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Bill Krier
Editor
WOOD® magazine

Adobe Acrobat Troubleshooting Guide

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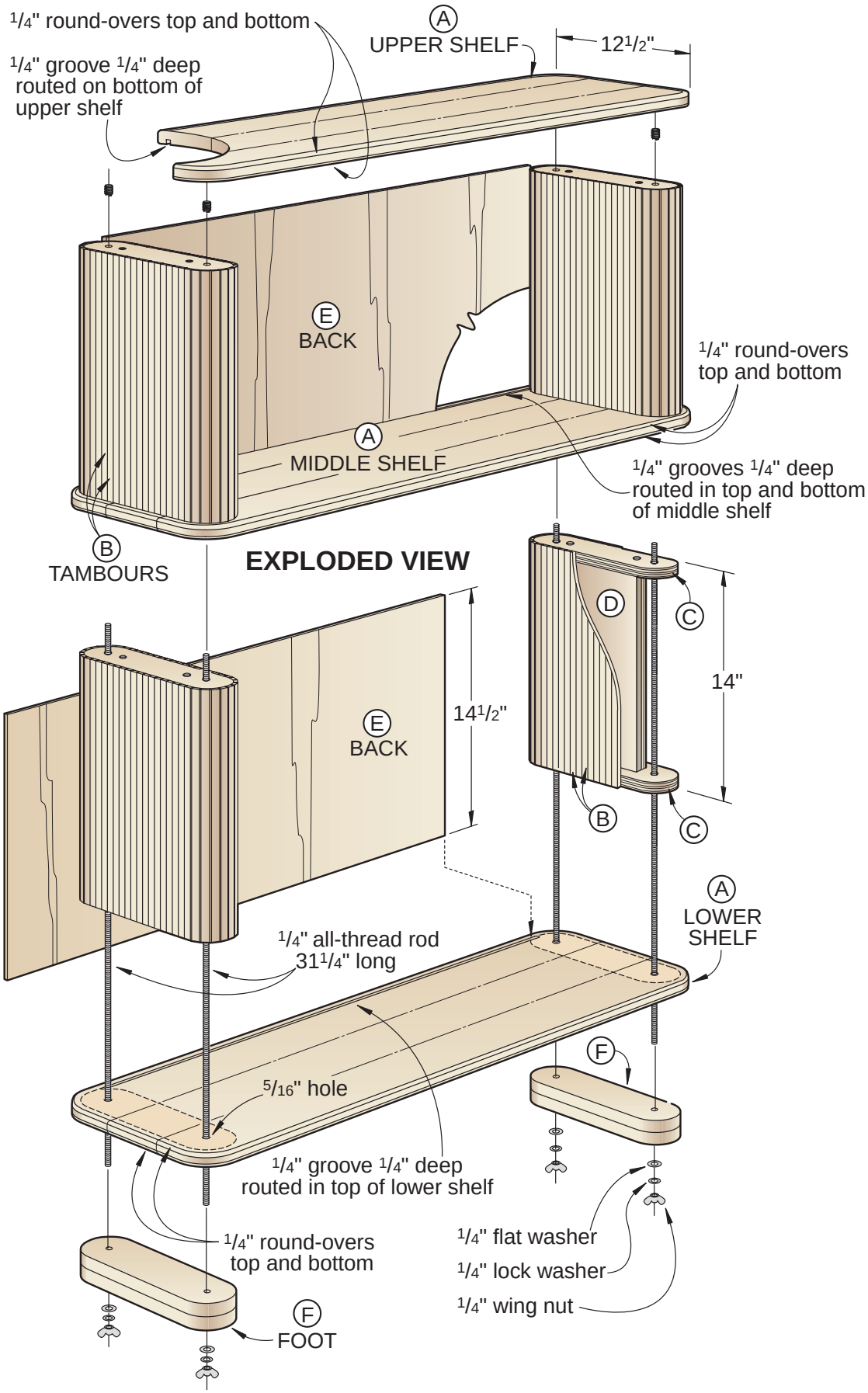
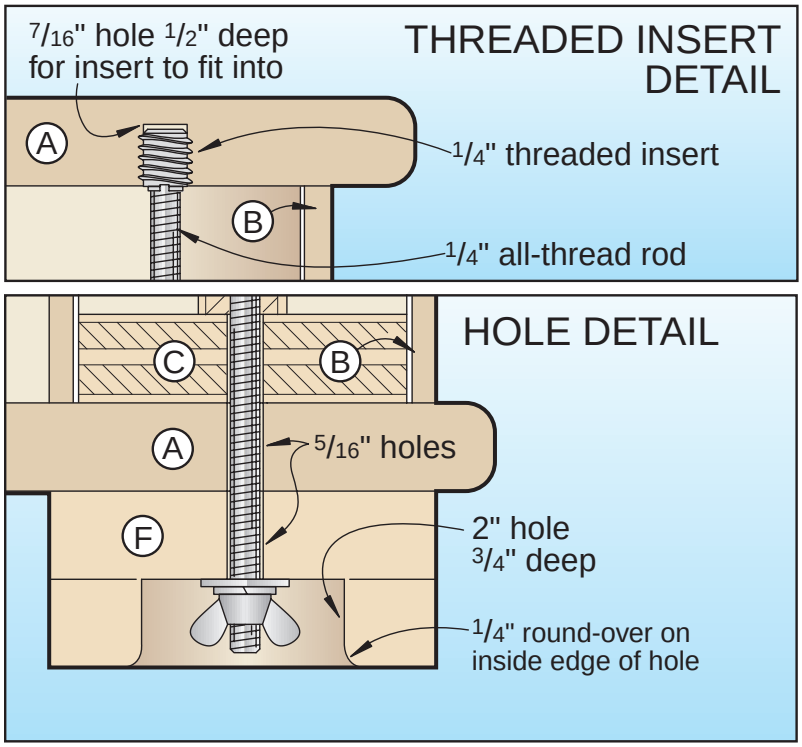
Terrific

Tambour Bookcase

We've seen a great many bookcases in our travels around the country, but none more good-looking and versatile than this one. And should you ever have to relocate, you'll find the modular pieces making up the bookcase a breeze to take apart and reassemble. To build the four-high bookcase, see the Bill of Materials and Cutting Diagram on **page 12.**

DP-00118


1/4" round-overs top and bottom
A
UPPER SHELF
12 1/2"
1/4" groove 1/4" deep routed on bottom of upper shelf
E
BACK
1/4" round-overs top and bottom
A
MIDDLE SHELF
1/4" grooves 1/4" deep routed in top and bottom of middle shelf
B
TAMBOURS
EXPLODED VIEW
D
C
14"
E
BACK
14 1/2"
B
C
A
LOWER SHELF
1/4" all-thread rod 31 1/4" long
F
5/16" hole
1/4" groove 1/4" deep routed in top of lower shelf
1/4" round-overs top and bottom
1/4" flat washer
1/4" lock washer
1/4" wing nut
F
FOOT



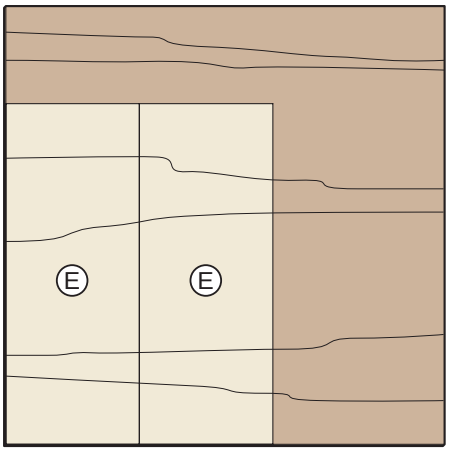
Bill of Materials

Part	Finished Size			Matl.	Qty.
	T	W	L		
A* shelves	¾"	12½"	42"	EO	3
B* tambour strips	3/16"	7/16"	14"	O	224
C support caps	¾"	2⅞"	11⅛"	PL	8
D uprights	¾"	6¾"	12½"	PL	4
E backs	¼"	37½"	14½"	OP	2
F feet	1½"	3¼"	11½"	LO	2

*Initially cut parts marked with an * oversized. Then, trim each to finished size according to the how-to instructions.

Materials Key: EO–edge-joined oak, O–oak, PL–plywood, OP–oak plywood, LO–laminated oak

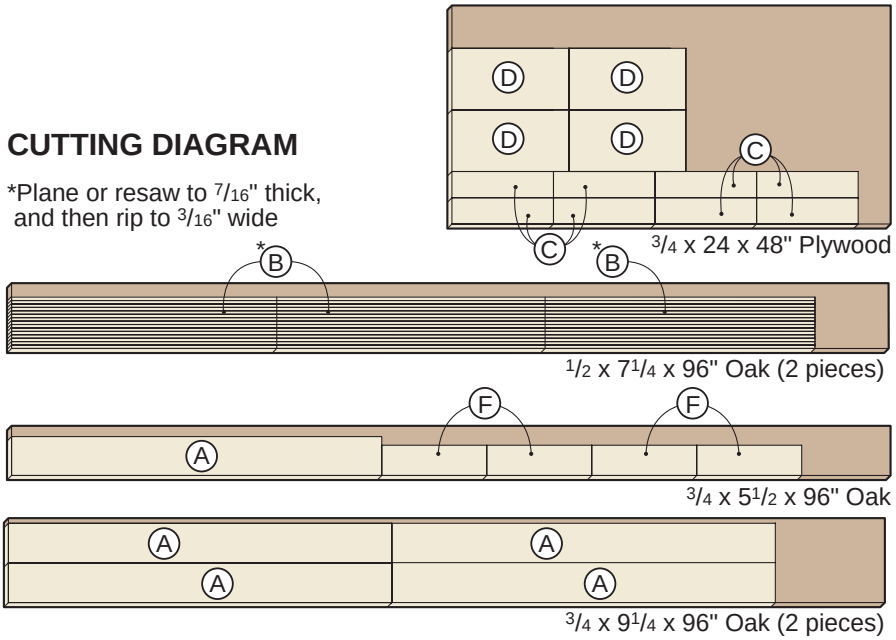
Supplies: lightweight canvas, #18x¾" brads, #8x1½" flathead wood screws, ¼" threaded inserts, ¼" all-thread rod, ¼" flat washers, ¼" lock washers, ¼" wing nuts, stain, finish.



1/4 x 48 x 48" Oak Plywood

CUTTING DIAGRAM

*Plane or resaw to 7/16" thick, and then rip to 3/16" wide



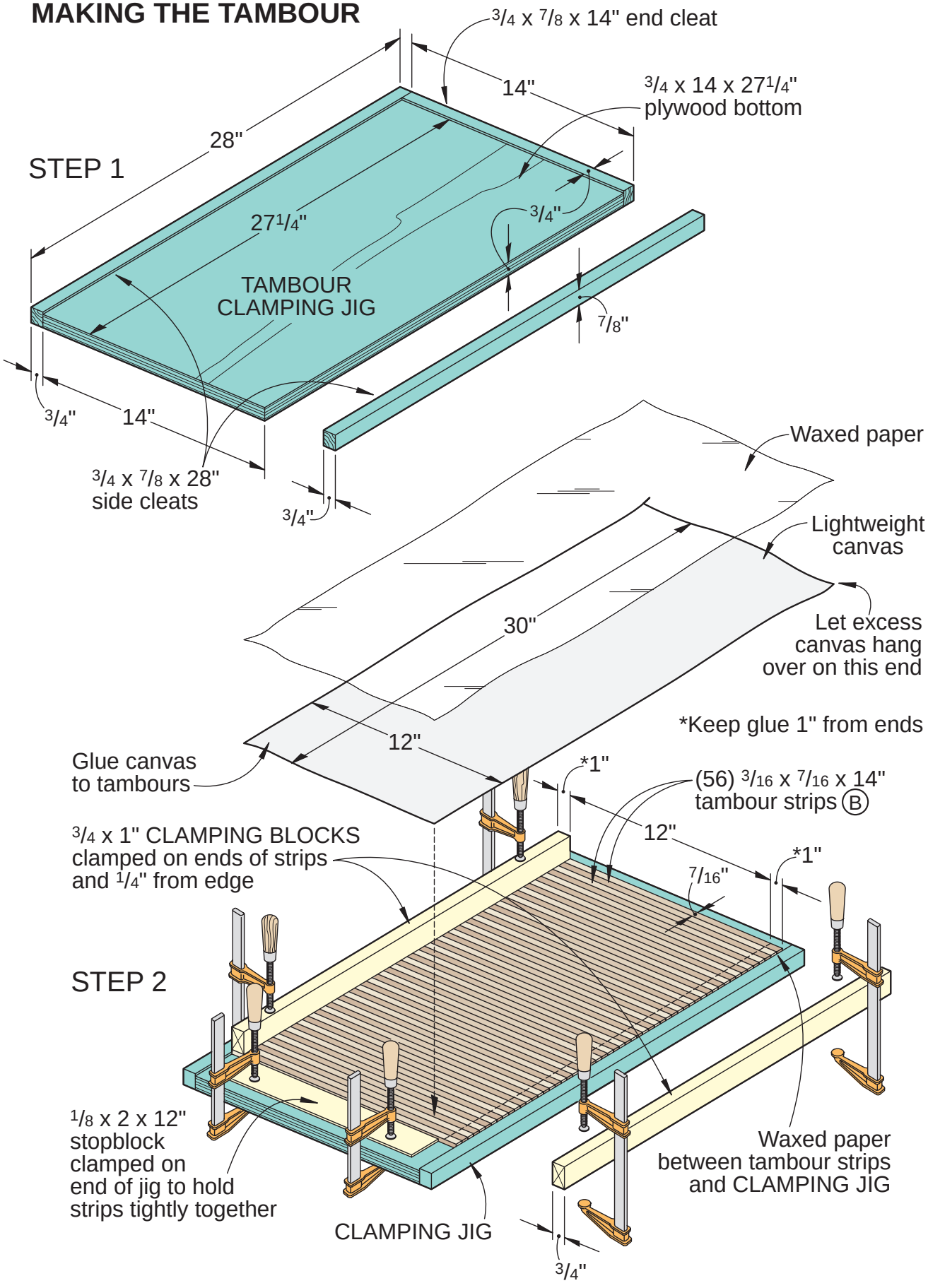
3/4 x 24 x 48" Plywood

1/2 x 7 1/4 x 96" Oak (2 pieces)

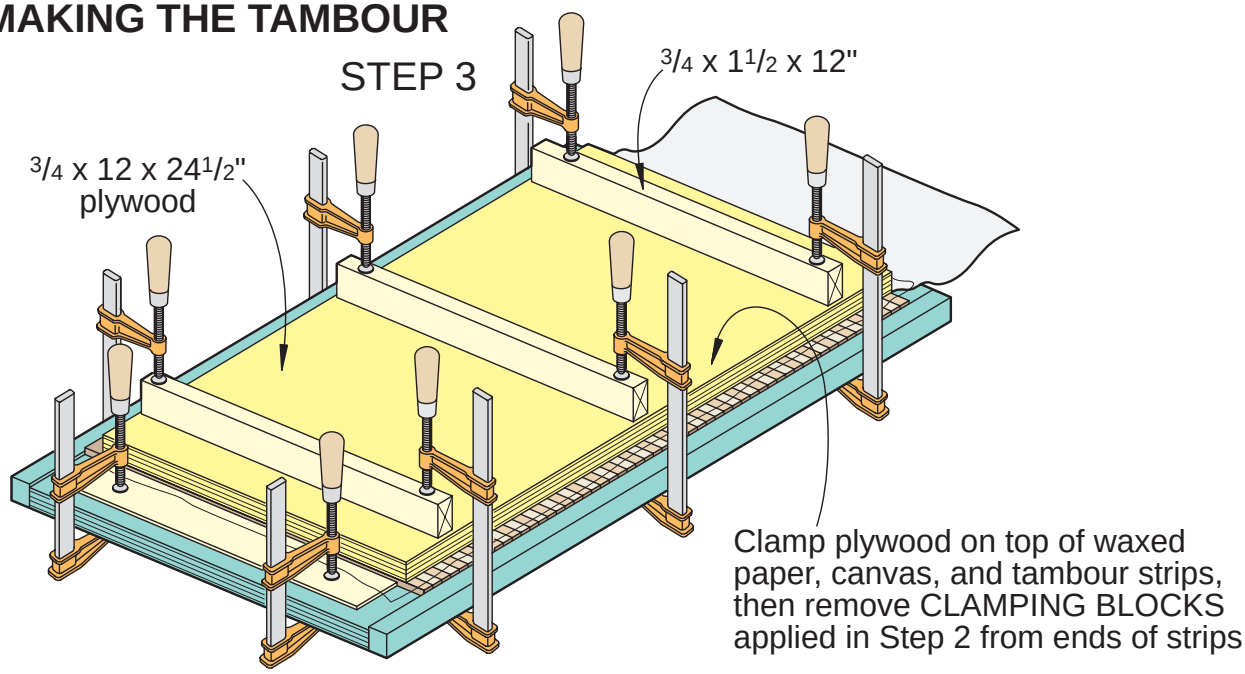
3/4 x 5 1/2 x 96" Oak

3/4 x 9 1/4 x 96" Oak (2 pieces)

MAKING THE TAMBOUR



MAKING THE TAMBOUR



Start by forming the edge-joined oak shelves

1 From ¾"-thick hardwood (we used oak), edge-join enough narrow stock to form three panels measuring 13" wide by 44" long. You'll use one panel for the upper shelf, another for the middle shelf, and the third for the lower shelf (all labeled A).

2 Rip and crosscut the three shelves to 12½" wide by 42" long. Sand both faces of each panel.

3 Mark a 2⅛" radius on each corner of each shelf. (See the Parts View drawing on *page 11* for reference.) Cut and sand the corners to shape. If you do this on the bandsaw, you'll need a helper to support the long panels when making the corner cuts. Using a pencil, label one shelf UPPER, another MIDDLE, and the third, LOWER. Labeling the parts now helps ensure the correct machining to the proper face of each shelf later.

4 Drill four 7/16" holes ½" deep into the bottom side of the upper shelf, using the same centerpoints used to mark the 2⅛"-radiused corners. Using a wide-blade screwdriver, drive a ¼"-threaded insert squarely into each of these holes until the notched end of the insert is flush with the bottom surface of the shelf, as where shown on the Threaded Insert detail accompanying the Exploded View drawing.

5 Switch bits, and drill 5/16" holes through the middle shelf and lower shelf, again using the hole centerpoints you marked earlier. You'll slide the all-thread rod through these holes later when assembling the modules.

6 Make start and stop marks for the grooves (2⅛" from the ends) along the back edge on the bottom side of the upper shelf, both sides of the middle shelf, and top side of the lower shelf, where dimensioned on the Parts View.

7 Fit your router with a ¼" straight bit and edge guide. If you don't have an edge guide, clamp a straightedge (a straight board will work) to the shelf. Rout a ¼" groove ¼" deep along the back edge of each shelf where marked. You'll use these grooves to house the plywood backs (E).

8 Rout ¼" round-overs along the top and bottom edges of each shelf. Sand the shelves smooth.

Now, let's cut the tambour strips to size

1 To make four tambour support columns, you'll need 56 strips (B) per column, or a total of 224 strips for the four columns. (We cut about 240 strips, giving us extras to substitute for strips with defects.) To form the strips, plane thicker stock to 7/16" thick. Crosscut the 7/16"-thick stock to 29" long.

2 Set the fence on your tablesaw 3/16" from the inside edge of the blade. (For smooth cuts, we used a 40-tooth, carbide-tipped saw blade.) Rip 120 of the 3/16×7/16×29" strips (B).

3 Complete the B parts by crosscutting two 14"-long strips from each of the 29"-long strips.

Glue and clamp the oak strips to the canvas

1 Build the Tambour Clamping Jig shown in *Step 1* of the Making the Tambour drawing.

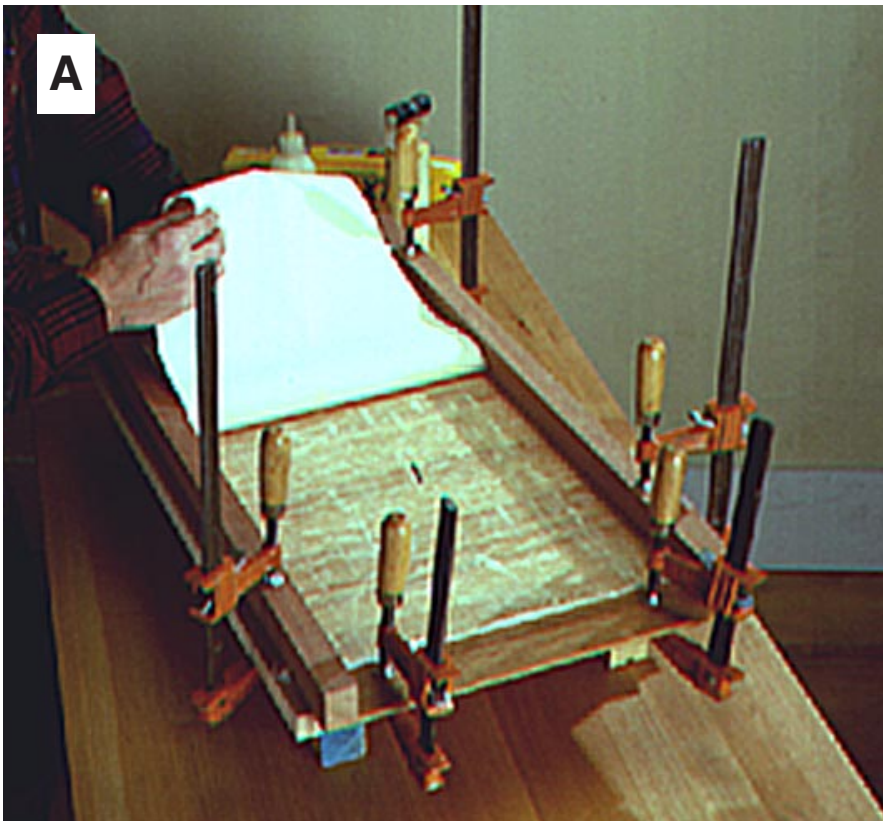
2 Cut four pieces of lightweight canvas to12×30".

3 Starting at the end of the jig with the end cleat, position 56 of the 3/16×7/16×14" strips, best face down,

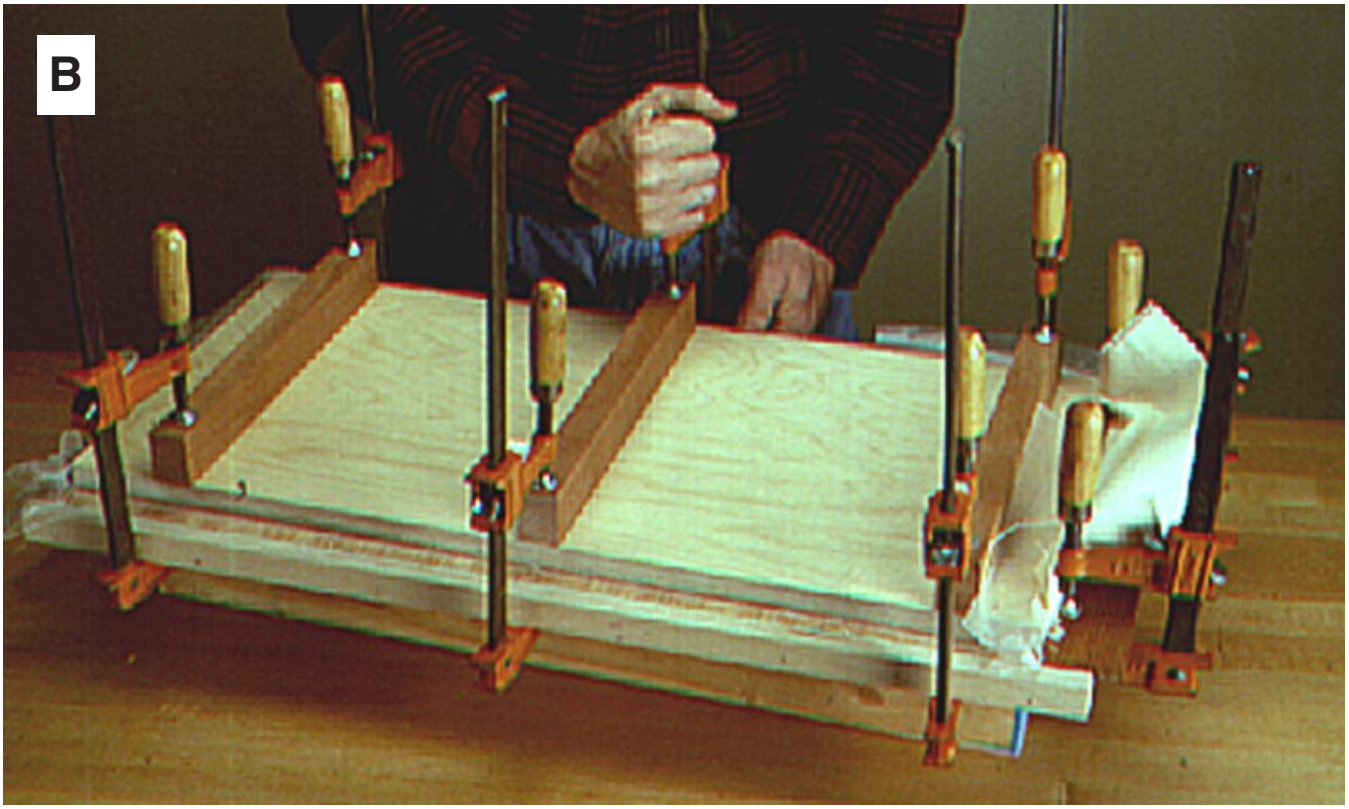
on the jig, where shown in *Step 2* of the drawing. Place waxed paper under the first three and last three tambour strips. Use a pair of bar clamps to lightly clamp the strips against the end cleat to remove any gaps between the strips. Then, clamp a ⅛×2×12" stopblock in position to hold the strips tightly together.

4 Mark a line 1" in from the tambour-strip ends, and spread a thin, even coat of glue on all of the strips between the pair of marked lines. Place a piece of 12×30" lightweight canvas on the glued strips where shown in *Photo A* and *Step 2* of the drawing on *page 4*. Smooth out any wrinkles or bubbles in the canvas.

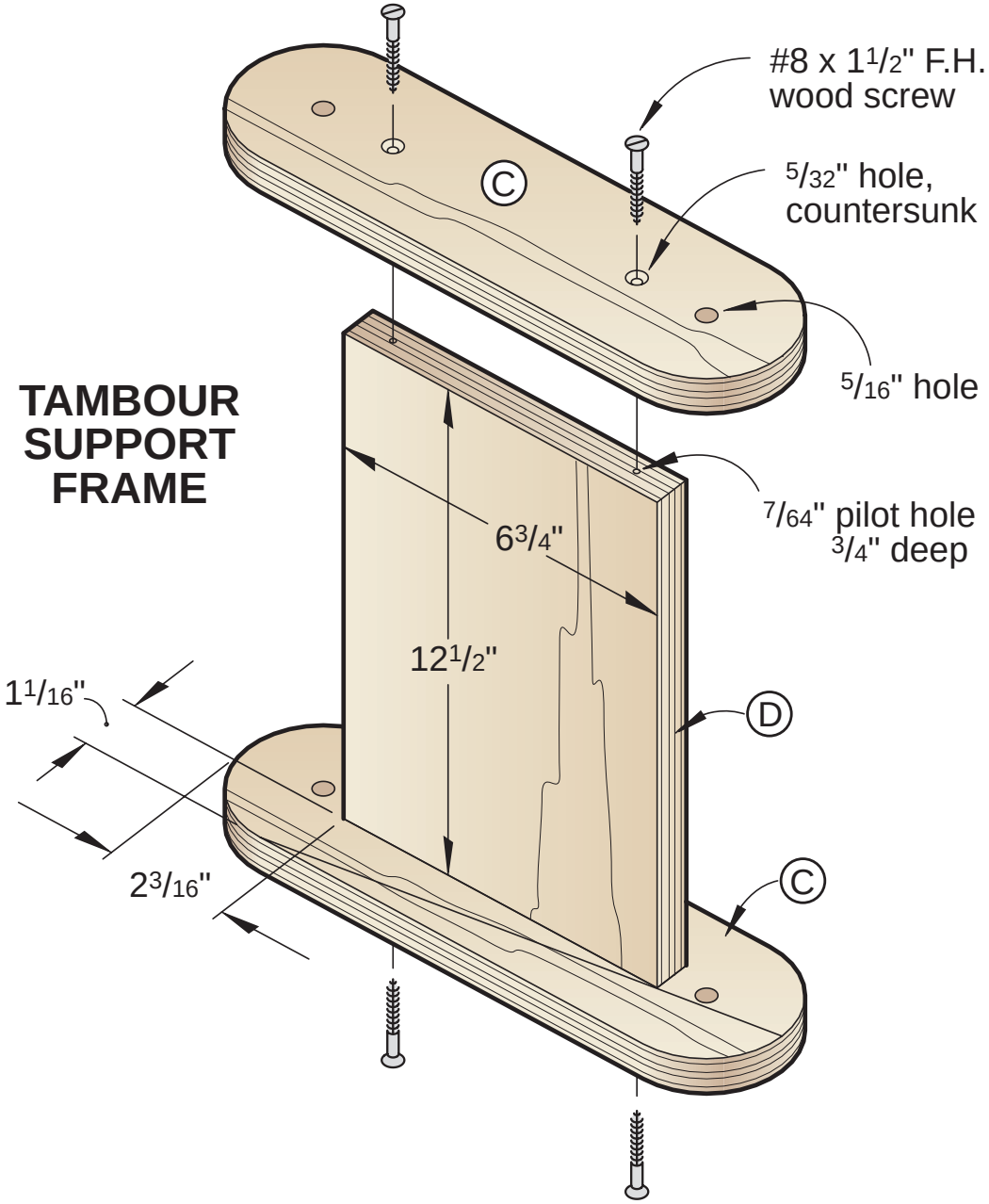
5 Cover the canvas with waxed paper. Next, clamp a piece of ¾×12×24½" plywood to the top of this assembly to press the tambour strips uniformly against the canvas as shown in *Photo B* and *Step 3* of the drawing. Leave the assembly clamped overnight. Remove the clamps and tambour,



Clamp the oak strips to the clamping jig good face down. Spread glue between the clamping blocks, and adhere a piece of lightweight canvas to the strips.



Place waxed paper on top of the canvas, and then position and clamp a piece of plywood on top of the waxed paper to firmly secure the canvas to the oak strips.



and repeat to form the remaining tambour assemblies.

6 Remove the tambour assembly from the jig, and sand the wood side of each tambour until the pieces are flush with each other and all machining marks are gone. (We first belt-sanded the tambour with 80, and then 120-grit sandpaper. Next, we used a palm sander and 150- and 220-grit sandpaper to finish-sand the tambour.)

Build the tambour frames for a supporting role

1 To build the tambour support frames, cut the support caps (C) to the shape shown on the Parts View drawing. Cut the uprights (D) to size.

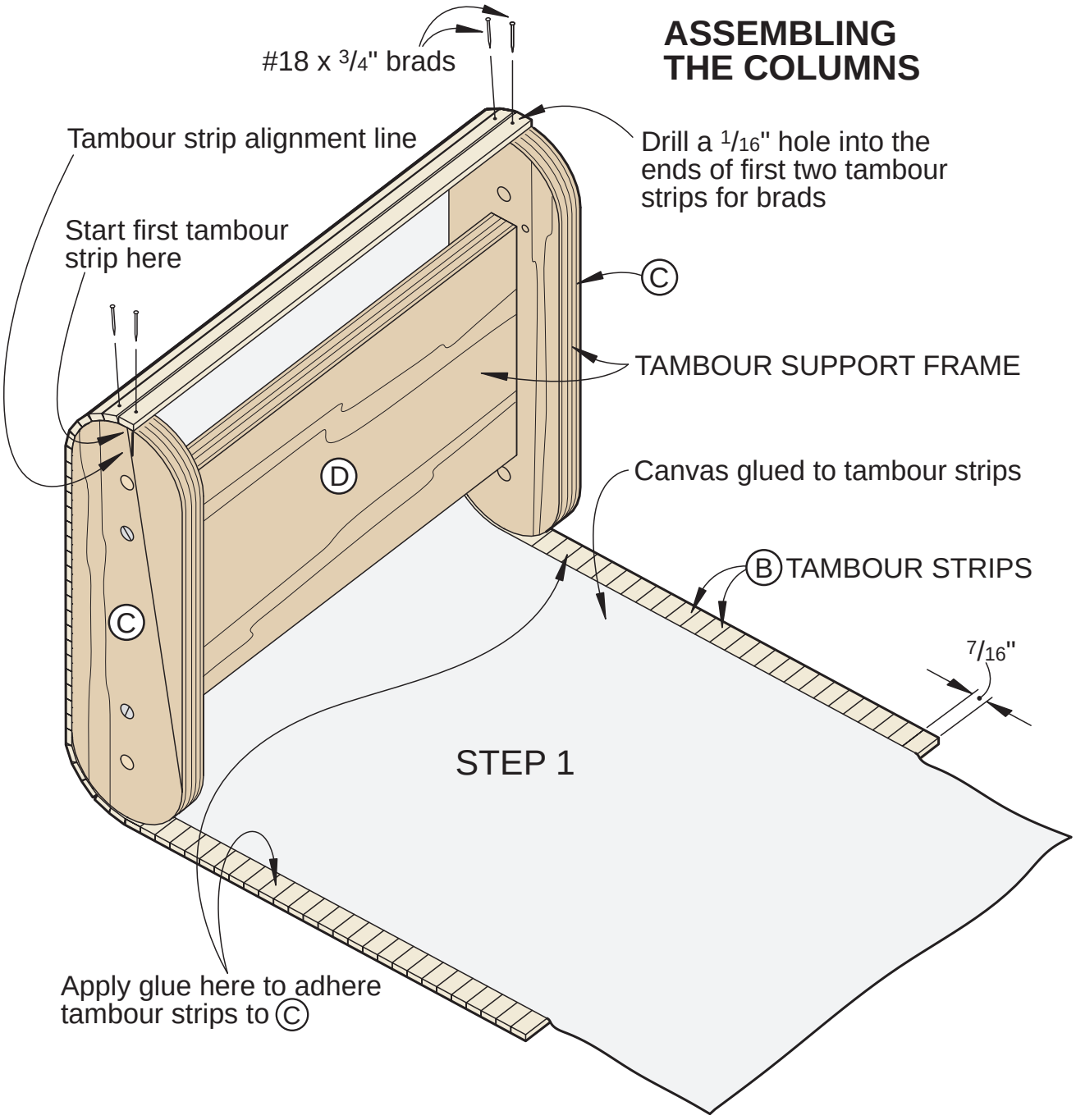
2 Using the Parts View drawing for reference, mark the center-points, and drill four holes in each top and bottom support cap (C).

3 Glue and screw the supports together in the configuration shown on the Tambour Support Frame drawing. (We used a framing square to check that the edges of the top and bottom caps [C] were aligned perfectly.)

4 To wrap the tambour around the frames, drill 1/16" holes 3/8" from the ends of the first two tambour strips where shown on *Step 1* of the Assembling the Columns drawing on *page 8*.

5 Spread glue on the mating edges and wrap the tambour tightly around the frame, where shown in *Step 1* of the drawing. Start the first strip centered on the radiused ends, where shown.

6 After gluing and wrapping the tambour completely around the support frame, clamp a pair of clamp blocks to the top and bottom of the assembly where shown



in *Step 2* of the drawing on *page 9*. The clamp blocks hold the ends of the tambour strips flush while the glue dries. Repeat the process to form each column. Drive brads into the last two tambour strips in the wrap to hold them firmly in place.

7 Using a hobby knife, trim the excess canvas from each column. Set the brads, and fill the holes with putty. Sand smooth.

8 Belt-sand the top and bottom surfaces of the column flush. Hand-sand a slight round-over on the exposed edges of the tambour pieces where they wrap around the frame radiused ends.

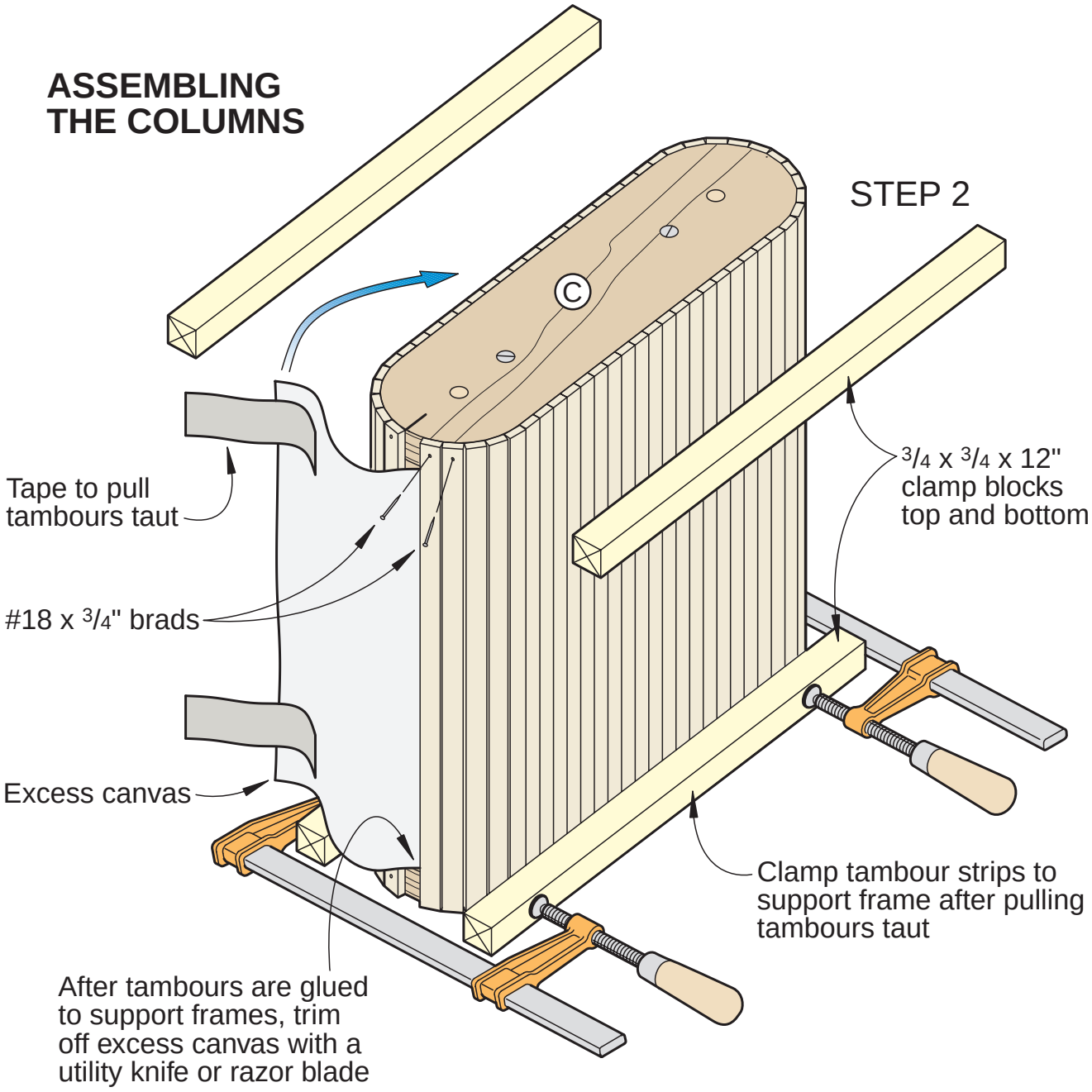
Cut the backs, and put the pieces together

1 From ¼" oak plywood, cut the backs (E) to size. Notice that the grain runs up and down on the backs, where shown on the Exploded View drawing.

2 Cut two pieces of ¾"-thick stock for each foot (F) to the shape shown on the Parts View drawing. If you don't have a 2" Forstner bit to form the holes in the bottom pieces, drill blade start holes and cut the openings with a scrollsaw or jigsaw. Glue the pieces face-to-face with the edges and ends flush. Sand the edges smooth.

3 Drill 5/16" holes through each foot, where shown on the Parts View drawing.

ASSEMBLING THE COLUMNS

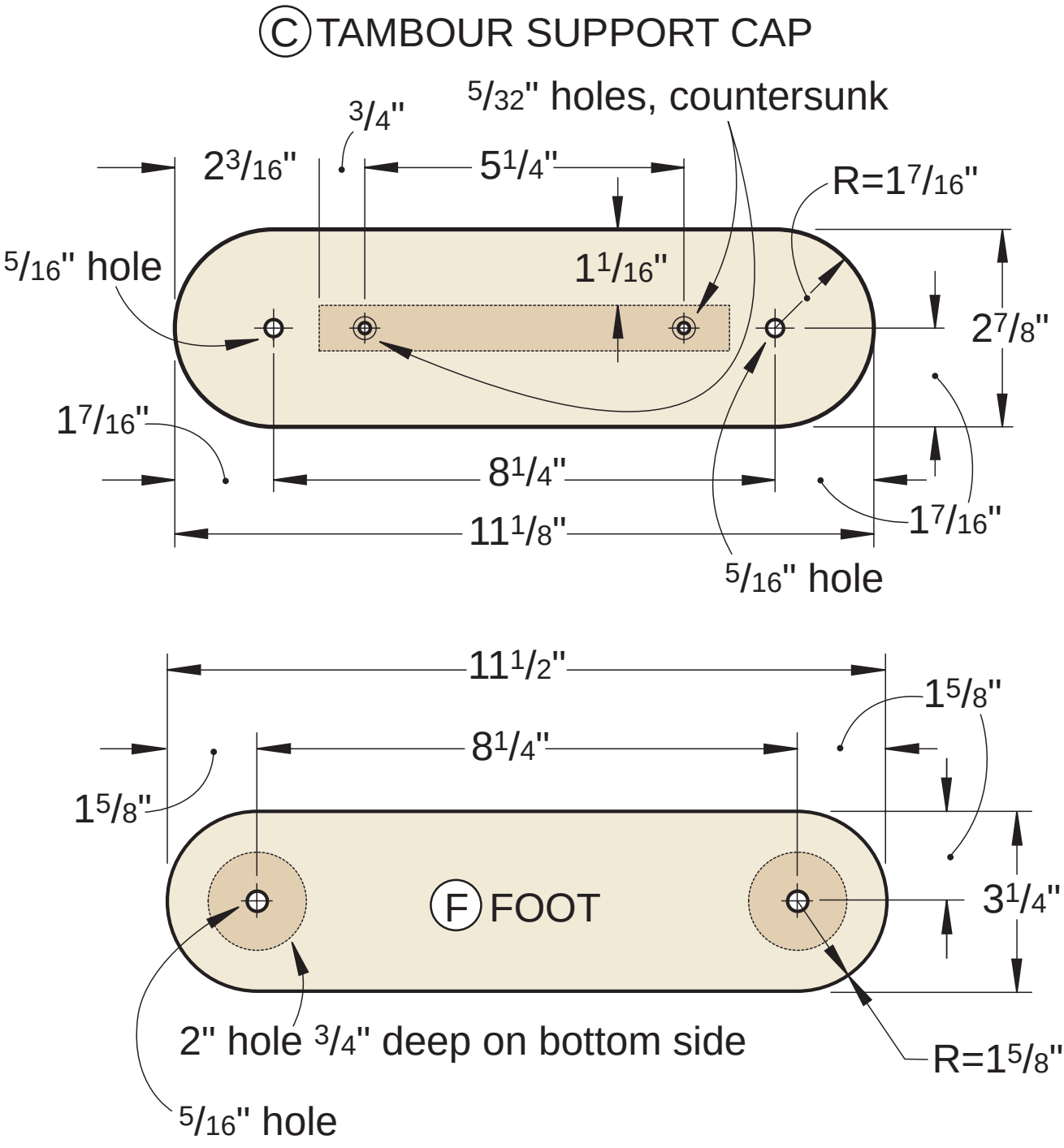


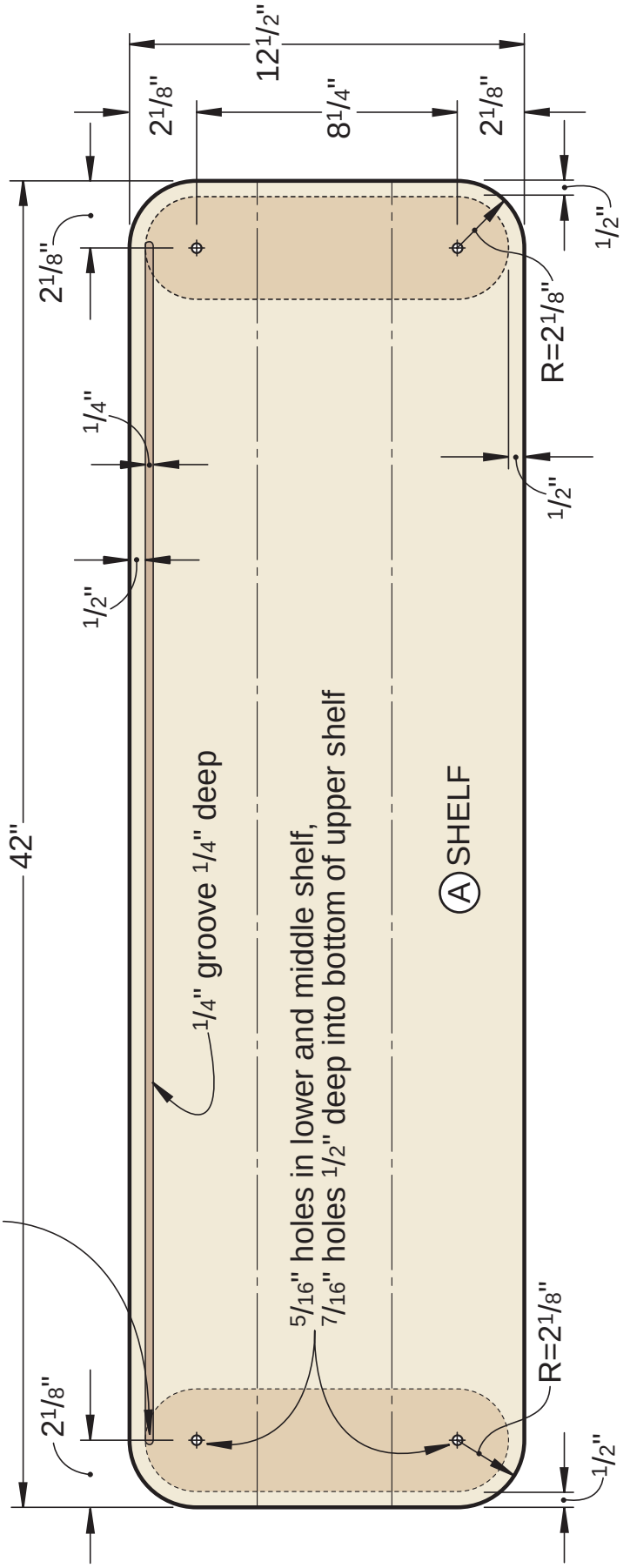
4 Finish-sand all of the pieces. Stain the components, and apply a clear finish.

5 Using a hacksaw, cut two 31¼"-long pieces of ¼" all-thread rod. Assemble the bookcase in the configuration shown on the Exploded View drawing. To prevent scratching the floor, make sure that the bottom of the all-thread is above the bottom surface of the feet, where shown on the Hole detail accompanying the Exploded View drawing. Trim the all-thread rod more if necessary.

Produced by Marlen Kemmet
Project Design: Parman Brothers LTD., Johnson, Kansas
Illustrations: Kim Downing
Graphic Design: Jamie Downing
Photographs: Hetherington Photography

PARTS VIEW


C TAMBOUR SUPPORT CAP
5/32" holes, countersunk
3/4"
2 3/16"
5 1/4"
R=1 7/16"
5/16" hole
1 1/16"
2 7/8"
1 7/16"
8 1/4"
1 7/16"
11 1/8"
5/16" hole
11 1/2"
1 5/8"
8 1/4"
1 5/8"
F FOOT
3 1/4"
2" hole 3/4" deep on bottom side
R=1 5/8"
5/16" hole


PARTS VIEW
12 1/2"
2 1/8"
8 1/4"
2 1/8"
1/2"
2 1/8"
R=2 1/8"
1/4"
1/2"
1/2"
42"
1/4" groove 1/4" deep
5/16" holes in lower and middle shelf,
7/16" holes 1/2" deep into bottom of upper shelf
A SHELF
Stop groove where
it meets with
tambour columns
2 1/8"
R=2 1/8"
1/2"

Bill of Materials

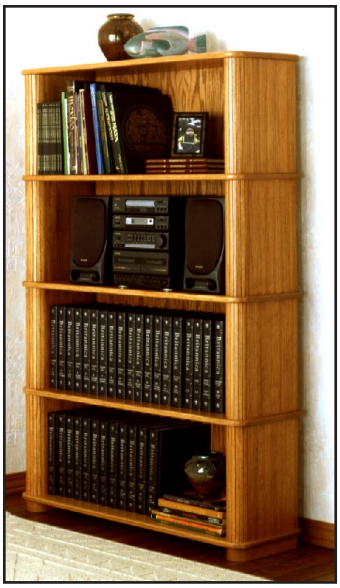
Part	Finished Size T	W	L	Matl.	Qty.
FOUR-HIGH UNIT					
A* shelves	¾"	12½"	42"	EO	5
B* tambour strips	3/16"	7/16"	14"	O	448
C support caps	¾"	2⅞"	11⅛"	PL	16
D uprights	¾"	6¾"	12½"	PL	8
E backs	¼"	37½"	14½"	OP	4
F feet	1½"	3¼"	11½"	LO	2

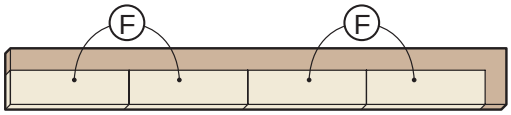
*Initially cut parts marked with an * oversized. Then, trim each to finished size according to the how-to instructions.

Materials Key: EO–edge-joined oak, O–oak PL–plywood, OP–oak plywood, LO–laminated oak.

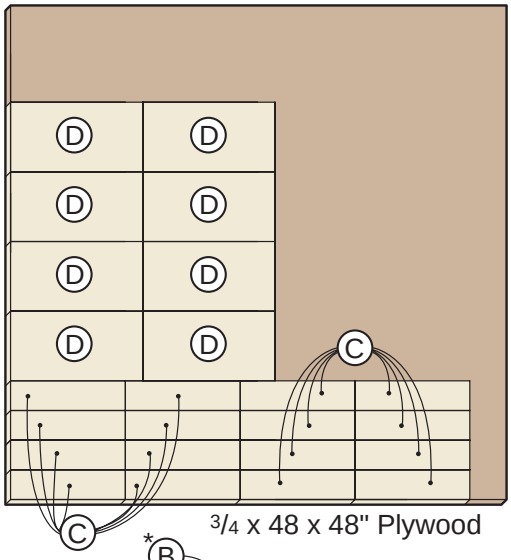
BILL OF MATERIALS AND CUTTING DIAGRAM

(for 4-high tambour bookshelf)



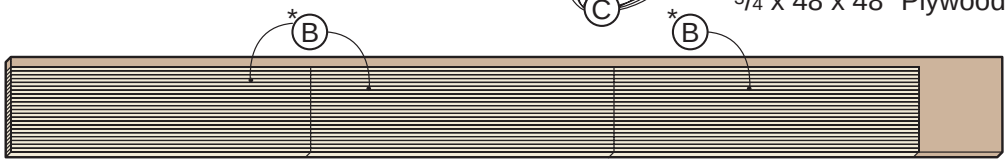


¾ x 5½ x 48" Oak

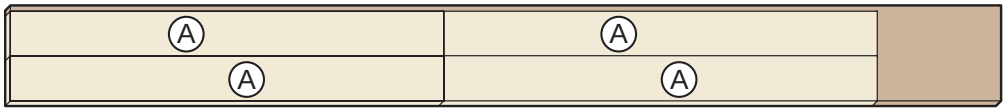


¾ x 48 x 48" Plywood

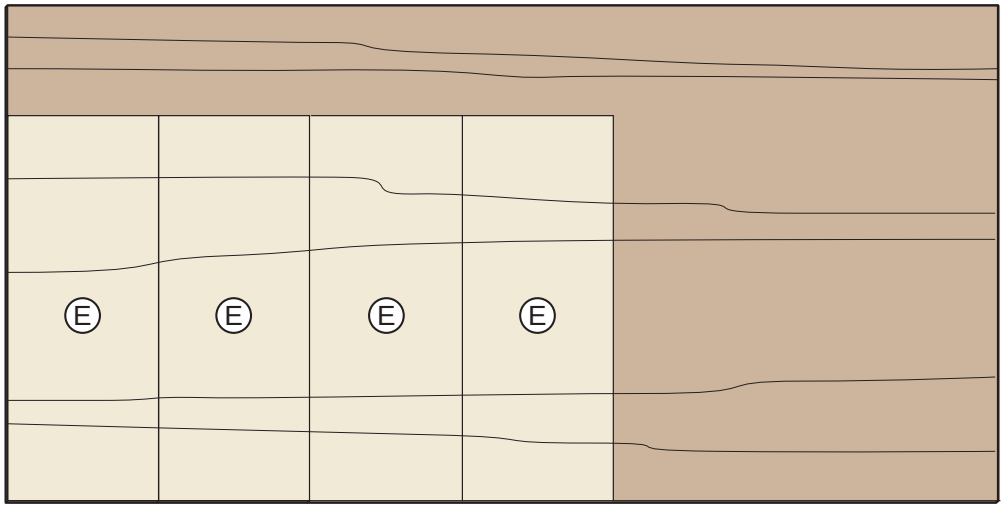
*Plane or resaw to 7/16" thick, and then rip to 3/16" wide



½ x 9¼ x 96" Oak (3 pieces)



¾ x 9¼ x 96" Oak (4 pieces)



¼ x 48 x 96" Oak Plywood