

## TAG June 18 2009

### Making a froe

**Essentials** – Sparks will fly so bring safety glasses, boots, old clothes and/or a leather apron.

Some flat spring stock and some pipe will be available for those who have no suitable material.

Splitting, or riving, wood in early days was a skill practiced by craftsmen who made boards, shingles, clapboards, fences, basket splints, chair parts, wagon spokes, lath, and more. Our ancestors used axes, gluts or wedges, froes, drawknives and spelk planes for splitting wood.



The froe was designed for splitting. It is typically an L-shaped tool made up of a wedge-shaped blade with a dull, but not blunt, knife edge and a wood handle. Blades were usually straight with a socket forged at one end, but curved blades were also made. Most handles were round and tapered, and were inserted up through this socket. But some froes had eyes similar to those on axes for handles that were wedged. The froe handle is held in an upright position in one hand while the other hand drives the top of the blade downward with a wood froe club or mallet. After a split is started, the froe is wiggled downward to lengthen it until the split is complete. (*Froes*, Hank Allen *The Tool Shed* Number 90 February 1996).

Froes come in all shapes and sizes and there is no standard form.

The material was generally mild steel although spring steel is of course a good stock material.

The eye for the handle can be forge- or arc-welded after bending the blade on the anvil, or you can use a piece of pipe welded to the blade. You can also use the existing round eye on a leaf-spring.

The blade need not be sharp and a flat spring can simply be ground with a two sided single bevel on the bottom.

If forging, a double bevel form is possible (ie top and bottom of the blade) but the most common form seems to be forging a tapering wedge on the bottom half of the blade.

## Making a froe



**Froe (f. Fromard)**

Demonstration by [Jock Dempsey](#)

April 4, 2001

[http://anvilfire.com/iForge/tutor/jdfroe/top\\_index.htm](http://anvilfire.com/iForge/tutor/jdfroe/top_index.htm)

-GURU Tonight's demo will be a froe. The word froe is from the French word fromard, meaning "to cleave". I used to make quite a few of these. This one is an average size. Occasionally they are made larger. I've made them as small as 6" long for basket makers.

Froes are used to split wood. Primarily they are thought of as a shingle making tool but they work great for firewood and they were commonly used to split boards out of logs. Splitting boards is very efficient if you have a long straight log. All primitive wood workers use them and they are a good seller at rendezvous.

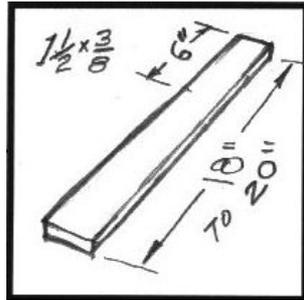


Figure 1

Froes do not need to be hard. I make them out of mild steel. Many were made of wrought iron without a hard edge. The small ones I've made were spring steel but you want a soft temper.

Froes are also not very sharp. They are a wedge. I slide an angle grinder over the edge once or twice to straighten it and then dull it a little with a fine file.



Figure 2

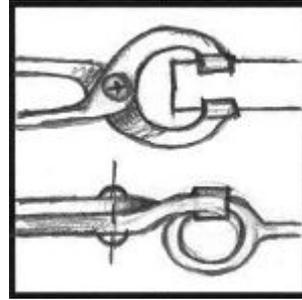


Figure 3

-GURU The first froe I made using common tongs. Then I modified a pair of goose neck tongs as shown to get a good grip on the froe. They fit the plain bar AND on one side of the eye.

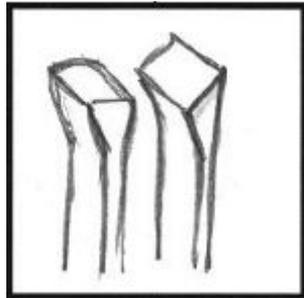


Figure 4

If you are going to forge weld the eye then you need to scarf the end. We are going to show both methods, arc and forge welding.

Upset the end and then form it as shown.

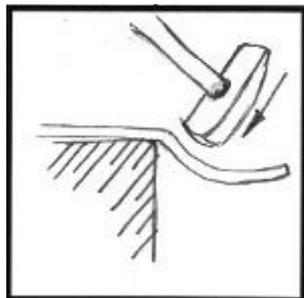


Figure 5

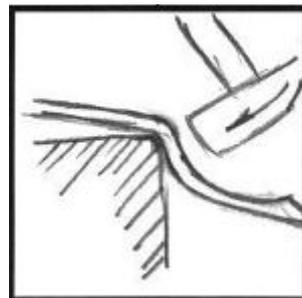


Figure 6

-GURU For this size froe the eye starts at about 6". Start the eye bend over a rounded corner of the anvil. As you hammer down and at an angle the far end will come UP from inertia. Kind of handy when you want it to, like now.

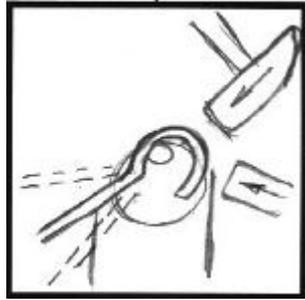


Figure 7

Be sure to have the corner of the scarf UP.

Finish the eye on the horn and over the edge of the anvil



Figure 8



Figure 9

-GURU I arc weld the eye inside and out. Run 1/8" E-6013 rod HOT (about 125 A). On the outside I run 3-4 passes to make a nice fillet. Then this is equalized when dressing the weld by forging.

To forge weld the eye, open the eye and wire brush the surfaces and then flux and close it nearly. Then heat to a welding heat and weld. Check the weld, reflux, heat and finish weld if necessary. Due to the prying motion and the low level of expertise of most makers of old froes you see a LOT of failed welds in froes. If a *smith* makes a froe the weld should NOT fail!

Some smiths don't weld the eye at all. The handle is made oversize and the opening springs out to grip the wood.

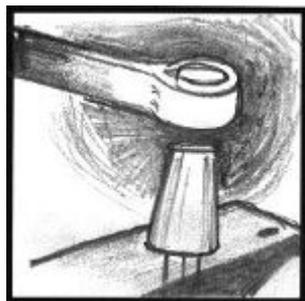


Figure 10

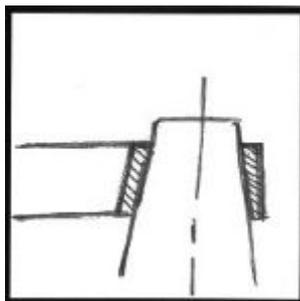


Figure 11

-GURU After welding the eye I like to taper them like and adz eye. Most smiths don't, I do. Froes are an ancient tool but most were made by apprentices, farmers and the like. There is no standard froe eye.

Tapering the eye requires a special drift as shown. Stop and make it to your size froe after forming the eye. Mine is 1-3/4" dia and 1-1/2" dia on the end. It has a shank to fit the hardy hole.

Heat the eye to nearly a welding heat then drive it down on the drift. If the eye is larger you may need to drive the drift in using a swage block or support of some type.

JOHN If you are at the forge already for bending the eye, Why would you even bother with an arc welder?

-GURU John, I'm showing both methods. You don't scarf the end if you are going to arc weld. I run several passes to help make a smooth fillet.

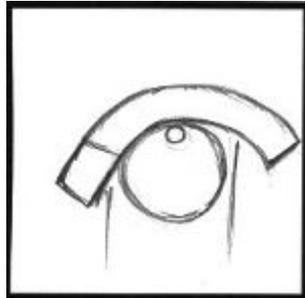


Figure 13

Before tapering the blade it needs to be bent to compensate for the growth of the stock lengthwise while forging. Be sure to bend the right direction (down) if you have tapered the the eye as above.

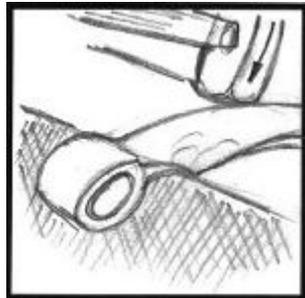


Figure 14

I start the tapering back at the eye and work forward.

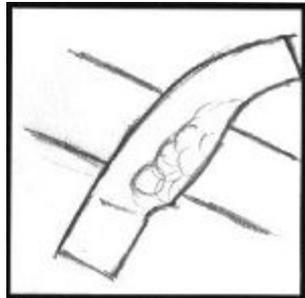


Figure 15

You only need to taper about half the blade's width. As you taper it the stock growth straightens the bend.

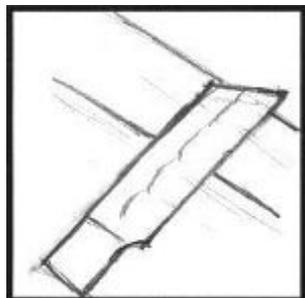


Figure 16

When you finish the point will have extended as shown. This is the effect that creates the clip point that is stylized on blades such a Bowey's and hunter's.



Figure 17

This is how the blade should look from the end.

As I mentioned at the beginning I do a very light dressing with an angle grinder and then deburr with a file. A coat of wax and you are finished.