The Humble Flint and Tinderbox - Revisited

By: Don Startin,

Submitted in Memory of Brian Chellew who taught me most of what I know about the subject

Before the advent of matches folks had to use flint, tinder and a striker made of hardened high carbon steel to make fire. You could use the back of your knife, razor or any small piece of steel that had been hardened and polished to strike a spark. The fire was carefully got ready with dry wood, shavings etc. The fire lighter took his kindling or punk and held the flint underneath it between his left thumb and forefinger. He then struck the sharp edge of the flint a glancing blow with the force of the striker. Hopefully this would rip a microscopic flake of steel off the face of the striker. This would be visible as a spark and was white hot. The spark would fly off into the tinder which would begin to glow. The firelighter would blow the spark into a flame and quickly transfer this into his fire. A little more strategic blowing and his fire would take.

I find that a large "Kiwi" Boot Polish Tin makes a good tinder box, so my strikers have to fit inside it. The steps to making such a striker are as follows:

Step 1 Locate a piece of very high carbon steel. Coil springs generally have six points of carbon. A spark test will give you an idea of how juicy your spark will be.

Step 2 Using a power hammer or a striker (if available) forge your coil spring into a bar approximately 3/16" x 5/16". Be careful not to burn it, but don't despair if the rod bums through, just fish the piece that fell off out of the fire and use this to make your striker! You have to keep the steel good and hot otherwise it will get cracks. Be sure to round off the square edges as you would the reins of a pair of tongs.

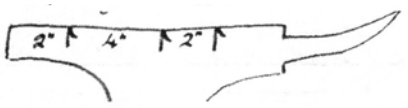
Step 3 With a flatter, flatten one of the 3/16" faces to an immaculate flatness.

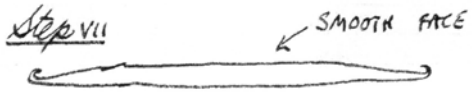
Step 4 Cut off a length of your striker stock 5" long. N.B. A bit longer is fine if the striker doesn't have to go into the "Kiwi" tin. One can put three or four fingers in the opening of the striker. To help you figure out how long your striker will be you can experiment with copper wire.

Step 5 With a piece of chalk or soap stone, mark the side of your anvil.

Step 6 Draw out each end of the stock to a 2" point. Mark the rough face.

Step 7 Turn up the points towards the smooth face.



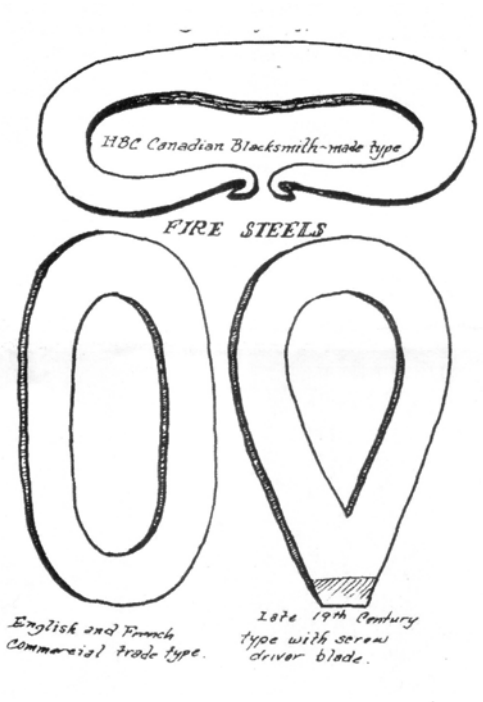


Step 8 Using the horn and scrolling tongs bend your scrolled ends away from the smooth face. 4" of the smooth face should be undisturbed. A curved face seems to strike good sparks. Check that the striker will fit in the tinderbox.

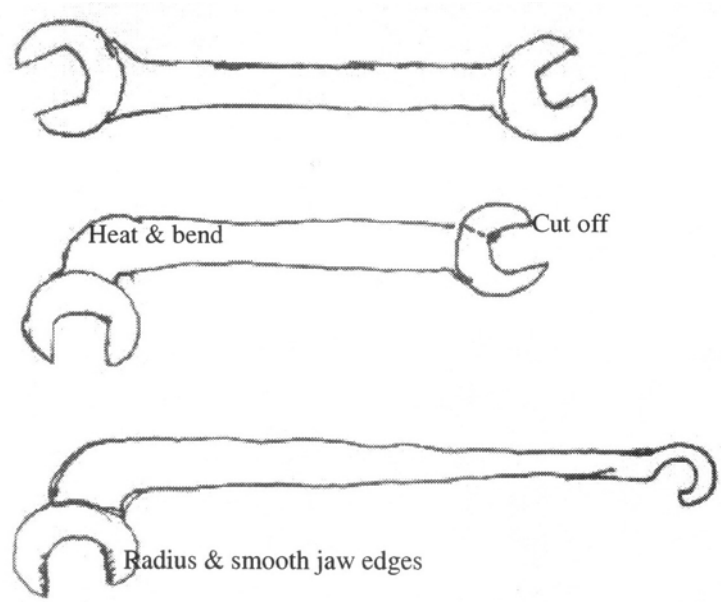
Step 9 Using some medium fine emery cloth smooth out the striker face.

Step 10 Harden the striker face. Heat the striker to critical temperature - a dull red should do... then dip the face in cold water for a count of "a thousand and one, a thousand and two, a thousand and three". Then quickly quench the whole striker in oil. This should give you a striker that is hard on the face, but soft elsewhere. However, avoid dropping the striker on a hard surface like concrete.

Step 1l Using a succession of ever finer grit emery cloths polish the face of the striker to a high gloss. N.B. By all means put a little fine oil on the face, but be sure it is oil free when you want to use it!



Tips Compiled by the New England Blacksmiths



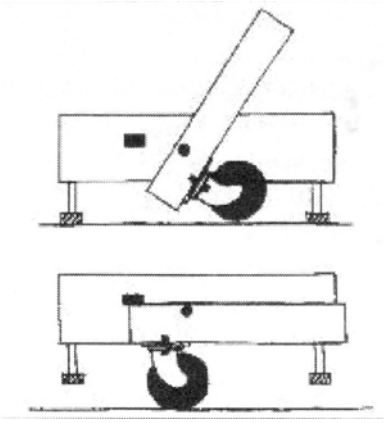
A Simple Scroll Wrench

By Rick Dixon, Saskatoon Saskatchewan
From "The Rivet"

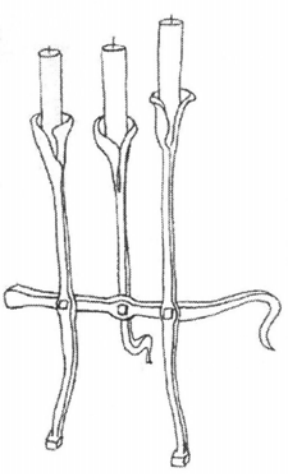
Here's a way of making a simple scroll bending wrench using a large open end wrench as a starting point.
They can be found at yard & flea market sales for reasonable money.
Heat & bend one end to 90 deg. From the shank handle.
Cut the other end as shown and draw out to a hook for hanging the tool.
Round the inside of the jaws and smooth so they won't mar the work.

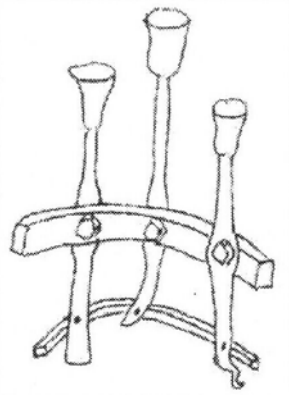
Simple Caster Jack

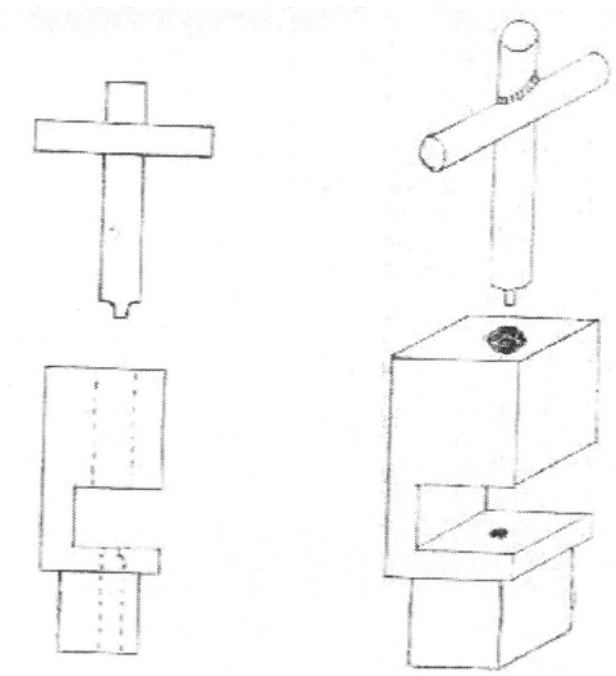
By Gene Olson, Minnesota Guild of Metalsmiths



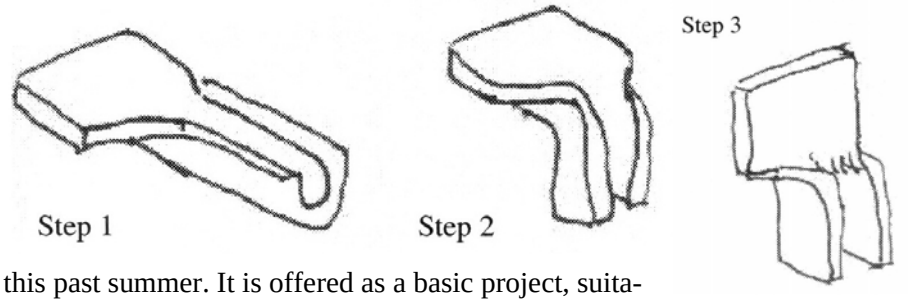
Often we have to move tools when they are not in use but need them to be stable when we are using them. I like to put bars across the bottom with 301/2" legs and move stuff with my pallet jack. But if you don't have that luxury, here is a low-tech solution.
A simple "cam-over" gravity lock on a swivel caster. You would use several of these or possibly two "fixed-casters" on one side of the machine, always down, and then the two feet shown with the retractable steering casters on the other side.







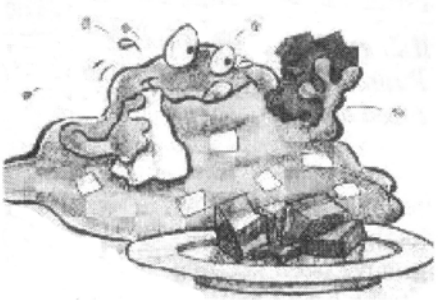
Candelabrum



Adapted from original drawings, California Blacksmith
This candelabrum was designed and demo'ed by Luca House at the a North Carolina Affiliate meeting this past summer. It is offered as a basic project, suitable for gift giving.
It makes a nice table centerpiece for candles and includes all the basic processes, drawing out, upsetting, punching & riveting.
Use this design as your "starting point" and develop your own from these. Let some things "happen" as you work and before you can say "Doug Wilson", you will have created a personal work of art!

Bill Riley's Hardy Hole Punch Tool

From a publication of The Watch Tower Society

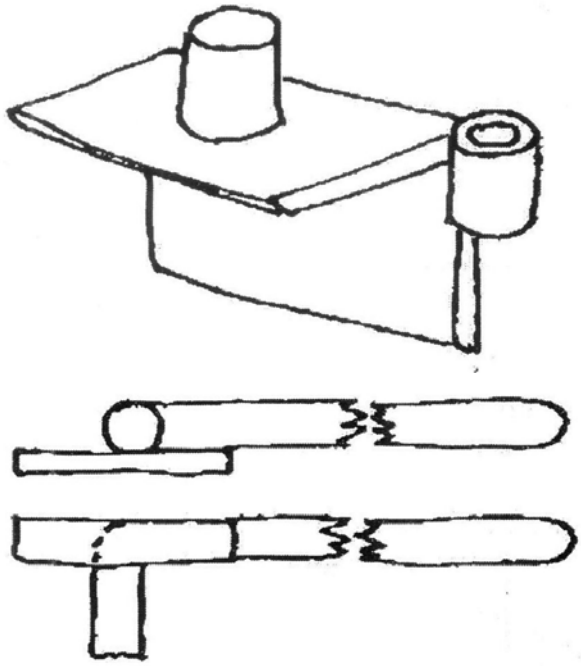


This is a punch and bolster/guide that I made to fit the hardy hole of my anvil. I use it to the screw hole in J hooks and similar projects at shows where I can't use a drill or other power tools. The Punch is made from coil spring stee; and the bolster/guide from mild steel. The "T" handle permits easy removal of the punch and I can hold the piece in one tong hand and hammer with the other.

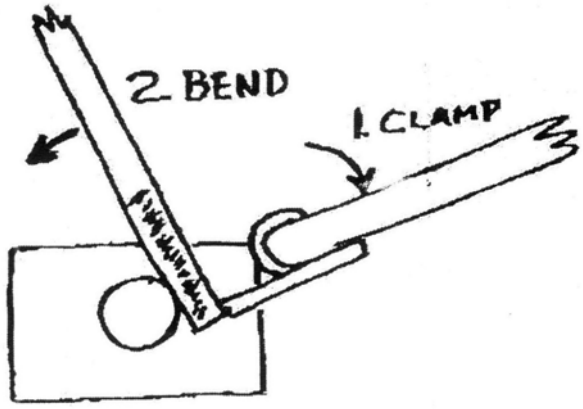
The punch hole matches the punch point diameter. The bottom of the hole is drilled out to allow the slugs to clear.

Thanks to The Alabama Forge Council and Clay Spencer for this great article. This is from The Alabama Forge Council's "Best of the Bits" Volume 4. and now copied from The Hot Iron Sparkle

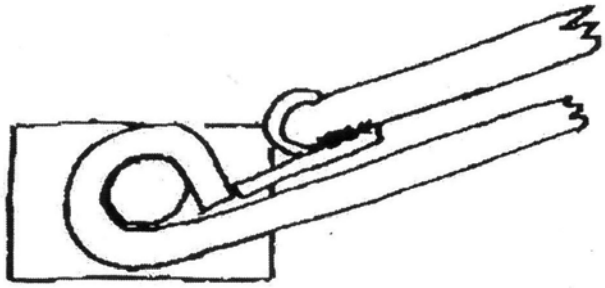
Jim Auer and Merle Bullard had an eye bending jig in the Northwest Ohio Blacksmith's newsletter in October 1990. A short piece of heavy angle is the base that clamps in the vise



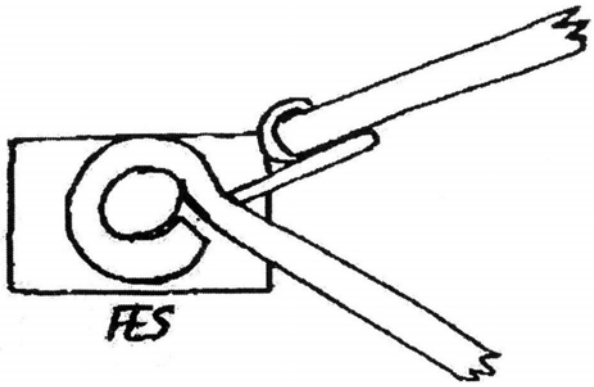
in use. You will need a base for each inside diameter eye you want to make. The pipe welded on the corner should fit the 3/4"



clamp. The clamp lever would be made of 3/4" round.



Put your hot stock next to the pin and clamp it with the lever. Bend around the pin. You will



have to watch that you don't have too long a heat on the stock or it will bend further out away from the pin than you want it too. Cool it with water if necessary. Remove from the pin, flip over and put back on the pin.

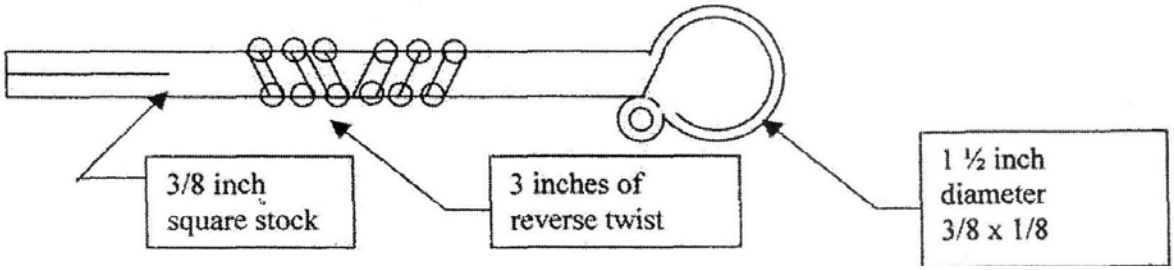
Bend against the clamp to center the eye with the stock.

Grandpa Nahum Hersom says to forge and grind your center punches to a square point rather than roundpoint. On red hot metal you

Thanks to The Arizona Artist Blacksmith Association and Len Ledet for this great article. This is from their newsletter, The Anvil's Horn, May 2004 issue., then the Hot Iron Sparkle

CALCULATING FORGING LENGTHS by Len Ledet

Recently I was asked to construct a decorative branding iron and stand. It consisted of a hanging loop on one end, three inches of a reverse twist in the middle, and the brand at the other



end. The total length was to be 16 inches and constructed out of 3/8 inch square stock.

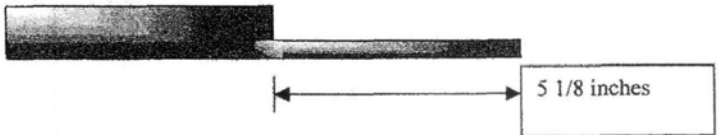
QUESTION:

For the loop on the handle, how much 3/8 inch square stock will be required to forge the 1 1/2 inch diameter loop with a cross-section of 3/8 x 1/8 inches.

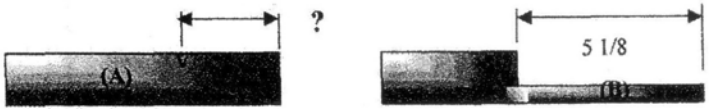
I . Must first calculate the circumference of the loop (circle)...

Circumference of a loop = (□) x (diameter + thickness of material) - (3.1416) x (1 1/2 + 1/8)

= (3.1416) x (1 5/8) = 5 1/8 inches



= 5 1/8 inches of material required to construct a loop with a diameter of 1 1/2 inches, and 1/8 inches wide…



VOLUME (A) VOLUME (B)

2. Next..., how much 3/8 inch square stock needed to draw the 5 1/8 x 1/8 x3/8 loop...

VOLUME A = length x width x depth.

= (Length ?) x (3/8)x(3/8)

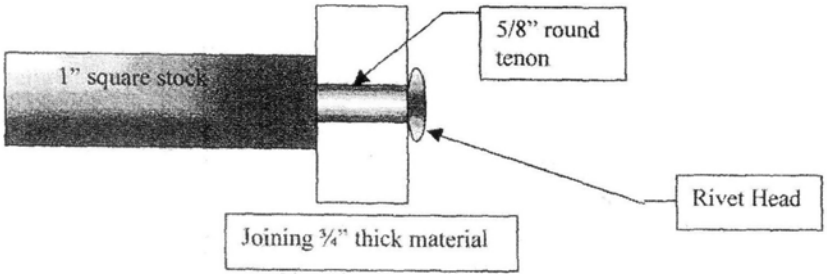
VOLUME B = length x width x depth

= (5 1/8) x (1/8) x (3/8)

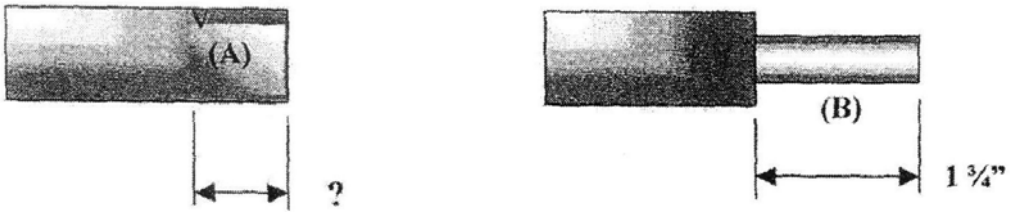
Calculating Forging Lengths (cont.)

Another Typical Example

Am working with a one inch square bar and need to forge a 5/8 inch diameter tenon, one inch long, plus enough stock to form a rivet on top…



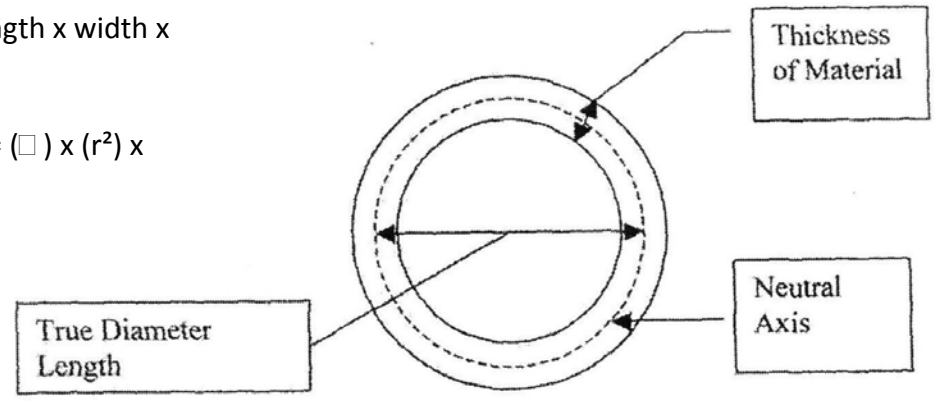
Once again we ask.., how much 1" stock



must we forge to obtain the 5/8" tenon.., 3/4" long.., plus material for the rivet..
MATERIAL FOR RIVET = 1 1/2 X rivet diameter = 1 1/2 x 5/8 = 15/16"
TOTAL LENGTH OF TENON = 3/4" (joining material) + 15/16" (rivet material) = 1 11/16 = 1 3/4"

Volume of a Cube - length x width x depth

Volume of a Cylinder = (□) x (r^2) x (length)



VOLUME A =

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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

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

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609-443-3106 JChob@earthlink.net
Grant Clark, GWC Forge
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732 446-2638, 732 446-2638
Eric Cuper Artist Blacksmith
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908 642-6420 ericuper@msn.com
Bruce Hay, Jr.
50 Pine St., Lincroft, NJ 07738
Jayesh Shah, Architectural Iron Design
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jay@archirondesign.com
Louise Pezzi, Blacksmith
1241 Carpenter St
Philadelphia, PA 19147

Search

I am looking for a
#250 fisher anvil in good shape.
If you have one for sale or run across one, contact me; Larry Brown, NJBA Editor. (718) 967-4776

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

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Northeast Blacksmiths Association

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

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

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

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Send your completed application with $ 20 (one year dues) to;
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1667 Wyomissing Rd.
Mohnton, PA 19540
(make Checks payable to PABA)

PABA Membership Application

Membership is from *Jan. 1 — Dec. 31*

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Please include payment with the information listed below. You will receive a postcard confirmation of your membership, and will receive a newsletter within a month. NJBA's "year" runs from June to June. If you join mid-year, the postcard will offer a prorated dues option which will then allow you to extend your membership till the following June. The following information will be listed in a roster available to other members.

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