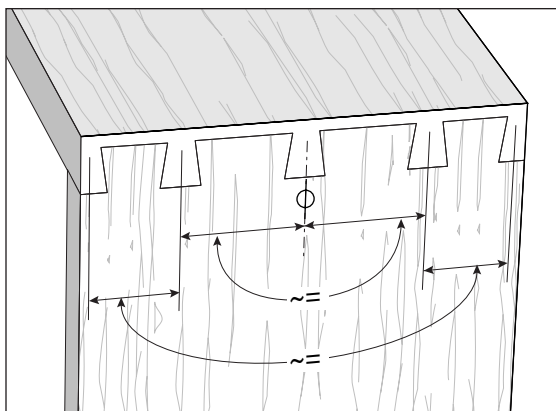


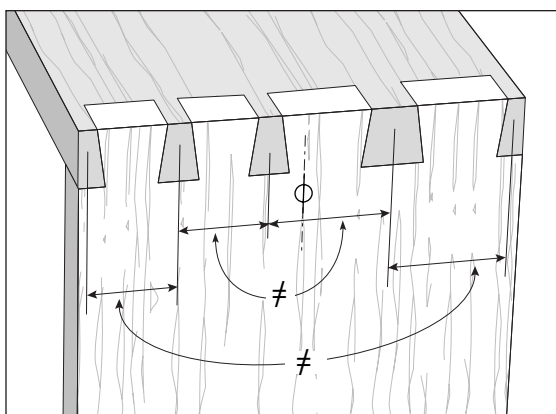
Asymmetric Dovetails

Chapter Foreword

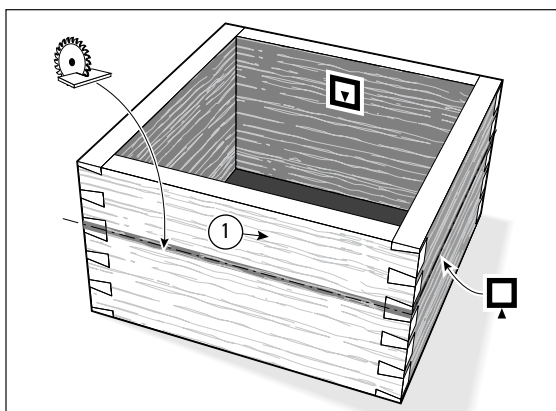
For certain procedures, you will need to use both ends of the Leigh jig. Asymmetrical joint layouts are one example. On the Leigh Jig, no joints will be truly symmetrical, but they can *look* symmetrical. Apparent symmetry is only required for aesthetic reasons, and not for strength. **Be sure you have read and understood chapters 8 through 11 before attempting these procedures.**

**13-1**

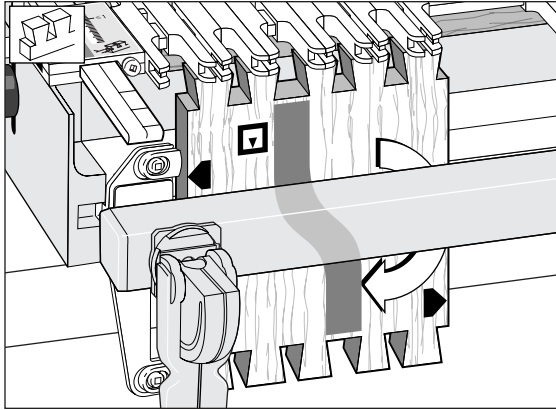
By *symmetrical* we mean a joint that looks or is approximately symmetrical about its centre line but is probably not, and need not be, precisely symmetrical. Using the Leigh jig, it is easy to cut a joint that looks symmetrical; the pins will always align perfectly with the tails cut at the same spacing. Remember, symmetry is only required for appearance, not for joinery reasons.

**13-2**

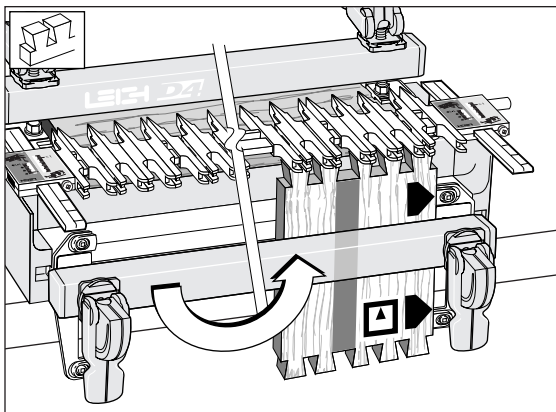
By *asymmetrical* we mean a deliberately uneven layout of pins and tails required by the project design.

**13-3**

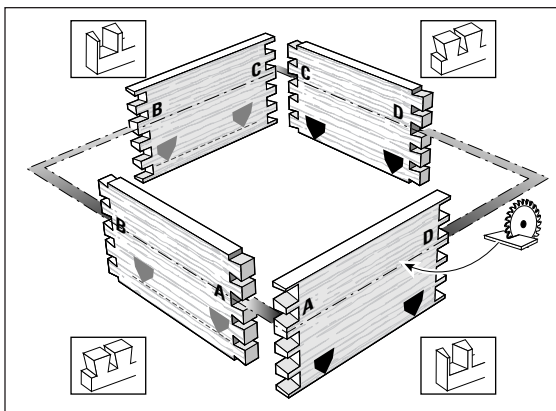
For example, asymmetrical joints may be used for blanket chests or boxes. One pin is made wider for a saw-cut allowance, so the half-pins all look the same width after the lid portion ① is cut off.

**13-4**

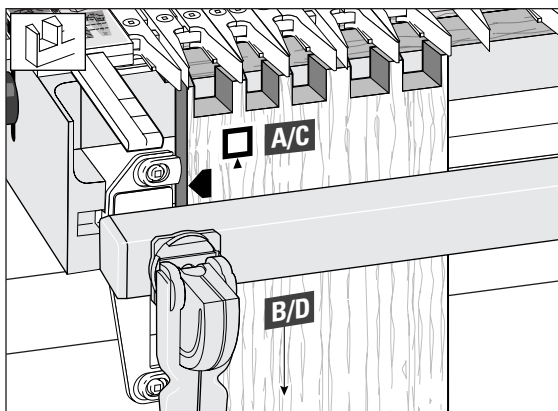
In the chest example you can see that if both ends of the board are cut under the same guidefingers, the wide sockets and pins at opposite ends will not line up. Remember, the same inside face ▣ of the through dovetail tail board has to face away from the jig for each cut.

**13-5**

Deliberately asymmetrical joints must therefore be routed on both ends of the jig using two separate, almost mirror-image layouts.

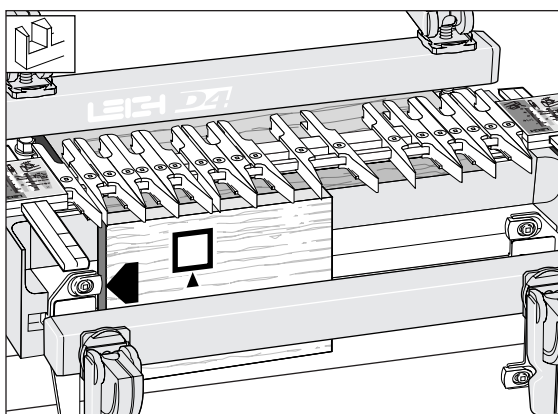
**13-6**

The layouts need not be exact mirror images because the parts that fit together will be made on the same end of the jig. For a typical blanket chest you would rout corners A and C on one end of the jig and corners B and D on the other end.



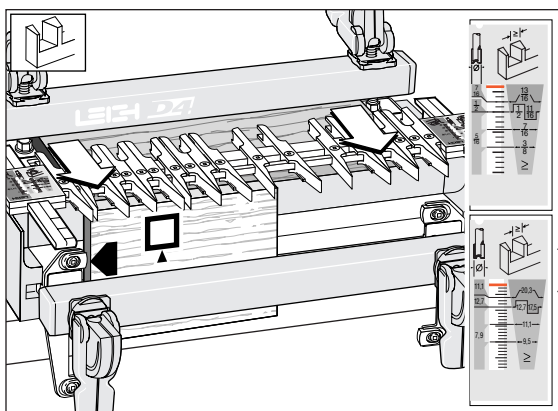
13-7

Here is an easy way to cut these near-mirror-image joints. Lay out the A and C corner joints in the usual way (i.e., in the  TD PINS mode). Rout the A and C corners' tails and pins. Leave the guidefingers set and in the  TD PINS mode.



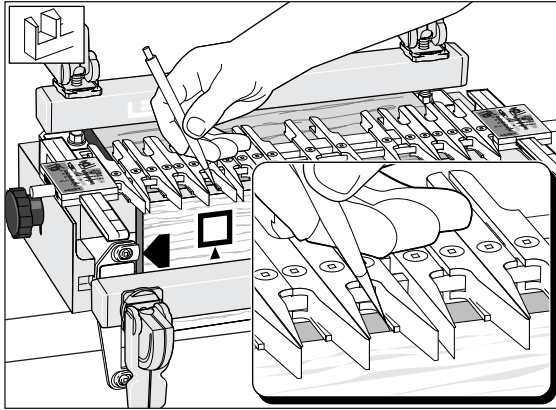
13-8

Take a square-cut scrap board wide enough to clamp **horizontally** in the front clamp and as long as (or slightly longer than) the width of the workpieces, and butt it against the same side stop you used for the A and C joints. Mark the board to indicate which face  is **out** on the jig.

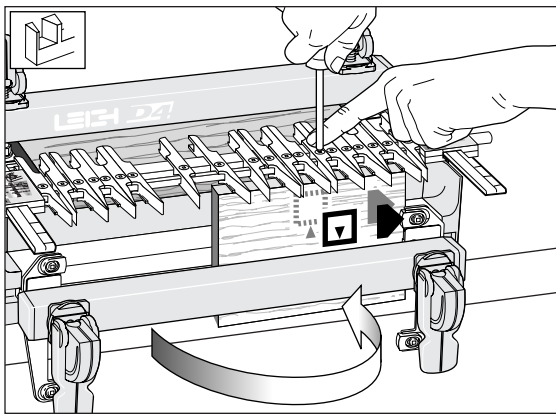


13-9

Pull the finger assembly forward until the bracket line is on the highest scale reading.

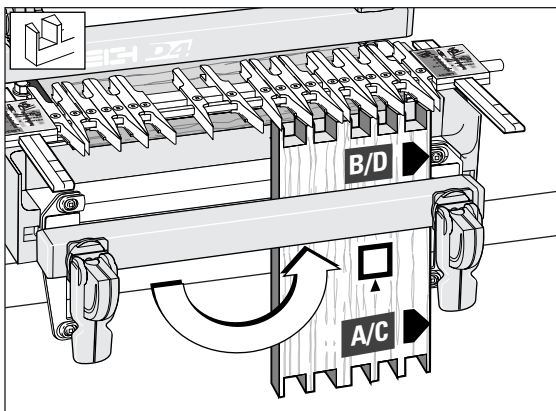
**13-10**

Mark pencil lines across the top edge of the scrap board, along the bottom of each side of each guidefinger or pair of guidefingers.

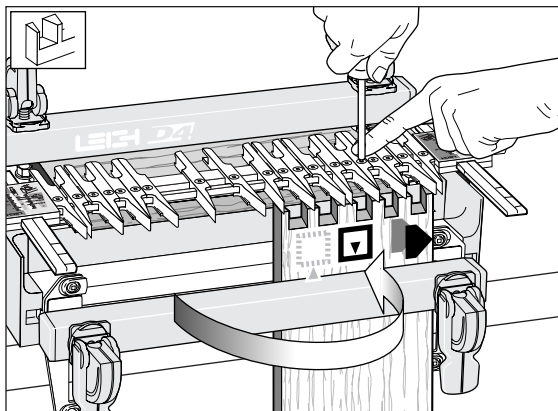
**13-11**

Turn the board (like turning a page of a book) to the other end of the jig and against the side stop, so the inside face  is now away from the jig. Adjust the guidefingers at that end to match the pencil lines.

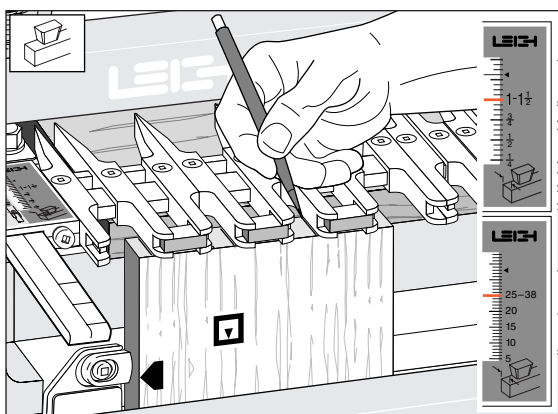
Note: See the next page for how to transfer half-blind mirror-images.

**13-12**

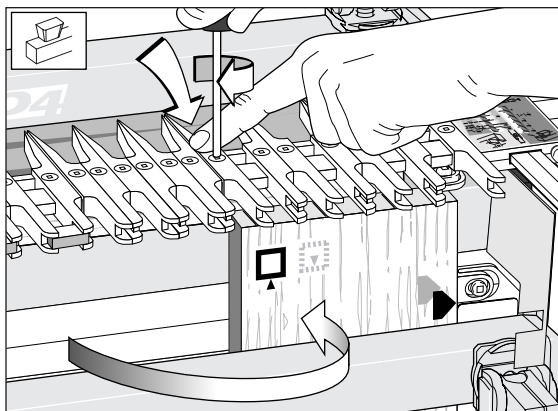
Now rout the B and D corners' tails and pins using this guidefinger pattern. When you assemble the case, the A and/or C ends will fit each other, and the B and/or D ends will also fit each other. Keep the boards inside face  inwards on the case and the side-stop edges all turned the same way, and the parts are sure to match (see 13-6).

**13-13**

A quicker and only slightly less accurate way to “mirror” the guidefinger positions from one end of the jig onto the other end is to simply flip a completed A or C pin board from one end of the jig (like turning a page) to the other end, and centre each pair of guidefingers over a pin. (This is not so precise because you are aligning converging angles of pins and guides instead of straight lines.)

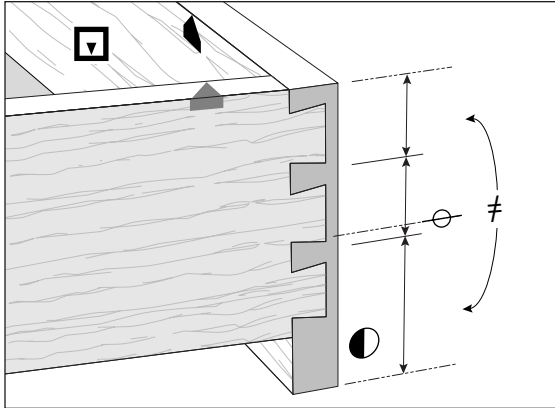
**13-14**

To transfer a **mirror image** asymmetrical half-blind joint, first set the scale on 1”[25mm] in the HB TAILS mode. Mark pencil lines next to the tail guides, and...

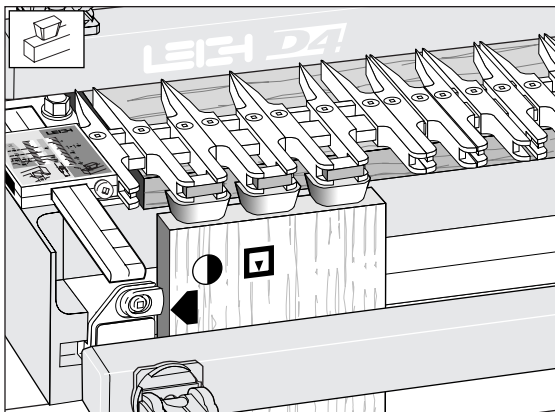
**13-15**

Turn the marked board (like turning a page of a book) to the other end of the jig. Position the guidefingers over the pencil marks.

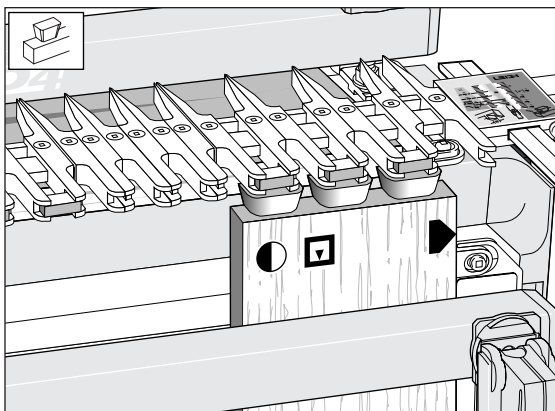
This tail board layout may look symmetrical, but as the next illustration shows, it forms part of an asymmetrical joint.

**13-16**

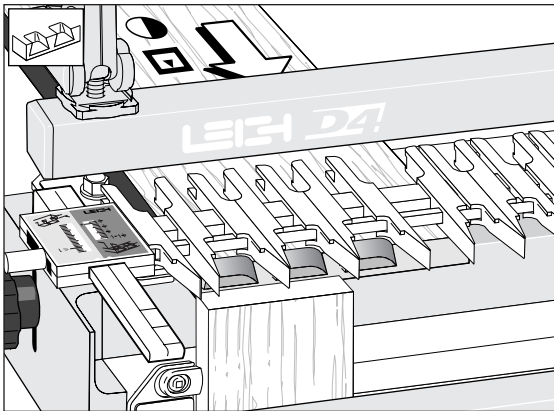
This common example of asymmetry is where boards are of a different width. In this case, a drop-front drawer, the drawer front bottom half-pin is much wider than the top half-pin. The top edges of the drawer front and sides are flush, so it makes sense to use these edges against the side stops at each end of the jig.

**13-17**

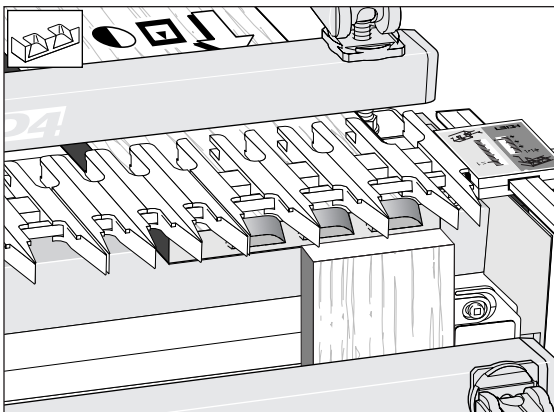
Mount the right hand  drawer side on the left end of the jig for routing, and...

**13-18**

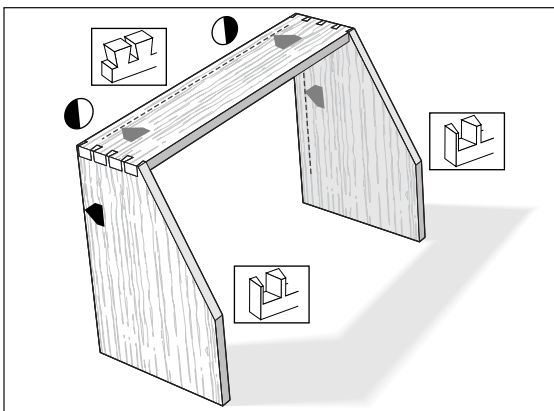
Transfer the joint layout from left to right (as in Figure 13-14 & 13-15). Mount the left hand  drawer side on the right end of the jig.

**13-19**

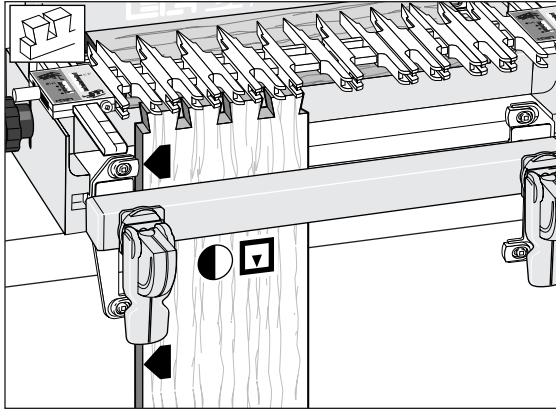
Mount the right end ● of the drawer front on the left end, and...

**13-20**

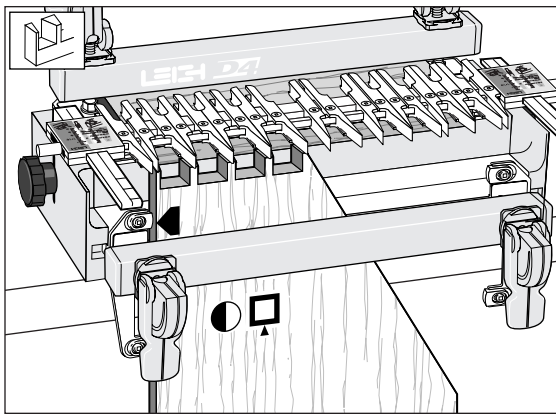
Mount the left end ● of the drawer front on the right end, using the **mirror-image** layouts on both ends.

**13-21**

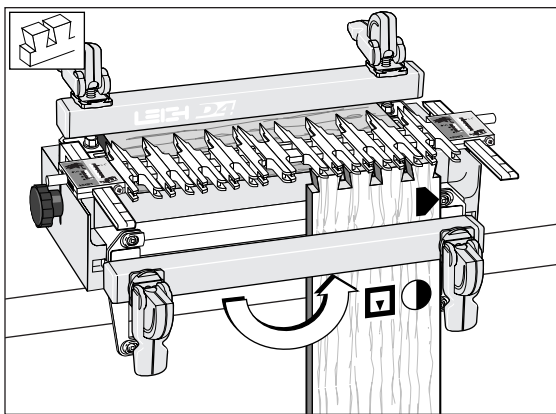
Both ends of the jig are also used for the top corners of a slant-front desk. The joints themselves may be symmetrical, but they must be routed on opposite ends of the jig because the sloped front will not register accurately against the fixed side stops.

**13-22**

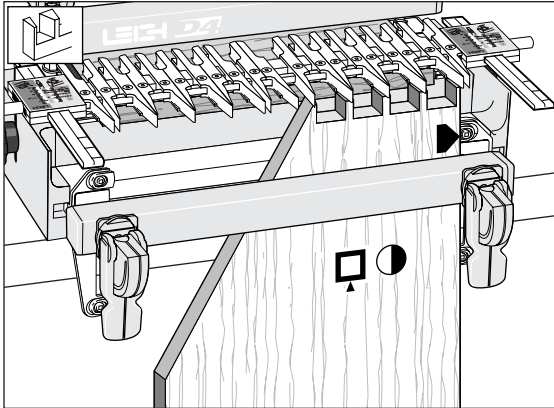
At the back of the desk both sides and top are flush, so the rear edges are set against the side stops. Place the left end ● of the top tail board against the left side stop ◄. Rout the tails.

**13-23**

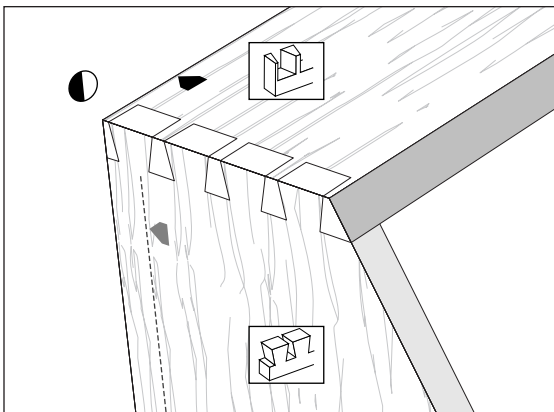
The left side ● of the desk goes against the left side stop ◄. Rout the pins.

**13-24**

Transfer the joint layout from left to right (as for 13-8 to 13-11) and place the right end ● of the top tail board against the right side stop ►. Rout the tails.

**13-25**

Place the right side ● of desk against the right side stop ▴. Rout the pins.

**13-26**

Note: If, in the slant-front desk example, the pins were in the desk top and the tails in the sides, then all the parts would be routed in the opposite ends of the jig to those shown above.

