

WOODWORKER'S JOURNAL

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Classic Project



In this plan you'll find:

- Step-by-step construction instruction.
- A complete bill of materials.
- Construction drawings and related photos.
- Tips to help you complete the project and become a better woodworker.

Butternut Breadbox

WEEKEND WORKSHOP

EASY-TO-MAKE GIFTS, TOYS & ACCESSORIES

Butternut Breadbox

Build this kitchen classic from just one board



The ubiquitous breadbox was once so commonplace that some long forgotten soul gained a taste of immortality by using it as a comparative measure to indicate rough size. "Bigger than a breadbox." How many times have we all heard that well worn phrase!

Today, with modern refrigeration and the use of preservatives, it can be positively frightening how long a loaf of bread can forestall the inevitable. But, whether your palate craves fresh-baked breads, rolls and pastries, or just a plain loaf of store-bought white, the breadbox is a time-tested way to keep those baked goods handy on a counter or table. We do recommend, though, that you wrap baked goods to retain freshness.

The breadbox shown, crafted in butternut, is courtesy of Jefferson, Ohio, high school shop teacher Joseph M. Herrmann. For nearly a decade, Herrmann has used this project to acquaint his 9th grade Industrial Arts classes with the basic elements of woodworking. According to Herrmann, the breadbox is an ideal project to get started on because it is made with a variety of the most common shop tools and equipment, from the table saw to the router.

Perhaps best of all, there are no fussy joints to cut. The basic box can be made with almost any simple construction method, from dowels to screws and plugs (as we show) or even biscuits, if you own a biscuit joiner. Use whatever method you are most comfortable with.

Stock Preparation

All the wooden parts of the breadbox, including the tambours, can be obtained from a single board measuring 3/4 in. thick by 11 1/2 in. wide by 8 ft. long (see Cutting Diagram). If you plan on making the breadbox from pine, the fact that the widest part is only 11 1/2 in. across will enable you to get the parts from a standard one-by-twelve. You could



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The Woodworker's Journal

Published in *Woodworker's Journal* May/June 1992

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WJC122

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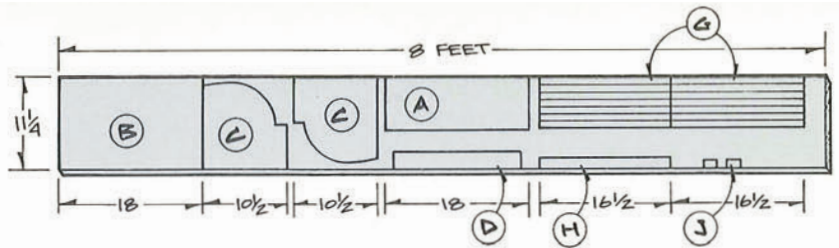


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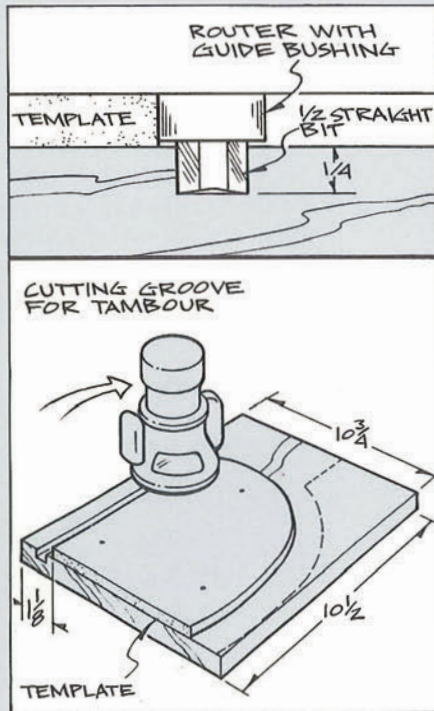
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CUTTING DIAGRAM

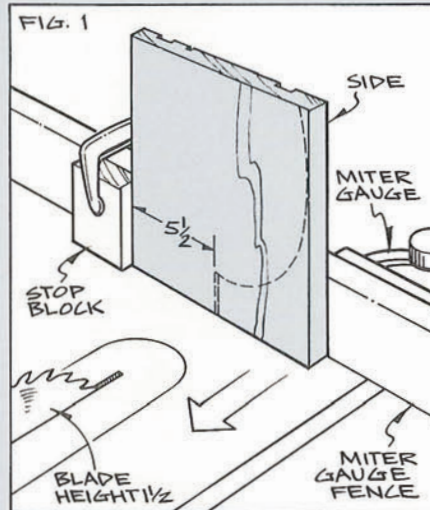


FULL-SIZE PATTERN FOR ROUTER WITH 5/8 DIA. GUIDE BUSHING.



edge-gluе narrower boards to obtain the wider parts, but if you don't own a jointer, then the ability to get all the parts from a single board is important.

Crosscut your source board to yield the lengths shown in the Cutting Diagram. The top (A), bottom (B), and sides (C) will now be their final lengths, but you'll need to do a bit more crosscutting and ripping to yield the front (D), the blanks for the tambours (G, H) and the stops (J). Cut a 1/2 in. by 3/4 in. rabbet in the ends of the front, and a 1/2 in. by 3/4 in. notch in the ends of the bottom edge as shown in the exploded view. Also at this time, use a 3/8 in. radius beading bit in the router to mold the front and side edges of the top and bottom. Then cut the back (E) and false back (F) to length and width. Herrmann used Masonite pegboard for the back and Masonite for the false back, but plywood can just as



well be used for these parts. The holes in the back permit some air circulation within the box, so any residual odor from the finish isn't imparted to the baked goods.

Route the Tambour Grooves

The tambour grooves in the sides are cut with a router, a 5/8 in. (outside diameter) guide bushing, a 1/2 in. straight cutter, and a template. To make your own template, just trace the full-size pattern provided directly onto a piece of 1/4 in. hardboard or plywood. This is easy to do by slipping a piece of carbon paper between the pattern and the template stock. Then cut the template out with a jigsaw or band saw, and sand the edges smooth. Now, using three small brads, or doublestick tape, fasten the template in position on the inside face of the side stock. Note how the bottom edge of the template is flush with the bottom edge of the side, and how the back edge of the template is located 1 1/8 in. from the back edge of the side. Using the router, guide bushing and 1/2 in. straight cutter, rout the groove as shown in the detail.

Once the groove in one side has been completed, remove the template, flip it over so the opposite face is up, and fasten it in place on the remaining side. When the tambour grooves have been established in both sides, switch to a 1/8 in. straight cutter in the router, and using the edge guide (remove the template and make sure the workpiece is clamped securely to the workbench), rout the 1/4 in. deep groove for the false back. Stop the groove about 6 3/4 in. from the bottom end of the sides. To avoid burning your router bit, it's a good idea to make the groove in two passes, each removing about 1/8 in. of stock.

Shape the Sides

Now lay out and cut the profile on the front edge of the sides. For the curved portion of the profile, use a pencil to scribe a line about 5/8 in. from the tambour groove. Then use a square to scribe the short straight section at the top. To get a true cut at the short straight section, raise the blade in the table saw 1 1/2 in. high, then with the stock on end, use the miter gauge to pass the side over the blade. As shown in the Fig. 1 detail, by clamping a stop to the auxiliary miter gauge fence (locate the stop 5 1/2 in. from the blade), you can insure that the cuts in both sides are indexed identically. Use the band saw or a jigsaw to cut the curved section paralleling the tambour groove, then sand smooth.

Make the Tambour Door

Ready-made solid tambours on canvas are very expensive. But making a tambour door is really quite easy. You'll need a bullnose router bit that cuts a 3/4 in. diameter bullnose, and the canvas (I). A standard unbleached duck canvas, available at most fabric stores, is best for

the tambour's backing.

The basic steps are shown in the Making the Tambour Door illustrations. With the bullnose router bit in the router table, and using the fence and a featherboard (see Cut the Bullnose), you can easily shape the bullnose on your tambour strips. As shown, the strips are $\frac{3}{4}$ in. square at this point, and about an inch longer than final size. Next, using a good quality carbide blade, rip the strips on the table saw to establish their final $\frac{3}{8}$ in. thickness. A sharp blade will eliminate the need to sand. Also cut the bottom tambour, which as shown is a little thicker than the $\frac{3}{8}$ in. thick tambours. A $\frac{3}{8}$ in. radius rounding over bit can be used to round the top edge of the bottom tambour to match the radius of the other tambours.

Position the canvas on a flat surface with some wax paper under it, and tack the four corners down. Apply glue (Herrmann uses Titebond for the entire project, and employs a $\frac{1}{2}$ in. wide brush to carefully apply glue to the tambours),

then use a section of $\frac{3}{4}$ in. thick plywood to weight or clamp down from the top, as shown in the clamping detail. When applying the glue, take care not to be too generous; excess glue will be forced up between the tambours, which isn't desirable. You want the tambours glued to the canvas, not to each other.

You'll also need some waxed blocks at the ends to hold the tambour assembly up tight. A lot of clamp pressure isn't needed here; the idea is to make certain that the tambours are all bunched tightly together. One clever way to achieve this is to first lay out all the tambours dry (no glue) on the canvas, and then clamp the two end blocks in place based on this test layout. This gives you a ready-made jig for holding the tambour assembly in position once glue is applied.

Once the tambour assembly is dry, it is cut to final length on the table saw. The same section of plywood that you used in the clamp-up is used to hold the tambour assembly down while you make the cut to final length. Using a

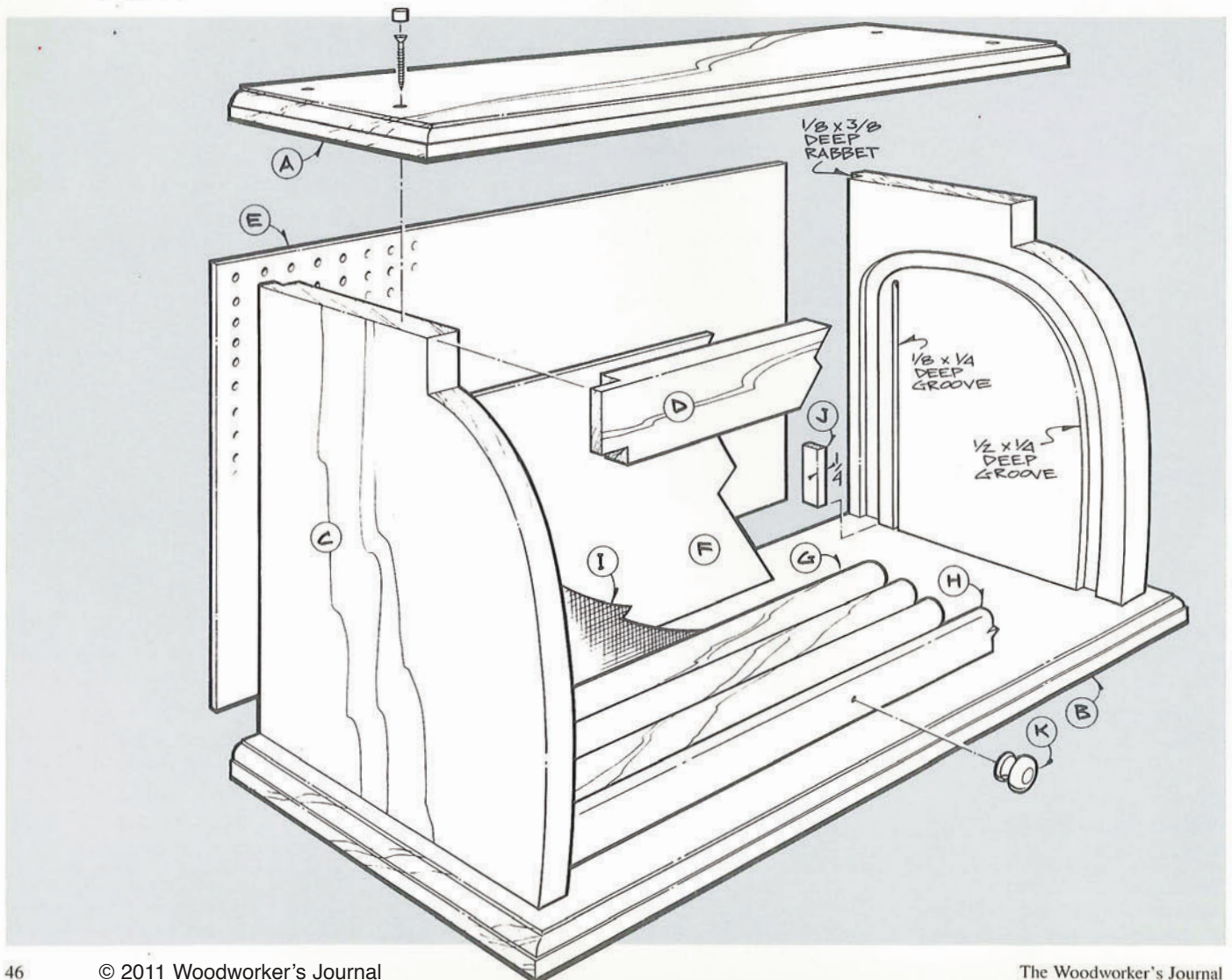
Bill of Materials (all dimensions actual)			
Part	Description	Size	No. Req'd.
A	Top	$\frac{3}{4}$ x $6\frac{1}{2}$ x 18	1
B	Bottom	$\frac{3}{4}$ x $11\frac{1}{4}$ x 18	1
C	Side	$\frac{3}{4}$ x $10\frac{3}{4}$ x $10\frac{1}{2}$	2
D	Front	$\frac{3}{4}$ x 2 x $16\frac{1}{2}$	1
E	Back	$\frac{1}{8}$ x $11\frac{1}{4}$ x $15\frac{3}{4}$	1
F	False Back	$\frac{1}{8}$ x $6\frac{3}{4}$ x $15\frac{1}{2}$	1
G	Tambour	$\frac{3}{8}$ x $\frac{3}{4}$ x $15\frac{7}{16}$ *	14
H	Bottom Tambour	$\frac{7}{16}$ x $1\frac{1}{8}$ x $15\frac{7}{16}$ *	1
I	Canvas	13 x 18**	1
J	Stop	$\frac{1}{4}$ x $\frac{1}{2}$ x $1\frac{1}{2}$	2
K	Knob	$\frac{3}{4}$ dia.	1

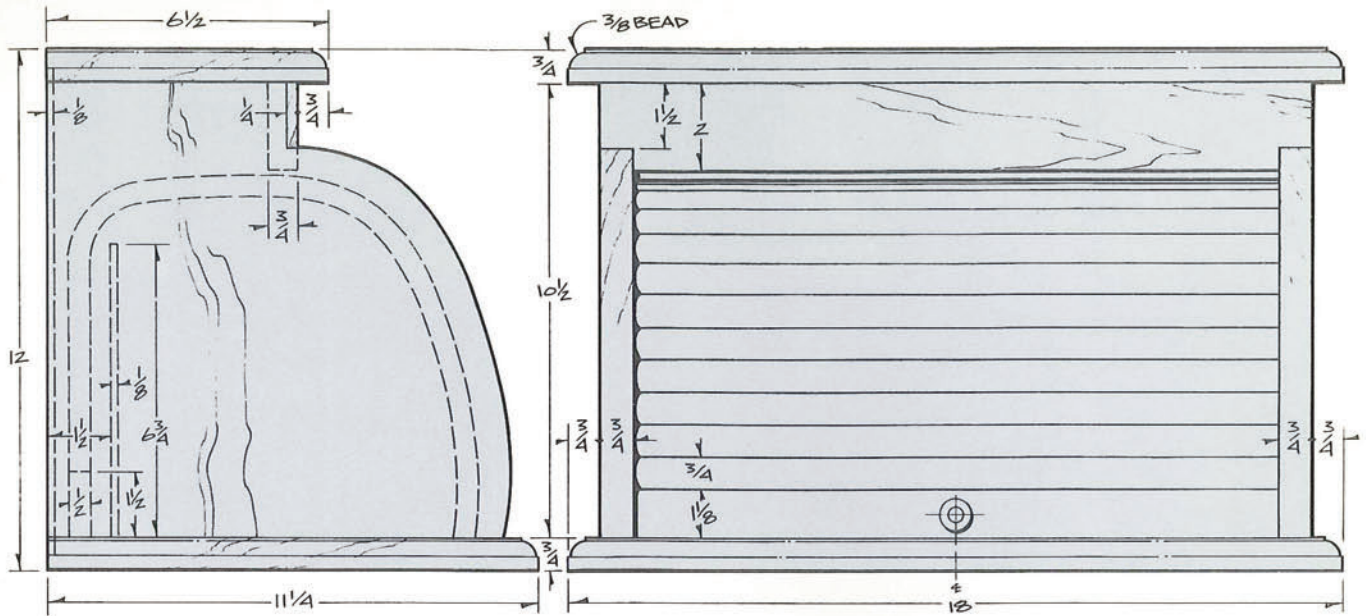
* Length of tambours is after final trimming, and allows $\frac{1}{16}$ in. space for fit within tambour grooves.
** Length and width of canvas is rough size, before tambours are added and tambour assembly is trimmed to final size.

sharp utility knife, cut back the canvas just a bit at the bottom end, so it won't show when the tambour door is open.

Assembly

When cut to length, the tambour door should slide easily within the tambour





grooves. Test assemble the box to make certain the fit isn't too tight.

The tambour door and the inside face

of the sides should be finished before the final assembly. For the sides, Herrmann uses a clear stain that's just a boiled

linseed oil diluted with paint thinner, following that up with two coats of polyurethane. In the 21 years that he's used this finish, Herrmann notes "I've never had a finish fail because of incompatibility between the oil and the polyurethane varnish." Take care not to get any finish on joint areas where glue will later be applied. For the tambour door, Herrmann uses Deft spray finish, rubbing out with 0000 steel wool between coats. Also, at this time, wax the tambour grooves (use paste wax) so the tambour door slides easily. Just be careful to not wax the ends of the grooves where the stops are glued.

Now make the final assembly. With the tambour door and false back in their respective grooves in the sides, glue and screw the top and bottom to the sides. Also add the front, which should help to square the assembly up. There should be a little clearance between the bottom edge of the front and the tambour door. Also, the bottom edge of the front is slightly rounded. Be sure the assembly is square and the tambour door can slide easily in its tracks, then set aside to dry.

Once dry, glue the two stopblocks in place. Then use a bearing-guided rabbeting bit in the router to cut a 1/8 in. by 3/8 in. rabbet for the back. Square the rabbet corners with a chisel, then cut the back to size and fasten it in place with brads. Apply a finish to the rest of the breadbox, mount the porcelain knob (K), and your project is complete. Allow time for the finish to thoroughly dry before using the breadbox.



Making the Tambour Door

CUT THE BULLNOSE FENCE

FENCE

3/4

3/4

FEATHER BOARD

16 1/2 ROUGH LENGTH

3/8 BULL NOSE CUTTER

RIP TAMBOURS TO 3/8 THICK USING A CARBIDE BLADE FOR A SMOOTH CUT.

3/8

USE A PIECE OF PLYWOOD TO KEEP TAMBOUR FLAT AS YOU CUT IT TO LENGTH.

CLAMP

CLAMP

CLAMP

CLAMP

GLUE TAMBOURS TO CANVAS

STRETCH CANVAS & TACK DOWN OVER WAX PAPER

CUT ONE WIDE TAMBOUR FOR BOTTOM OF ROLL

3/8

7/16

16 1/2 ROUGH LENGTH

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Matt Becker
Internet Production Coordinator