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Piece: Display cabinet on a stand

Subject: The making of the cabinet base.

The picture below shows you the cabinet base in reasonable detail.



The top front rail has been set slightly below the underside of the carcass base to create a small space between the two. This was done to help create a feeling of the two separate components and provide a subtle shadow line. The side and back top rails are flush with the top of the legs. The carcass sits on the top of the legs and these rails and is held to the carcass by inlaid brass right angle brackets. The photo below shows the brass angle brackets. The smaller brackets have been inlaid at the front of the side rails and the larger, slot screwed brackets have been inlaid at the rear of the side rails. The slot screw is facing upwards onto the base of the carcass and will allow the carcass to move with the seasons.



The legs have been shaped. A template was made of a full size leg and this was used to mark out all of the legs for the shaping. Firstly I machined the legs using my machine planer and then machine thicknesser. I then hand planed a face side and face edge on each leg ensuring they were square and straight. The face side and edge were the inside faces where the mortises, to house the rail tenons, were to be cut. I then re-thickened the other sides. I then set up a stop on my machine planer and planed the face side and face edge down by approximately 7 to 8mm. The purpose of the stop was to create the feet of the legs. The stop ensured all of the legs were consistent. In cutting these inside faces down on the planer I had to ensure that the grain direction ran the same way on all eight faces. If the grain direction altered I would have used the bandsaw. I then used the bandsaw to cut the majority of the waste away from the curved feet.

I also use my drill press as a hollow chisel mortiser and a drum sander. I have attachments that enable this machine to be multi-purpose. In using the drill press as a drum sander I then sanded the feet to the line using progressively finer grits of sandpaper. Finally I used a hand scraper to remove any remaining sanding scratches.

I then marked out all of the mortises on the legs and set the drill press up as a hollow chisel mortiser. I would very much like to have a stand alone machine for this purpose with a robust fence and sliding base, but presently I do not, so I make do with what I have. The photo below shows a piece of straight jarrah clamped to the base of the drill press as a fence. I have then held the leg by hand, set a depth stop on the drill press, and plunged the hollow chisel about 1mm inside the marked line to the correct depth. This set-up did struggle to penetrate the very dense jarrah and a lot of patience was required.

I used marking gauges from the face side and face edge to accurately mark out all of the mortises. I also used marking gauges to mark out the tenons on all of the rails, being very careful to ensure all marking out was done from the face side. I placed the legs together and carefully marked out the tops and bottoms of all of the mortises. Placing the legs together will ensure that the tops and bottoms of the mortises are consistent.



Below shows a rough cut mortise. I then chopped to the scribe line with a large and small mortising chisel and the inside faces cleaned up nicely ready for the tenon.



I marked the tenons out carefully using marking gauges and calipers and once again placed the rails together, clamped them, and marked out the shoulder lines so that they were consistent across all rails.

I setup a fence on the bandsaw based on the cutting distance from the face side of the rails. That is, the face side would always be running up against the fence. I tested the setting on scrap until I was happy with its placement. I then cut the first side of all the tenons ensuring the face side was running against the fence. I was also careful not to cut too close to the shoulder line as the bandsaw blade can creep backwards sometimes. I then reset the fence to cut the other side of the tenon. This setting was tested on scrap until I was happy with the fence

placement. When I was satisfied I cut the other side of the tenons. The shoulders were cut on my docking saw. I then pared all joinery to the line with paring chisels and the fit between the mortise and tenon was firm and snug but not too tight.

All of the joinery was cut so that the rails would be flush with the outside faces of the legs. The base was glued up in two stages.





As the joinery was a firm fit I used a small paintbrush to apply a thin layer of pva glue to the walls of the mortise and the sides of the tenon. I also placed a small amount on the shoulders of the tenons. I did not want excessive squeeze out of glue and preferably would prefer none at all so that the wood surfaces around the join would remain clean cut by the handplane.

When the glue was dry I removed the clamps and planed the surfaces flush. I also planed the top of the base flush using a straight edge to ensure the cabinet would sit nicely.

Once I had planed the surfaces flush I carefully sanded the edges with 320 grit sandpaper just to remove the sharp edge so the feel was gentle to the hand.



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