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**Designer and Maker of Fine Handcrafted Furniture**

Article 8: 30th April 2008  
Piece: Display cabinet on a stand  
Subject: The making of the door and drawer handles.

The door and drawer handles are made from a small piece of Brazilian Purpleheart that David Charlesworth gave me in 1995. The piece was about 80mm long, 50mm wide and 10mm deep. I used this piece to make the four handles. At one end of this piece I cut a long tenon with shoulders of no more than 1.5mm. This tenon will be the joinery for two of the handles, either the doors or drawers. I cut the same tenon at the other end. I will keep this piece of purpleheart as big as possible for as long as possible so that I have something substantial to hold. When I am doing the final shaping of the handles I will not have much to hold, so doing as much work as you can when the piece is large is a good idea. The joinery is crucial so cutting it first is sensible. The door handles are 26mm high, 8mm wide and protrude from the door 21mm. The tenon on each handle is 20mm long, 5mm wide and 6mm deep into the door stile.

The idea here is to make the handles together for as long as possible. When I need to cut them free from the block to do final shaping I will also cut the piece in half, place a shoulder for the tenon on the newly cut end and then continue to shape them individually.

Before doing any cutting for the tenon I prepared the piece of purpleheart by planing a face side and edge. I then planed the other face by hand as the piece was too small to thickness and by the time I made the jig to enable me to thickness it, I could easily have hand planed the other face. Once the piece was prepared I used a square and marking knife to square up the ends. I then used the docking saw to cut the ends square to the marked line. So now I have a flat, true piece of wood to commence making the handles.

I decided on the depth of the tenon and used a square of the face edge to mark this depth on the face side with a marking knife. I squared this gauge line all of the way around the piece of wood. I repeated this process at the other end of the piece of wood.

I decided on the depth of the tenon shoulders and marked the tenon out using a marking gauge. I then removed 90% of the waste using a docking saw. You could use your bandsaw, router, handsaw or other means to remove this waste. I also cut a 3mm shoulder at each end. I then pared down to the line to clean up the tenons and chopped to the shoulder line to ensure this edge was crisp. Whilst the piece of wood is large you should cut your tenons and ensure they are ready to be fitted. When you cut each end piece in half to make the two handles you will need to place the end shoulder on the tenon.

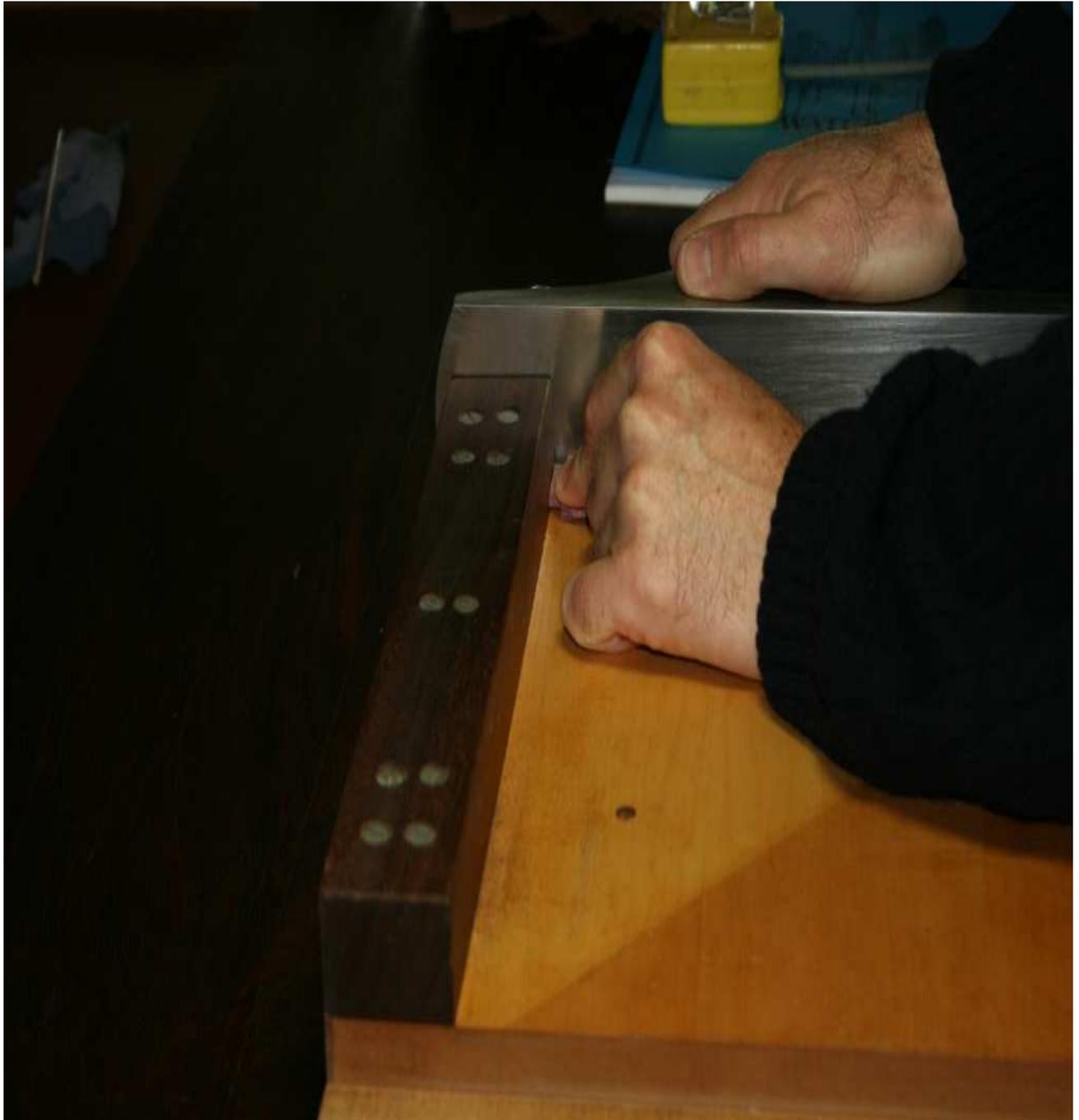
With the tenons cut I marked out the shape of the handles on each end and along the faces. I used my bandsaw to remove a small amount of wood. The piece is still whole. I then cut the two end pieces away and continued to shape the two end pieces. I will remove the remainder of the waste by using my drill press as a drum sander. I used a coarser grit to do the rough shaping and then progressively finer grits to polish the final shape. When I am ready I will cut the two end pieces in half so that I have two lots of two handles that are very similar. I then cut the shoulder to the tenon at the newly cut ends and clean them up with chisels.

Now I will cut the mortices on the doors and drawers to house the tenons. I mark these out accurately to fit each designated tenon. I recently bought a small hand held router at a garage sale and it is a beauty. It is very light and compact and gives you very good vision of where you are cutting. I used a 3mm straight edged router bit and gradually crept up the required depth. Do not try and cut a 6mm deep hole in one hit with a 3mm router bit. You will break the bit. I cut 1.5mm at a time and crept up the depth in four separate cuts. I cleaned up the edges and corners with chopping chisels.

Now I can try the tenon in the mortice and check the fit. I want the fit to be firm but not too tight so that it is difficult to remove. I am particularly concerned about how the shoulders meet the door rails and drawer fronts. This needs to be tight.

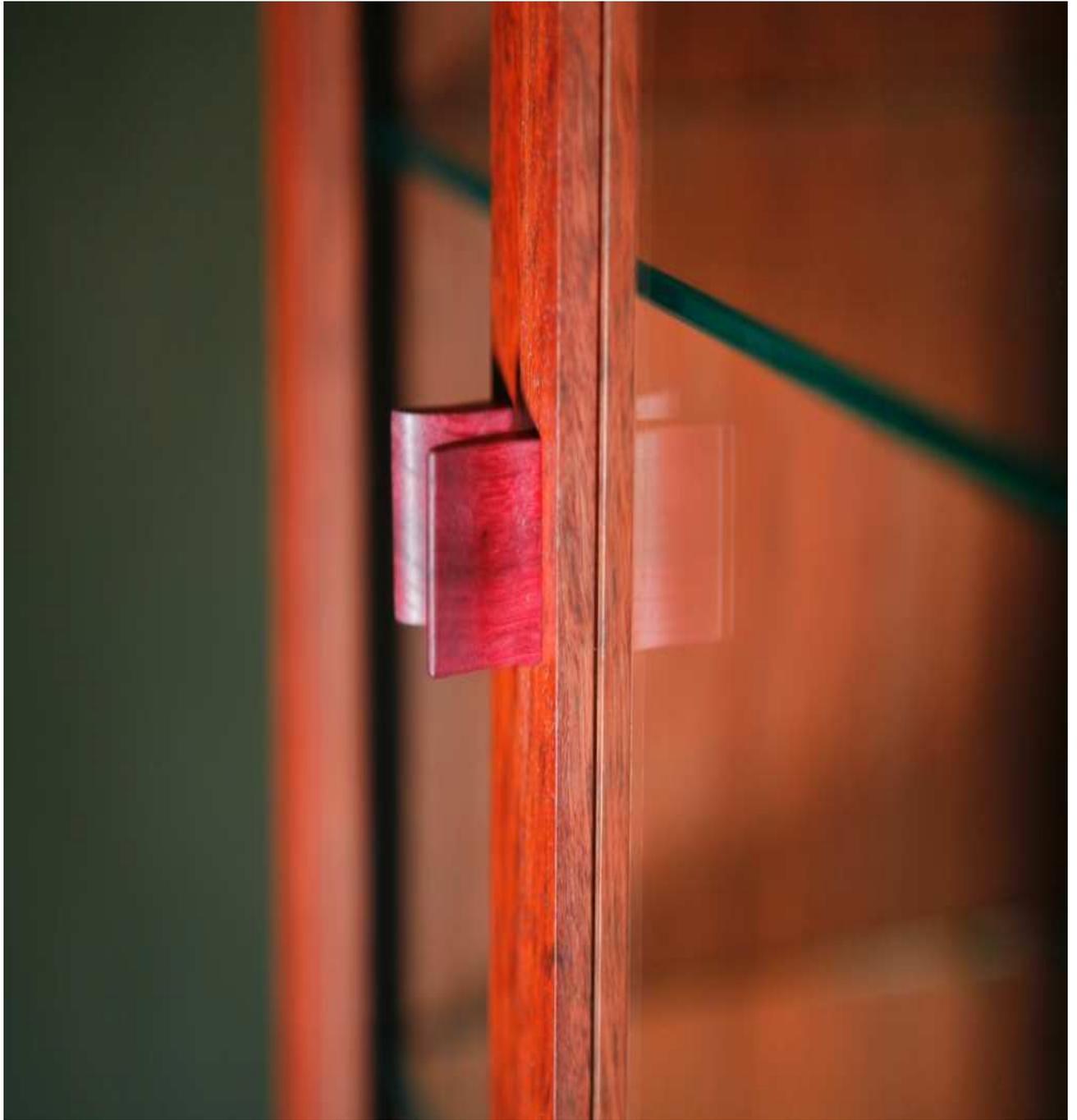
If the drawer handles differ in length by .5mm I am not concerned; but if the door handles differ in their length (height) it will stand out that there is a difference. I want the door handles to be the same height and on the same line. In ensuring this was the case I placed the handles in the doors and viewed them closely. I needed to reduce one in height to align with the other so I shot the tops and bottoms until they were aligned. See photo below.

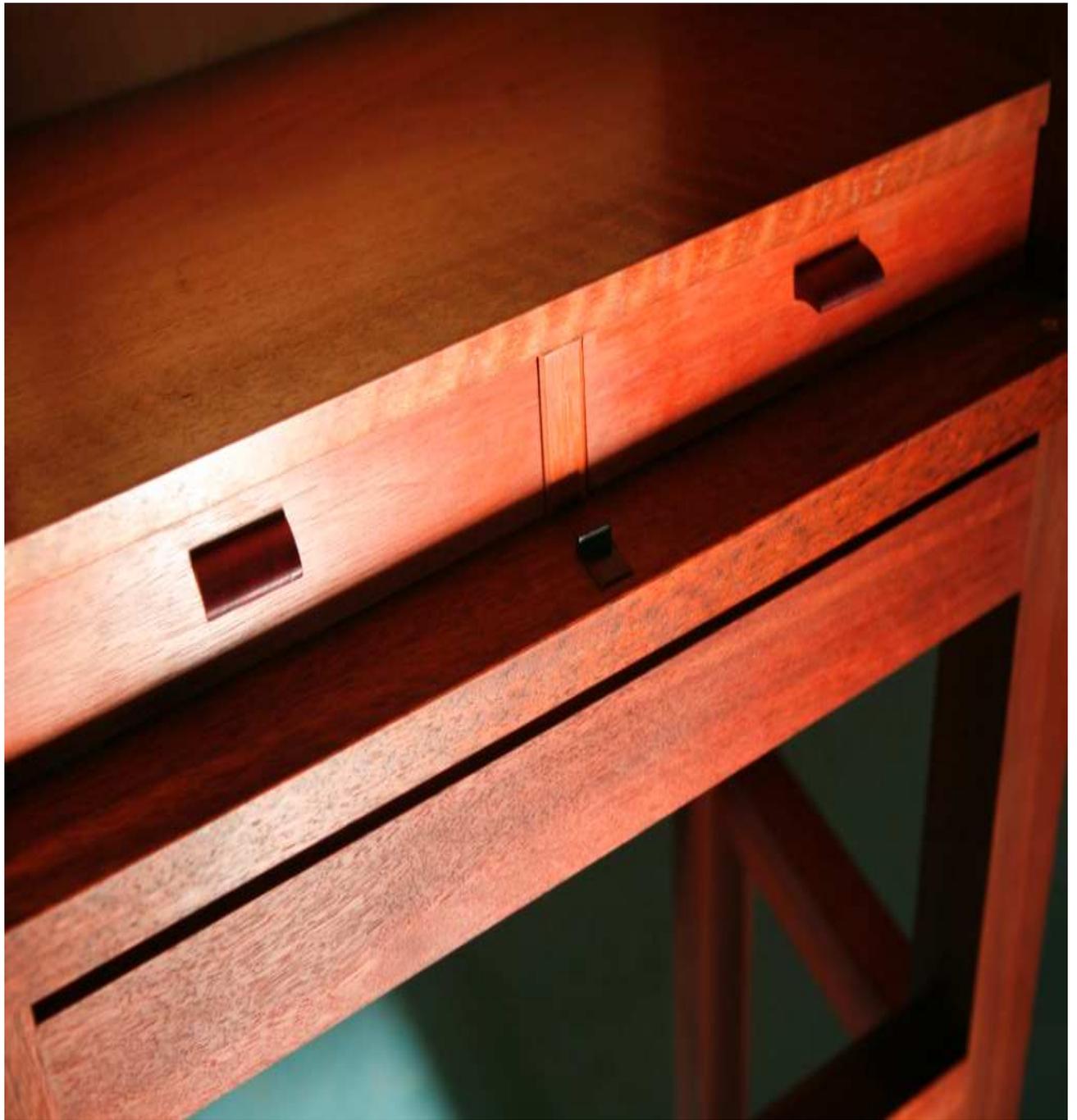


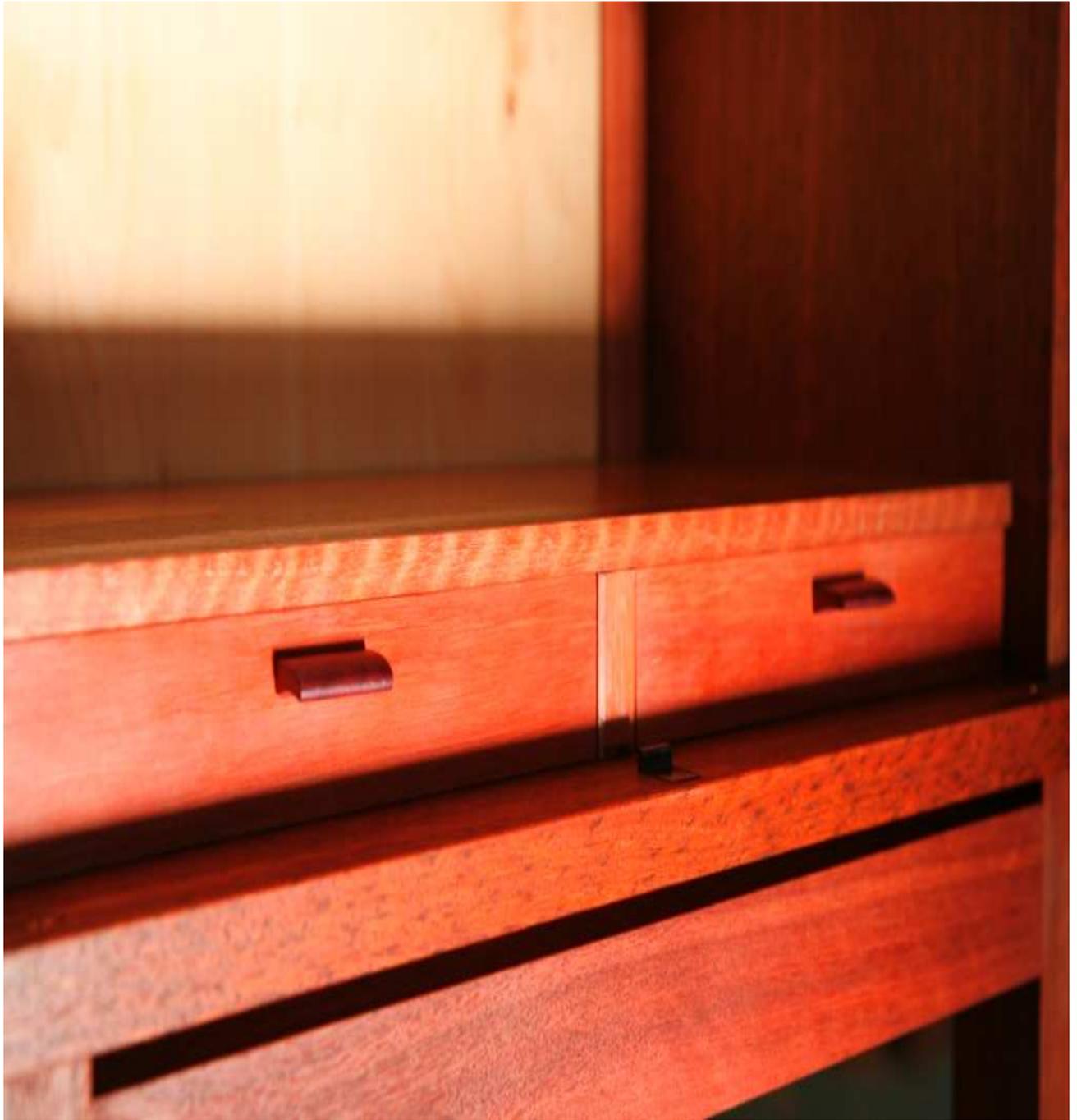


I kept shooting and then placing the handle back in the door to check the alignment with the other handle. Shoot and then check, shoot and then check.

Once I had the handles ready to be fitted I gave them a good finish with OOOO steel wool and then waxed them, being careful to get no wax on the tenon. I then glued the pieces into place.







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