

13

BOX WITH RAISED PANELS



MAKING THE BOX WITH RAISED PANELS

After the material has been selected and dimensioned, plough grooves on the inside faces of the box's sides and ends to receive the tongues on the edges of the box's top and bottom. Cut dovetails at each of the box's four vertical corners,

Glue the dovetails and assemble the four walls of the box around the top and bottom. At first, this may seem strange because this makes the box a completely sealed enclosure, allowing no access to the space inside. This problem, however, will be solved very quickly.

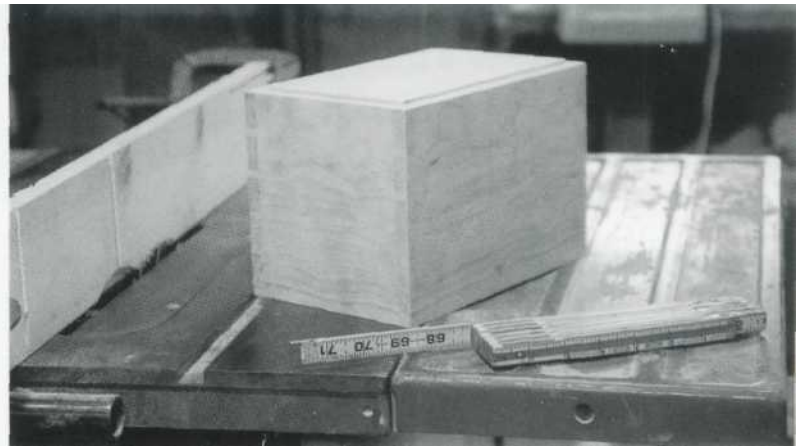
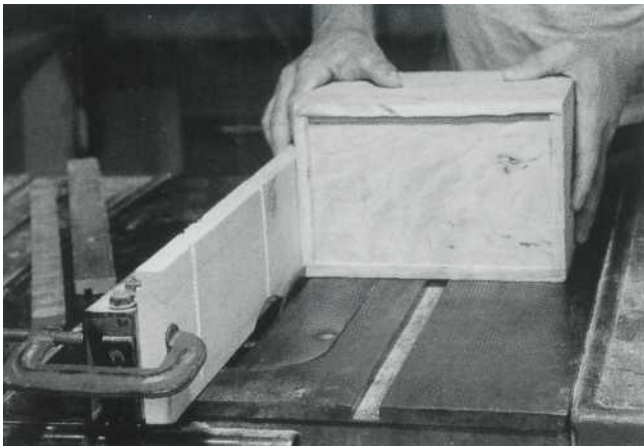
Because of the placement of the groove near the top of the inside faces of the front, back and ends, the top panel is already raised 1/8". After the pins and tails at each of the

box's vertical corners have been sanded flush, the four vertical panels are raised by cutting a 7/16" X 1/8" pass around all four sides.

You can do this on either the table saw or on a table-mounted router by removing enough material to give the effect of raising the central portion of each of the vertical panels.

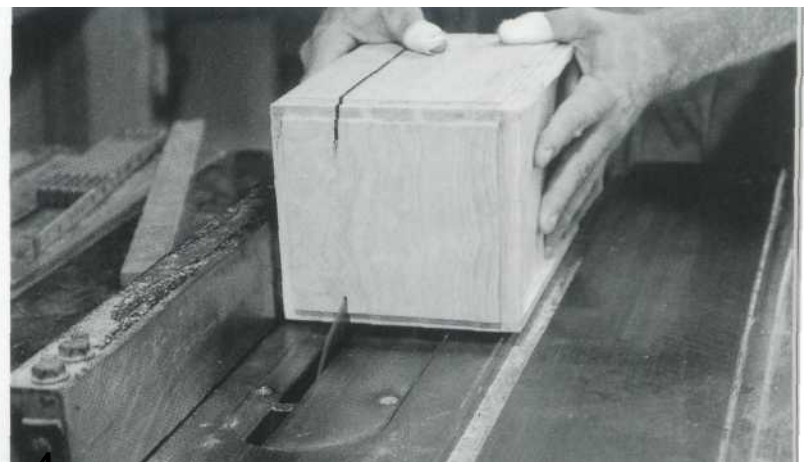
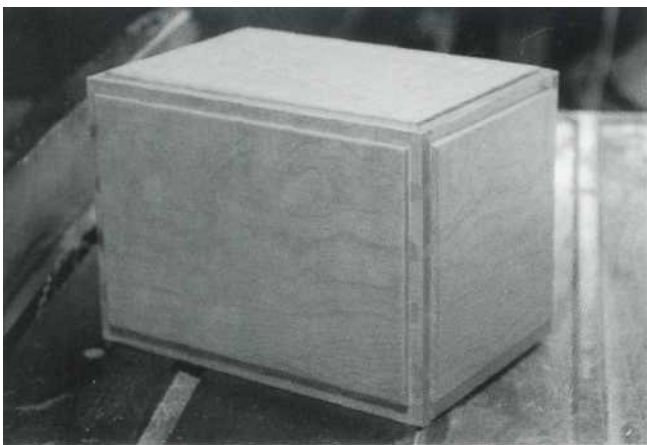
Create a lid by cutting a saw kerf through the four walls of the box 1 7/8" from the top.

After installing the hardware (see chapter twenty-seven), cut a shallow mortise around the strike plate, and fasten the 1/8" thick pull into place with glue and a few brads. The box is then ready for sanding and finishing.



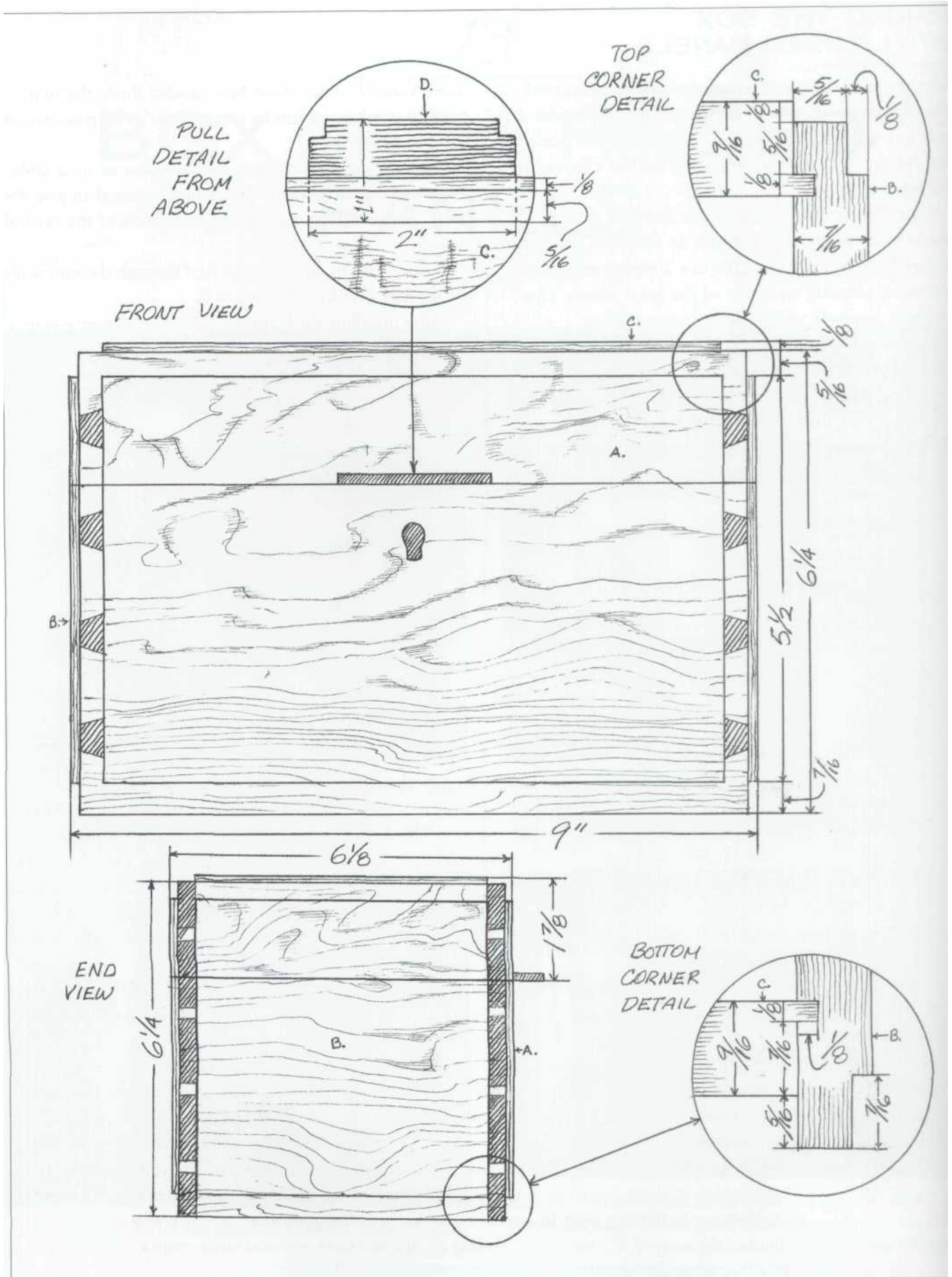
1 Clamp a strip of wood to the saw fence. This wood will protect the blade when the fence is crowded against it. Then, set the blade at a height of 7/16" above the saw table, and bring the fence up to it.

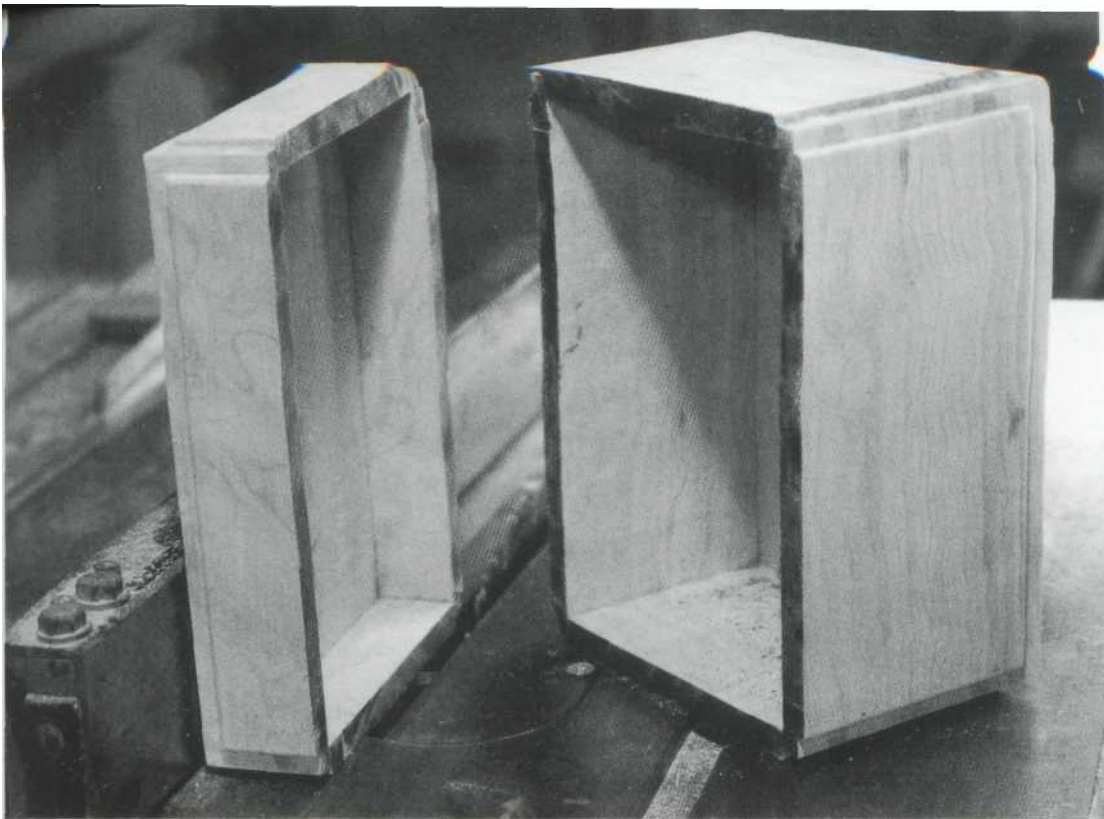
2 The box's four vertical faces are framed by the 7/16" X 3/32" saw kerf created when the perimeter of those faces is passed over the blade.



3 Chisels, files and sandpaper are necessary to remove the grain tear-out and burn marks left along the saw kerfs. (This should bring the saw kerf to its finished thickness of 1/8".)

4 Set the fence 1 7/8" from the blade, cut off the top, creating the lid.





5 Notice the burn marks left by the saw blade. A blade on which the teeth have set won't burn; however, the hollow-ground planer blade is made without set in order to produce a smoother cut and, as a result, often leaves a burned surface.

BURN REMOVAL

I have read that a hollow-ground planer blade can be persuaded to cut without leaving behind the unsightly, blackened surfaces visible in the above photo. I have read that if the blade is razor sharp, free of pitch, and set perfectly parallel to the rip fence, it is possible to cut without burning.

But I haven't been able to manage it.

I clean the blade frequently, and it is kept sharp, and of course I make an effort to properly set the rip fence, but I always end up with burned surfaces on one or both sides of the cut.

This could be a result of the fact that machine tool maintenance is not a priority in my shop. Although I have the standard array of power tools, I use them no more than necessary and never take pleasure in their operation. They produce too much noise and too much dirt, making the shop a thoroughly unpleasant place to be.

I have, instead, focused on methods for removing these burn marks from cut surfaces.

Those in the above photo are relatively easy to eliminate. Placing the tip of an extremely sharp 1" butt chisel across the thickness of the blackened wood, I drag the chisel backward (in the direction opposite the bevel) in a scraping motion. Two or three passes removes most of the scorching, in addition to leveling any irregularities left behind by the sawing process. A little work with sandpaper wrapped around a bit of flat scrap then completes the clean-up process.

The scorched areas resulting from the formation of the

MATERIALS LIST

A	Front and back	2 pcs.	$\frac{7}{16} \times 6\frac{1}{4} \times 9$
B	End	2 pcs.	$\frac{7}{16} \times 6\frac{1}{4} \times 6\frac{1}{8}$
C	Bottom and top	2 pcs.	$\frac{3}{16} \times 5\frac{1}{2} \times 8\frac{3}{8}$
D	Pull	1 pc.	$\frac{3}{8} \times 2 \times 1$
E	Hinges	2 pcs.	$1\frac{1}{2} \times \frac{7}{8}$
F	Box lock	1 pc.	$1\frac{1}{2} \times 1$

**These are net measurements. A surplus should be added to dovetailed parts to allow joints to be sanded flush.*

**Hinges and lock were ordered from Constantine's Hardware.*

raised panels on the four sides of this box are a little more difficult. Because the raised panel is immediately adjacent to these flats, they can't be straddled with a chisel. Making the process even more difficult is the fact that the vertical flats on each end of the raised panels run across the grain.

The solution? The only one I know requires patience and a lot of work with a fine-toothed wood file and sandpaper.

I suspect that it would take less time to tune my table saw so that a hollow-ground planer blade wouldn't burn cut surfaces than it does to remove the burn marks afterwards. I suspect that I'm not using my shop time as wisely as I might. But there is a trade-off here. To achieve the overall time savings, I would have resigned myself to several hours of frustrating, knuckle-busting power-tool maintenance, and the truth is that I would rather spend my time scraping and sanding.