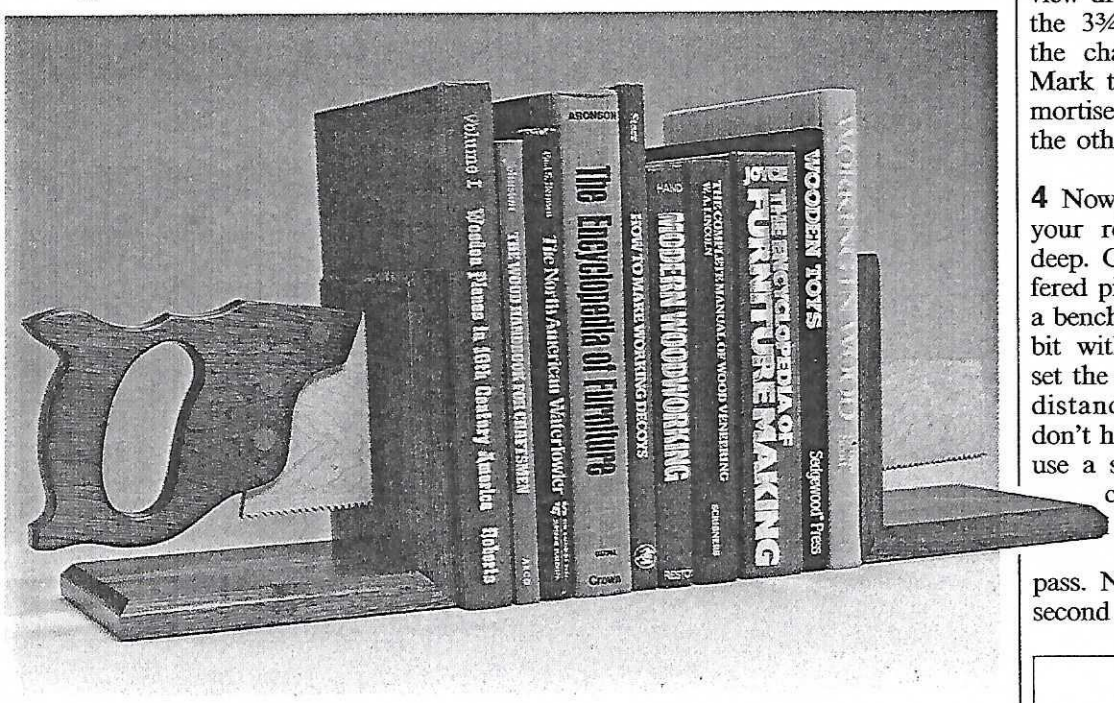
# HANDSAW BOOKENDS *FOR YOUR WOODWORKING LIBRARY*




**Do your woodworking books sit in a dusty stack awaiting a little respect? We may be able to help. Our walnut handsaw bookends stand eight inches tall and let you show-off your woodworking book collection with dignity, and a touch of humor. Full-sized patterns for the saw parts guarantee fast work.**

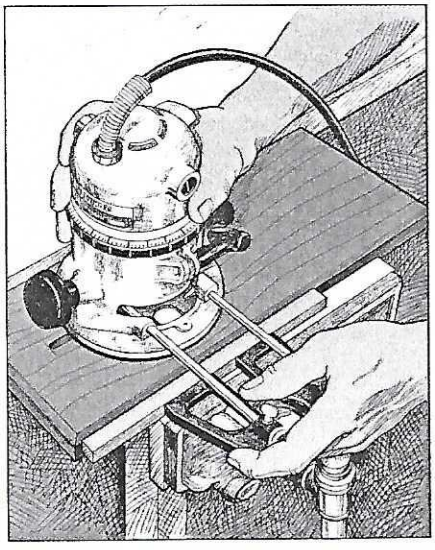
## LET'S START WITH THE BASE

**1** Rip and crosscut two pieces of ¾" walnut to 6½x16".

**2** Chuck a ½" chamfer bit in your table-mounted router, and rout a ⅜" chamfer along the top edges on both pieces. (We chamfered the end grain first.)

**3** Using a combination square and the dimensions on the exploded-view drawing, mark the location for the 3¾"-long mortise centered on the chamfered face of one piece. Mark the position of the 2½"-long mortise on the chamfered face of the other piece.

**4** Now, chuck a ¼" straight bit in your router; adjust it to cut ¼" deep. Clamp one of the two chamfered pieces to your bench (we used a bench vise). Next, align the router bit with the mortise location, and set the router's guide for the proper distance from the edge. (If you don't have an auxillary router guide, use a straightedge.) Make the first cutting pass as shown *below*; then, set the bit to cut ½" deep, and make the second pass. Now, rout the mortise in the second chamfered end piece.

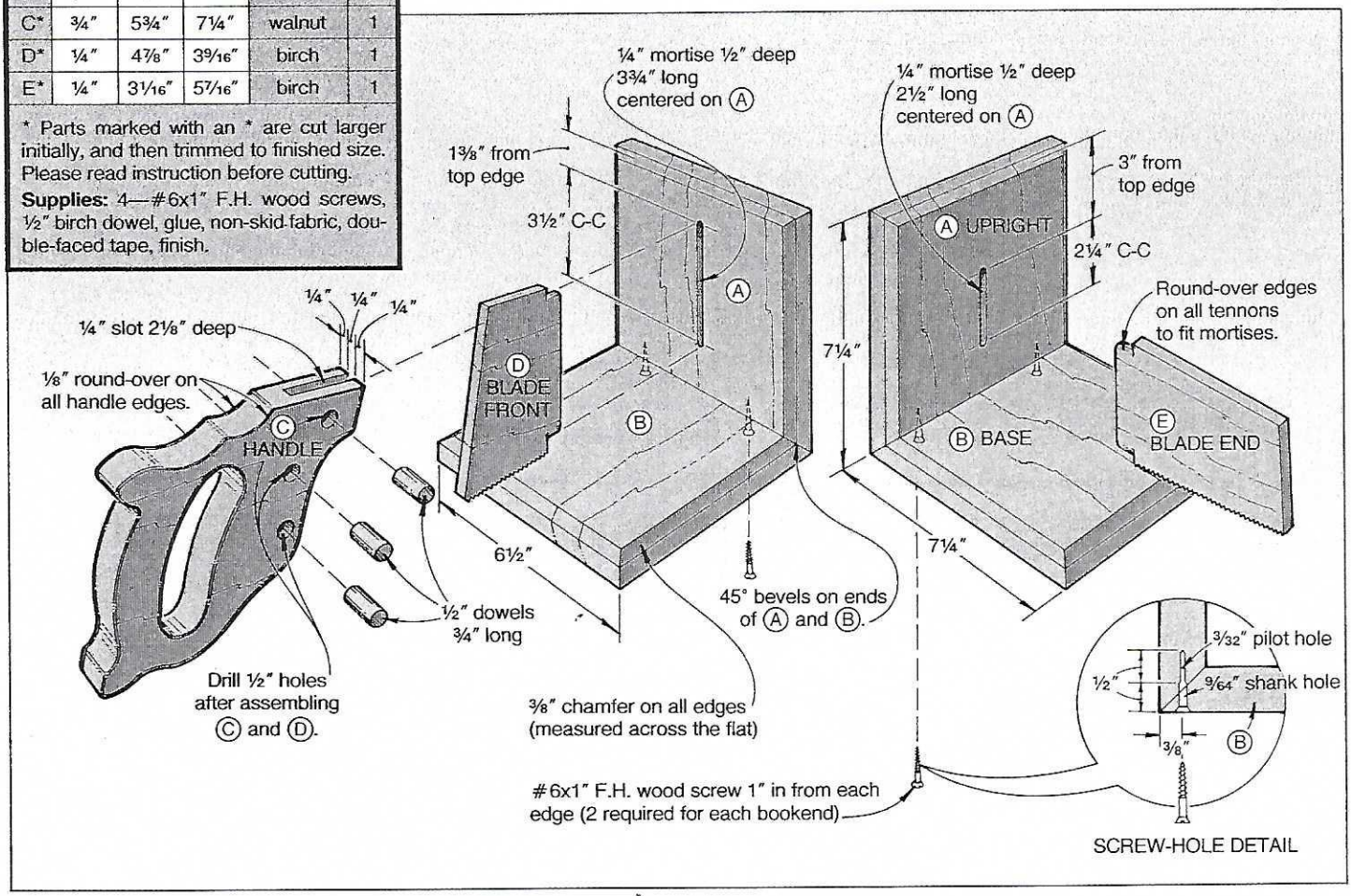


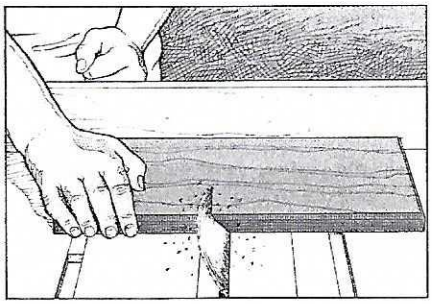
## Bill of Materials

| Part | Finished Size* | | | Material | Qty. |
|---|---|---|---|---|---|
| | T | W | L | | |
| A | ¾″ | 6½″ | 7¼″ | walnut | 2 |
| B | ¾″ | 6½″ | 7¼″ | walnut | 2 |
| C* | ¾″ | 5¾″ | 7¼″ | walnut | 1 |
| D* | ¼″ | 4⅞″ | 3⁹⁄₁₆″ | birch | 1 |
| E* | ¼″ | 3¹⁄₁₆″ | 5⁷⁄₁₆″ | birch | 1 |

* Parts marked with an * are cut larger initially, and then trimmed to finished size. Please read instruction before cutting.

**Supplies:** 4—#6x1″ F.H. wood screws, ½″ birch dowel, glue, non-skid fabric, double-faced tape, finish.



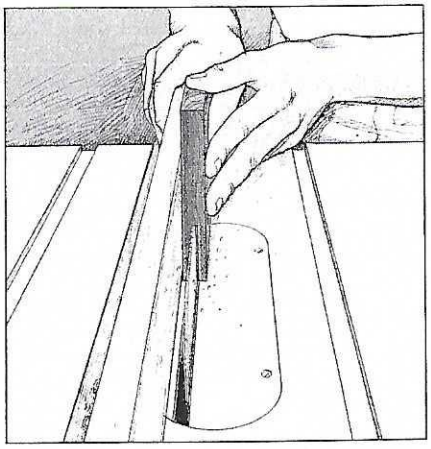



**5** Angle your tablesaw blade to cut at 45°. (We used an adjustable triangle to accurately set the blade angle.) Check the angle by cutting two pieces of ¾″-scrap stock and test-assembling the miter joint. Adjust the saw blade angle if necessary and retest blade setting. Next, mark both walnut pieces 7¼″ from each end. Attach an auxillary fence to your saw's miter and use it as shown at *left*, to bevel-cut the boards. You'll cut two uprights (A), and two base pieces (B) from the two 16″ lengths of walnut. Put them aside until you are ready to assemby them.

### NEXT, SHAPE THE SAW HANDLE AND BLADE

**1** To make the saw handle (C), rip and crosscut a ¾″ piece of walnut to 5¾x7¼″. Clamp a 6″-tall auxillary fence to your saw's rip fence to support the piece. Lock it ¼″ from the blade. Next, elevate your saw blade to 2⅛″ above the saw's table. Now, cut a slot in the blade end of the handle piece as shown at *right*; then, rotate the piece 180° and make a second pass to finish cutting the ¼″-wide slot.

**2** Make a photocopy of the Full-Sized Handle Pattern and two copies of the Full-Sized Saw Blade Patterns on pages 18 and 19. Next, cut the handle pattern to shape, and



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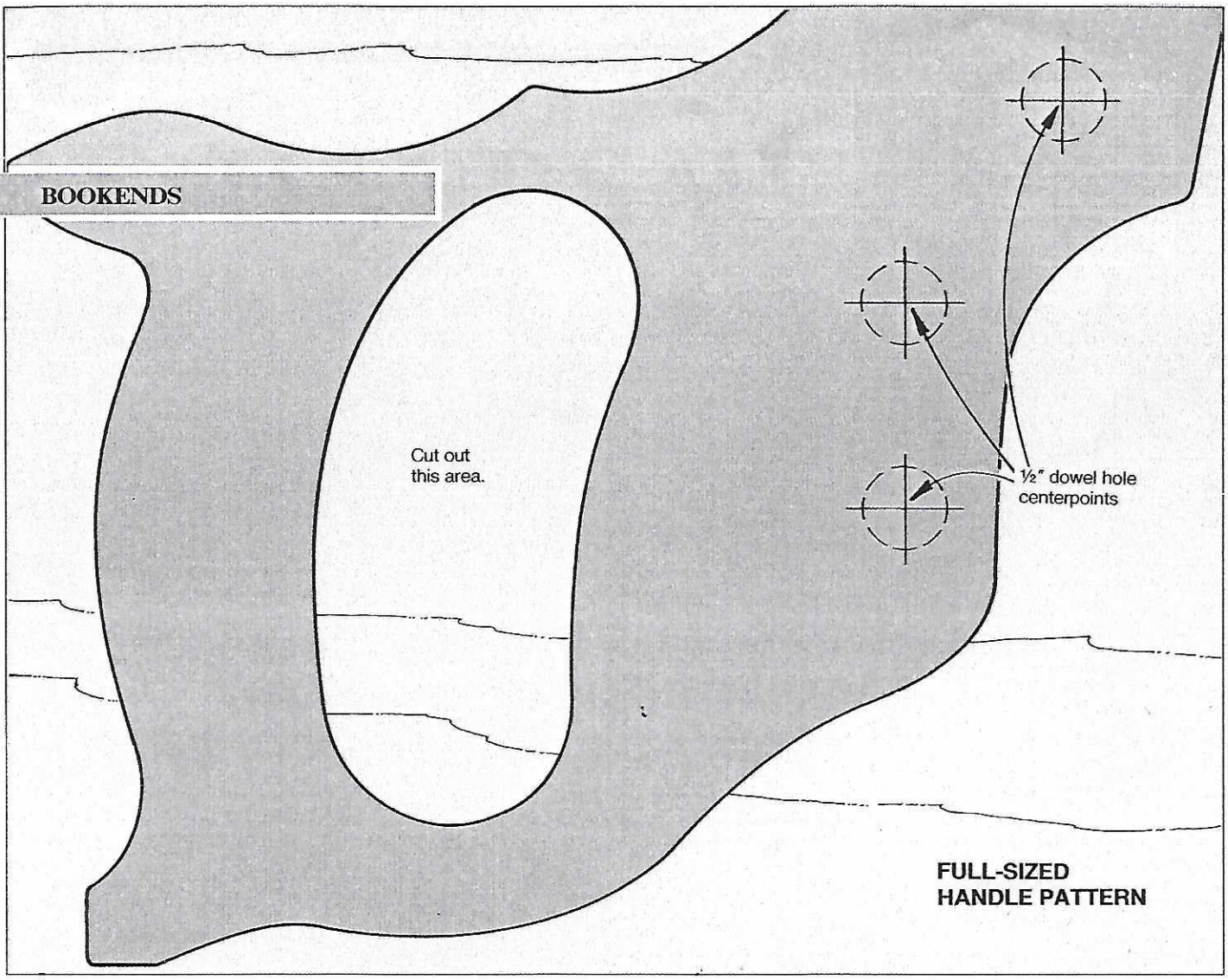



apply spray adhesive to its back. Now, adhere the pattern to the walnut, aligning it with the piece at the points indicated on the pattern.

**3** Next, using a scrollsaw, saw the handle to shape. (To cut out the handle center, we drilled a ½" pilot hole in the cut-out area and threaded the saw blade through it.) Using an awl or a nail, mark the centerpoints for the three dowel holes; then, remove the paper pattern. Finally, round-over all edges on the walnut handle (we used a router and ⅛" piloted round-over bit). Finish-sand the handle.

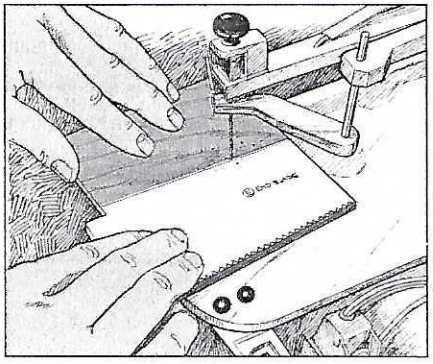
**4** To make the saw blades, rip and crosscut a piece of ¾" birch to 5½x12". Plane, or resaw and sand the piece to ¼" thickness.

**5** Cut the full-sized saw blade patterns to shape, apply spray adhesive to the back of both, and position them on the ¼"-thick birch.

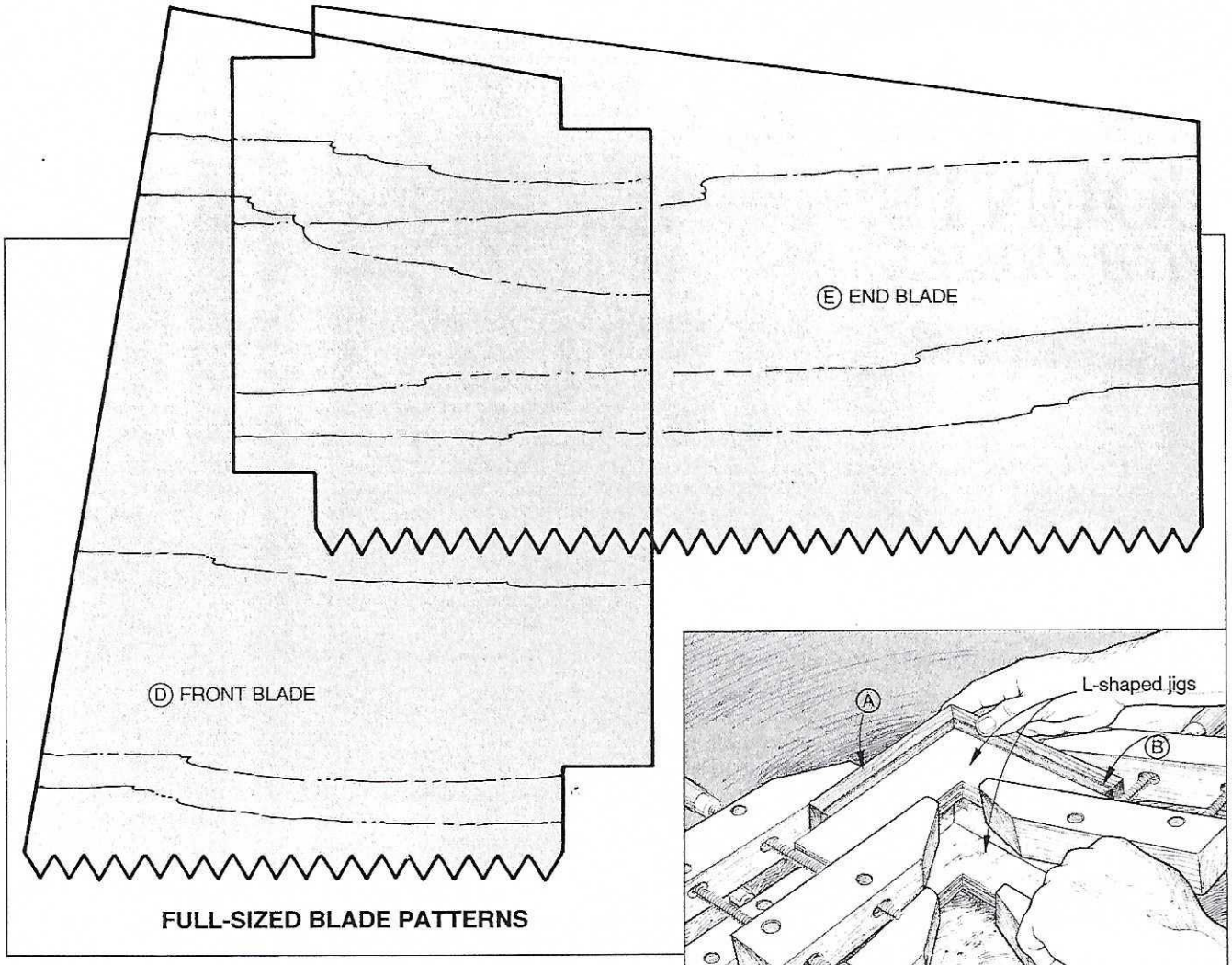
**6** Now, cut parts D and E to shape. (Using a scrollsaw as shown at *right*, we carefully cut straight along the points of the teeth; then, we turned and cut each V-shaped tooth notch, cutting on the pattern lines. On the straight edges we cut just wide of the line, and then sanded to the line using our belt sander.) Remove the paper patterns.

## YOU'RE READY TO ASSEMBLE THE BOOKENDS

**1** Sand round-overs on both edges of the saw blade tenons. They need to fit snugly into the rounded ends of the mortises in the uprights.



**2** Apply glue to the slot you cut into the handle. Next, insert the angled end of part D into the slot, and align both pieces along the top. Now, using a drill press and a ½" brad point bit, drill the three dowel holes where marked earlier. Back the parts with scrap to prevent chip-out while drilling.




**FULL-SIZED BLADE PATTERNS**




**3** Cut three ¾" lengths of ½" birch dowel. Apply glue to the surface of the dowels, and insert them into the holes. Finish-sand the handle and dowels after the glue dries.

**4** Using dimensions in the Screw-hole Detail on the exploded-view drawing, mark, drill, and countersink the screw holes in the bottoms of the two walnut base pieces.

**5** To assemble the bookends, make two L-shaped jigs (we made two from a 10x10" scrap of 3/4" plywood) with square outside corners.

**6** Lay one L jig on a flat surface. Next, lay one part A and one part B on edge against the outside edge of the jig and join them snugly at the corner. When you have the pieces positioned properly, clamp each to the arms of the jig. Now, turn the assembly over and clamp the second jig in place along the bottom edges, as shown at *right*. When you're satisfied with the joint's fit, loosen the clamps holding one walnut piece. Apply woodworkers' glue to the beveled edge. Now, place the piece back in the jig and against the other beveled piece. Reclamp. After the glue has set (about 1 hour), drill two 3/32" pilot holes in the uprights by drilling through the predrilled holes in the base piece. Drive the two screws. Now, assemble the other book end using the same technique.

**7** To help align the saw blades, cut two 3½"-long blocks of scrap 1⅛" wide. Next, apply woodworkers's glue in the mortises of the uprights. Insert the tenons on the saw blade pieces into the mortises of the uprights. Now, place the scrap blocks beneath the blades to level and space them uniformly 1⅛" above the base pieces. Wipe off any glue squeeze-out. Let the glue dry. Finish-sand if needed.

**8** Apply the finish of your choice. (We applied three coats of clear gloss spray lacquer, sanding lightly after each coat with 220-grit paper to smooth the surface.)

**9** Cut two 6x6¾" pieces of non-skid fabric (sold in fabric stores for use in the feet of children's pajamas). Adhere the fabric to the bottom of each base piece. (We used double-faced tape to stick the fabric to the underside of the base parts.)

Project Design: Russell Cooper  Illustrations: Kim Downing, Ode Designs  Photograph: Bob Calmer