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18<sup>th</sup>-Century Six-Board Chest

A project plan  
for building  
a sturdy chest



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# 18th-Century Six-Board Chest

Copying an original is an excellent way to hone your hand-tool skills



BY MIKE DUNBAR

This copy of a ca. 1800 blanket chest—also known as a six-board chest—is an ideal project for honing your woodworking skills. While the chest can be made by machine, its various parts are made equally well (and about as fast) by hand. It was fun to spend a few afternoons making something by hand. It reinforced for me how delightful the shop can be when the only noise is the whisk of sharp tools. I rediscovered how pleasant woodworking is without hearing, eye and

lung protection. When a storm knocked out the power one afternoon, I was able to keep working. It was delightful—just me, the wood, the tools and the sunlight.

At first glance the chest appears to be little more than a nailed box. As you make the project, you'll begin to respect simple joinery that requires mostly rabbets and dadoes. You'll begin to realize how much today's woodworking has developed construction into a design element. The original chest from which this one was copied

*White pine chest made the old way. Using sharp hand tools, the author made a blanket chest in a few afternoons. The till—a box within the box—is used to hold small items.*

has been in continuous use for nearly 200 years and is still solid and very much intact. Its survival is not unique. The chest seems to violate an important woodworking principle, in that the grain of the ends and sides is arranged in opposite directions. One would expect this to cause the front or



back boards to split. However, that did not happen to the original example or to the untold numbers of other chests like it. Unlike glue, the nailing allows enough movement to compensate.

The original chest is generally referred to as a blanket chest, underscoring its purpose—to store folded items made of cloth. However, this was also a utilitarian piece of furniture usually kept in a bedroom against the wall or at the end of a bed. An average house would have several such chests.

The original piece's everyday function dictated a couple of construction choices for the cabinetmaker. Time-consuming joinery, like dovetails, was replaced with equally strong rabbeted joints. The original was made in New England, where white pine is still sold everywhere. Had the cabinetmaker been working in another region, he might have used yellow poplar. I used 5/4 clear white pine. The original box was made when a 1-in. board was a full inch thick. I felt the proportions of the original were important to the chest's overall appearance, which is why I chose 5/4 stock. The exception is the chest's bottom panel, which I made from 3/4-in.-thick #2 pine.

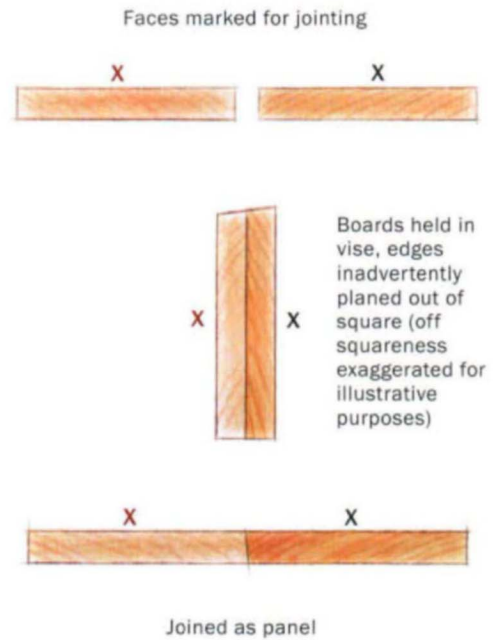
### Jointing stock, gluing panels

The original chest was made of six wide boards, excluding the three smaller pieces that make up the till, a small lidded compartment within the chest. Today, 18-wide 5/4 pine is rare, so I bought 5/4 boards that could be glued up into six wide panels. Crosscut the stock 1 in. longer than the finished lengths of the panels so that when you glue them together, you will have to worry about aligning the ends.

Like all hand-tool operations, cutting with a handsaw is easier when the wood is securely clamped to a bench. For me, it's easiest to follow my pencil line if, with each pull stroke of the saw, I raise the saw's teeth out of the kerf, away from the line, and then push them back into the line with each push stroke. This technique helps prevent the saw from wandering. To make a cut that's square to the face of the board, rather than one that is undercut or overcut, try to stand right over the saw. This way, when you look down, all you'll see is the

## PERFECT PANELS

**Two edges at once.** Boards that will be edge-glued into panels are folded into a vise so that facing sides are clamped against opposite jaws. Any off squareness in the planed edge will be neutralized when the boards are married into a panel.



**Spring a joint.** After jointing paired boards in a vise, take a final pass that begins and ends several inches from the boards' ends. When placed flat on a bench, the boards' edges will touch at each end and have a two-plane-shavings-wide gap in the middle (left). Two clamps will pull the gap together for glue-up (right).

thin top edge, not the face of either side of the blade (see the photo on p. 50).

Determine and mark the good side of each board—the side you want to face out—and pair up the pieces into panels. Place the paired-up boards together and clamp them in a vise for jointing. Jointing the two boards at the same time ensures that any variation from square on the two edges is equalized and that the finished panel will be flat (see the photos and drawings above).

Use a jointer plane to make the edges straight, which may take a little practice. The key is weight transfer; as you start a cut, exert more hand pressure on the plane's front knob. As you push the plane along the length of the board, transfer pressure to your other hand and to the rear of the plane. The long, straight sole of a jointer plane will remove only the boards' high spots. The first several passes you take will probably result in less-than-full-length curls of wood. Once you are able to plane



a few full-length curls, sight along the boards for straightness or check them with a long straightedge.

Once the boards are straight, take a final pass with your plane, beginning about 3 in. from the front end of the boards and ending about 3 in. from the far end. This technique, called springing the joints, aids in gluing up boards. This incomplete pass creates a slight gap—two plane shavings wide—in the center of the boards when they are placed together on the bench for



**Two-handed bandsawing.** To avoid breaking a fragile edge, and thus making it difficult to restart a cut, hold the fingertips of your free hand lightly against the thin waste piece. To saw a square edge, stand directly above the cut so that you see the thin top edge of the saw, rather than either side of the blade.

clamping. Because the boards touch at each end, one or two clamps spring the middle of the boards together.

### Surface the panels and cut them square

Surface both sides of the panels to remove thickness-planer marks and to level the sides. As you plane, you'll find that what seemed like flat boards have lots of hol-

lows. The panels are too long for a smooth plane. Its short sole will ride down into the hollows in the surface. I prefer a No. 6 jack plane, which is slightly longer and wider than a No. 5. For surface planing, use an iron with a slight crown honed into it. A crowned iron, as opposed to one with 90° corners between the cutting edge and the sides of the iron, reduces the likelihood of planing sharp ridges into the surfaces of the panels. Instead, the surface will be slightly scalloped, almost unnoticeably so, which is a sign of handplaned work.

One at a time, joint an edge of each panel. Use a framing square to lay out the ends prior to trimming. Lay out the finished width at the same time. Measure corner to corner to be sure the panel will be square; if the diagonal measurements are the same, the panel has four 90° corners. Cut the panels to size using a rip saw along the length and a crosscut saw on the ends. When ripping, the saw's teeth should just touch the outside of the pencil line. This way, when you joint the edge to remove the saw marks, you will not be undersized.

Because the rough length of the boards are cut very close to the finished length of the glued-up panels, you'll be left with a thin strip to trim off each one. When using a handsaw, a slight twist of your wrist can break the thin strip, and trying to start the cut again in the middle of the edge can make it ragged and uneven. I like to use the fingertips of my free hand to push lightly against the strip to keep it from breaking (see the photo at left).

### Cut boot-jack ends and the stop joint

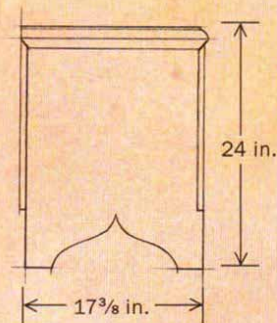
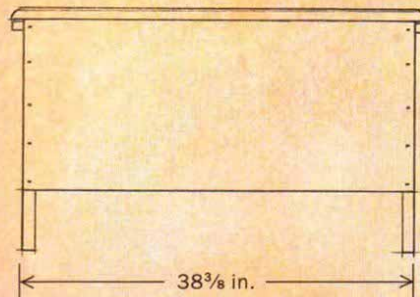
The graceful, curved feet of the blanket chest are referred to as boot-jack ends because their shapes are similar to a once-common device used to help pull off boots by jamming the heel into the V.

To cut these ends, first make a template half the width of the chest's side and draw a curve that pleases your eye. After tracing the pattern ends of the chest, cut out the pattern using a small bowsaw (see the top photo on p. 56). The saw works best on the pull stroke. Use two hands and try to create a fluid motion that uses almost the entire length of the blade. Clean up the cuts using a spokeshave and a chisel, working from the center out on each side so as to cut with the grain.

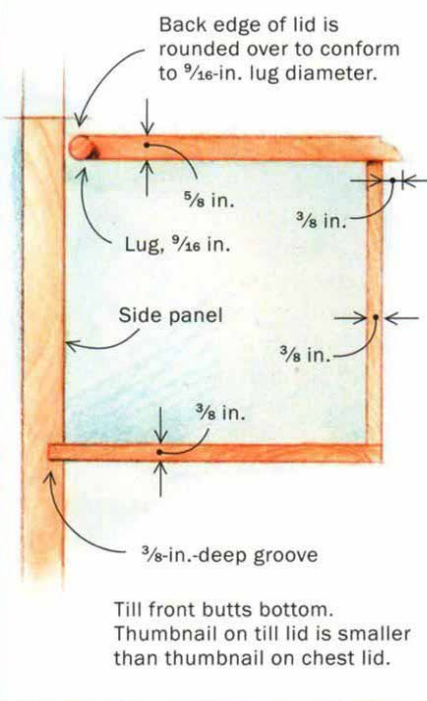
Lay out the stop butt joint using a square and a marking gauge. Cut the return with a

## HANDMADE BLANKET CHEST

Chests like this were as common as candles in period homes, which were notoriously devoid of closets. The chests were usually placed at the end of beds and stored cloth goods. Local woods, available in wide boards, were used to make these chests. The boards were held together with rabbets, dadoes and cut nails.



### TILL CONSTRUCTION



Drawings: Tim Langenderfer



Thumbnail molding (see detail below) cut on front and sides of chest lid. Back edge has no thumbnail.

Lid, 1 in. by 18 $\frac{1}{8}$  in. by 40 $\frac{3}{8}$  in.

Cleat, 1 in. by 1 in. by 18 $\frac{1}{8}$  in.

Till lid,  $\frac{3}{8}$  in. by 8 $\frac{1}{2}$  in. by 16 $\frac{7}{8}$  in.

$\frac{3}{8}$ -in. hole for lug

$\frac{3}{4}$  in.

Hinge rabbet

Stop butt joint captures front-panel rabbet (no stop cut on opposite edge of side panel).

Till bottom,  $\frac{3}{8}$  in. by 8 $\frac{1}{2}$  in. by 16 $\frac{7}{8}$  in.

Till front,  $\frac{3}{8}$  in. by 7 $\frac{5}{8}$  in. by 16 $\frac{7}{8}$  in.

See bottom corner detail below.

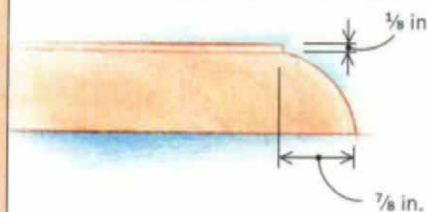
Bottom panel,  $\frac{3}{4}$  in. by 16 $\frac{7}{8}$  in. by 37 $\frac{3}{8}$  in.

Side panels, 1 in. by 17 $\frac{3}{8}$  in. by 23 in.

Front and back panels, 1 in. by 17 in. by 38 $\frac{3}{8}$  in.

8d fine-cut finish nails

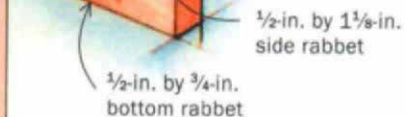
### THUMBNAIL MOLDING ON CHEST LID



Rabbet plane is used to make  $\frac{3}{8}$ -in.-deep cut, then edge is rounded over with block plane.

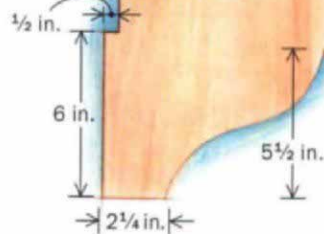
### BOTTOM CORNERS OF FRONT AND BACK PANELS

Cross-grain rabbet is cut  $1\frac{1}{8}$  in. wide. After chest has been assembled, block plane is used to trim edge flush with sides.



### BOOT-JACK ENDS

Boot-jack ends are cut with a bowsaw and finished with a spokeshave and chisel.







**Bowsawed bootjack.** A plywood half pattern, seen on the uncut panel, is used to trace the bootjack end that forms the blanket chest's feet. If the bowsaw jams in the cut, pop out the waste piece with a chisel blow to the panel's end grain.

dovetail saw. Cut the length of the joint with a fine ripsaw. The surface needs to be smoothed with a block plane to remove saw marks. By skewing a block plane, you can start close to the stop. Straighten out the plane as you continue the cut. Clean in to the stop using a chisel. Test the joint with a straightedge.

### Cut the rabbets and dados

The front and back of the blanket chest have a rabbet cut across the grain. An iron rabbet plane has an adjustable fence that regulates the width of the cut. Set the plane to cut a rabbet 1 1/8 in. wide—wider than the 1-in. width of the sides. The face edge will overhang the sides slightly and can be planed smooth after the chest has been nailed together. The plane's depth stop regulates the depth of cut; set it to cut a 1/2-in.-deep rabbet. The plane has a scribe (also called a nicker) under the depth stop. The scribe looks like a rounded cross with one corner missing. Each corner is sharpened and, when placed into the opening, projects below the sole. It is used when cutting cross-grain. The scribe severs the

wood fibers ahead of the cutter, eliminating dreaded tearout.

To avoid blowing out the end of a cross-grain rabbet, clamp a strip of sacrificial wood to the far side of the board you're cutting. And when starting a cross-grain rabbet, draw the plane backward so that the scribe makes a preliminary cut. When you push the plane, be sure to keep it square with the surface and end of the panel. You need to apply as much pressure in and down with the hand supporting the plane as you do with the one pushing it.

As the rabbet nears completion, the depth stop will begin to ride on the panel's surface. Usually, it comes in contact first on the side nearest you, as it is a natural tendency to decrease the pressure on the plane as your arms become extended. Make sure the rabbet has a consistent depth, then test the fit of the side panel into the rabbet. Cut all of the cross-grain rabbets, then cut the rabbets along the bottom of the front and back pieces to accommodate the chest's bottom panel.

The bottom panel of the chest also fits into dados cut in the side panels. In soft

white pine, you can cut a dado very easily using a utility knife and a chisel (see the photo below). Lay out the dado and clamp a straightedge along the mark. Score the line several times with a utility knife. Repeat on the other mark. With a chisel, pare the waste from the dado. When necessary, score the dado again and trim to depth.

### Making the till

Like most early blanket chests, this one has a till in one end. The till was used for storing small items that would be hard to find if placed in the chest itself. The till fits into stop dados cut in the front and back panels and in a dado on one side panel.

Surface-plane all till parts. Joint and cut them square. Thin wood presents a problem when cutting with a handsaw. The saws used in general work are too large and frequently break the piece. I own a number of small handsaws that are cut with 14 teeth per inch for small work.

The till has its own lid that hinges on two wood pins called lugs, which are made by removing all but a short rounded tenon from the lid's end-grain ends. Lay out the lugs with a try square and trace a 9/16-in. circle on the end of each lug. Cut away the waste with a dovetail saw and a small handsaw. Clean up next to the lugs by paring away with a chisel. Using a chisel, undercut the waste on the corners of the square lugs (see the left photo on the facing page). Pare away the waste to round the lug. Test its fit into a 5/8-in. hole drilled in a piece of scrap.

The till lid's front edge is molded with a very traditional profile known as a thumb-



**Scribe with a knife, then cut a dado with a chisel.** Soft white pine, used for this chest and for thousands of similar antique versions, cuts easily with sharp hand tools. After a little chisel work, scribe again with the knife to cut cross-grain fibers until the dado is 1/2 in. deep.



**Wood hinge for the till.** After clamping the chest together for a test fit, mark the dadoes for the till. The till's lid hinges on lugs, small round tenons made by removing a strip of wood from each end of the lid and rounding off the remaining stub with a chisel.

nail. Make this molding the same way as those on the chest lid (see below).

### Final assembly doesn't require glue

Use a square to lay out the dadoes for the till bottom and front, but do not cut them yet. First, test-assemble the chest. This not only allows you to check your joints but also to be sure that the stopped dadoes you've laid out will intersect. Run a clamp through the boot-jack ends to hold the bottom in place and the ends vertical. You can easily assemble the rest from this stage.

Disassemble and make any necessary adjustments. Cut the till dadoes the same way as those in the end pieces. Drill the  $\frac{5}{8}$ -in. holes for the lugs in the locations shown.

When you're sure of the fit, reassemble the chest with the till parts in place and nail the rabbet joints. I used 8d fine-cut finish nails from Tremont Nail Co. (800-842-0560). These nails look the same as those on the original chest.

Because the nails are visible, their spacing is important; use five nails per joint. Drill a  $\frac{3}{16}$ -in. pilot hole for each nail and run the long head with the grain.

Use a low-angle ( $12^\circ$ ) block plane to trim the rabbets' face edges flush with the chest ends. (Remember that you cut the rabbet joints wide on the front and back panels.)

### Make and fit the lid

Cut the lid to size and make the cleats. Trace the beveled ends of the cleats with a



**Start the thumbnail with a rabbet plane; finish it with a block plane.** The lid of the blanket chest has a thumbnail, a popular edge profile from the 18th century, on the two sides and the front. The thumbnail is made in two steps; first, cut a  $\frac{1}{8}$ -in. rabbet, then round over the remaining square edge with a low-angle ( $12^\circ$ ) block plane.

bevel gauge set to the desired angle and cut them with a dovetail saw. Strike the bevels with a low-angle block plane to smooth away the saw marks.

To make the thumbnail molding, start with a rabbet plane to cut a  $\frac{1}{8}$ -in.-deep rabbet on the lid's front and side edges. Again, it's a good idea to clamp a sacrificial waste block when planing end grain. Turn the rabbet into a thumbnail by using a block plane to round the square edge (see the photo above). Check to ensure that the profile is uniform along all edges. Attach the cleats using #10 by  $1\frac{1}{4}$ -in. screws.

The original chest had snipe hinges, which look like two cotter pins connected by their eyes. The leaves of the snipe

hinges were drilled through the chest and clinched over into the wood. Some early blanket chests used butt hinges, while others used blacksmith-made offset strap hinges. Ball and Ball (800-257-3711) sells the handsome wrought-iron reproduction strap hinges I used.

The location of the till makes it necessary to mount the hinges off center, a common practice in the 18th century. To mount the hinges, simply mark their locations on the chest, mortise the short leaves into the chest's back panel and drive in a handful of black iron screws. □

Mike Dunbar is a contributing editor to Fine Woodworking.