

Walnut and ripple maple jewellery box

Israel Martin describes the process of making a jewellery box with secret mitre dovetails and holly string inlay



Normally secret mitre dovetails let us make pieces with continuous grain but for this project I was looking for a strong joint that would allow me to add inlays along every edge of the case. I selected some nice figured walnut to add interest to the piece. I used self-harvested and air-dried holly to make the inlays. The case is narrow enough to add inlays across the grain without having to worry about the wood expanding or contracting.

The box has two small drawers made from straight grained quartersawn maple with a ripple maple veneer applied to the front. I also added an almost invisible maple base to the bottom of the piece to raise it up from the surface and make it appear as if floating. The box was French polished with amber shellac.



A single board of figured walnut from which the case components were sawn



Self-harvested holly for the inlay



Ripple maple shop-made veneer for the drawer fronts



Partway through the French polishing stage

Making secret mitre dovetails

Secret mitred dovetails are the best method for constructing discrete, seamless mitred corners that allow the grain to run around the sides of a box. Like any case construction it requires the components to be dimensioned accurately before marking out for joinery. The first step was to cut a rebate with a skew rebate plane on the end of each piece, to make the flap that will be mitred later. Then I laid out the pins for the dovetails. When making through or half-blind dovetails I usually start with the tails, but for secret mitre dovetails I prefer the opposite approach – pins first. For this technique I generally aim to

make them wider than I would for a tails first sequence as it makes it easier to transfer the information to the tail board. As a consequence the tails are narrower as well. To transfer the information I hold the pin board square to the tail board using a jig for support and mark them with a knife. The only challenge is to make the mitre on the flap, if the piece is big enough I use a jig with a 45° angle but if the parts are small I do it freehand with a chisel as it is often more difficult to hold the jig to the workpiece. The walnut in this case was very fragile and prone to splintering.



The pieces were all dimensioned on the shooting board



The pins are cut first and spaced so that transferring their positions is easier



The pin board is clamped to the jig with the tail board below

Making narrow rebates for inlays

When I have to make a wide rebate across the grain I usually use my skew rebate plane, but when I have to make them really narrow – 2mm – I prefer to make a nice deep cut with my marking gauge and remove the material with the plough plane. I used a 3mm blade that I made using the 4mm blade I already had. It's easier and more accurate for me.



All edges rabbeted

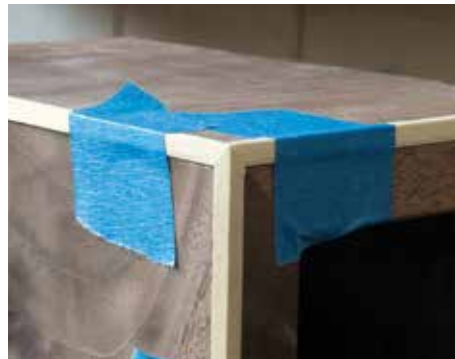
Making the holly edge inlays

Using holly that I harvested myself years ago was the most enjoyable aspect of this project. Holly is notoriously difficult to season. Allow it to dry too quickly and it splits, too slowly and you risk spots from mould. I made some 3mm x 20mm sticks of about 30cm long, and then planed them square on two sides. I then cut them into small bars of 3 x 3mm using a dovetail saw. Springing the sticks kept the spine of the saw away from the kerf. After cleaning

up the saw cut edges with a plane, the strips were glued into 2.5mm rebates on the box around all the edges. The corners were kept tidy by using a three-way mitre. Stretching the masking tape to near breaking point creates enough pressure to hold the pieces in place while the glue dries. The holly was planed flush by hand working in from the corner of the box so as not to risk fracturing the mitres.



A dovetail saw is the perfect rip saw for small scale components



Detail of the three mitre corners



Gluing all the holly edges



The holly makes an excellent contrast against the walnut

Choosing the right wood for the drawer bottoms

Nothing suggests poor quality better than a plywood drawer base. I try to use a quartersawn soft wood, normally red cedar where I can. It reduces weight for a start, which may be important on large drawers. The contrast of grain and colour also make the drawer more exciting to see when it's open. Some of the soft woods, especially cedar, also have a gorgeous smell.



Quartersawn red cedar small drawer bottom



Quartersawn red cedar large drawer bottom

Veneering drawer fronts

When I use decorative timbers for the drawer front I like to use a veneer if possible as it means I use less of what may be a precious material. I start by making a complete drawer box from straight grained timber and preferably with the front board from the same species as the face veneer.

I make it big enough so that it barely fits the space for the

drawer then glue a slightly larger veneer on to it so that I just have to remove very little material to make it fit. This means I can be more accurate with the grain alignment or pattern of the figured veneer. An added bonus is that I can apply pressure with clamps all around the edge to minimise the risk of a glue line showing.



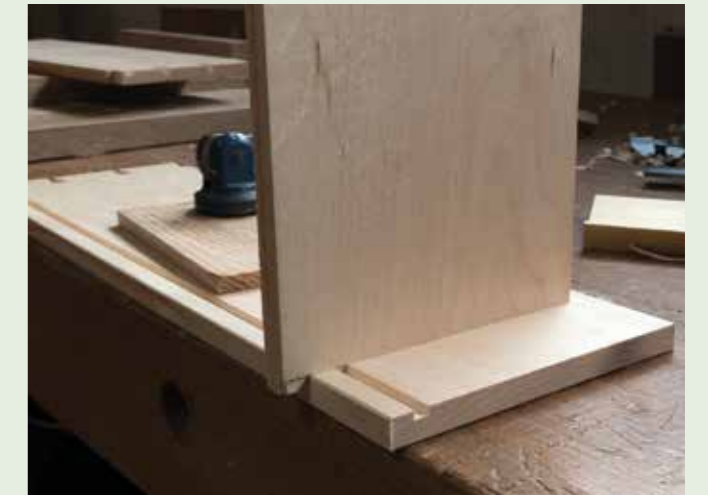
Trimming the drawer fronts on the shooting board



Laying out the drawer fronts on the veneer

Joinery for the drawer backs

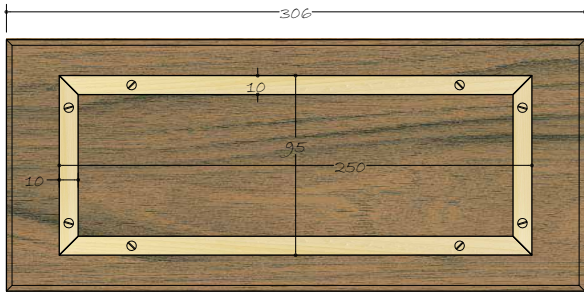
Choosing a style of joinery for your drawer has implications beyond the aesthetic appeal. The choices you make will affect the strength of the drawer as well as the production method. For handmade furniture through dovetails are the most common joint for all four corners but I like to use sliding dovetails for the backs, especially in big drawers for various reasons. If the drawer is large it allows you to have more drawer side material retained in the carcass when the drawer is pulled out to its full capacity.



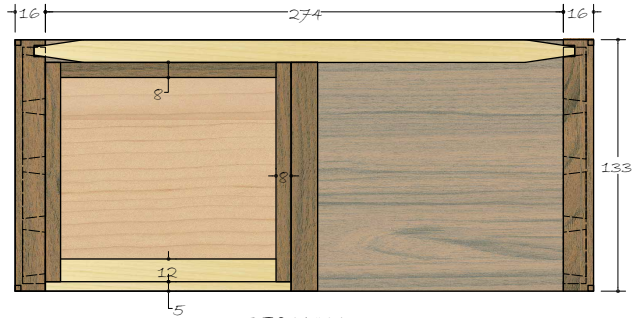
Drawer backs made with sliding dovetails require longer sides



Regular drawers make better use of space but can be sloppy when made on a small scale



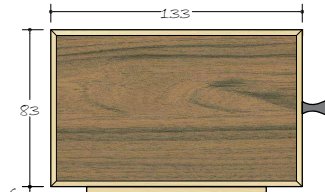
PLAN OF BOTTOM OF BOX
Scale: 1 to 4



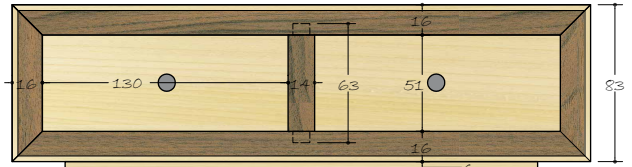
SECTION
(One drawer only shown)



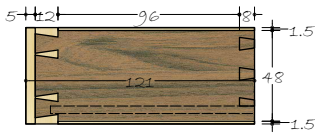
SECTION



SIDE ELEVATION
Scale: 1 to 4



FRONT ELEVATION
Scale: 1 to 4



DRAWER DETAILS

