

Paddle Making: Notes on the Geoff Burke seminar L.L. Bean North American Canoe Symposium '91

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Materials:

Use straight-grained, flatsawn, 5/4 stock, from one of the following woods:

- Eastern white spruce (easiest to work)
- black spruce (if you can find it)
- basswood (Voyageur's material)
- bird's eye maple (hard to work; make paddle thinner to cut down on weight)
- white ash
- cherry (makes beautiful paddle)

Flatsawn wood tends to be "springier", while quartersawn wood, while leading to a stronger shaft, can snap off unexpectedly. If you choose to laminate wood to make your blank, use Weldwood or epoxy rather than Resorcinol glue. Also, the glue will tend to dull hand tools quickly, so a laminated paddle may be best built using primarily power tools; modify the directions below accordingly.

For finishing:

- spar varnish
- thinner
- china bristle brush
- mixing cup(s)/tub(s)

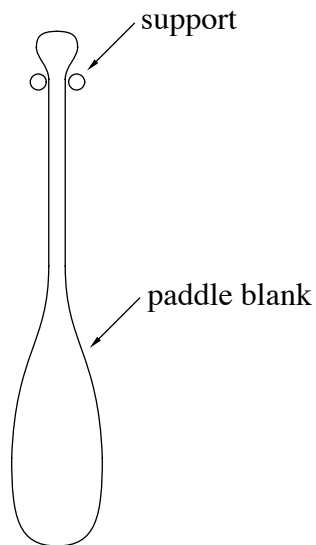
Tools:

- draw knife
- cooper's spokeshave
- block plane
- back saw (e.g., dovetail saw or gent's saw)
- rasp
- bandsaw, sabre saw, or coping saw
- belt sander
- orbital sander
- sanding belts and sheets, various grits
- marking gauge, compass, or dividers
- chalkline

- ruler
- pencil

Procedure:

Trace old paddle or pattern onto board, and cut out blank. After you cut out the blank, let it hang for two weeks as shown below:

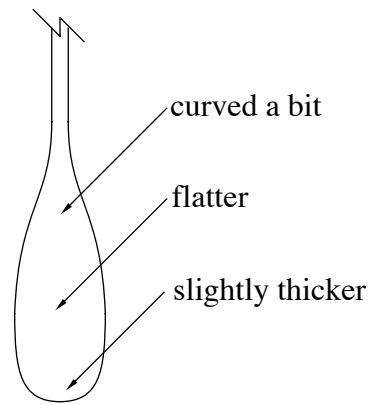


Then, check for warpage. A little warpage is to be expected, but beware of twist. If the blank is warped too badly, use it for some other project, or for firewood.

Scribe a centerline along the entire edge of the paddle using the compass.

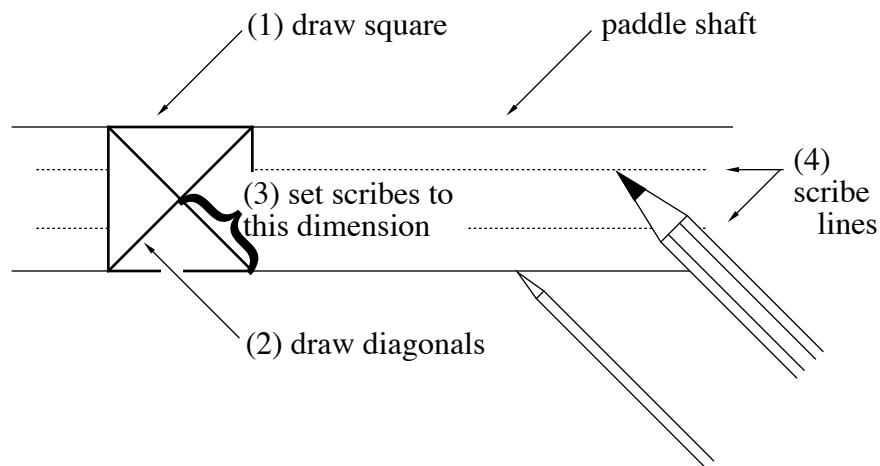
Snap a chalkline centerline along the paddle's face. If the paddle warped side-to-side, center this line on the shaft, and correct the width on the blade.

Clamp the paddle blank in a vise. Bevel the blade edge to within $\sim 3/16$ " of the thickness centerline using the spokeshave or block plane. Then, sluff off material from the blade using the drawknife, being careful of the grain direction; you may need to switch the paddle end-for-end in the vise to retain a drawn cutting motion. Note how the blade thickness should vary along it's length:



Use the cooper's spokeshave to thin down the blade further, nearly to its final shape and thickness.

To make a round shaft, use "8-siding" on each face. Set compass to the width/thickness of the shaft. Then, use it to mark out a square. Draw diagonals on the square, and set compass to distance from corner of square to its centroid (where the diagonals intersect). Use this spacing to mark the face of the shaft, as shown below:

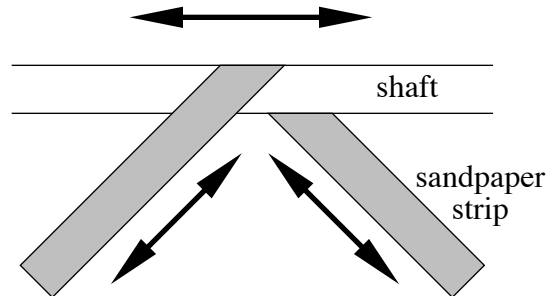


Repeat this procedure for each face. If the width and thickness of the shaft differ, this procedure will create an oval shaft.

Use the spokeshave to remove stock down to the scribed lines. Then, nick off the resulting corners with a block plane. By now, the shaft is 16-sided, and close to round (or oval, as the case may be).

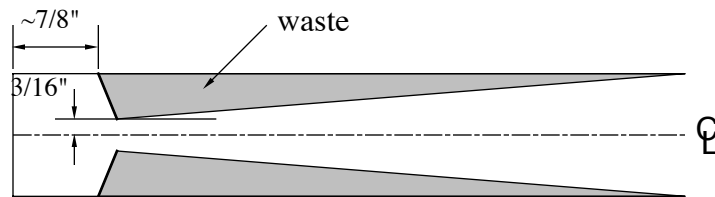
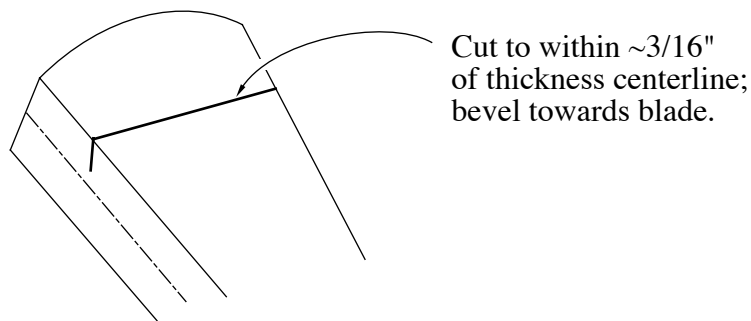
Cut a sanding belt, unroll, and cut again along its length to create sanding "strips" about

1 1/2" wide; some stores sell sand paper strips in rolls, so you can skip cutting up a belt. Then, sand the shaft in a drawing motion, pulling back and forth on the ends of the strip, moving up and down the shaft; it's kind of like the motion used to polish shoes:



The grip design is a very personal matter. Some prefer to laminate additional blocks to make a 1-sided grip, while other glue on T-handles. The directions here describe how to make a pear grip.

Make two cuts with the back saw, as shown, at the grip end:



Cut away the cross-hatched area using the draw knife, using very deliberate strokes - you can really screw up things here, so be careful! Then, shape the grip to your personal preference with the block plane and rasp.

Fair the corners of the blade with the block plane, with the grip on the floor. Sight

down the blade to check symmetry and smoothness of line. Then, round the corners with the block plane, and finish by sanding.

To finish, use varnish thinned 50%, 25%, 15%, ..., for up to 6 coats. The 50% thinned varnish really penetrates the wood. Leave the grip unfinished, or apply a couple of coats of boiled linseed oil. Some also prefer this on the shaft as well.