BAILEY'S ROUTER CLASS

Mini mouldings

Our Anthony puts the finishing touches to a dolls' house

THE PROJECT

Some issues ago in WPP43 we made a dolls' house. It was finished off as a play dolls' house, not a serious one for collectors who like more exact detail. As I said at the time, the basics for a simple dolls' house are the same as a 'proper' one. You need a template to machine out window and door openings – the difference is what you fit in those openings and the room detail e.g. cornice, architrave, dado and skirtings. So, we thought it was time to take it to the natural conclusion and show you how to add fine detail to a dolls' house. Some machining can be done with standard small cutters, but mouldings need special tiny dolls' house cutters which you can buy from several cutter manufacturers, notably Wealden and Trend.

The router is still the most versatile power tool there is. Along with a vast range of cutters, jigs and gadgets – many of which you can also make for yourself – it can help produce high-quality woodwork.

This series is intended to show you what the router can do, while assuming the reader has a general level of woodworking knowledge.

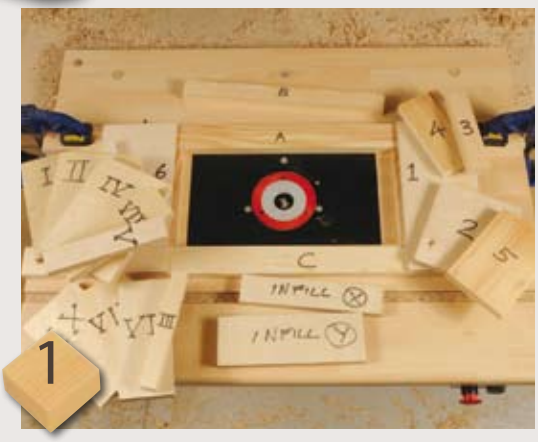
We hope to show you the aspects of each project that specifically involve the router and how this great bit of kit can expand your woodworking skills.

Each month we will highlight the jigs, cutters and gadgets you will need to help you get more from this incredible machine. Feel free to send us pictures of your routing endeavours, or post them on the WPP forum at:
www.woodworkersinstitute.com

PHOTOGRAPHS BY GMC/ANTHONY BAILEY

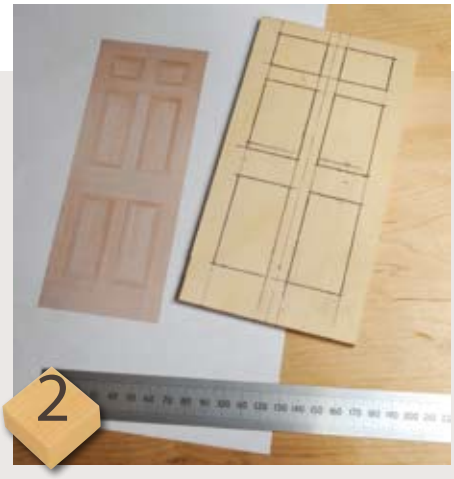
THE JIG

The trickiest thing to make is a panelled front door found on Victorian and Georgian properties, which are mostly chosen for dolls' houses. The same technique also applies to panelled interior doors too. It is more complex than it may at first appear. Here is my method which works well, but I would be interested if you have another solution (see page 8)!



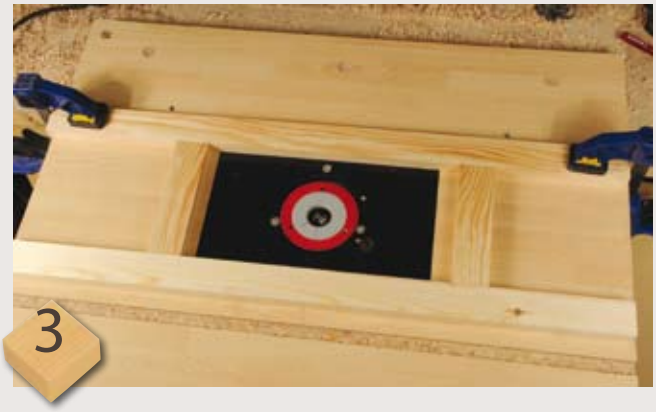
1

Yes, it looks complex and it did need a bit of working out, but believe me it does work!



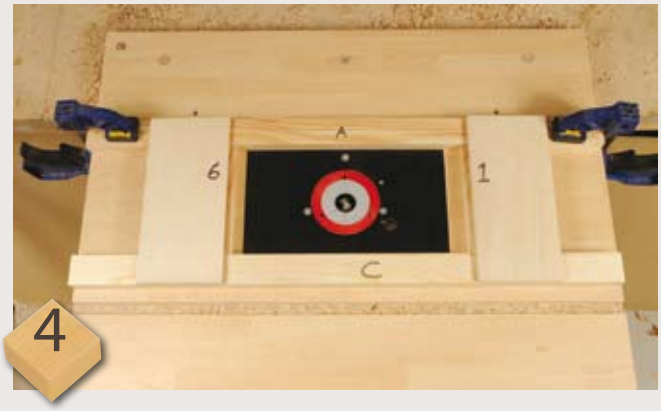
2

Start by designing the door using reference material to suggest proportions. The standard dolls' house scale is 1/12th so that is what we have used. When you are satisfied with it, run your marking out right across and on the edges too – this will help when setting out and building the jig



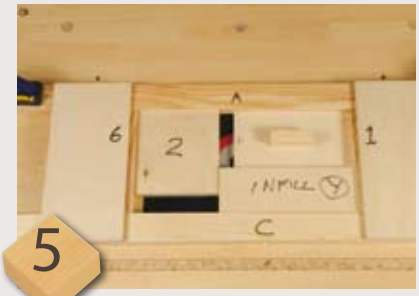
3

Fit a small straight cutter, say 2.5mm, in the router and lay the prototype door on the cutter so it is centred on the outermost vertical door line. Now clamp a batten running alongside the door. Move the door towards you so the cutter centres on the opposite outermost vertical line, and clamp that batten exactly parallel to the first one – this determines the width of the jig. Repeat the process for the length, cutting two battens to fit between the ones you have clamped



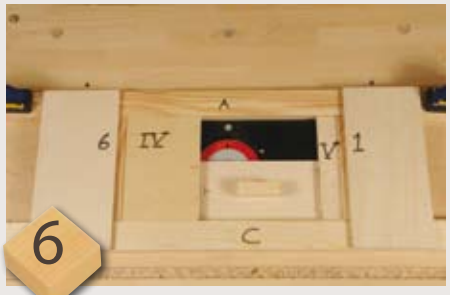
4

Ensure the jig is exactly square and glue and pin two pieces of thin ply on the outside ends of the jig – this will lock it rigid ready for the rest of the process. The numbers and letters relate to the door machining sequence. The machining problem we need to address is that we have to create six frames, in three sizes, in two vertical lines down the door. We need absolute control or the door blank will wander about and the result will be a mess



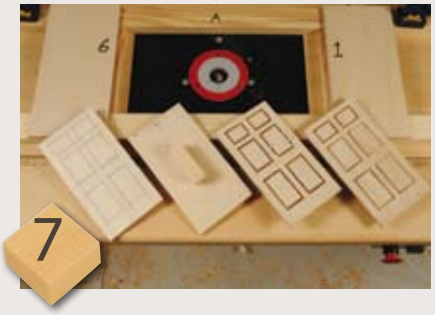
5

The first vertical line to be machined needs the numbered and lettered blocks shown here. The door blank has a grip handle glued to it to allow for drop-on cuts. This set-up makes the outer side of the topmost right-hand panel. Note the infill marked 'Y' which prevents sideways movement. To make the same outer line for the panels below, two more blocks and the infill are needed



6

The crosswise grooves will be done by drop-on cuts sighting down short pre-drawn lines on the door that match up with centrelines marked on the Latin numbered infill blocks. The door blank handle is important as it makes drop-on and lift-off machining possible.
This series of blocks inserted at the ends of the jig are all marked with Latin numerals to distinguish them from the previous blocks



7

The key to making all the blocks for this jig is to work through the process logically, working out each step of the sequence. The result is quite satisfying, starting with a prototype door, then some identical size blanks with a handle glued on the reverse, machining the door, and finally sanding ready to paint. When completed, I find the result is really quite impressive

THE CUTTERS

There are plenty of cutter styles available from both Trend and Wealden, either singly or a as boxed set like this Trend offering (top left). Top right are two multi profile types from Wealden. In fact, most dolls' house cutters are capable of producing a variety of mouldings from each cutter. They can mimick all the mouldings you would expect to find in a real house. They are so small that tearout on wood isn't a real problem as the cuts are so fine. You do, however, need good eyesight or reading glasses to see the result properly! In the foreground are a whole group of normal cutters in small sizes that can be used for such work

MAKING IT...

The Making It sequence here covers the door and all the internal mouldings you will need for your dolls' house

1

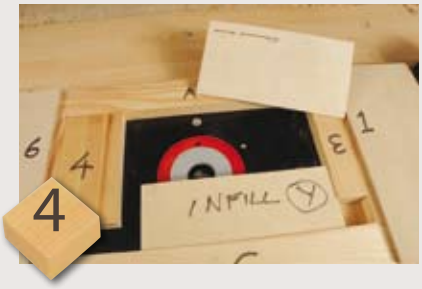
The jig is already made and the door framing is the biggest challenge. Place the blank in the start position with infill 'Y' next to it

2

Insert the first end blank marked '2' ('1' is the fixed jig-end to the right). You can now lift the blank just clear of the cutter, switch on and drop on, and push the blank from '1' along to '2'

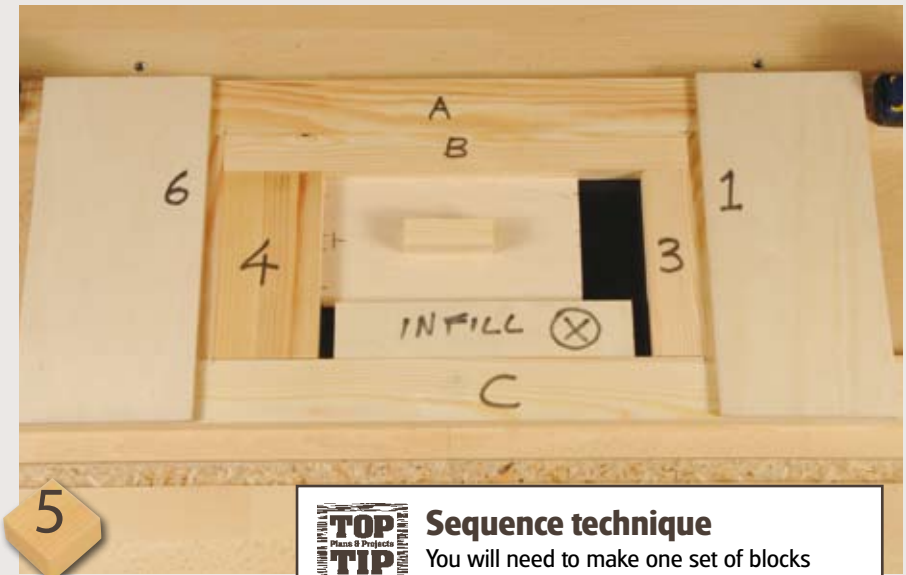
3

The result of the first cut is a very short slot for one of the top door panels – not impressive but it's a start



4

The next slot is done using the next blocks marked '4' and '3'. The last slot in the line will be done with block '5'



5

The machining sequence starts all over again but this time block 'B' and infill piece 'X' are used to move the blank over to create the next line of slots

TOP TIP

Sequence technique

You will need to make one set of blocks that determine the limit of movement from left to right for each door panel and another set to prevent any sideways movement. The series of blocks inserted in sequence at each end of the jig have numbers marked on them. Two infill blocks marked 'X' and 'Y' are needed to prevent sideways movement.

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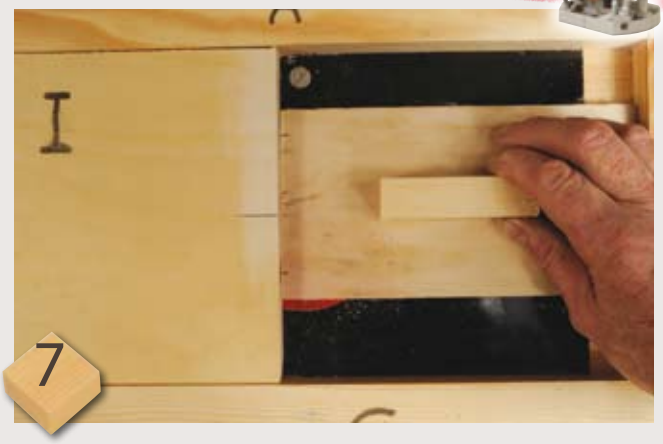
Repeat the sequence two more times, swapping 'X' and 'B' around, then remove 'X' and substitute 'Y' and you will end up with four matching lines of slots



To make the crosswise slots start with Roman numeral 'I' (this avoids confusion with the other blocks). Lift the blank, switch on, drop on and push until you feel the cutter break through into the next slot, the lines acting as a visual guide. Lift the blank and move it over to make the slot for the adjacent frame

Using the series of crosswise blocks, machine all the slots using the drop-on technique for all of them. Working carefully, I managed to make a series of doors, each one taking under 10 minutes – if I got into the rhythm I'm sure it would be less. Once you master the thinking behind the process, it becomes fun and you can turn out doors until the cows come home, it's a job done

When machining small mouldings for the dolls' house, do it on the edge of a wider board and use sprung fingers and a breakthrough fence to give good, safe support. Then cut the moulding off on the circular saw and repeat the process to make more mouldings

You may need to replace the insert plate on your tablesaw with one that fits tightly around the blade and riving knife, otherwise the tiny mouldings will just get dragged down the gaps

Thicknessing stock down thin enough for mouldings can be helped by fitting a false bed so you can go below the thicknesser's minimum capacity

And here you can see the result of producing skirting boards and dado rails for you dolls' house. It gives the rooms a very professional feel

Win Wealden dolls' house cutter set

Wealden have offered us this dolls' house cutter set worth £325.72 inc VAT, as a prize. To win, simply suggest another way of making a dolls' house panelled door, and we will choose the best solution. Send your answers on a postcard to: Wealden Competition, GMC Publications Ltd, 86 High Street, Lewes, East Sussex, BN7 1XN. Usual GMC competition rules apply. Closes January 21, 2011.