

CHERRY SIDEBOARD made with hand tools

Israel Martin describes the joinery techniques used on his sideboard

The first time I saw Garrett Hack's huntboard, I knew I wanted to make something similar. It's solid yet elegant and although large by most people's standards, is still suitable for making using only hand tools. The use of sliding dovetails is the key to making

it easy to construct as there is no need for biscuits, dowels or Dominos. In keeping with the hand tool made theme, I decided to add some Gimson-inspired details around the perimeter of the the door and drawer openings with some ebony and holly edge inlays.



PHOTOGRAPH BY ISRAEL MARTIN

Making mitred mortises and tenons

I like to cut this joint by starting with the mortises. First I laid them out on the legs before shaping them. The aprons are set back from the face of the legs by 3mm. The mortises were positioned as close to the outside edge of each leg as possible to keep them long, therefore increasing their strength. I drilled all the mortises with a hand brace and followed on by chiselling to the knife line, checking at regular intervals with a combination square.

I completed all the mortises on one side of the leg first, and then the ones on the other side. In order to prevent splitting the wood inside the mortise, I used a small piece of wood the same size as the previous mortise when chiselling the ones on the other side. That way the two mortises intersect in the middle of the leg without any breakout.

Once that was done I started making the tenons. I marked them out and then sawed the cheeks just shy of the knife line before paring them to their finished dimension. The length of each tenon should be the same depth of the mortise. I used a small block plane to create the mitres. The aim is to get the mitres so that they almost touch inside the mortises with a clearance of just 0.5mm or so.



Mitred and haunched mortise and tenons provide a very strong joint between the legs and the aprons



Wooden screw clamps are ideal for supporting the workpiece and help to prevent splitting



Checking the mortises with the combination square



Making the mitre on the tenon using the small block plane

Tapered sliding dovetails

I used this joint to join the lower shelf with the two divisions that separate the drawers and the openings for the doors. The main benefits of using this joint are that they are incredibly strong and self-squaring if properly done. They are also fast to make and allow the material to expand or contract.

I decided the easiest way for me to make the male part was with a dovetail plane. First I marked where the shoulders would be using the combination square and a marking knife to prevent splitting fibres as I used the plane. The plane is set up with the nicker running in the knife line. Then I started passing the plane until there was only a small corner at the end. I repeated this on the other side, then did the same on the other board creating just one side of the dovetail.

In order to make the sliding dovetail tapered, I divided the length of the dovetail into four sections, then carried out passes that increase in length by a section span each time. The final pass travels through all four sections. This was done on only one side of the male part. It is important to mark the taper on the correct edge of the female part to avoid a mistake.

To mark this out, I used callipers to capture the thinnest part of the male section and transferred it onto the board that would be the shelf. Then with a square and marking knife I made lines across the board. I used a dovetail marker to capture the angle and make marks to the depth of the male part of the joint. After sawing along the knife line I removed the waste with a router plane to



A wooden dovetail plane is used to create the male part of the sliding dovetail

within about 1mm of the final depth creating a straight walled dado. I used the side rebate plane to convert the straight walls into the dovetail shape.

As a result of using this plane and given that the blade protrudes just a fraction from the side of the body, I reached the correct depth with nice crisp corners. To create the taper I repeated the same procedure of four passes of increasing length with the side rabbet plane instead. The final stage in

creating these joints was to remove the last 1mm of waste from the bottom of the dado down the middle with a small router plane.

It's useful not to achieve an exact tight fit when testing the joint dry but instead creep up to what you think will be the finished article when you finally bring the components together with glue. Concentrate on localised areas with the dovetail plane to make fine adjustments and not full length passes as this could remove too much material at one time.



Keep the male panel over width until a good fit has been established. Apply masking tape either side of the dado to prevent the router plane from marking the surface



Testing the sliding dovetail



The divisions are in their place on the shelf and adjusted for square

Ebony mouldings

Bead mouldings often make for an interesting detail on all manner of furniture components to either highlight a junction or conceal a joint. In this case I made ebony mouldings to add to the inside edge of the door frames. The mouldings were shaped using a scratch stock and then glued to the frame but not the doors.



Adding elegant details

To introduce a little finesse to the the legs I decided to taper them on all four sides, being careful not to make them too thin. Thin straight legs can cause tall pieces to wobble if you're not careful especially without stretchers or a similar undercarriage to brace them. If you're in any doubt consider just tapering the inside edges and perhaps even adding a little rake and splay for stability. I decided to add some colour to the leg ends with cocobolo sabot feet offset with a line of tiger maple inlay.

First I planed some 5mm cocobolo boards, then sawed them in two with the panel saw before reducing them further to approximately 2mm thick. I then cut the first piece (for the front) a little bit wider than the width of the leg. The two sides will be covered by the overlap and the rear piece will slot in between the side pieces in an attempt to conceal as many of the joints as possible.

The bulk of the waste was removed using a router plane, leaving a small section at the end for support, which was later removed with a chisel. After the cocobolo had been wrapped around the leg I set a sliding bevel to the angle of the taper and marked out for the maple inlay. A mini router plane was used to excavate a channel all the way round the leg.



Planing the thin cocobolo boards



Using the router plane to make space for the cocobolo sabot feet



Ready to add the maple strip



Planing flush the 'socks' for the legs



Chamfering the legs

Installing off-set hinges

The only challenge, I find, in installing off-set hinges is that you have to do it before all the pieces have been glued up. I used my Veritas dual marking gauge to mark the hinges' width and depth. Then I removed a little bit of waste with

a chisel and finished the job with a mini router to get the exact depth. To install them in the doors, the challenge is that you have to work on end grain, so your chisels and router need to be very sharp.



Installing knife hinges on the upper apron before adding the edge inlay



Gluing ebony and holly dots with the knife hinge fixed



Knife hinge in the lower front apron. Pre-drilling with a steel screw



Knife hinge mounted on door and apron

