Shaker-style Hanging cabinet

Michael T Collins makes a small hanging cabinet with a pegboard

Many years ago I became fascinated with Shaker furniture for its simple, no-frills utilitarian design. Books about the Shakers are always littered with photographs of rooms prominently displaying one or two pieces of furniture standing on the signature wide-boarded wood floors of the time. But, looking beyond the 'starring' piece, there are always other furnishings kept out of the way by hanging them on those characteristic shaker pegs.

WHAT YOU WILL NEED:

Tools

- Rip and crosscut saw
- 9mm bevel edged chisel
- 19mm bevel edged chisel
- 6mm mortise chisel
- Marking and cutting gauge
- Combination or rebate plane with 12mm and 19mm irons
- Router plane
- Spokeshave
- Brace and 25mm bit
- Rounding plane 12mm
- Egg beater drill and 3.2mm and 1.5mm brad point bits

Wood

- Pine (*Pinus* spp.)
- White oak (*Quercus alba*)

For this project the cabinet will be made from pine for two reasons; it is readily available and should you wish to paint the finished cabinet, two coats of milk paint will work perfectly, making secondary wood perfect for this project. The pegboard and pegs, on the other hand are made of white oak.

Supplies needed

Pair of no-mortise hinges and Shaker knobs and Pegs available from **www.rockler.com.**

PHOTOGRAPHS BY MICHAEL T COLLINS

1 First, cut all pieces to final dimensions with the exception of the stiles and rails, which will be left long and custom fitted later. Mark all parts with cabinetmaker's marks. The first step is to cut the rebates on the sides. Each side has three rebates, one for the top and bottom and one for the back panel. Start by making sure that all ends are at 90° – this is critical if the cabinet is to be square. Using one of the 12mm thick pieces and a try square or combination square, mark the location of the top and bottom rebates. Do the same for the shelf, marking the location in the centre of each of the sides.

2 From the face side, use a cutting gauge to mark the 6mm depth of the housing.

Different ways to cut the housing

3 **Method one:** Deeply score the sides of the housing.

4 Then, with a wide chisel create a 'v' notch on both sides, chop down along the score line and pare from the centre towards the chop line (creating a triangle in the centre). Repeat this process until you have chiseled down to the floor of the housing. Now, with a narrow chisel, pare away the waste. Use a combination square to check the depth (slight concavity in the centre will insure the ends are a perfect fit).

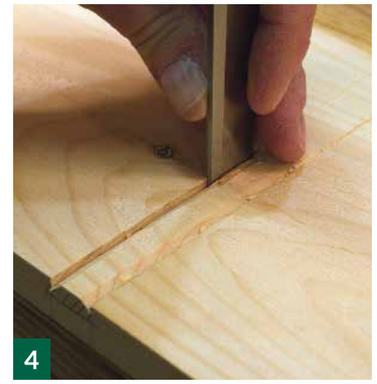
5 **Method two:** Deeply score the sides and create the 'v' notch as before, then on the waste side saw down to the 6mm mark. Now remove the waste with a router plane. I like to remove the waste by coming at it from both ends, thus eliminating tearout when exiting. The rebate for the top and bottom can be done using method one or two. If using a router plane the router will need to be supported on the free end with a piece of wood of equal thickness.

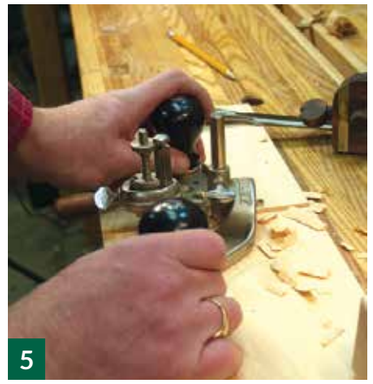
6 My preferred method is to remove the waste using the combination plane with the knicker set so that the fibres are sliced. Remember to pull back across the wood before making the first cut and always plane from the point farthest away from you, working back towards your body. Cut the long rebate at the back using the combination plane – there is no need to set the knicker here. Once all the joints are cut, finish the inside surfaces with a smoothing plane or 180 and 320 grit.

7 Dry fit the carcass and check that all the sides are parallel – if the housings and rebates are not the same depth, the sides will either be hourglass or barrel shaped and the shelf and tops will need to be adjusted. Because the top and bottom joints are mostly end grain to end grain, the glue can be supplemented with nails. Toenailing them in (angles like dovetails) will create a much stronger joint. Clamp the carcass and make sure that it is square (I use a shopmade pinch rod to determine squareness). Don't over clamp and remove after roughly 30 minutes.

The face frame

8 The face frame on this cabinet is about as easy as it gets. It consists of just two stiles glued to the front edge of the sides. It is important that the stiles are parallel to each other and ➤





flush to the side pieces. Clamp and set aside. Once dry, plane all faces flush.

The back boards

While most Shaker cabinets of this size would have a single solid backboard, here I have opted for three separate pieces that will be ship-lapped. The advantage of this construction method is that any seasonal movement can take place and yet the back of the cupboard will not show gaps. Tongue and groove would also work here. Position the three boards so that they span and overlap the back of the cabinet.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9 Mark on the end grain the overlap then, using the combination plane, create matching rebates. The centre board will slide under the two outside boards and will be held in place with three screws in slots.


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The top and bottom

10 Give both the top and bottom pieces a nice curved profile with a rounding plane. Start by marking 6 x 6mm outline on the lower and upper edges of the top and bottom boards respectively. Plane a 45° bevel between these two marks.

11 With a rounding plane and your fingers acting as a fence plane a cove that spans the bevel you just created. Always plane end grain first, working from front to back, this way any tearout will be towards the back and if there is any on the front edges it will be cleared up when the front edge is planed.

12 Simply glue the bottom into place, making sure it is centred and flush with the backboards. The top is centred and rested against the back board. Mark the left and right extent on the board.

13 We need to remove the section in the middle of the back so that the top board wraps around the back boards. To do this, employ a simple trick that was used when making the drawer in issue 11 (making a jewellery box). Rip the top so that the 12mm section you just marked is removed. Plane the surfaces and then cut off the two ends. Re-attach the two 'nubs' by applying a small amount of glue and creating a rubbed joint. Once dry, clean up, glue and clamp the top in place.


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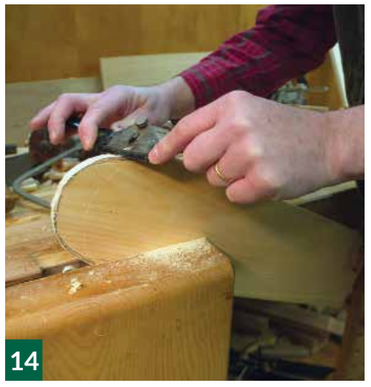
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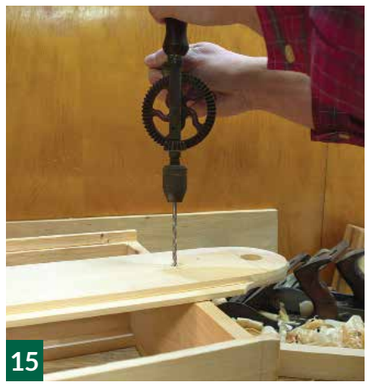
Shaping the back

14 Use the profile given in the diagram, lay out the shape and then with a bow saw or coping saw cut it out. Refine the profile with a spokeshave, remembering to work with the grain rising away from you.

15 Drill a 25mm diameter hanging hole. The back can now be fastened into place. Nail the two sides in place against the carcass sides. Then, position the centre board between the outside boards. Drill three countersunk holes, then elongate the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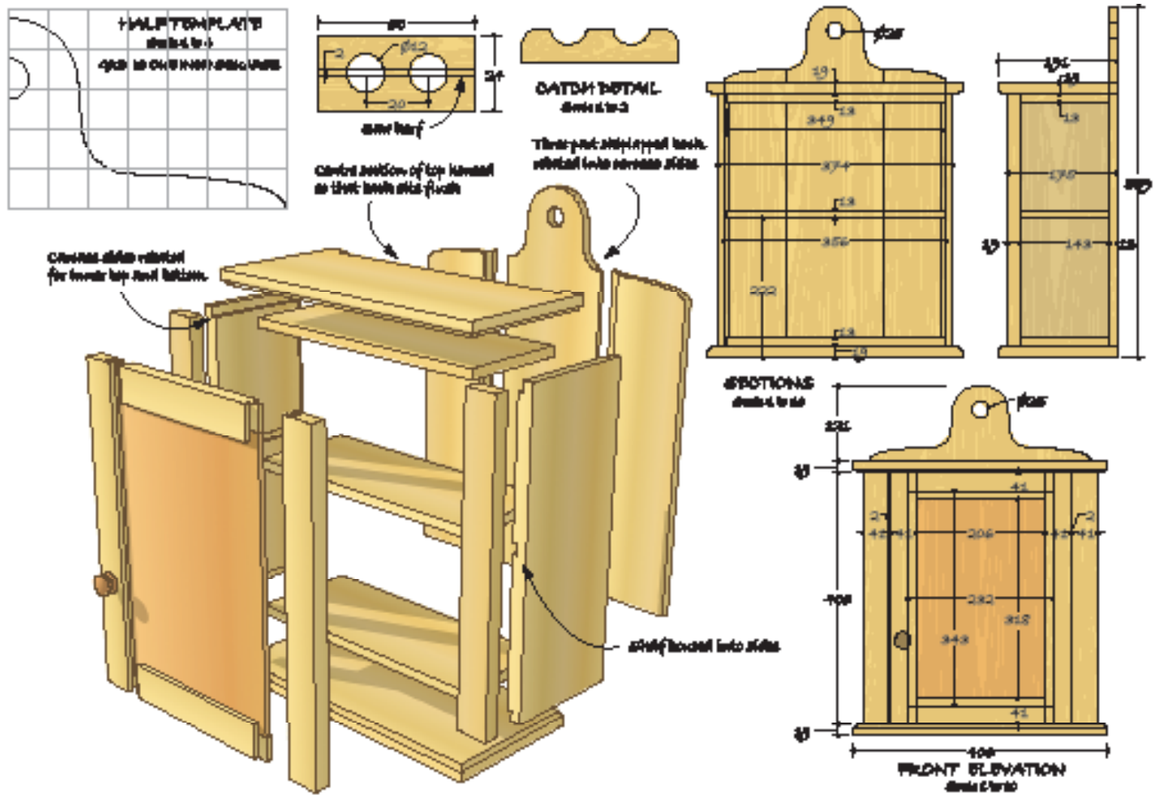

hole with a sideways rocking motion. Secure the centre board in place with a steel screw.

16 The resulting corner joint helps characterise Shaker style


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The panel door

17 Give the stiles and rails the same treatment – centre a 6 x 12mm groove on the edge running the entire length. On the rails we are going to create what is called a 'stub tenon'. The beauty of a stub tenon is that a standard mortise does not need to be chopped. From the face side, mark the location of the groove with a mortise gauge set to 6mm in the centre. Using the combination plane with a 6mm cutter set to a depth of 12mm plane a groove in each of the doors stiles only.

18 When making doors I generally use a story stick (see making a panel door, issue 5) but this frame is simple and just requires the length of the rails to be the distance between the stiles plus 25mm for the two 12mm stub tenons. It's a good idea to place the hinges in the frame so that the true length of the rails can be found. ➤


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Cut the rails to size, allowing for the stub tenon and then with a marking knife and try square, mark the shoulders. Without changing the setting on the mortise gauge from the face side mark the stub tenon on the end grain.

19 Normally I would cut the shoulder first and then saw the cheek, but this would make planing the groove difficult, so instead cut the cheeks first but leave attached. Now you can plane the groove as you did the stiles. Once the groove is planed cut the shoulders. Clean up any wood left from planing. Repeat this for the other ends of the rails. Test fit the frame.

20 The panel is made from a piece 6mm oak ply to contrast with the pine frame. Cut the panel to size so that it is the width of the rail plus the depth of the two grooves in the stiles less about 3.2mm for movement. Disassemble and clean up all the internal edges – ease all the sharp corners with a couple of passes of a fine set block plane or 320 grit paper. Clean up the faces with a smoothing plane or sand. If you are going to apply a finish now is the time to apply it. Be particularly careful not to apply finish where the joints are. Apply glue to only the stub tenons and assemble the frame applying some clamping pressure – check for squareness. Once dry position the hinges and test fit. It's a good to chamfer the inside long edge opposite the hinges so that it clears the face frame when closing.

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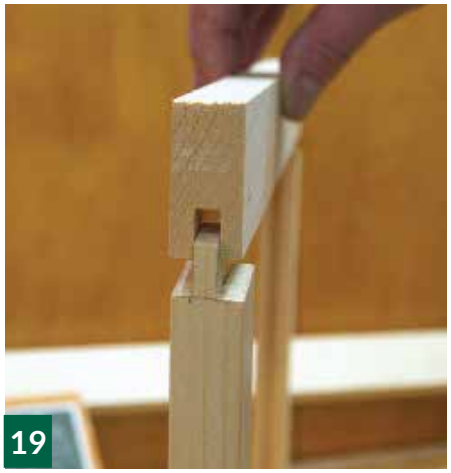

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Making the door catch

21 Take a scrap of pine about 50 x 12mm and drill two 12mm holes as per the diagram.

22 Now cut the piece in two, slightly off centre.

23 Cut to length and pare away the sharp edges. Drill a 3.2mm hole in the centre and secure to the face frame with a steel screw.

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Finishing

I used a simple Shaker knob. The Shakers painted some of their furniture in muted colours. However, the outside of this cabinet is finished with a couple of coat of furniture wax.

The peg board

24 The pegboard is a piece of 19 x 125 x 600mm oak with a decorative profile. Cut a 19 x 3.2mm rebate all the way round and then round the profile with planes or a 19mm hollow plane. Three shaker pegs are glued into 9mm holes. ■

In the next issue… Michael make a Moravian chair

Michael T Collins

British-born Michael has been working with wood off and on for 40 years. He moved to New York in 1996 and over the years, has made bespoke furniture, including clocks, inlay work, Adams fireplaces, book cases and reproduction furniture.
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