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Heirloom Blanket Chest



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Heirloom Blanket Chest

You'd never know by looking at it, but this charming cherry chest bypasses traditional mortise and tenon joinery in favor of a unique combination of rabbet and lap joints. These options make the chest easier to build without compromising strength. A finishing scheme of both paint and clear finish also lends a handsome effect to this project. It's sure to become one of those accent pieces your kids will want to inherit someday.

Winters can be just a bit chilly up here in Minnesota. Thankfully, modern housing keeps us warm and cozy, but our ancestors weren't so lucky. When the first hoarfrost settled on the cottonwoods, those hardy folks reached into Grandma's old blanket chest for another layer of warmth.

Our chest follows in that same tradition, providing attractive and functional year-round storage for winter blankets. It combines the warmth of natural cherry with a historically authenticated Windsor Green water-based enamel paint. Where it surpasses the original is in its hardware, which includes a pair of inexpensive but effective lid supports that were designed to protect children's fingers from pinches.

If you would like to create this family heirloom, the first step is to choose some top-quality stock for the lid.

Making a Flat Panel

The appearance of the solid cherry lid (piece 1) is one of the most critical features of this chest. If you're not used to creating wide panels, here are some pointers to help you over the hurdles.

Several narrow boards rather than a few wide ones make for the most stable panel, and some woodworkers

will even rip and re-glue wider boards to achieve this. The key is to have an uneven number of boards (or an even number of varying width boards) so that the panel doesn't have an eye-catching joint running right down the middle. You should also alternate the grain patterns by looking at the ends of the boards and making sure that every other crown points down. Biscuits or dowels are helpful to keep everything in line when clamping large panels like this. A center clamp (see *Figure 1*) will exert pressure on the center of a panel to keep it flat while clamping.

If you own a planer, you can make two small panels first, plane them, glue them up, and then belt-sand the last joint. But for a professional look, we recommend gluing up 4/4 stock and having a local cabinet shop run it through their wide belt sander.

The bottom of the chest (piece 2) is also a glued-up panel. Make this from poplar rather than cherry; it will be painted anyway, and poplar is less expensive. Making the lid and bottom together will save time on set-ups. While you're at it, go ahead and glue up some of your nicer cherry stock for the eight decorative panels.

The skeleton of our blanket chest is



Figure 1: A center clamp slides along the pipe of a standard clamp and applies pressure to the center of larger glued up panels.

poplar, an old favorite of cabinetmakers and furniture builders. It's a fast-growing hardwood with fine, closed grain, so it's commonly used as a base for veneers or as hidden or painted structural members.

Each side of the blanket chest carcass can be treated as a subassembly—a frame that contains panels. The front and back frames are identical, as are the two side frames.

The first step in building these frames is to cut the parts to size according to the *Material List* on page 90. All the cuts are square except for the short taper on the lower ends of the stiles (pieces 3 and 4). This taper can be laid out using the dimensions given in the *Stile Detail* on the next page and then cut to size on your bandsaw.

Heirloom Chest Exploded View

Planning Ahead: The Heirloom Chest Project

To complete the chest frame, the panels and the lid, you will need access to a table saw and a router table. You also may want to check with local cabinet shops to get a rate for running the glued-up lid through their wide belt sander. Plan on spending about 40 hours on this project. Aside from the hardware items and the moldings, you'll need:

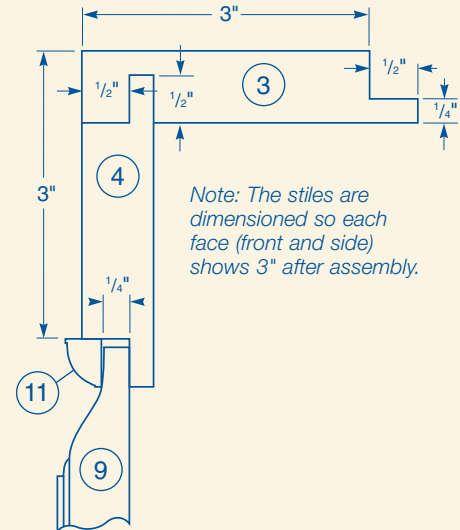
- 13 board feet of cherry
- 17 board feet of poplar

MATERIAL LIST – Heirloom Chest

	T x W x L
1 Lid (1)	3/4" x 17 1/4" x 38"
2 Bottom (1)	3/4" x 15 1/4" x 35"
3 Front and Back Stiles (4)	3/4" x 3 1/2" x 19 1/4"
4 Side Stiles (4)	3/4" x 3 1/4" x 19 1/4"
5 Front and Back Rails (4)	3/4" x 3 1/2" x 30"
6 Side Rails (4)	3/4" x 3 1/2" x 10 1/4"
7 Interior Stiles (4)	3/4" x 3 1/2" x 10 1/4"
8 Front and Back Panels (6)	3/4" x 7 7/8" x 10 1/8"
9 Side Panels (2)	3/4" x 10 1/8" x 10 1/8"
10 Front and Back Horizontal Moldings (12)	3/8" x 1/2" x 8"
11 All Vertical and Side Horizontal Moldings (20)	3/8" x 1/2" x 10 1/4"
12 Solid Brass Hinges (3)	1 1/2" x 2"
13 Lid Supports (2)	
14 Windsor Green Enamel Paint (1 quart)	

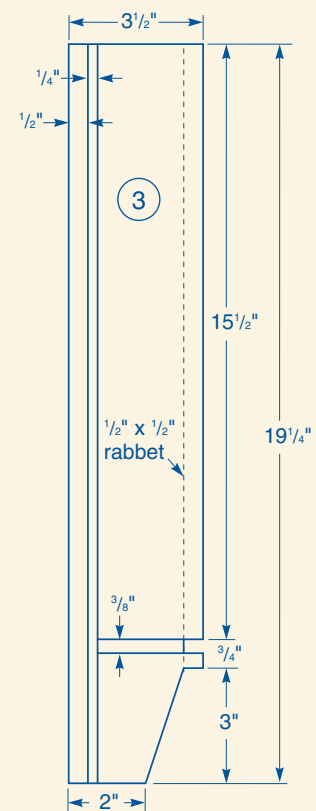
Corner Detail

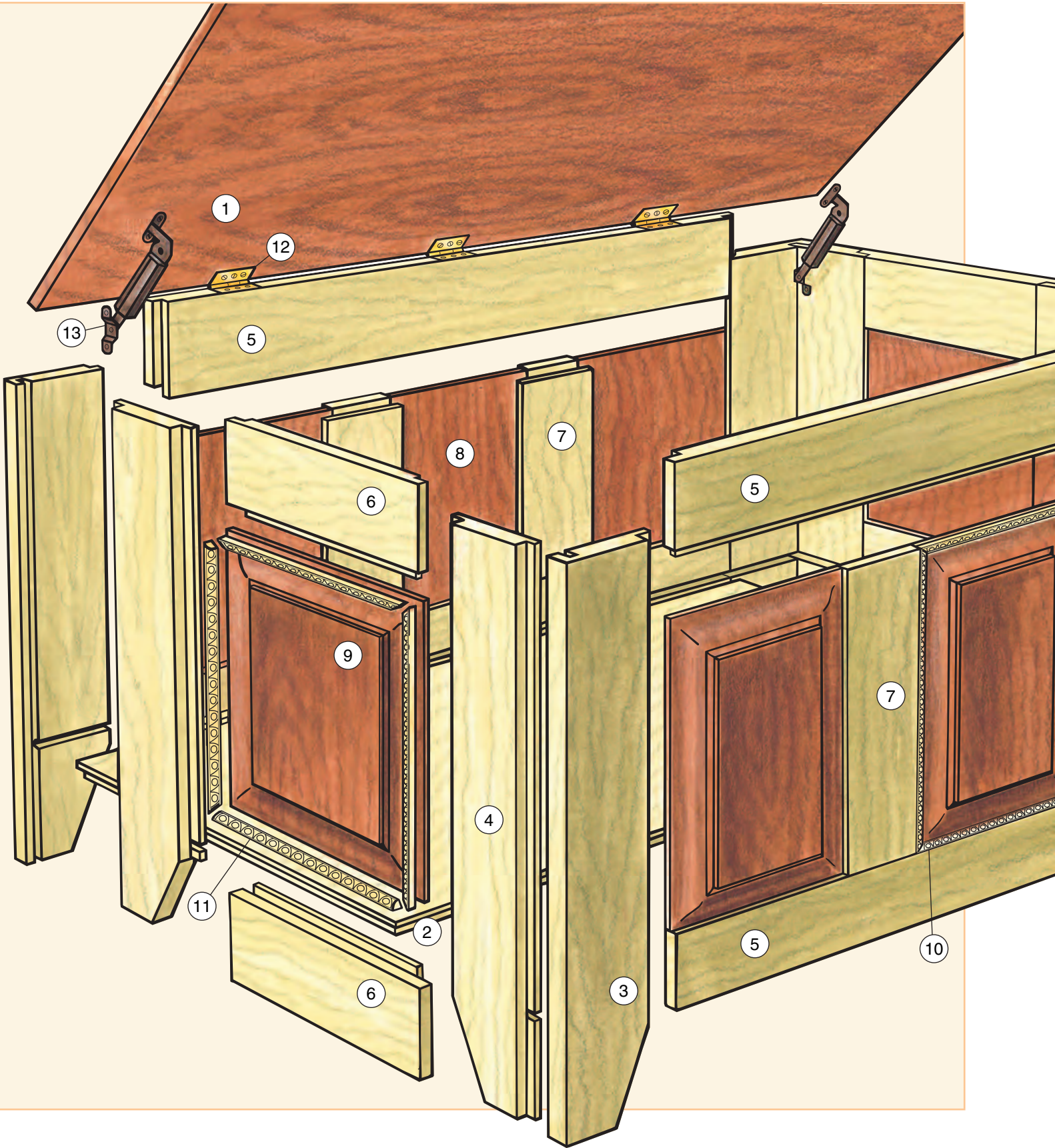
Top View



Stile Detail

Inside View





RAISING PANELS ON THE ROUTER TABLE

Vertical-style panel raising bits are the only way to go these days. They're safer than big horizontal cutters, easy to use and provide the home woodworker with plenty of profile options. The key to using these bits is to always support your workpiece vertically with an appropriately sized auxiliary fence.

For best results, your router should have at least a 1½ horsepower motor. The load exerted on these long cutters is substantial, especially in denser hardwood stock. This is why vertical panel raising bits are generally not available with 1/4" shanks.

Routers featuring variable speed controls are recommended by the bit

manufacturers. Variations in both the speed of the router's motor and the rate of feed can have a strong impact on the quality of the cut. Wood that is cut too quickly across the grain will have torn fibers, and an overly slow cut can leave you with burn marks. You can improve the quality of your work and reduce strain on the router bit by taking six or seven passes on each edge of a panel, moving your fence after each pass. To minimize tearout, rout the end grain first, then the sides. Chatter and chipping are two good indicators that your cut is too deep and that you should adjust your fence.



The keys to using vertical panel raising bits are to support them with an auxiliary fence on your router table and to take multiple light passes.



We used lap joints on the front, back and side frames, and rabbet and dado joints on the corners, as shown in the *Corner Detail* on page 90. There are two reasons for using lap joinery: It does a great job of securing the stiles to the rails, and at the same time it creates recesses for the cherry panels. Since we're using molding to hold the panels in place, a traditional mortise is not necessary.

To make the lap joints, insert a dado head in your table saw and set the blade height and the fence for a 1/2" x 1/2" cut. Mill rabbets on both edges of the side stiles and on the tapered edges of the front and back

stiles, as shown in the *Detail Drawing*.

This same rabbet is milled on one edge of the front, back and side rails (pieces 5 and 6) and on both edges of the interior stiles (pieces 7). The second half of the lap joint is a 1/2"-wide tongue that is milled on the ends of the rails and interior stiles. To make this tongue, decrease the blade height to create a 1/4"-deep cut and use your miter gauge to maintain squareness.

With the dado head set up, you can now create the tongue, which runs around the edge of the bottom panel. Set the depth of cut to 3/8" and form the 1/4"-wide tongue. There is one more operation that you can perform

with the dado set installed in your saw: forming the grooves in the front and back stiles to accommodate the tongues you just milled on the side stiles. These grooves will require an adjustment in the width of the kerf, so remove the dado head and reset it to 1/4". Now set the height to 1/2", align your fence 1/2" away, and create the grooves (see *Stile Detail*).

Assembling the Frames

With all the initial machining done, it's time to assemble the four frames. Gluing the lap joints can be tricky because the joint tends to buckle as the clamp applies pressure. One way to

avoid this problem is by using C-clamps to hold a short length (about 8") of scrap on either side of the joint. Set the C-clamps so they're finger tight only; this way you can still close the joint under pressure from the pipe clamps. Slip a piece of wax paper between the scrap and the frame so excess glue wouldn't secure the scrap to your workpiece. When the pipe clamps are snug, tighten the C clamps fully to hold the two cheeks of the lap joint together while the glue cures. As you assemble the frames, check for squareness by measuring diagonally across the faces, and adjust your clamps accordingly.

With all four frames glued up, you can now run the grooves that hold the bottom panel (see *Figure 2*). This is best done with a router rather than a table saw because two of the four grooves are stopped before they emerge from the end of the frame.

To make the two stopped dados, equip your router table with a 3/8" straight bit and set the depth of cut to 5/16". Stick some masking tape to your router table fence and mark the location of the router bit on it: You'll have two marks 3/8" apart showing the points where the bit enters and exits the workpiece.



Figure 2: Align marks on your router table fence and the stiles to locate the two stopped dados that will hold the bottom panel.

The top rail of each frame will run along the fence, which should be set 15½" from the bit. Using the marks on

QuickTip

Winning the Air Hose Battle

Air tools are wonderful, but battling a twisted mess of air hose is not. There's an easy and inexpensive remedy to the problem, and all you need is a 5-gallon bucket with a lid. Drill a 1" hole in the bottom for the male end to stick out and a 1" hole in the cover to push the hose in. Thread the male end through the cap and then through the bottom of the pail. Put the lid on the bucket, and push the rest of the hose in. Most hoses will coil up easily inside. Now you're all set to plug the male end of the hose into your air compressor and pull out only as much hose as you need. The rest stays out of sight and neatly ready for use. Better still, you don't have to buy an expensive hose coil.



the masking tape as a guide, slowly push the piece down on the bit so the leading edge is 1/2" beyond the left-hand mark. Feed the piece from right to left, stopping when the right edge is just 1/2" to the right of the two marks. Square up the stopped dados with a sharp chisel.

Assembling the Carcass

Now it's time to start bringing the chest together. Begin by laying the back frame flat on your workbench with the outside face down. Rotate the frame until the ends extend beyond the edges of your worktop (so you can clamp it later), and then drop the bottom panel into its groove. Don't glue the panel in.

The two side frames do get glued in, and they're inserted next, followed by the front frame. Then clamp every-

thing together. If you are a relatively new woodworker, you should be aware that many people tend to overtighten clamps, squeezing too much of the glue out of the joints. Try to resist those last two turns on the crank; just make the joint snug while the glue cures. Be sure to check and recheck your diagonals now as well, adjusting as necessary to keep everything square.

Installing the Panels

With the carcass assembled and waiting for its cherry panels (pieces 8 and 9), this is an excellent time to apply paint to all the poplar areas. Doing so now eliminates the need to apply masking tape to the panels later. While you have the paint out, you should also coat the embossed moldings (pieces 10 and 11).

Your panel stock should be ready by now, so go ahead and trim the eight panels to size, lightly marking the best ones for the front and sides. The raised panel is created using a vertical panel-raising bit in the router table (see the *box* on page 92). Make a number of passes, moving your fence 1/16" further back each time until you have 1/4" of stock left on the lip. Rout the end grain first, then the long grain, to help minimize short-grain tearout.

Finishing Up

The eight panels and the lid should be sanded and finished prior to installation. An excellent finish for cherry is several coats of natural Danish oil, which quickly develops the rich patina of the wood.

To miter the ends of the moldings

Quick Tips

Speedier Joint Setups Take Planning

When you're designing the joints in a piece of furniture or casework, think not only how they will look and work, but also how they will be machined. For example, if you install a 3/8" dado head in the table saw and set the height at 3/8", you can cut both parts of a rabbet and dado joint without ever changing your setup. If you place 3/8" dowel joints and 3/8" shelf supports in the same relative locations in a cabinet, you can use a single drill press setup for both tasks. And if you make stiles, rails and trim pieces the same width, you can rip and joint them all at the same time.

Switch to Plywood when Making Spline Joints

Spline joints are a great way to join two long edges. But while most woodworkers have no problem routing the grooves for the spline, they often let the ball drop when it comes to making the actual spline. A ripped piece of hardwood won't work, as it will split along the grain — right where you need the most strength. Plywood is the perfect answer: its alternating plies prevent splitting, and it comes in thicknesses that are perfectly suited to the router bits you use to make the grooves.

A MITERING JIG FOR SMALL MOLDINGS

you should build the small jig shown at right. The groove in the jig holds the thin, flexible stock steady while you run it across the table saw. Use a fine-tooth plywood blade to make these cuts.

Securing the panels in place may prove to be a little tricky. The embossed molding is relatively thin, and the 1/2" rabbet has to accommodate both the panel and the molding. Set the chest on its back so you can work on a flat surface as you install the panels. Once all the moldings are mitered to the correct length, glue and tack them in place with brad nails, trapping the panels in their frames. Set and fill the nail heads and then touch up the paint.

Mark the locations for the hinge mortises on both the lid and the carcass and use a router equipped with a straight bit to remove most of the waste. Finish up with a sharp chisel. Drill pilot holes for the screws, and install the hinges (pieces 12).

The lid supports (pieces 13) come in left and right configurations and are relatively easy to install. You'll find complete instructions printed on the bag. Simply measure for the screw locations and surface-mount each support.

Other Handy Uses for this Chest

Storing blankets may not be the only use for this chest; with a little imagination you can adapt it to suit a number of different uses. For example, cleats installed a few inches from the top could support a drop-in tray for linens or placemats. It's also just about the perfect size for a toy chest, although in that case you may want to build the whole piece out of poplar and paint it in brighter colors. Either way, when you complete this chest you're bound to end up with an heirloom that will get passed down through future generations.



Mitering small moldings can be dicier than it looks, especially on a table saw. This easy-to-make cradle attaches to your saw's miter gauge and holds the workpiece safely during the cut.

The jig is made by plowing a 1/2" groove in a piece of 1" x 3" scrap. The wood left under the groove should be only 1/8" thick to prevent small cutoffs from falling back into the blade.

Set your miter gauge at 45° to the right, attach the piece of scrap to it and run the assembly through the blade. Now reset the fence at 45° to the left, switch miter slots and repeat the process. When cutting miters on the small moldings, line up your mark with the edge of the jig for a perfect cut every time.

