

Craftsman Tool Chest

Place this chest on top of the rolling tool cabinet. Or set it on a workbench. Either way, it protects and organizes your precision hand tools.



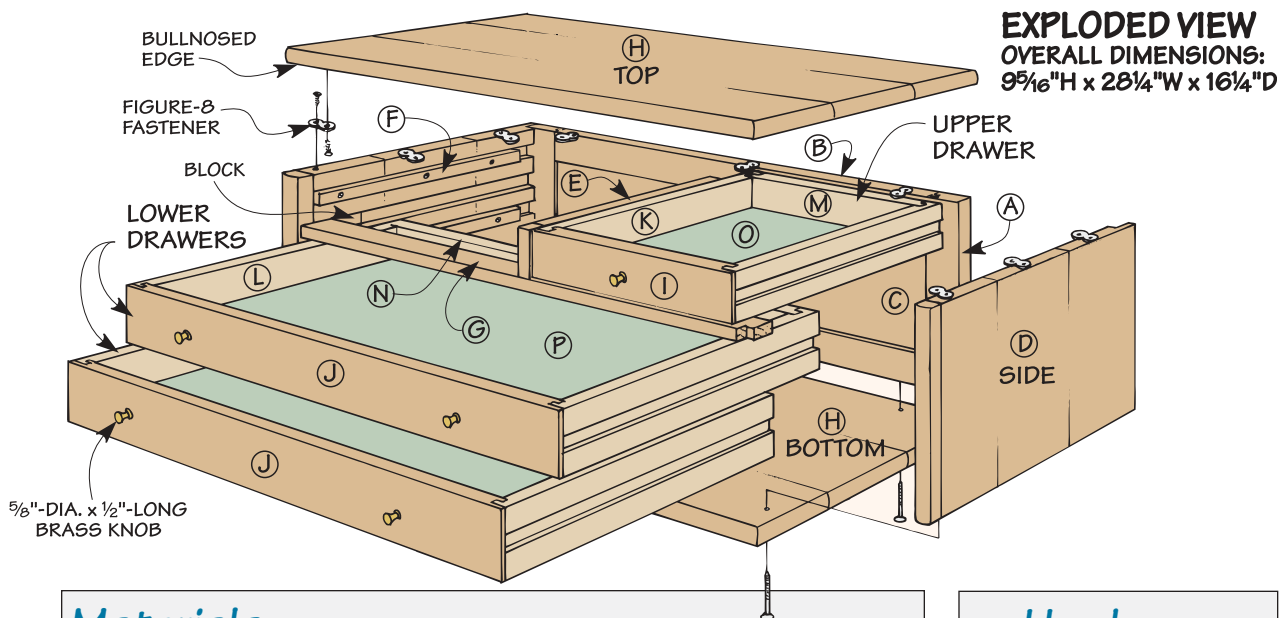
Special tools deserve a special place. At least, that's how I feel about my hand tools.

Whether it's the bevel gauge that belonged to my grandfather, a brand new precision square, or my best set of chisels, it's reassuring to know they won't get knocked around or damaged.

That's why I built this craftsman tool chest. It protects and organizes my best hand tools. But what I like most is its traditional appearance — as comfortable as the look and feel of a tool that's polished with use.

SOLID WOOD. One thing that adds to this look is its solid wood panels made from quartersawn oak. Along with soft bullnosed edges, this makes the chest a perfect companion piece to place on top of our rolling tool cabinet. (also available at www.plansnow.com.)

DRAWERS. Either way, a bank of four shallow drawers that run smoothly on wood guides provides plenty of storage and easy access to your tools. And lining these drawers with felt adds that final touch of craftsmanship.



EXPLODED VIEW
OVERALL DIMENSIONS:
9⁵/₁₆"H x 28¹/₄"W x 16¹/₄"D

Materials

Case

A Back Stiles (2)	3/4 x 1 1/2 - 7 ³ / ₁₆
B Back Rails (2)	3/4 x 1 1/2 - 24 ³ / ₄
C Back Panel	5 ⁵ / ₁₆ x 24 ³ / ₄ - 1/4 Ply.
D Sides (2)	3/4 x 16 - 7 ³ / ₁₆
E Vertical Divider	1/2 x 14 - 1 ⁷ / ₈
F Drawer Guides (8)	7/16 x 1/2 - 13 ³ / ₄
G Horizontal Divider	1/2 x 1 - 26 ¹ / ₂
H Top/Bottom (2)	3/4 x 16 ¹ / ₄ - 28 ¹ / ₄

Drawers

I Uprr. Drwr. Fronts (2)	3/4 x 1 ³ / ₄ - 12 ⁵ / ₄
J Lwr. Drwr. Fronts (2)	3/4 x 2 ⁵ / ₈ - 26 ¹ / ₈
K Uprr. Drwr. Sides (4)	1/2 x 1 ³ / ₄ - 14 ¹ / ₂
L Lwr. Drwr. Sides (4)	1/2 x 2 ⁵ / ₈ - 14 ¹ / ₂
M Uprr. Drwr. Backs (2)	1/2 x 1 ³ / ₄ - 12
N Lwr. Drwr. Backs (2)	1/2 x 2 ⁵ / ₈ - 25 ³ / ₈
O Uprr. Drwr. Btms (2)	14 x 12 ¹ / ₄ - 1/4 Hdbd.
P Lwr. Drwr. Btms (2)	14 x 25 ⁵ / ₈ - 1/4 Hdbd.

Hardware

- (6) 5/8" x 1/2" Brass Knobs
- (9) Figure-8 Fasteners
- (18) #8 x 5/8" Fh Woodscrews
- (1) #8 x 3" Fh Woodscrew
- (2) #8 x 2 1/2" Rh Woodscrews
- (9) #8 x 1 1/4" Fh Woodscrews
- (24) #6 x 5/8" Fh Woodscrews

Case

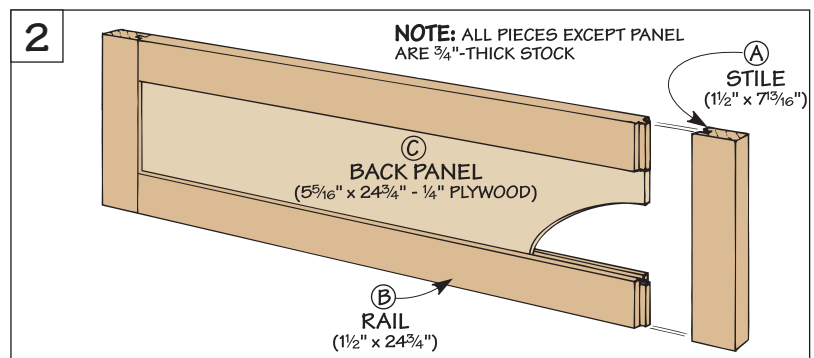
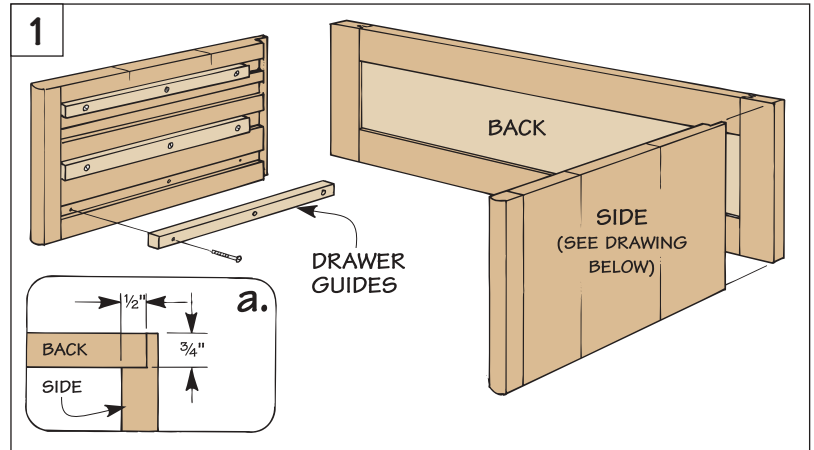
The case for the craftsman tool chest starts out simply enough — just two sides and a back that form an open, U-shaped frame, see Fig. 1.

BACK. Like the sides and back of the rolling tool cabinet, the back is just a wood frame that surrounds a plywood panel. The frame consists of two short *stiles* (A) and two long *rails* (B), see Fig. 2. After cutting stub tenon and groove joints on these pieces, a plywood *back panel* (C) is glued in the frame.

SIDES. With the back complete, the next step is to add the two sides, see drawing below. Besides enclosing the case, the sides support the wood guides for the drawers.

VERTICAL DIVIDER. In addition to the drawer guides on the sides, the vertical divider that separates the top two drawers also supports a pair of drawer guides, see drawing on page 3. So it's easiest to work on it at the same time as you make the sides.

SOLID WOOD PANELS. Both the *sides* (D) and the *vertical divider* (E) are made by gluing up solid wood panels, see drawings below

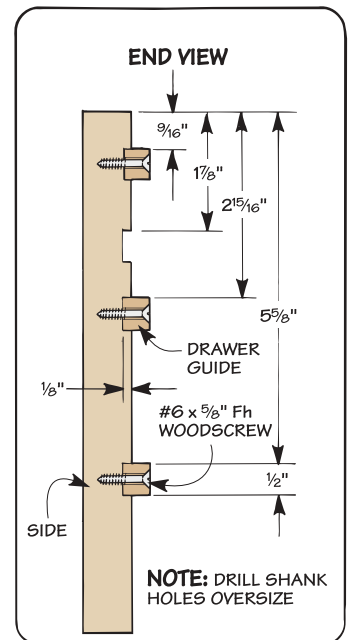
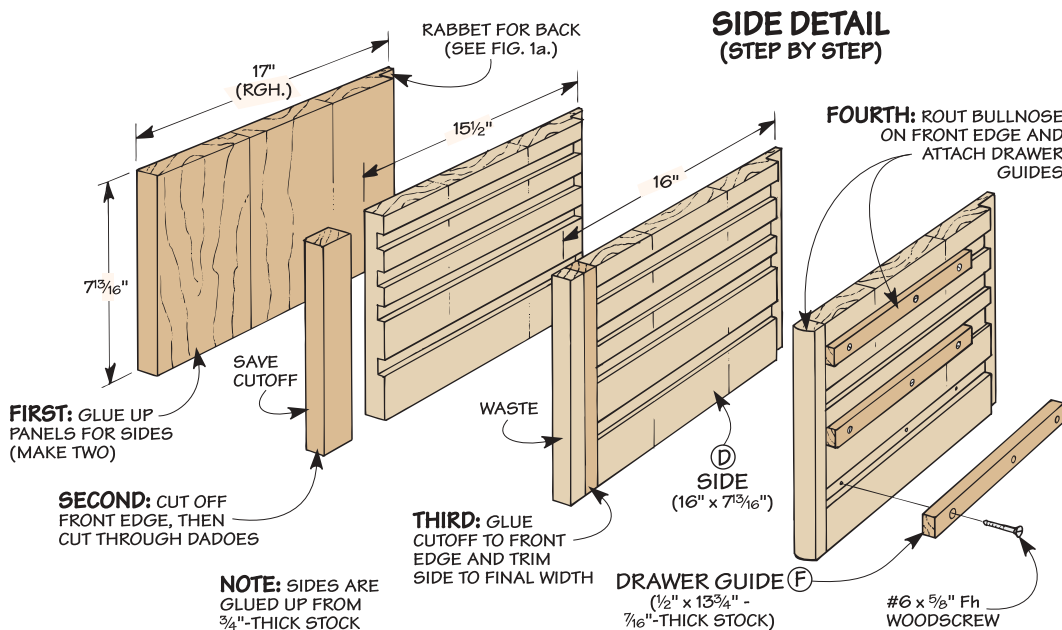


and on page 3. (Note: The sides are made from 3/4"-thick stock; the vertical divider is made from 1/2"-thick stock.)

The thing to be aware of is the grain direction of these panels

runs *vertically*. This way, as the wood expands and contracts with changes in humidity, the panels will move *with* the top and bottom of the case — not against them.

When the glue dries, the



panels can be cut to final length (height). But to make it easier later when cutting stopped dadoes for the drawer guides, they're oversized in width.

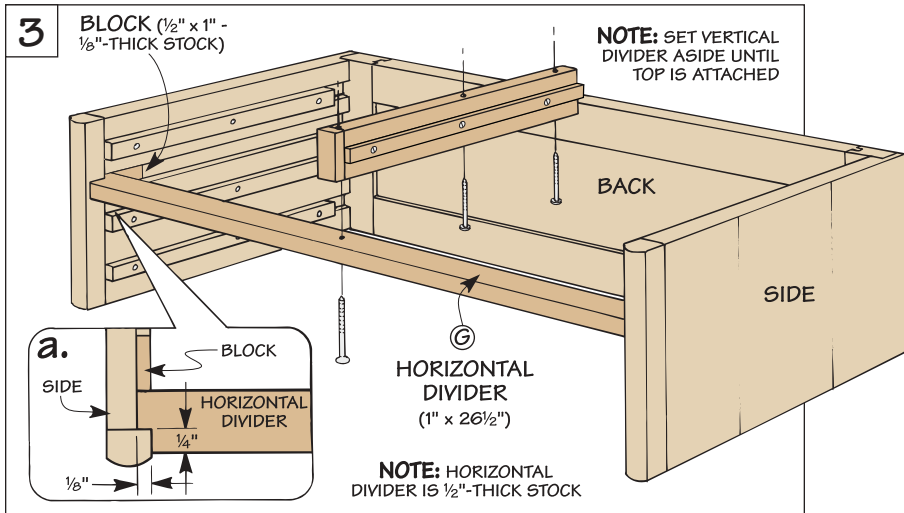
RABBET. Before cutting these dadoes, there's one more thing to do. That's to rabbet the back edge of each side (not the vertical divider) to accept the back of the chest, see Fig. 1a.

STOPPED DADOES. Now you can turn your attention to the stopped dadoes. One dado (the second one from the top on each side) accepts a horizontal divider that's added later. The others hold the drawer guides in place.

To keep the drawers from binding, it's important for these dadoes to align. At first, this sounds simple — just cut the dadoes in pairs using the same fence setting (and the same reference edge) on the table saw. But there's a problem.

After cutting one dado, the only way to cut the matching dado is to flip the side (or the vertical divider) end for end. This means you'd be cutting *through* the front edge of the panel. To get around this, I used a slightly unorthodox technique.

The basic idea is simple. To start with, cut the front edge off each panel (and save the cutoff).



This way, after cutting *through* dadoes, you can glue the cutoff back in place to form the *stopped* dadoes, see margin.

GLUE JOINT. You'd think this would create an obvious glue line. But because the grain of the panels is oriented up and down, you're gluing two pieces together with matching edge grain. This creates a glue joint that's nearly invisible.

CUT TO WIDTH. After the glue dries, you can cut the *sides* (*D*) and *vertical divider* (*E*) to final width. To match the profile on the edges of the rolling tool cabinet, I routed a bullnose on the front edges of each side.

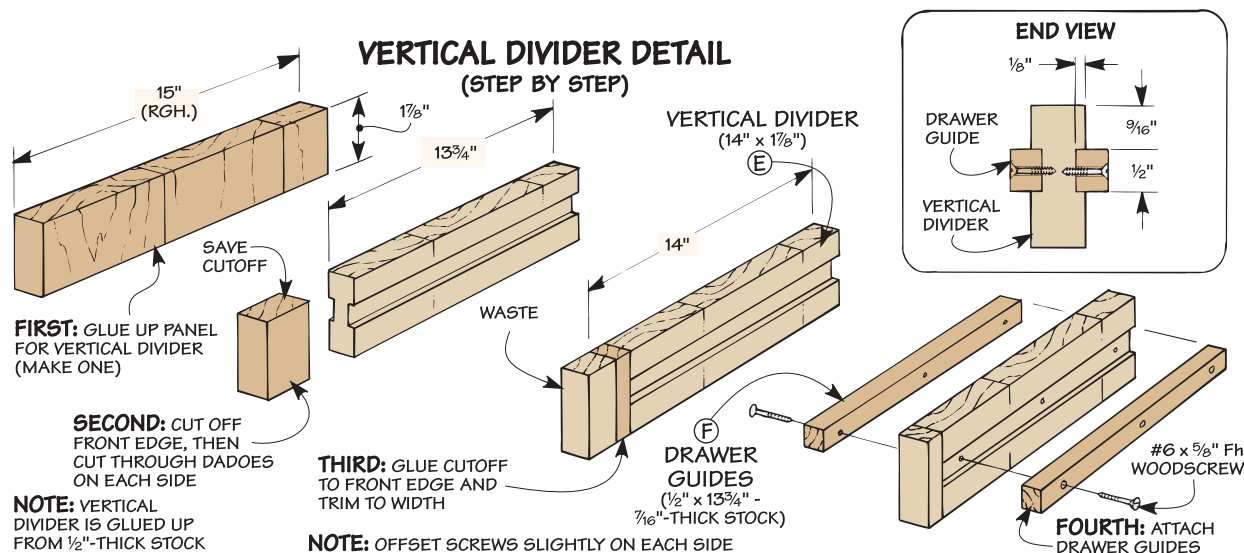
DRAWER GUIDES. Now it's just a matter of cutting the *drawer guides* (*F*) to fit the dadoes. These are strips of hardwood that are screwed (not glued) in place.

HORIZONTAL DIVIDER. With the guides in place, I added a *horizontal divider* (*G*) to separate the top and bottom drawers, see Fig. 3. It's a thin strip of hardwood with a notch at each end that fits in the open dado in the sides.

ASSEMBLY. All that's left is to assemble the case. This is just a matter of slipping in the horizontal divider, then gluing and clamping the sides and back. To hold the horizontal divider securely in place, I glued short blocks into the dadoes behind it, see Fig. 3.



Cutting stopped dadoes is easy. Just cut the front edge off the panel. Then cut a series of through dadoes, and glue the front edge back in place.



Top/Bottom

The case of the tool chest is sandwiched between two solid wood panels — one for the top and the other for the bottom.

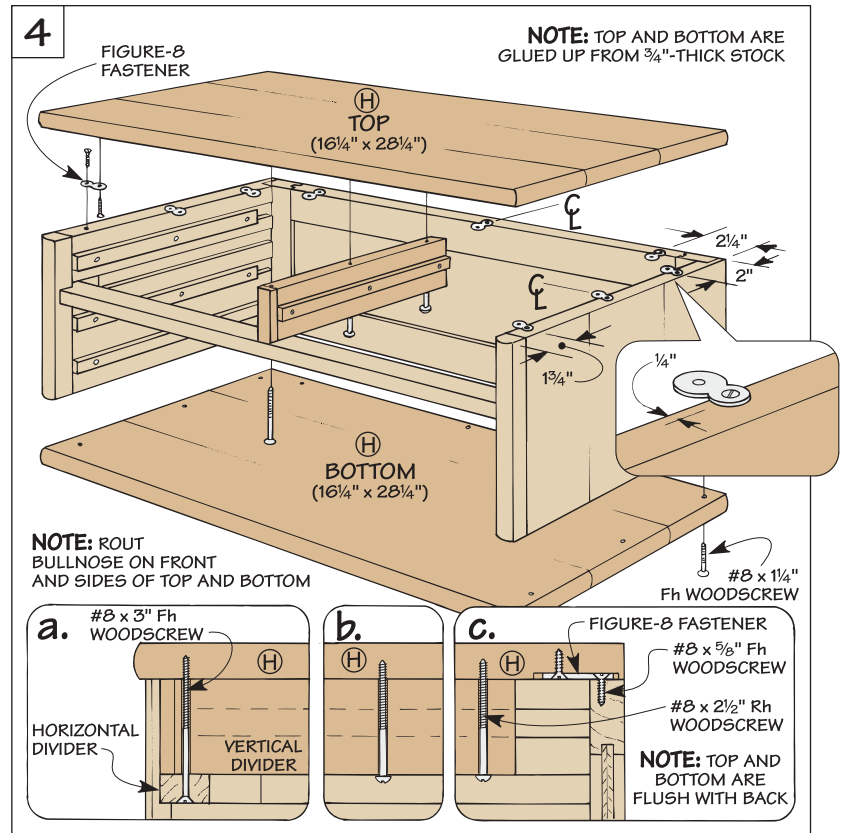
Both the *top* and *bottom* (H) are made by gluing up pieces of $\frac{3}{4}$ "-thick stock, see Fig. 4. The idea here is to orient the pieces so there's edge grain in front and back of the panels. This way, the top and bottom will move together with the sides (across their width) as they expand and contract with changes in humidity.

BULLNOSE. If you're building this tool chest to go with our matching Rolling Tool Cabinet (also available at PlansNOW), rout a bullnose on the front and sides of each panel, see page 3 of the tool cabinet plan for details.

ATTACH TOP. Now you're ready to attach the top. Here again, I used figure-8 fasteners to hold it in place. Not because of wood movement. (Remember, the panels will all move together.) But because it's an easy way to attach the top without any hardware showing on the surface.

As before, the figure-8 fasteners are recessed by drilling a series of pockets in the top, see Fig. 5. And here again, the fasteners are screwed to the sides and back of the case, see Fig. 4.

To attach the top, it's easiest

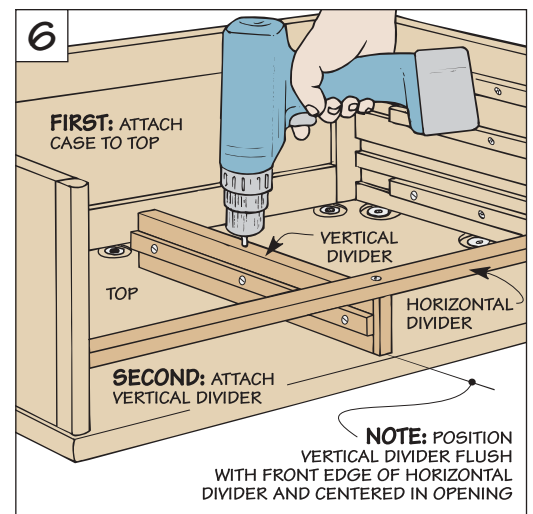
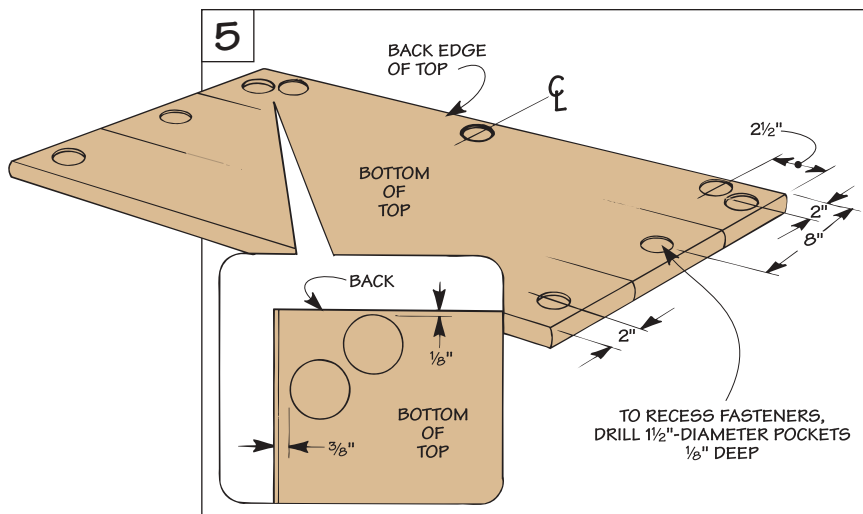


to lay it upside down on a work-surface, see Fig. 6. Then, after positioning the case so the top extends an equal amount on each side (and it's flush at the back), simply screw it in place.

VERTICAL DIVIDER. At this point, you can attach the vertical divider to the top. It's held in place with three screws. A long flathead

woodscrew passes through holes drilled through each divider and into the top, see Fig. 4a and 6. And shorter roundhead wood-screws are installed in the center and back, see Figs. 4b and 4c.

ATTACH BOTTOM. All that's left to complete the assembly is to screw the bottom and back of the case, see Fig. 4.



Drawers

To hold different size hand tools, this tool chest has two narrow drawers on top and two wide drawers at the bottom, see Fig. 7. They slide in and out of the tool chest on the wood drawer guides installed earlier.

LOCKING RABBET. Like the drawers on the rolling tool cabinet, they're held together with locking rabbet joints. But before cutting the joints, there are a couple of things worth mentioning.

First, the drawer pieces are sized to create a $\frac{1}{16}$ " gap all the way around, see Fig. 7a. And second, there's no lip on the front of the drawer. Instead, it's flush with the side of the drawer.

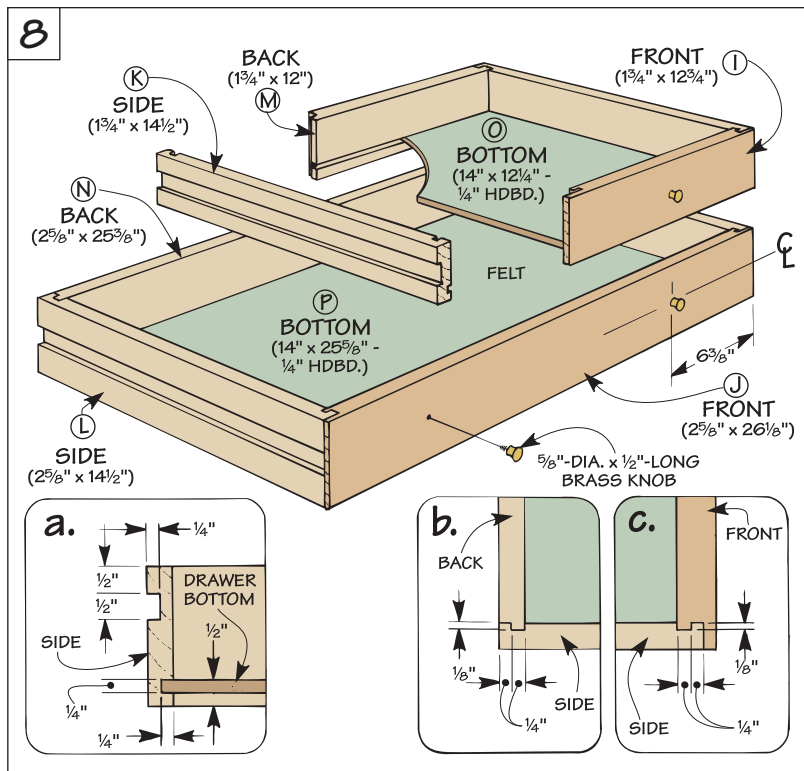
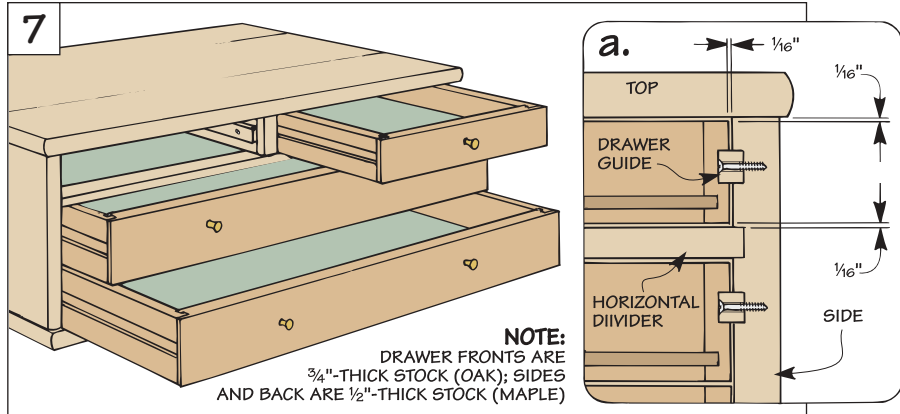
The reason for this is simple. When the drawers are installed, the wood guides are recessed into grooves in the *sides* of the drawers. So they're hidden by the drawer front. As a result, you don't need a lip to cover them like you do with the metal slides on the rolling tool cabinet.

Other than that, building the drawers is fairly straightforward. After cutting the *drawer fronts* (I, J), *sides* (K, L), and *backs* (M, N) to size, it's just a matter of cutting the locking rabbet joints, see Figs. 8b and 8c.

GROOVES. Before assembling the drawers, you'll need to cut the grooves in the side pieces for the drawer guides. To create a consistent $\frac{1}{16}$ " gap, the grooves are located $\frac{1}{2}$ " down from the *top* of each side, see Figs. 7a and 8a.

In addition to the grooves for the drawer guides, you'll also need to cut grooves for the $\frac{1}{4}$ "-thick hardboard *drawer bottoms* (O, P), see Figs. 8 and 8a. Then just glue up the drawers.

FINAL DETAILS. To complete the chest, I added a set of brass knobs. These just screw into the drawer fronts, see Fig. 8. As a final touch, I lined the drawer bottoms with felt, see box at right.



Felt Lining

Nothing shows off a set of fine hand tools better than a drawer lined with felt, see photo. And it's easy to install. Using spray adhesive, attach an oversized piece of felt to a piece of posterboard that's cut to fit the drawer bottom. Then simply trim the felt to size and press it into the bottom of the drawer.

