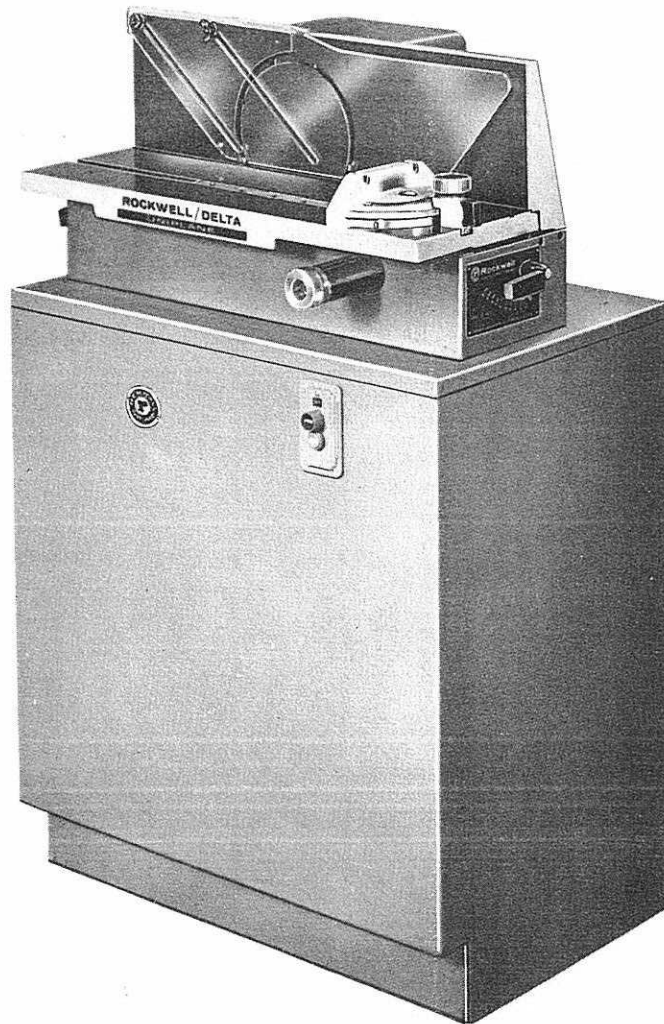




# UNIPLANE

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## INTRODUCTION

The "Uniplane" provides a unique yet superior method for jointing or surfacing material up to 6" in width or thickness, or even as small as a matchstick, all with complete safety.

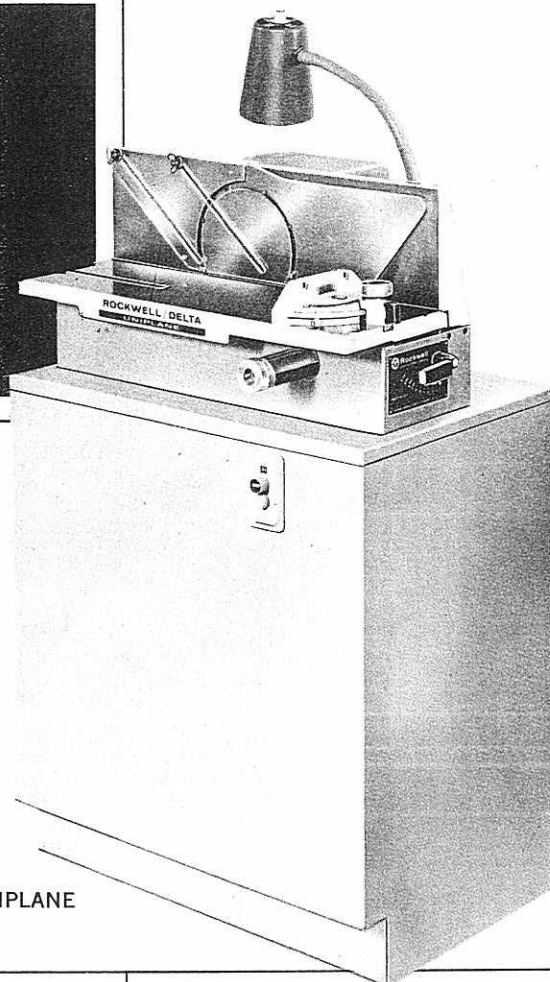
Your "Uniplane" will do all these operations safely and with unbelievable accuracy: Planing, jointing, beveling, chamfering, trimming, tapering, and many more.

In order to take full advantage of these capabilities you should thoroughly understand the construction and assembly of the machine and the proper technique for operating it. Therefore, we suggest you read this manual before operating the Uniplane and also that you save it for future reference.

The above photograph of the Uniplane is shown with the Miter Gage, Stand, and Electricals, which are available as accessories.

# SAFETY SUGGESTIONS FOR ROCKWELL DELTA UNIPLANE\*

\*Trademark



UNIPLANE

- 1.** IF YOU ARE NOT thoroughly familiar with the operation of the Uniplane, obtain advice from your supervisor, instructor or other qualified person.
- 2.** MAKE SURE wiring codes and recommended electrical connections are followed and that machine is properly grounded.
- 3.** HAVE the power disconnected when making any adjustment. If power cannot be disconnected, remove the V-belt.
- 4.** REMOVE tie, rings, watch and other jewelry and roll up sleeves.
- 5.** ALWAYS WEAR safety glasses or a face shield.
- 6.** CUTTER GUARD and guard for belt and pulley must be in place before machine is turned on. Be sure cutter guard is free to ride up and down as work is passed under it.
- 7.** BE SURE all cutters are securely locked in the cutterhead and that they are properly adjusted—i.e., do not stick out excessively far.
- 8.** HOLD THE WORK firmly against the fence at all times.
- 9.** ALWAYS use push sticks or a push block when working with small pieces of work. Use two sticks—one to hold the work against the fence and the other to feed the work.
- 10.** THE MITER GAGE should be used when cutting end grain of small pieces.
- 11.** A BACK UP BOARD should be used when surfacing thin material. Sandpaper glued onto the face of the back up board will keep it from slipping.
- 12.** BEFORE LEAVING the Uniplane unattended, shut off the power and wait for the cutterhead to stop.

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## IMPORTANT

Please read this entire manual before operating your new "Uniplane". The "Uniplane" provides a unique, yet superior, method for jointing or surfacing and is equipped with "triple cutting action". Cutting results will vary between different species of wood, depending on the degree of hardness, the pattern of the grain, etc. A light cut and slow steady feed is recommended for satisfactory results, under any condition. The following is an explanation of the "triple cutting action" and, for additional information, refer to the section entitled "CORRECT OPERATING TECHNIQUE" on page 20.

1. First the roughing cutters only, cut the work piece to almost (but not quite) the final dimension. The single cutting point of the roughing cutters is on a cutting circle that is a small fraction of an inch larger in diameter, than the outside corner of the cutting edge of the finishing cutters. The entire job of the roughing cutters is completed before the finishing knives start to cut.
2. Then each finishing knife takes a light, downward, shaving cut. This is completed just before the work piece moves onto the center fence, and erases the marks left by the roughing cutters.
3. The finishing knives only then take a final, light, upward, smoothing cut, just before the work piece reaches the outfeed table.

# INSTALLATION

## ASSEMBLING UNIPLANE TO #50-138 STEEL STAND

The Uniplane as illustrated on the front cover is shown mounted on a totally enclosed steel stand, catalog number 50-138. This stand may be purchased with motor and controls completely assembled and wired inside the stand, plus the belt and pulley guard, catalog number 22-835, and V-belt, catalog number 410.

If you have received the enclosed stand with motor and electricals installed, proceed as follows:

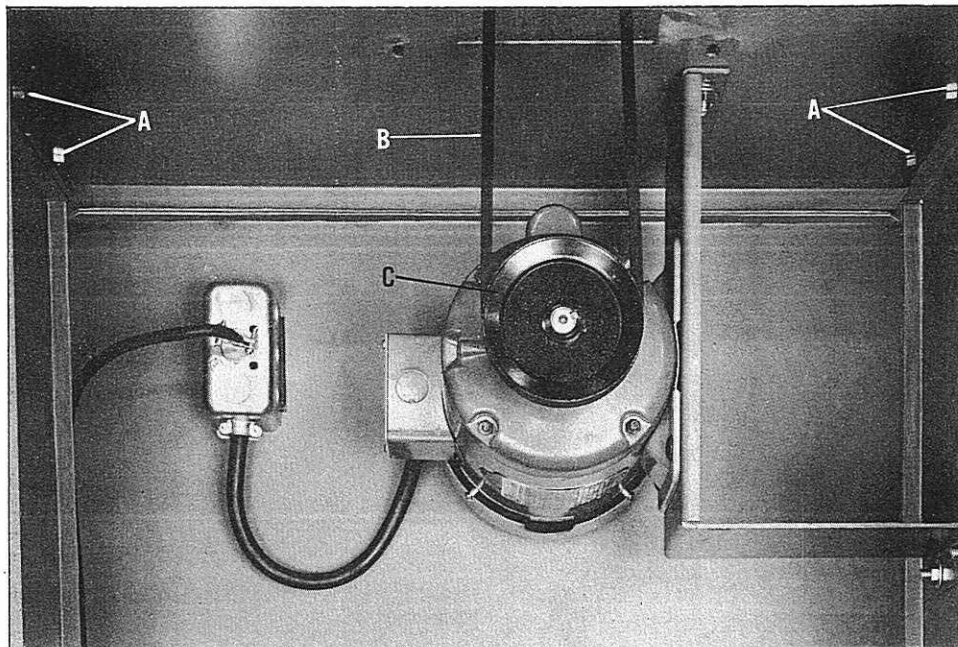


Fig. 1.

1. Cut off all four flaps from top of stand carton. NOTE: The stand is packed upside down.
2. Remove the packing and other contents.
3. Turn carton and stand over, end for end, and lift carton upwards to remove.
4. Remove rear panel.
5. Remove packing from the Uniplane carton and remove the Uniplane. NOTE: Remove the waxed paper from the table and fences and clean with alcohol or similar solvent. Do not use gasoline, lacquer thinner or turpentine. Apply a coating of hard paste wax and buff thoroughly.
6. Assemble the four screws and washers (A) Fig. 1, to the bottom of the Uniplane. Thread the screws about halfway into the Uniplane base.
7. Place the Uniplane on top of the stand with the cutterhead pulley above the belt opening and with the four screws (A) Fig. 1, inserted through the large openings of the four keyholes on top of the stand. Visually align the cutterhead shaft parallel with the motor shaft by shifting the Uniplane and tighten screws (A) Fig. 1.
8. Place V-belt over pulleys and move motor pulley (C) Fig. 1, in or out so that it is in line with cutterhead pulley.
9. Loosen nuts on motor mounting bolts and allow motor to move downward. The weight of the motor alone applies sufficient tension to the belt. DO NOT APPLY EXTRA TENSION. Tighten nuts.



## ASSEMBLING AND ADJUSTING CUTTERHEAD GUARD

The cutterhead guard (A) Fig. 2, rides up onto the material being cut and drops down behind it. The isometric drawing in Fig. 2, illustrates the correct position of the hardware to assemble the guard (A) Fig. 2, to the outfeed fence.

1. Place the two rollers (D) Fig. 2, on the two studs located on the rear fence.
2. Assemble the guard on the studs so that the slots in the guard ride on the two rollers.
3. Assemble the two washers (E) Fig. 2, on the studs.
4. Assemble the hex nut (B) Fig. 2, on the left stud and the wing nut (C) on the right stud.
5. The sliding action of the guard can be adjusted by tightening or loosening the hex nut (B) Fig. 2. For certain operations or for maintenance it may be desirable to lock the guard up out of the way. This may be done by sliding the guard up to the desired position and locking it in place with the wing nut (C).

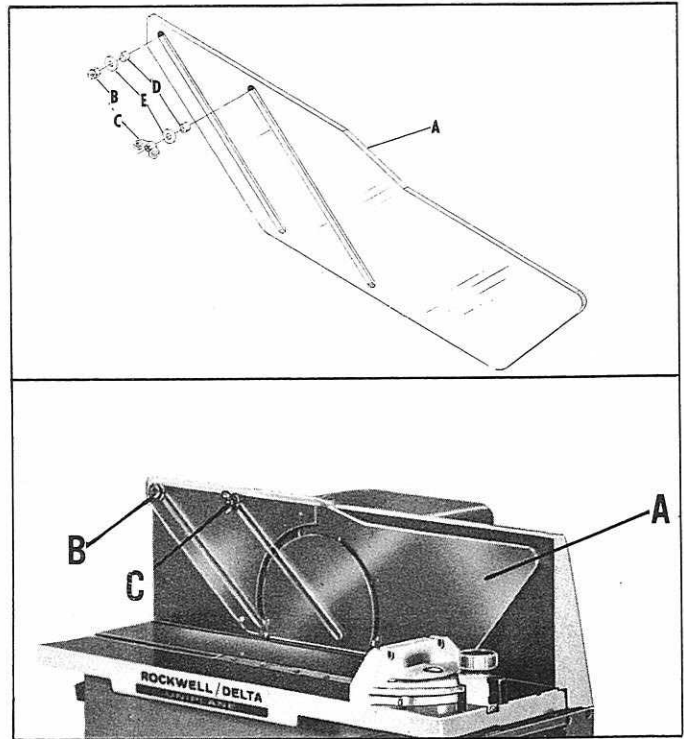


Fig. 2.

## LEVELING THE UNIPLANE

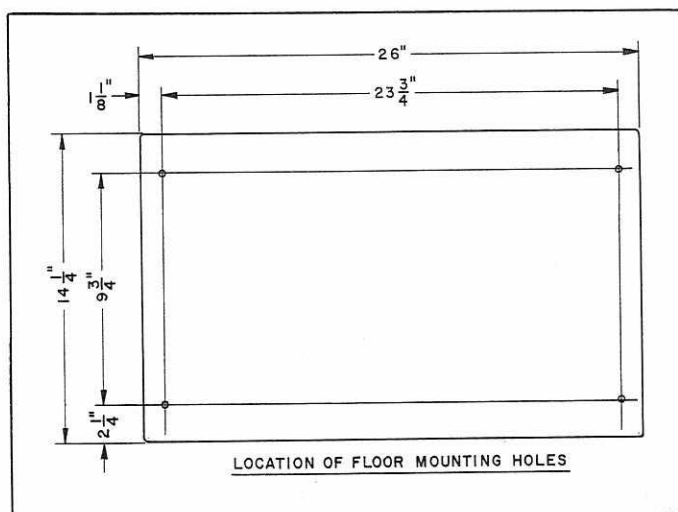


Fig. 3.

1. It is not advisable to move the Uniplane around as this may cause misalignment of the fences and table. The Uniplane mounted on the stand should be placed in a suitable location and anchored to the floor. See Fig. 3 for anchor bolt locations.

If placed near a wall, allow sufficient room between the back of the stand and wall for easy removal of the back access panel.

If the floor is uneven, place tapered wedges between the stand and the floor. Place a spirit level on the table and adjust the wedges so that table is level.

2. Insert metal shims in the openings between the stand and the floor and remove wedges.
3. Install anchor bolts.
4. Insert power cord through hole in back panel, and attach back panel to stand using screws provided.

# ELECTRICAL RECOMMENDATIONS

## SINGLE PHASE INSTALLATION

Single phase motors when installed in the stand at the factory are wired to rotate in the proper direction. Rotation of the motor should be counterclockwise when viewing from the motor pulley.

Single phase motors may be used on either 115 or 230 Volts, preferably 230 volts. The single phase motor, 62-020, is especially designed for the Uniplane. Therefore, the circuit should be protected with a Fusatron Time Lag Fuse rated 15 amps, or a circuit breaker rated 15 amps.

## THREE PHASE INSTALLATION

The necessary wiring from the starter to the power source should be completed by a competent electrician.

**IMPORTANT:** Rotation of motor should be counterclockwise when viewing from the motor pulley.

## OPERATING CONTROLS AND ADJUSTMENTS

### TABLE TILTING MECHANISM

The table can be tilted and locked in any position between  $0^{\circ}$  and  $45^{\circ}$ .

1. Loosen both locking handles. One locking handle is shown at (A) Fig. 4. Raise table to desired position and tighten both handles. **NOTE:** When tilting table to  $45^{\circ}$ , use caution. **DO NOT STRIKE LIMIT STOP SEVERLY.**

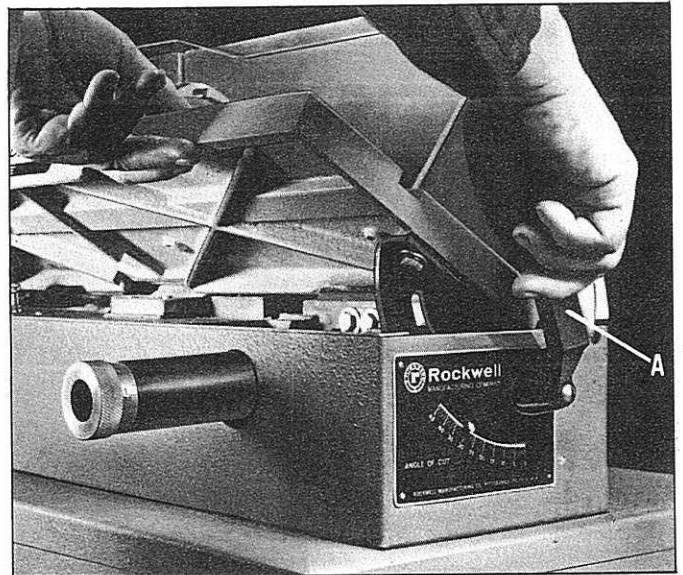


Fig. 4.

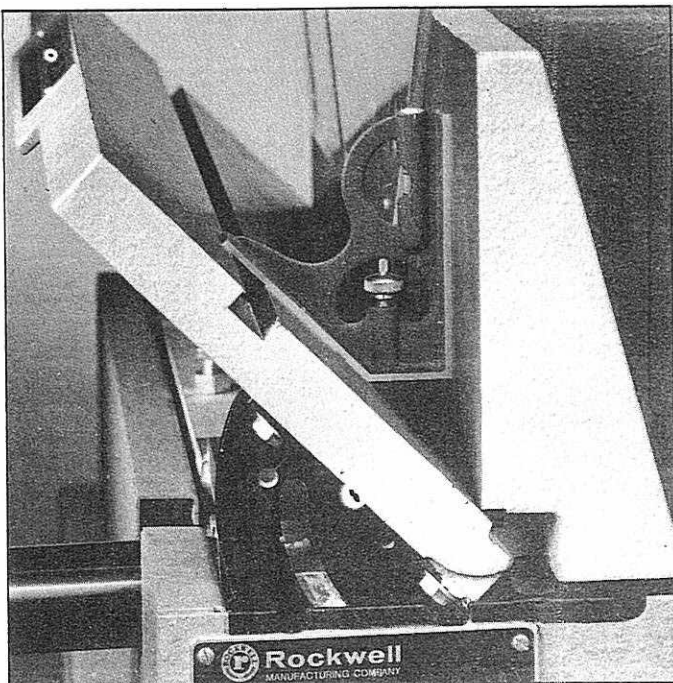


Fig. 5.

2. For an accurate setting at  $45^{\circ}$ , place head of combination square between table and fence, as shown in Fig. 5.

## ADJUSTABLE TABLE STOP

A positive stop is provided at 90° which consists of a screw and lock nut located underneath the center of the table. Although this adjustment is set at the factory, future readjustment can be made as follows:

1. Loosen lock handles and make sure table is resting on stop screw.
2. Place accurate square on the table and against OUTFEED FENCE, as shown in Fig. 6. If table is not 90° to the fence, an adjustment must be made.
3. Turn adjusting screw (A) Fig. 6, in or out until table is square with fence.
4. Check angle scale (B) Fig. 6, and if pointer is not at "0", loosen four screws that hold the scale to the base and adjust the scale.

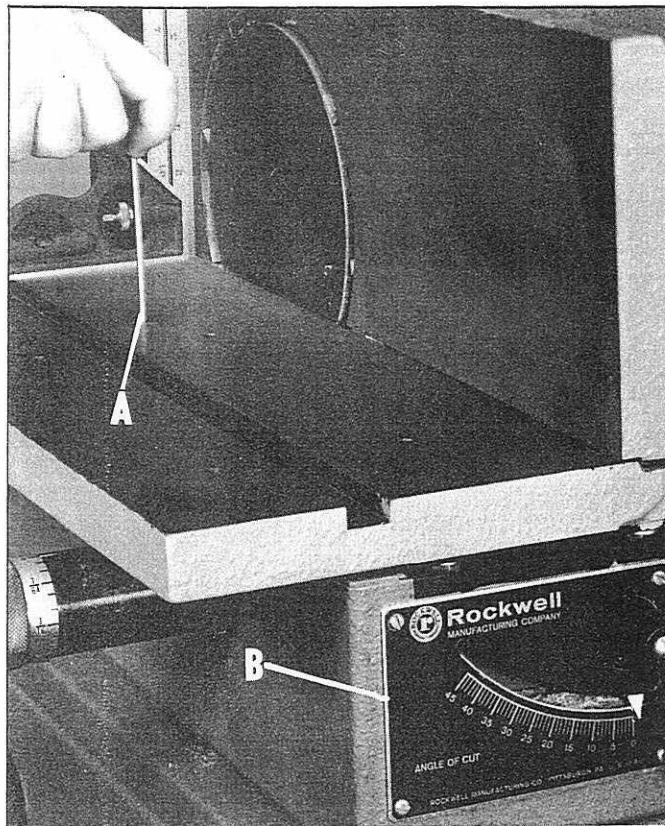


Fig. 6.

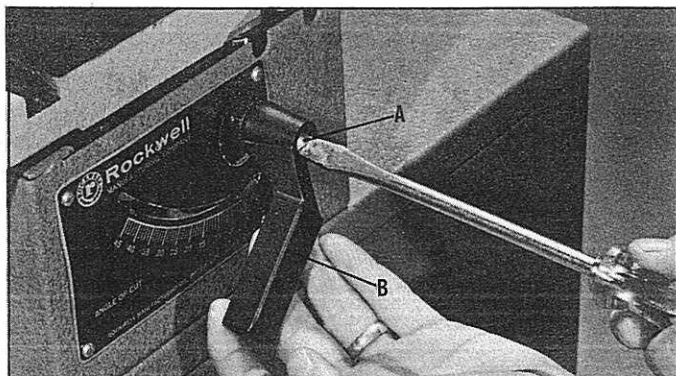


Fig. 7.

## CHANGING POSITION OF THE TABLE LOCKING HANDLES

When the table locking handles do not lock in a convenient position, they may be repositioned as follows:

1. Loosen screw (A) Fig. 7.
2. Pull out and reposition the handle (B) so that it locks in a convenient position and tighten screw (A) Fig. 7.

## "MICRO-SET" DEPTH OF CUT CONTROL

The "Micro-Set" Depth of cut control (A) Fig. 8 is conveniently located and readily accessible at the front of the machine. Large, easy to read graduations are in full view of the operator. The graduated collar (B) Fig. 8 is calibrated in 64ths of an inch. The markings are widely spaced to permit easy readings and insure accurate adjustment. The maximum depth of cut is 1/8".

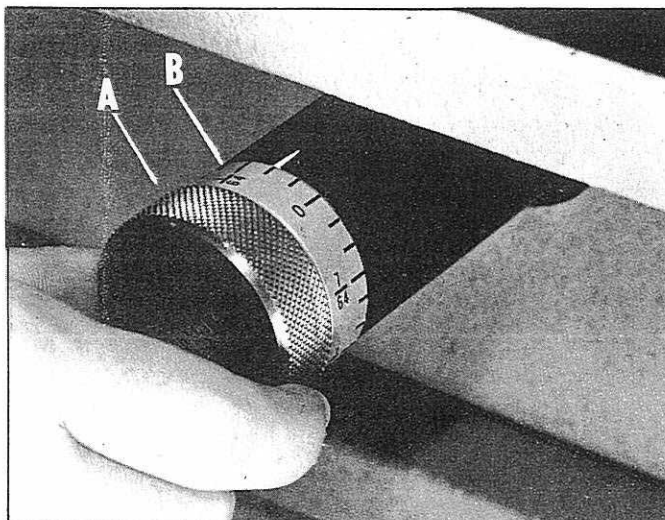


Fig. 8.

## ADJUSTING THE GRADUATED COLLAR FOR "MICRO-SET" DEPTH OF CUT CONTROL

1. Position infeed fence outward beyond the outfeed fence, by turning depth of cut control knob (A) Fig. 9, counterclockwise.
2. Place a straight edge on the outfeed fence and the infeed fence as shown in Fig. 9.
3. Turn depth of cut control knob (A) clockwise until the fences are in the same plane, as shown in Fig. 9.

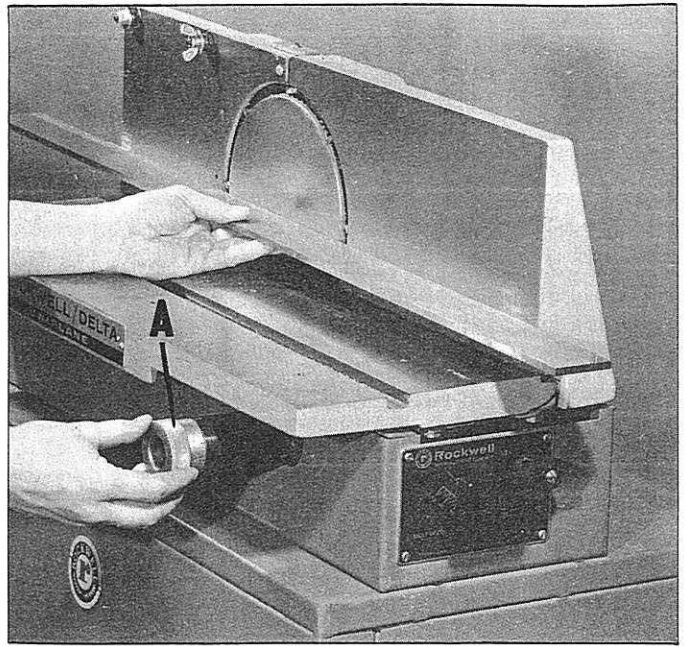


Fig. 9.

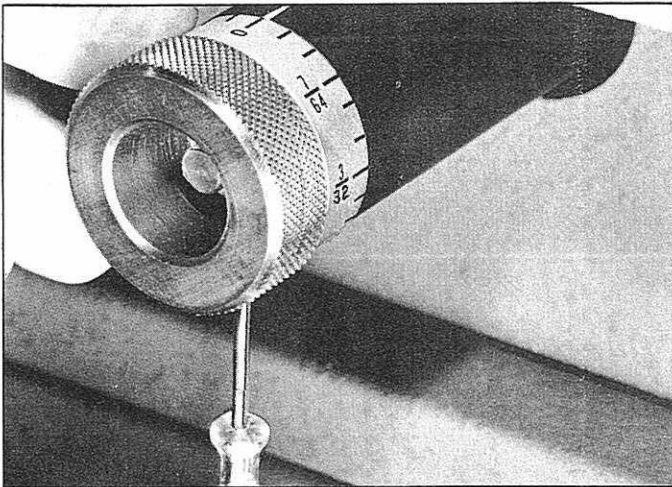


Fig. 10.

4. Loosen set screw in graduated collar, and rotate collar until '0' graduation coincides with witness mark on sleeve, as shown in Fig. 10.

## BACKLASH ADJUSTMENT FOR THE DEPTH OF CUT CONTROL SCREW

After a long period of time, backlash may develop in the Depth of Cut screw. To adjust, proceed as follows:

1. Tilt table to 45°.
2. Place hex wrench (A), in adjusting screw, as shown in Fig. 11.
3. Turn depth of cut control knob (B) Fig. 11, back and forth, while tightening adjusting screw slightly with hex wrench (A), until backlash is minimized.

NOTE: It is impossible to remove all backlash, therefore do not adjust screw TOO TIGHTLY.

4. Return table to 90° position.

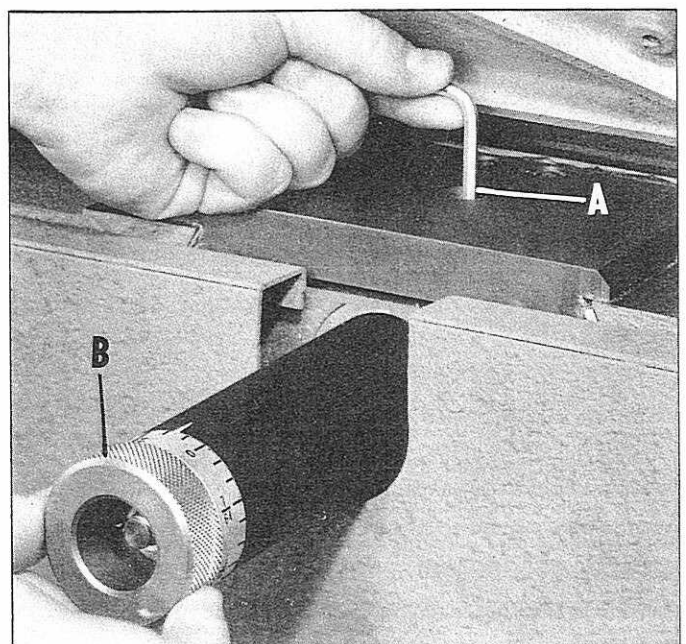


Fig. 11.



## GIB ADJUSTMENT FOR FRONT FENCE

A "gib" is provided to take up all play between the mating dove tailed ways of the front fence and and the base. The "gib" is a strip of steel placed between the dovetailed ways as shown in Fig. 12. Should the front fence move too freely or bind, it is necessary to readjust the gib as follows:

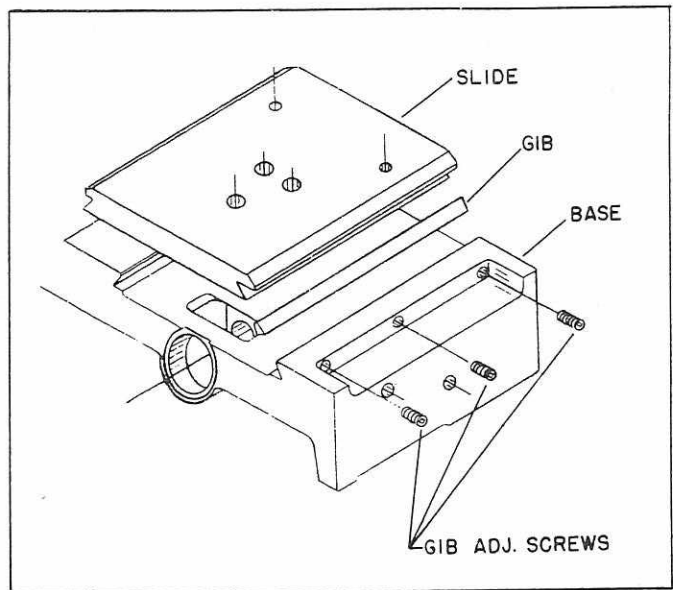


Fig. 12.



Fig. 13.

1. Tilt the table to approximately  $13^{\circ}$ , or until the hole (A) Fig. 13, in the trunnion lines up with the gib adjusting screw.

2. Tighten or loosen the two gib adjusting screws (A) and (B) Fig. 13, until a good snug sliding fit is obtained.

3. Move the table to the  $90^{\circ}$  position and adjust the center gib adjusting screw (A) Fig. 14.

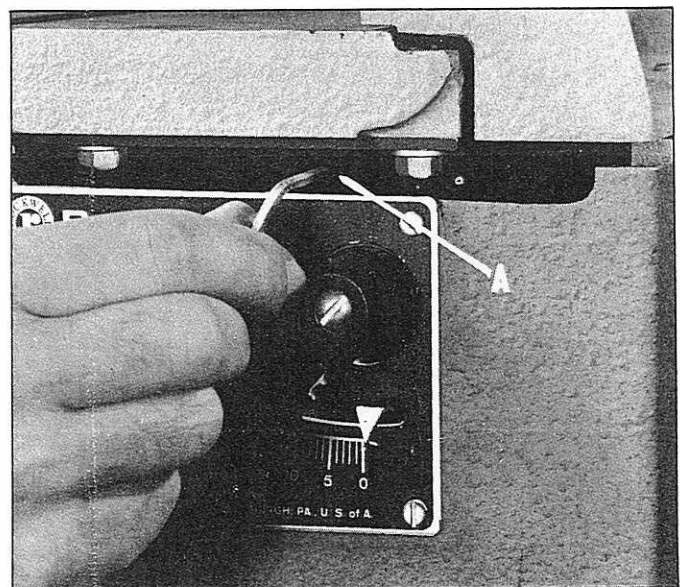


Fig. 14.



# CUTTER MAINTENANCE

The ease with which the cutters can be resharpened and replaced in the cutterhead is a natural incentive to always maintain sharp cutting edges on the cutters. Do not allow the cutters to become dull, resharpen them frequently.

## CUTTERS

Eight cutters are supplied with your Uniplane. Four of the cutters, every other one, are Roughing Cutters. The other four cutters are Finishing Cutters. The cutters are alternated in the cutterhead as shown in Fig. 15. The Roughing Cutters are placed in the holes in the cutterhead that are marked with a "R" and the Finishing Cutters are placed in the holes that are marked with an "F", as shown in Fig. 15.

NOTE: For clarity the cutterhead is shown removed from the machine in Fig. 15.

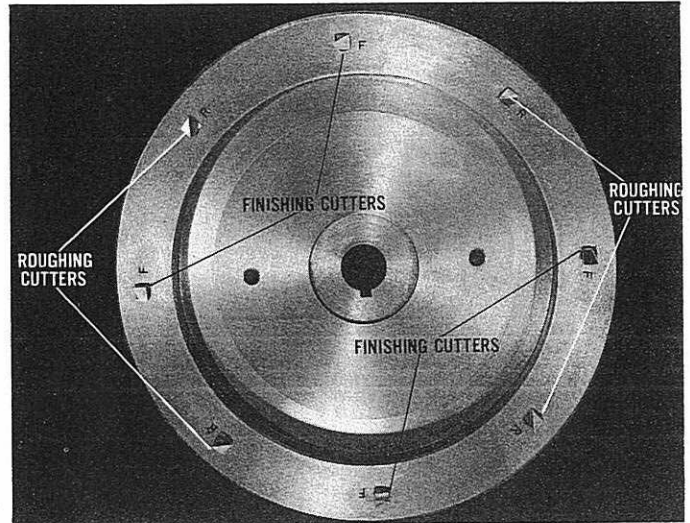


Fig. 15.

## REMOVING CUTTERS

1. Disconnect machine from power source.

NOTE: On 3 phase installation remove V-belt.

2. Remove cutterhead guard and belt guard.
3. Remove round head screw (A) and cutter setting gage (B) Fig. 16, from top of outfeed fence.

NOTE: When cutter setting gage is not in use, attach it to top of outfeed fence. This will prevent it from getting lost and it also covers the opening between the fences.

4. Loosen screws holding cutters, and remove cutters.
5. Remove any accumulation of gum or pitch from periphery and face of cutterhead.

NOTE: Adjacent to holes in cutterhead, the letters "R" and "F" are stamped. This is to facilitate correct replacement of cutters. "R" for roughing and "F" for finishing.

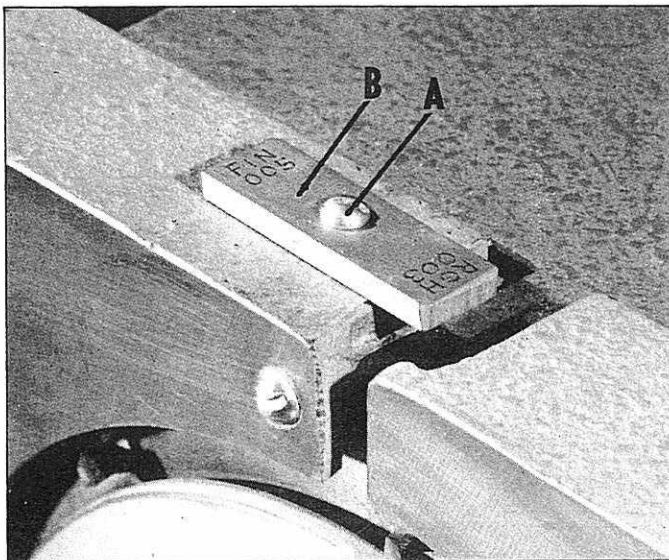


Fig. 16.

## HONING CUTTERS

The cutters should be honed frequently. For best results, use a Norton pocket stone FJB Fine Crystolon, 4" X 1" X 1/4", or one similar. Honing stones are available from most leading Industrial Distributors.

1. Remove any accumulation of gum or pitch from the cutters.
2. Grip the cutters in a vise while honing, and frequently dip the stone in very light oil or kerosene.
3. The finishing cutter is honed on the front face only. The stone should be passed over the face in one direction as shown in Fig. 17.

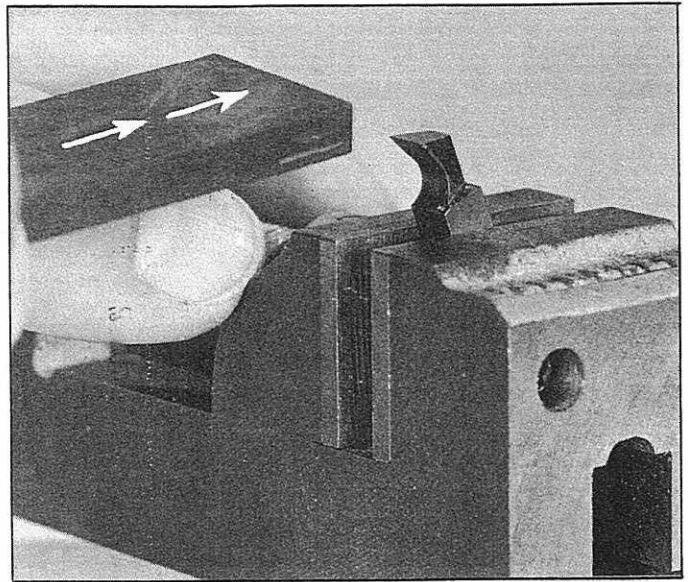


Fig. 17.



Fig. 18.

4. The roughing cutter is honed on the side faces only, as shown in Fig. 18. Pass the stone over the faces in one direction as indicated by the arrow.

## GRINDING CUTTERS

If cutters ever have to be re-ground, we suggest that this work be done by a reputable Industrial Tool and Cutter Sharpening Service.

The dimensions shown in Fig. 19, should be followed when grinding the roughing cutters.

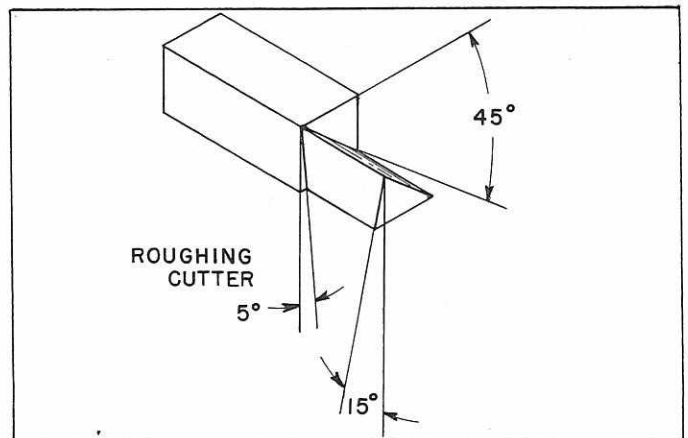


Fig. 19.

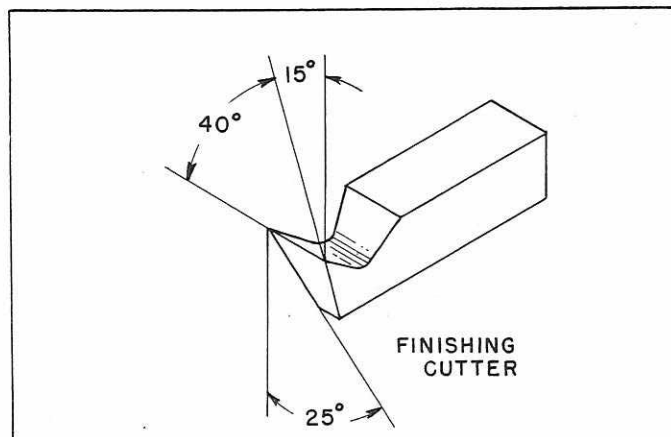


Fig. 20.

The dimensions shown in Fig. 20, should be followed when grinding the finishing cutters.

# REPLACING CUTTERS

1. Remove the cutterhead guard and the belt and pulley guard from the machine.
2. Remove the round head screw (A) and cutter setting gage (B) Fig. 21. NOTE: The cutter setting gage is precision ground at each end. One end is ground .003" from the face, the other is ground .005" from the face.

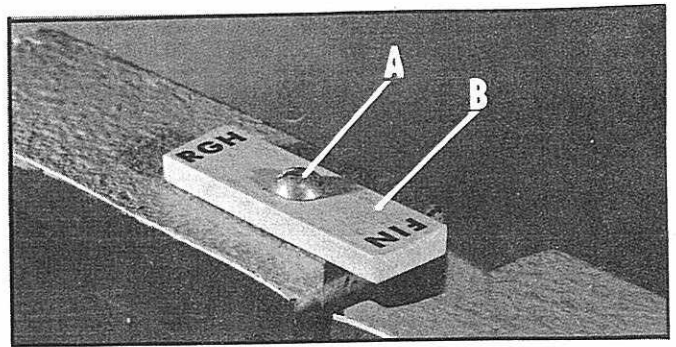


Fig. 21.

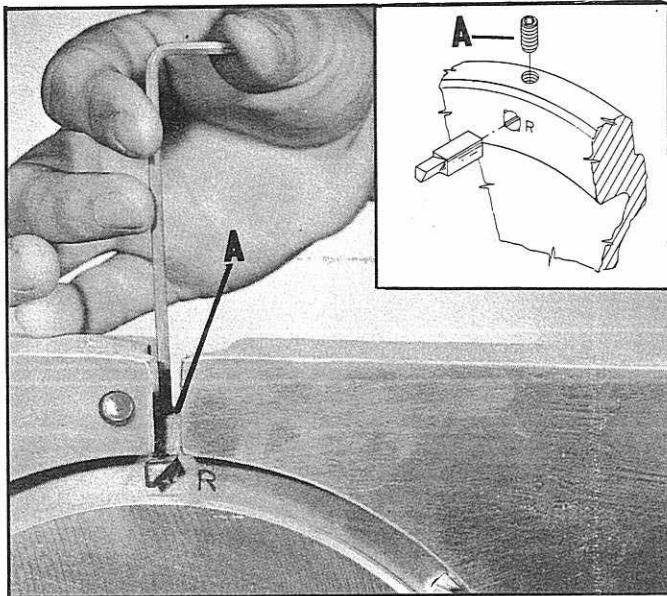


Fig. 22.

4. Insert a finishing cutter in one of the holes in the cutterhead marked "F", as shown in Fig. 23. The line drawing in Fig. 23, illustrates the correct position for inserting the finishing cutter into the cutterhead. NOTE: Make sure the cutter is not set out past the face of the center fence at this time and snug up set screw (A), Fig. 23. Insert the three remaining finishing cutters in the holes in the cutterhead marked "F" in the same manner as outlined above.

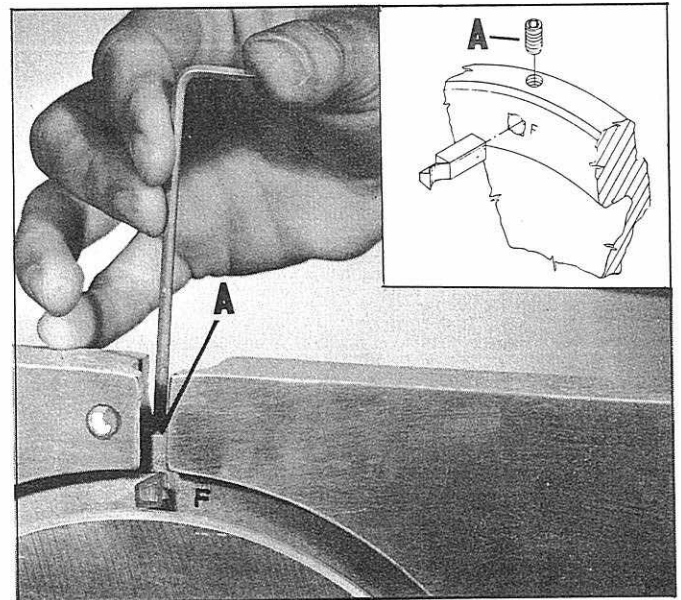


Fig. 23.

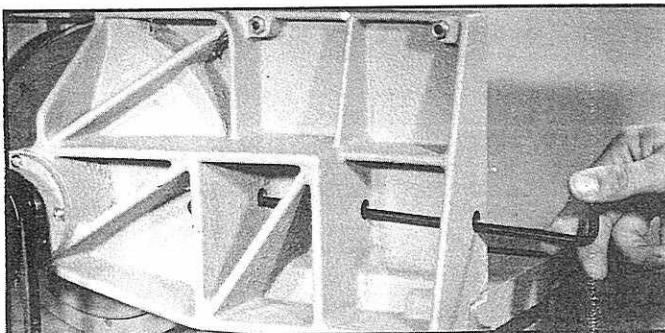


Fig. 23 A

3. Insert a roughing cutter in one of the holes in the cutterhead marked "R", as shown in Fig. 22. The line drawing in Fig. 22 illustrates the correct position for inserting the roughing cutter into the cutterhead. NOTE: Make sure the cutter is not set out past the face of the center fence at this time and snug up set screw (A) Fig. 22. Insert the three remaining roughing cutters in the holes in the cutterhead marked "R" in the same manner as outlined above.

5. Using the long special wrench supplied with your Uniplane, insert it into the hole in the end of the outfeed fence and on through the holes in the ribs of the fence, as shown in Fig. 23-A, until it comes into contact with one of the set screws that hold the roughing cutters in the cutterhead.

6. When the wrench is lined up with the roughing cutter set screw, attach the cutter setting gage to the outfeed fence with the end of the gage marked "RGH" opposite the roughing cutter, as shown in Fig. 23-B.

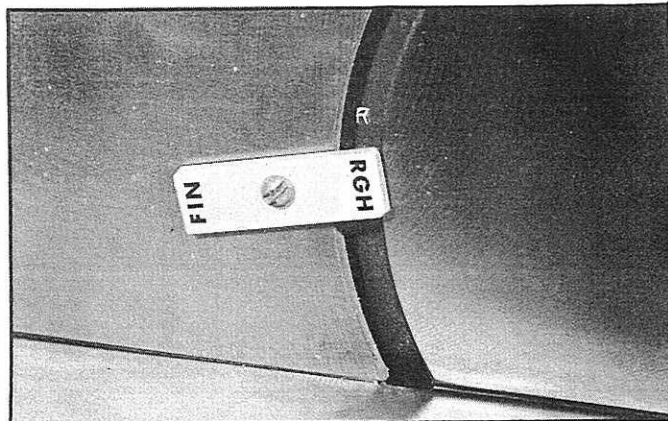


Fig. 23 B

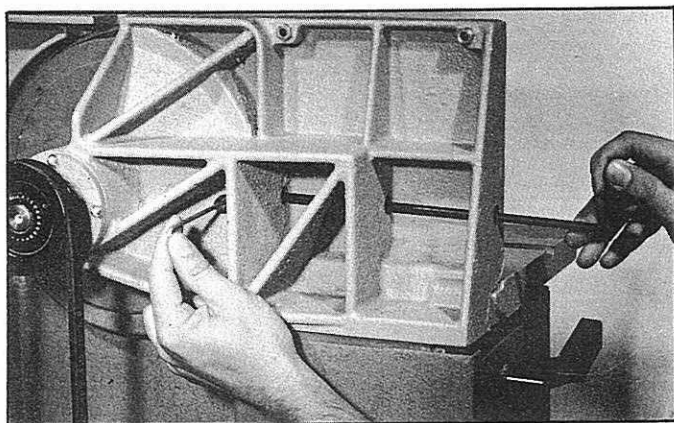


Fig. 23 C

7. Loosen the set screw that holds the roughing cutter and using one of the other wrenches or something similar, apply light pressure to the back of the cutter, as shown in Fig. 23-C, until the front end of the cutter just touches the cutter setting gage. Then lightly tighten the set screw that holds the cutter in place.

8. Rotate the cutterhead counterclockwise 90° and reset another roughing cutter as explained in Step 7. Reset the two remaining roughing cutters in a similar manner.

9. Loosen the screw (A) and rotate the gage until the end of the gage marked "FIN" is opposite the finishing cutter, as shown in Fig. 23-D. Then reset the finishing cutters in the same manner as the roughing cutters were reset.

10. When all the cutters are reset, tighten the set screws that hold the cutters in place. This is done at the top of the machine for convenience.

11. Check each of the cutters again, using the gage, to be sure the position of the cutter did not change when the set screws were tightened.

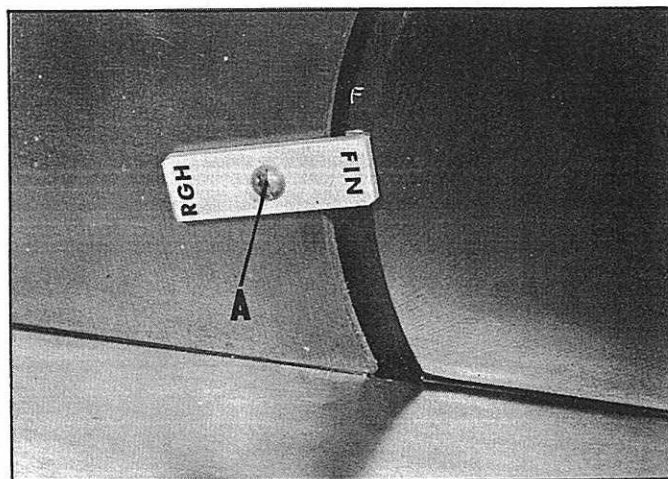


Fig. 23 D

12. Remove gage and replace it on top of outfeed fence.



# FENCE ADJUSTMENTS

## OUTFEED FENCE

The outfeed fence is set at the factory and fixed in position. No further adjustment is necessary.

## INFEED FENCE

The infeed fence is set at the factory and fixed to the dovetailed slide.

The only adjustment to the infeed fence is the "take up" of the gibs, which is described under GIB ADJUSTMENT FOR INFEED FENCE.

## CENTER FENCE

The center fence is also set at the factory but can be adjusted if necessary as follows:

1. Place an accurate straight edge against the outfeed and infeed fence and move the infeed fence in or out by turning the "micro-set" depth of cut control knob, until both fences are in the same plane.

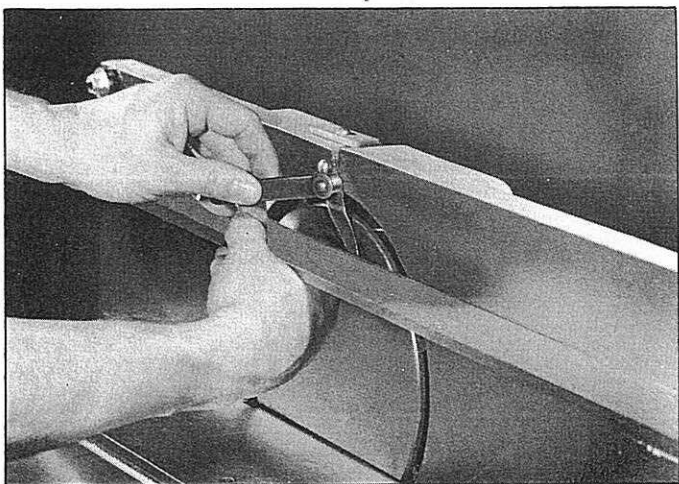


Fig. 24C

2. The center fence should be set .002" to .005" in from the outfeed and infeed fences. Using a feeler gage, check the center fence with the straight edge placed about 1" above table level and also with the straight edge placed about 5" above table level, as shown in Fig. 24-C.

3. If an adjustment is necessary, tilt the table to approximately 25 degrees and lock in place.

4. Loosen two cap screws (A) Fig. 24-D, 1/8 turn.

5. To tilt the top of the center fence to the rear, loosen set screw (B), Fig. 24-D, slightly. To tilt the top of the center fence to the front, tighten screw (B) slightly. The screw should be tightened or loosened with the special wrench which is supplied.

6. To swivel the center fence or to move it in, the two cap screws (A) Fig. 24-D, should be loosened 1/8 of a turn and with a soft hammer or a block of hard wood, gently tap either or both corners of the fence at points (D) and (C) until the fence is in adjustment.

7. When you are certain the center fence is adjusted properly, tighten screws (A) Fig. 24-D.

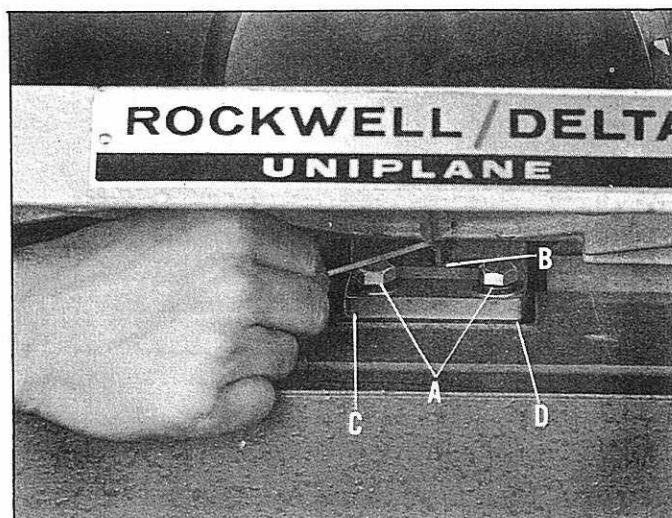


Fig. 24D



# MAINTENANCE AND REPAIRS

## GENERAL MAINTENANCE

Always disconnect machine from power source when performing maintenance or making major adjustments.

NOTE: On 3 phase installation remove V-Belt.

1. Frequently remove any accumulation of gum or pitch from the cutterhead, table, and fences. Scrape off the excess, using a piece of hard wood and remove the remainder with a cloth dampened with denatured alcohol.

2. After removing the gum and pitch accumulation, coat table and fences with a small amount of hard paste wax, and buff thoroughly. Hard wax also contributes to the safe operation of your Uniplane, since the work will not drag when pushed across the table or against the fence.

3. Periodically check the rollers and studs on which the cutterhead guard rides. They should be cleaned of any dust or dirt accumulation.

---

## REMOVING AND REPLACING BEARING AND SHAFT ASSEMBLY, AND CUTTERHEAD

To insure that the cutterhead runs true with minimum runout, the bearings are assembled to the shaft in a precise manner.

This is known as "pre-loading" the bearings, which requires special tools and can only be done at the factory.

If the bearings or the shaft require replacement, the complete bearing and shaft assembly must be returned to the factory.

To remove from the machine, proceed as follows:

1. Disconnect machine from the power source and remove the belt guard, cutterhead guard and cutters.

NOTE: On 3 phase installation remove V-Belt.

2. Remove the four screws that hold the table to the trunnions and remove the table.

3. Remove two screws (A) Fig. 25, and remove the center fence (B) by pulling it straight out.

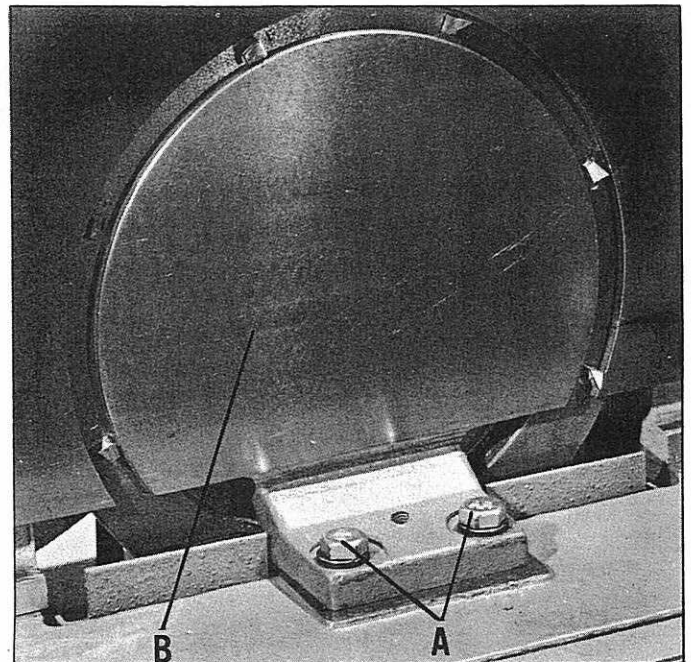


Fig. 25.

4. Remove the nut and washer (A) Fig. 26.

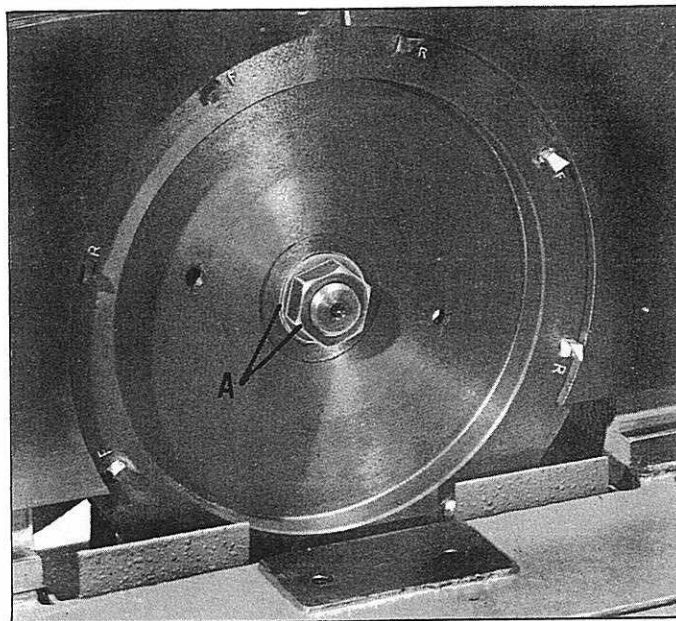


Fig. 26.

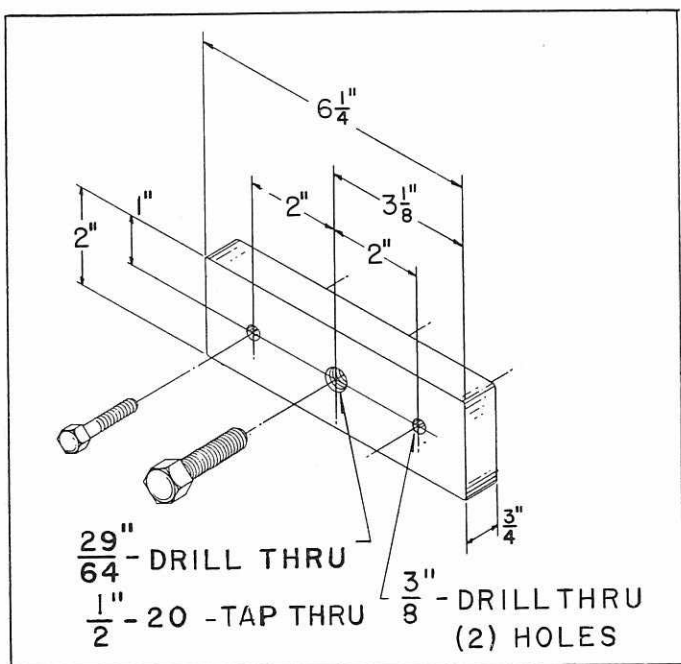


Fig. 27.

5. Construct a wheel puller out of steel similar to the one shown in Fig. 27.

6. Assemble the wheel puller (A) Fig. 28, to the cutterhead (B) by inserting two 5/16 - 18 x 1 1/4" Hex Cap Screws (C) through the wheel puller and into the two tapped holes provided in the cutterhead.

7. Insert a 1/2 - 20 x 1 1/2 Hex head cap screw (D), into the center hole in the wheel puller, as shown in Fig. 28, until it bears against the shaft. Turn screw (D) until the cutterhead is free.

8. Remove the belt and arbor pulley.

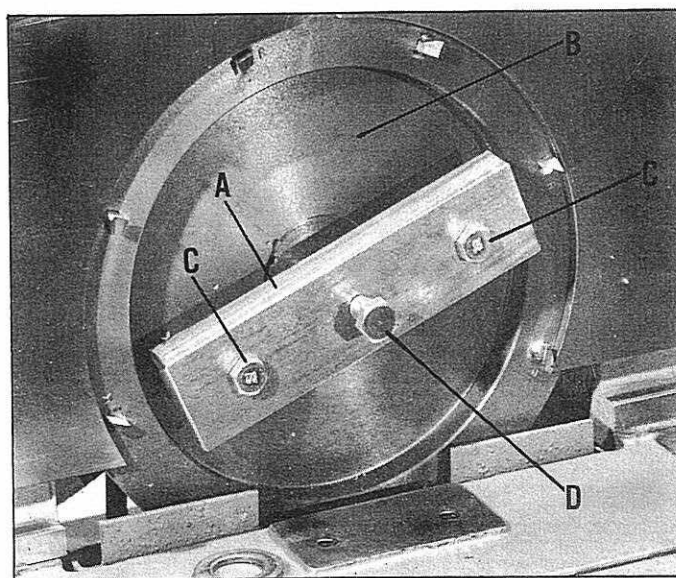


Fig. 28.

9. Remove the four screws (A) Fig. 29, and remove the retaining plate (B).

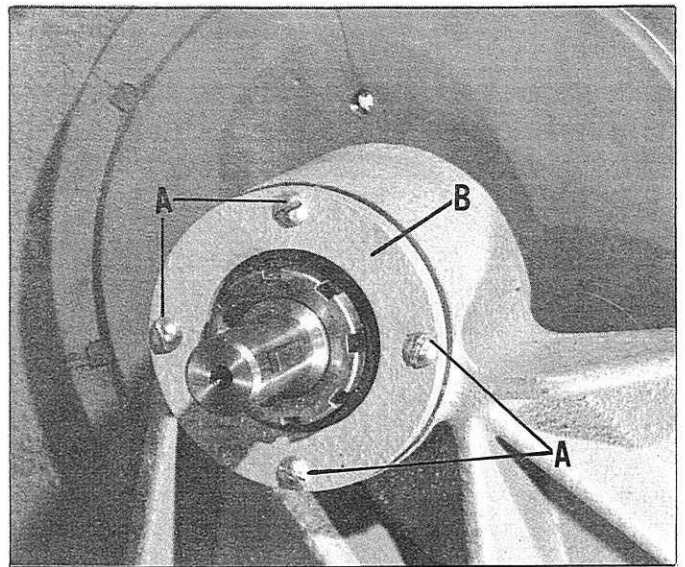


Fig. 29.

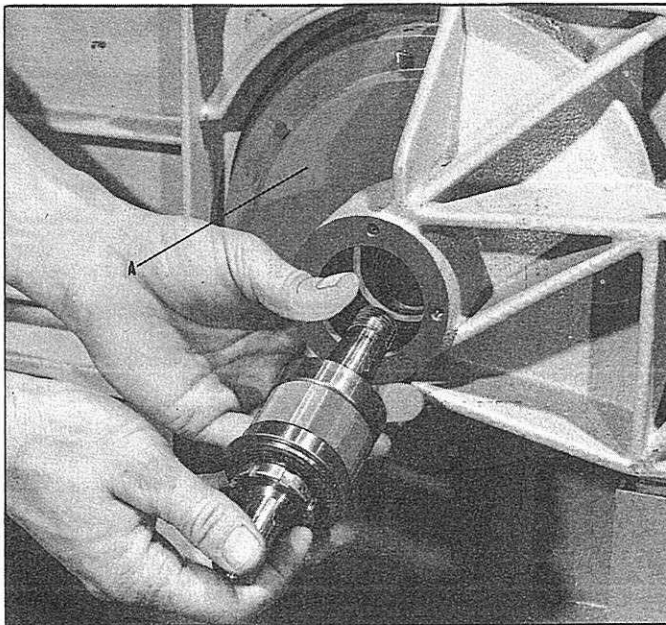


Fig. 30.

10. Remove the shaft and bearing assembly as shown in Fig. 30. It may be necessary when removing the shaft and bearing assembly to gently tap the shaft at the tapered end with a piece of wood.

11. The cutterhead (A) Fig. 30, may also be removed by sliding it down through the opening in the rear of the fences.

12. Reassemble in the reverse order.

NOTE: When replacing the table, the miter gage slot in the table should be parallel with the three fences. Loosen the four screws that hold the table to the trunnions and adjust the table until the miter gage slot is parallel with the three fences. Then tighten the four screws.

## ACCESSORIES

### CATALOG NO. 34-833 MITER GAGE

The Miter Gage is accurately constructed and equipped with individually adjustable index stops at  $90^{\circ}$  and  $45^{\circ}$  right and left. Adjustment to the index stop can be made by tightening or loosening the three adjusting screws. One of the adjusting screws (A) can be seen in Fig. 31.

To operate the miter gage, simply loosen the lock knob (B) Fig. 31, and to operate the body of the miter gage (C) to the desired angle. The miter gage body will stop at  $0^{\circ}$  and  $45^{\circ}$  both right and left. To rotate the miter gage body past these points simply pull out the stop (D) Fig. 31.

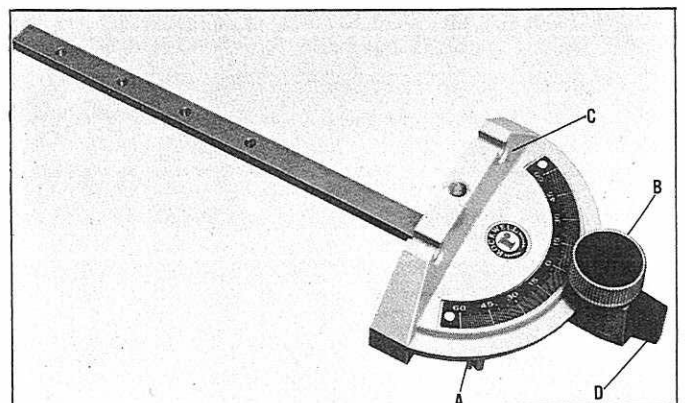


Fig. 31.

## CATALOG NO. 22-835 BELT AND PULLEY GUARD

The belt and pulley guard (A) is assembled to the rear of the cutterhead as shown in Fig. 32. It is fastened to the cabinet by four self tapping screws.

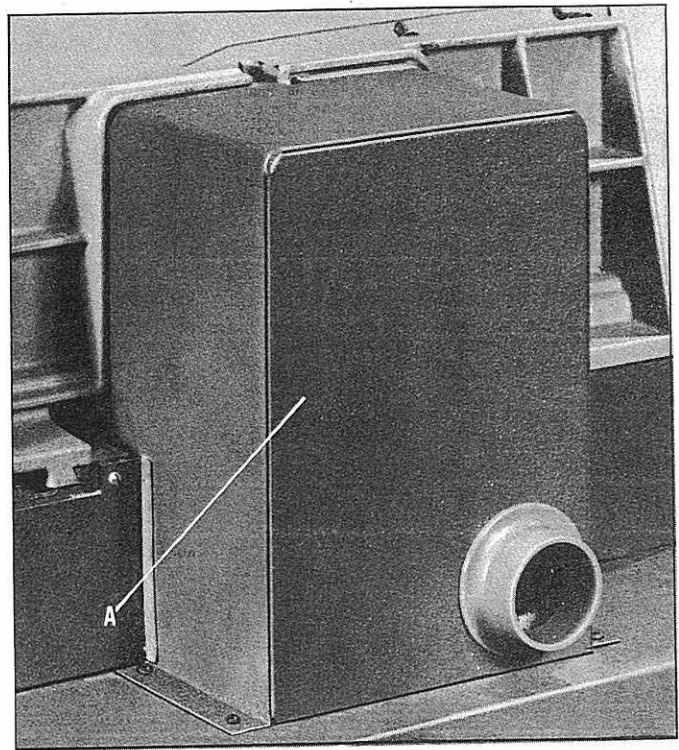


Fig. 32.

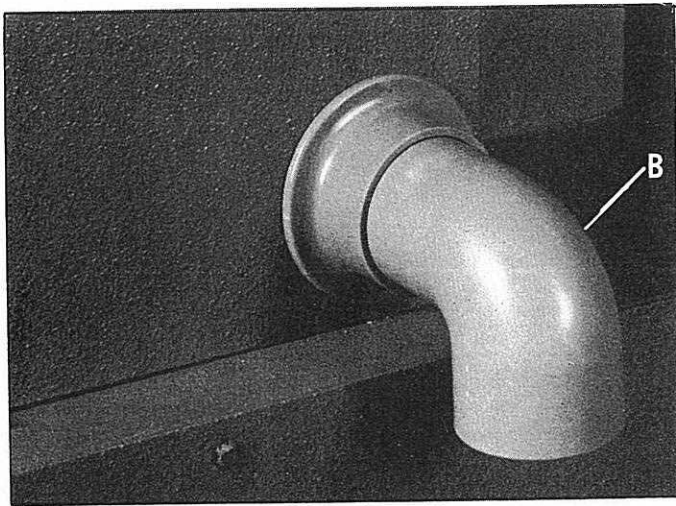


Fig. 33.

## CATALOG NO. 49-230 90° PLASTIC ELBOW

The 90° Plastic Elbow (B) Fig. 33, is attached to the rear of the belt and pulley guard and will deflect the chips downward into a suitable container.

## ROCKWELL VACUUM CLEANERS

All Rockwell Vacuum Cleaners having a 2½" diameter hose can be used with your Uniplane as shown in Fig. 34. The hose of the Vacuum Cleaner is attached to the outlet on the belt and pulley guard.

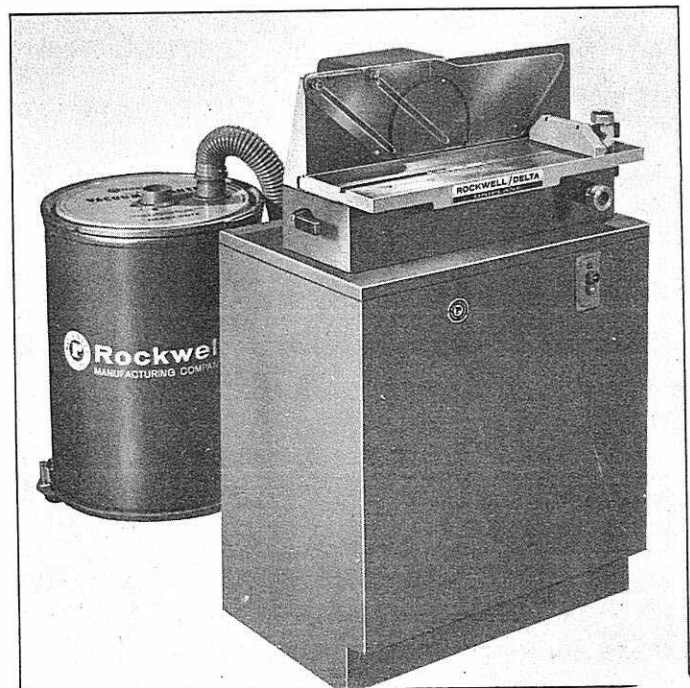


Fig. 34





**Rockwell**  
MANUFACTURING COMPANY

## AUTHORIZED DELTA PARTS DISTRIBUTORS

### CALIFORNIA

LOS ANGELES, 90007  
Rockwell Manufacturing Company  
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### MASSACHUSETTS

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Phone: 617 782-1700

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Phone: 313 358-1000

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Rockwell Manufacturing Company  
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Rudolf Bass, Incorporated  
175 Lafayette Street, Cor. Grand Street  
Phone: 212 CA 6-4000

BUFFALO, 14204  
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138-150 Chicago Street, Cor. So. Park Avenue  
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### OHIO

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Phone: 412 241-8400

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Phone: 214 631-1890

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Rockwell Manufacturing Company  
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Phone: 206 622-4576

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10700 West Burleigh Street  
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# OPERATION

## CORRECT OPERATING TECHNIQUE

Correct operating technique is very important when operating your Uniplane. The hands should be kept as far away from the cutting edge as possible. On short pieces a push stick should always be used. The guard should always remain on the machine and allowed to raise and lower as the workpiece is passed underneath it. Cutting results will vary between different species of wood depending on the degree of hardness, the pattern of the grain, etc. A light cut and slow steady feed is recommended for satisfactory results, under any conditions. NOTE: A number of the following photographs show the cutterhead guard raised for clarity.

1. Set infeed fence for desired depth of cut.
2. Turn on machine, allow cutterhead to come up to full speed.
3. Make a few trial cuts to get the "feel" of your Uniplane. Feeding the workpiece too fast will produce unsatisfactory results in most cases. The optimum feed rate to produce satisfactory results is determined by the species of wood being cut, the depth of cut, and the sharpness of the cutters.

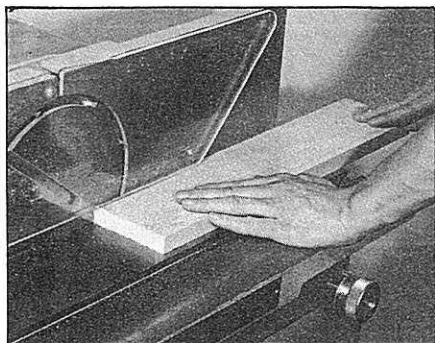


Fig. 35.

Hold workpiece firmly against infeed fence and start as shown in Fig. 35.

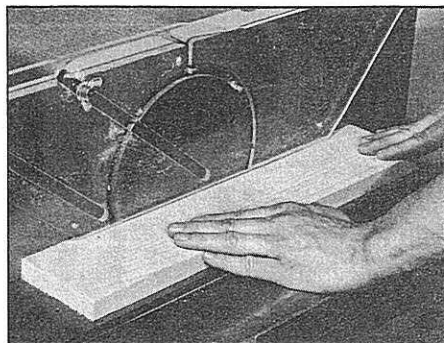


Fig. 36.

Proceed pushing workpiece without hesitating toward center and outfeed fences, as shown in Fig. 36, making sure the workpiece is firmly held against the fences.

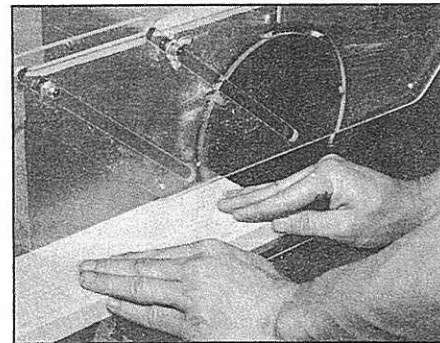


Fig. 37.

Continue to feed past the cutters coming up between center and outfeed fences, as shown in Fig. 37. The last phase of the cut will permit the finishing cutters to slightly "shave" the material.

4. When working small pieces, always use two push sticks, as shown in Fig. 38. Push sticks can easily be made out of scrap material.

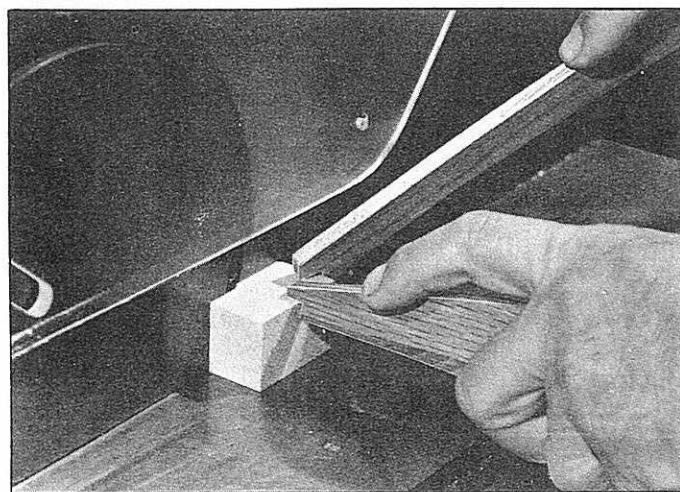


Fig. 38.

5. For beveling or chamfering, raise cutterhead guard first about 1", tilt and lock the table, then release guard.

6. If all four edges are to be chamfered, the ends are chamfered first using the miter gage, as shown in Fig. 39.

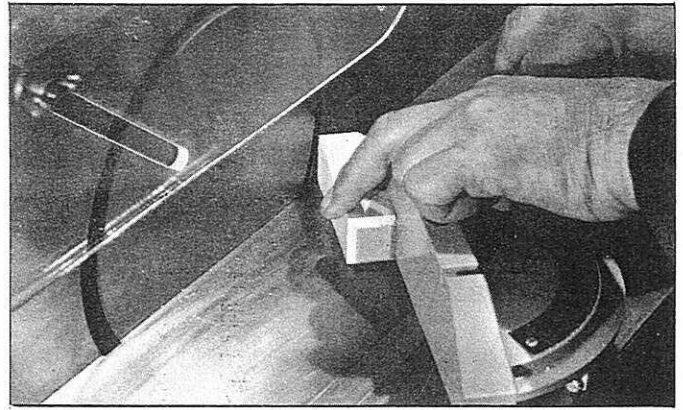


Fig. 39.

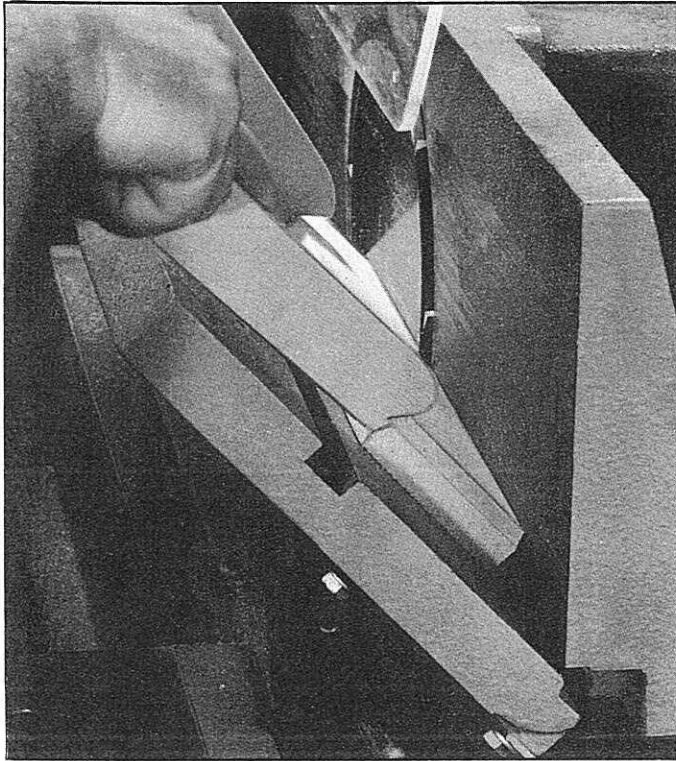


Fig. 40.

7. When chamfering sides, note how the tilted table forms a "V" with the fence, as shown in Fig. 40.

8. When chamfering the sides of narrow pieces, always use push sticks, as shown in Fig. 40.

9. End grain can be cut satisfactorily. The results will vary depending upon the species of wood. Take a light cut and feed the material slowly. Always use the miter gage for small material, as shown in Fig. 41.

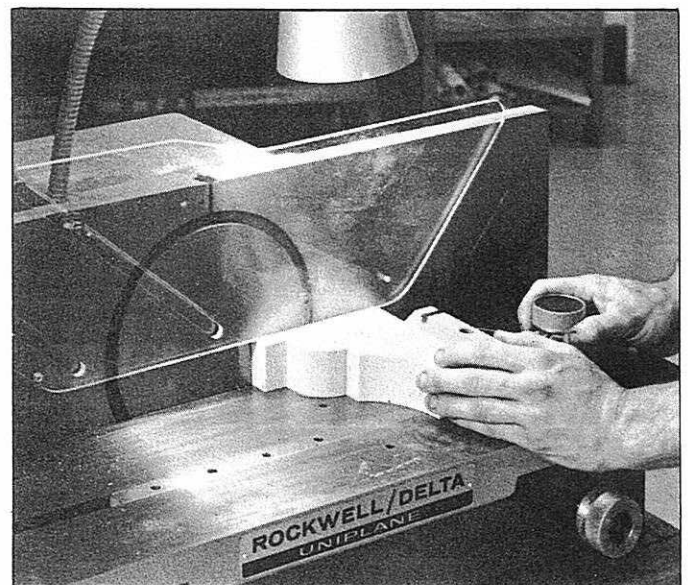


Fig. 41.

10. When surfacing thin material, always use a "backup board". These can be made readily out of 3/4" plywood, as shown in Fig. 42. Make several assorted widths and lengths depending upon your needs. Sandpaper glued to the flat side of the "backup board" will prevent it from slipping on the work piece.

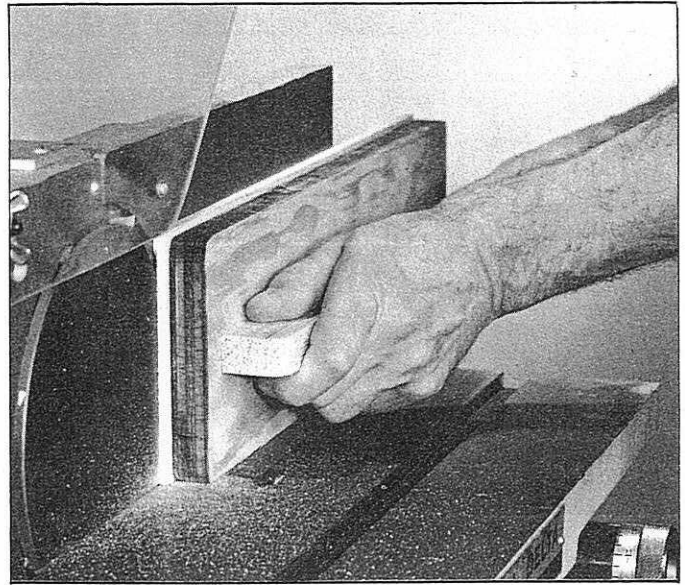


Fig. 42.

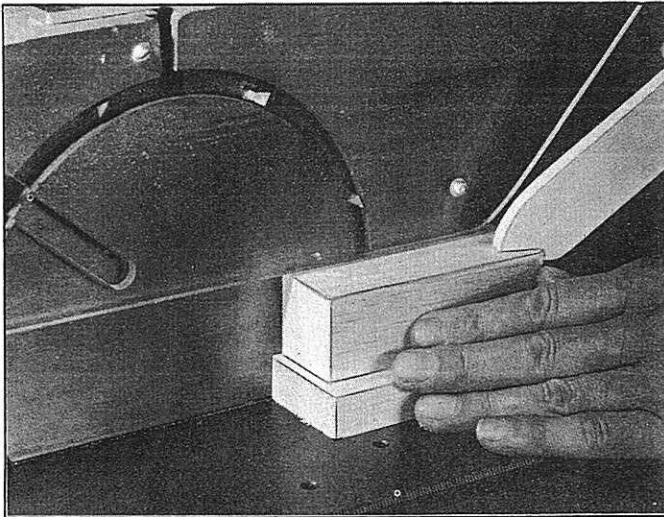


Fig. 43.

11. Certain materials will tend to "chip out" on the bottom edge when being cut. To minimize this situation, use a "backing block". If small pieces are being worked occasionally, the backing block need only be the same size as the workpiece or slightly larger, as shown in Fig. 43.

12. When doing repetitive work on small pieces or working very large pieces, the backing block may be larger in dimension and attached to the table with screws, as shown in Fig. 44.

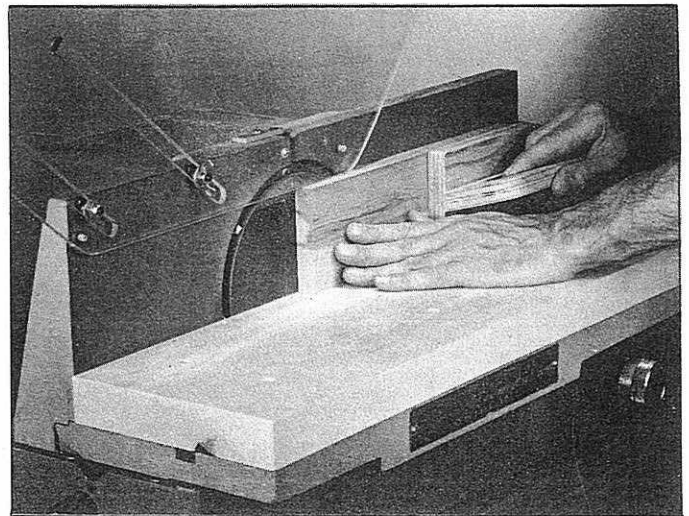
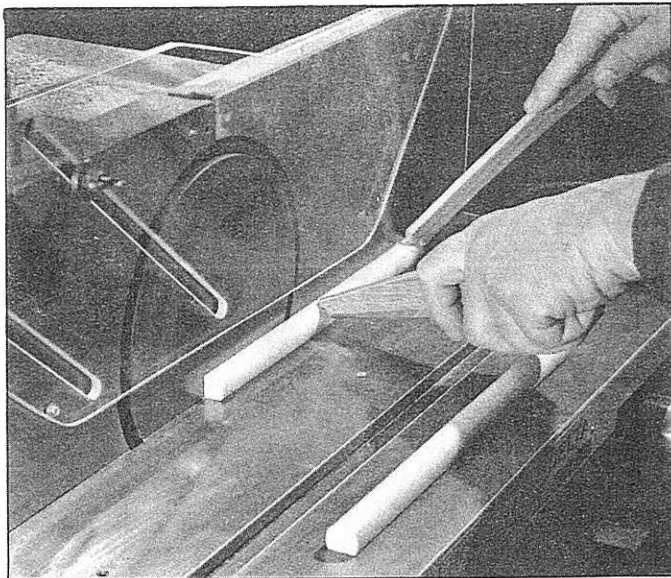


Fig. 44.

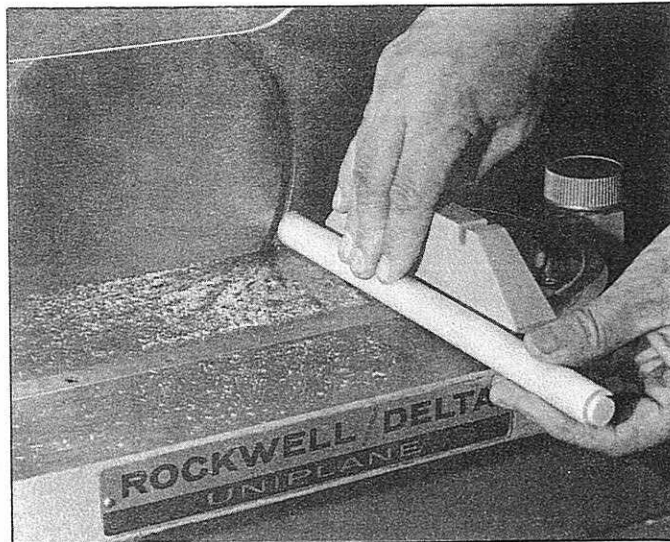
13. For working long or wide pieces, a large auxiliary table made of plywood may be attached to the table.



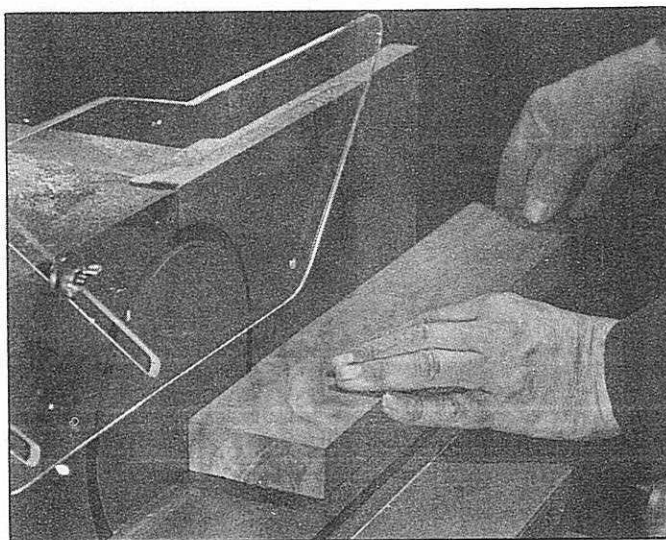
The following photographs illustrate just some of the many additional operations that can be performed on your Uniplane.



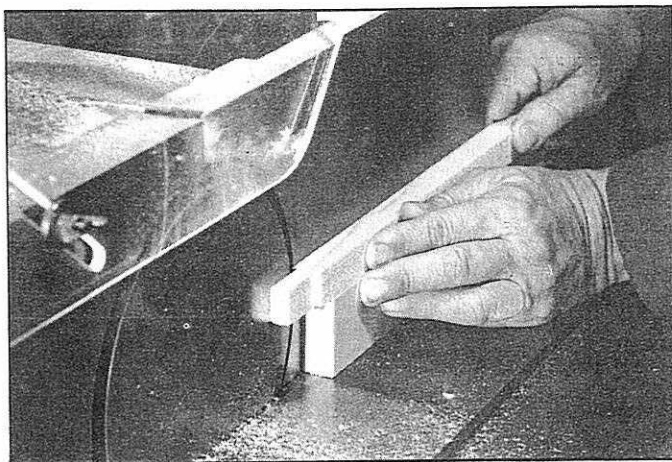
MAKING A FLAT ON ROUND STOCK



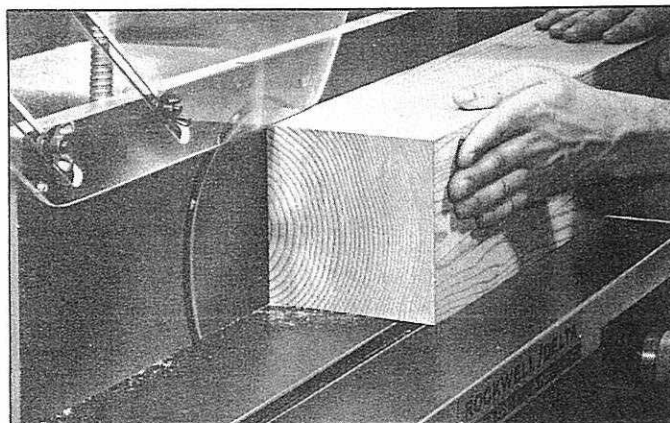
CUT TENNONS ON ROUND STOCK



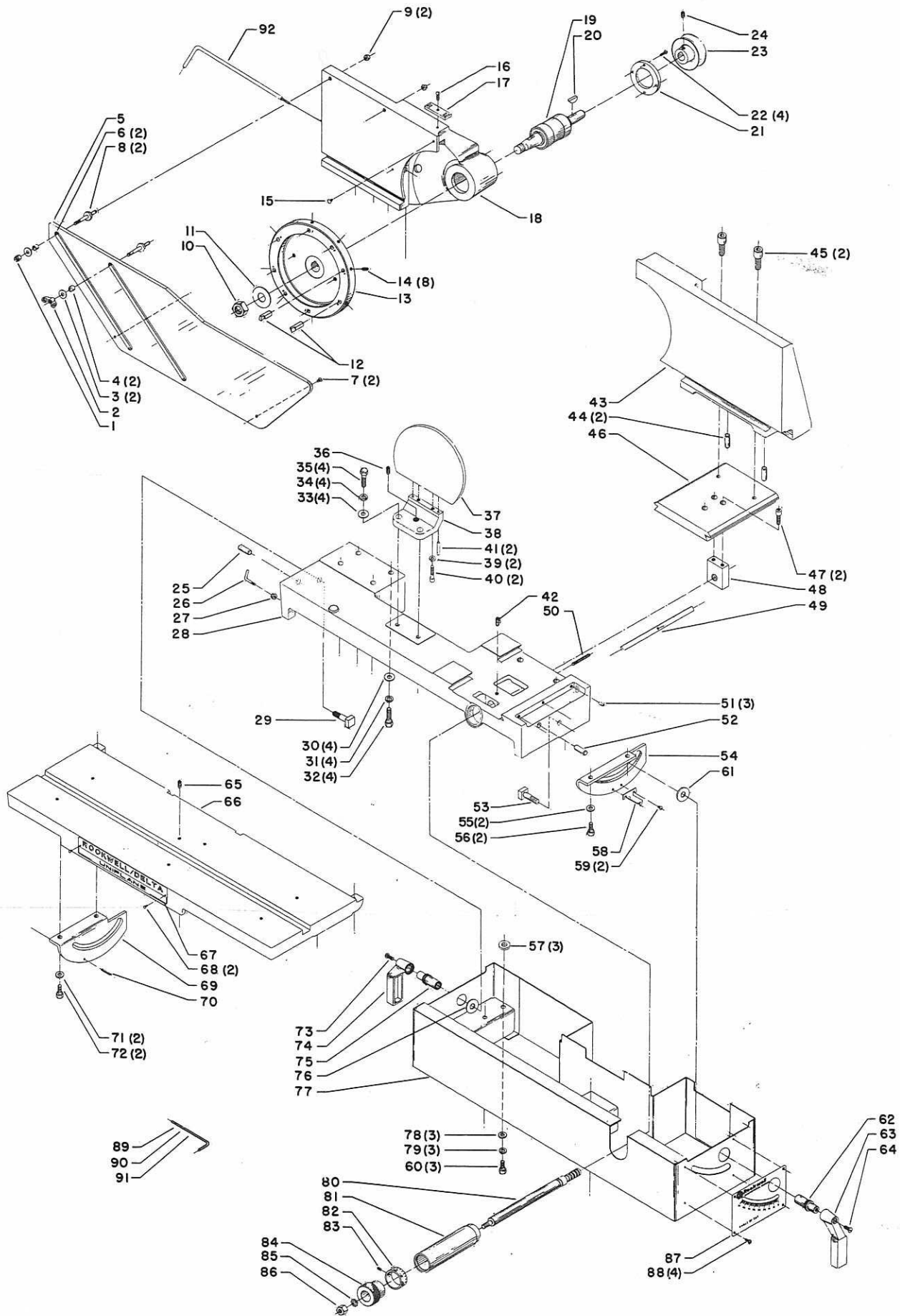
DRESS HARD OR SOFT WOOD



CUT TENNONS ON SMALL RECTANGULAR STOCK



SURFACE EXTRA LARGE MATERIAL

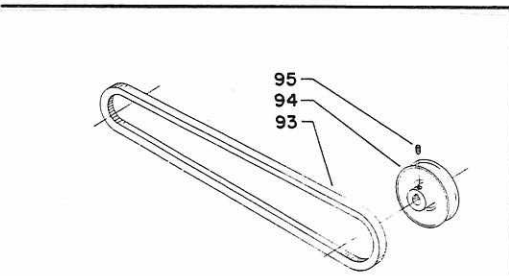
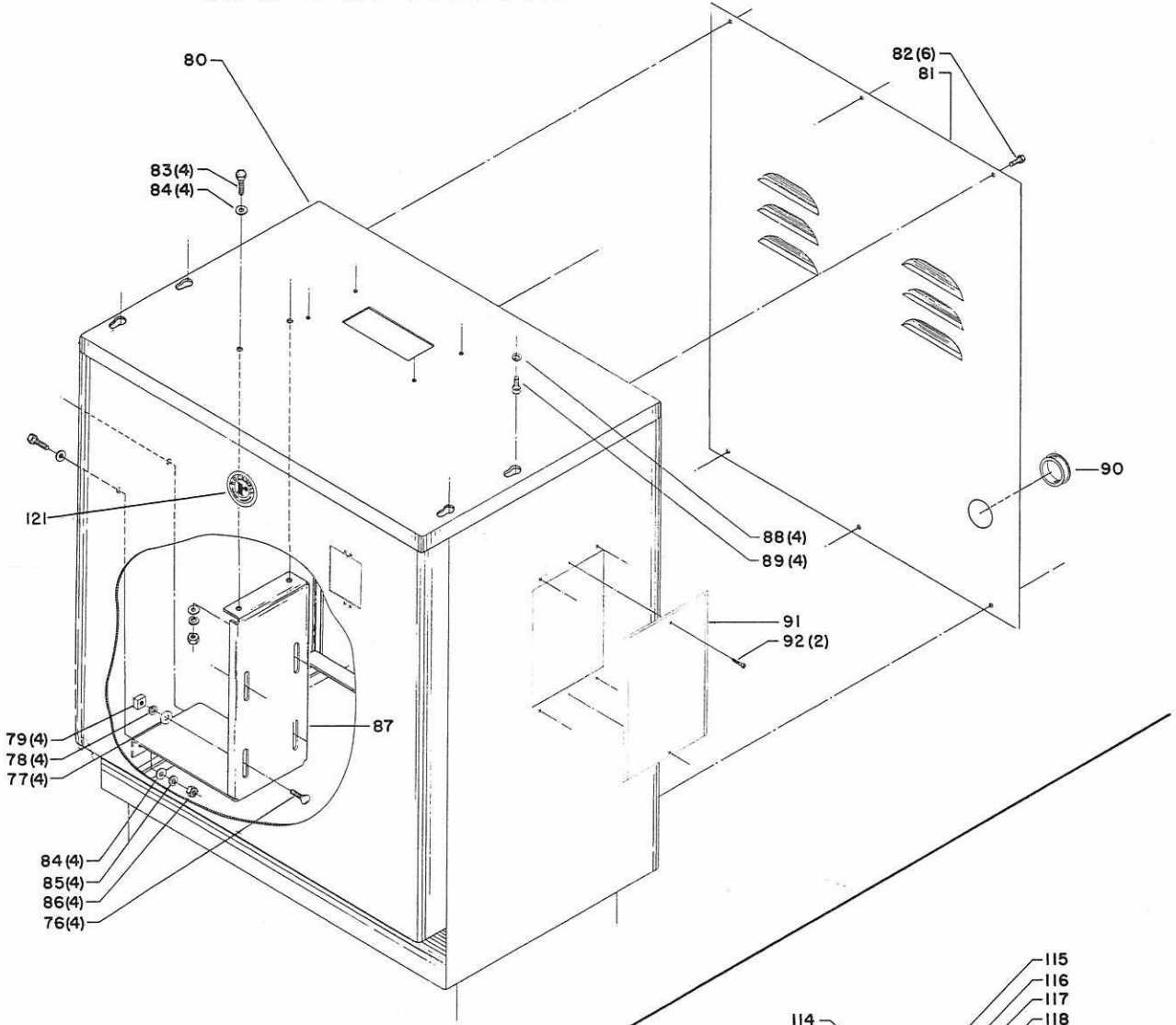




# Replacement Parts

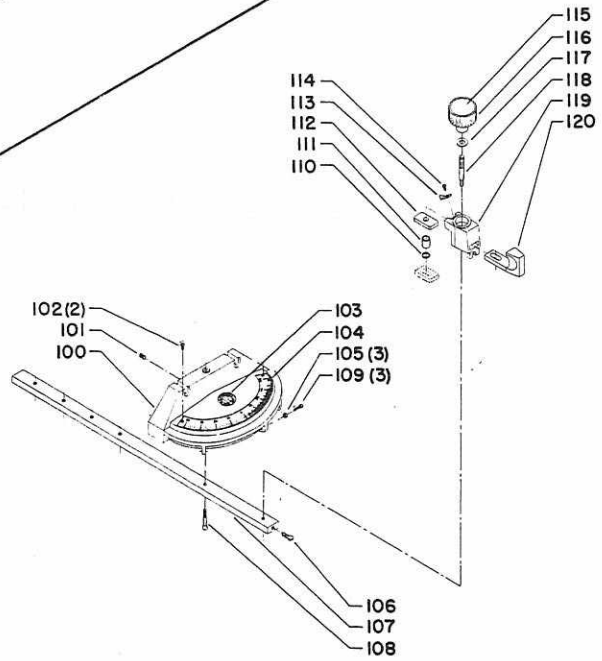
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	902-01-212-2409	1/4"-20 Stop Nut	47	SP-757	5/16-18 x 3/4" Soc. Hd. Scr.
2	902-04-010-1432	1/4"-20 Wing Nut	48	428-03-010-0001	Block
3	904-01-031-7712	17/64 x 13/16 x 1/16 Washer	49	428-03-052-0001	Gib
4	428-03-104-0002	Spacer	50	SP-109	1/4-20 x 1 1/2" Headless Set Scr.
5	428-03-354-0001	Cutter Guard Assembly, incl:	51	901-04-461-5297	1/4-28 x 3/8" Long-Lok Soc. Set Scr.
6	428-03-016-0001	Bumper			
7	SP-577	#10-32 x 3/16" Rd. Hd. Scr.	52	428-03-111-0001	Stud
8	428-03-111-0004	Screw Stud	53	428-03-111-0003	Scr. Stud - R, H.
9	SP-1034	1/4"-20 Hex. Nut	54	428-03-095-0001	Trunnion - R, H.
10	MJ-4520	3/4"-16 L, H. Hex. Nut	55	SP-1620	11/32 x 11/16 x 1/16" Washer
11	904-01-031-7722	13/16 x 1-7/8 x .048" Washer	56	SP-606	5/16-18 x 5/8" Hex. Hd. Scr.
12	Cat. #22-836	High Speed Stl. Cutters - Set of 8 (4 Roughing and 4 Finishing Cutters)	57	NSS-262	Rubber Washer
13	428-03-400-0002	Cutterhead, including:	58	428-03-075-0001	Pointer
14	SP-275	1/4-28 x 1/4" Soc. Set Scr.	59	SP-577	#10-32 x 3/16" Rd. Hd. Scr.
15	901-06-450-8221	#10 x 3/8" Drive Scr.	60	SP-606	5/16-18 x 5/8" Hex. Hd. Scr.
16	SP-559	#10-32 x 1/2" Rd. Hd. Scr.	61	SP-1607	1/2 x 1-1/4 x 5/64" Washer
17	428-03-050-0001	Precision Setting Gage	62	428-03-027-0002	Clamp R, H.
18	428-03-043-0001	Outfeed Fence	63	931-04-012-0492	Table Locking Handle
19	428-03-406-0001	Shaft Bearing Assembly	64	SP-509	1/4-20 x 1/2" Rd. Hd. Scr.
20	SP-2601	#9 Woodruff Key	65	SP-254	5/16-24 x 3/8" Soc. Set Scr.
21	428-03-020-0001	Retaining Plate	66	428-03-091-0001	Table
22	SP-559	#10-32 x 1/2" Rd. Hd. Scr.	67	960-02-012-1448	Nameplate
23	926-01-992-5502	Pulley Assembly, including:	68	SP-2250	#4 x 3/16" Drive Scr.
24	SP-206	5/16-18 x 5/16" Soc. Set Scr.	69	428-03-095-0002	Trunnion-L, H;
25	428-03-111-0001	Stud	70	SP-2733	5/32 x 7/8" Roll Pin
26	428-03-112-0002	Special Scr.	71	SP-1620	11/32 x 11/16 x 1/16" Washer
27	SP-1034	1/4"-20 Hex. Nut	72	SP-606	5/16-18 x 5/8" Hex. Hd. Scr.
28	428-03-005-0001	Base	73	SP-509	1/4-20 x 1/2" Rd. Hd. Scr.
29	428-03-111-0002	Screw Stud - L, H.	74	931-04-012-0492	Table Locking Handle
30	SP-1605	3/8 x 7/8 x 1/16" Washer	75	428-03-027-0001	Clamp-L, H.
31	SP-1704	3/8" Split Lockwasher	76	SP-1607	1/2 x 1-1/4 x 5/64" Washer
32	SP-648	3/8"-16 x 1 1/4" Hex. Hd. Scr.	77	428-03-331-0001	Cover
33	SP-1605	3/8 x 7/8 x 1/16" Washer	78	SP-1620	11/32 x 11/16 x 1/16" Washer
34	SP-1704	3/8" Split Lockwasher	79	SP-1703	5/16" Split Lock Washer
35	SP-648	3/8-16 x 1 1/4" Hex. Hd. Scr.	80	428-03-106-0002	Scr. Shaft
36	901-04-190-9458	1/2-20 x 1/2" Soc. Set Scr.	81	428-03-061-0001	Scr. Shaft Sleeve
37	1085865	Center Fence	82	428-03-337-0002	Micrometer Collar
38	1085864	Bracket	83	901-04-081-3631	#10-32 x 1/8" Headless Set Scr.
39	SP-1702	1/4" Split Lockwasher	84	428-03-037-0001	"Depth of Cut" Control Knob
40	SP-3345	1/4-20 x 1" Hex. Soc. Hd. Cap Scr.	85	SP-1756	3/8" External Tooth Lock Washer
41	SP-2706	3/16 x 1" Roll Pin	86	SP-5900	3/8"-16 Hex Nut
42	428-03-112-0001	Special Set Scr.	87	951-02-011-8289	Scale
43	428-03-043-0002	Infeed Fence	88	SP-3003	#6 x 3/8" Sheet Metal Scr.
44	905-03-012-0373	#6 x 1" Taper Pin	89	MH-3066	1/8" Hex. Long Arm Wrench
45	SP-793	1/2-13 x 1" Soc. Hd. Scr.	90	428-03-101-0003	5/32" Hex Wrench
46	428-03-055-0001	Slide	91	428-03-101-0001	1/4" Hex. Wrench
			92	428-03-301-0001	Wrench Assembly

CAT. N° 50-138 STEEL STAND



CAT. N° 410 V-BELT

- CAT. N° 41-062
- CAT. N° 41-063 MOTOR PULLEYS
- CAT. N° 41-064



CAT. N° 34-833 MITER GAGE

# Replacement Parts

## ACCESSORIES FOR THE UNIPLANE

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
	Cat. #50-138	Steel Stand consisting of:	98	Cat. #41-064	4" Motor Pulley (3/4" Bore) including:
76	SP-834	5/16-18 x 3/4" Carriage Bolt			
77	SP-1605	3/8 x 7/8 x 1/16" Washer	99	SP-206	5/16-18 x 5/16" Soc. Set Scr.
78	SP-1703	5/16" Split Lock Washer		Cat. #34-833	Miter Gage Complete, consisting of:
79	SP-1303	5/16"-18 Sq Nut			
80	436-01-331-0037	Stand	100	422-16-050-0001	Miter Gage Body
81	436-01-031-0022	Rear Cover	101	NCS-177	1/4-28 x 1/4" Headless Set Scr.
82	901-05-211-7372	#14 x 5/8" Self Tapping Scr.	102	901-05-151-7375	#6-32 x 1/4" Pan Hd. Thd. Forming Scr.
83	SP-649	5/16-18 x 1 Hex Hd. Scr.			
84	SP-1604	5/16 x 3/4 x 1/16" Washer	103	960-03-012-0419	Emblem
85	SP-1703	5/16" Split Lock Washer	104	960-03-012-0421	Scale
86	SP-1300	5/16"-18 Hex Nut	105	NCS-173	#8-32 Hex Nut
87	436-01-072-0005	Motor Plate	106	SP-721	#10-32 x 1/2" Fil Hd. Scr.
88	SP-1703	5/16" Split Lock washer	107	422-16-004-0002	Guide Bar
89	SP-606	5/16-18 x 5/8" Hex Hd. Scr.	108	NCS-168	Special Pivot Scr.
90	438-01-011-0020	Insulator	109	SP-723	#8-32 x 1/2" Fil Hd. Scr.
91	438-01-021-0130	Cover	110	904-01-031-7720	21/64 x 1/2 x .032" Washer
92	908460	#8-32 x 3/4"	111	422-16-017-0002	Bushing
*	960-02-012-0028	Cabinet Nameplate	112	422-16-027-0001	Clamp
93	Cat. #410	V-Belt	113	422-16-075-0001	Pointer
94	Cat. #41-062	4" Motor Pulley (1/2" Bore) including:	114	901-05-151-7375	#6-32 x 1/4" Pan Hd. Thd. Forming Scr.
95	SP-206	5/16-18 x 5/16" Soc. Set Scr.	115	422-16-063-0001	Insert
96	Cat. #41-063	4" Motor Pulley (5/8" Bore) including:	116	931-02-012-0489	Kurled Knob
97	SP-206	5/16-18 x 5/16" Soc. Set Scr.	117	SP-1620	11/32 x 11/16 x 1/16" Washer
			118	422-16-111-0002	Stud
			119	422-16-010-0002	Clamp Block
			120	422-16-088-0001	Stop
			121	960-02-012-0028	Nameplate

ADDITIONAL ACCESSORIES AVAILABLE FOR THE UNIPLANE, BUT NOT SHOWN HERE:

Cat. #865	Clamp Attachment for Miter Gage
Cat. #873	Extra Clamp Screw and Block Only
Cat. #22-835	Belt and Pulley Guard
Cat. #22-837	Carbide Cutters - Set of Eight - (Four Roughing and Four Finishing Cutters)
Cat. #49-230	90° Elbow (Chip Deflector - Attaches to Cat. #22-835 Belt and Pulley Guard)



## YOUR ROCKWELL WARRANTY

Rockwell is proud of the quality of the power tools which it sells. The component parts of our tools are inspected at various stages of production, and each finished tool is subjected to a final inspection before it is placed in its specially designed carton to await shipment. Because of our confidence in our engineered quality, Rockwell agrees to repair or replace any part or parts of Rockwell Power Tools or Rockwell Power Tool Accessories which examination proves to be defective in workmanship or material. In order to take advantage of this guarantee, the complete portable power tool or accessory, or in the case of machinery, the part must be returned prepaid to the appropriate factory, Rockwell service center, or authorized service station for examination. This guarantee, of course, does not include repair or replacement required because of misuse, abuse, or normal wear and tear. Repairs made by other than our factory, service center, or authorized service station, relieves Rockwell of further liability under this guarantee. THIS GUARANTEE IS MADE EXPRESSLY IN PLACE OF ALL OTHER GUARANTEES OR WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO QUALITY, MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE.