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CHIP BOX

Walnut, White Oak



MAKING THE CHIP BOX

Walnut was used in the construction of *this box with care* taken to select pieces exhibiting contrasting streaks of white sapwood. The bail was shaped from white oak. While any of a number of woods would do nicely for the box, make the bail from a wood that is not only strong but also pliable enough to assume the U shape without breaking. Suitable woods include oaks, ashes and hickories.

Construction is very simple. After milling the stock to a thickness of 1/2", rip the sides, ends and bottom to width and cut to length. Then plough a 1/4" X 1/4" groove in the

sides and ends to receive the bottom. Then cut and pare dovetails to fit (see chapter twenty-five). With hand planes, bevel the edges of the bottom to allow them to slide in their grooves (see chapter one).

Then assemble the box and fit plugs into the ends of the grooves ploughed into the sides.

After removing the bail from its bending form, give its two paws their final shape using a paring chisel and a shop knife. Then fasten the bail to the box with four 1/8" X 1 1/4" brass machine screws and nuts.

SHAPING THE BAIL

1 The bail requires a 3/8"-thick length of continuous-grain bending stock. This means that, when viewed from the quarter-sawn side (the side with the narrow, parallel lines), the grain should run from end to end. Traditionally, this is achieved by splitting out the stock with the use of a froe and beetle. However, few contemporary woodworkers have these tools. You may, therefore, choose to use a length of sawn stock selected for straight grain.

Before bending, work the band-sawn strip with a drawknife and spokeshave to rough-in the desired shape. At this point, it isn't necessary to be fussy. The goal is simply to round the edges on the top side of the bail since this procedure can be carried out more comfortably now, when the stock is unbent, than later, when the bail has taken on its *U* shape.



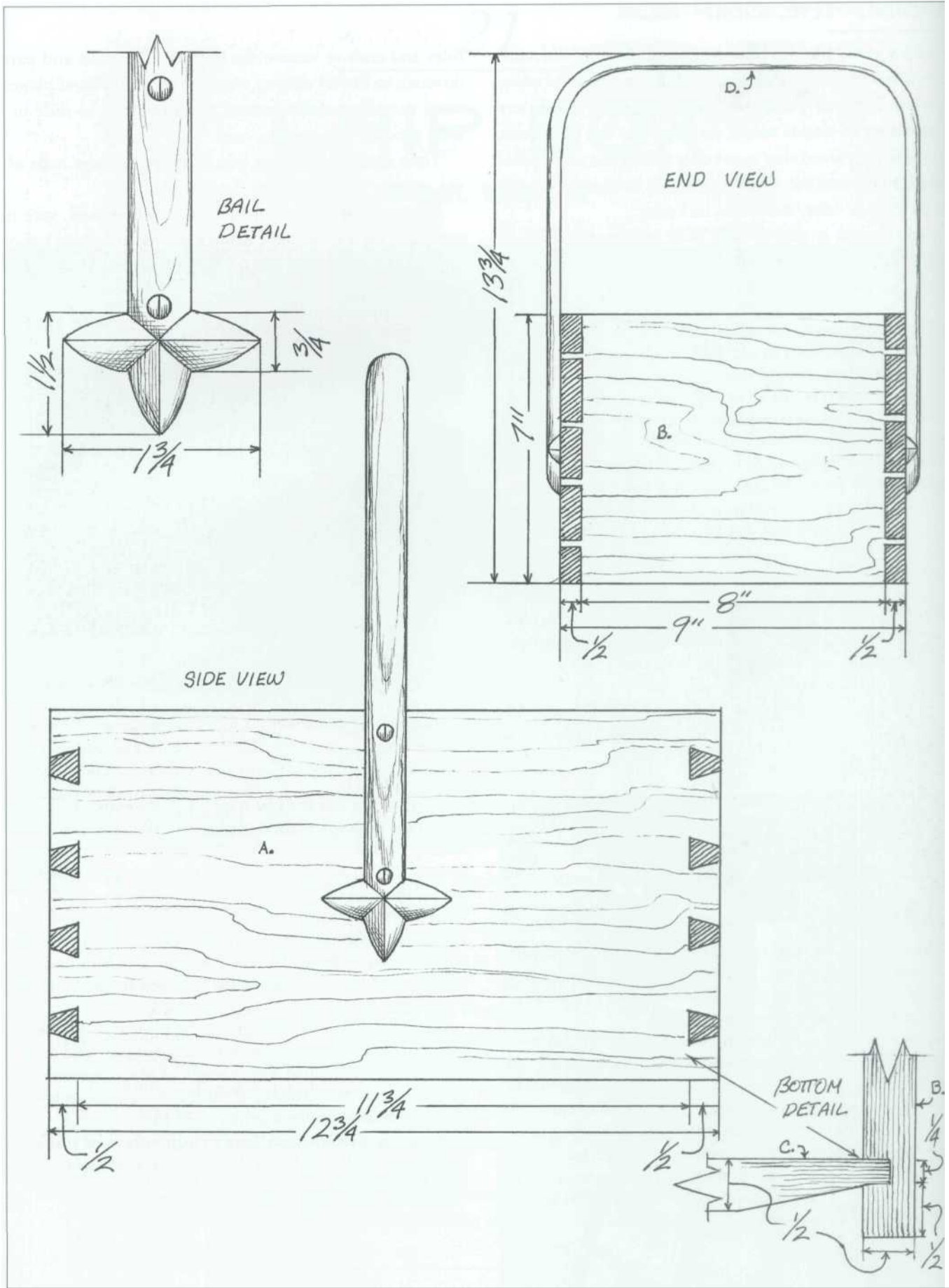
STEAM BENDING



1 My steamer is a deep fat fryer. I've cut an opening in the lid the same size as the outside diameter of a length of PVC which I use as a steam chamber. Three sheet metal screws turned into the PVC just above its base are allowed to protrude. These rest on the fryer's lid holding the steam chamber above the water's surface. A square of hardware cloth that laps the bottom of the steam chamber and is screwed to the PVC supports the material being steamed. To hold the entire apparatus upright, a strip of wood lath is screwed to the PVC and spring-clamped to a stepladder.

Similarly, functional steamers can be made in a number of different ways. Many woodworkers use a hot plate and a tea kettle with a spout fitted with a length of plastic hose which conducts steam to a chamber of some sort—a wooden box, a length of downspout, or a section of PVC.

Steam the bending stock long enough to become plastic. In my steamer, with material of this thickness, that means about forty-five minutes.



STEAM BENDING (CONTINUED)



2 Prepare bending forms beforehand. This particular form, a 2"-thick block of poplar cut to the inside profile of the bail, is nailed to a block of wood held in a vise. Necessary clamps and clamping blocks are placed nearby. Gloves are needed because the steamed oak will be very hot when removed from the steam chamber.

Although you shouldn't rush, proceed quickly because the steamed wood will cool rapidly, becoming less pliable.

Place the midway point along the length of the oak strip at the halfway point across the width of the poplar form. Then clamp it, using a block of wood to protect the oak from clamp marks.

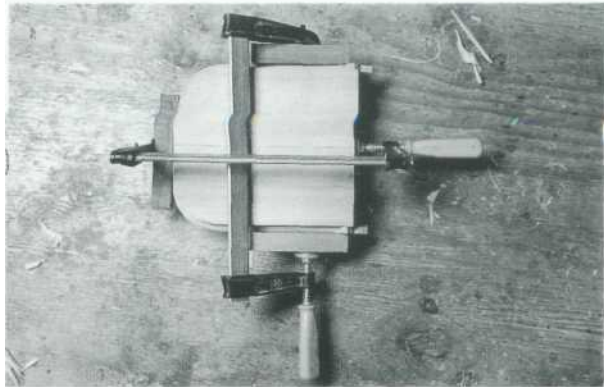


3 Bend the oak strip into its U shape, holding it in place with a second clamp set perpendicular to the first. Again, use blocks of scrap to protect the oak. From above, the strip can be seen to have assumed the shape of the bail.

Green wood is best for bending, but dry material can be coaxed into the required shapes with enough steam and enough patience.

Wood bending, particularly bending involving the sharp curves shown here, is a process rich with opportunities for failure. Sometimes, even after selecting continuous-grained material, even after steaming that material thoroughly, fracture can occur along the bends. When that happens, the only solution is to start the process all over again.

SHAVING TOOLS



Shown are the shaving tools I use in my shop. The two with turned wooden handles are drawknives. The knife at the top is a general-purpose tool, while the one at the bottom is a variety known as the "inshave" used by makers of Windsor chairs to hollow-out seats. The two middle tools are metal-bodied spokeshaves. The shave with the straight iron is used for general-purpose work, while the other, a hollow shave, can only be used for rounding spindles.

MATERIALS LIST

A	Side	2 pcs.	$\frac{1}{2} \times 7 \times 12\frac{3}{4}$
B	End	2 pcs.	$\frac{1}{2} \times 7 \times 9$
C	Bottom	1 pc.	$\frac{1}{2} \times 8\frac{1}{2} \times 12\frac{1}{4}$
D	Bail	1 pc.	$\frac{3}{8} \times 2\frac{1}{8} \times 29$
E	Plug	4 pcs.	$\frac{1}{4} \times \frac{1}{4} \times \frac{1}{4}$, shaved to fit
F	Machine screws & nuts	4 pcs.	$\frac{1}{8} \times 1\frac{1}{4}$

**These are net measurements. Surplus should be added to lengths of dovetailed sides and ends to allow joints to be sanded flush.*