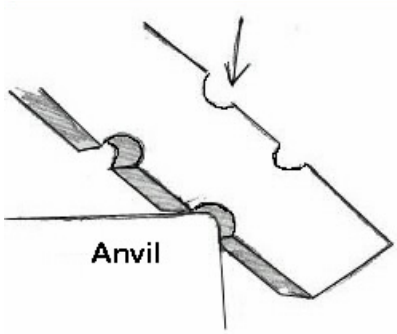
Half-Sized Spade

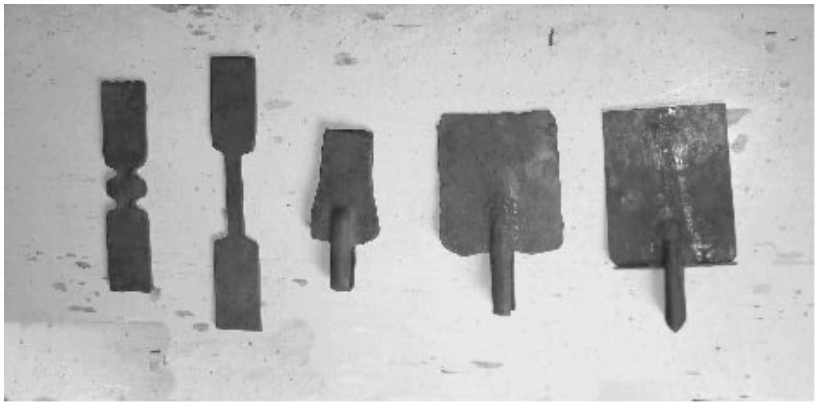
In this demonstration Ken Schwarz made a smaller, half-sized version of a spade. Such spades were made by welding the blade together from two pieces and leaving a socket (with exetensions) for mounting the handle. The difficulty is that such thin stock is difficult to weld together. Imperfect welds result. Hence, they concluded that the weld is made while the stock is thick.



Ken started with 2" x 1/4" x ~9" of stock. Begin by marking to the center of the 9” piece at 4-1/2”. Fuller about 3/4” on each side of the mark. Then draw out and thin the segment between the fuller marks.

This photo illustrates the general sequence of making this small spade. It is first fullered about the center

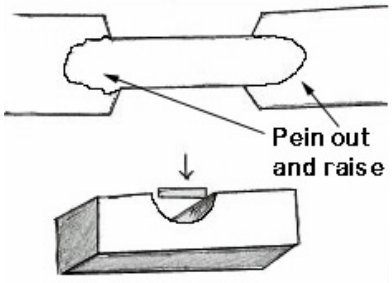




line, then the center section drawn out to about 1/2 the thickness of the original stock. The blade portions are then folded to meet, with the section to be the socket extensions providing the hinge. Note that at this point the blades are still relatively thick. Make sure the shoulders align correctly.

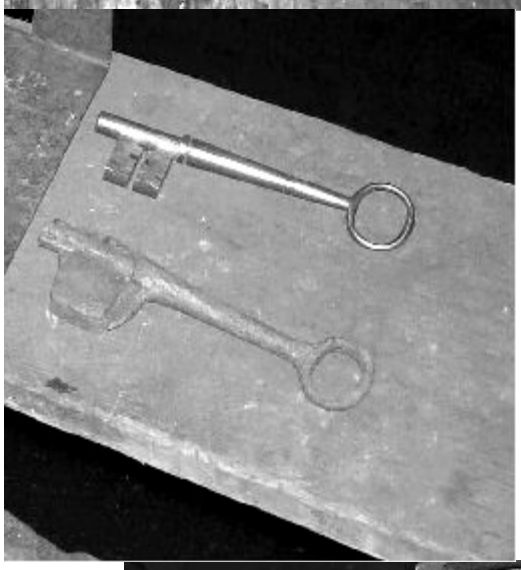
The section for the extensions are thinned down and slightly rounded up before bending. That socket segment where the handle would enter into the blade portion is raised and rounded somewhat to help prevent it from being forge welded. Ideally, some portion of the handle will be fitted into this piece.

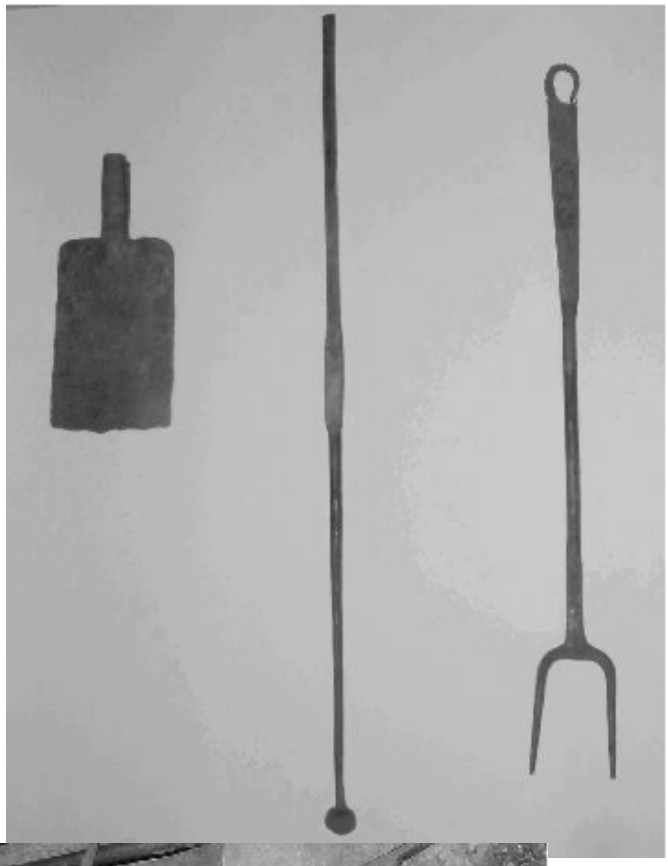
The blade segments are forge welded together. Ken says he can usually get this in three good heats. After cutting the center piece and straightening the resulting pieces, Ken ran a shaft (e.g., a drift) into the socket, and formed the socket around the shaft.

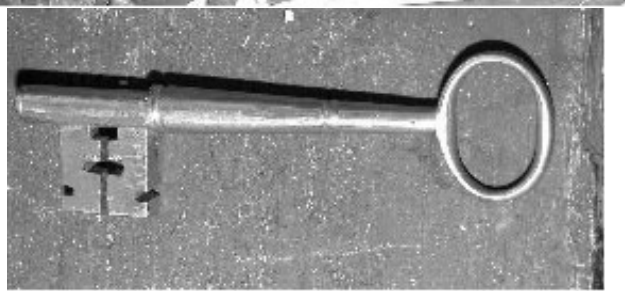


Ken drew the edges out last to reduce the burning. Angle peining was done to keep the corners square. Finish the blade by hammer so that there's little or no trimming to be done.

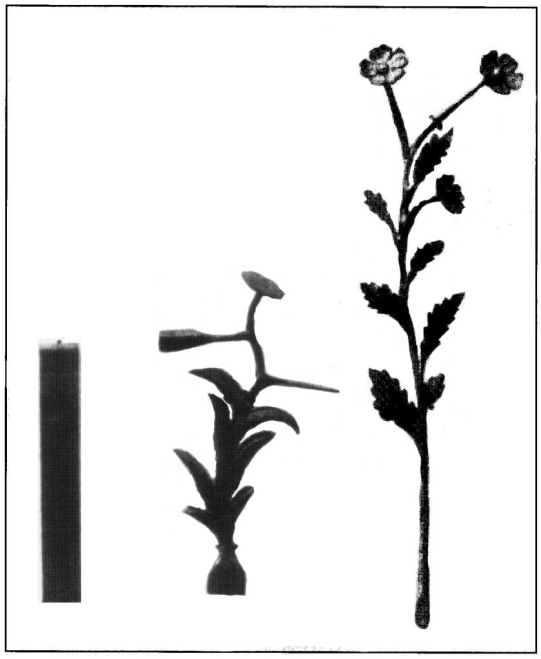
Ken also demonstrated making the foot of a pair of tongs often used to handle meat. Shel made a key and Mark made a fork. Unfortunately, we have run out of time and space. But here are some images. All in all, it was a most excellent event and a great learning experience.

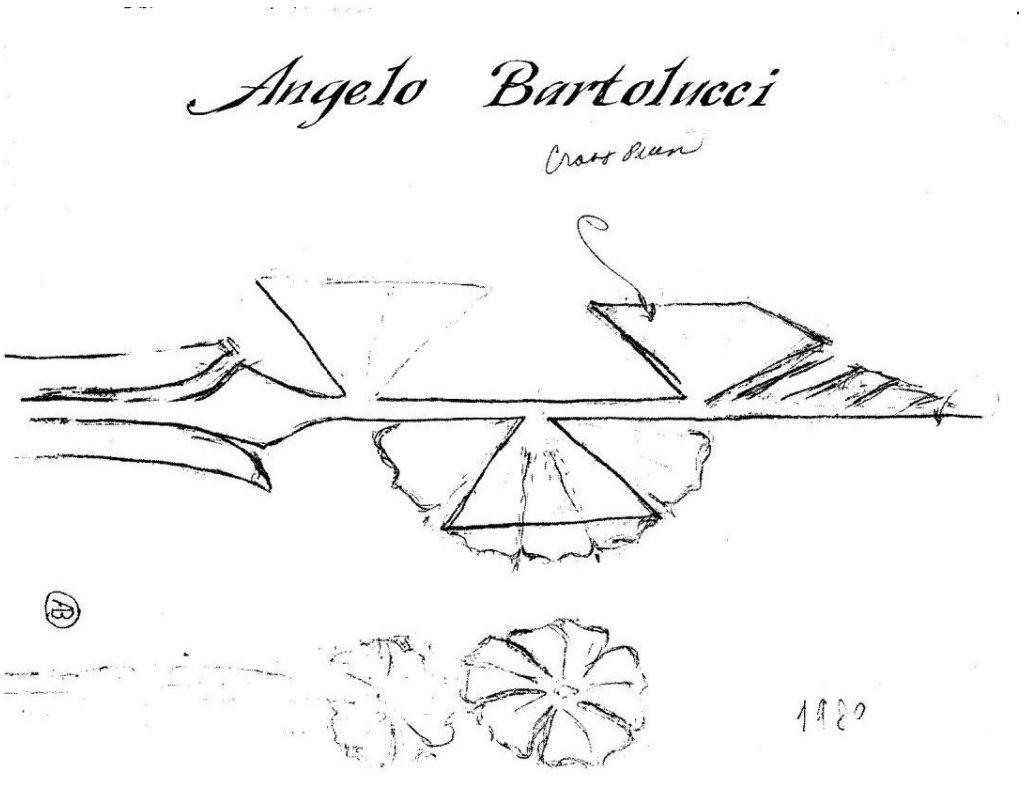






A Flower From One piece of Bar





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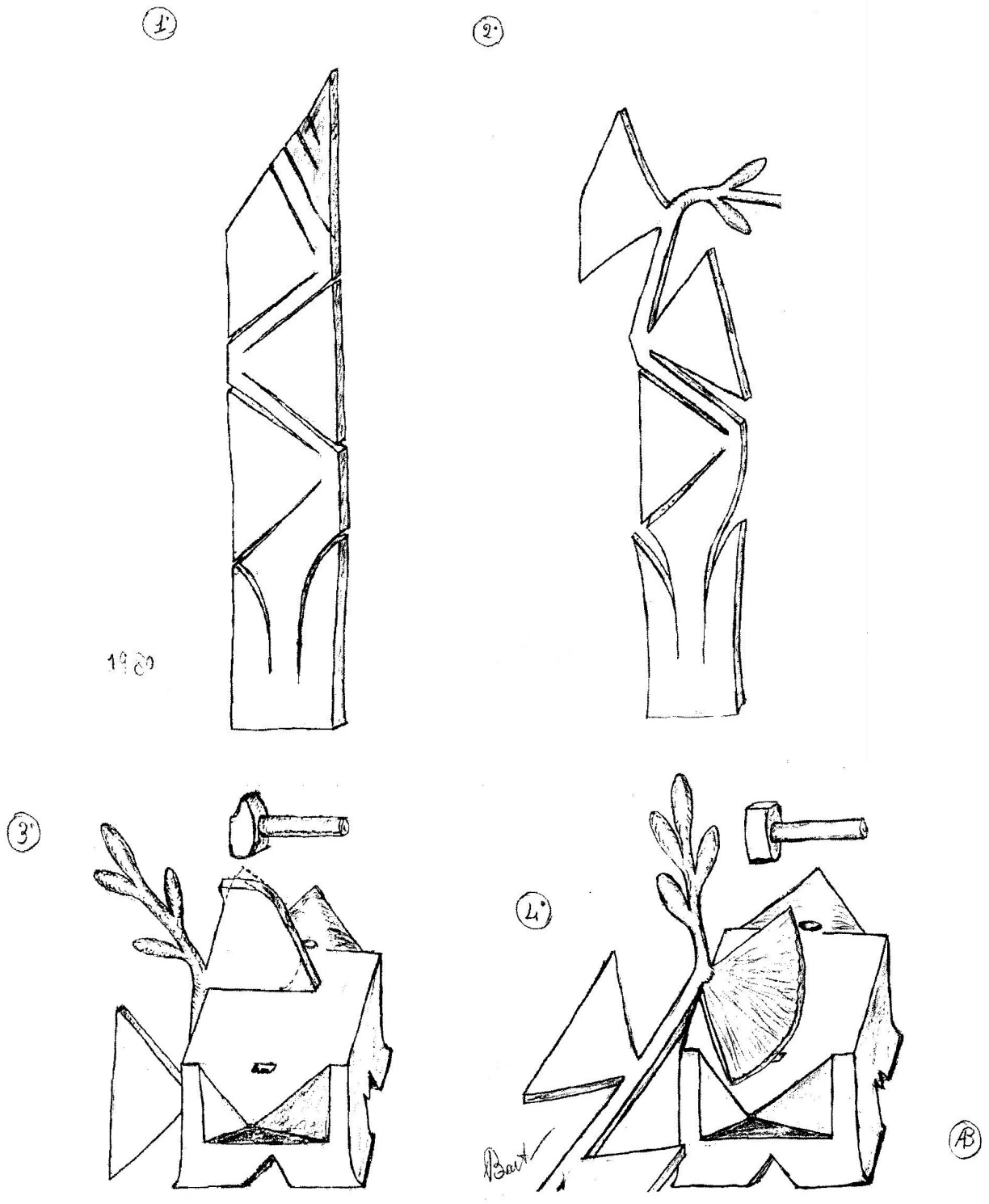
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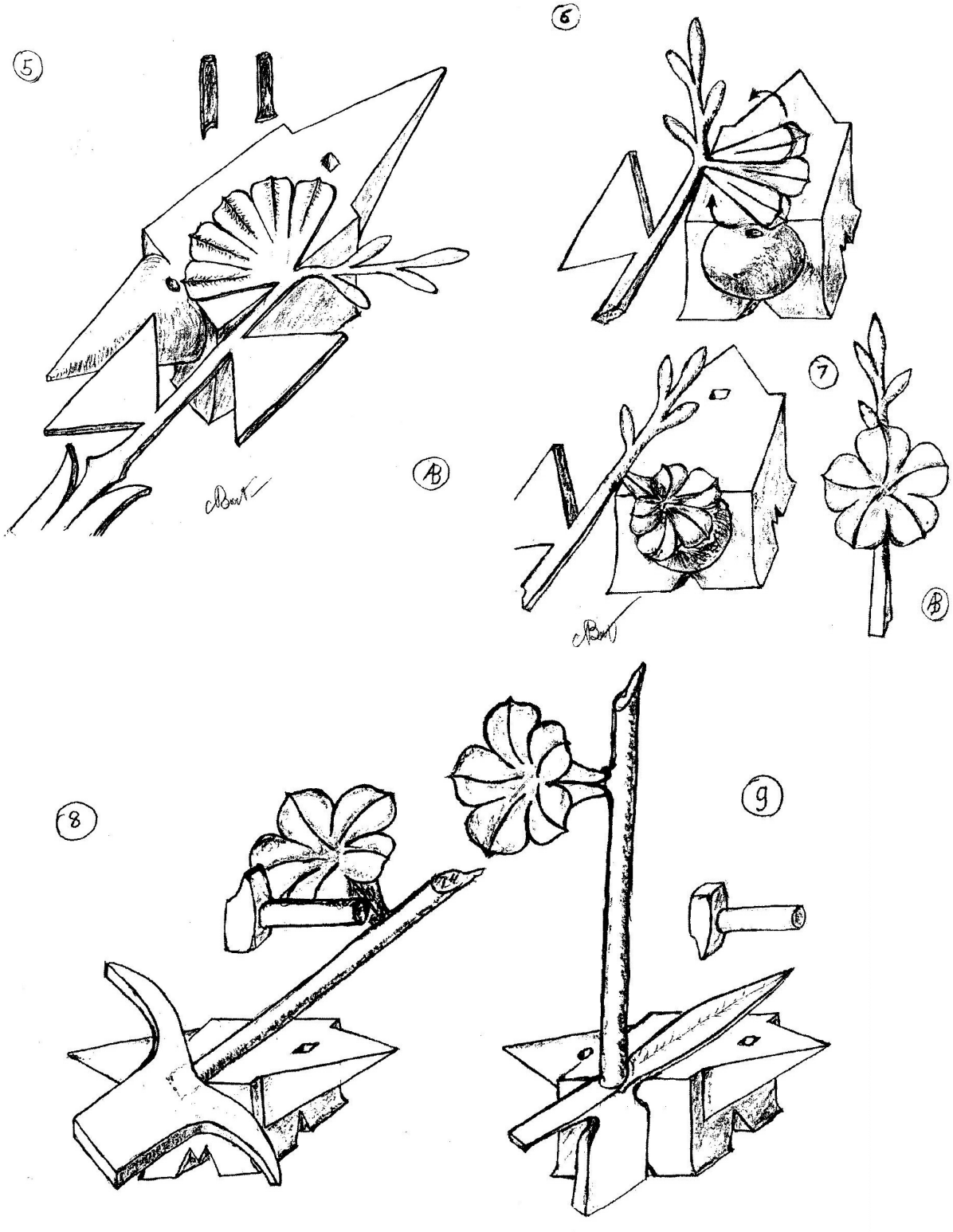
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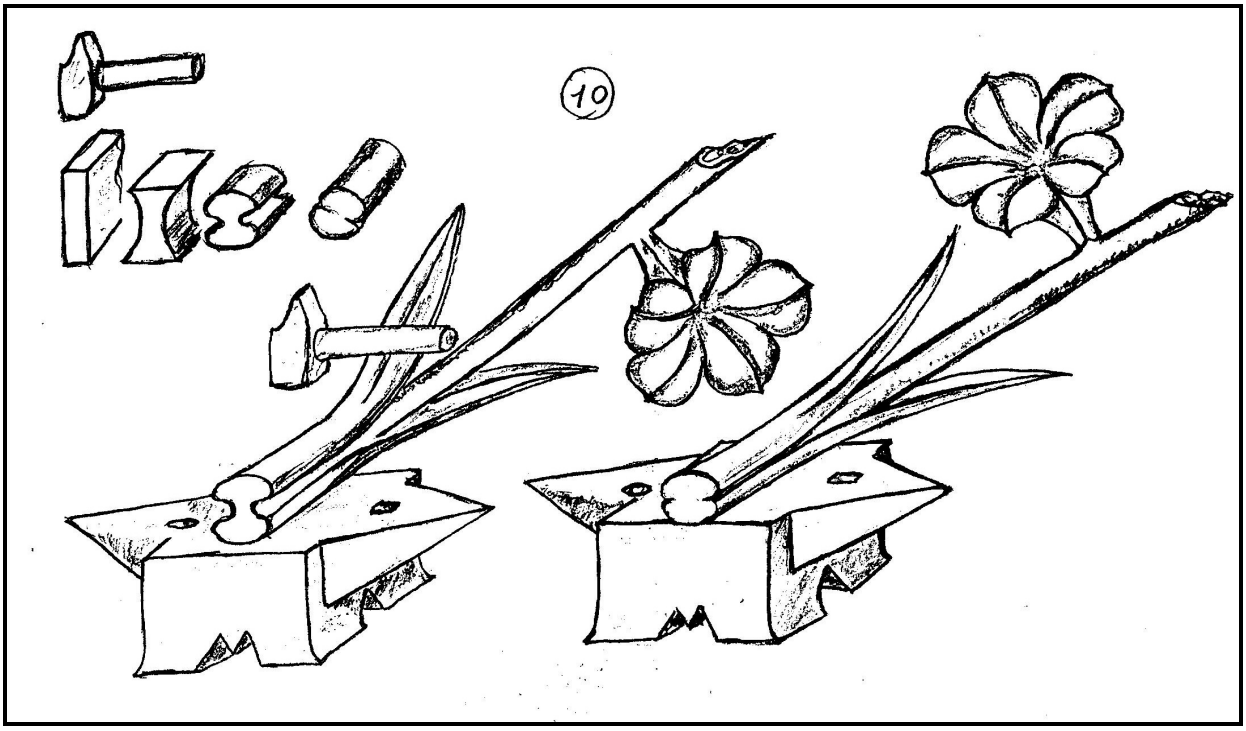

Forged or Fabricated:
Educating the Client

By April Witzke
From The Anvils Horn
The Arizona Artist Blacksmith Association

Recently, I received a spam mail from Chris Topp and Co. Wrought Ironworks in England. I was about to hit delete when the words "One would not use a bricklayer to repair stonework with concrete, or oak beams with MDF." I was ensnared. It seems they were making an issue about restoration of antiquated ironwork being done by welders and fabricators and were looking for support in establishing a specification, or standard, that would require anyone claiming to do "wrought ironwork" to use traditional materials and working methods. They argued that the lack of specifications has architects, blacksmiths, fabricators and customers alike wasting considerable time and money on the bid process.

While I agree that the term "wrought iron" has been bastardized and that a standard would help immensely, what really got my attention was the realization that blacksmiths in England share the same challenge of competing against fabricators as we do. Having recently lost several jobs to fabricators, I have been pondering what we can do to educate our clients on the difference between forgework and fabrication and ultimately win their commission. To uncover some tricks of the trade, I spoke to several full time blacksmiths. Here is what they had to say;

Brian Hughes of Artsmithing in Prescott says, "Ninety percent of people don't know the difference between cast, welded and forged." Several years ago he created a pamphlet that explains the differences and justifies the cost of forge work. Hughes says awareness of the trade has increased substantially compared to when he first got into blacksmithing in 1973 but he admitted that there is still a problem selling expensive iron work. "Blacksmithing (forgework)", he claims, "is for wealthy people."

Peter Sevin of Art Ironwork does no advertising, not even the yellow pages. His clientele come to him strictly from referral. Referrals are ideal because you can assume that the client is already somewhat educated. For instance they would probably know that he does traditional blacksmithing and

that he's more expensive than a fabricator/ welder. One thing that has helped Sevin is having a dedicated showroom with dozens of forged elements organized on tables and hanging on the walls. He says he noticed a difference in how much time a client spent looking and touching the ironwork in the showroom as opposed to when he had items piled on a dusty table in the shop area.

Phoenix Forge, owned and operated by Bill Calloway has several large finished pieces, gates and railing sections, as well as smaller forged elements placed conspicuously around the shop. Calloway says it is important for the client to hold the iron-work in their hand because it engages their senses. He stressed finishing the elements with a pleasant feeling wax sealer. Once their interest is sparked he is able to educate them on the process and labor involved.

Kathy Borthwick of Flag Forge and her partner, Russ, primarily exhibit at art and craft shows. The shows provide an intimate setting which allows the customer an opportunity to see and feel the quality of Flag Forge's workmanship while being further educated about the art of blacksmithing. This often leads to commissions of custom forge work.

Mark Aspery, blacksmith and instructor at Sierra Fire and Forge in California uses a portfolio of his work that shows no finished pieces. Instead it shows close-ups detailing what a traditional blacksmith offers; forgework with traditional joinery, textures and character. Aspery focuses on the design process. His portfolio helps because the design invariably incorporates elements from the photos. A drawing evolves. Aspery then makes some test pieces to support the artwork. The test pieces, he says, give the client an added dimension to the drawing and assist him in the estimate. This method gets the customer more deeply involved and provides them with a chance to see and feel his hand wrought ironwork which makes it harder for them to choose fabricated.

Colin Price of Shadow Mountain Forge in Colorado has been a full time blacksmith for about three years. He has recently made some changes in his "marketing" strategy. Price is bypassing the general public and has begun a campaign of cold calling architects and builders to determine which ones incorporate ironwork into their designs. When he makes contact with one who uses a lot of ironwork, he sends them a brochure then makes a follow up call for an appointment to begin forging a new relationship. Price admitted that it took hiring a financial advisor to mentor him but so far the results have been worth it.

Frank Turley instructor of Turley Forge in New Mexico advises his students to design a sample element then make one out of cold bent and welded metal, leaving some spatter on it, just for fun. Then forge a similar element using traditional blacksmithing techniques that is a deliberate improvement over the other. Turley also advises his students against showing potential clients blacksmithing books, as they may include work they are not confident in reproducing. A photo album incorporating older work is also to be avoided, as their abilities may have graduated beyond the piece pictured and it may not be something they really want to reproduce. Turley's last words of advice were, "If it's the kind of job that you don't care for, try to refer it to someone else. That leaves a good taste in the customer's mouth." At 69, Turley says he doesn't have a problem saying no.

Jeff Fetty of Leaning Oak Forge has one of the most extensive web sites I have come across and he affirmed that it is a great tool in qualifying his potential client. His site literally states "get to know my work. . .and get an idea of my style. If my work is something you are interested in, contact me..." Even then, he still has to educate the client further when they contact him.

The result of my inquiry is this; we must take every opportunity to educate our clients on the differences between forgework and fabrication. The more tools we have at our disposal to do so, the more effective we will be and eventually, our reputation will make it easier. But the theme I heard over and over was simply stated by Colin Price, "We gotta find the right client."
Jefferson Mack at last year's California Spring Blacksmiths Conference shared that he literally asks clients what their income is prior to doing an initial consultation. That takes some moxy, but at least he is sure that he's dealing with the right client..

New Jersey
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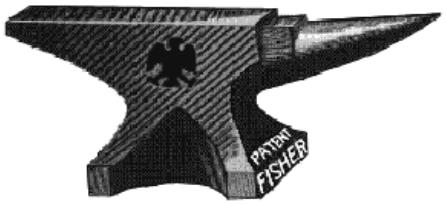
Attn: Larry Brown, Editor

New Jersey Blacksmiths Association



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