

A photograph of a miniature wooden chest, likely made of pine, with its lid propped open. The chest is filled with various sewing supplies, including spools of thread in different colors (yellow, red, blue, pink) and a small wooden spool. The chest has a decorative, scalloped base. It is placed on a blue and white patterned rug. In the background, there is a wicker chair with a dark, floral-patterned cushion and a teddy bear sitting on a dark wooden shelf. The scene is set against a light-colored wall.

Pleasant Hill Shaker Miniature Chest

Reproductions may
have room for
improvement.



Photo by Al Parrish

Furniture reproductions are never exactly like the originals on which they're based. In some cases, that's because the skill and artistry of the reproducer don't measure up to the skill and artistry of the original craftsman. In other cases, it's because the reproducer consciously made the decision to vary from the original, substituting, for example, curly maple for cherry or machine-cut dovetails for hand-cut dovetails. In other cases, it's because the reproducer decided that the original could be improved on in some way.

The last is true of my version of this delightful little blanket chest from the Shaker Village of Pleasant Hill, which is located outside Harrodsburg, Ky.

The original was appealing in several ways: diminutive size, charming country-style details and solid joinery. But it also had some problems. Instead of the chest bottom's edges being let into grooves cut on the inside surfaces of the four sides of the case, the bottom of the original was simply nailed inside the case with the result that, when the solid-wood bottom underwent inevitable shrinkage across its width, gaps appeared on either side, visible when you look into the case from above. Also, the material was, I believe, simply too thick for this relatively dainty form. The material of the original was dressed to a chunky $\frac{7}{8}$ " thickness that would have been more appropriate for this chest's bigger, full-sized brothers.

I opted for $\frac{5}{8}$ " material throughout, and I set the edges of the bottom into grooves, although in the drawing, I showed the original $\frac{7}{8}$ " material.

I have a theory about the original. I think it might have been an apprentice piece. The master in the shop would have discouraged the youngster from testing his skills on a full-sized piece with a full-sized appetite for material, directing that youngster instead to this little miniature.

At least that's my theory.

So why would I reproduce a piece that I think might have been the work of an apprentice?

Well, I like it.

The Big Three-hearted Tree

Material selection and arrangement is always critical, but it is, I think, doubly so in the case of a simple piece like this on which there isn't any carving or veneering.

When I'm gluing up panels for such a simple piece, I begin by pulling boards with similar color and figure.

I then begin to lay out the cuttings on the surfaces of those boards, making an effort to ensure each panel will be glued up of pieces taken from the same board. This means, for example, that the five pieces from which the lid is glued up were all taken from the same board. Three 25"-long sections of that board came together for the lid's main panel. The breadboard ends were then ripped from the offcut left behind. This approach is critical, I believe, because even though all the boards I might pull for a particular piece will have similar color and figure, the very best matches are those taken from the same board.

We woodworkers are often tempted to cut our stock from the edges of our boards. That is, after all, the logical way to proceed.



Step photos by the author

If possible, cut lengths from the same board for each piece of a panel you are going to glue up. This strategy offers the best possible color and figure match.

by Kerry Pierce

Kerry is the author of "Authentic Shaker Furniture" (Popular Woodworking), "Making Shaker Woodenware" (Sterling) and numerous other books. He teaches Shaker chairmaking at the Marc Adams School of Woodworking.

You joint one edge, set the table saw to the desired width, then rip off what you need. That's an efficient use of time and material, but it doesn't always result in the most visually pleasing arrangement of material. My method is to draw rectangles anywhere on the boards that have the kind of color, figure and absence of defects I'm trying to attain. Then I band saw the first long edge of the piece, joint that edge, and cut the other side on the table saw.

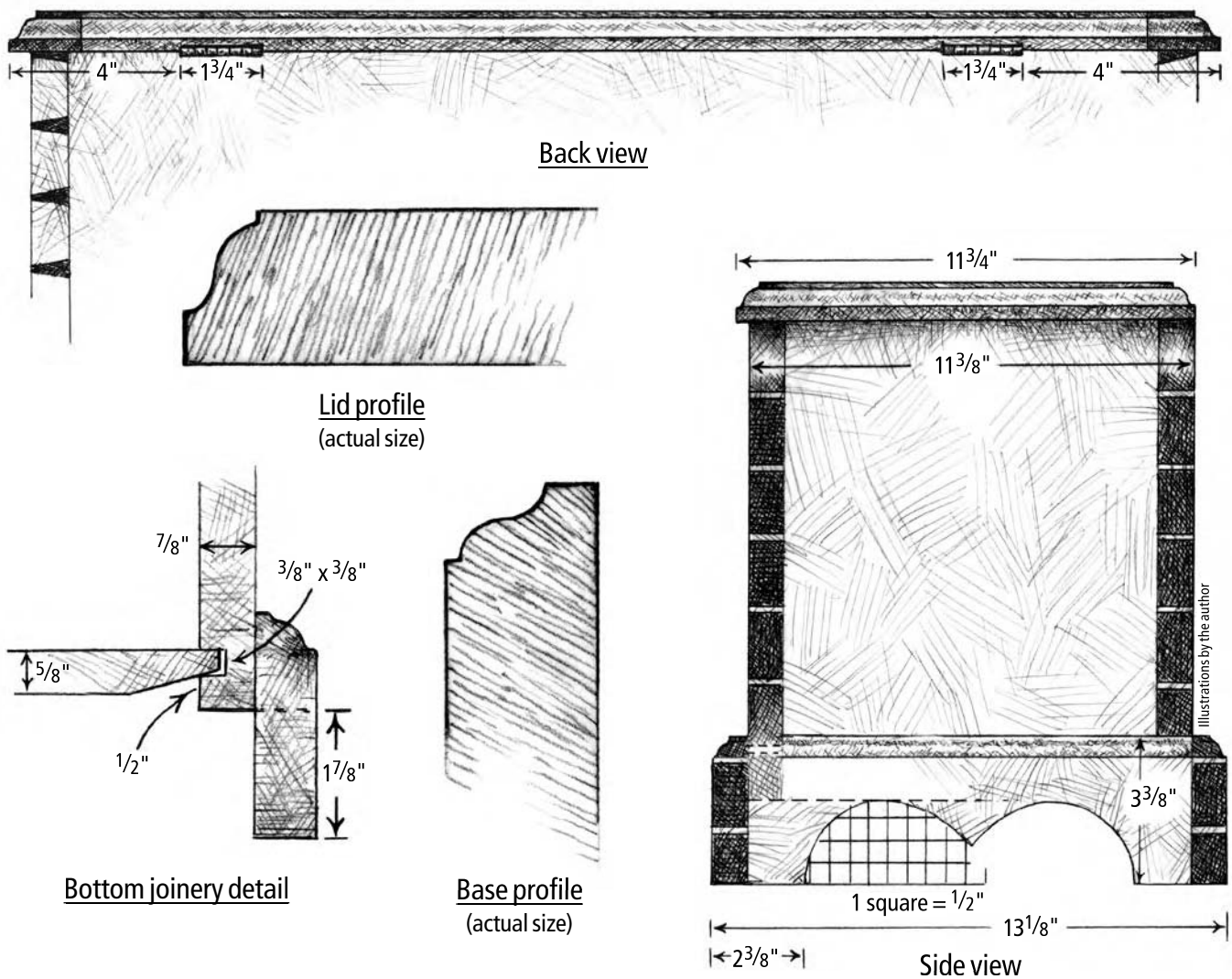
I consciously look for opportunities to employ material exhibiting a mix of heart and sapwood, particularly in the cases of walnut

and cherry where the contrasts are so dramatic. However, the use of sapwood places on me the obligation to use that material in some kind of aesthetically coherent manner. In the case of this blanket chest, I decided I would use sapwood only on the lid and only in a very controlled context. Specifically, I would create two swaths of light-colored material running the full length of the lid, stopped and held visually in place by breadboard ends cut from heartwood.

To create these two swaths of light-colored material, I aligned the material so that the joints



When you apply significant clamping pressure to a glued-up panel, the pressure can cause the panel to cup. Cleats can be clamped to the panel as shown to eliminate that cupping.





After squaring lines across the end grain, I cut the tails freehand, without first marking their angles. This gives me joinery that is certifiably handcut, with each tail just a little different than the one beside it.



Because I cut the pins and tails a little long, I use cleats to apply clamping pressure behind these elements when I'm bringing a case together.

of the dovetails and assemble the larger box around the chest bottom (which you have already raised so the edges of that bottom will fit in the grooves you've plowed for its edges). Check the case for square by measuring the diagonals. If there is an error, correct that error by racking the longer diagonal until the two measurements are the same (within maybe $\frac{1}{32}$ "). Then wipe away all the glue squeeze-out on the inside and outside of the chest.

Once the glue has cured, fix the chest to your bench and, with

a plane, pare down the surplus length from the pins and tails of your joinery. Prior to cutting a set of dovetails, I set my marking gauge so that there is at least $\frac{1}{32}$ " of extra length on these elements so I can plane the surplus flush without retaining the end grain tear-out that is part of every saw crosscut. This work could also be done with a belt sander.

I believe this planing is the most difficult part of the joinery process because it takes a fair amount of force to power even a sharp, well-tuned handplane

through the joint's end grain. That means the case must be securely fastened to your workbench.

Next, assemble the four parts of the plinth using dovetails here as well. I chose to cut the joinery before I shaped the moulding because I wasn't sure how I would mark the dovetails on an edge that had already been shaped.

Check the fit against the case dry to ensure there are no gaps. Then run the stock past the bit on your router table to create the moulded edge. Before you glue up the four parts of the plinth, dry assemble them one more time, and mark the shape of the bracket feet at the corners. You can very quickly remove most of the waste on your band saw.

Then glue up the plinth and, while the glue is still wet, attach the plinth to the case using $1\frac{1}{4}$ " x

#8 drywall screws from inside the bottom. (I probably could have gone with 1" screws because the two pieces I'm joining here have a total thickness of only $1\frac{1}{4}$ ", but I wanted the holding power of the longer screws, so before I used them, I touched the tip of each to my grinding wheel to reduce the length to a bit more than $1\frac{1}{8}$ ".)

The moulded corners of the plinth will require a little fussy work with hand tools in that end section. I used a shoulder plane to extend the little fillet at the base of the moulded edge all the way to the corner. I then formed the rest of the moulded edge with a paring chisel and a carving gouge. And a little sandpaper.

I couldn't really tell how the original lid's breadboard ends were attached. What I can say



Check the fit of the plinth elements around the case before you glue them together. Notice that I haven't yet cut the moulded edge on the top edge of the pieces to the plinth.



I used a Skil $\frac{5}{32}$ " Roman ogee bit to cut the moulded edge. I used the same bit with the same set-up to cut the moulded edge around the assembled top.

is this: There's no evidence of a tongue-and-groove joint (the joinery I would have expected). That is, there is no tongue visible on the front edge of the lid. It's conceivable, however, that the tongue and groove were stopped, but that's a level of joinery sophistication I found nowhere else on this piece. In fact, for the most part, the joinery on this chest is simple and straightforward—very Shaker. I chose to use a 20th-century standby, the lowly dowel. As you can see in the picture at right, I applied glue only to the three center dowels. My thinking is that might permit a bit more movement across the grain of the center panel. While you might normally drill elongated holes for the dowels, I've found that their location and slightly undersized fit allow plenty of room for wood movement.



Before you glue up the plinth, mark and cut away on your band saw the surplus stock at each corner.

All lids/tops cup. It's a natural law with results as predictable as gravity. It doesn't matter how you align the grain when you're gluing up the lid/top. It doesn't matter how carefully the material is seasoned or whether you've finished both the top and bottom surfaces. In most casework, you can fasten the sides of the top to the sides of the case with good results, but you can't do that with a lid like the one on this chest. Many years ago I began installing cleats on the undersides of unsupported lids, and they do work, but they must be wide enough to resist cupping, and for best results you have to cheat with your cleats. Before I install them, I plane a 1/16" crown on the edge that will contact the underside of the lid. This gives me some leverage in my war on cupping. I may not use it all at once. If for example, there isn't much cup-

ping on the day I install the cleats, I may install them with either end just a bit above the surface of the lid. Then later, if I need to, I can draw them down.

But I should point out that these cleats are not on the original lid, which is, I should also point out, cupped.

Haste Makes Slop

Take your time when installing the hardware because a little haste here can ruin an otherwise handsome project.

Begin with the hinges. In the finished piece, the back side of the lid is aligned with the back side of the case. Next attach the two lid stays. These nifty bits of hardware were not on the original, but I think it's a mistake to attach any lid without also attaching something to prevent the lid from accidentally flopping all the way back and maybe pulling out the hinge screws.

Woodcraft sells an escutcheon almost exactly like the one on the original (Part #02U04 \$7.50). The lock, however, I bought from Woodworker's Supply (Part #115-841 \$19.99). I like this little lock because the post on the strike plate simplifies the installation process. Lock-and-strike-plate alignment can be frustrating.



Use clamps (and protective clamping blocks) to bring the plinth together and—this is important—screw it to the case before the glue in the dovetails cures. (If you look closely, you can see the bevels around the field of the raised panel on the chest bottom. These bevels were cut freehand with a jack plane.)



I applied glue only to the center three dowels, thinking that might allow a bit more movement across the grain of the center panel.

There is little room for error, and if you do make a slight mistake or if there is a slight mistake in lock manufacture, you may find yourself muttering in the shop.

Finishing

Unfortunately, finishing is all about sanding. Lots of sanding. Use a sanding block to keep the surface level and start with #100 grit, progress to #150, then #220, and finish-sand twice with #320.

In a small shop like mine, with-

out a dedicated finishing room, I think woodworkers are much better off with wipe-on finishes. I've used many different brands, and all performed well. In the case of this chest, I tried Minwax Wipe-On Poly for the first time, and two coats built up enough surface to lay a foundation for my paste wax. I sanded with #400 grit wet/dry paper after the first coat of poly. I sanded with #600 grit wet/dry after the second coat. I then applied the wax. **PW**