*The companion **Craftsman Tool Chest** plan also available at www.plansnow.com*

Rolling Tool Cabinet

I suppose I could have bought a rolling tool cabinet. The kind with big banks of drawers and lots of storage underneath that auto mechanics use. But something just didn't seem right about storing my woodworking tools in a metal cabinet.

What I really wanted was a tool cabinet that was made from wood — one with a traditional appearance that I could roll right up to the bench while I'm working. So I decided to build a rolling tool cabinet of my own.

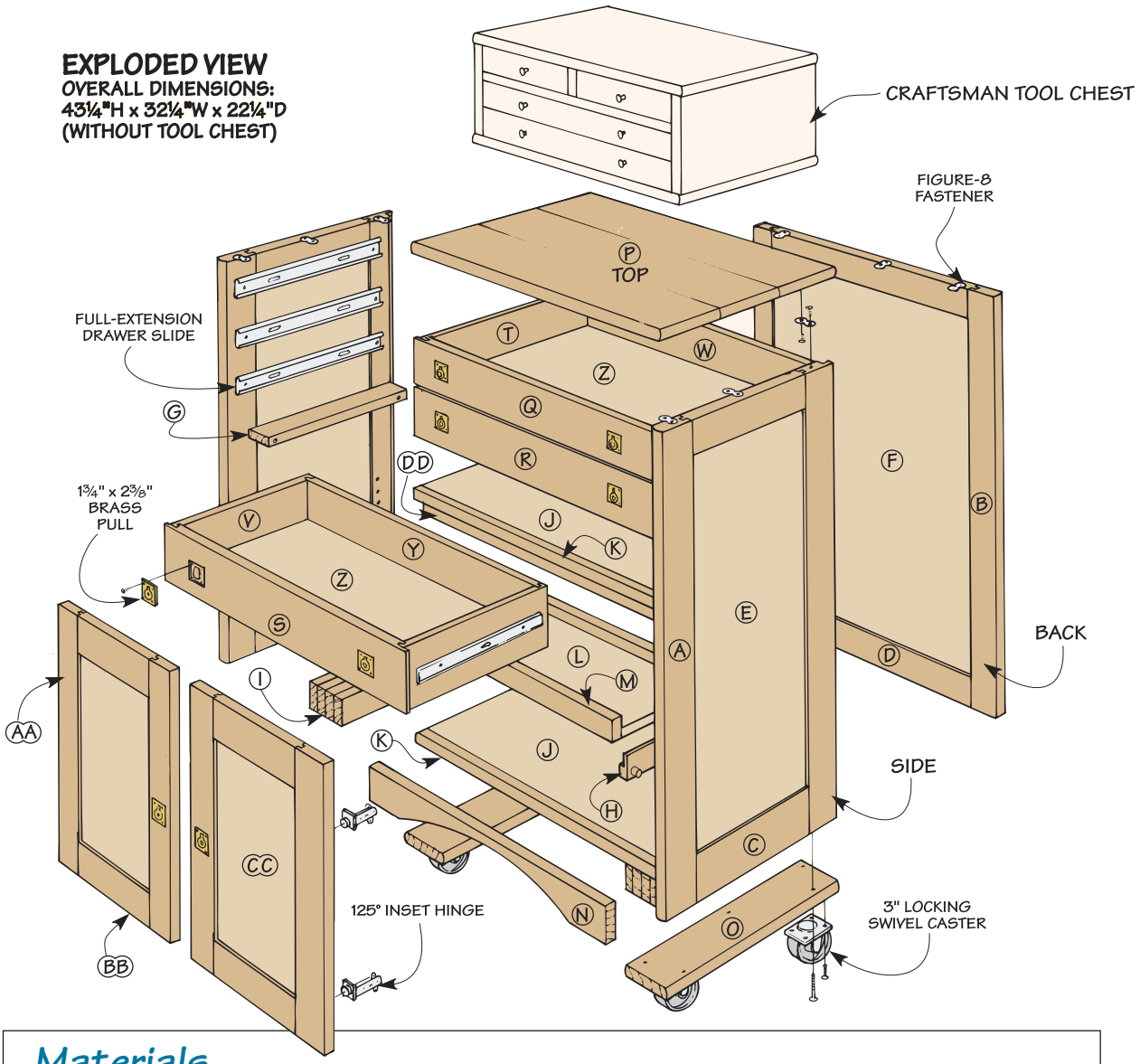
The overall design features two parts: a large base cabinet that rolls on casters, and a small tool chest that sits on top. The companion tool chest plan is available at www.PlansNOW.com.

A. Drawers. *To provide easy access, the three drawers in the rolling cabinet are mounted on full-extension slides.*

B. Shelf & Tray. *Portable power tools are stored underneath on a large bottom shelf and a sliding tray.*

EXPLODED VIEW

OVERALL DIMENSIONS:
43¼"H x 32¼"W x 22¼"D
(WITHOUT TOOL CHEST)



Materials

Case

A	Side Stiles (4)	¾ x 3½ - 38
B	Back Stiles (2)	¾ x 3½ - 38
C	Side Rails (4)	¾ x 3½ - 15 ½
D	Back Rails (2)	¾ x 3½ - 24¾
E	Side Panels (2)	15½ x 31½ - ¼ Ply.
F	Back Panel (1)	24¾ x 31½ - ¼ Ply.
G	Fixed Cleats (2)	¾ x 2 - 19½
H	Adjustable Cleats (2)	¾ x 1½ - 20
I	Corner Blocks (8 pieces)	¾ x 2¾ - 20⅛
J	Divider/Bottom Shelf (2)	20 x 30¼ - ¾ Ply.
K	Trim Pieces (2)	¾ x 1 - 30¼
L	Sliding Tray (1)	10½ x 29¾ - ¾ Ply.
M	Lip (2)	¾ x 1½ - 29¾
N	Apron (1)	¾ x 2¾ - 30¼
O	Base Pieces (2)	¾ x 4¾ - 22¼
P	Top (1)	¾ x 22¼ - 32¼

Drawers

Q	Top Drawer Front (1)	¾ x 3½ - 30
R	Middle Drawer Front (1)	¾ x 4⅜ - 30
S	Deep Drawer Front (1)	¾ x 5¼ - 30
T	Top Drawer Sides (2)	½ x 3½ - 20½
U	Middle Drawer Sides (2)	½ x 4⅜ - 20½
V	Deep Drawer Sides (2)	½ x 5¼ - 20½
W	Top Drawer Back (1)	½ x 3½ - 28¾
X	Middle Drawer Back (1)	½ x 4⅜ - 28¾
Y	Deep Drawer Back (1)	½ x 5¼ - 28¾
Z	Drawer Bottoms (3)	28¾ x 20 - ¼ Ply.

Doors

AA	Door Stiles (4)	¾ x 3½ - 19⅞
BB	Door Rails (4)	¾ x 3½ - 8½
CC	Door Panels (2)	8½ x 13⅜ - ¼ Ply.
DD	Door Stop (1)	¾ x ¾ - 30¼

Hardware

- (3 pairs) 20" Full-Ext. Drawer Slides
- (2 pairs) 125° Inset Hinges
- (8) 1¾" x 2⅜" Brass Pulls
- (4) 3" Locking Swivel Casters
- (16) ¼" x 1" Lag Screws
- (16) ¼" Flat Washers
- (4) #8 x 2½" Fh Woodscrews
- (22) #8 x 1¼" Fh Woodscrews
- (9) Figure-8 Fasteners
- (18) #8 x ⅝" Fh Woodscrews

Case

I started on the rolling tool cabinet by making the case. Basically, it's a large open box that's divided into separate storage compartments, see drawing.

SIDES & BACK. To add rigidity to the case, the sides and back are made of solid wood frames and plywood panels. Each frame and panel is held together with simple (yet strong) stub tenon and groove joints.

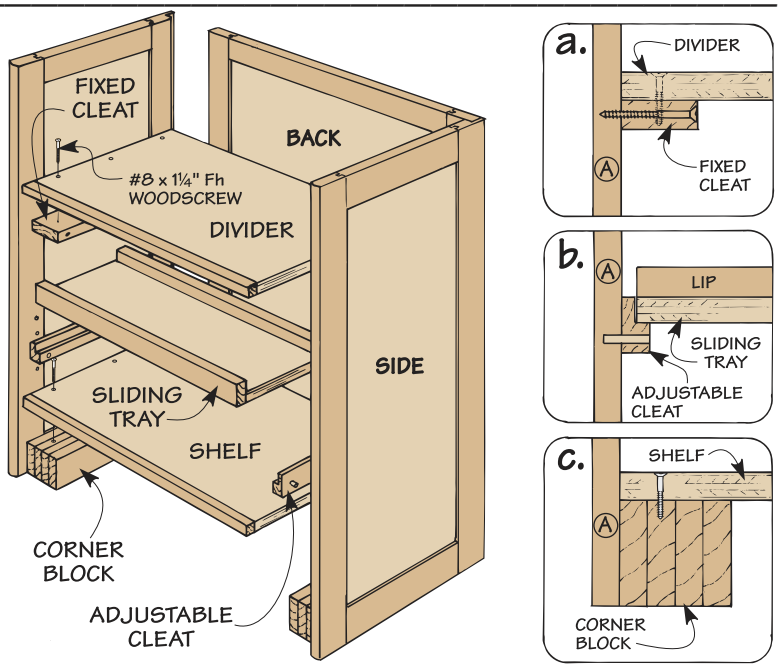
The pieces of these frames are identical in width (3½"). And so is the length of the *side (A)* and *back stiles (B)*, see Fig. 1. But since the sides are narrower than the back, the *side rails (C)* are shorter than the *back rails (D)*.

To accept the plywood panels and rails, there's a groove cut in each piece, see Fig. 1a. And stub tenons are cut on the ends of each rail to fit the grooves, see Fig. 1b.

PANELS. With the joinery complete, you can add the *side (E)* and *back panels (F)*. These are just ¼"-thick pieces of plywood that are glued into the frames.

At this point, there's still some work left to do on the sides. To make the sliding tray (added later) adjustable, I drilled a series of holes in the side stiles (A), see Fig. 1. And there's a rabbet that's routed in the back edge of each side to accept the back, see Fig. 1c.

BULLNOSE. To soften the front edges of the sides, I routed a bullnose. But rather than buy a special bit, I used a ½" roundover bit instead and made a pass on each side, see detail in Fig. 1.

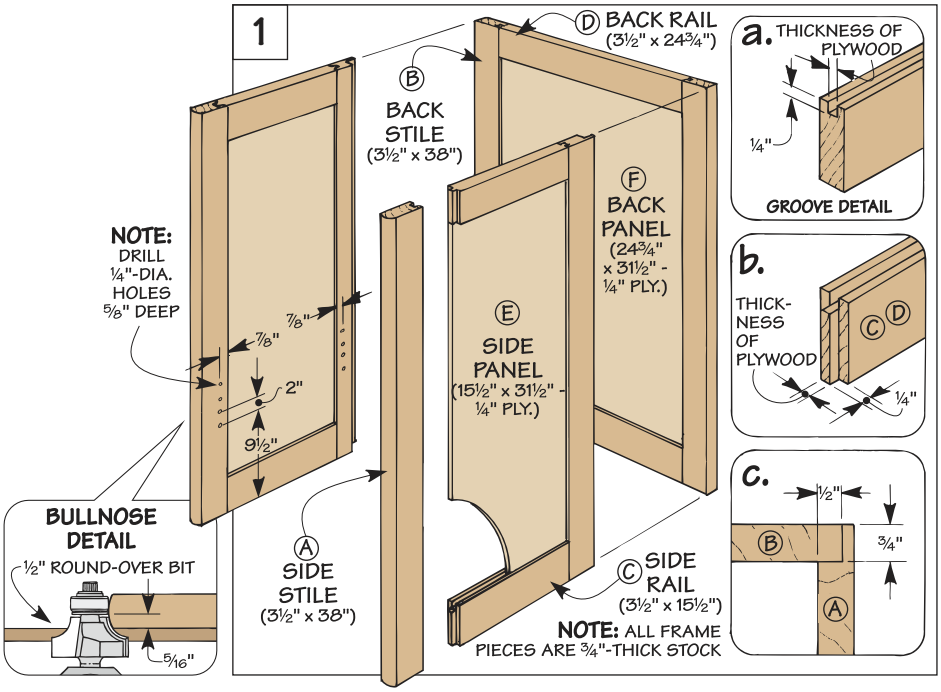


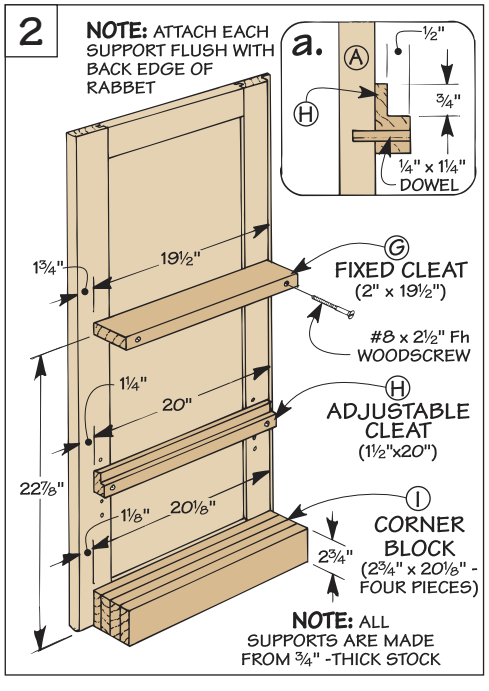
This leaves a slight "flat," but all it takes is a little sanding to smooth it out.

SUPPORTS

Before assembling the case, it's easiest to add supports for a divider, sliding tray, and shelf.

FIXED CLEATS. The divider is supported by a pair of *fixed cleats (G)* made from ¾"-thick hardwood, see Fig. 2. After posi-





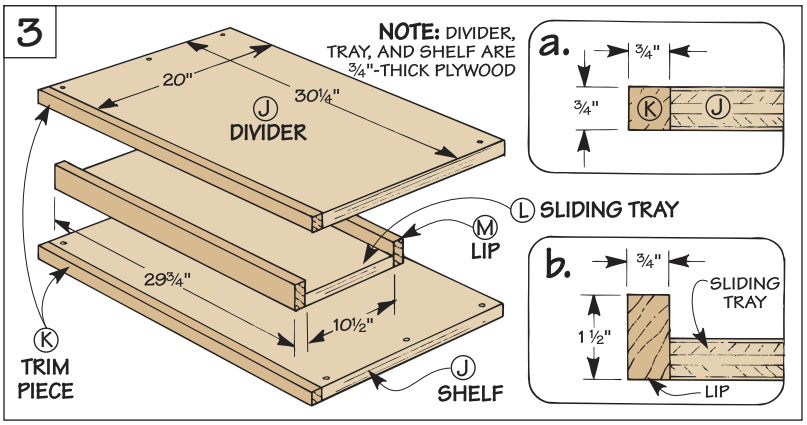
tioning each cleat flush with the inside edge of the rabbet, they're simply screwed to the side stiles.

ADJUSTABLE CLEATS. The sliding tray is also supported by two cleats. But to move the tray up or down, these *adjustable cleats (H)* have pins (dowels) that fit into the holes drilled earlier in the sides, see Fig. 2a.

To hold the cleats tight against the sides of the case, the tray sits in a rabbet cut in the edge of the cleats, see Fig. 2a. This way, the edge of the tray presses against the cleats and holds them in place.

CORNER BLOCKS. One last set of supports is a pair of corner blocks. Besides supporting the bottom shelf, these corner blocks direct the weight of the tool cabinet onto the casters, see margin.

To help carry this weight, the *corner blocks (I)* are made by gluing up four pieces of ¾"-thick stock, see Fig. 2. These blocks are simply glued flush with the bottom of each side.



DIVIDER, TRAY, & SHELF

With all the supports in place, you can turn your attention to the divider, tray, and shelf.

DIVIDER. The divider separates the cabinet into an upper and lower compartment. The top compartment houses three drawers. And the lower one provides storage underneath.

The *divider (J)* is just a piece of ¾"-thick plywood with holes drilled in it to attach it to the fixed cleats, see Fig. 3. Gluing on a hardwood *trim piece (K)* covers the front edge of the divider, see Fig. 3a.

SLIDING TRAY. To provide easy access to tools, the *sliding tray (L)* is a narrow piece of ¾"-thick plywood that pulls to the front of the cabinet. A hardwood *lip (M)* glued to the front and back edges keeps tools from falling off, see Fig. 3a.

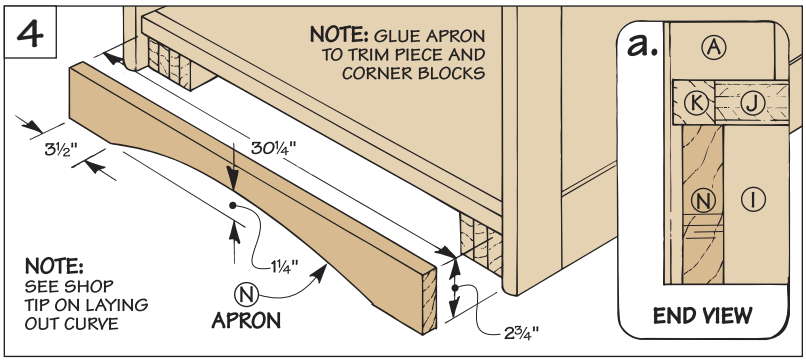
SHELF. For storage at the bottom of the case, there's a *shelf (J)* that's identical in size to the divider. Again, a *trim piece (K)* creates a finished looking edge.

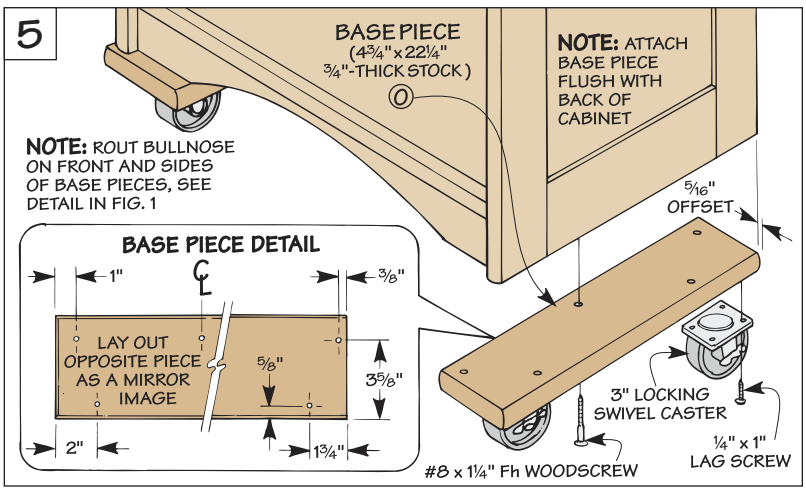
ASSEMBLY. At this point, you can glue up the case. To keep things square, I slipped the divider and shelf into the case. When the glue dries, just screw them in place and install the sliding tray.

APRON. Next, I added a hardwood *apron (N)*, see Fig. 4. After cutting a gentle curve on the bottom edge, this apron is glued to the trim piece (K) and corner blocks (I), see margin and Fig. 4a.

CASTERS. All that's left is to add four locking swivel casters. To provide a sturdy mounting platform for the casters, two *base pieces (O)* are attached to the bottom of the case, see Fig. 5. After routing a bullnose on the sides and front of the base pieces, they're screwed to the corner blocks and sides. Then just attach the casters with screws.

A thick corner block directs the weight of the cabinet and tools onto the casters.





Shop Tip

To lay out a large curve, bend a thin strip of hardboard in an arc. Then have a helper mark the curve on the workpiece.

Top

With the case complete, I started on the top of the cabinet.

To provide a sturdy platform for the tool chest, the *top (P)* is a solid wood panel that's made by gluing up pieces of ¾"-thick hardwood (oak), see Fig. 6.

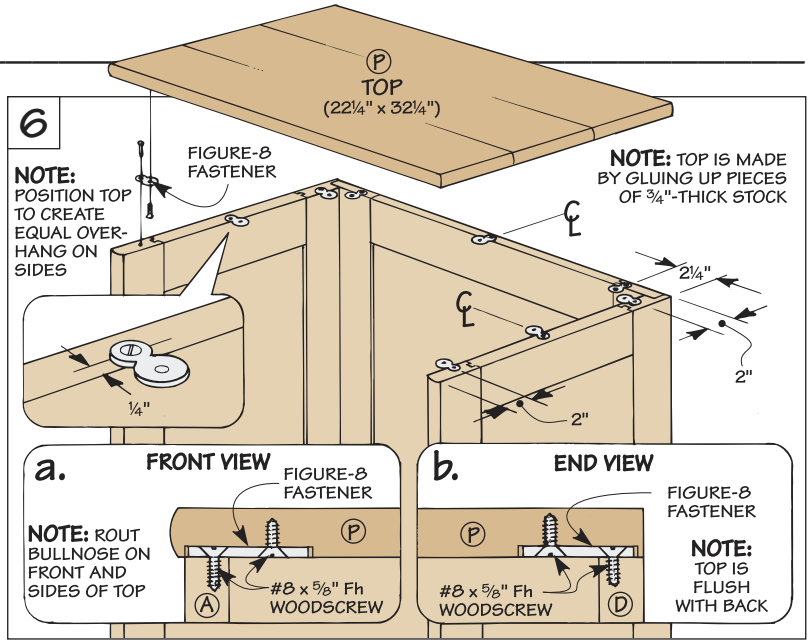
WOOD MOVEMENT. But a solid wood top creates an interesting problem when attaching it to the case. It has to be held tightly in place. But to keep the top from splitting, it still has to expand and contract with changes in humidity.

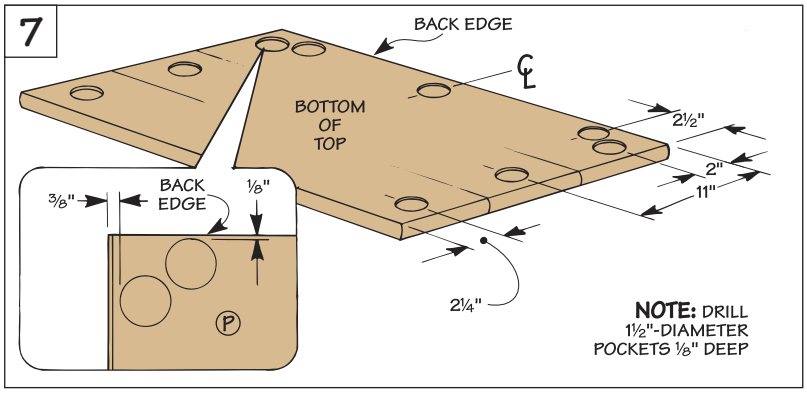
FIGURE-8. To secure the top *and* allow for wood movement, I used metal figure-8 fasteners. The small end of these fasteners attaches to the sides (or back) of the case, see details in Fig. 6. The large end fastens to the top. This way, when the wood expands or contracts, the fastener pivots and keeps the top from splitting.

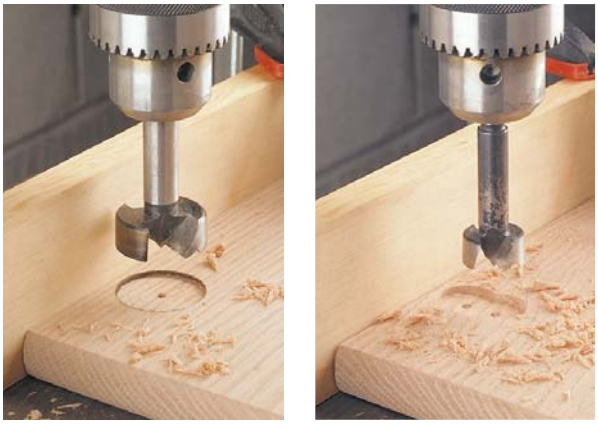
POCKETS. The figure-8 fasteners are recessed into shallow (⅛"-deep) "pockets." After laying out their location, I drilled the pockets with a 1½"-dia. Forstner bit, see Figs. 7 and 7a. But you can also drill overlapping holes with a smaller bit, see photos below.

Before attaching the top, there's one more thing to do. That's to rout a bullnose on the front and sides only. (The back edge is left square.)

INSTALL FASTENERS. At this point, you're ready to install the fasteners. Installation is just a simple three-step process, see box below. Note: To provide easy access to the case when working on the drawers, it's best to wait until the drawer slides are installed to attach the top.



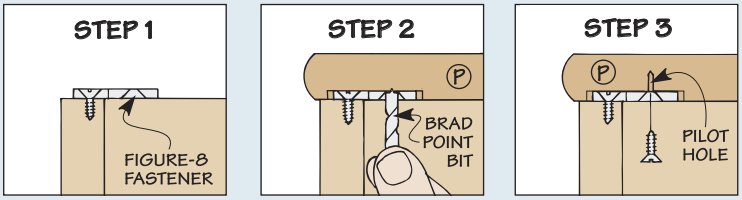




▲ *Pockets. To create crisp, clean pockets for the figure-8 fasteners, it's best to use a Forstner bit. This can be a large (1½"-dia.) bit (left). Or use a small (1"-dia.) bit and drill overlapping holes (right).*

Figure-8 Fasteners

To install a figure-8 fastener, start by screwing the small end of the fastener to the sides and back of the case, see Step 1. Then, after positioning the top and marking the location of the hole in the big end (Step 2), drill pilot holes in the top and screw the top in place, see Step 3. (Note: These fasteners are available from a variety of woodworking catalogs.)



Drawers

To provide storage for different sizes of tools and materials, I built three progressively deeper drawers for the upper part of the tool cabinet, see Fig. 8.

Strong locking rabbet joints hold the drawers together. And full-extension drawer slides provide easy access to what's inside.

There's nothing complicated about building the drawers. The drawer *fronts (Q, R, S)* are made from ¾"-thick hardwood (oak), see Fig. 8. And I used ½"-thick stock (maple) for the drawer *sides (T, U, V)* and *backs (W, X, Y)*. Note: These pieces are sized to allow ½" clearance for the drawer slides and an ⅛" gap all the way around each drawer front.

LOCKING RABBETS. With the pieces cut to size, you can concentrate on the locking rabbet joints. (See Figs. 8a and 8b.) Then just cut grooves for the plywood *bottoms (Z)*, see Fig. 8c.

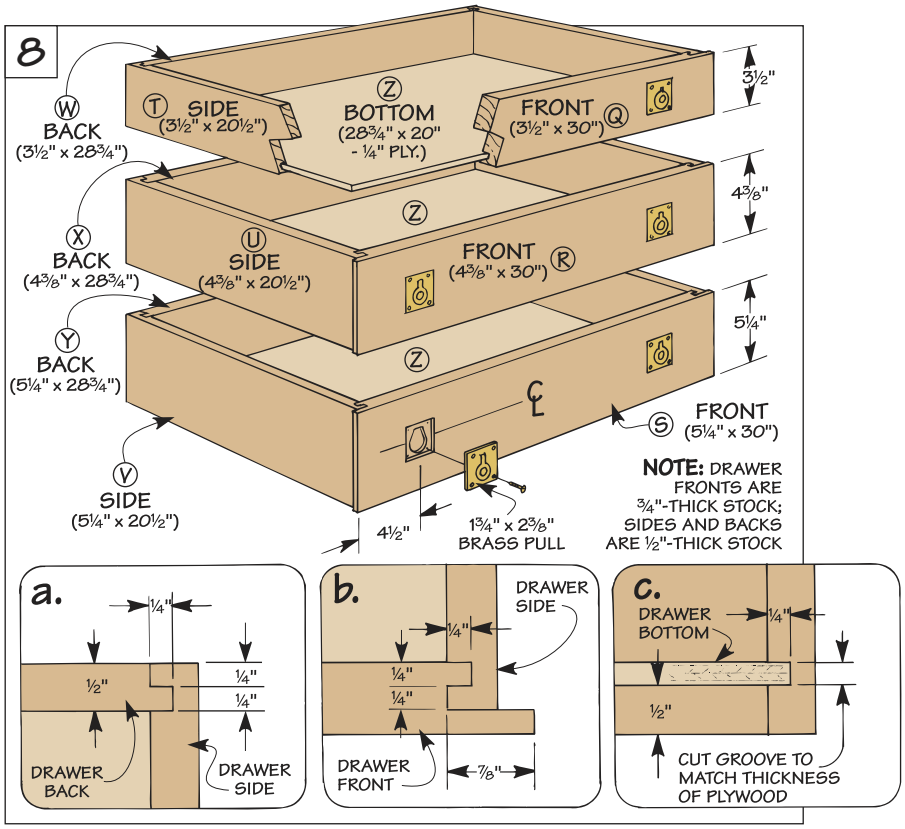
DRAWER PULLS. Before gluing up the drawers, it's easiest to install the brass pulls on the drawer fronts. (For a step-by-step procedure see page 7.)

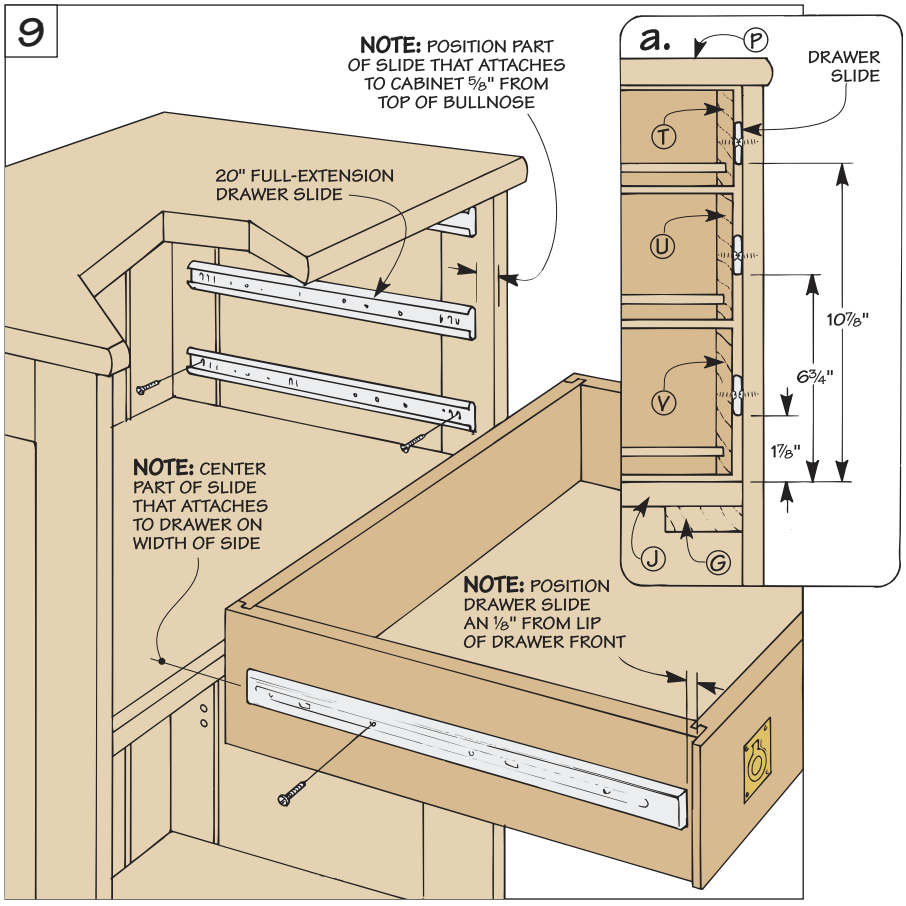
DRAWER SLIDES. Now it's just a matter of adding the drawer slides. These slides have two basic parts.

One is centered on the width of the drawer sides, see Fig. 9. It lets you adjust the drawer up and down, so you'll be able to "fine tune" the drawers for a consistent ⅛" gap all the way around.

The other part attaches to the side of the cabinet, see Figs. 9 and 9a. By adjusting this part, you can position the drawer fronts farther in or out of the cabinet. Note: Since I wanted to recess the drawer fronts about ⅛" back, I located the slide ⅝" in from the top of the bullnose.

ATTACH TOP. Now all that's left is to attach the top (see opposite page) and slide in the drawers.





Doors

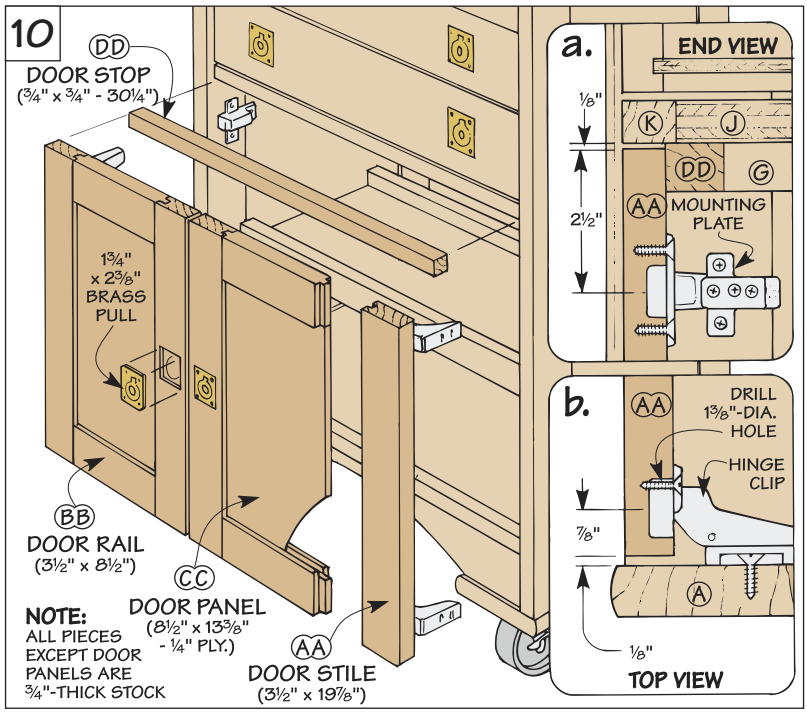
To keep dust and chips out of the lower part of the tool cabinet, I added two doors. Like the sides and back, the doors are simple wood frames and plywood panels that are held together with stub tenons and grooves.

APPEARANCE. In addition to the joinery, I also wanted to maintain a consistent *appearance* between the different parts of the cabinet.

So the *stiles (AA)* and *rails (BB)* are the same width (3½") as the stiles and rails on the sides and back, see Fig. 10. And to match the spacing of the drawers, these frame pieces are cut to length to allow an ⅛" gap all the way around, see Figs. 10a and 10b.

Now you're ready to cut the stub tenon and groove joints, refer to Figs. 1a and 1b on page 18. Then, cut the *door panels (CC)* to size and glue up the doors.

Before installing the doors, I added a *stop (DD)* that keeps them flush with the front edge of the divider when they're closed.



This is a strip of hardwood that's glued under the divider, see Figs. 10 and 10a.

INSTALL DOORS. After adding brass pulls (see box below), you can install the doors. They're held in place with 125° European-style hinges, see Figs. 10a and 10b.

This requires drilling a 1⅜"-dia. hole in the door stile to accept the hinge clip, see Fig. 10b. Then attach the mounting plate to the side, see Fig. 10a.

Installing Brass Pulls

It's easy to install a brass pull flush with the surface of a door (or drawer). All it takes is to cut a two-tiered mortise — a deep, oblong-shaped pocket for the part that sticks out in back, and a shallow, rectangular recess for the mounting plate.

TEMPLATE. To lay out the deep pocket, I use a hardboard template with a horseshoe-shaped opening to match the back of the pull, see Step 1. To allow for some adjustment when positioning the mounting plate, the opening is 1/16" larger than the back of the pull. Note: I draw centerlines on the template to make it easy to align.

To form the deep pocket, it's easiest to use a straight bit and rout up to the line, see Step 2. Then, after setting the pull into the opening and marking around the mounting plate (Step 3), rout the shallow recess up close to (but not touching) the line (Step 4).

Now chisel up to the edges, checking the fit of the pull as you work.