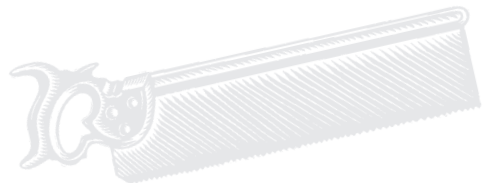


Jig Assembly, Mounting And Using The Clamps



Make Sure You Have All the Parts!

Before you start to assemble your Leigh D4 jig, check to make sure you have received all the required parts.

The small carton you removed from the end of the main carton contains:

1. 1 VHS instructional video (english only)
2 scale assemblies, 2 standard cutters, and any other small optional items you may have ordered with your new jig. Check the packing slip for this information.

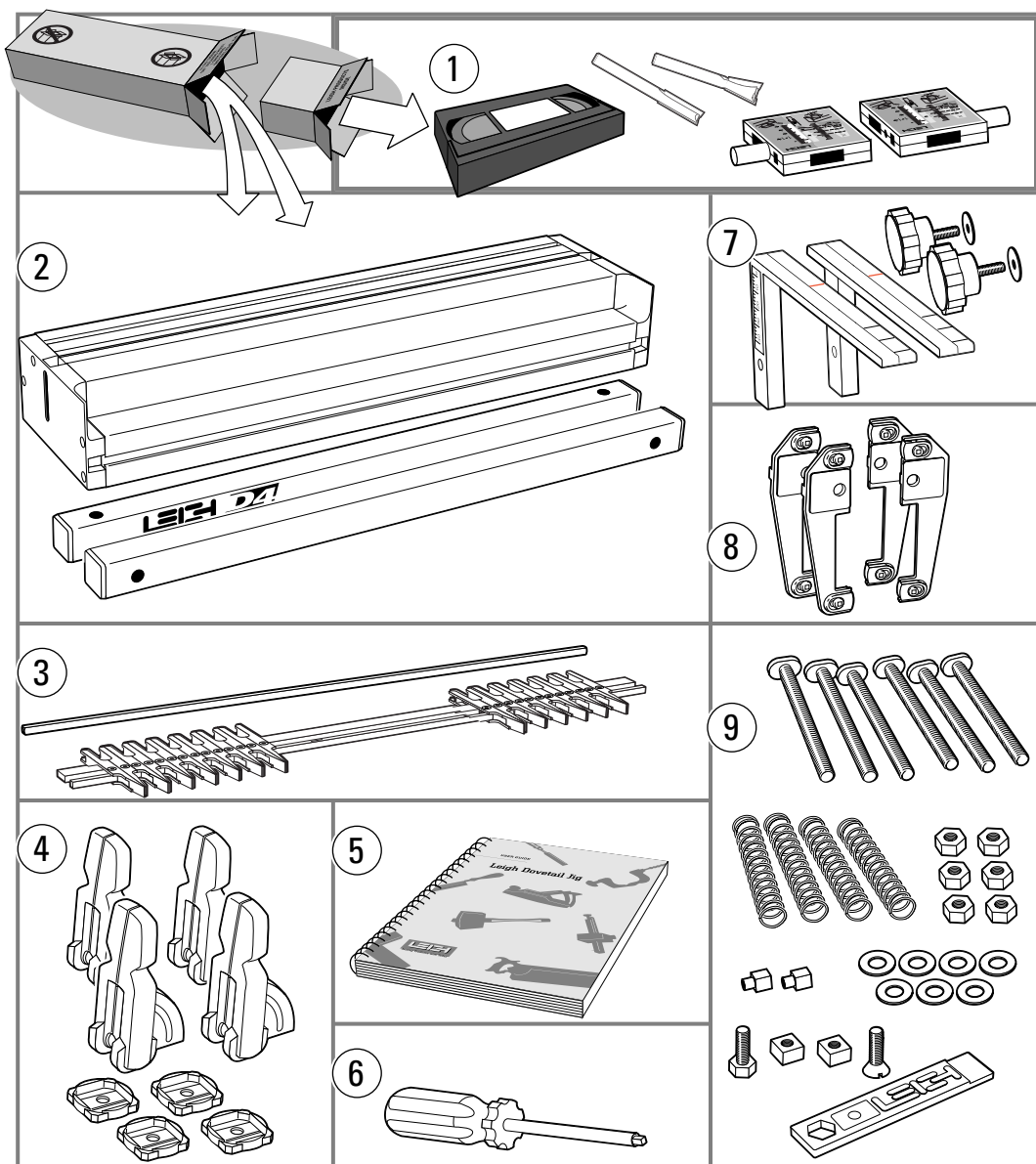
The main carton contains:

2. 2 clamp bars
1 main jig body

Inside the main jig body, there should be:

3. 1 cross cut bar
1 finger assembly on two bars
(D4 jig has 26 guidefingers)
4. 4 cam-action speed clamps
4 cam clamp step washers
5. 1 Leigh jig user guide
6. 1 square-head guidefinger screwdriver
7. 2 support brackets
2 knobs
2 nylon washers
8. 4 side stop assemblies
(2 left hand, 2 right hand)
9. 6 T-bolts
4 springs
6 hex nuts
2 cross cut bar end caps
7 flat washers
1 hex bolt
1 flat head machine screw
2 square nuts
1 Leigh wrench/gauge/angle side stop

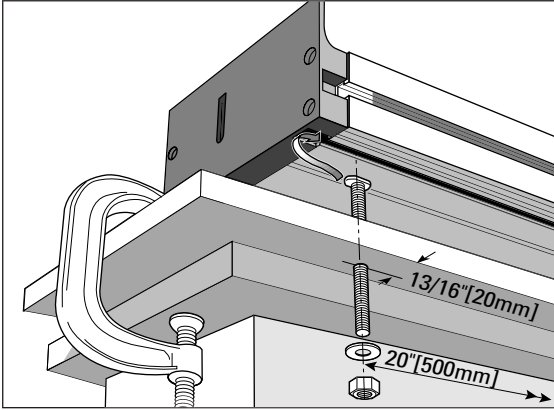
If any of these items are missing from your jig, please notify your supplier or Leigh Industries immediately.



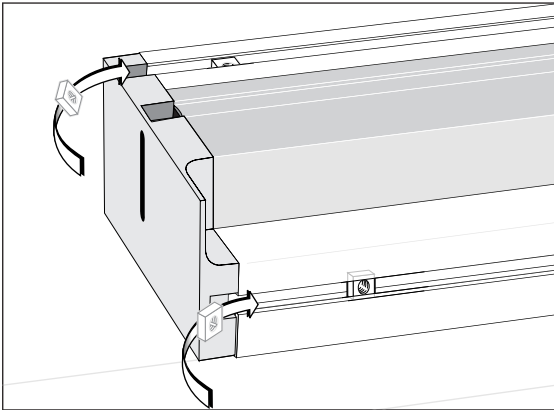
Important Note

Mount your jig securely and assemble it completely before you try to use it.

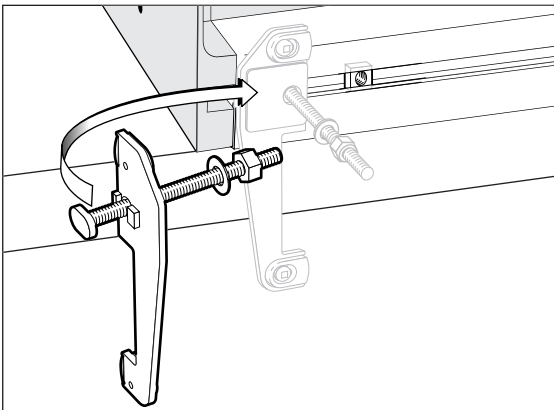
Make sure you have read and understood all the material in the Safety section of this user guide before using the jig.

**1-1**

Insert two T-bolts in the slot under the front extrusion. Bolt the jig either directly to a bench or to a base suitable for clamping to a bench, as illustrated, i.e. 1 x 8" [20 x 180 mm] x 36" [915 mm] long. Fit the T-bolts at approximately 20" [500 mm] centres, $1\frac{3}{16}$ " [20 mm] in from the edge, and cut them to length as required.

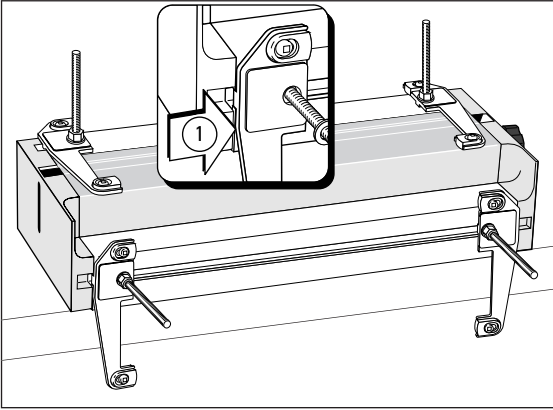
**1-2**

Insert one square nut (part #284) into the channel of the front and top main extrusions. The nuts are for the possible future attachment of accessories.

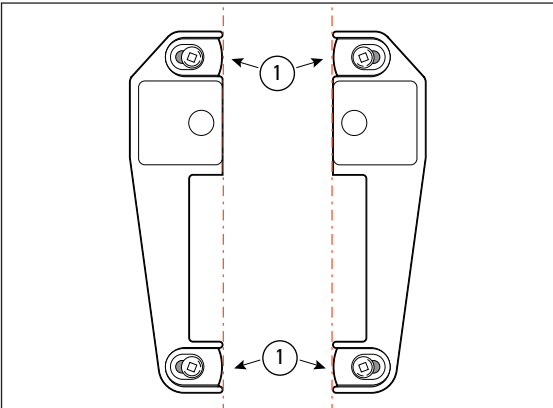
**1-3**

Insert two T-bolt/sidestop sub-assemblies into each of the two main extrusions. Make sure the side stop, washer, and nut are in the correct order as illustrated, with the locating lugs engaging in the extrusion slot.

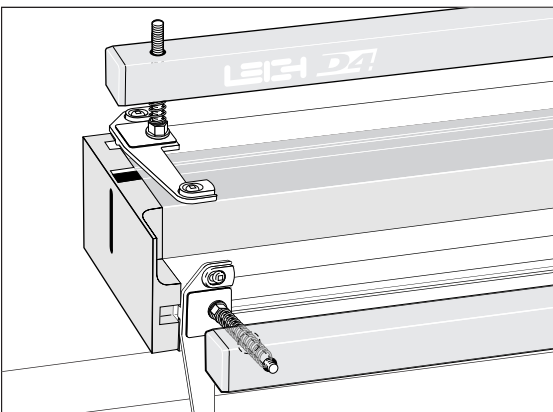
Note: The lugs will be tight to enter the extrusion slot but the nut will force them in. See 1-4 before tightening.

**1-4**

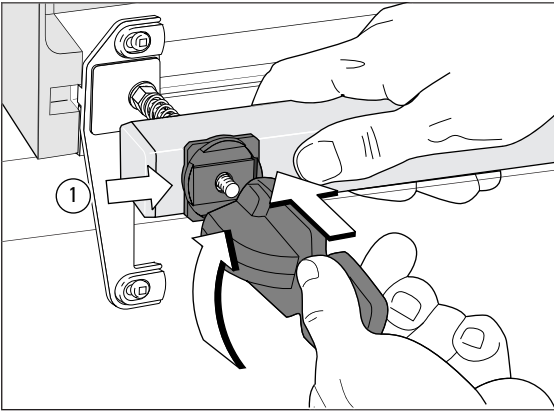
Position the side stops with the outer edge of the casting flush with the ends of the extrusion ①. Firmly tighten the nuts until the side stops are seated.

**1-5**

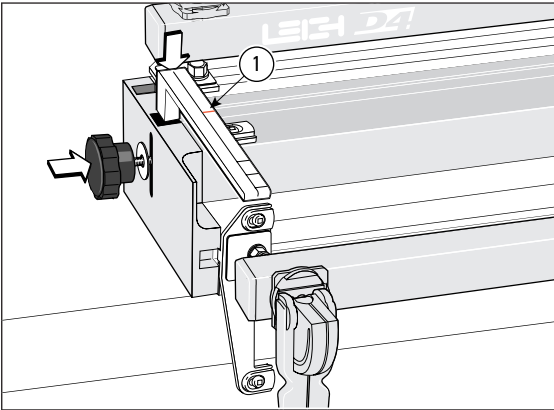
Note that the adjustable bumpers ① are factory set in the retracted position, which is set back from the main body of the side-stop. This is for setup alignment purposes, covered later in this chapter. If yours are not in this position, make sure that they are before proceeding.

**1-6**

Place four springs and two clamp bars on the T-bolts. The large holes in the clamp bars go right over the springs. Make sure the clamp bars move freely on the T-bolts. The Leigh logo should be on the rear (upper) clamp bar facing you.

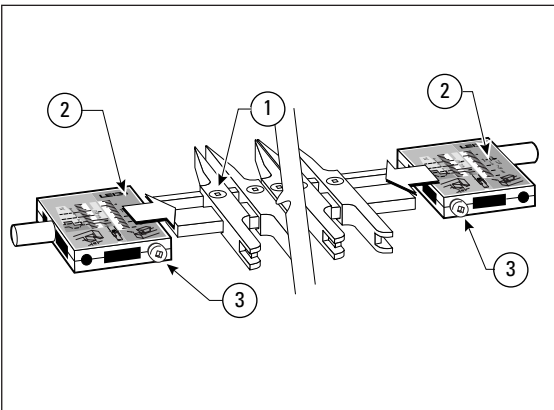
**1-7**

Place one black step washer ① on each T-bolt with the *flat side against the clamp bar*. Screw a clamp lever assembly onto each T-bolt, making sure the cam lobes are between the step washer sidewalls.

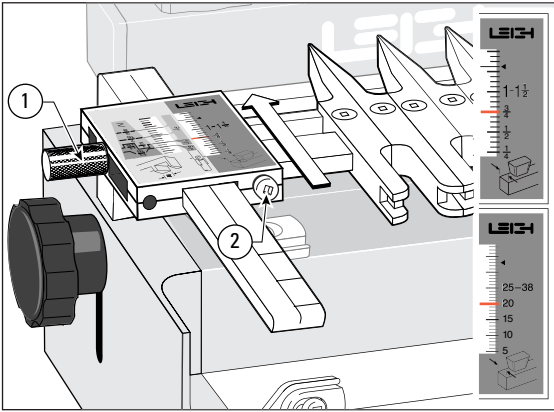
**1-8**

Insert the right and left (marked RH and LH) support brackets. Attach the knobs and nylon washers, raise them to full height and tighten the knobs.

Note: The set line on this support bracket ① is shown in red for clarity in this manual only. The actual bracket lines are black.

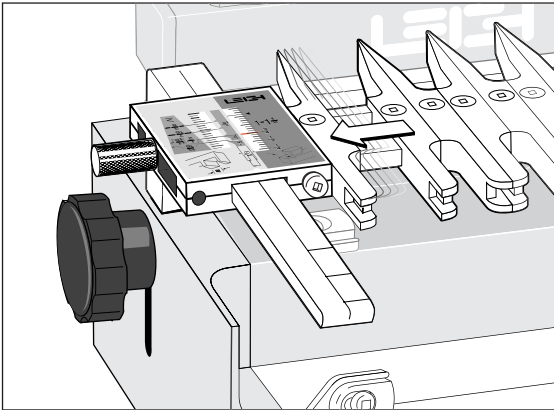
**1-9**

Place the finger assembly on your bench with the guidefinger screws ① on top and the sharp ends of the guidefingers pointing away from you. Fit the scales onto the finger assembly, placing the HB TAILS scale ② to the right at both ends. **Do not tighten the scale screws ③ yet.**



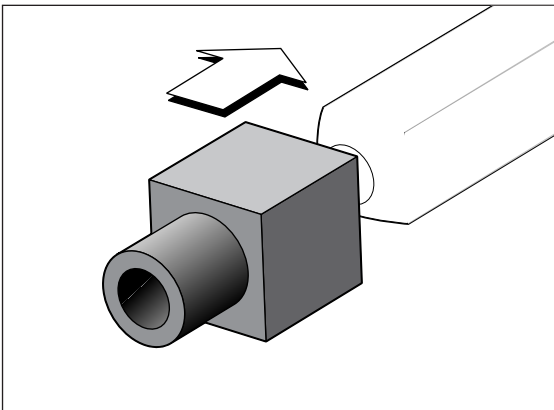
1-10

Slide the complete finger assembly with loose scales onto the support brackets. Set rear bracket line at $\frac{3}{4}$ " [20mm] on the HB TAILS scale and tighten the thumb screws ①. Tighten the scale screws ② with the Leigh screwdriver. **Do not over-tighten.** To ensure correct finger assembly alignment, follow this same procedure whenever you remove the scales from the finger assembly.



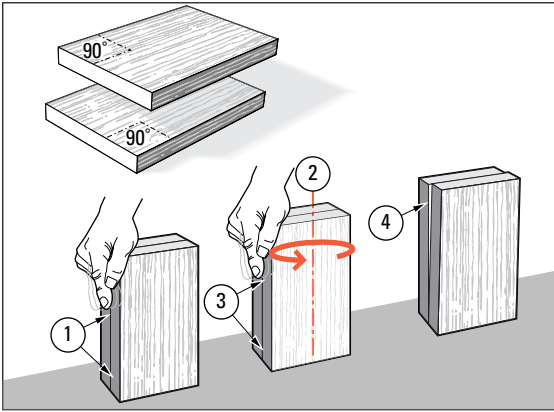
1-11

Move the outermost guidefinger at each end of the finger assembly outward to touch the scales, and lightly tighten. This finger acts as an end support for the router and is not used as a guide.




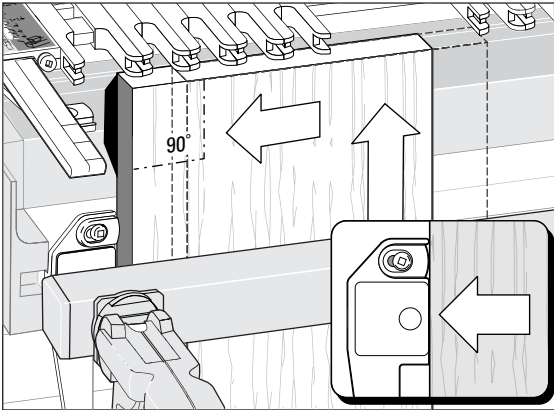
1-12

Press one plastic cap onto each end of the cross-cut bar as shown, and set the bar aside until needed.

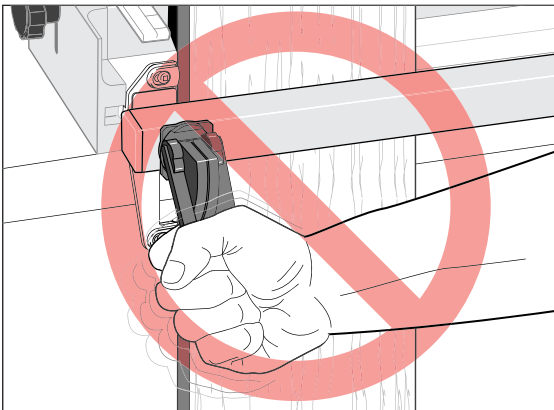
**1-13**

Now you will need two boards $\frac{3}{4}$ "x6" [20x140mm]x8" [200mm] or longer, for practising with the cam-action clamps. **Both pieces need to have square ends for setting the side stops later.**

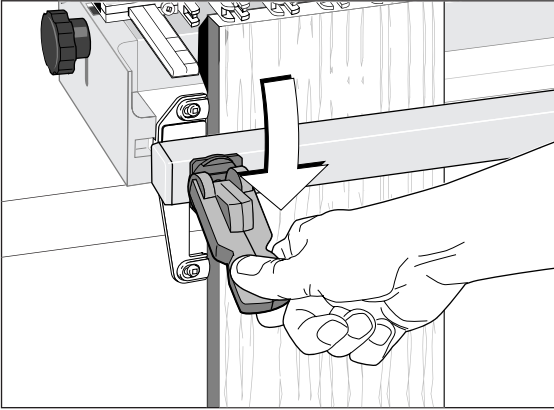
 Do not trust your square! To check for squareness: stand both pieces vertically on a flat surface, make sure the side edges are flush at the bottom and then at the top ①. Turn one piece around on its end ②. If side edges are flush top to bottom ③, the boards are square. If not ④; cut two that are.

**1-14**

You will operate the cam-action speed-clamps every time you use the jig, so get used to the feel of the clamps first. Use the square ended boards for practice. Make sure the end of the board is touching the underside of the guidefingers. Then slide the board over against the side stop. Do not worry about setting the side stop bumpers until after you are familiar with the clamp operation.

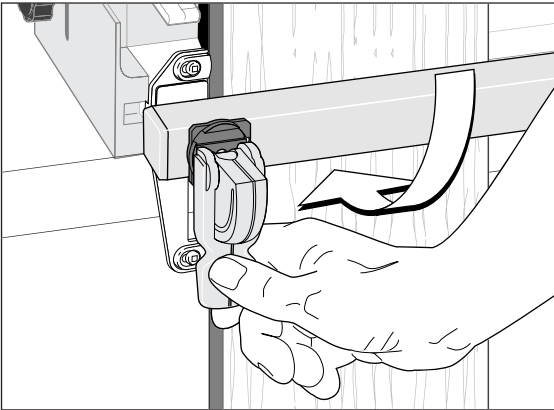
**1-15**

Do Not force the cam-action speed-clamp. It has great leverage, and excessive force may damage the workpiece or the jig.

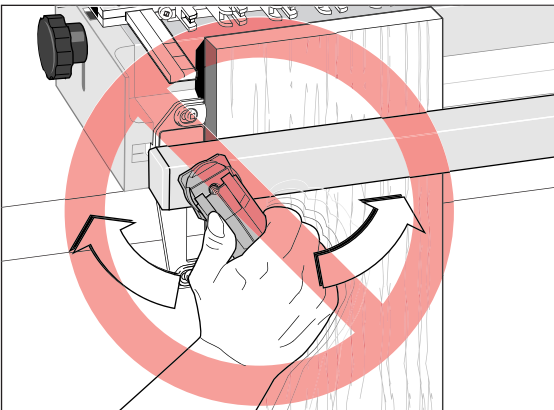
**1-16**

A smooth, firm action is enough to engage the clamp.

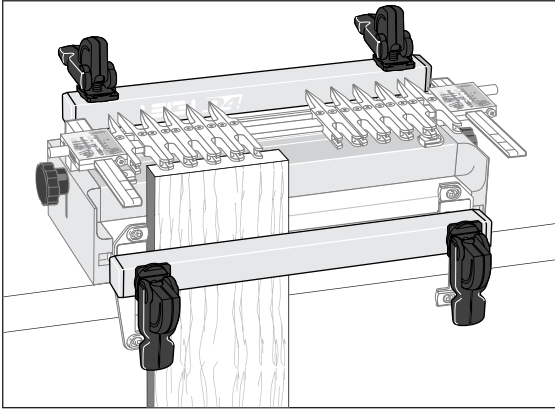
Rule of thumb: If you can't throw the lever comfortably by pressing the end of it with your thumb, reduce the tension. A few minutes of trial and error will help you feel the right clamp tension.

**1-17**

Firm thumb pressure is about right.

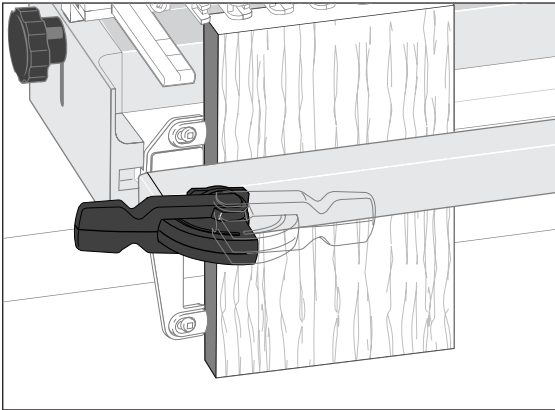
**1-18**

Do Not use the lever as a torque arm. Adjust the clamp tension only with the clamp disengaged.

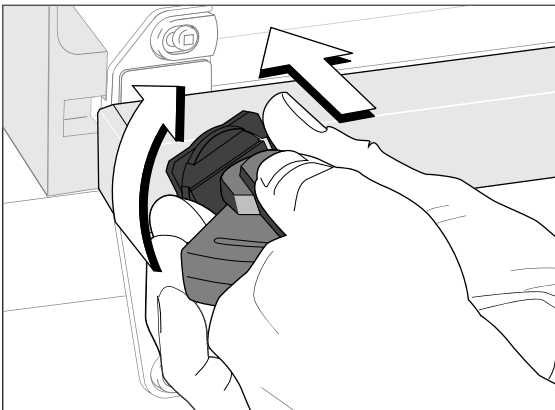
**1-19**

When engaged, the front clamp levers should point down and the rear clamp levers should point away from the operator.

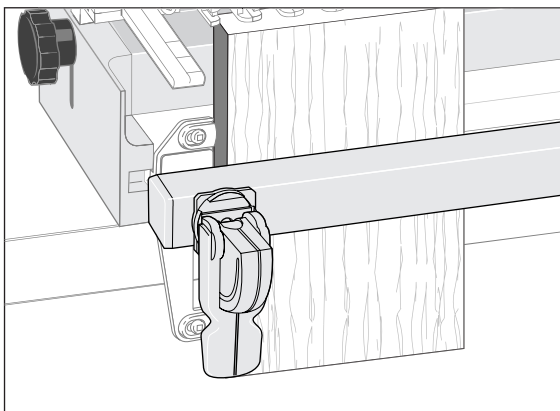
To simplify the instructions, most jig illustrations will show a jig considerably shorter than the standard 24" [610mm] jig.

**1-20**

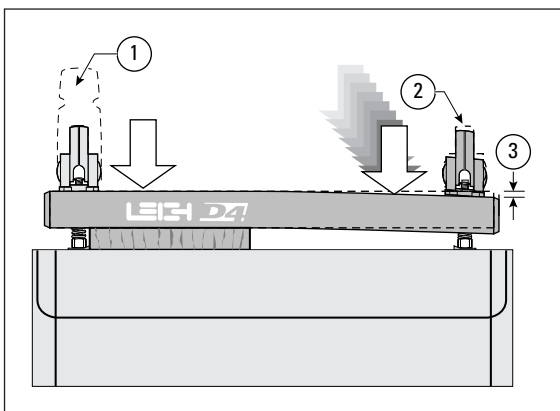
If the lever is badly positioned at the correct clamping pressure...

**1-21**

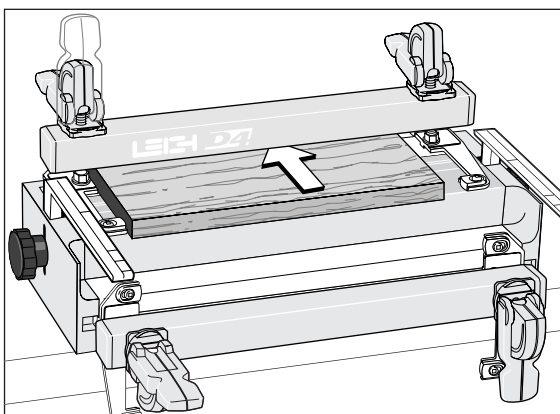
Release the clamp, remove the board and turn the step washer a quarter turn (the step height inside the step washer is one quarter of the thread pitch).

**1-22**

Then adjust the clamp until the clamp lever is in the right position at the right pressure.

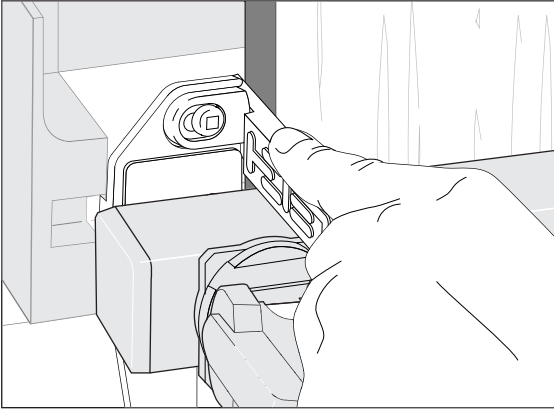
**1-23**

For all but the wider workpieces, you need only operate the clamp on the workpiece end ① of the jig to release the board. For narrower boards, the clamp at the free end ② should be just tight enough to bow the clamp bar about $\frac{1}{8}$ " [3mm] ③.

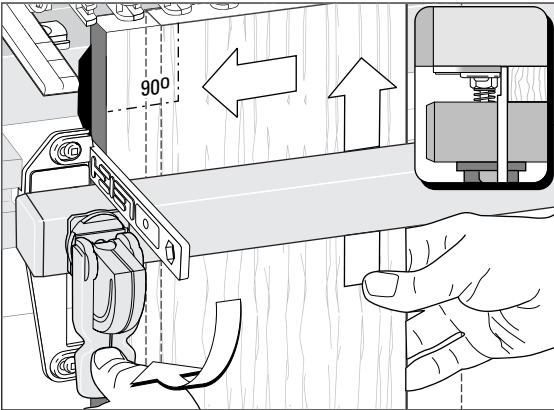
**1-24**

Make up a spacer board. This board will be used to support the finger assembly in all front-clamping vertical board modes. The spacer board should be flat, straight and of even thickness. We suggest $\frac{3}{4}$ " x 6" [20x150mm] by approximately 23" [580mm] long. Note: the thickness of the spacer board has no relationship to the thickness of the vertical board being routed.

Chapter 1 D4 User Guide



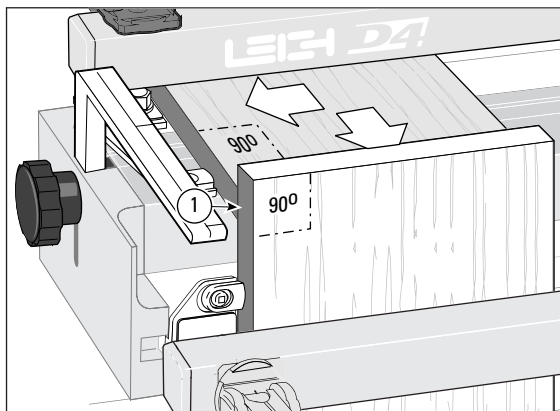
1-25 Place the finger assembly on the support brackets (any mode), resting flat on the spacer board. *Leigh F1 Template owners: the F1 requires a more precise side stop setting. Follow the F1 instructions 1-3 through 1-30, then return to this D4 guide instructions 1-27 through 1-33. Otherwise, begin here with 1-24.* To set the D4 sidestop bumpers, leave the clamps adjusted to receive the two square boards. Use the thin end of the Leigh Wrench to position one of the 90° test boards away from the front left hand side stop casting. Make sure the top end edge of the board is touching flush under the guide fingers.



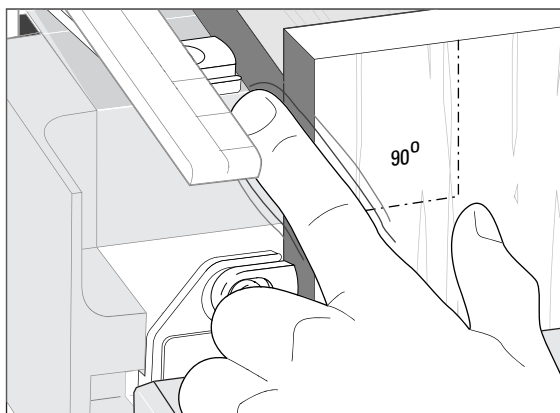
1-26
With the wrench trapped in place, clamp the board.



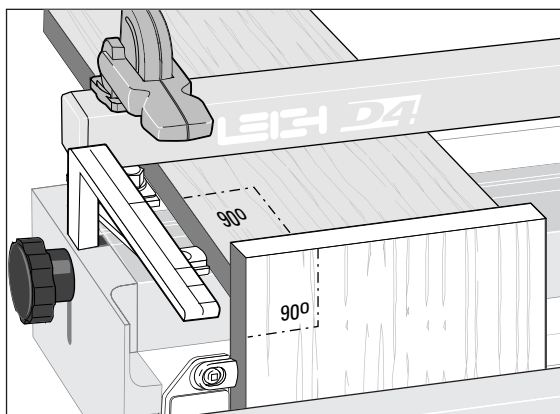
1-27
Remove the wrench and loosen the bumper setscrews. Slide the top bumper against the board and tighten the screw firmly. Position and tighten the bottom bumper. *Leave the board in place.*

**1-28**

Remove the finger assembly. Place the second 90° test board under the rear clamp, front end edge flush against the front board. Slide the rear board side to side until the left side edges are flush ①.

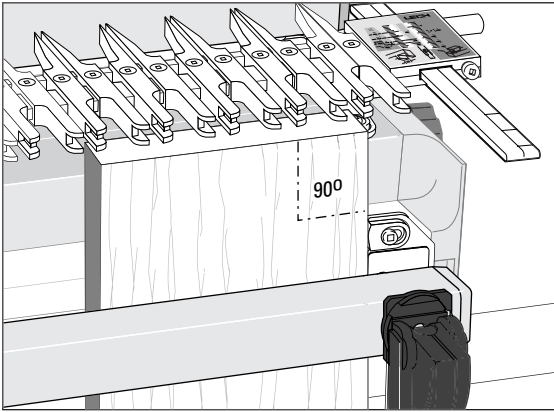
**1-29**

Check with your fingertip to make sure it is flush.

**1-30**

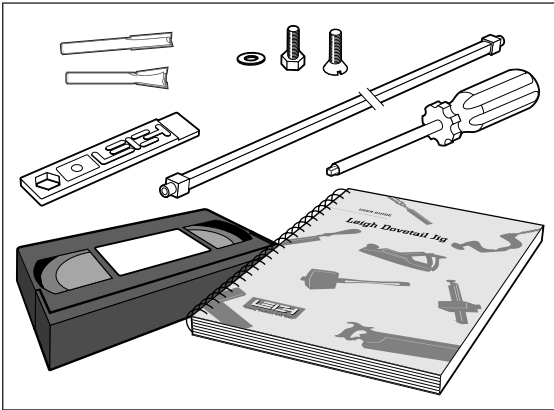
Clamp the rear board by pulling the lever forward (this one time only so that the rear bumper screw is accessible). Position the bumpers against the top board and tighten the setscrews.

The left hand front and rear side stops are now precisely aligned.

**1-31**

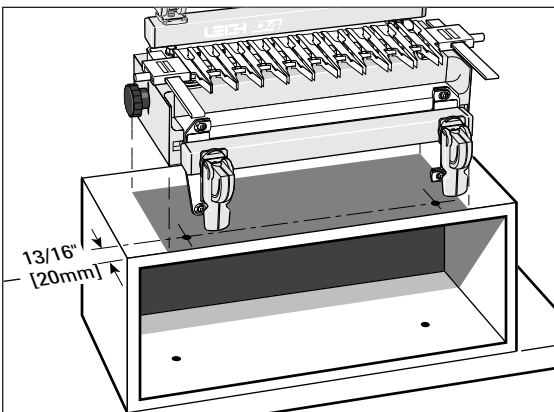
Remove the boards from the left side of the jig. Make sure the support brackets are still in the fully raised position. Temporarily re-install the finger assembly onto the support brackets (any mode). Repeat the side stop bumper setting procedure on the front right side of the jig.

Then remove the finger assembly and repeat the alignment procedure for the rear right side stop.

**1-32**

After you have assembled and mounted the jig, you will have some items left over:

- 1 straight router bit Leigh No.140
 - 1 dovetail router bit Leigh No.80
 - 1 Leigh wrench/gauge/angle sidestop
 - 1 angled sidestop bolt and washer
 - 1 accessory attachment screw
 - 1 Leigh guidefinger adjustment screwdriver
 - 1 cross cut bar with plastic caps
 - 1 Instructional Video, and this manual.
- Please keep all these items for ready use.

**1-33**

To gain height for a more comfortable working position or for routing longer boards, mount the jig to a box that can be bolted securely to a bench.

(see also page 145 fig. 17-14)