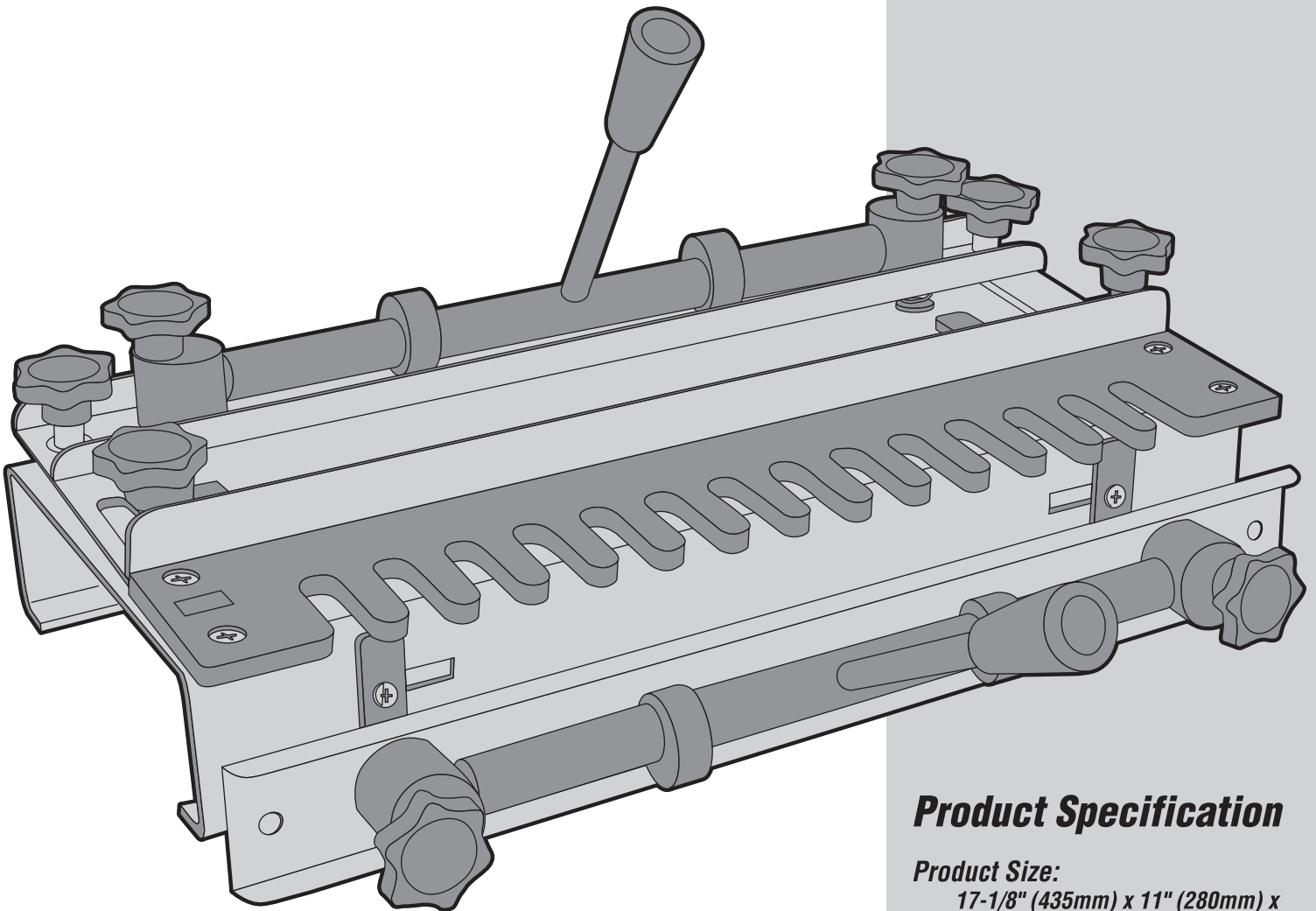


12" DOVETAIL JIG

User Instructions - Please keep for future reference



Eccentric Fixing Jig

- ***Male and female dovetail joints are cut simultaneously, ensure perfect match of dovetail joints.***
- ***Eccentric fixing clamps hold both workpieces firmly together in the jig.***
- ***Side stops provided, allow repeated precise dovetail joint cutting with only initial setting.***

Product Specification

Product Size:

17-1/8" (435mm) x 11" (280mm) x
7-3/4" (170mm)

Net weight:

8.6Kgs

Eccentric clamp capacity:

up to 1/4" (6mm)

Side stops offset capacity:

up to 1" (25mm)

Comb size:

1/2" comb finger, 17-1/8" (435mm) x
2-3/4" (70mm) x 1/4" (6.4mm)

Guide collar:

2-3/8" (60mm) outer diameter,
7/16" (12mm) bush diameter

Dovetail router bit:

1/4" shank TCT, cutting width 5/8",
cutting depth: 5/8"

Workshop Advice & Guidance



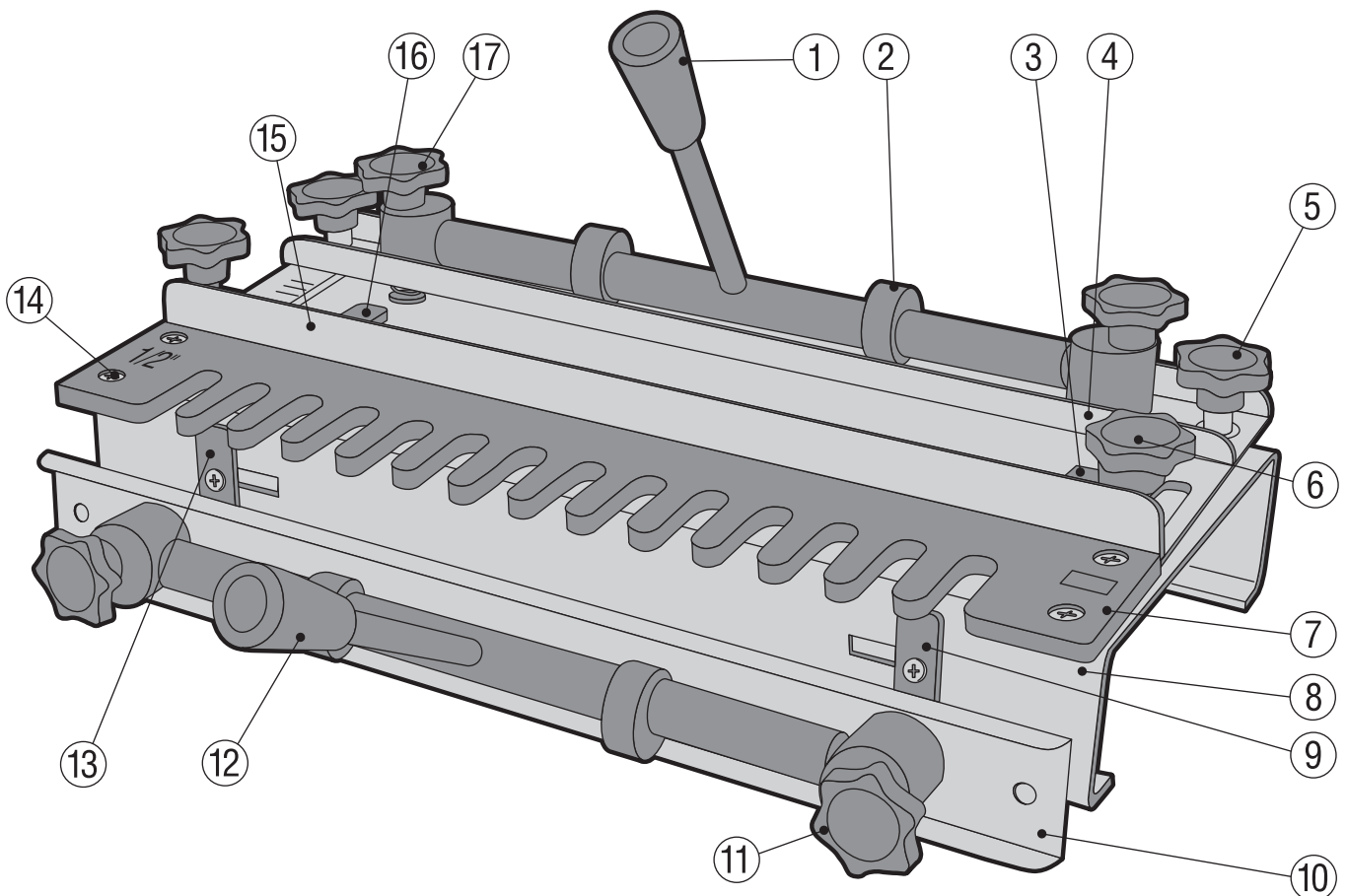
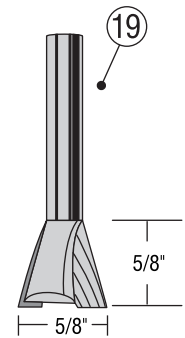
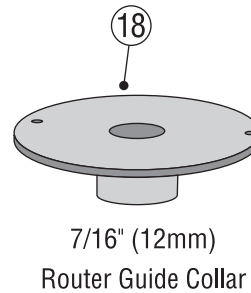
Important - Safety and maintenance

Please read the following instructions prior to operation of this product and keep for future use.

1. **Avoid wearing loose clothing, jewelry or anything that could get caught in moving parts.** Tie back long hair. Use ear protectors especially in confined areas. Keep fingers etc. clear of the moving parts.
2. **Children and pets should be kept out of the working area.** Children should not be allowed to operate this Jig. All tools should be kept out of reach of children, and stored or locked in a secure cabinet or room.
3. **Guard against electric shock.** Keep the Jig clear of the electric cables while working. **Do not work on or near "live" equipment or services.**
4. **Work environment.** Do not use the Jig in **damp or wet areas.** Do not use near **flammable gas or liquids.**
5. **Always use the correct tool.** Do not attempt to use the Jig for a purpose of which it was not designed. The router will give much better service if you do not use excessive force. **Excessive force will overheat the router and damage internal parts.** Excessive force may cause you to over balance causing damage and / or injury.
6. **When not in use store in a dry place or keep locked away out of children's reach.**
7. Sides of the test piece and work piece must be square to each other and to the surfaces.
8. Never try to rout a board with thickness lower than the recommended value. All workpieces shall be uniform in thickness.

Components

Reference	Description
①	Top Eccentric Bar Clamp
②	Eccentric Cam Wheel
③	Side Stops (Top/Right)
④	Upper Bracket - Top Clamp
⑤	Comb Adjustment Knobs
⑥	Back Stop Fixing Knobs
⑦	1/2" Comb
⑧	Main Body
⑨	Side Stop (Front/Right)
⑩	Front Clamp
⑪	Clamp Adjustment Knobs
⑫	Front Eccentric Bar Clamp
⑬	Side Stop (Front/Left)
⑭	Comb Fixing Screw
⑮	Back Stop
⑯	Side Stop (Top/Left)
⑰	Clamp Adjustment Knobs
⑱	Router Guide Collar
⑲	1/4" Shank TCT 5/8" Dovetail Router Bit



Cutting a Flush Dovetail Joint

Cutting a Flush Dovetail Joint with a 1/4"-5/8" Dovetail Bit, a 1/2" Comb and a 7/16" (12mm) diameter Router Guide Collar as supplied.

Set up: Before you start



WARNING!
Wear eye, ear and breathing protection



Tools required: PH2 screwdrivers, combination square



Note: Ensure Jig is firmly fastened to the work surface or bench. Screw in the Bar clamps handles to form the eccentric bar clamp. Ensure they are securely fixed in place. See fig. 1.

- Slide the comb ⑦ to the front most position, with the front edge parallel to that of the jig's main body, fix the comb with the comb adjustment knobs ⑤. Insert a test piece of wood on the top of the jig. Make sure the side edge of the wood piece is parallel to that of the jig's main body ⑧. Align the side edge of the wood piece with the left side edge of the comb finger in same vertical plane and then clamp the work piece firmly with the top eccentric bar clamp ①. Loosen the back stop adjustment knobs ⑥ if necessary to gain access to the side stop screws. With the side stop tightly rest against the edge of the wood piece, fix the side stop position by tightening side stop fixing screws.
- Remove the comb by loosening the comb fixing screws ⑭, remove also the front clamp ⑩ by the loosening the clamp adjustment knobs ⑪.
- Offset the front side stop by 1/2 inch (if the supplied comb is used) to the top side stop as shown in Fig 3. The top and front side stop shall be perpendicular to each other. Fix the front side stop in position by tightening the screws. If the width of the wooden board to be cut exceeds 11", remove the front side stop on the other end.
- Replace the front clamp with the front clamp adjustment knobs.



Note: You can also perform the top and front side stops setting on the right by following the procedure above.



Note: Once the top and front side stops have been fixed in position no more adjustment is needed.

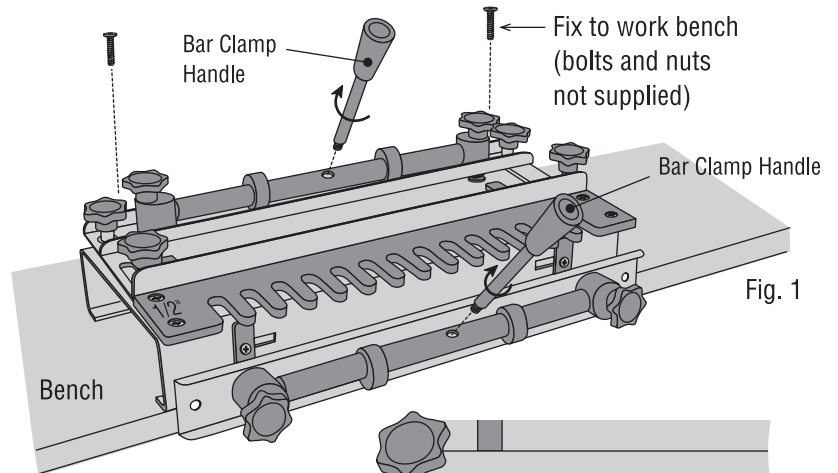


Fig. 1

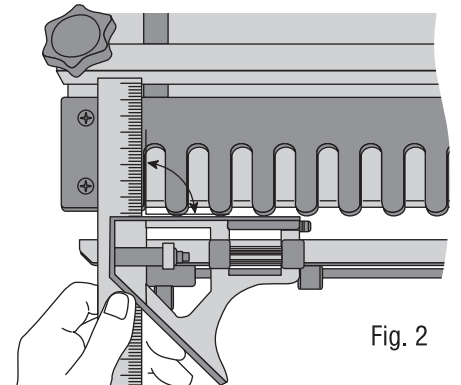


Fig. 2

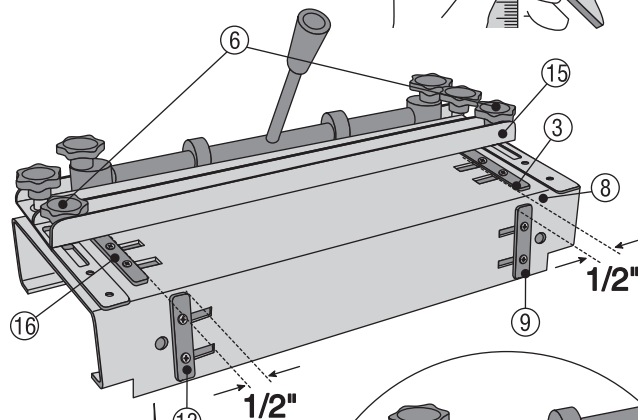


Fig. 3

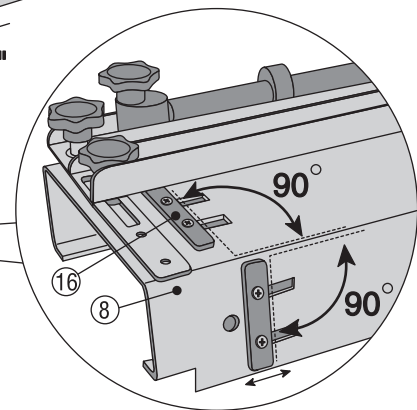


Fig. 4

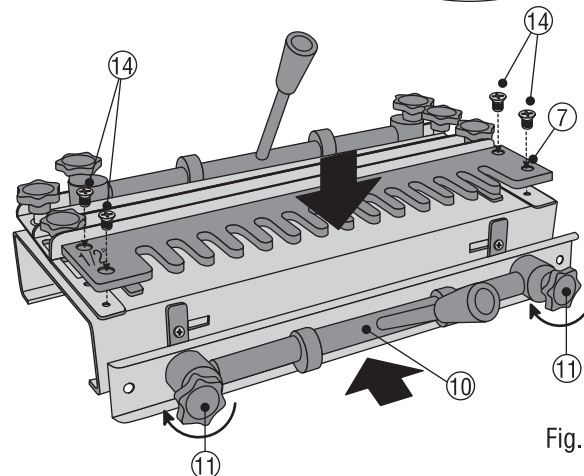


Fig. 5

Cutting a Flush Dovetail Joint

Preparing the wood

- 1) All sides of the work pieces must be square to the face.
- 2) The work pieces for the Front, Back and Sides of your wood must be accurately sized. **See fig. 6.**
- 3) Each piece should be carefully labelled using a pencil (Such as front, left side, right side and back). Also label the Inside and Outside face of each piece and number the ends. **See fig. 7.**



Note: We highly recommend to cut two Test Pieces the same size such as Left Side and Front Side to test the cut for your first joint.

Inserting the wood

- 1) Install the Left Side with Inside Surface, facing out, vertically into the Jig. Ensure the numbered end extends at least 1/2" above the top of the Jig and the bottom edge is firmly located against the Front Side Stop (13) clamp in place using the Front Eccentric Bar Clamp (12). **See fig. 8.**

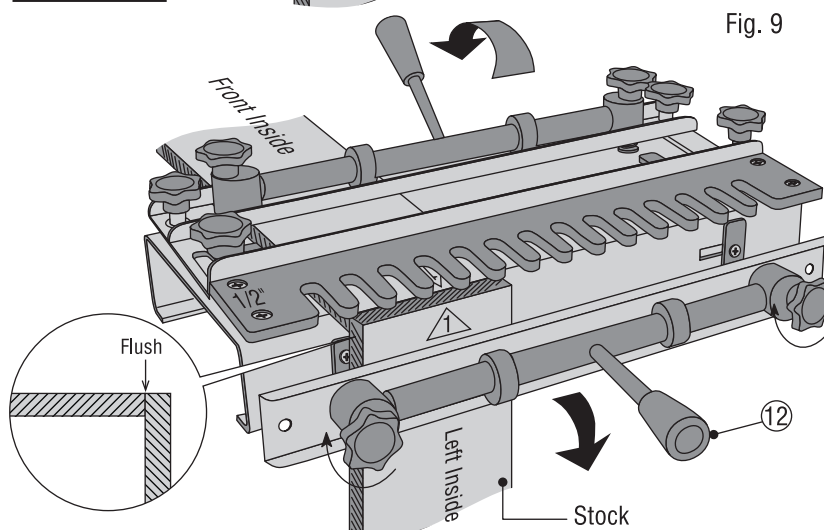
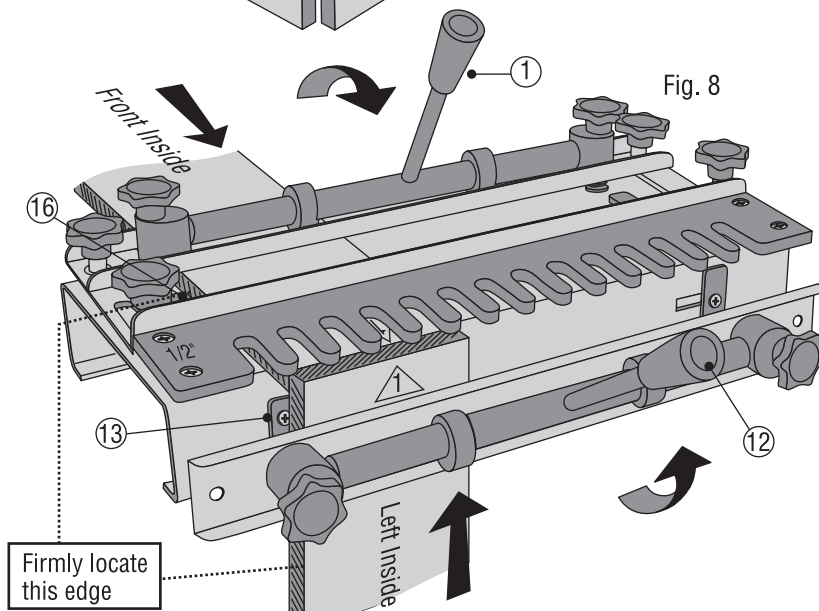
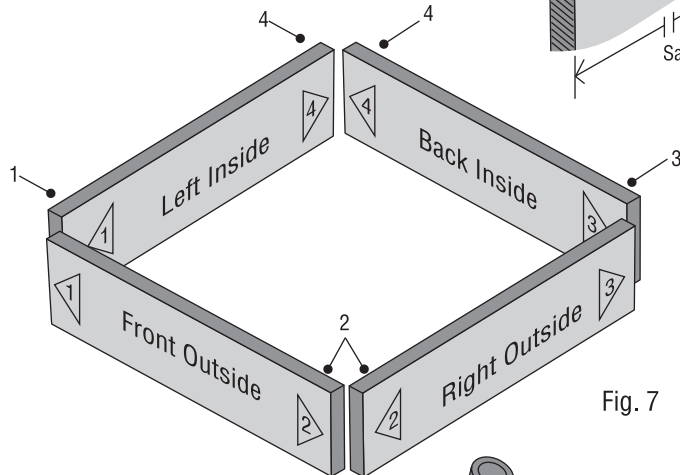
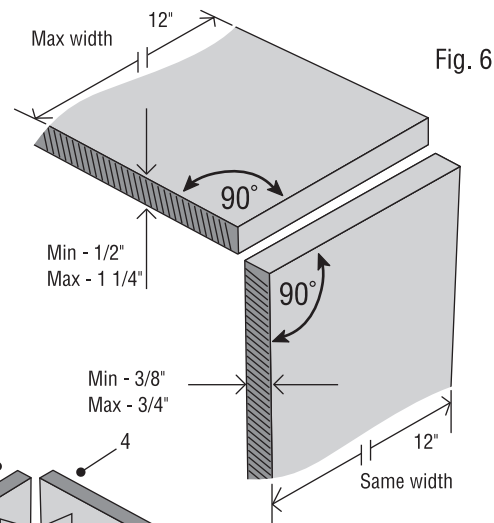


Note: Using the Top and Front Clamps (1) and (12). Ensure the Clamps are fully rotated into place and securely lock the wood into position. Adjust the fitting using the Clamp Adjustment Knobs (11) and (17). Beware that the wood pieces may slightly slip away when applying Eccentric Bar Clamp, make sure work pieces are fitted properly.

- 2) Insert the Drawer Front horizontally with the Inside Surface facing up. Ensure the corresponding numbered end is against the Left Side piece i.e. 1 and the bottom edge is firmly located against the Left Side Stop (16) clamp in place using the Top Eccentric Bar Clamp (1). **See fig. 8.**
- 3) Hold the Left Side piece of wood (Now Called Stock) and loosen the Front Eccentric Bar Clamp (12). Now bring it flush with the Front Side piece of wood and reclamp into place. Ensure the bottom edge is firmly located against the Front Side Stop. **See fig. 9.**



Important: Please carefully check all dimensions and settings before cutting any wood. Always check to ensure the Router Bit will not accidentally hit or contact any metal parts.



Cutting a Flush Dovetail Joint

Adjusting the comb position

- 1) You should adjust the Comb (7) using the two Comb Adjustment Knobs (5). Adjust to a distance X (See fig. 10.), which is approximately equal to 1.5 to 2 mm if the supplied router bit, router collar and comb is used.

See fig. 10.

- 2) After adjustment ensure the Comb (7) is parallel to the edge of the side piece. Firmly tighten the two Comb Adjustment Knobs (5).

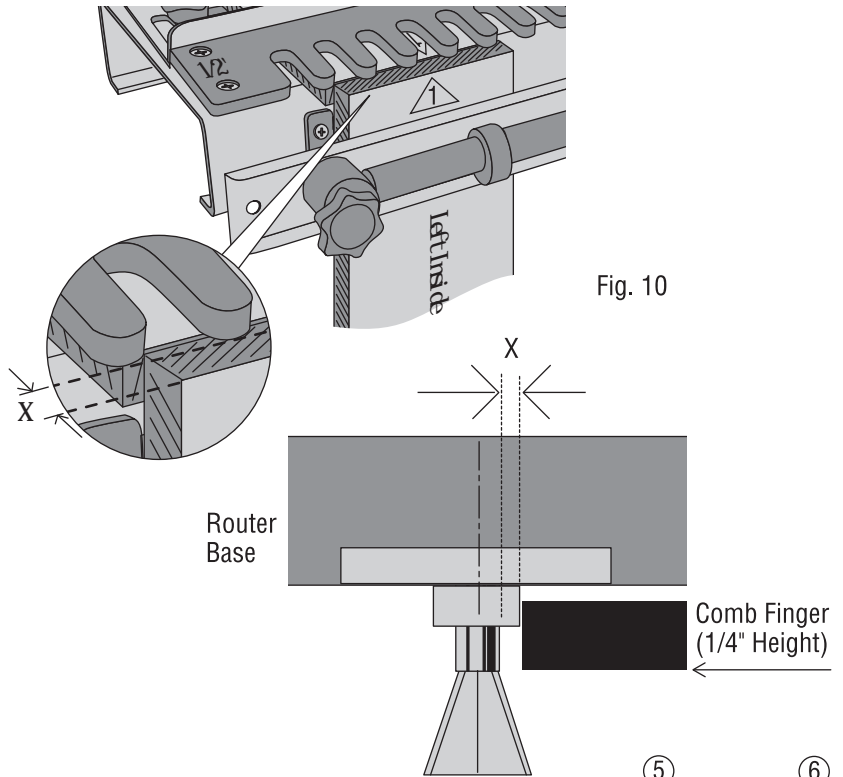


Fig. 10

Adjusting the back stop

- 1) Adjust the Back Stop (15) using the two Back Stop Fixing Knobs (6). Check the Back Stop is Parallel to the Comb (7) with the help of a combination square.

See fig. 11.

- 2) Set the distance of the Back Stop to the edge of the Comb using the following formula.

See fig. 12.

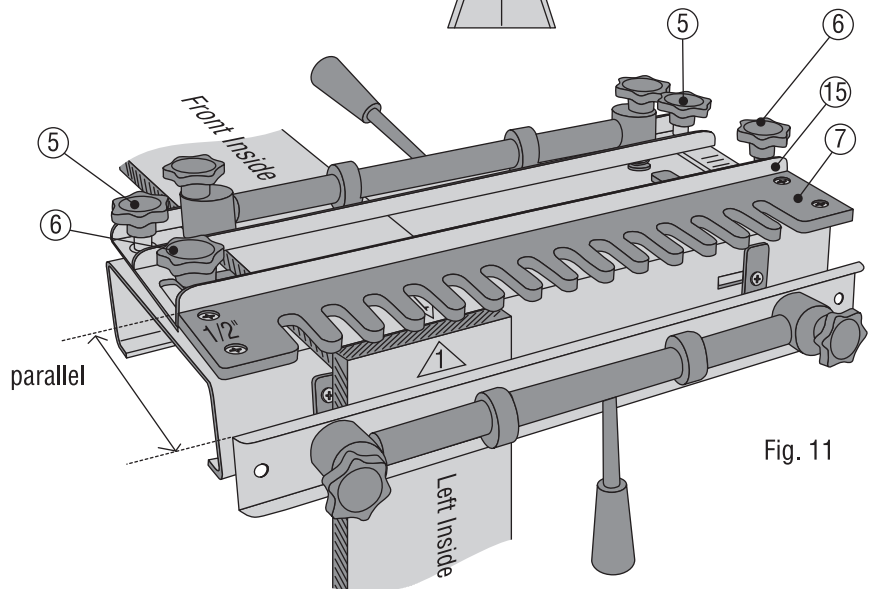


Fig. 11



Caution Hazard: We strongly recommend you double check all dimensions, settings and fittings before you begin to cut any wood. Serious injury can be caused by misuse.

- 3) The "Distance Y" of the Back Stop to the Comb edge should be twice the thickness of the Stock plus half the diameter of the Router Base, minus half the diameter of the Router Bit.

$$(2xa) + (b \div 2) - (c \div 2) = \text{Distance Y}$$

Example:

- (a) Stock - 3/4":
- (b) Router Base - 6":
- (c) Router Bit - 5/8":

$$\begin{aligned} & (3/4" \times 2) + (6 \div 2") - (5/8 \div 2) \\ &= 1 \ 1/2" + 3" - 5/16" \\ &= 4 \ 3/16" \end{aligned}$$

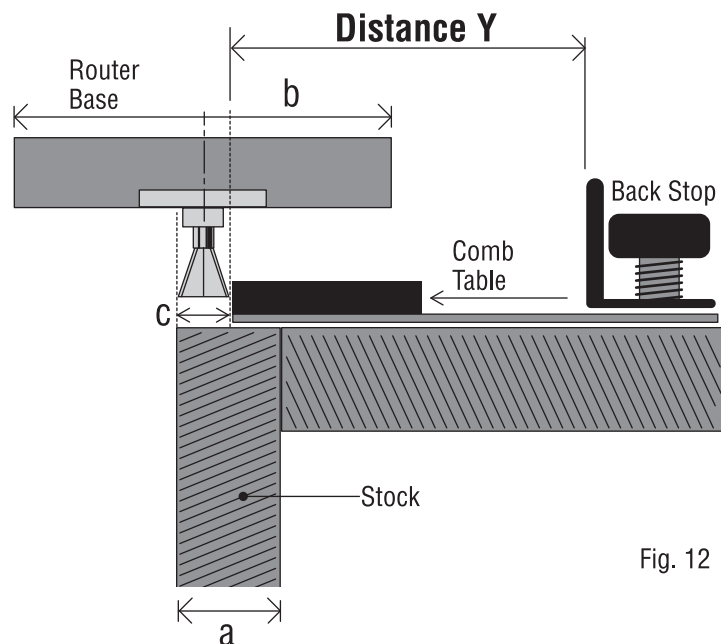


Fig. 12

Cutting a Flush Dovetail Joint

Preparing the router

- 1) Using the supplied 5/8" Router Bit (19) and 12mm Router Guide Collar (18) fit to your Router. Adjust the depth of the Router Base to the end of the Router Bit to 15mm-16mm with the help of a combination square.
- See fig. 13 and 14.



Caution: Check once more all the settings and dimensions on the Jig and Router.

Cutting the wood



Caution: Always ensure the Router Bit does not contact the Jig or any other metal parts. Do not lift the router base above the comb during routing, otherwise the comb will be damaged.



WARNING!
Wear eye, ear and breathing protection



- 1) Place the Router Base on the Comb (7) and begin to cut from the edge of the left side Comb finger.
- See fig. 15.



Note: Ensure the bush on the guide collar follows the exact profile of the comb fingers, including the tip of each comb finger to prevent chipping.

- 2) Remove the wood from the Jig and test for fitting perhaps allowing space for gluing.



Trouble Shooting

- 1) If the Joint is too tight, reduce the depth from the base of the Router to the Router Bit by 0.5mm. If the Joint is loose, increase the depth from the base of the Router to the Router Bit by 0.5mm.
 - 2) If the tails protrude from the sockets, adjust the Back Stop (15) slightly backwards. This will allow the Router to cut deeper into the front piece. If the tails recess into the sockets, adjust the Back Stop slightly towards to the front of the Jig.
- See fig. 16.
- 3) If the jointed wood pieces do not match in height, the Side Stop offset need to be re-adjusted.

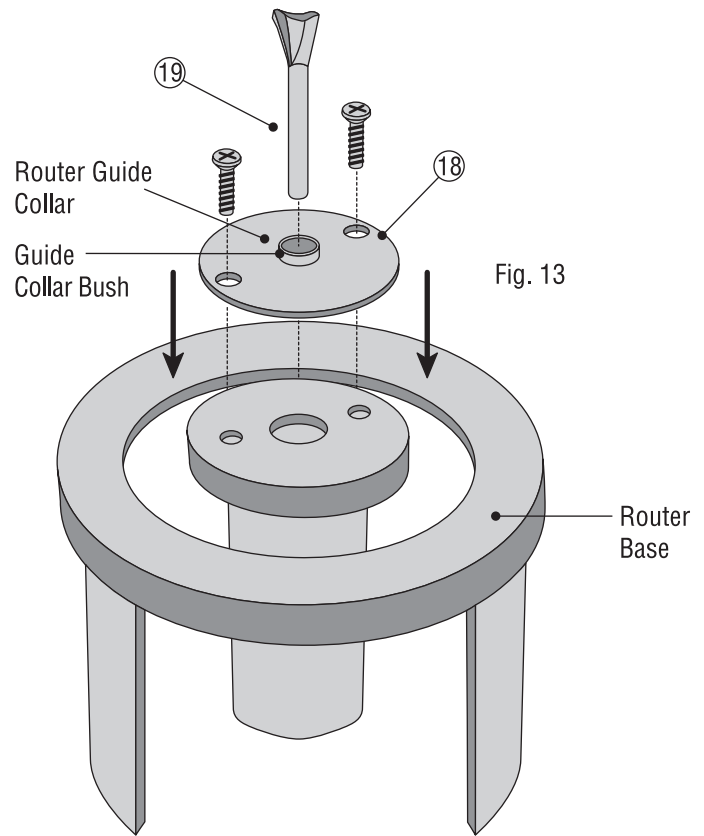


Fig. 13

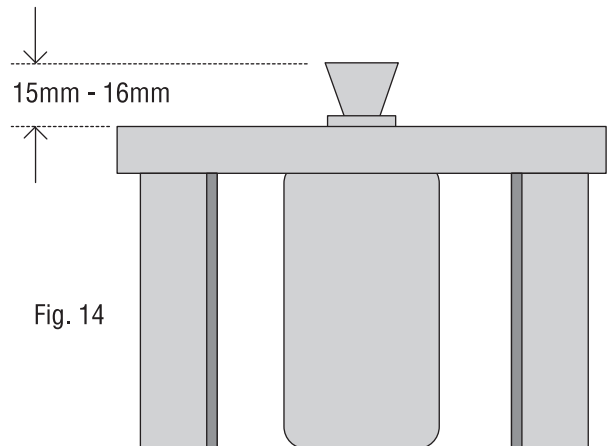


Fig. 14

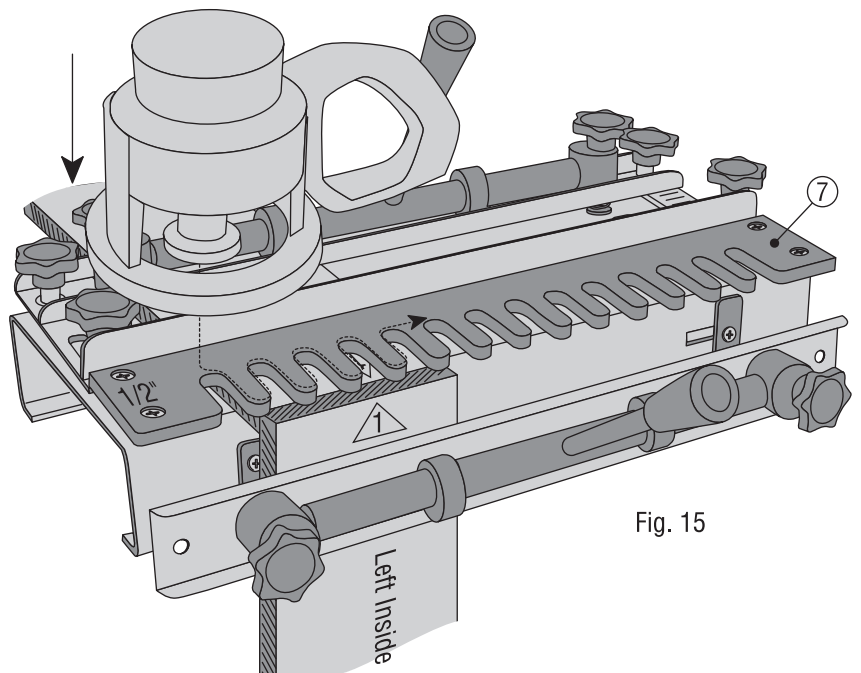


Fig. 15

Cutting a Flush Dovetail Joint

- 3) After making the necessary adjustments, saw off the Dovetail Joints of your test pieces making sure they are cut square.
- 4) Clamp the test pieces back into the Jig and rout another test joint and repeat until you are satisfied with the result of the dovetails produced. When you are happy with the adjustments, proceed with the routing of the final pieces. First cut the Front and Left Side pieces on the Left Side of the Jig. Then follow the same procedure but use the Right Side of the Jig to join the other end of the Front piece to the Right Side piece.



Note: Only when you are happy with the results achieved should you proceed with the cutting of your main pieces.

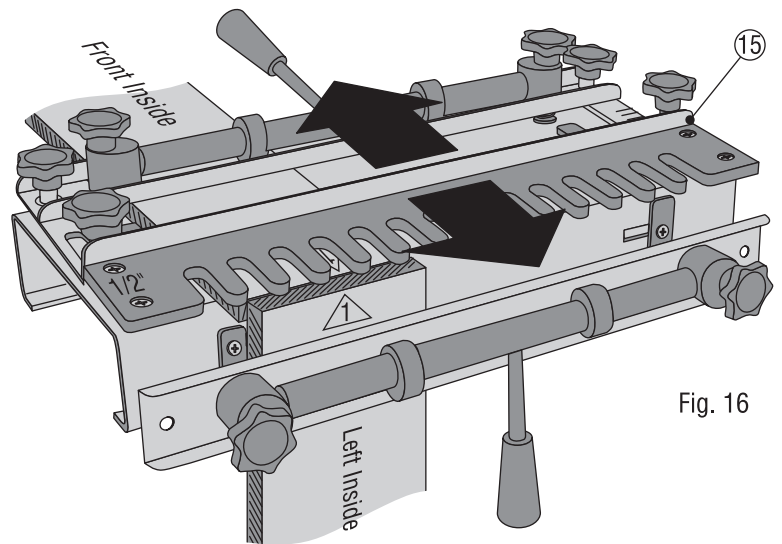


Fig. 16

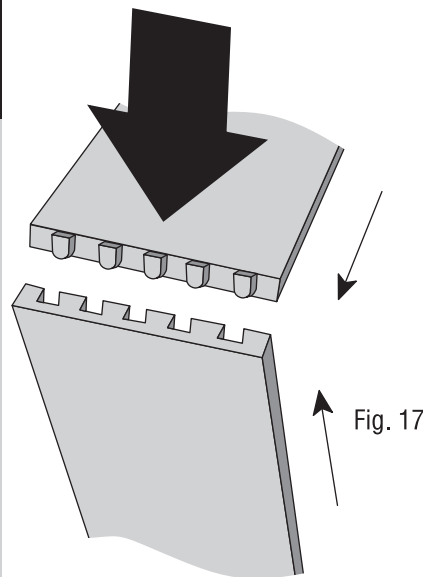


Fig. 17

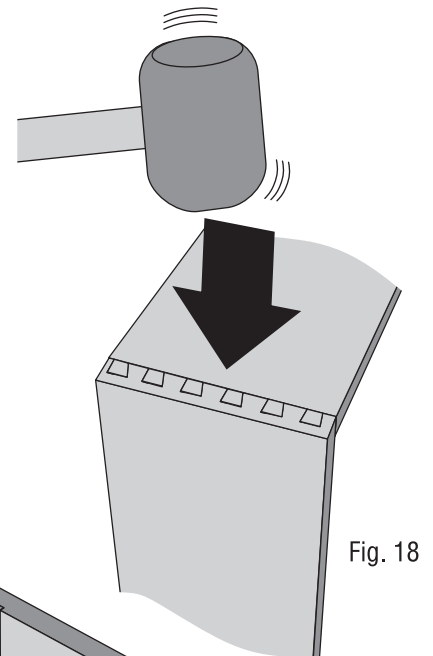
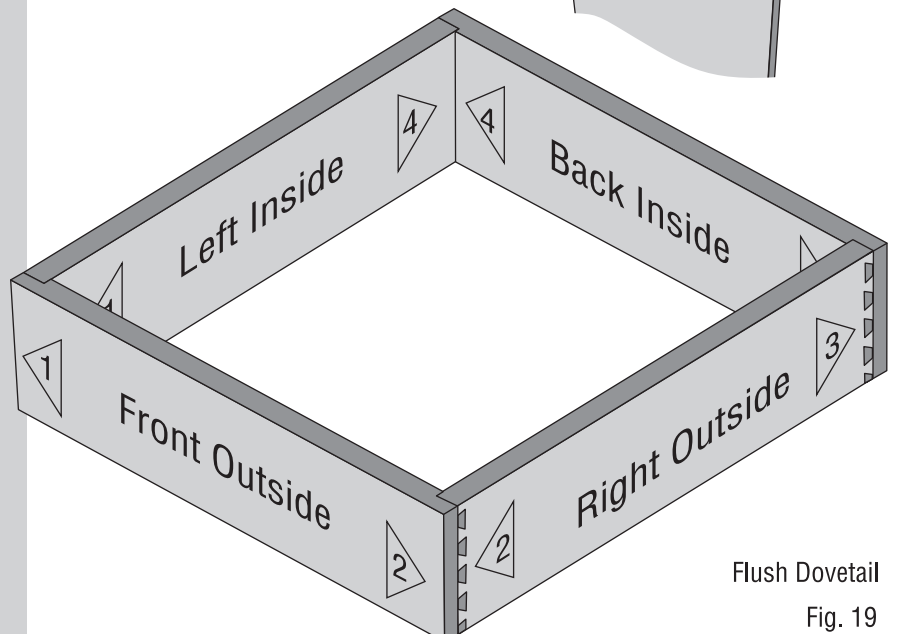


Fig. 18

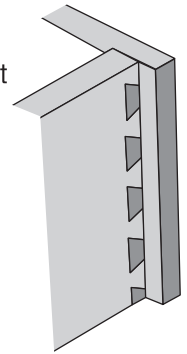


Flush Dovetail
Fig. 19

Flush-Offset - Fig. 20

1. When cutting the Front piece for the Flush-Offset Joint (as in Fig. 20) add $\frac{3}{4}$ " to the piece length. The Stock thickness should be a minimum of $\frac{7}{8}$ " to allow for a $\frac{3}{8}$ " wide by $\frac{1}{2}$ " deep rebate on both ends. This rebate should be cut prior to the Dovetail operation.
2. Proceed the same as for a Flush Joint except for the setting of the Backstop, which should move $\frac{3}{8}$ " further back to allow for the $\frac{3}{8}$ " offset.
3. It is advisable to cut a number of test joints to ensure the correct adjustment of the Jig prior to cutting the main pieces.

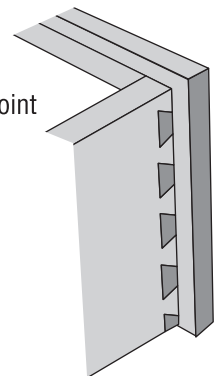
Fig. 20
Flush - Offset
Joint



Rebated Joint - Fig. 21

1. When cutting the Front piece for the Rebated Joint add $\frac{3}{4}$ " to the length and to the width. The thickness should be a minimum of $\frac{7}{8}$ " to allow for a $\frac{3}{8}$ " wide by $\frac{1}{2}$ " deep rebate all round. The rebate for the inside front piece should be cut prior to routing the Dovetails.
2. Proceed as for the Flush-Offset Joint with the addition of resetting the Right and Left Stops for the Front piece. The Stops should be set so that the offset is $\frac{1}{8}$ " instead of $\frac{1}{2}$ " for the Flush Joint. Clamp the workpieces into the Jig and proceed to make the dovetail cuts in the same sequence as before.

Fig. 21
Rebated Joint



Box Finger Joint - Fig. 22

1. When cutting a Box Finger Joint as shown in Fig. 22, both pieces of Stock must be put into the Dovetail Jig vertically. One piece of Stock should be lined up flush to the left of one of the Comb Fingers and the other piece is lined up flush to the right of the Finger.
2. Make sure the Router Bit depth is set to cut the exact thickness of the Stock. This will ensure a perfect Box Finger Joint. To avoid the Router Bit cutting into the template, raise up the Comb Table to the appropriate height using some spare Stock as a spacer.

Fig. 22
Box Finger Joint

