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THE DOVETAILER II

DOVETAIL JIG

USERS MANUAL



No. 861

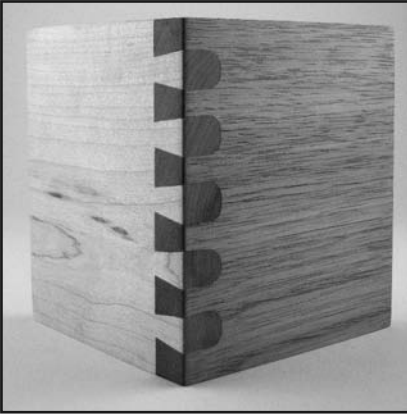
PLEASE READ THESE INSTRUCTIONS FULLY BEFORE USING THIS JIG

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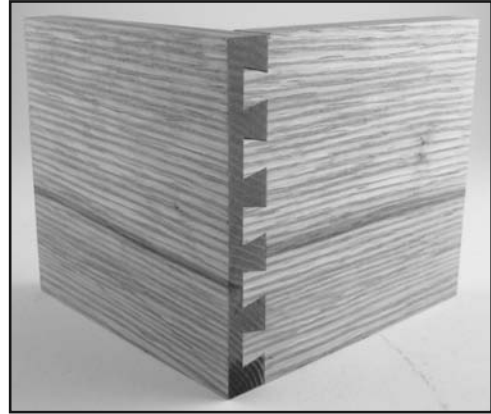
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INTRODUCTION

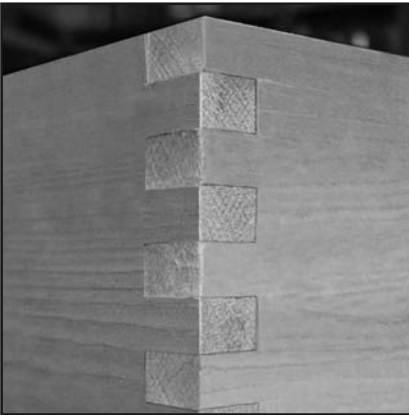
Thank you for purchasing General Tools & Instruments' DOVETAILERII Dovetail Jig. A simple and easy way to make professional dovetail joints, the DOVETAILERII enables you to cut half blind, full through and box joints as well as edge to edge joining. The DOVETAILERII can be used on a router table (Fig. 1) or free hand with a handheld router (Fig. 2).



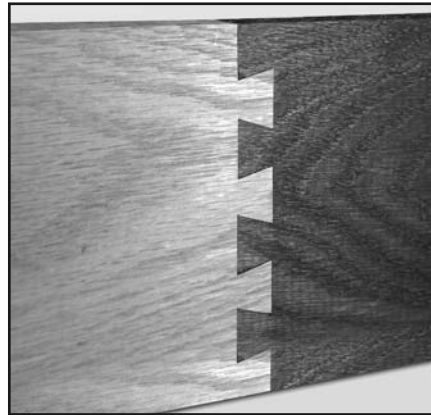
FULL THROUGH



HALF BLIND



BOX JOINT



EDGE JOINT



FIG. 1



FIG. 2

CAPACITY AND SPECIFICATIONS:

Accommodates stock from 1/2 in. to 1 in. thick.

WHAT'S IN THE JIG KIT

- 1 The fully assembled jig
- 2 Two router table guide knobs
- 3 One 14° x 1/2 in. dovetail router bit with guide bearings (1/4 in. shank)
- 4 One alignment tool
- 5 One allen wrench

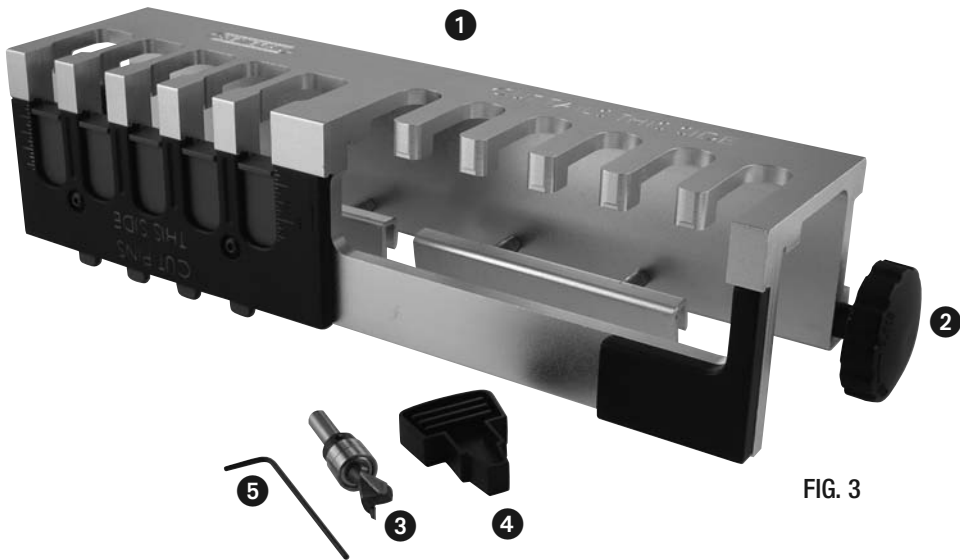
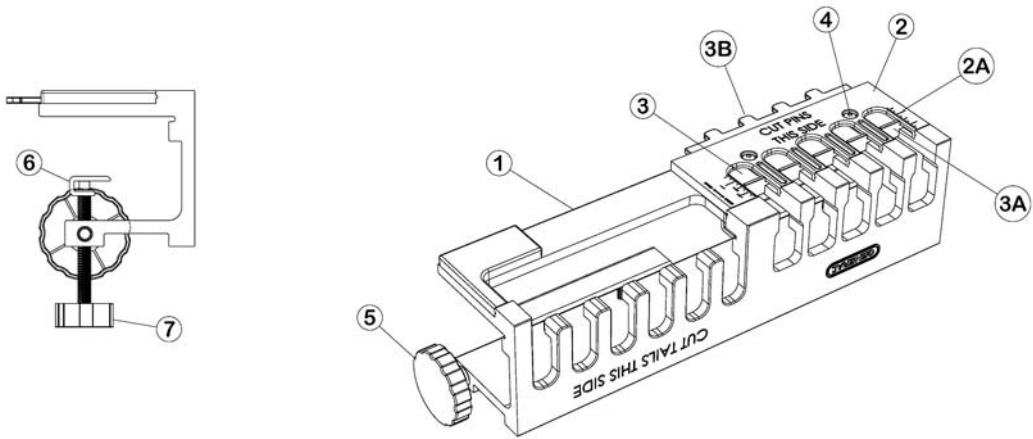


FIG. 3

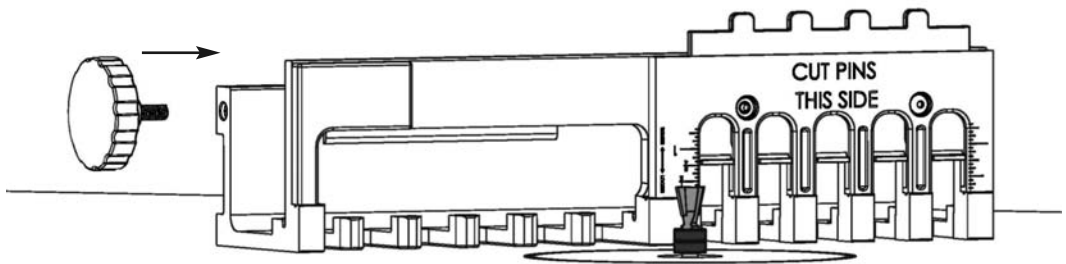
It is highly recommended that you familiarize yourself with the nomenclature in Fig. 3 before proceeding.

ANATOMY OF THE DOVETAILER II JIG



- ① – Jig Assembly
- ② – Depth Plate
- ②A – Template Position Rule
- ③ – Depth Adjuster Plate
- ③A – Depth Measuring Working Surface
- ③B – Edge Alignment Teeth
- ④ – Template Lock Screws
- ⑤ – Two Router Table Guide Knobs
- ⑥ – Face Clamp
- ⑦ – Face Clamp Thumb Screws

FIG.4



DOVETAIL JIG ASSEMBLY

NOTE: Your jig comes fully assembled for use. The addition of the router control knobs aids in the use of this jig on router tables.

1. For use on a router table, securely screw in the two Router Table Guide Knobs [6] into the holes provided on the ends of the jig. Always use the Router Table Guide Knobs when using the jig on a router table.(FIG. 4)

DOVETAIL JIG ROUTER BIT AND BEARINGS

Included bearings are 1/2 in. outside diameter (OD) and 1/4 in. inner diameter (ID). Router sleeves or bushings can be used in place of the guide bearings as long as they are also 1/2 in. OD. Included router bit is 14° x 1/2 in. Other bits can be substituted provided they have a 1/4 in. diameter shank have no greater diameter than 17/32 in.

Caution: Keep fingers on control knobs only when using the jig on a router table.

USING THE BUILT IN DEPTH GAUGE

The built-in Depth Gauge is used to set both the depth of the Dovetail Cutter during router setup as well as to control the length of the pins during cutting. (FIG. 5).

1. Loosen the Template Lock Screws (4) on the face of the Depth Plate (2).
2. Align the Depth Measuring Working Surface (3A) with the desired measurement on the Template Position Rule (2A) Make sure both sides are at the same measurement.
3. Tighten the Template Lock Screws (4) to lock the Depth Adjuster Plate in position (3).

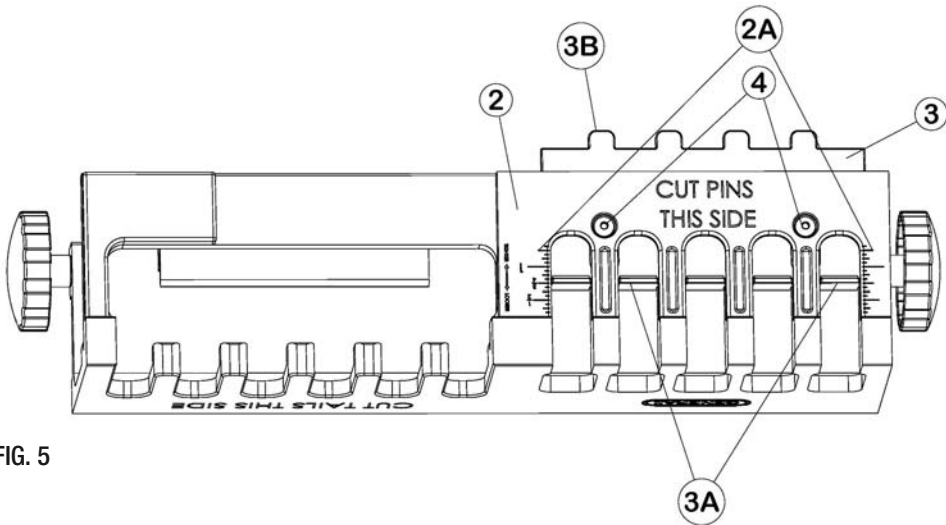


FIG. 5

PREPARING THE ROUTER

SAFETY O E R I E

1. **KNOW YOUR ROUTER.** Read the owner's manual that came with your router before you use it. Understand the machine's applications and limitations, as well as the specific potential hazards inherent in its use. Before using the router, check that none of its moving parts are broken, loose or misaligned.

NOTE: General Tools & Instruments is not responsible for router misuse or the disregard of standard safety precautions associated with using a router.

ROUTER SETUP

1. Insert the dovetail cutter with its guide bearings fully into the router.
2. Set the height of the Dovetail Cutter Bit using the Depth Measuring Working Surface (3A). (FIG. 6)

For instructions on setting the depth gauge see USING THE DEPTH GAUGE above.

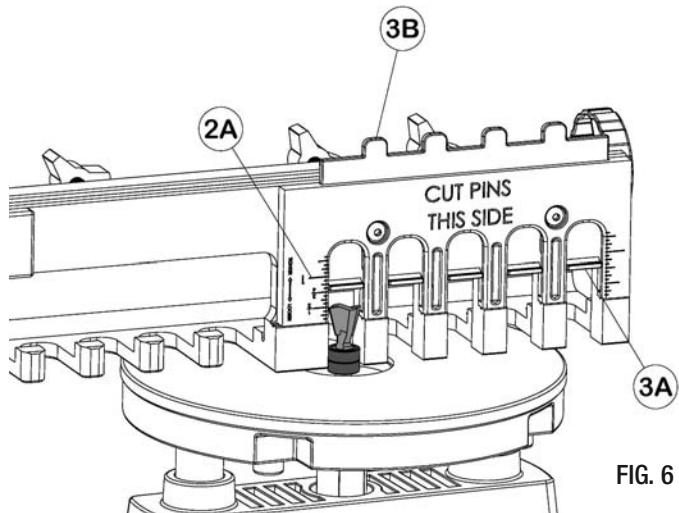


FIG. 6

3. FIG. 7 shows the dimension of the dovetail joint affected by the cutter height.

NOTE: Setting this height affects the length of the Tails and the depth of the Pins.

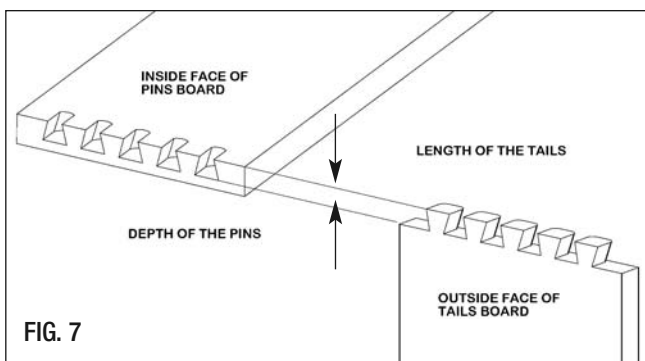


FIG. 7

4. Now that the router is setup, you need to reset the Depth Adjuster Plate ③ for the length of the pins. (FIG. 8) Set the depth gauge for the length of the "PINS". This should be equal to the thickness of the wood used for the "TAILS" board. (FIG. 9)

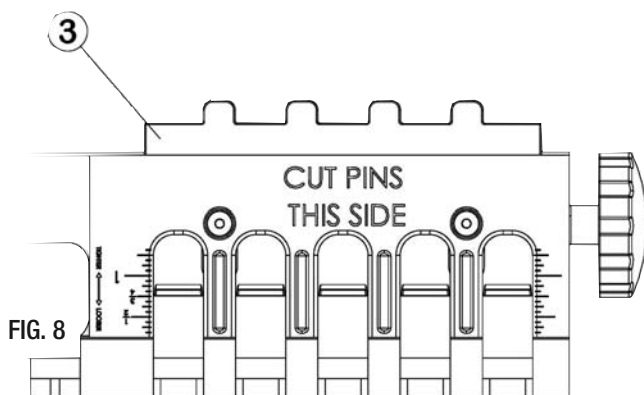
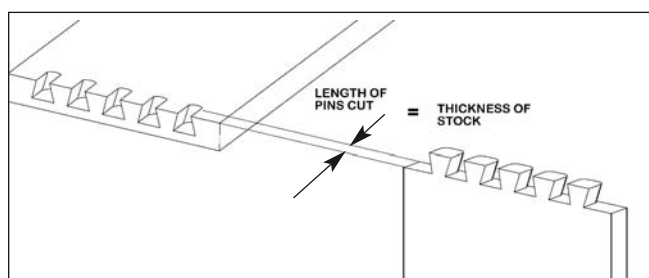


FIG. 8

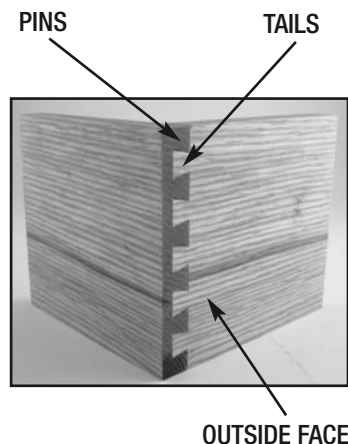


CUTTING JOINTS

Note: Always cut the "TAILS" side of the joint first.

CUTTING A HALF-BLIND DOVETAIL JOINT

1. When cutting a half-blind dovetail joint, using the included dovetail cutter, start with a bit height setting equal to the depth of the joint you desire. (FIG. 7)
2. Cut a test joint with scrap wood to confirm the fit of the joint. If the boards do not fit together easily, the joint may be too tight. The joint can be made looser or tighter by setting the cutter depth shallower or deeper as shown in FIG. 8.
3. Mark the center of your board, then center the mark on any one of the guide teeth in the "TAILS" portion of the jig.
4. Make sure the outside face of the board faces inwards towards the clamp.
5. Tighten the clamps securely.



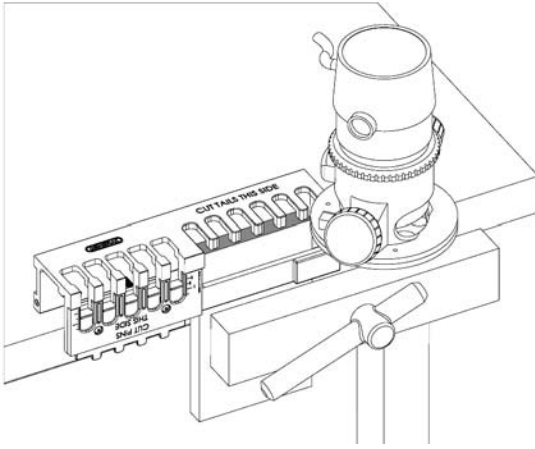
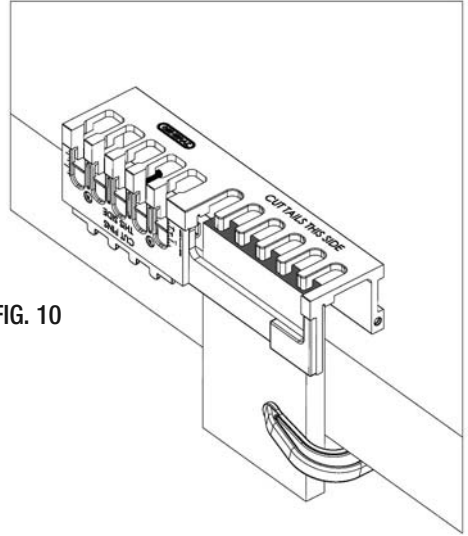


FIG. 10



6. Clamp the board to a workbench or secure it in a vice as shown (FIG. 10) or if using a router table, make sure the face saying “cut tails this side” is faced to the router table (FIG. 11).

7. Cut the “TAILS” portion of the joint always keeping the guide bearings against the template edges. When finished, remove “TAILS” board from the jig.

8. Then to cut the “PINS”. Loosely clamp the “PINS” board into the jig with the outside face pointing inward.

9. To align the edges, insert the tails of the “TAILS” board into the Edge Alignment Teeth ^{3B} teeth on the top of the Adjuster plate ³ with the rounded side in (inside face), and slide the loosely clamped “PINS” board to align its edges with the edges of the “TAILS” board. Now securely tighten the clamps and remove the “TAILS” board (FIG. 12).

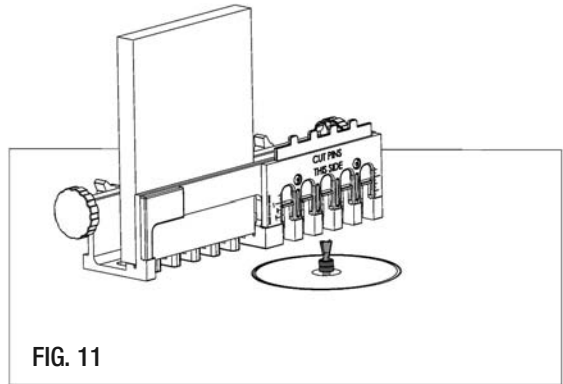


FIG. 11

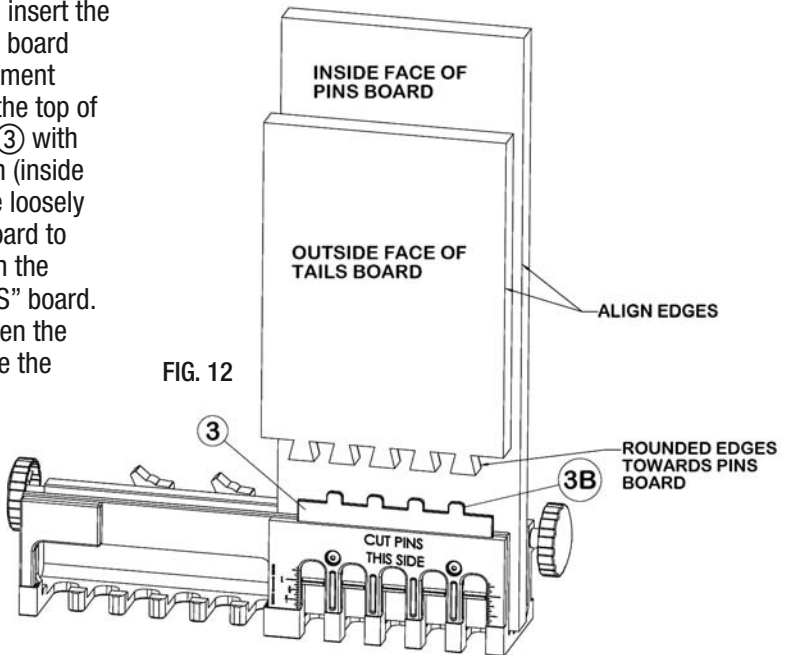


FIG. 12

10. Make all cuts to the pins board. For those cuts, the router should ride on the surface marked "cut pins this side" shown in FIG. 13 & 14. Be sure to follow the jig profile.

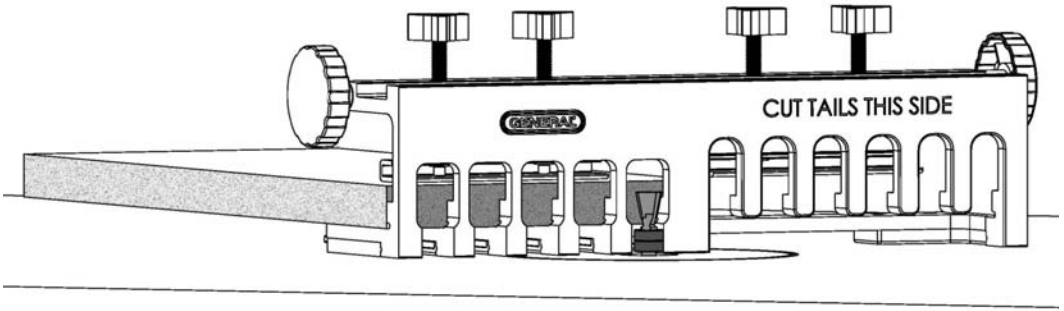


FIG. 13

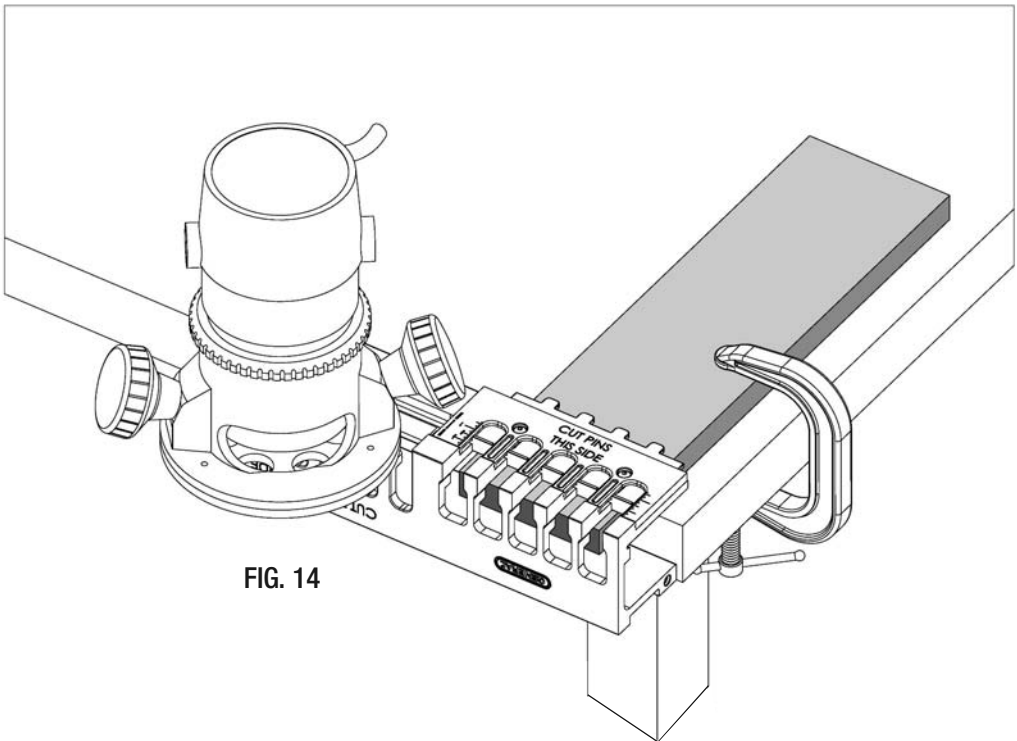


FIG. 14

11. Dry fit the two sections together. If problems arise, file or trim the joint as needed.

CUTTING JOINTS LONGER THAN THE JIG OPENING

Joints longer than the opening must be cut in multiple continuous segments. To align the jig with the previous cut, the aligning tool provided must be used.

1. Move the previously cut wood in the jig and position the last slot from the previous cut in the last channel of the jig either going to the right or to the left.
2. Loosely clamp the wood in the jig.
3. Insert the aligning tool into the slot to properly align the wood with the jig. (FIG. 15)
4. Tighten the clamps securely, and continue cutting.
5. Repeat as necessary.

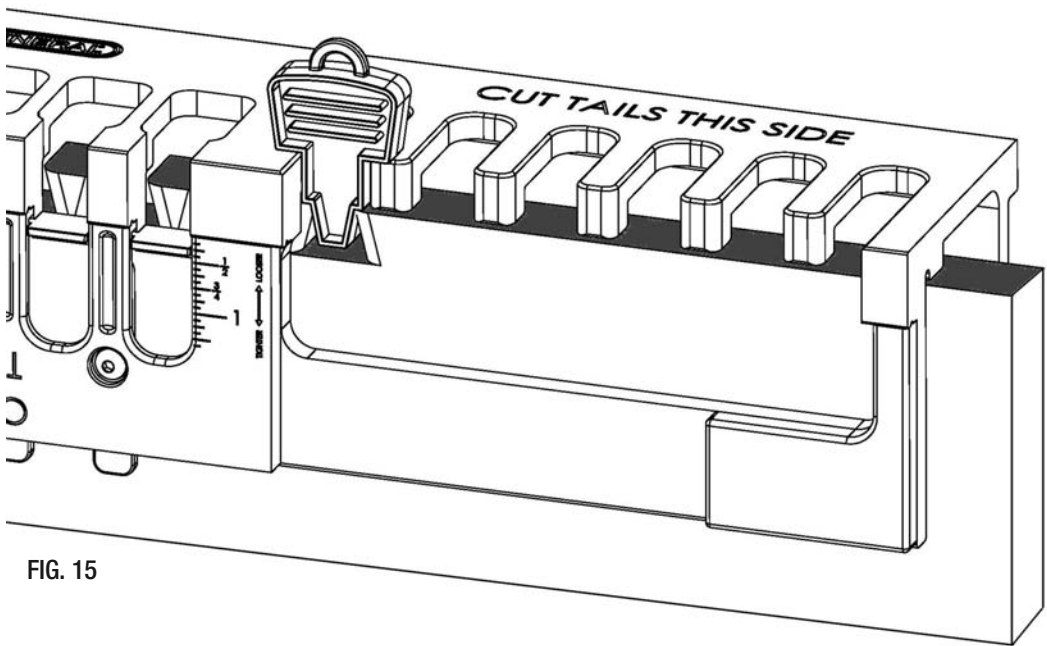


FIG. 15

CUTTING A FULL THROUGH DOVETAIL JOINT

** This requires a dovetail cutter bit with a depth equal to or greater than the wood thickness you are cutting.*

Note: Do not use router bit with a maximum diameter greater than 17/32 in.

The steps required to cut a full through joint (FIG. 16) are the same as to those described in the previous section CUTTING A HALF BLIND DOVETAIL JOINT. With the following exceptions:

When cutting the “PINS” portion of the joint, set the depth gauge equal to the thickness of the “TAILS” board.

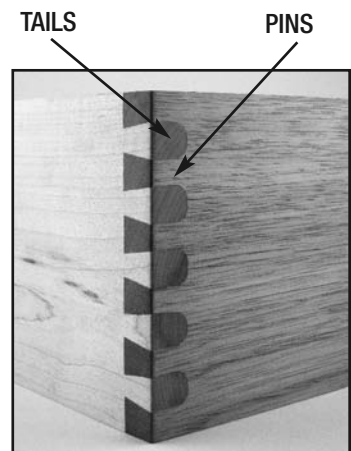


FIG. 16

EDGE TO EDGE JOINTING

1. When cutting an edge joint, the round-over created by the dovetail jig must be eliminated in order to join the two pieces of wood using a Dovetail-Joint. (FIG.17)
2. Insert the first board into the "TAILS" section of the Dovetail Jig along with 1/4 in. thick shim to offset the board away from the rounded position of the template in the jig. (FIG. 18)
3. Align one edge of the board to be cut with the outside edge of the jig. (FIG. 18)
4. Tighten the clamps securely, and make all cuts.

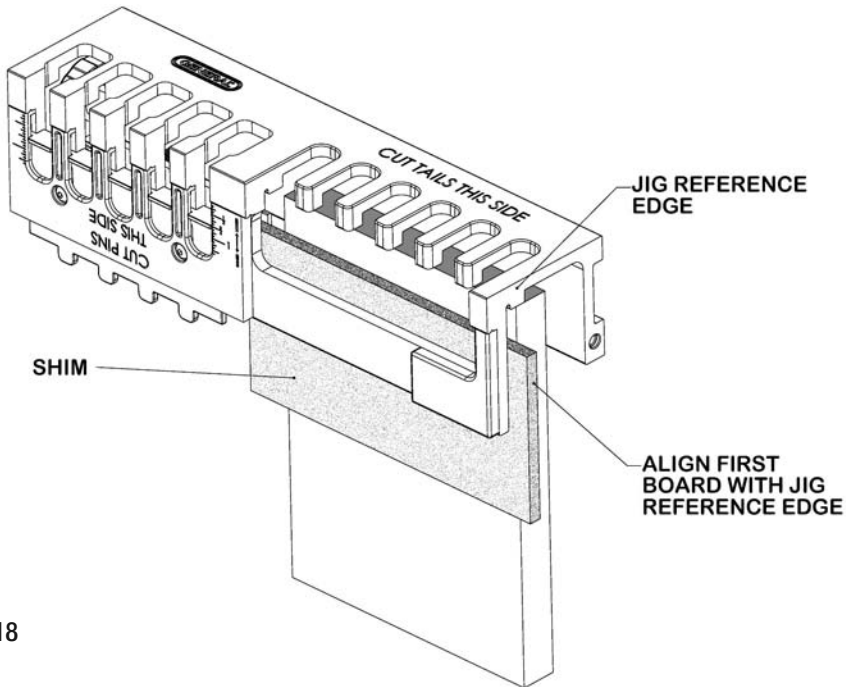
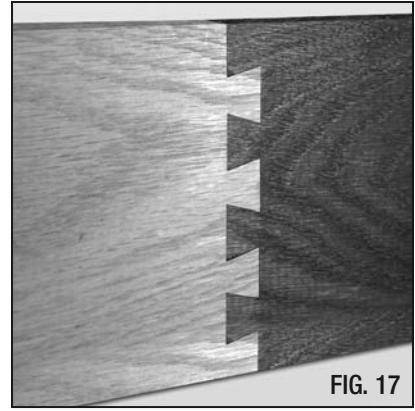


FIG. 18

5. Insert the second board into the jig along with the same shim and offset one edge of the board 1/2 in. in from the outside edge of the jig. FIG. 19. This spacing will offset the "TAILS" of the second board so that they align with the slots cut into the first board.

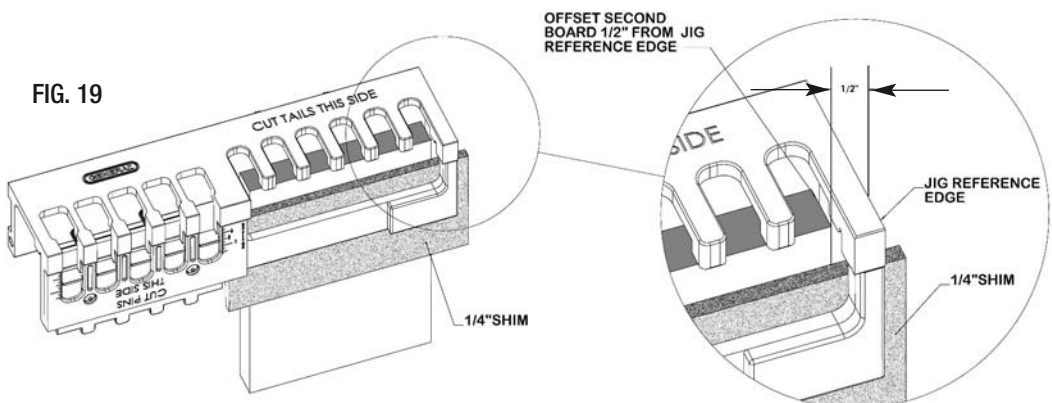


FIG. 19

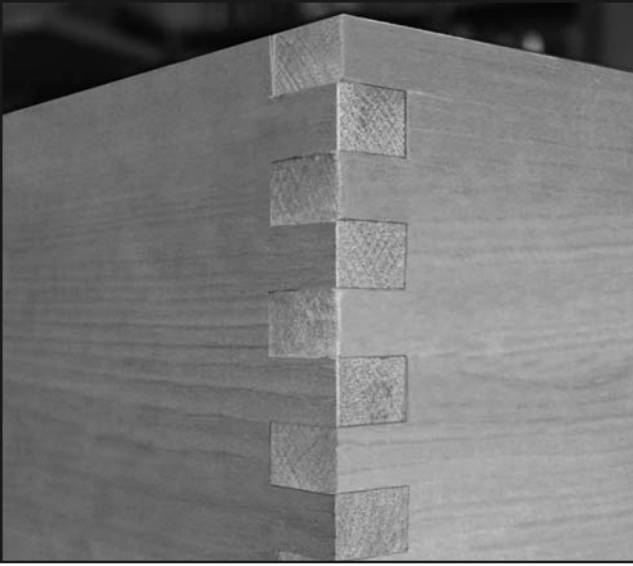
CUTTING A BOX JOINT

- When cutting a box joint, only use the “TAILS” portion of the jig for all cuts.
- For box jointing, use a 1/2 in. diameter straight bit with a 1/4 in. shank with either a 1/2 in. O.D. guide bearing or a 1/2 in. O.D. guide sleeve insert in your router. Set the depth of the cutter to equal, or slightly greater than the thickness of the wood you are joining.

Tip: Always make sure that the guide bearing or the guide sleeve tracks in the guide slot.

- To avoid the “round-over” part of the jig’s guide finger, use a 1/4 in. thick shim between the wood and the inner surface of the jig to offset the board from the “round-over”.

Tip: If you’re doing more than one joint, you can use a piece of double-face tape to hold the shim in place.



- Cut the slots in the first board with the board edge set flush with the right hand edge of the jig. (FIG. 20). Make the entry and exit cuts using the left side of the guide slot only (FIG. 20)

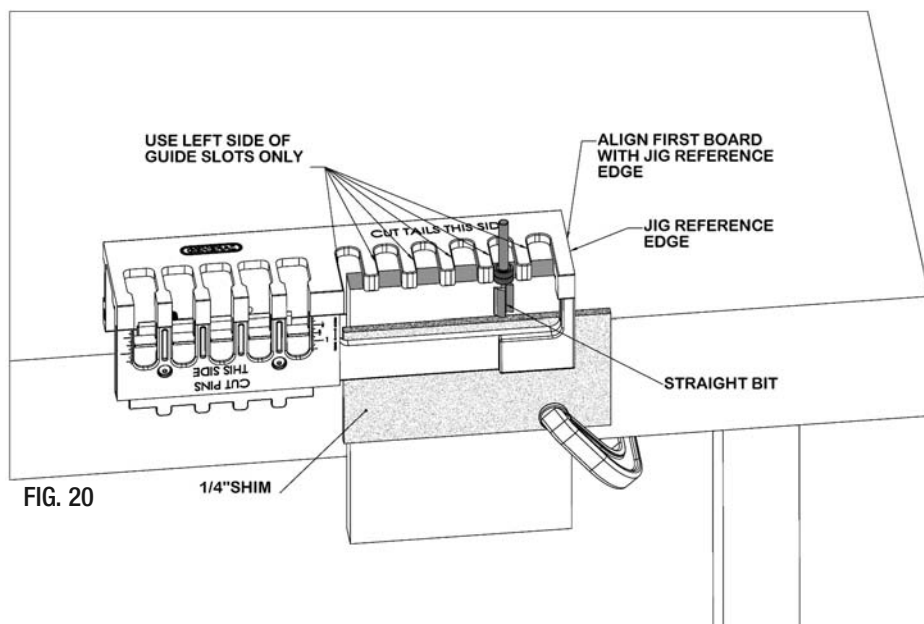


FIG. 20

- For the joining board, clamp it in the jig with its edge offset 3/8 in. in from the right hand edge of the jig. Make entry and exit cuts using the right side of the guide slot only (FIG. 21).



FIG. 21

- Dry fit the joint before gluing to be sure it is tight. If necessary, use a wood mallet to bring the two parts together.

WARRANTY INFORMATION

The **No. 861 Dovetailer II Dovetail Jig Kit** from General Tools & Instruments is warranted to the original purchaser to be free from defects in material and workmanship for a period of one year. Subject to certain restrictions, General will repair or replace this product, if, after examination, it is determined by General to be defective in material or workmanship.



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