DELTA

61962
Part No. 1343761 - 12-16-04

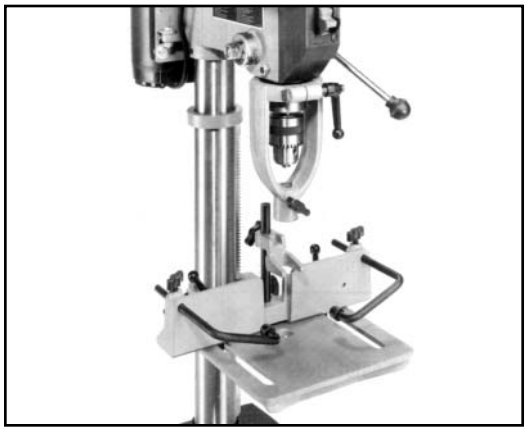
DELTA ACCESSORY MODEL 17-935 & MODEL 17-924 MORTISING ATTACHMENT

INTRODUCTION

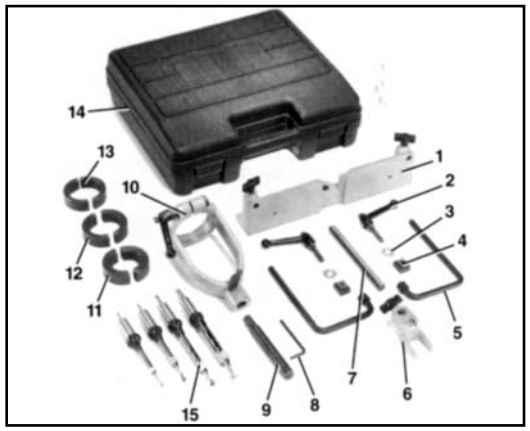
The 17-924 Mortising Attachment converts your drill press into an accurate mortising machine and can be used with the following units:

11-980 Drill Press (10")
14-070 Drill Press (14")
17-925 Drill Press (16-1/2")
11-990 Drill Press (12")
11-090 Radial Drill Press (32")
Delta Utility Drill Presses (15")
14-040 Drill Press (14")
17-900 Drill Press (16-1/2")

CARTON CONTENTS



Mortising Attachment Assembled



1. Fence
2. Locking Levers (2)
3. Flat washers (2)
4. T-Nuts
5. Guides
6. Hold-Down Assembly
7. Hold-Down Shaft
8. 5/32" Hex Wrench
9. Quill Alignment Pin
10. Chisel Holder
11. Small ID Split-Ring Bushings - for 10", 12", and 32" Radial Drill Presses
12. Intermediate Split-Ring Bushings - for 14" Drill Presses
13. Large ID Split-Ring Bushings - for 15" and 16-1/2" Drill Presses
14. Carrying Case (For Model 17-924 Mortising Attachment ONLY)
15. Set of Chisels and Bits (4) - 1/4", 5/16", 3/8", and 1/2" (Furnished with Model 17-924 Mortising Attachment ONLY)

INSTALLATION

IMPORTANT: Use the correct bushings as indicated in the carton contents for your machine. Any others will not work. The 16-1/2" drill press (Model 17-900) does not require bushings.

RTD10000125AA

ASSEMBLING THE CHISEL HOLDER

1. Loosely thread the knob (A) Fig. 1 into the bottom of the hole of the chisel holder (B) (See Fig. 2).
2. Install the special screw (C) in either side of the chisel holder (B).
3. Loosely thread the locking lever (D) on the special screw (Fig. 2).

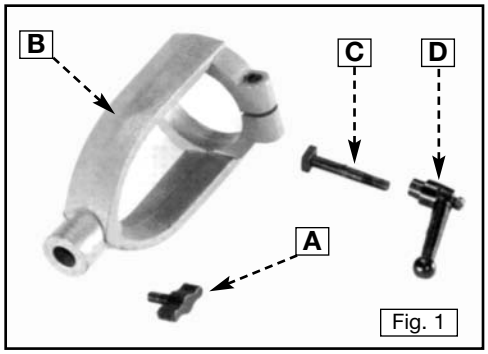


Fig. 1

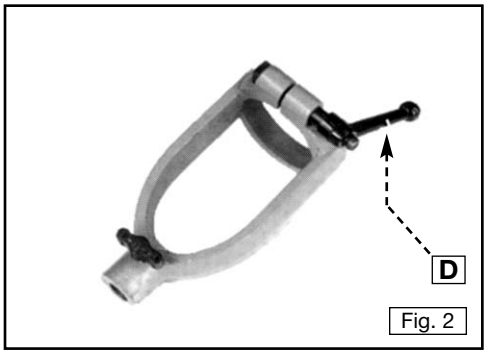


Fig. 2

ATTACHING THE CHISEL HOLDER TO THE DRILL PRESS

THE FOLLOWING INSTRUCTIONS ARE FOR THE 10", 12", 14", AND 32" RADIAL DRILL PRESSES LISTED IN THE INTRODUCTION.

⚠WARNING Disconnect the machine from the power source.

1. Install and lock the smaller diameter end of the alignment pin (A) Fig. 3 into the spindle (B).
2. Lower the drill press spindle (B) Fig. 4 approximately two to three inches and lock the quill (G) in this position.
3. Slide the rubber ring (C) Fig. 4 up on the quill.
4. Select the correct size bushings for your drill press according to the listing in the **"CARTON CONTENTS"**, and attach them around the quill, between the rubber ring (C) and the stop collar (E) Fig. 4.
5. While holding the bushings (D) Fig. 5 in position on the quill, face the gap in the split-ring bushings toward the front of the machine.
6. Return the spindle to its uppermost position.
7. Start from below the alignment pin (A) Fig. 6 and slide the chisel holder (H) up, so that the alignment pin (A) enters the smaller hole in the chisel holder. Check to see that the larger hole in the chisel holder is positioned over the split-ring bushings (D) Fig. 5.

NOTE: Before you tighten the locking lever (K) Fig. 6, make certain that the slot in the split-ring bushing (F) Fig. 5 aligns with the slot (L) Fig. 6 in the chisel holder. Tighten the thumb screw (M) first,then tighten the locking lever (K).

NOTE: The locking lever is spring-loaded. Change it by pulling out and repositioning the hub of the lever on the nut located directly under the hub.

8. Loosen the knob (M) Fig. 6 and remove the alignment pin (A) from the spindle after the chisel holder (H) is attached to the machine.
9. After successfully completing these instructions, go to the section in this manual entitled **"ATTACHING THE FENCE TO THE TABLE."**

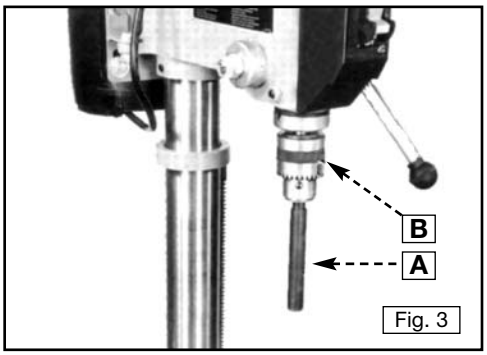


Fig. 3

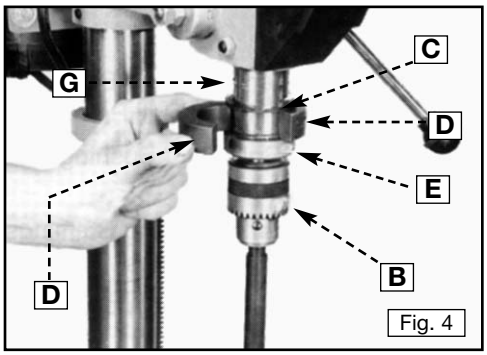


Fig. 4

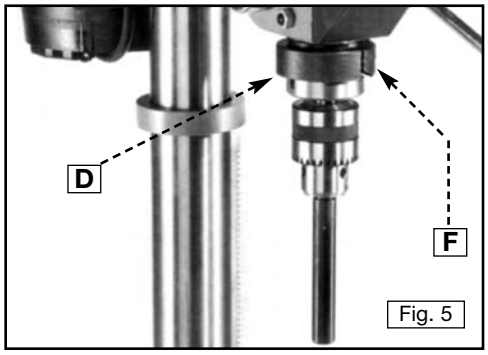


Fig. 5

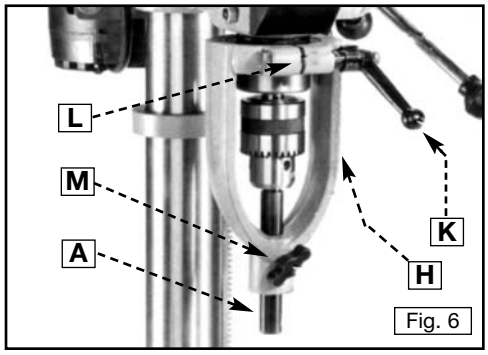


Fig. 6

THE FOLLOWING INSTRUCTIONS ARE FOR THE DELTA 15" UTILITY DRILL PRESSES.

⚠WARNING Disconnect the machine from the power source.

1. Lower the spindle (A) Fig. 7 approximately 3" and lock the quill (B) in position by turning the locking lever (C) clockwise.
2. Loosen the set screw (D) Fig. 8 and the hex nut (E).
3. Slide the rubber ring (F) Fig. 9 up on the quill and raise the stop collar (G) approximately 7/8". Tighten the set screw (D) Fig. 8 and the hex nut (E) just enough to hold the stop collar (G) in position.

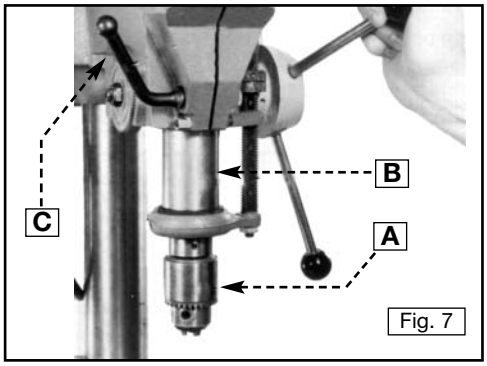


Fig. 7

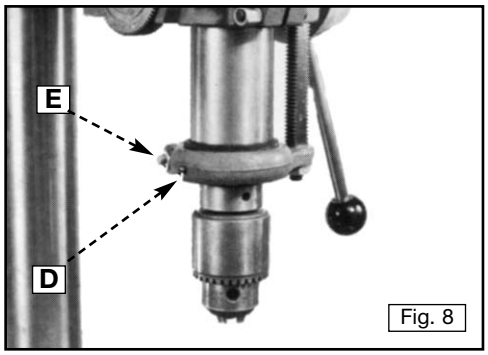


Fig. 8

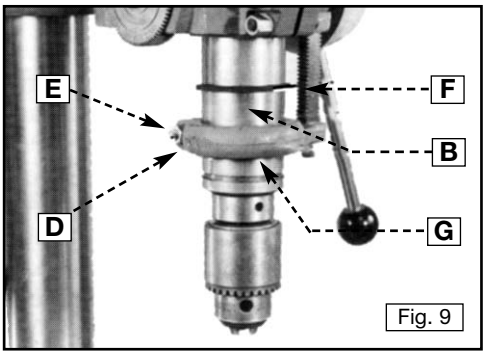


Fig. 9

THE FOLLOWING INSTRUCTIONS ARE FOR THE DELTA 15" UTILITY DRILL PRESSES AND DELTA 16-1/2" VARIABLE SPEED DRILL PRESS.

⚠WARNING Disconnect the machine from the power source.

1. Install and lock the smaller diameter end of the alignment pin (H) in the spindle (A) Fig. 10.
2. Install the largest inside diameter split-ring bushings (J) Fig. 10 around the quill and under the stop collar (G).
3. While holding the split-ring bushings (J) Fig. 10 in position on the quill, slide the chisel holder (K) over the alignment pin (H) and over the split-ring bushings (J).

IMPORTANT: Before tightening the locking lever (L) Fig. 11, align the slot in the split-ring bushings (J) Fig. 10 with the slot in the chisel holder (K) Fig. 11. Tighten the thumb screw (M) on the alignment pin (H). Tighten the locking lever (L) around the split ring bushings.

NOTE: The locking lever is spring-loaded. Change it by pulling out and repositioning the hub of the lever on the nut located directly under the hub.

4. After the chisel holder (K) Fig. 11 is installed on the machine, loosen the thumb screw (M) and remove the alignment pin (H) from the spindle.
5. After successfully completing these instructions, go to the section in this manual entitled **"ATTACHING THE FENCE TO THE TABLE."**

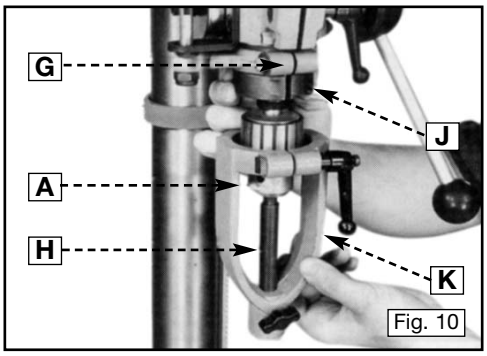


Fig. 10

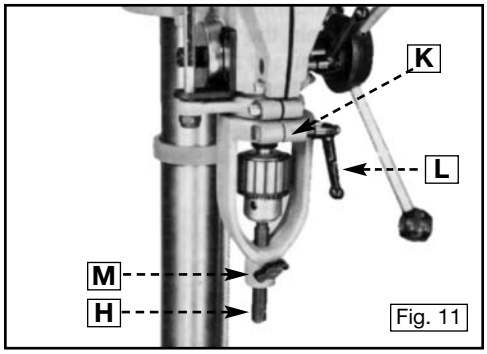


Fig. 11

THE FOLLOWING INSTRUCTIONS ARE FOR THE DELTA 17-900 16-1/2" DRILL PRESS.

⚠WARNING Disconnect the machine from the power source.

NOTE: This unit requires **NO** bushings for attaching the chisel holder to the quill.

1. Insert and lock the smaller diameter end of the alignment pin (A) Fig. 12 into the spindle.
2. Slide the chisel holder (B) Fig. 12 over the alignment pin and over the stop collar (C) of the drill press.

NOTE: Face the slot (D) in the chisel holder (B) toward the front of the drill press.

3. Tighten the thumb screw (F) Fig. 12 on the alignment pin first, then tighten the locking lever (E).

NOTE: The locking lever is spring-loaded. Change it by pulling out and repositioning the hub of the lever on the nut located directly under the hub.

4. Loosen the thumb screw (E) and remove the alignment pin (A) from the spindle.

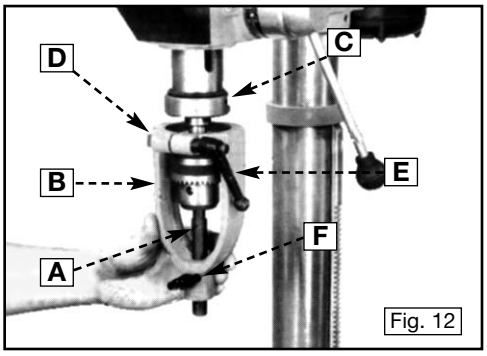


Fig. 12

ATTACHING THE FENCE TO THE TABLE

THE FOLLOWING INSTRUCTIONS ARE FOR THE 10", 12", 14", AND 32" RADIAL DRILL PRESSES AND THE MODEL 17-900, LISTED IN THE INTRODUCTION.

⚠WARNING Disconnect the machine from the power source.

1. Attach the fence (A) Fig. 13 to the drill press table with two locking levers (C and Y), flat washers (D) and T-nuts (E).

IMPORTANT: The T-nuts are positioned under the drill press table.

NOTE: For ease of assembly, you can remove the locking levers (C) and (Y) from the studs (F) by removing the screws and springs (B). Attach the studs (F) first, then re-attach the lever (Y) to the stud (F). You can reposition the locking levers (C) and (Y) by lifting the upward and rotating them on the stud in either direction.

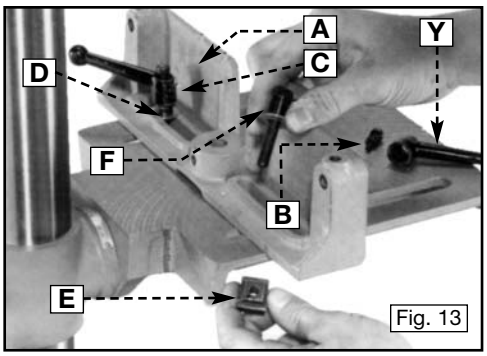


Fig. 13

THE FOLLOWING INSTRUCTIONS ARE FOR THE 15" UTILITY AND MODEL 17-925 16-1/2" VARIABLE SPEED DRILL PRESSES.

1. Attach the fence (A) Fig. 14 to the drill press table with two locking levers (C and Y), flat washers (D) and T-nuts (E), one of which is shown in the assembly (C).

NOTE: You can rotate the T-nuts (one of which is shown inserted in the t-slot of the drill press table) 90 degrees if necessary to fit properly inside the T-slot in the table.

NOTE: For ease of assembly, you can remove the locking levers (C and Y) from the stud by removing the screws and springs (B). Re-attach the studs (F) first, then the levers (C and Y) to the studs. You can reposition the locking levers (C) and (Y) by lifting the upward and rotating them on the stud in either direction.

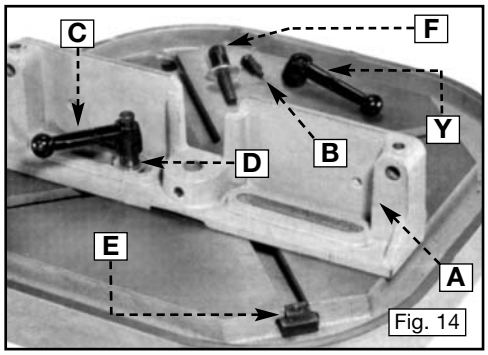


Fig. 14

ATTACHING THE WORKPIECE HOLD-DOWN - ALL UNITS

⚠WARNING Disconnect the machine from the power source.

1. Attach the vertical shaft (X) Fig. 15 to the fence, using the supplied wrench (H).

NOTE: Place the flat on the shaft (X) toward the rear of the drill press.

2. Position the workpiece hold-down (I) Fig. 15 over the shaft (X) and tighten the thumb screw (J) against the flat on the shaft.
3. Insert the two guides (K) Fig. 16 into the pre-drilled holes in the fence (A) and secure them in place using the two thumb screws (L).

NOTE: You can cut mortises in workpieces of 3/4" or thicker on the 17-900 16-1/2" drill press.

NOTE: If you are mortising to the center of a workpiece less than 3/4" thick, you can attach a wooden auxiliary fence to the fence (A) Fig. 17 with screws through the holes (M).

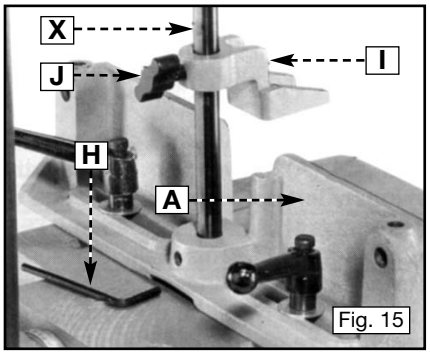


Fig. 15

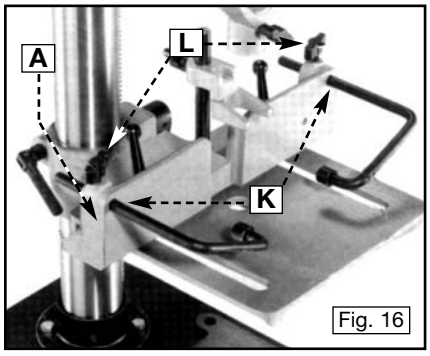


Fig. 16

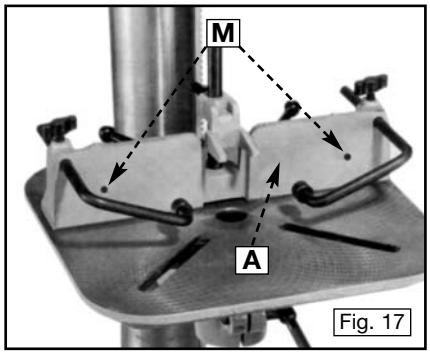


Fig. 17

INSTALLING THE CHISEL AND BIT

⚠WARNING Disconnect the machine from the power source.

1. Position the chisel (A) Fig. 18 in the chisel holder (B) so that the upper face of the chisel (D) is approximately 1/32" below the bottom edge of the chisel holder (B). Make sure that the chip ejection slot (E) faces toward either the left or right of the drill press to provide efficient chip removal, eliminate excessive heat build-up, and lengthen the life of the chisel and bit.
2. Tighten the thumb screw (C).
3. Push the bit (F) Fig. 19 up through the chisel (A) as far as it will go and tighten the drill press chuck.
4. Loosen the thumb screw (C) Fig. 19, and move the chisel (A) up against the bottom edge of the chisel holder (B).
5. Tighten the thumb screw (C).

NOTE: If the noise level increases during operation, re-center the chisel holder using the alignment pin as previously described.

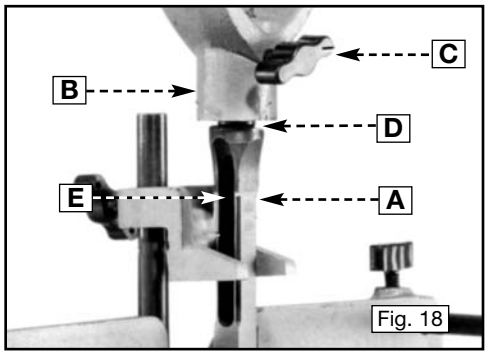


Fig. 18

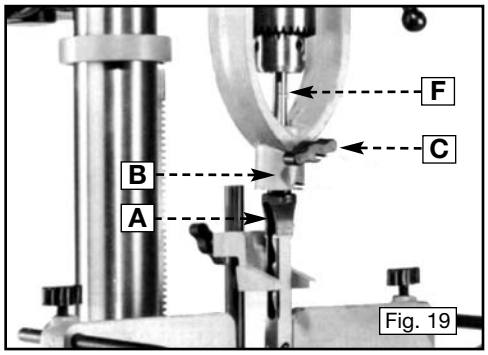


Fig. 19

SPINDLE SPEEDS

The correct spindle speed depends on the size of the bit and the hardness of the wood. Your best cuts are generally in the range of 650 to 1800 RPM. Use a slower speed for larger bits and harder woods and faster speeds for smaller bits and softer woods.

MORTISING CHISEL AND BIT COMBINATIONS

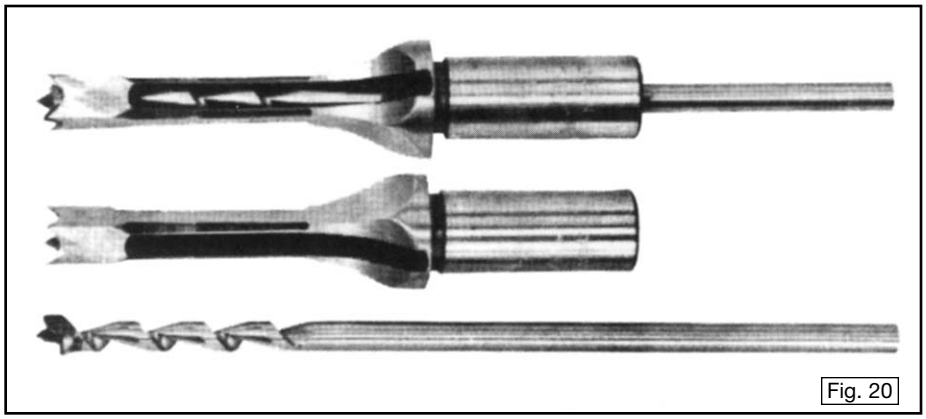


Fig. 20

OPERATION

Place the workpiece on the table and adjust the height of the table so that the point of the chisel clears the work about 1/2". Lower the chisel along the side of the workpiece to gauge the depth of the mortise. Adjust the depth stop of the drill press to control the depth of the mortise. Adjust the guides (X) Fig 21 to hold the work against the fence (Y), tilting them if necessary. Lower the hold-down (Z) against the top of the work. This hold-down should hold the work in place, but should also allow the workpiece to slide to its next position. These hold-down arms are independently adjustable. Once you have them adjusted, tighten the thumb screws (T).

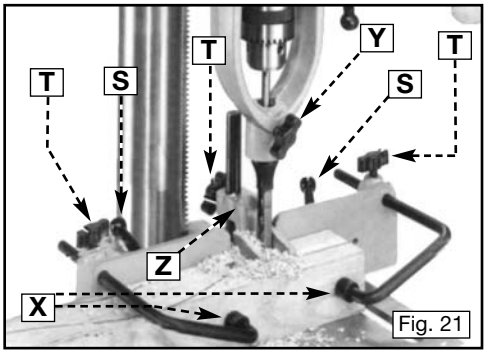


Fig. 21

Loosen the locking levers (S) Fig. 21 that hold the mortising attachment fence to the drill press table. Shift the fence forward or toward the column to being the workpiece to the desired position under the mortising chisel. Tighten the locking levers.

Slide the workpiece along the fence to ensure that the cuts will be aligned. Loosen the lock handle (Y) Fig. 21 and turn the chisel in the holder (if necessary) to make its faces square with the cut. Tighten the lock handle (Y).

NOTE: If the fence and face of the chisel are not parallel, the cuts will be staggered.

NOTE: Make mortise cuts to the far left and far right first, then make the cuts in between. This method allows all four sides of the chisel to make a true vertical cut on each end.

NOTE: Do not attempt to mortise deeper than maximum depth listed for each chisel as indicated in Fig. 22. Going past these limits will clog the ejection slots and you will damage the tool or the bit.

NOTE: Practice on scrap material before you use an actual workpiece.

NOTE: For through mortises, place a piece of 1/2" plywood between the workpiece and the drill press table to eliminate splintering.

MORTISING CHISELS WITH 5/8" X 1-1/2" SHANK		
Cat. No.	**Size**	**Depth Capacity**
17-912	1/4" x 1/4"	1-7/8"
17-913	5/16" x 5/16"	1-7/8"
17-914	3/8" x 3/8"	3"
17-915	1/2" x 1/2"	3"

Fig. 22

SHARPENING CHISELS AND MORTISING BITS

Sharpening these chisels requires considerable skill and practice. An improperly-sharpened hollow chisel can easily split in operation, and an old bit will cause excessive strain on the hollow chisel, causing breakage. Therefore, we recommend that you find an expert rather than doing the job yourself.

NOTES