

Shaker-style Wall shelf with pegs

Michael T Collins pegs his reputation for quality on this Shaker-based project

PHOTOGRAPHS BY MICHAEL T. COLLINS

We have lived in our house for over 20 years and the entry-mud room can get very cluttered with coats, gloves and scarves, especially during the long winter months. Several years ago I made a simple coat rack with a few hooks, but it came time for a change. We needed something that could not only handle the number of coats my wife has, but also the keys and other paraphernalia that just get dumped on entering the house. It was decided that we needed a new shelf and coat rack.

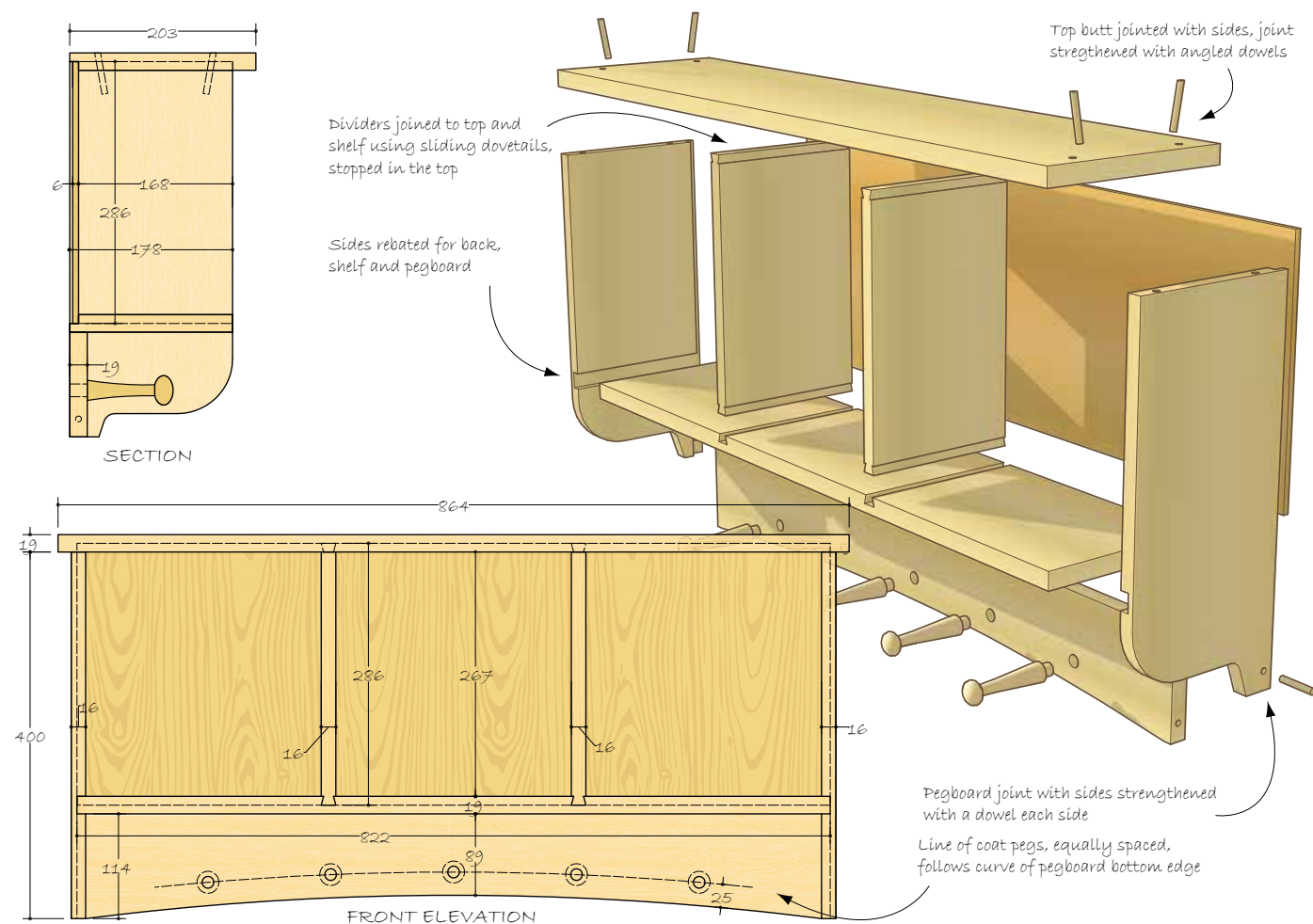
The Shakers had a very minimalist lifestyle and this way of life was reflected in the style of their furniture; minimalistic, no frills and elegant, which centuries later is still very popular and highly sought after. Most Shaker furniture is now in private collections or in museums. It has a long and detailed history, one that continues to be remembered by those who appreciate fine furniture as works of art as well as highly functional objects. ➤

WHAT YOU WILL NEED: Tools

- Crosscut saw
- Router plane and ¼in cutter
- Chisels – 10mm, 20mm & 25mm
- Mallet
- Combination or shoulder plane
- Bevel gauge
- Carpenters square
- Cutting and mortise gauge
- Marking knife

Wood

- 1 top – 19 x 200 x 860mm
- 1 bottom – 19 x 180 x 820mm
- 2 sides – 16 x 180 x 390mm
- 2 shelf dividers – 16 x 170 x 285mm
- 1 peg board – 19 x 100 x 820mm
- 1 piece Baltic birch back – 6 x 285 x 822mm
- 5 screw-in shaker pegs available from www.rockler.com (or can be turned on a lathe)



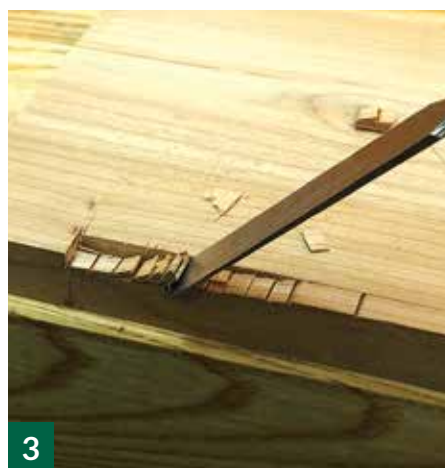
Cutting the rebates

1 Prepare the wood to the finished dimensions, square and plane all ends. I like to mark all rebates with a cutting gauge, this provides a clean shoulder when planing the rebate. The back panel is housed in a 9 x 9mm rebate on the inside of the side, bottom and top boards.

2 Create the rebate on the bottom and side boards with a combination plane. Place the wood flush with the edge of your bench – this gives additional support and stability and is more likely to create a square shouldered rebate.

3 The top board has a stopped rebate which can be planed just like the other pieces, but some additional work is required. Mark and gauge the limits of the rebate as before and then chop out and pare out a 50mm section at the left end.

4 Set the depth stop at 10mm and plane the rebate. You will need to clean up the section of the rebate on the right end with a chisel.



Peg board rebate

5 Once the rebate is planed on the side pieces, mark a section that is 19 x 115mm on the lower end, for the peg board ends, which can be cut using a chisel.

The sliding dovetail socket

6 The top and bottom sockets are made in essentially the same way but the top board is 25mm wider and the dovetail sockets do not go all the way through. In this situation, simply rip 25mm off the front edge, joint the two pieces then cut all the sockets and glue the piece back on. Take the bottom board and evenly space the two dividers along the length. Don't forget to allow for the 9mm housed in the side's dado. With a combination square and the dividers, lay out the position of the sockets – carry the lines down the front and back edges.

7 Next, position the top board so that it is centred on the bottom board and transfer the socket locations – this removes the need to measure the positions, and avoids introducing error caused by inaccurate measurement.

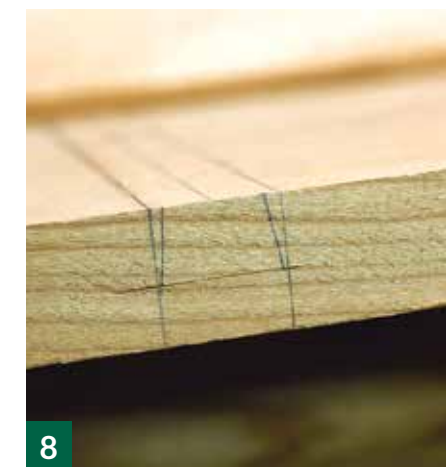
8 This dovetail is only 180mm long and affords an opportunity to try sawing angles freehand. Practise on some scrap material if you do not feel confident. Mark the 9mm depth of the socket and come in 3mm (approximately 18°) then connect this inner line with the lower corners – repeat this for all the joints at both ends of the joint.

9–10 Continue the lines across the board and deeply score with a marking knife, then with a chisel create a 'V' notch. You can do this in two ways – draw the chisel towards you or pare away the waste.

11 Now saw down on the waste side of the line. Check the saw's location at the back edge.

12 Pare away the bulk of the waste with a narrow chisel.

13 Clean up the socket with a plough plane (adjusting the depth gradually). Here, you can see I have put some masking tape on the sole to protect the wood. Because of the nature of this joint too much cleaning up with a plane will change the fit of the joint.



Cutting the tail

14 Take the depth of the socket and using a cutting gauge, mark the ends of the dividers.

15 Using a bevel gauge take the same angle used for the socket and transfer it to the divider.

16 Saw down to the 'root' of the tail, then remove the waste by whatever means you like.

17 In step 16 you can see that I am paring from the corner to the bottom of the saw kerf. Test fit the joint, it should slide together with just a little resistance, too much and you are likely to split something, too little and it will be a sloppy joint.

Handy hint

To remove the joint it is sometimes easier to push the dovetail all the way through – this way you are not trying to reverse the direction of the crushed fibres.

Cutting the dados

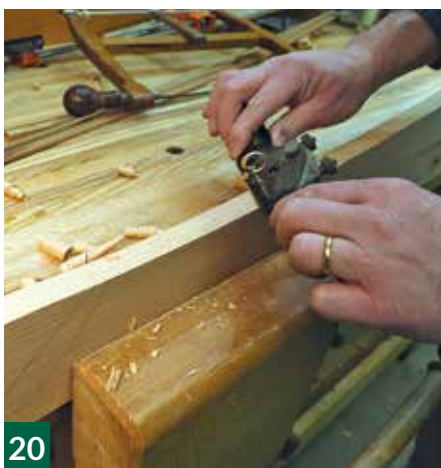
18 The dados are cut using the same technique as the dovetail sockets – only sawing vertically down. Pare away and use the plough plane to clean up the joint.

The peg board

19 The curve on the peg board is easy to achieve with nothing more complicated than a piece of 25 x 6mm straight grained wood and a piece of string. Select the desired curve and draw the profile. Saw the profile using a coping or bow saw.

20 Then, clean up the surface with a spokeshave or compass plane (remember to always plane 'downhill'). Leave a slightly flat area at each end – this will blend in with the bottom of the ends.

21 It was at this point I decided that rather than a squared off finished to the bottom of the sides, I wanted a curved profile. This was cut using a bow saw.



22 Test fit the parts to make sure they go together well.

Glue up

23 Start by gluing the dividers into place. Spread glue in the socket only at the entry end – this way the glue will be smeared the length of the socket as the joint is brought together.

24 Now glue the side pieces into place. The top is a glued butt-joint and is pegged at an angle, creating a strong joint. The top of the shelves could also be nailed.

25 Glue the piece that was ripped off the top back in place, making sure that you get the grain direction correct. Glue the pegboard into place. Both these joints are long grain to long grain and will form a strong joint with just glue, however because the pegboard will be taking a lot of weight (at least in our household...) I also pegged the lower end to the sides. Glue the back panel in place and add a few nails to secure it.

Installing the pegs

26 I used screw-in pegs for this project and used a combination square to position them 25mm from the bottom of the curve. This way the pegs match the curve of the board and add a little visual interest.

27 Pre-drill the holes and then screw the pegs home. The shelf is supported with a couple of brass picture hangers – remove enough wood from the rear so that the hangers lie flush with the back of the shelf.

The finish

28 Sand all the surfaces with 180 through 320 grit paper. Wipe off the dust, then flood the surface with natural Danish oil and let it sink in for about 45 minutes. Remove any excess and allow it to dry fully. Give the whole piece a light sand with 320 grit and then apply another coat of Danish oil. Depending on the degree of lustre you want, you can repeat this a couple more times. Rub out the final coat with 0000 wire wool. Finally, apply a good quality furniture wax and buff to a shine. The next step is to make three boxes that fit on the shelf, but that's for another time...

Now step back and admire the minimalist lines and style of your Shaker shelf and at the same time help

**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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**Next month...**

Michael makes a Shaker bench