

Shaker Chest with a Side Drawer

Photos: Anissa Kapsales

Not your typical dovetailed case

On one end of this chest, the dovetail layout must accommodate the side drawer, stopping short to create a drawer pocket below.



Stop the tails short. Start by cutting the tails on the front and back boards. On the right end of both boards, the tails stop where the drawer opening starts. On the other end, the tails span the full width of the board. Becksvoort cuts to the line with a handsaw and chisels the tails clean.

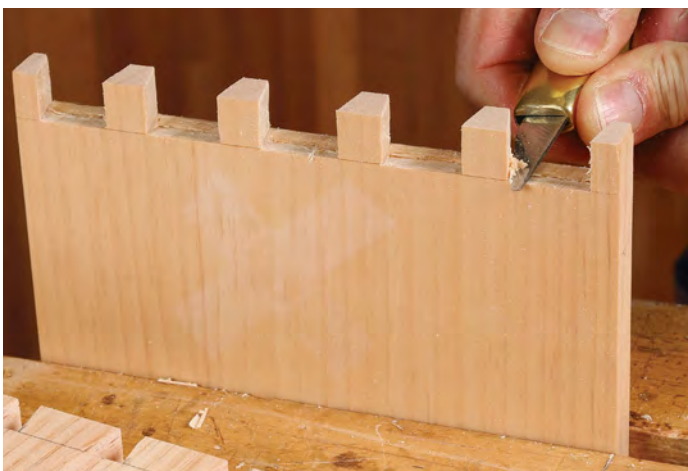
Manageable size and smart techniques make this a fun and rewarding project

BY CHRISTIAN
BECKSVOORT

This small pine chest with a drawer can be used for storing all kinds of treasures. The size and craftsmanship make this a fun project. It offers plenty of chances to practice your dovetails, and the fact that it is made of pine means it won't break the bank. The full-length drawer is useful for jewelry, photos, and other collectibles. You can follow the original faithfully for a perfect reproduction or make minor changes to suit your needs.

Dovetails first, then the false bottom

While this chest would look handsome in any species, I prefer clear white pine (like the original) with quartersawn pine for the two bottoms (there's a false bottom separating the drawer from the main part of the chest). The original piece is likely from the Mt Lebanon, N.Y., community, and made in the early 1800s.



Pin boards are different widths. The board on the left end of the chest is the same width as the front and back boards, but the right end board (above the drawer) is narrower. Transfer the truncated tails from the front and back boards to the two ends of the narrower side board. Cut the pins, clean them up, and dry-fit the case.

Top and bottom boards

While both the lid and the bottom get a subtle molding profile, the profiles are different for each.



Bottoms up. The top corner of the bottom board gets a roundover, but the bottom corner is left square. Becksvoort cuts the profile at the router table, doing both end-grain ends first, then the long-grain ends, ensuring any end-grain blowout that could occur gets cut off with the long-grain cut.



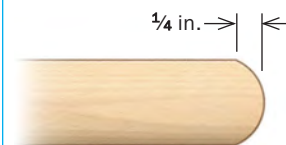
Top it off. The lid gets a bullnose profile, cut with a $\frac{3}{8}$ -in. roundover bit. While the profile can easily be shaped with a block plane, Becksvoort cuts it on the router table. Again, he makes the end-grain passes first and then follows up with the long grain.

SHAKER CHEST WITH SIDE DRAWER

SOURCES OF SUPPLY

Knob: Horton Brasses H-42 ($\frac{1}{2}$ in.)
Hinges: Rockler 29234
Hooks: Rockler 47683
Chain: Lee Valley 00G44.01
Chain ends: Lee Valley 00G45.15
Brass eyes: Lee Valley 00S56.41

LID EDGE DETAIL



Side, $\frac{9}{16}$ in. thick by $10\frac{1}{4}$ in. wide by $10\frac{7}{8}$ in. long

Front, $\frac{9}{16}$ in. thick by $10\frac{1}{4}$ in. wide by $18\frac{3}{8}$ in. long

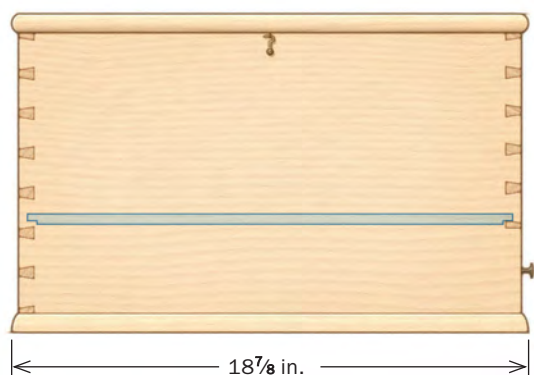
Groove, $\frac{1}{4}$ in. wide by $\frac{1}{4}$ in. deep, located $3\frac{3}{8}$ in. up from bottom edge

Hook

False bottom, $\frac{3}{8}$ in. thick

Bottom, $\frac{11}{16}$ in. thick by $11\frac{3}{8}$ in. wide by $18\frac{7}{8}$ in. long

Drawer opening, $3\frac{1}{8}$ in.



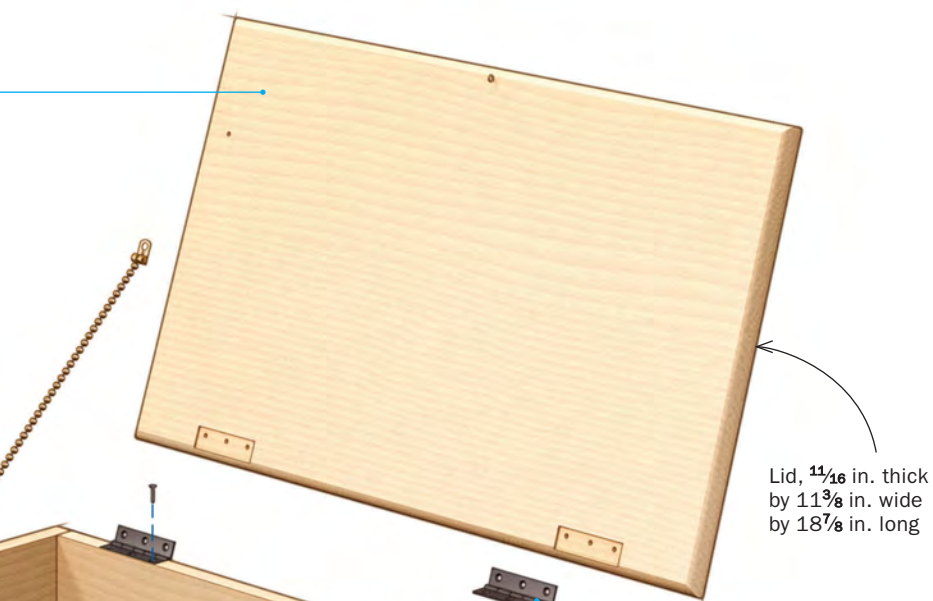
FRONT VIEW



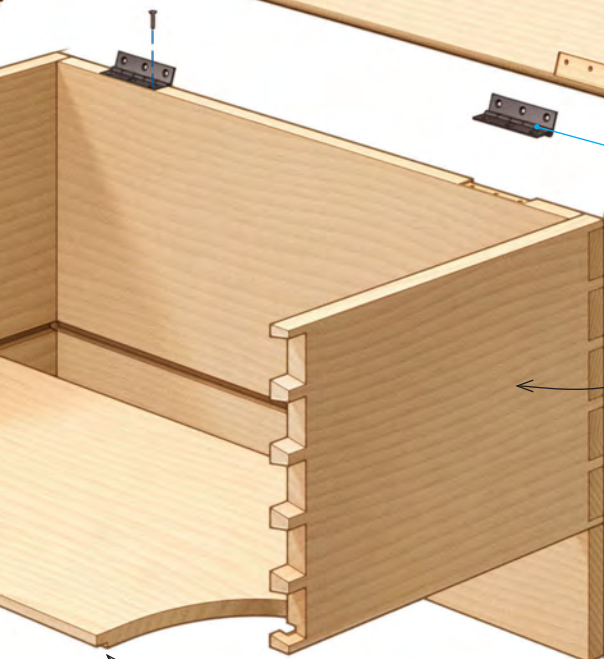
SIDE VIEW



To purchase expanded plans and a complete parts list for this chest and other projects, go to FineWoodworking.com/PlanStore.



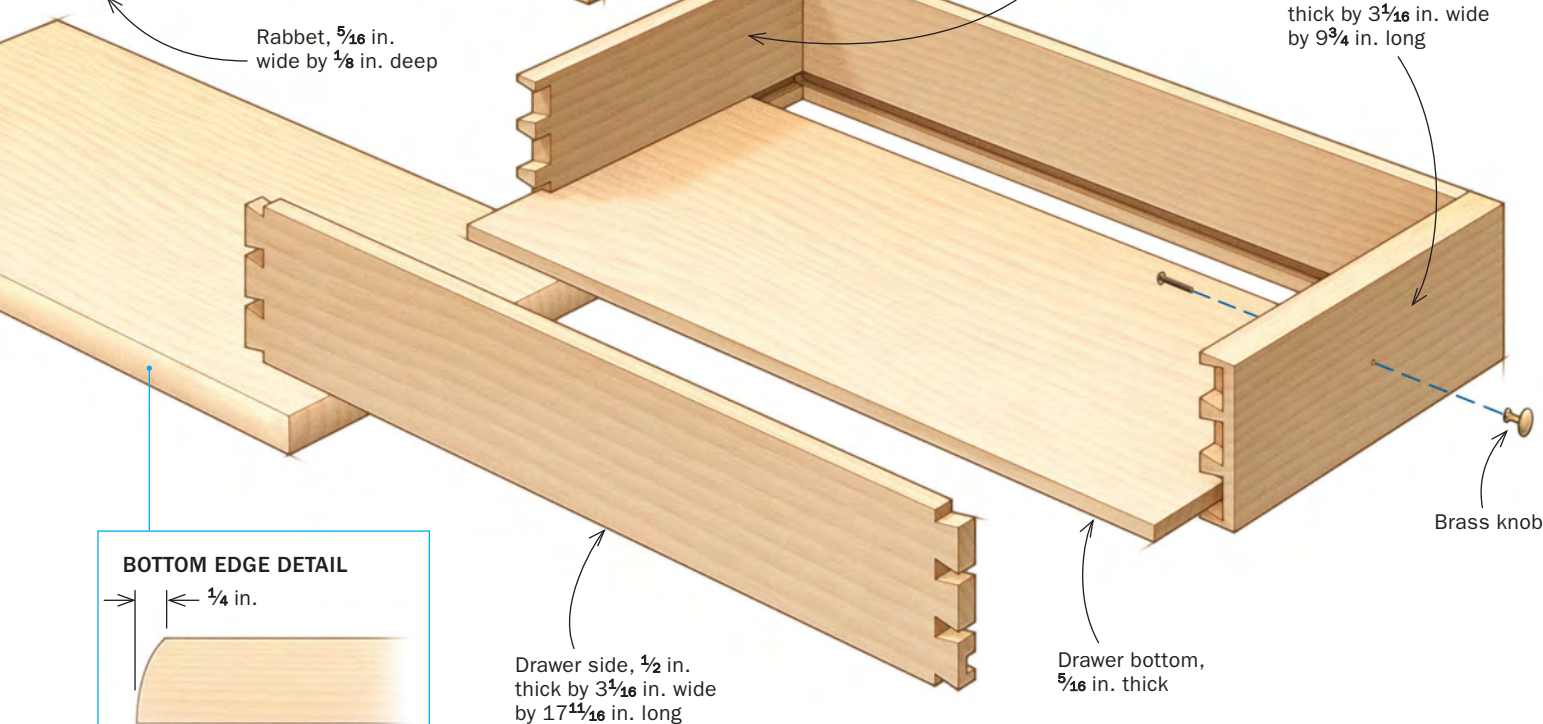
Lid, $1\frac{1}{16}$ in. thick
by $11\frac{3}{8}$ in. wide
by $18\frac{7}{8}$ in. long



Side above drawer,
 $\frac{9}{16}$ in. thick by $7\frac{1}{8}$ in.
wide by $10\frac{7}{8}$ in. long

Back, $\frac{9}{16}$ in. thick
by $10\frac{1}{4}$ in. wide by
 $18\frac{3}{8}$ in. long

Rabbet, $\frac{5}{16}$ in.
wide by $\frac{1}{8}$ in. deep



Drawer back, $\frac{1}{2}$ in.
thick by $3\frac{1}{16}$ in. wide
by $9\frac{3}{4}$ in. long

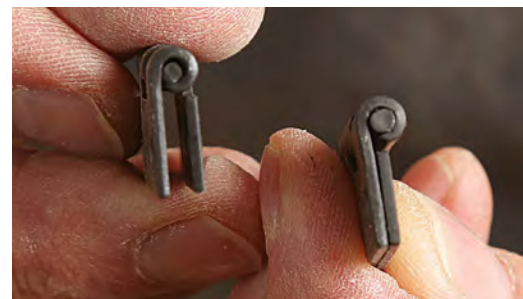
Drawer front, $\frac{3}{4}$ in.
thick by $3\frac{1}{16}$ in. wide
by $9\frac{3}{4}$ in. long

Brass knob

Drawer side, $\frac{1}{2}$ in.
thick by $3\frac{1}{16}$ in. wide
by $17\frac{11}{16}$ in. long

Drawer bottom,
 $\frac{5}{16}$ in. thick

HINGE MODIFICATION



Because the profiled lid overhangs the back of the chest, hinging it is a little finicky. Becksvoort swaged the hinge in the jaws of a vise, crimping one side into the other. He recessed that crimped side into the edge of the case back and let the flat side into the lid. Without swaging, you would have to gouge out for half the barrel into the lid.

BOTTOM EDGE DETAIL

$\frac{1}{4}$ in.

False bottom divides the chest

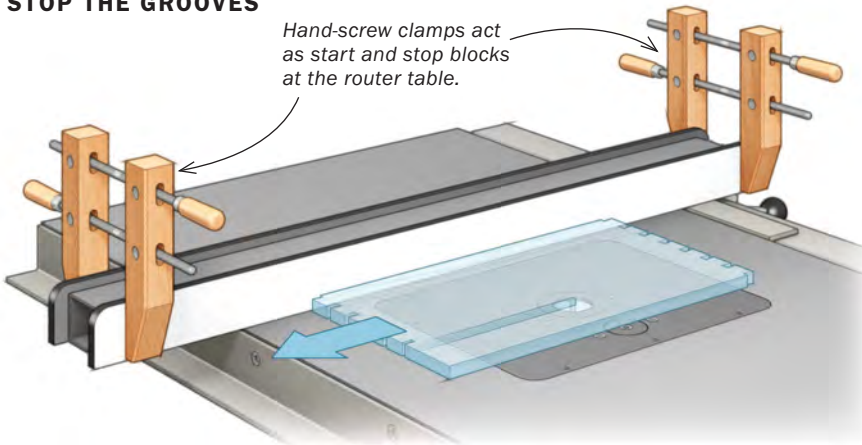
Lift the lid and you'll see that the chest interior isn't full depth. It stops at a false bottom, which serves as the top of the drawer pocket.

Groove all four sides of the chest. Set up stops on the router table and pivot onto and off the bit to create stopped grooves for the false bottom.



STOP THE GROOVES

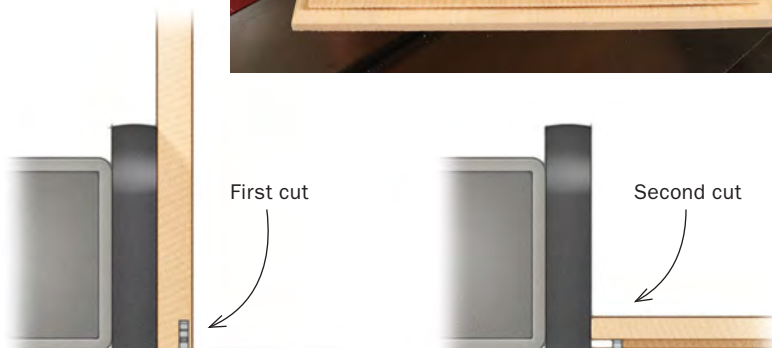
Hand-screw clamps act as start and stop blocks at the router table.



Start by milling the four sides and cutting them to length. Lay out, saw, and chop the tails on the front and back boards. Then transfer the tails onto the end pieces, and saw and chop the pins. Dry-fit the case.

The $\frac{3}{8}$ -in.-thick false bottom above the drawer sits in grooves. The original chest has through-grooves (and small filler plugs to cover the ends) which can be cut on the table-saw or by hand. Typically, I like to go with the original, but stopped cuts look so much cleaner that in this case I decided to veer from the past. You can use a $\frac{1}{4}$ -in. dado set on the

Rabbet the false bottom. On the tablesaw, create a rabbet around the false bottom with two cuts on each side (right). Check the fit in the groove (far right).



Glue up the case

Becksvoort's clever technique for gluing a dovetailed case reduces stress and the likelihood of error.



Set the stage. Prior to adding glue, Becksvoort gathers all the parts and sets one long side and the two ends together so the dovetails are just engaged. He slots the false bottom into the groove, and adds the final long side, again with the dovetails just engaged enough to keep it in place.



Glue it up. Using a small strip of wood to apply the glue, Becksvoort coats the cheeks of the dovetail pins and all the dovetail sockets. He taps the parts together and adds clamping pressure to completely seat the dovetails.

tablesaw, but I think that method requires too much chisel work at both ends of the stopped cut. I prefer to use a router with a $\frac{1}{4}$ -in. bit. Clamp a start and stop block to the router-table fence where you want the cuts to begin and end, about $\frac{1}{4}$ in. from the ends.

Since the false bottom must be supported on all four sides, I located the groove for it $\frac{1}{8}$ in. above the drawer opening. The false bottom is $\frac{3}{8}$ in. thick, and I ran a $\frac{1}{8}$ -in. by $\frac{1}{4}$ -in. rabbet all the way around the underside. So the false bottom fits into the $\frac{1}{4}$ -in. groove and its underside is flush with the drawer opening. Because it floats in the grooves, the false bottom can be made from flatsawn or riftsawn material as long as you allow a little space for potential movement.



Hinge the lid

Mark the hinge placement. After using the hinge to mark its location on the edge of the case back, follow up with a marking gauge.



Cut the hinge mortise. Use a trim router to waste away close to the lines, and then clean up to the lines with a chisel.



Transfer to the lid. Once you've screwed the hinges onto the case, set the lid upside down with the case upside down on top of it. Dial in the placement of the case on the lid, then transfer the hinge location to the lid. Cut the mortise, and screw the hinge to the lid.



Assemble the chest

Once the interior faces of all the parts have been sanded or planed, and the false bottom has been cut to size and rabbeted, the carcass can be glued. Dry-fit all the pieces together to make sure everything works as it should before adding any glue.

While the glue dries, mill the lid and the bottom board and cut them to size. The bottom must be quartersawn because it gets glued directly to the chest without allowance for wood movement. With Eastern white pine, this works fine.

The lid has a half-round molding profile, while the bottom has a slight arc. You can shape the profiles with a block plane or router.

I attached the lid to the chest with a pair of 1 $\frac{3}{4}$ -in.-long butt hinges. They need to be inset



from the back edge of the lid to allow for the molded overhang.

The full-length drawer is made and fitted last. I cut half-blind dovetails, and once it's glued together I sneak up on the fit in the chest, using a belt sander until the fit and reveal around the drawer are both perfect. Then I add a $\frac{1}{2}$ -in. brass knob as the drawer pull.

The original case is unfinished. If you go that route, aim for all heartwood because it will darken up nicely. You also can choose to use oil, shellac, or even milk paint. □

Contributing editor Christian Becksvoort makes furniture in New Gloucester, Maine.

The home stretch

The final touches on the chest include installing the bottom board, fitting the drawer, and adding the hardware.



Glue the bottom to the case. Center the case on the quartersawn bottom, and glue and clamp it in place.



Fit the drawer. Becksvoort uses a belt sander to fine-tune the fit of the drawer.



Finishing touches. Add a stay to keep the lid from falling too far back. In keeping with the brass knob and brass catch, Becksvoort chose a brass chain for the job.