



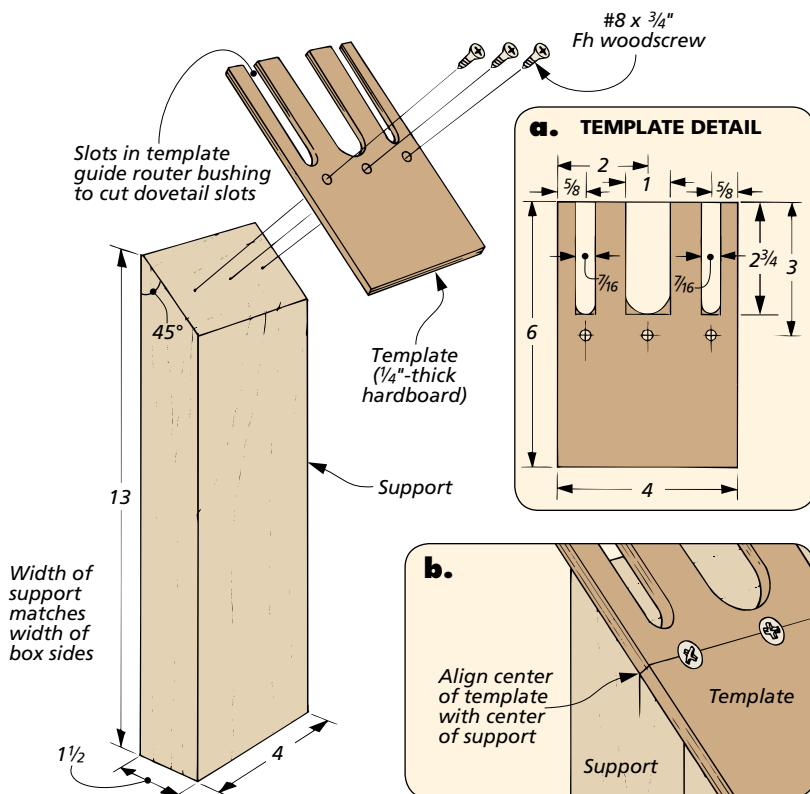
Woodsmith **PLANS**

# DOVETAIL KEY JOINERY



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Adding dovetail keys to a small box is one way to strengthen mitered corners. And with this unique jig, it's easy to rout slots for these keys.



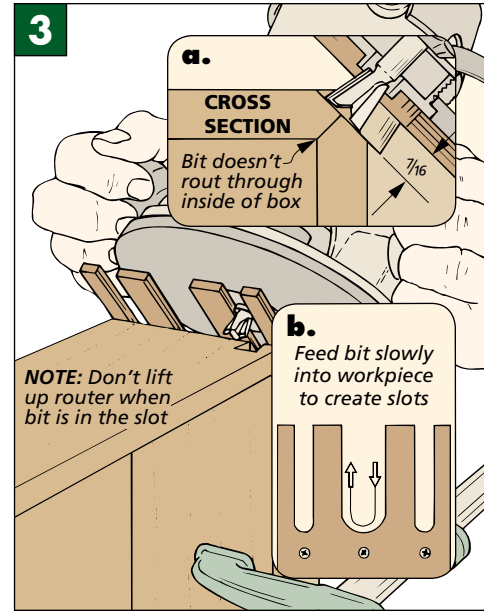
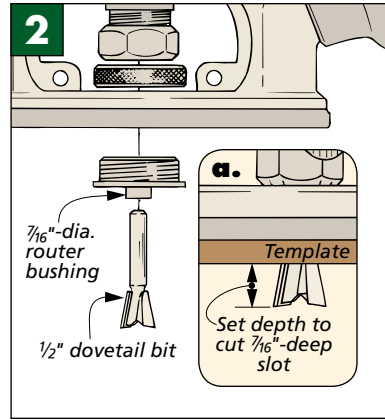
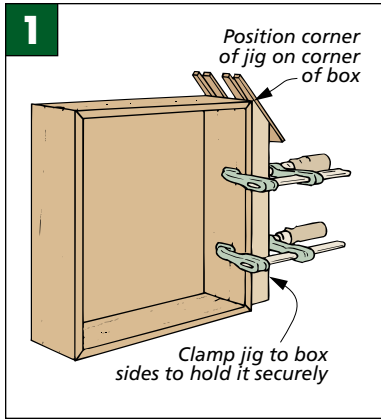
**B**uilding simple boxes, like the one used for the router bit cabinet, is pretty straightforward. You just make the sides, miter the ends, and glue the pieces together. But sometimes mitered joints need reinforcement, so I add dovetail keys at the corners.

**JIG.** You could rout the slots for these keys on the router table. But to make the task easier, I designed a jig that clamps to the side of a box, as you see in Figure 1 on page 2, and used my hand-held router.

You'll notice in the drawing at left that this jig consists of just two parts. There's a hardboard template on top to support and guide the router. And a support block underneath holds the template at the proper angle for routing the slots.

**TEMPLATE.** The template for this jig is a piece of 1/4" hardboard with slots cut in one end. These slots are for the guide bushing on the router. Just be sure to cut the slots wide enough to fit the outside diameter of the guide bushing you plan on using.

For the router bit case, I cut three slots (detail 'a' at left). Simply "stop" the slot by drilling a hole at one end, and then remove the waste in the middle.



**SUPPORT.** A 1½"-thick support is glued and screwed to the template, as you see in detail 'b' on page 1. A 45° miter cut on one end determines the angle for the template. And before driving in the screws, I positioned the center of the template over the centerline of the support block.

**USING THE JIG.** With the jig assembled, clamp it to one corner of the box, as illustrated in Figure 1. Then, adjust your bit depth as needed, as shown in Figures 2a and 3a. In my case, the bit was extended below the template on the jig to create a 7/16"-deep slot. The depth can vary, but just make sure you don't rout through to the inside of the box.

To rout the dovetail slots, the guide bushing follows the template (Figures 3 and 3b). But as you do this, avoid lifting up the router — it will damage the template.

**KEYS.** Once the slots are cut, keys to fill them can be made at the router table. I started with a wide blank and adjusted the bit height to equal the depth of the slots, as you can see in Figure 4. Use a ¾"-thick blank for the small keys and a 1¼"-thick piece for the large one. Then "sneak up" on the thickness of the key for a snug fit. To save stock, I routed keys on both edges of the blank (Figure 5). Also, it's a good idea to check the fit of each key in the slots, as illustrated in Figure 5.

When the keys fit, rip them free of the blank (Figure 6). You don't need to cut them to an exact height — leaving a "cap" on top makes them easier to handle. Then, glue the keys into the slots, as in Figure 7.

Once the glue dries, the keys need to be trimmed. I used a small back saw to remove most of the waste (Figure 8). Finally, sand the keys flush with the sides of the box, as shown in Figure 9.

