



PHOTOGRAPHS BY MICHAEL T. COLLINS



Bridle joint on an old medicine cabinet

### THINGS YOU WILL NEED

#### Tools:

- 13mm mortise chisel
- 19mm bevel-edge chisel
- Rip and tenon saw
- Brace and 10mm twist bit
- Jack, smoothing, block, router and combination plane with tongue and groove cutters
- 13mm round plane
- Mortise and cutting gauge
- Marking knife
- Homemade mitre box – see issue 7

#### Supplies:

- Two no mortise antique hinges – available from [www.rockler.com](http://www.rockler.com)
- Cut nails – available from [www.houseofantiquehardware.com](http://www.houseofantiquehardware.com)
- Waterproof glue

# Bathroom corner cabinet

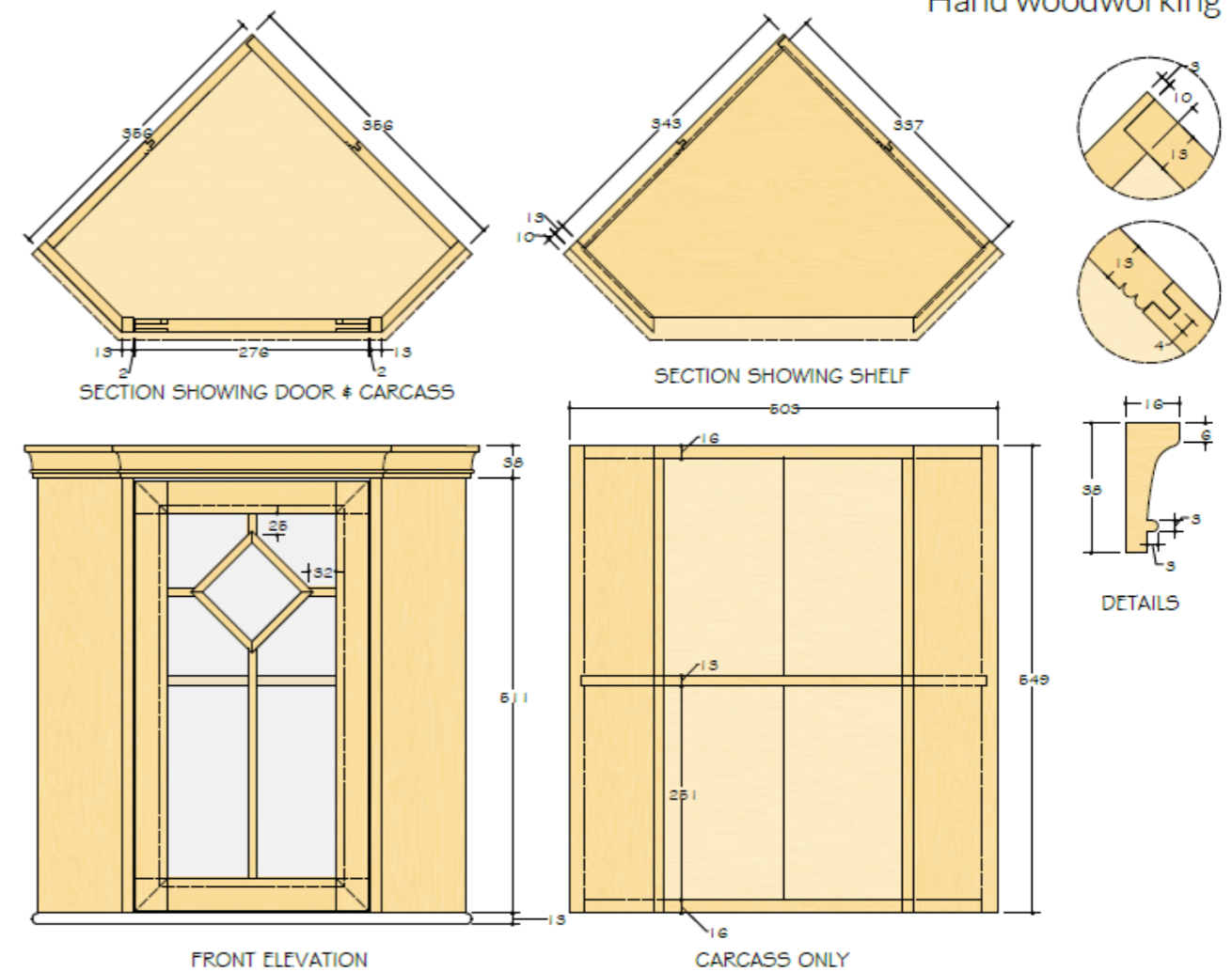
Michael T Collins talks us through making this spacious corner cabinet

For as long as I can remember there has been an old wooden cabinet in the corner of our bathroom in the family home. Readers of my previous articles may have been able to catch a glimpse of the cabinet in issue four, when we looked at making bridle joints.

In this article however, I'd like to revisit that cabinet and re-create it by upcycling an old 2400 x 38 x 255mm scaffolding plank.

#### Look out for...

Whenever using wood from unknown origins it is important to check very carefully for nails, metal and other hard foreign material embedded in the surface – even a tiny speck of grit will knick a plane iron. Use a metal detector or thoroughly scrub with a wire brush.



The shelves and base are created with boards butt-jointed together, while the carcass is jointed with tongue and groove. The inner top and bottom are nailed to the sides. A base extends beyond the sides and finished with a bullnose profile. The outer top is flush with the sides and a cove and bead profile added.

**1** Cut the plank in half and prepare one for the panel and shelf to 13mm thick, the inner bottom and top are 20mm thick as is the door frame. All these sizes can be adapted for your needs. The parts for the door should be prepared 1–2mm longer for final planing to size. Plane one face flat and mark this as face side.

**2** Then, gauge the 13mm thickness from this face.

**3** Now rip to thickness, with a good sharp rip saw – be prepared for a great upper body workout! Plane the two sawn surfaces and gauge the last piece and plane to thickness. Repeat the process for the other half of the plank, but this time gauge it to 20mm for the door frame, inner top and bottom. ➤



**4** Select the boards for the side panels and keeping them full length, joint them using a combination plane with a tongue and groove cutter. Always plane with the plane's fence on the face side. There are a number of reasons for using this joint; it holds the panels tight together, needs no glue and, if spread slightly, it allows for seasonal movement.



**5** You may choose to add a small bead to the tongue piece surface for visual appeal.



**6** Using the combination plane, cut a rebate 13 x 10mm on the inside back edge of one of the pieces – this will allow the sides to be glued together at 90°.



**7** The shelf is set slightly above the middle of the side panels. Use the width of the shelf to mark the dado and saw down 3mm and remove the bulk of the waste with a chisel.



**8** Then, clean up the housing with a router plane.

**Inner top and bottom**

The inner top and bottom pieces are 20mm and made by using a rubbed glue joint and cut to size. These boards will be butt fitted, glued and nailed inside the side panels. I opted to use cut nails to add a degree of oldness to the finished cabinet.



**9** Cut nails are tapered in one direction and parallel in the other – the important thing to remember is that they are driven home with the parallel sides running with the grain. Drill pilot holes and drive the nails home.



**10** The interior shelf is made from 13mm board and is loose fitted in the 3mm dado on the side and front panels.



**11** The face frame is made from 20mm stock and the sides are mitred together with the thin face frame – this gives a very clean joint that is almost imperceptible. Glue all the parts together and check for squareness. There is no need for nails as all these joints are long grain to long grain.



**12** The outer top and bottom are slightly different. The bottom

extends by 10mm on the visible edges, while the top is flush with all sides, this allows the crown moulding to be attached. Place the carcass on the outer bottom board with the back corners flush, trace around the base using a washer that gives 10mm overlap – alternatively scribe with a compass.



**13** Cut out and then plane a bullnose profile on the visible edges.



**14** The measurements of the door are taken directly from the opening in the face frame. It's a good idea to place the hinges in the frame so that the true length of the rails can be found. Using a bridge joint means that the rails and the stiles are the exact length of the width and height of the opening. The rails and the stiles are 38 x 19mm.



**15** The secret of this joint is in the precise layout – take time to practice on a mock-up. Layout the bridge joint as per the diagram. Be sure to check that the rails and stiles are exactly the same width and thickness and ends are square.



**16** Mark the face side and edges on all pieces. The mortise location on the stile, is simply the width of the rail, plus 1mm for waste. Use the rail, pencil and try square to mark the location of the mortise. Set the mortise gauge using the width of your chisel – in my case 6mm. The tenon location is marked using the width of the stile. Gang the rails together and using the stile, try square and a pencil, scribe the location on all sides, and don't forget to add 1mm for waste.



**Bridge joint with a difference...**

This door has a rebate to hold a glass pane, however planing a rebate in a traditional bridge joint would need some 'complex' joinery or a stopped rebate so that it's not seen on the ends. From the inside this modified bridge joint looks like a mitred joint, but from the outside looks like a traditional joint.

**17** Adjust the mortise gauge so that the tenon is in the centre of the rail. Scribe the tenon from the face side.

**Making the mortise**

With the same mortise gauge setting you used to mark the tenon, mark the mortise on both ends.

**18** Drill a hole with a 10mm spiral bit at the base of the mortise with the stiles secured vertically in the vice and the mortise location facing towards you. Make sure that you position the bit so it will bore a hole that touches the three marked lines and is perpendicular to the edge.



Drill through the bottom of the mortise until you can just see the spur of the bit showing on the other side; turn the wood round and complete the hole.

**19** Once the hole is drilled, saw the rest of the mortise in the same way that you sawed the tenon, remembering to saw on the waste side.

**Rails**

**20** On the waste side of the shoulder line, cut a V groove using a chisel. This groove will give you a place for the saw to cut, allowing you to produce a very clean shoulder. Using a bench hook and a tenon saw, cut down to the tenon marks.

**21** Rip down on the waste side to the ends of the scribe marks using a dovetail saw. Turn the wood around and again saw at 45° using the kerf as your guide. Lastly, saw vertically down to the shoulder – the waste should fall away. On the inside, use a marking knife to score the diagonal and then saw using the same method and repeat for the other cheeks. Use your mortise chisel to clean up joint. Finally, mark the diagonal and saw just to the waste side – the sloping edge can then be cleaned up with a block plane.

**22** Once all the bridle joints are finished, you can now plane the 10 x 10mm rebate on the inside. Finally, ease all the edges, glue and clamp the parts together and check for squareness. And finally plane off the 1mm waste.

**23** Once the glue is dry, position the hinges and test fit. It's a good idea to chamfer the inside long edge opposite the hinges so that the door clears the face frame when closing.

**Crown molding**

The top edge gets a handmade cove and bead moulding. The moulding is created by making two distinct profiles and then gluing them together.

**24** Using the tongue cuter create the 3mm profile and then with a handmade scratch stock, round over the tongue creating a bead. A block plane would work also.



**The cove**

**25** Select a piece of wood and scribe a quarter circle on the end.

**26** Remove most of the waste with a chisel or spokeshave, then with a rounding plane, use your fingers as the fence to create the cove.

**27** Now, glue the two profiles together.

**28** Once glued the moulding can be mitred together at 22½°. Here I've used a mitre saw, but a homemade mitre box will also work and clean up the faces with a block plane.

**Finishing**

**29** The door is held shut with a couple of 6mm rare magnets embedded in a hole in the inner bottom, a matching steel screw is aligned in the door.

**30** Give the whole cabinet a couple of coats of Danish oil inside and out before installing the glass, which is held in place with an 3mm bead of wood glued in place.

**31** I went with a very simple design on the door made from some thin strips of leftover wood. The pieces are all butt jointed using CA glue.

*Next month...*

Michael will be asking 'how square is your square...?'

**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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