mortise and tenon

Bookshelf Option

I used biscuit joinery to assemble the sides of the Knock-Down Classic Bookshelf, but the traditional mortise and tenon joinery shown at right will do the job just as well.

A FEW CHANGES. If you choose to go this route, you'll need to make a change to the order of things. On the "biscuit-joined" bookshelf I first completed all the rail-to-spindle joinery and then added the stiles at the tail end. Here, the stile-to-rail joinery comes first. The reason is simple. You're going to start with rails that are 50mm longer than those for the biscuit-joined bookshelf. This allows you 25mm on either end for a tenon. But until the tenons are cut and the shoulder-to-shoulder length of the rails is established, you can't accurately locate the notched filler strips that form the spindle mortises.

OFFSET MORTISES. The 25mm-thick stiles and the 18mm-thick rails are flush across the inside face of the sides. To make this happen, either the mortises or the tenons need to be cut "off centre". To me, it's easier to offset the mortises in the stiles as shown in detail 'b'. This way you can still cut centred tenons on the rails. Just take your time when laying out and cutting the mortises and you should end up with a perfectly flush inside face.

TENONS. Before cutting the tenons on the rails, you'll want to cut the centred grooves that hold the filler strips. Once the grooves are completed, the centred tenons can be cut to fit the mortises in the stiles (detail 'a'). When fitting the tenons, leave a little top-to-bottom play. This makes it easier to "snug up" the spindles and rails when you assemble the sides.

SPINDLES. Once the rail-to-stile joinery is completed, the spindles are fitted as shown in the article. W