PHOTOGRAPHS BY MICHAEL T COLLINS

Simple TOOL TOTE

Michael T Collins constructs a useful tote for storing and transporting tools

What you will need:

- 38mm twist bit or adjustable bit
- Bow saw
- Compass or dividers
- Marking gauge
- Cutting gauge
- Chisel
- Crosscut saw
- Jack plane
- Spokeshave
- Coping saw
- Rasp

PREPARATION

Tool totes are traditionally made from pine (*Pinus spp.*), a relatively cheap wood with the added benefit of being easy to work, long lasting and, as a soft wood, less likely to damage tools. The most stable wood is quartersawn, where the wood is sawn radially out from the centre of a log, with annular rings running perpendicular to the board's face. A good source for stable straight grain wood is especially flat 50 x 304mm construction timber. When picking your wood look for boards that are cut close to the centre of the log.

This tote will have one straight side and one sloping side and be made using 16mm boards for the ends and handle. The sides will be about 10mm and need to be long enough, around 660mm to hold your longest tool, in my case a 560mm Stanley No. 7 jointing plane.

I have just completed a rather large project and, looking around my workshop, I have tools on every surface. When they are not in use, my hand tools are kept in a toolchest, or a tool tote if I'm working away from my shop. A tool tote is a practical way of keeping your most used tools together and secure, while avoiding the frustration of putting down a tool and turning around only to find it has mysteriously disappeared into a black hole with all the other misplaced tools. Over my previous articles, we have been accumulating numerous tools, and unless you have somewhere to keep them, they are going to pile up so a tool tote – or two – will make a great addition to your 'necessary tools'.

This is an easy project and requires adding a few optional new tools to the collection: a 38mm twist bit or adjustable bit, bow saw and compass or dividers. These are readily available on the second-hand tool market.

Rip sawing

First, rip the 304mm board into two pieces of approximately 125mm for the ends and handle and 180mm for the base and sides.

50 x 305mm has a finished dimension of 38mm so ripping these pieces will provide boards approximately 16mm thick. Select a face side and mark the centre with the marking gauge around the board – keep the fence of the marking gauge pushed firmly into the wood so that the spur does not track along the grain. Run a pencil down this line to aid visibility.

Saw technique

Now, rip the boards into two-pieces – try to split the pencil line. Placing the board in the vice at 45°, saw the two lines you can see; turn the wood over and again saw at 45°. Then, remove the triangle of wood in the kerf. If you find that the saw binds in the kerf, rub the sides of the saw with beeswax. Starting a rip cut in pine is very easy, but when ripping hard wood, cut a 'V' notch – this will give the saw a place to start and prevent the saw bouncing around.

After the first few cuts the kerf should keep the saw on track. However, pine is very soft and it is easy to get off track. If the saw begins to drift off course, slightly twist the saw in the direction of any drift. For example, if the saw is drifting to the left of the line, twist the handle to the left – anti-clockwise – to pivot the saw back on track. Take one of the 180mm boards and rip this in half to produce two boards approximately 10mm thick – these will form the sides. 10mm might seem thin, but it is perfectly adequate and makes for a much lighter tote.

Rough plane all the boards – there really is no need to remove all the saw marks – this tote will get a lot of 'abuse' over the coming years.

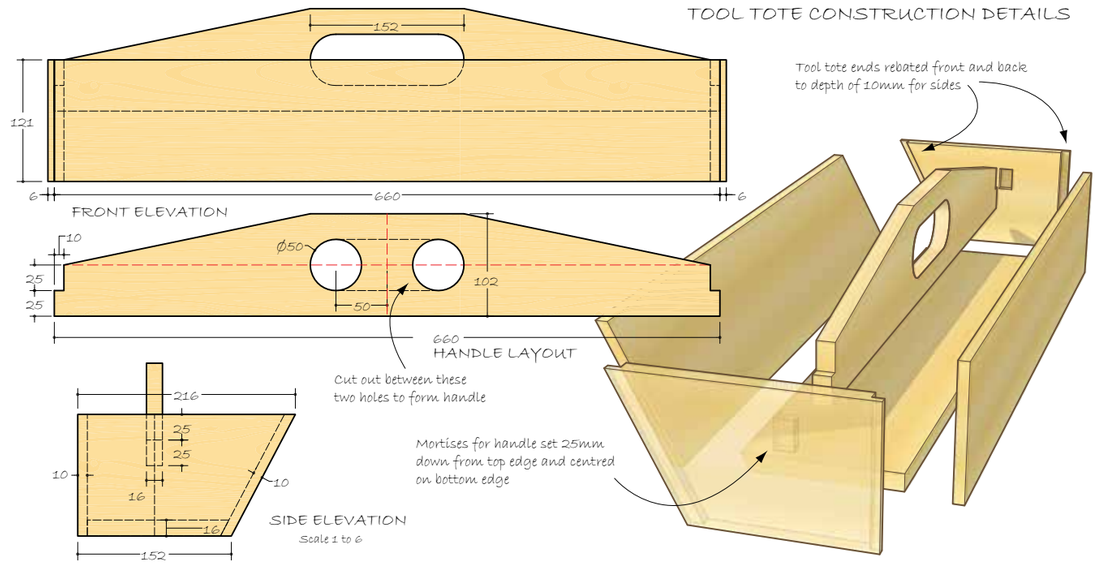
Cut all the pieces to final length following the diagram. The angle of the sloping side to the base is approx. 26 degrees or a ratio 1:2. ➤

50 x 304mm construction lumber

Use your longest tool to determine the length of the tote

You're in for a ripping good time!

Rough plane the saw cuts off



The joints

1 In previous articles we have seen the many ways there are to join corners, from dovetails to butt joints. For this simple tote a nailed rebate joint will be employed. This will provide a strong and traditional joint – glue is not necessary but can be used. Set the cutting gauge to the thickness of the side.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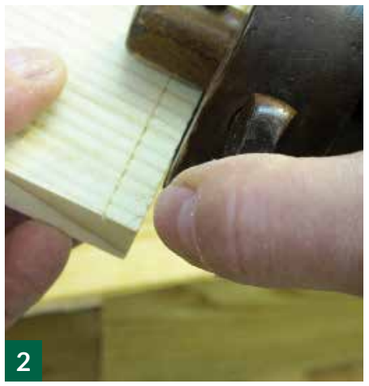
2 Mark the rebate's width on the inside of each end piece, make sure to sever the fibres.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3 Use a chisel to cut a 'V' notch on the waste side to give the saw a place to run.


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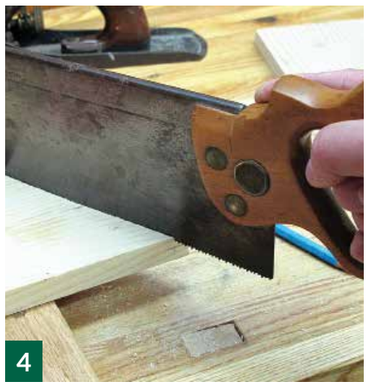
4 Mark the depth of the rebate at 10mm and then using a crosscut saw, saw down to the depth of the rebate.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5 It is good practice – unless you enjoy sharpening plane irons – to remove the bulk of the wood with the tool that's easiest to sharpen – in this case a chisel. Simply place the board vertically in the vice and position the chisel about 1.5mm from the marked line, on the waste side; hold the chisel close to the bevel for control and with a mallet sharply tap the chisel – the waste will break off.


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6 Alternatively tap the waste with the handle of the chisel and the waste will break off cleanly. This technique will work best in straight grained wood.


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7 Keeping your hands well behind the cutting edge, pare away the remaining waste by placing the workpiece on the bench hook. You can also use a shoulder plane – but be careful not to split the wood as it exits the rebate. Repeat the process for the other rebates.


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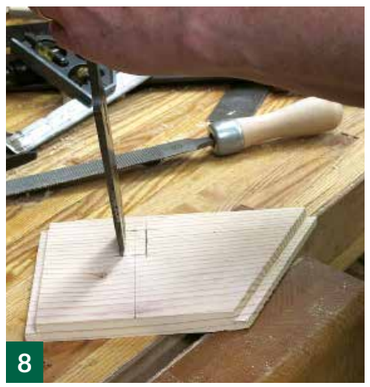
Mortise position

8 On the ends find the centre of the base and draw a vertical line. There are no hard and fast rules about how far up the mortise should be – but it needs to be positioned so that there is enough wood above the mortise to support a tote full of tools and at the same time allow for the tapered handle to be flush with the end's top. In this example the mortise is 25mm down from the top and is 16 x 25mm. As usual, chop the mortise out across the grain using a 25mm chisel. Go easy with the chopping as the pine is soft and too much force may cause the chisel to break through to the other side. Also make sure that your chisel is razor-sharp to slice the soft fibres.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The handle

9 The handle is the same length as the sides and has a 10 x 16 x 25mm stub tenon on the end. The handle can be any shape that you care to design. This tote has a very simple sloped handle. Mark 75mm either side of the centre line, from this point draw the slope as per the diagram – so that it intersects the end of the handle at the halfway point. Saw away the waste and clean up with the jack plane.


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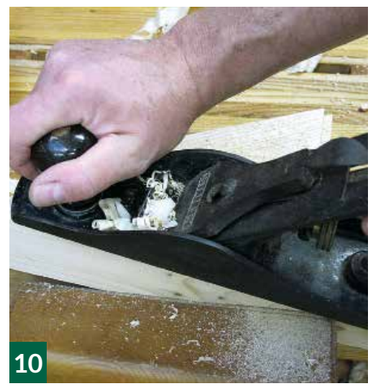
10 Alternatively draw the curved handle's profile on paper using a compass and then transfer to the wood with a stippling technique – using a point to push through the design onto the wood. Use the bow saw or a coping saw to remove the waste and finish by using a spoke-shave to clean up the rough sawn edge. Finish by chamfering the edges with the spokeshave or plane.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The handhold in the handle

11 The handhold is positioned centrally on the handle both vertically and horizontally. On the face of the handle mark a centre line, then measure a point 50mm either side of this line, these will be the centre marks for the ends of the handle opening.

Drill two 25mm radii holes at these centre points. To do this smoothly, drill halfway through and then drill from the other side, thus avoiding any tear-out.


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12 Then draw a tangent line from the top and bottom of the holes and saw out using a coping saw.

13 Clean up the edges using a rasp.


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14 Alternatively, draw the outline of the handhold and drill a small hole. Then, using a coping saw, remove the waste. Finally, cut off the waste on the handle to create the stub tenon and check the fit.

The base

15 The base is not rebated but simply sits inside the tote flush with the bottom. To find the angle, join


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one end and the vertical side together using nails driven in at slight angle – toe-nailed. A good tip when nailing close to end grain is to blunt the nail tips – this will cause the nails to break the fibres as they are driven home rather than split the wood.

16 Place the base snugly into the corner you have just created and mark the angle on the base's end grain. Remember to mark the angle inside the rebate. Carry the mark along the face of the wood.

17 Plane down to the lines. This is a test of your hand planing skills.

Assembling the tote

18 Now for the fun part – putting it all together. The easiest way is by toe-nailing the remaining end in place. Also nail from the ends into the sides in the same way. Then position the handle in the mortises.

19 Nail the sloping side in place using the same toe-nailing technique. The base should be able to slide in under the handle and be nailed in place from the side – there is no need to angle these nails.

20 Lastly, chamfer all the edges. This will not only look good but will be much more comfortable to hold.

21 If you wish, give the tote a coat of boiled linseed oil and beeswax. See Issue 1 of *Woodworking Crafts* for my bench finishing recipe. Now that your tools are all in one place, you are ready to carry them to your next project. Every self-respecting cabinetmaker needs a decent tool tote and this one is the perfect answer. ■


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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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