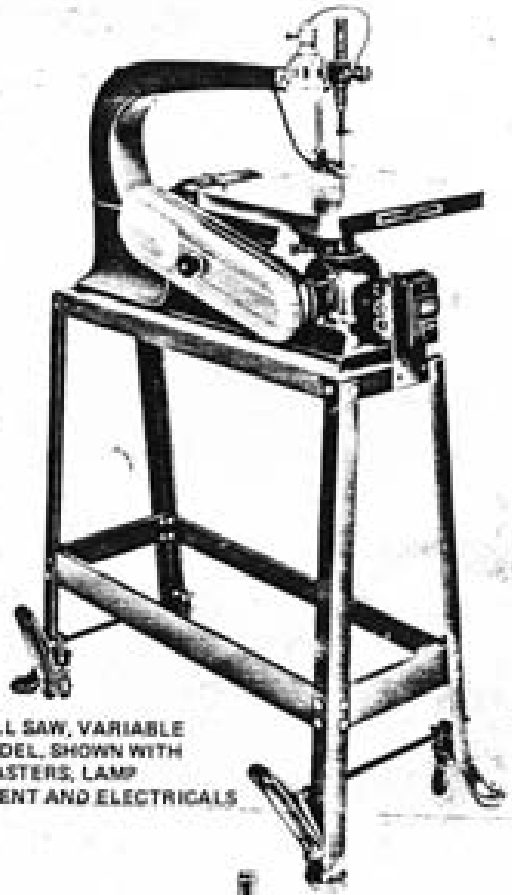
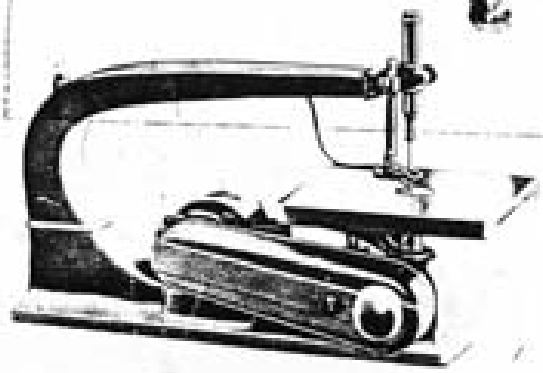
# Instruction manual

# 24" Scroll Saw



24" SCROLL SAW, VARIABLE SPEED MODEL, SHOWN WITH STAND, CASTERS, LAMP ATTACHMENT AND ELECTRICALS



24" SCROLL SAW, FOUR SPEED MODEL, SHOWN WITH GUARD AND ELECTRICALS

Rockwell

The Serial No./Model No. plate is attached to the base casting. Record the serial No. and Model No. as stamped on this plate and the date of purchase in your manual for future reference.

Serial No. _____

Model No. _____

Date of Purchase _____

Part No. 1086721

Dated 10-20-73

# SAFETY RULES FOR ALL TOOLS

As with all power tools there is a certain amount of hazard involved with the operator and his use of the tool. Using the tool with the respect and caution demanded as far as safety precautions are concerned will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or completely ignored, personal injury to the operator can develop.

There are also certain applications for which this tool was designed. Rockwell strongly recommends that this tool NOT be modified and/or used for any application other than for which it was designed. If you have any questions relative to its application DO NOT use the tool until you have written Rockwell and we have advised you.

ROCKWELL INTERNATIONAL
MANAGER OF PRODUCT SAFETY
POWER TOOL DIVISION
400 NORTH LEXINGTON AVENUE
PITTSBURGH, PENNSYLVANIA 15208

1. **KNOW YOUR POWER TOOL.** Read the owner's manual carefully. Learn the tools applications and limitations, as well as the specific potential hazards peculiar to it.

2. **KEEP GUARDS IN PLACE** and in working order.

3. **GROUND ALL TOOLS.** If tool is equipped with three-prong plug, it should be plugged into a three-hole electrical receptacle. If an adapter is used to accommodate a two-prong receptacle, the adapter lug must be attached to a known ground. Never remove the third prong.

4. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.

5. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.

6. **AVOID DANGEROUS ENVIRONMENT.** Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.

7. **KEEP CHILDREN AND VISITORS AWAY.** All children and visitors should be kept a safe distance from work area.

8. **MAKE WORKSHOP KIDPROOF** : with padlocks, master switches, or by removing starter keys.

9. **DON'T FORCE TOOL.** It will do the job better and be safer at the rate for which it was designed.

10. **USE RIGHT TOOL.** Don't force tool or attachment to do a job it was not designed for.

11. **WEAR PROPER APPAREL.** No loose clothing, gloves, neckties, or jewelry to get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.

12. **USE SAFETY GLASSES.** Also use face or dust mask if cutting operation is dusty.

13. **SECURE WORK.** Use clamps or a vise to hold work, when practical. It's safer than using your hand and frees both hands to operate tool.

14. **DON'T OVERREACH.** Keep your proper footing and balance at all times.

15. **MAINTAIN TOOLS IN TOP CONDITION.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

16. **DISCONNECT TOOLS** before servicing and when changing accessories such as blades, bits, cutters.

17. **USE RECOMMENDED ACCESSORIES.** Consult the owner's manual for recommended accessories. The use of improper accessories may cause hazards.

18. **AVOID ACCIDENTAL STARTING.** Make sure switch is in "OFF" position before plugging in cord.

19. **NEVER STAND ON TOOL.** Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.

20. **CHECK DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to ensure that it will operate properly and perform its intended function — check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.

21. **DIRECTION OF FEED.** Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.

22. **NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF.** Don't leave tool until it comes to a complete stop.

23. **DRUGS, ALCOHOL, MEDICATION.** Do not operate tool while under the influence of drugs, alcohol or any medication.

# ADDITIONAL SAFETY RULES FOR SCROLL SAWS

1. **CHECK** all adjustments on the scroll saw by rotating the motor by hand before turning power on.

2. **LOWER** the hold down on the scroll saw so that it presses lightly on the material being cut.

3. **STOP** the machine before removing scrap pieces from the table.

4. **ALWAYS** keep hands and fingers away from blade.

5. **CHECK** for proper blade size and type.

6. **DO NOT** attempt to saw stock that does not have a flat surface, unless a suitable support is used.

7. **TURN OFF** the machine if the material is to be backed out of an uncompleted cut.

8. **MAKE** "release" cuts before cutting long curves.

# UNPACKING AND CLEANING THE SCROLL SAW

If you purchased your scroll saw factory wired and ready to run (either the four speed model or variable speed model), the scroll saw with electricals is shipped assembled to the top shelf of the stand.

If you purchased the basic 24" scroll saw minus electricals along with the Catalog No. 50-718 steel stand, the machine is shipped in one carton and the stand in another carton.

In both cases, remove the scroll saw from the carton and remove the protective coating from the machined surfaces of the scroll saw. This coating may be removed with a soft cloth moistened with kerosene (do not use acetone, gasoline or lacquer thinner for this purpose). After cleaning, cover all unpainted surfaces with a good quality paste wax.

## ASSEMBLING STAND

If you purchased your machine factory wired and ready to run, either four speed model or variable speed model, proceed as follows:

1. Tilt the saw on its back and assemble the four legs (A), to the top shelf (B), using the eight hex head screws, lockwashers and nuts supplied, as shown in Fig. 2. NOTE: Only tighten the nuts finger tight at this time.

2. Assemble the four tie bars (C) Fig. 2, to the legs making sure the lip of the tie bars will be toward the top of the stand, using the sixteen hex head screws, lockwashers and nuts supplied. Only tighten the nuts finger tight at this time.

3. Tilt the stand and saw to the upright position and tighten the nuts and bolts in the following order. First the eight lower tie bar bolts and nuts (D); second, the eight upper tie bar bolts and nuts (E); third, the eight top shelf bolts and nuts (F), Fig. 2.

If you purchased the Catalog No. 50-718 Steel Stand, the procedure for assembling the stand is the same as factory wired and ready to run models with the exception that the top shelf should be positioned upside down on a table or floor and the legs (A) and tie bars (B) Fig. 2, fastened to the top shelf, as previously explained. After the stand is in the upright position and all the bolts and nuts tightened, assemble the saw to the stand.


Fig. 2

# ASSEMBLING RETRACTABLE CASTER ATTACHMENT

If you have purchased the Catalog No. 49-363 Retractable Caster Attachment fpr use on the steel stand, assemble it to the stand, as follows:

1. Before assembling caster set to stand, determine which side of the stand would be most convenient for the foot levers. The foot lever end of the shaft has a cam (A) Fig. 3, assembled in place at the factory.

2. The shaft should be fitted across the narrow side of the steel stand.

3. Assemble the cams (B) on both shafts (C) at hole (D) Fig. 3. Assemble one cam on each shaft. Cams on each shaft must match when assembled, as shown in Fig. 3.

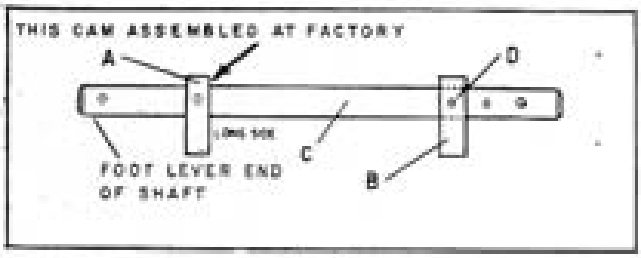



Fig. 3

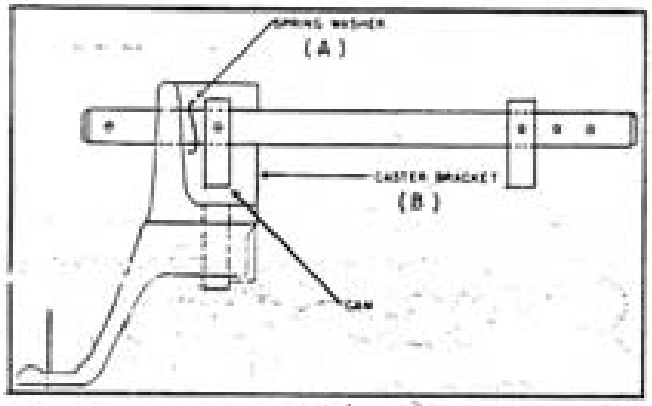



Fig. 4

4. Assemble spring washer (A) and caster mount bracket (B) on each shaft, as shown in Fig. 4.

5. Assemble foot lever (A) Fig. 5, to the end of the shaft using the pin supplied. Foot lever is assembled to each shaft in the same manner, as shown in Fig. 5.

6. Tilt the steel stand by placing a 2 X 4 under it so that the legs will be off the floor about 2 inches.

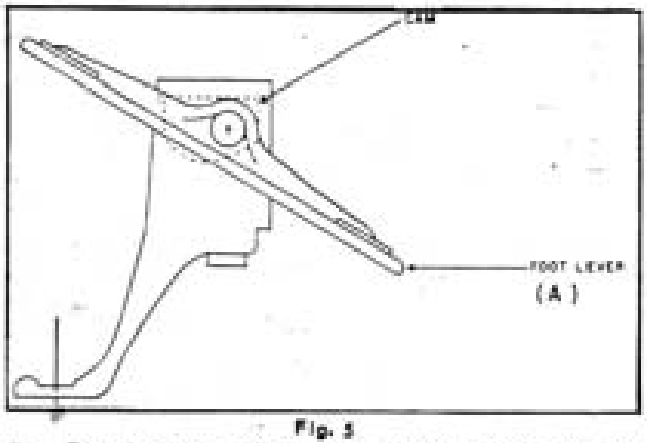



Fig. 5

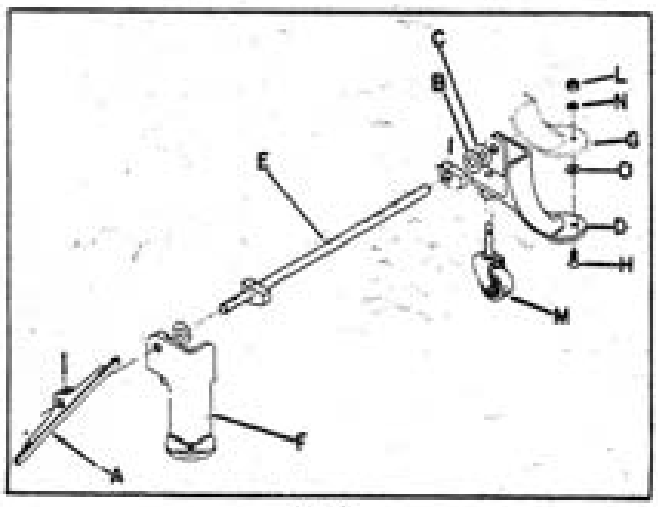



Fig. 6

7. Place spring washer (B), fiber washer (C) and caster mount bracket (D) on opposite end of shaft (E) Fig. 6. NOTE: The fiber washers (C) are to be used as shims. These washers can be placed on the shaft end opposite the foot lever and between the spring washer (B) and caster mount (D) Fig. 6.

8. Place caster mount bracket (D) and (F) with shaft (E) and foot lever (A) inside and under steel stand legs (G) Fig. 6.

9. Insert flat head machine screw (H) through hole in bracket (D) and through washer (O) steel stand leg (G) and fasten in place with washer (N) and nut (L) Fig. 6. Do not tighten nut securely at this time.

10. Fasten the other bracket (F) Fig. 6, to the steel stand in the same manner and tighten both nuts (L) securely.

11. This same method of application is to be followed in assembling shaft to opposite pair of steel legs. The caster (M) can then be assembled to the attachment.

# GROUNDING INFORMATION

## 115 VOLT, SINGLE PHASE

If the motor on your machine is wired for 115 Volt, single phase, the power cord is equipped with a plug that has two flat, parallel current-carrying prongs and one longer, round or "U"-shaped, ground prong which requires a mating 3-conductor grounded type receptacle as shown in Fig. 7.

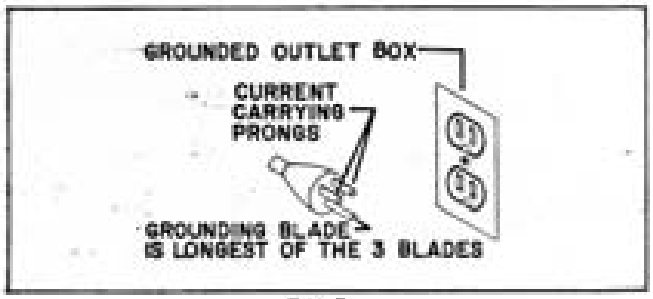



Fig. 7

An adapter, shown in Fig. 8, is available for connecting 3-prong grounding type plugs to 2-prong receptacles. THIS ADAPTER IS NOT APPLICABLE IN CANADA. The green-colored rigid ear, lug, etc., extending from the adapter is the grounding means and must be connected to a permanent ground such as to properly grounded outlet box, as shown in Fig. 8.

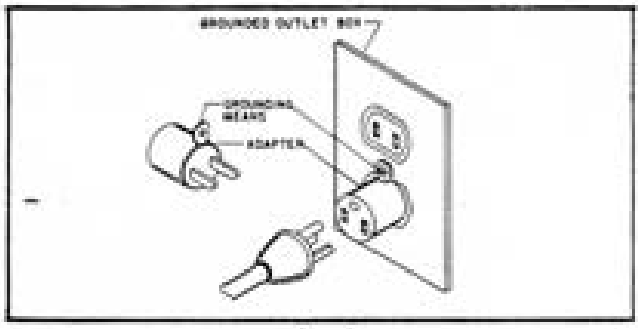



Fig. 8

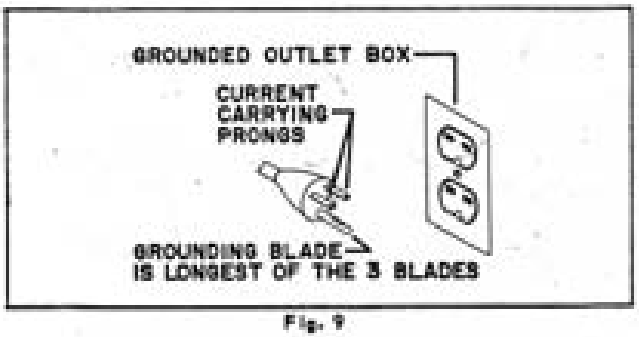



Fig. 9

## 230 VOLT, SINGLE PHASE

If the motor on your machine is wired for 230 Volt, single phase the power cord is equipped with a plug that has two flat, current-carrying prongs in tandem, and one round or "U"-shaped longer ground prong. This is used only with the proper mating 3-conductor grounding type receptacle as shown in Fig. 8.

IN ALL CASES, MAKE SURE THE RECEPTACLE IN QUESTION IS PROPERLY GROUNDED.

## 200 VOLT, 230 VOLT AND 460 VOLT THREE PHASE

If the motor on your machine is wired for 200V, 230V or 460V three phase, the necessary wiring from the starter to the power source should be completed by a competent electrician.

# LUBRICATION

FILL THE CRANKCASE BEFORE OPERATING – Unscrew oil plug (A) Fig. 10, and fill crankcase with light #10 oil. The capacity of the crankcase is approximately 1¼ pints. When filled, the oil should be within ¼" of the top of the oil filler hole. Excess oil can be drained by removing oil plug located directly underneath crankcase. Replace plug (A) after filling.

The upper plunger bearing is self lubricating. The plunger is chrome plated and requires no attention for the life of the machine.

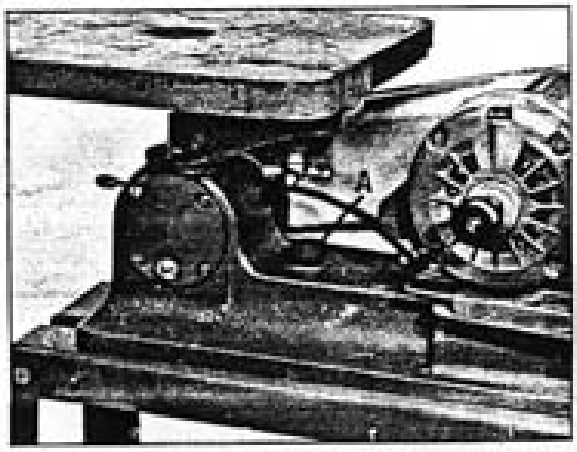



Fig. 10

## INSTALLING STANDARD BLADES

Always use widest blade possible. Use narrow blades for small abrupt curves and for fine delicate work only. To install blades, proceed as follows:

1. Disconnect machine from power source.

2. Remove table insert.

3. Loosen thumb screw (A) Fig. 11.

4. Insert blade about one-half inch between the two flat jaws (B), centering it in the jaws and holding it vertical. Then tighten thumb screw (A) Fig. 11.

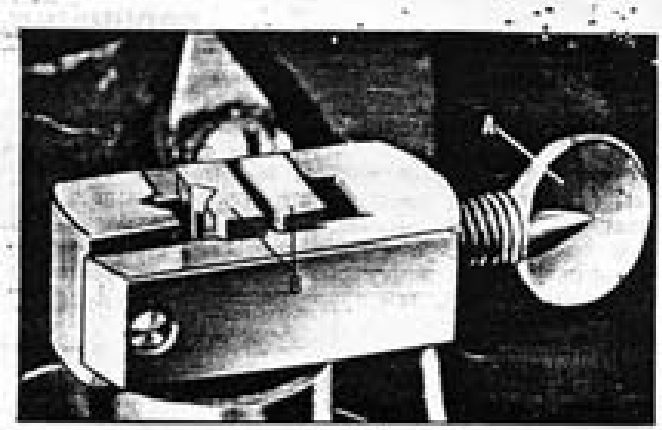


Fig. 11

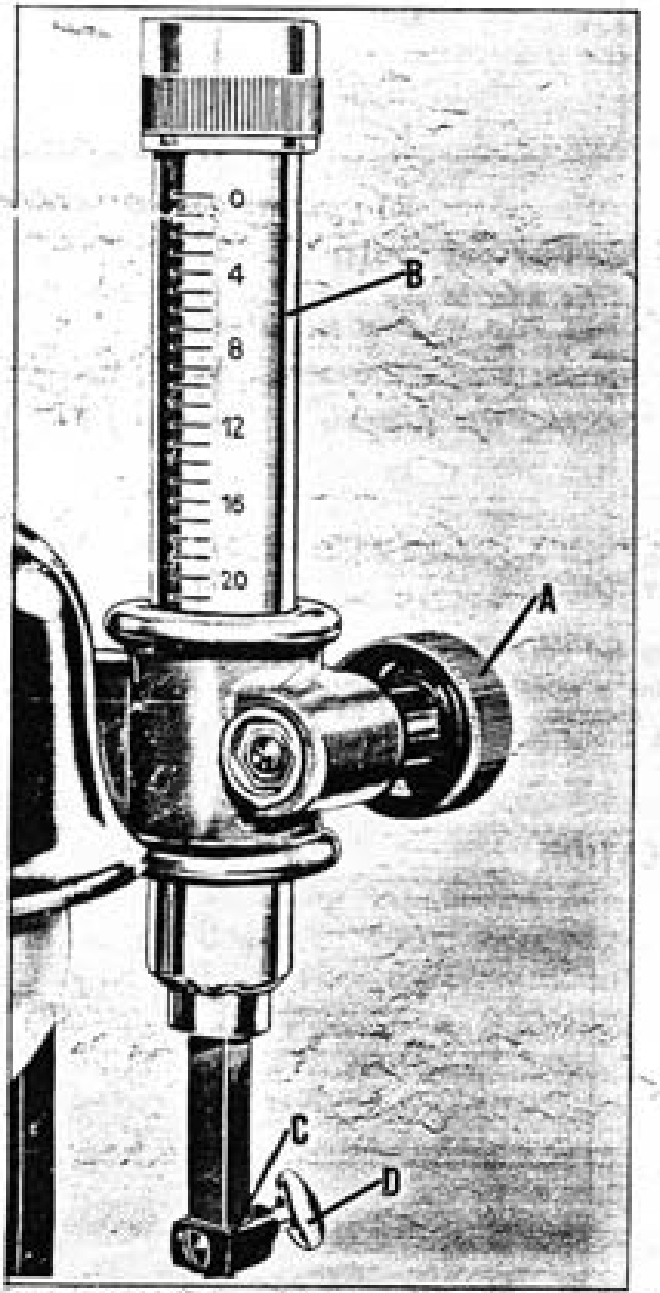



Fig. 12

5. Rotate the drive shaft pulley until the lower plunger comes up to its maximum upward travel.

6. Loosen knurled knob (A) Fig. 12, and slide graduated tube down until blade enters 1/2 inch between jaws of upper chuck (C).

7. Tighten thumb screw (D) Fig. 12, of upper chuck, to hold blade in place.

8. Raise graduated tube (B) Fig. 12, until blade has correct tension and retighten knurled knob (A). NOTE: Operator can determine, from experience, the proper tension for various blades as they are used for various work, and can record these tensions on the tube for future work using the same blades and materials.

## CHANGING LOWER CHUCK POSITION

The normal position of the lower chuck (A) Fig. 13, when cutting from the front of the machine, is with the thumb screw (B) facing to the right. To turn the chuck 90 degrees, loosen screw (C) and turn chuck so thumb screw (B) will face the front and retighten screw (C) Fig. 13. To turn the chuck 180 degrees, remove screw (C), turn chuck so that thumb screw will face the left side, exposing a hole to receive screw (C). When blade is sideways, the table should be turned 90 degrees also, to allow for proper tilting.

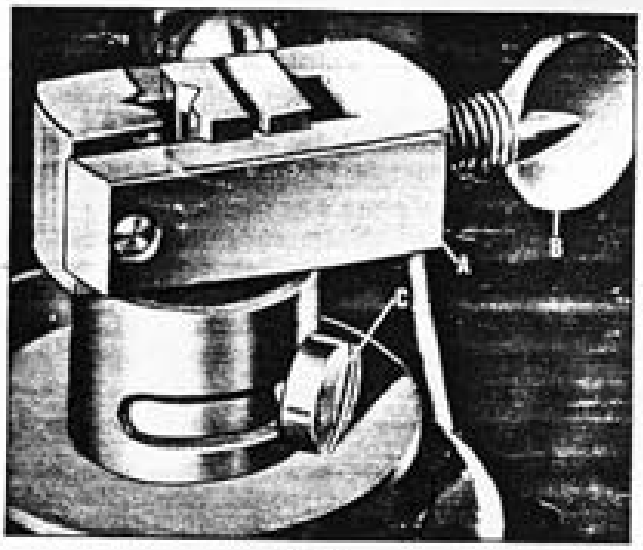



Fig. 13

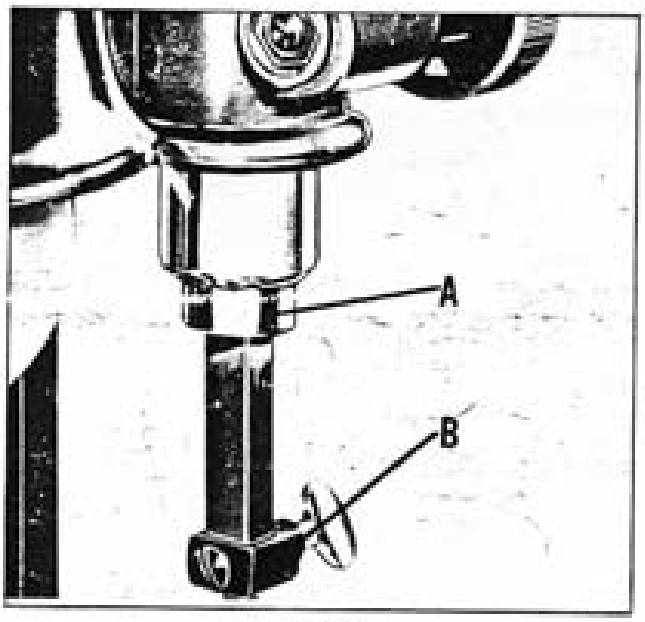



Fig. 14

## CHANGING UPPER CHUCK POSITION

To change cutting position of blade from front to side, or side to front, push up retainer seal (A) Fig. 14, and turn chuck (B) 90 degrees to the right or left and it will automatically lock itself in place. No further adjustment is necessary.

## BLADE GUIDE POST

When the work is fed from the side of the table, the hexagon guide post (A) Fig. 15, is moved from hexagon hole on left side of head to the hexagon hole (B) on the right side. This will automatically bring the blade guide to the proper position for side cutting. To move the blade guide, proceed as follows:

1. Remove thumb screw (C) Fig. 15, and remove blade guide assembly (D) from guide post (A).

2. Remove thumb screw (E) Fig. 15, and transfer guide post (A) from left side to hole (B) on right side of head.

3. Insert thumb screw (E) Fig. 15, in front tapped hole (F) to hold guide post in place. Only thumb screw (E) is transferred as lock pin is not required in front hole.

4. Replace blade guide assembly (D) to guide post (A), positioning guide assembly to allow work to be fed from the side and tighten thumb screw (C) Fig. 15, to hold blade guide assembly to guide post.

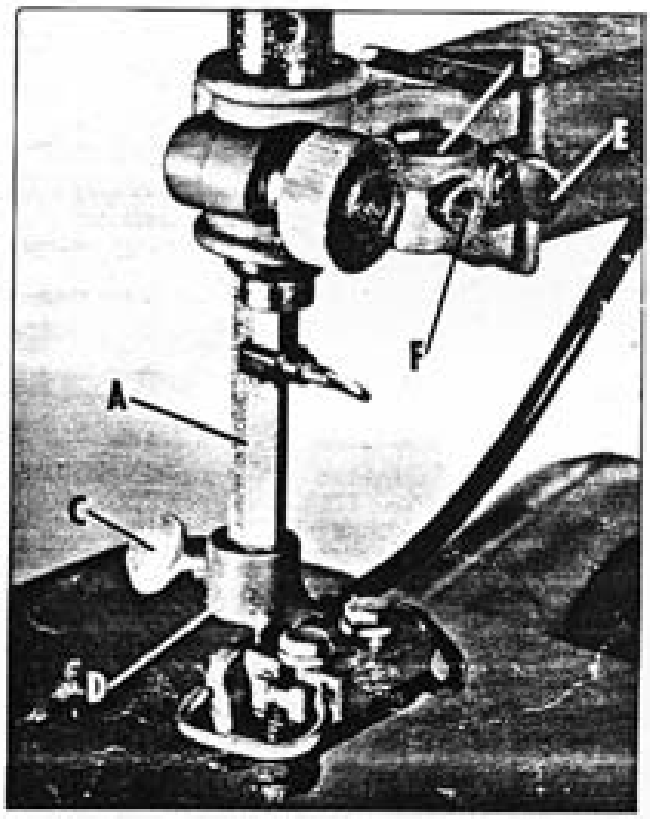



Fig. 15

## BLADE GUIDE ASSEMBLY

The blade guide (A) Fig. 16, is universal and can be adjusted to suit any width or thickness of blade within the capacity of the machine. The blade guide (A) has six different width slots and can be rotated to accommodate various blade thicknesses by loosening screw (B).

The blade is backed by a heat treated roller (C) Fig. 16, that prevents wear on the blade guide, avoids work hardening of the back of the blade, which may contribute to blade breakage.

A blade guard is provided to prevent accidental injury to the fingers. (For clarity the blade guard is not shown in Fig. 16.)

The blade guide assembly is also provided with a hold-down spring (E) Fig. 16, which can be tilted to follow the angle of the work when the table is tilted.

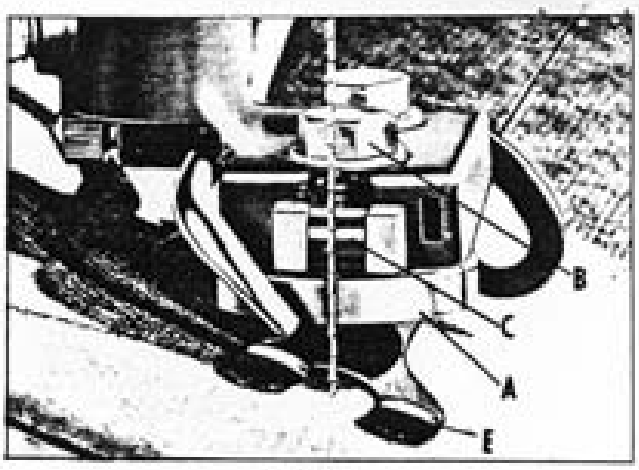



Fig. 16

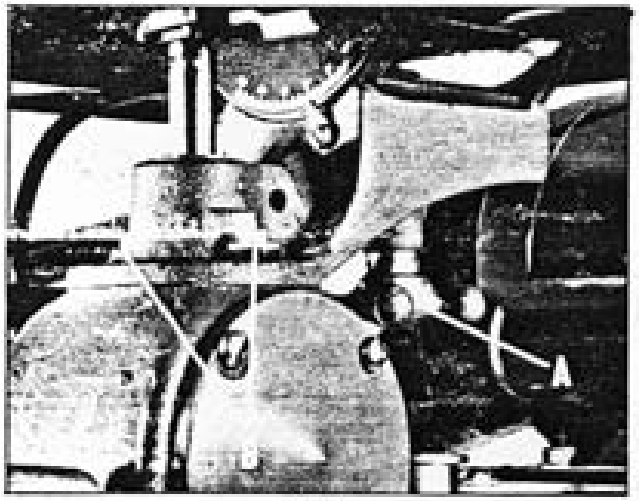



Fig. 17

## TABLE ADJUSTMENTS

To tilt the table loose knob (A) Fig. 17, tilt table to desired degree and retighten knob (A). IMPORTANT: When the table is to be tilted 45 degrees to the right, the position of the lower chuck must be reversed to move the thumb screw to the left hand side so that the table will not strike the thumb screw.

To rotate the table, loosen the two screws (B) Fig. 17, and rotate table 90 degrees. When the table is rotated the upper and lower blade chuck and guide will have to be turned 90 degrees.

The table top should be adjusted so that it is 90 degrees to the saw blade, by placing a small square on the table with one end of the square against the blade. If an adjustment is necessary, tilt the table until table is square with blade and tighten table tilting knob (A) Fig. 17. If necessary, adjust pointer to 0 degrees on scale.

## AIR BLOWER

The air blower (A) Fig. 18, keeps the cutting line free of nuisance dust and operates off the crankshaft. If blower does not function properly, proceed as follows:

1. Examine rubber tubing and see that it is not kinked, chocked or caught under base.

2. Examine nozzle (A) Fig. 18, on the guide and see that it is clear.

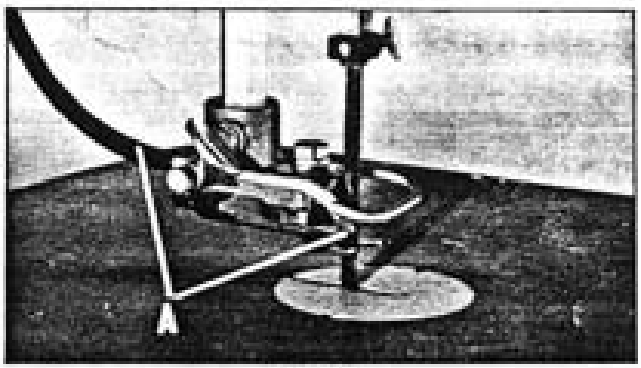



Fig. 18

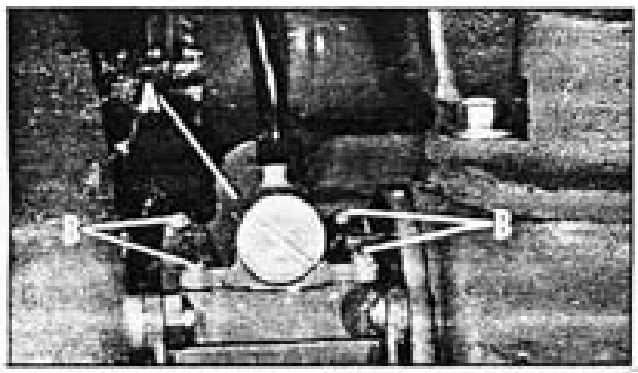



Fig. 19

3. If blower still does not operate properly, remove pump housing cover (A) Fig. 19, by removing four screws (B).

4. Remove blower piston, examine it, if not in good condition, replace with a new one.

5. No trouble should be encountered with the valves.

# OPERATION

The following directions will give the inexperienced operator a start on the usual scroll saw operations. Use scrap material for practice, to get the feel of the machine before attempting regular work.

Place the table insert with its slot back of the blade, so that the solid part of the insert is always in front, where it is needed to support the work. The center of the insert coincides with the line of the blade in all positions.

Turn the machine by hand, to make sure that all parts have clearance, before starting the motor. Always bring the blade guide down as far as the thickness of the work will permit, for maximum blade support.

## CUTTING WITH SCROLL SAW BLADES

Blades are available in various widths and tooth spacings, according to the purpose for which they are designed, see chart on page 12. Wide blades are for straight or slightly curved cuts; the narrow ones are for sharp curves. Minimum radius of the curve depends upon the amount of tooth set in relation to thickness and width of the blade, as the back of the blade must run to one side of the saw kerf. Do not try to force the blade around a curve sharper than it is intended to cut smoothly; rather cut a series of short segments and finish to the correct curve by sanding or filing.

Tooth spacing is important in relation to the kind of material and thickness to be cut. Several teeth should be in the cut at all times. Coarse blades are for use on relatively thick pieces of wood and other soft materials. Blades with closely spaced teeth should be used when cutting thin metal sheets or tubes.

When cutting very thin materials, there is a tendency for the saw teeth to strike on the edge of the work because only one tooth may be in the cut at a time. This results in chatter and frequent blade breakage. Feeding the work slowly and carefully improves the operation, but it is best to sandwich the thin sheet between two pieces of thicker waste material, thus presenting a more substantial edge to the blade. This method gives a smoother cut and less burr on the thin sheet; also longer blade life.

## CUTTING WITH SABER BLADES

Saber blades are clamped in the V-jaws, (A) Fig. 20, of the lower chuck, rather than in the flat jaws. The normal position of the lower chuck is therefore correct for cutting from the side of the machine. When cutting from the front, turn the chuck so that the thumb screw is to the front.

The blade guide must be used to support the upper end of the saber blade. Adjustments for correct position of the blade guide are the same as for scroll saw blades.

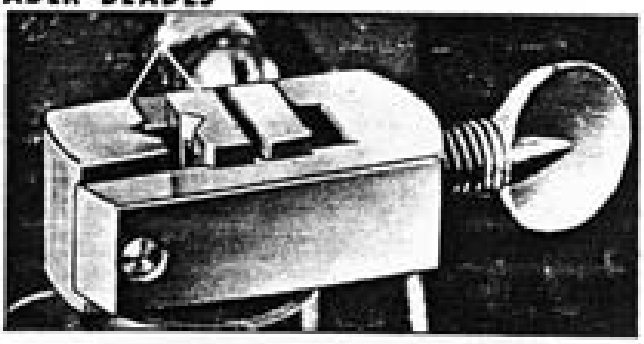


Fig. 20

Available as an accessory for your saw is the Catalog No. 40-204 Lower Saber Saw Blade Guide (A) Fig. 21, which supports the saber blade directly below the table. This accessory enables you to do perfect straight line saber cutting because the blade is supported below the table as well as above. The 40-204 consist of two lower guides with post, nut and thumb screw. Blade slots are .030" and .040".

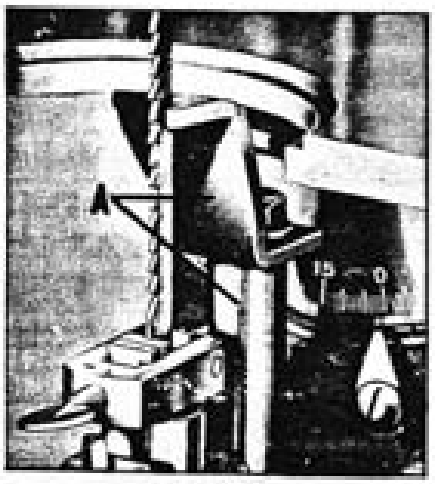


Fig. 21

Since the upper chuck is not used with saber blades, the upper plunger remains at the top of its stroke, out of the way. The blade guide should, however, be set no higher than about 1/4 inch below the upper end of the blade at the lower end of the stroke.

Saber blades are necessarily wider and heavier than the fine jeweler's blades. Because of their more rapid cutting action they should be used for the majority of scroll saw operations. They offer a distinct advantage in the case of shifting from one opening to another in pierced work and in connection with odd-shaped pieces which cannot be run under the upper plunger when using scroll saw blades.

## CUTTING CIRCLES

Circles may be cut with the scroll saw by means of a circle jig. Clamp a plywood sheet on the table, as an auxiliary top. Use a pin through the plywood as the center of the circle. The pin should be on a line drawn at right angles to the flat of the blade even with the teeth, and its distance from the blade should be equal to the radius of the desired circle. Drill a hole in the work piece to fit the pin, and rotate the piece on the pin while cutting the circle.

## RIPPING

While intended primarily for free-hand cutting of curved designs, the scroll saw can be used within reasonable limits for ripping, as with a circular saw. An effective rip fence may be made by clamping a straight edge on the table, parallel to the saw blade. Material can be ripped straight by feeding it along the fence. This is a useful procedure in preparing stock, such as plywood or plastic sheets, for various projects, and may be applied where portions of the design call for straight cuts. The fence is also a handy guide when set at right angles to the blade for cutting thin tubes square.

## SANDING

The Catalog No. 40-711 Accessory Sanding attachment Fig. 22, has a 1/4" shank so that it may be clamped between the V-jaws in the lower chuck. It is useful for finishing the edges of work which has been cut on the scroll saw or band saw. The combination of a curved and a flat face, with fairly sharp edges, make it possible to do accurate sanding of various patterns, saving tedious hand work.

Medium and fine grained sanding sleeves are available to fit this attachment. The knurled knob (A) controls the expanding body, making the sleeves instantly interchangeable and holding them securely when tightened.

Slow speed should be used for sanding operations. The standard table insert should be replaced by a special insert, cut out to the shape of the sander, or a plywood table top with suitable fitted hole.

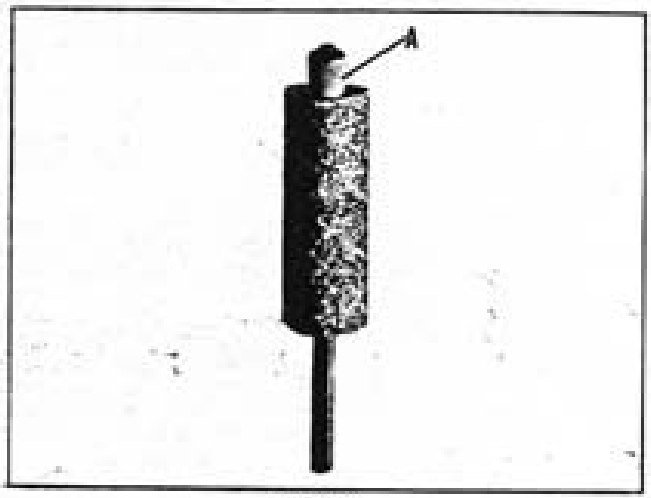



Fig. 22

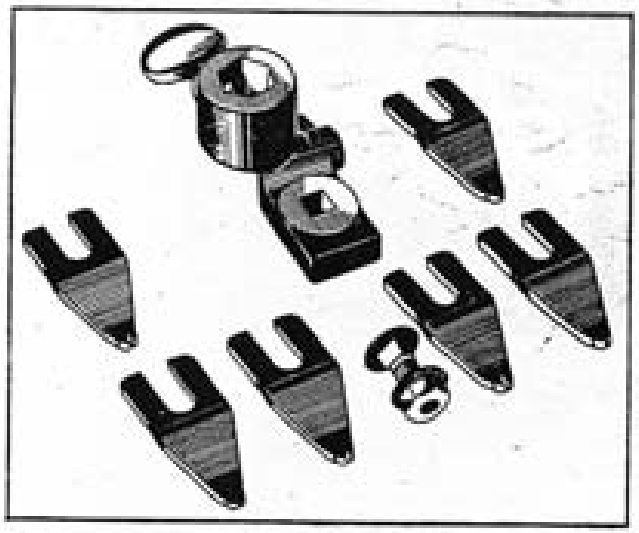


Fig. 23

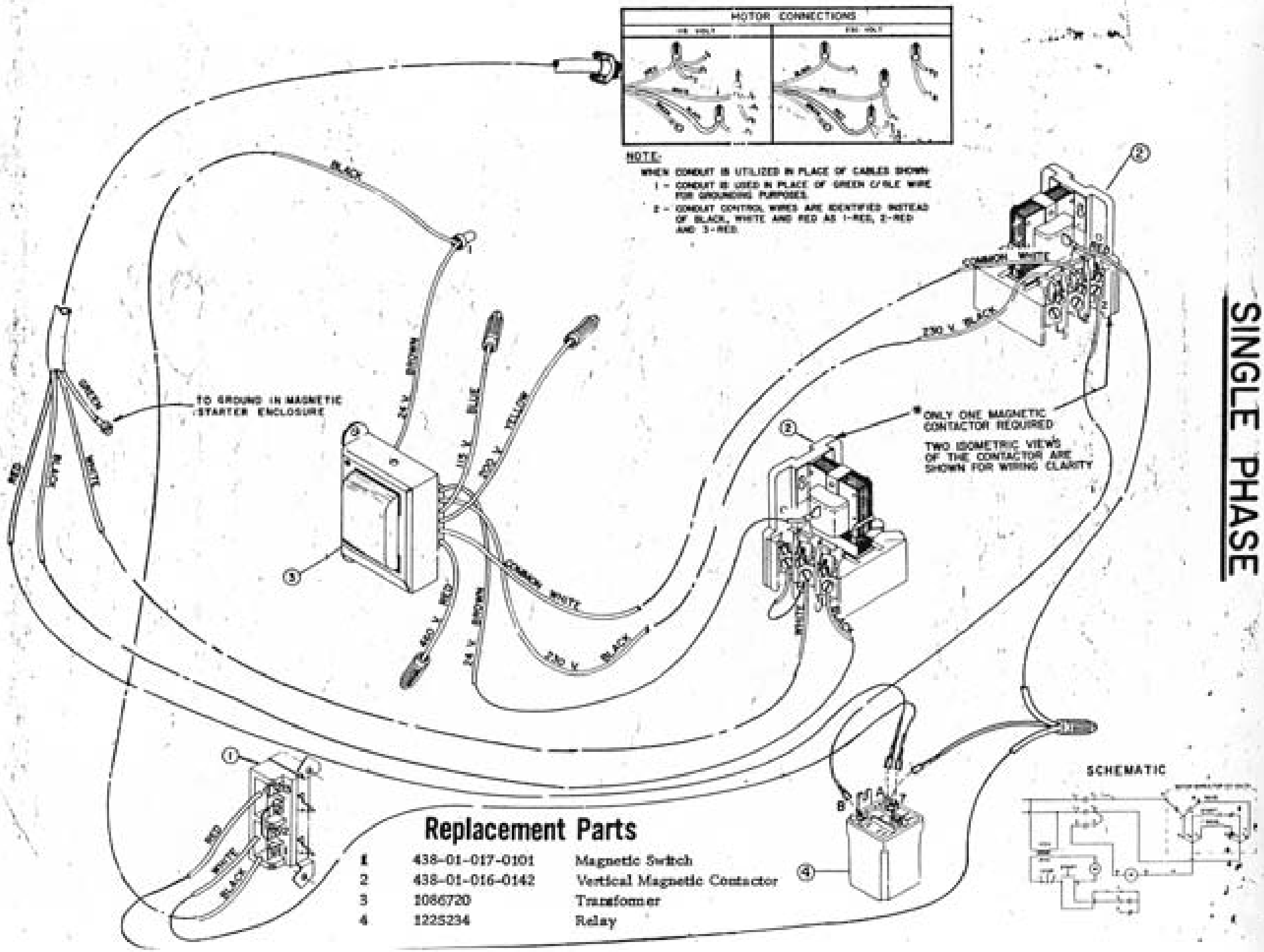
## ACCESSORY BLADE GUIDES

Available as an accessory for your saw is Catalog No. 40-202 Individual Blade Guides Fig. 23, which consist of six different, hardened steel guides and bracket. This set of blade guides supplement the regular guide and hold down and are used where close following of a line or pattern is important. Ideal for puzzle and marquetry work.

## ACCESSORY SELF—CENTERING LOWER CHUCK

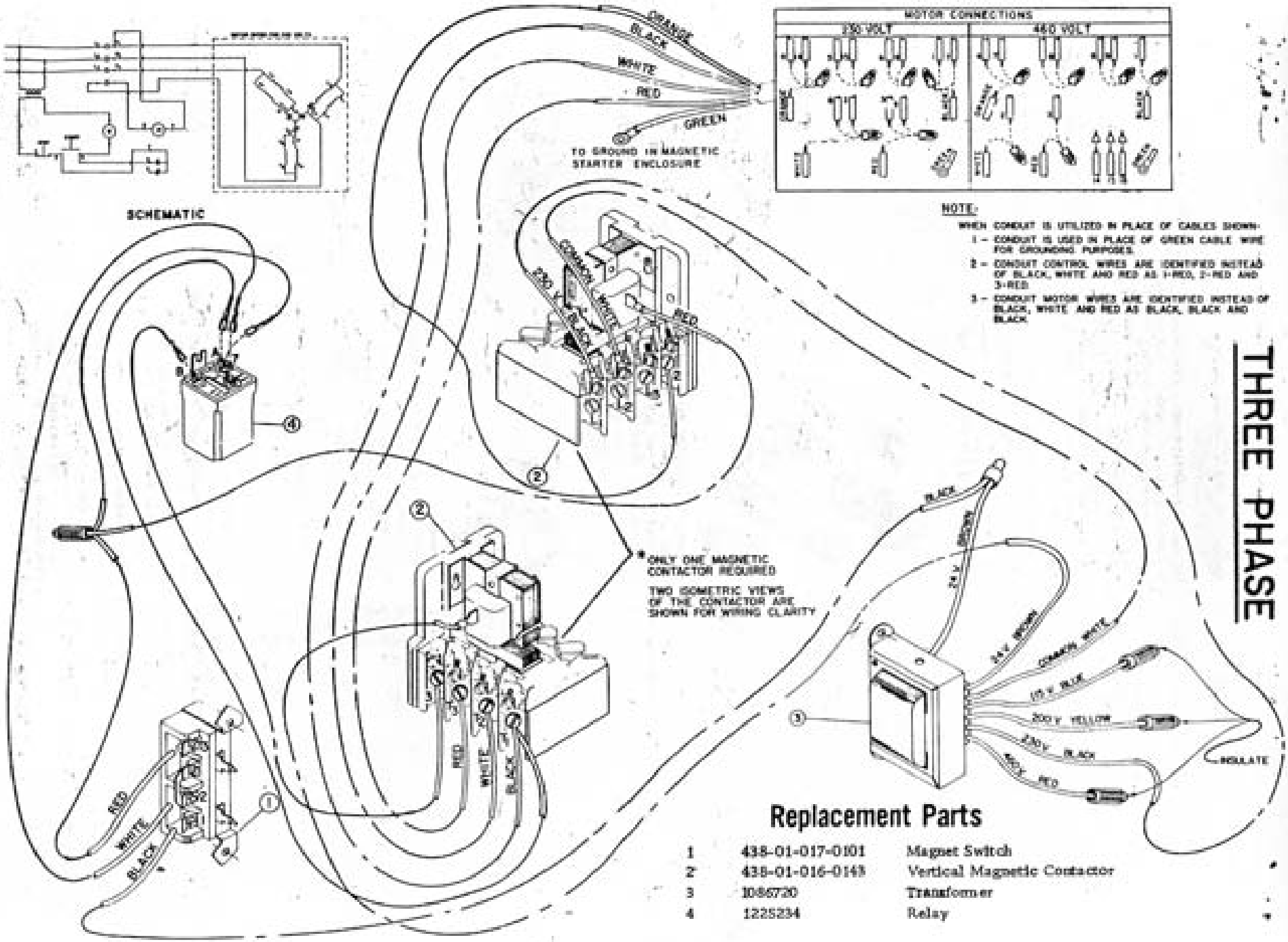
The Catalog No. 40-715 accessory self-centering lower chuck, Fig. 24, is handy for clamping very fine blades. It is easily attached to the lower plunger tube, in place of the standard lower universal chuck. It is a valuable aid for fine marquetry and puzzle work. Fine blades are automatically guided to center of chuck, then locked with thumb screw. It also includes a special jaw for use with upper chuck.

Fig. 24




## Replacement Parts

| | | |
|---|---|---|
| 1 | 438-01-017-0101 | Magnetic Switch |
| 2 | 438-01-016-0142 | Vertical Magnetic Contactor |
| 3 | 1086720 | Transformer |
| 4 | 1225234 | Relay |




## Replacement Parts

| | | |
|---|---|---|
| 1 | 438-01-017-0101 | Magnet Switch |
| 2 | 438-01-016-0148 | Vertical Magnetic Contactor |
| 3 | 1086720 | Transformer |
| 4 | 1225234 | Relay |

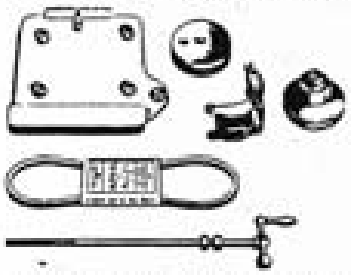
## QUALITY ACCESSORIES MAKE THE 24" SCROLL SAW MORE VALUABLE

**No. 50-718 Steel Stand.** 8 x 34 x 31½" high. 34 lbs.

**No. 49-363 Retractable Caster Set.** For 50-718 Steel Stand. 12 lbs.

**No. 40-207 (old 1207) Four-Speed Accessory Group.** Consists of 41-712 Motor Pulley (½" bore), 41-722 machine pulley and 49-340 (old 340) V-belt. 3 lbs.

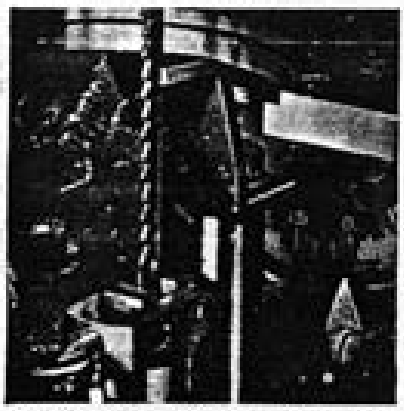
**No. 40-203 (old 1203) Belt and Pulley Guard.** For use with 40-207 (old 1207) Four-Speed Accessory Group. 6 lbs.



**No. 40-444 (old 1444) Variable Speed Accessory Group.** Converts the Four-Speed 24" Scroll Saw to a Variable Speed Model. This efficient drive, with a range of 650 to 1700 cutting strokes per minute, provides the proper cutting speed for any material—high speed for fast, fine work—slow speed for heavy work—and an infinite choice of speeds in between. A convenient speed control handle permits fine speed adjustment—even within 1 or 2 C.S.M.—while the machine is running.

Consists of 40-446 (old 1446) variable-speed motor pulley (½" bore), 40-447 (old 1447) motor base with bracket, screws and handle, 49-303 (old 331) special V-belt and 40-443 (old 1443) special drive pulley (½" bore). 11 lbs.

**No. 40-442 (old 1442) Belt and Pulley Guard.** For use with 40-444 (old 1444) Variable Speed Assembly. 11 lbs.



**No. 40-204 (old 1204) Lower Saber Saw Blade Guides.** Support saber blade directly below table. Enable you to do perfect straight-line saber cutting because the blade is supported below the table as well as above.

Consists of (2) lower guides with post, nut and thumb screw. Blade slots—.030" and .040". ⅝ lb.

**No. 40-711 (old 711) Sanding Attachment.** For sanding concave, convex or flat surfaces. Eliminates annoyance of makeshift devices. Knurled knob expands body of sanding attachment, tightens garnet sleeve securely. 15/16" wide, 1/4" thick and 2½" long. ¼" dia. shank fits universal lower chuck of scroll saw. With one sleeve. ½ lb.

**Sanding Sleeves.** Package of 6. ¼ lb.

| Number | Type | Grit and Finish |
|---|---|---|
| 46-841 (old 841) | Garnet | No. 1 Medium |
| 46-842 (old 842) | Garnet | No. 1/0 Fine |

**No. 40-202 (old 1202) Individual Blade Guides.** Supplement the regular guide and hold-down. Used where close following of a line or pattern is important. Ideal for puzzle and marquetry work.

Set of six different, hardened steel guides and bracket. 1 lb.

**No. 40-715 (old 715) Self-Centering Lower-Jaw Chuck.** Fits lower plunger of scroll saw. Valuable aid for fine marquetry and puzzle work. Fine blades are automatically guided to center of chuck, then locked with thumb screw. Includes special jaw for use with upper chuck. ⅝ lb.

**No. 40-882 (old 882) Lamp Attachment.** Eliminates shadows and brings light to your work where needed for accurate following of layouts, yet does not glare. Can be swung out of the way by a touch of the finger. Furnishes every machine with its own illumination, independent of the shop lighting system. Uses standard 15 or 25-watt bulb. Includes shade, socket, cord, four flat links, bolts, spacer and attachment bracket. 1½ lbs.

### SCROLL SAW BLADES

A proper blade for every job. All are 5" long with accurately spaced teeth. Heat treated for extra long life. Have ⅝" blank ends for fastening into chuck. ½ doz. to a package. ⅛ lb.

| Cat. No. | Material Cut | Width In. | Teeth Per Inch | Blade Full Size |
|---|---|---|---|---|
| 40-158 (Old 58) | Steel • Iron Lead • Copper Aluminum | .070 | 32 | |
| 40-159 (Old 59) | Pewter Asbestos Paper • Felt | .070 | 20 | |
| 40-160 (Old 60) | Steel • Iron Lead • Copper Brass | .070 | 15 | |
| 40-161 (Old 61) | Aluminum Pewter Asbestos | .085 | 15 | |
| 40-164 (Old 64) | Wood | .110 | 20 | |
| 40-165 (Old 65) | Asbestos • Brake Lining • Mica Steel • Iron Lead • Copper Brass Aluminum Pewter | .250 | 20 | |
| 40-184 (Old 84) | Wood Veneer Fine Plastics Celluloid Hard Rubber Bakelite Ivory Extremely Thin Materials | .035 | 20 | |
| 40-185 (Old 85) | Plastics Celluloid | .050 | 15 | |
| 40-187 (Old 87) | Bakelite | .070 | 7 | |
| 40-188 (Old 88) | Ivory • Wood | .110 | 7 | |
| 40-191 (Old 91) | Wall Board Pressed Wood Wood • Lead Bone • Felt Paper • Copper Ivory Aluminum | .125 | 15 | |
| 40-192 (Old 92) | | .110 | 10 | |
| 40-193 (Old 93) | Hard and Soft Wood | .187 | 10 | |
| 40-194 (Old 94) | | .250 | 7 | |
| 40-195 (Old 95) | Pearl • Pewter Mica | .054 | 30 | |
| 40-196 (Old 96) | Pressed Wood Sea Shells | .054 | 20 | |
| 40-198 (Old 98) | Hard Leather | .085 | 12 | |

*As a general rule, always select the narrowest blades recommended for intricate curve cutting and widest blades for straight and large curve cutting operations.*

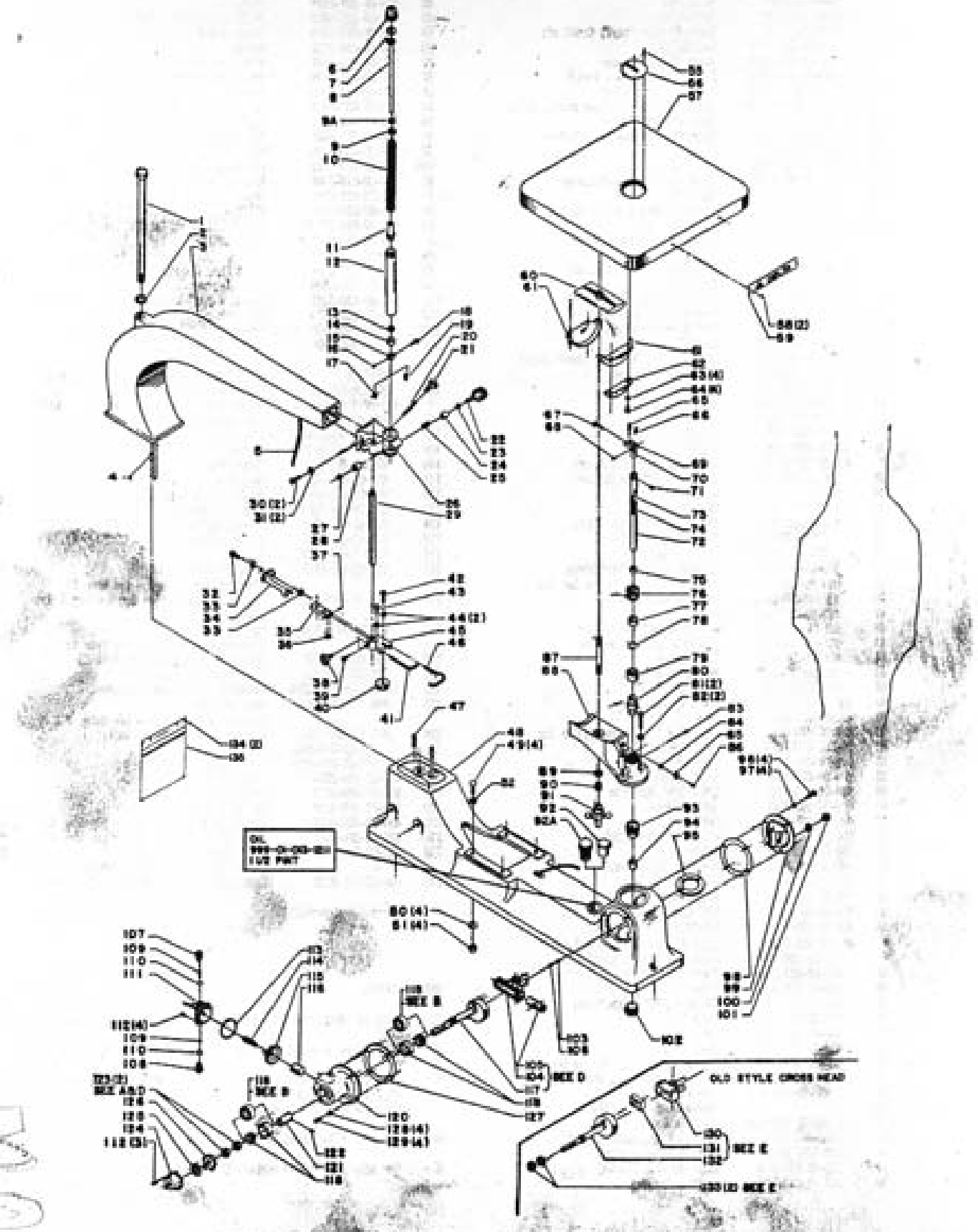
### SABER BLADES FOR WOOD

Made of high-grade steel with teeth hardened and accurately set. Are 5" in length. ½ doz. to a package. ⅝ lb.

**No. 40-703 (old 703)** .023" thick, .187" wide. 9 teeth per inch.

**No. 40-704 (old 704)** .033" thick, .250" wide, 7 teeth per inch.

# 1440, 40-205, 40-211, 40-213, 40-305, 40-306, 40-311, 40-313, 40-440



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# REPLACEMENT PARTS

[redacted]

| REF. NO. | PART NO. | DESCRIPTION |
|---|---|---|
| 1 | 901-01-101-1568 | Bolt |
| 2 | 904-03-020-1751 | 5/8" Int Tooth Lockwasher |
| 3 | 400-02-089-0001 | Overarm |
| 4 | 905-04-071-4460 | Steel Pin |
| 5 | 400-02-091-0001 | Rubber Tube |
| * | 400-02-325-0007 | Upper Plunger Assy., Const of: |
| 6 | 400-01-020-0005 | Knurled Cap |
| 7 | 904-08-021-3995 | Upper Plunger Bumper |
| 8 | 400-02-029-0006 | Plunger Tube Assy., Incl: |
| 9 | 400-02-104-0001 | Sq Hole Fiber Washer |
| 9A | 904-01-021-2925 | Special Washer (Current Models Only) |
| 10 | 928-01-101-4107 | Upper Plunger Spring |
| 11 | 400-02-317-0001 | Upper Plunger Bearing & Collar |
| 12 | 400-02-031-0001 | Casing |
| 13 | 904-09-101-4823 | Felt Seal |
| 14 | 400-02-020-0007 | Upper Plunger Seal Retainer |
| 15 | 1096016 | Chuck Body |
| 16 | 901-02-551-2997 | #6-40 x 13/64 Spec Fil Hd Scr |
| 17 | 1096017 | Jaw w/Pin |
| 18 | 901-04-260-1542 | #10-32 x 1/2" Thumb Screw |
| 19 | 1096018 | Jaw w/Pin |
| * | 400-02-314-0004 | Plunger Housing, Const of: |
| 20 | 905-04-071-3125 | Steel Pin |
| 21 | 901-04-260-1520 | 5/16-18 x 1/2" Thumb Screw |
| 22 | 400-02-411-0001 | Knurled Hand Knob |
| 23 | 904-07-010-5555 | 1/4" Bakelite Washer |
| 24 | 400-02-105-0001 | Lock Sleeve (R.H.) |
| 25 | 928-01-040-7395 | Stop Rod Spring (Early Model Only) |
| 26 | 400-02-014-0009 | Upper Head Bracket |
| 27 | 902-01-120-1209 | 1/4-28 Hex Nut |
| 28 | 400-02-105-0002 | Lock Sleeve (L.H.) |
| 29 | 400-02-110-0003 | Guide Post |
| 30 | 901-01-060-0826 | 1/4-20 x 3/4" Hex Hd Scr |
| 31 | 904-01-031-2924 | Washer |
| * | 400-02-365-0003 | Saw Guide Assy, Const of: |
| 32 | 901-01-060-0811 | 1/4-20 x 1/2" Hex Hd Scr |
| 33 | 904-01-031-2924 | Washer |
| 34 | 400-02-027-0005 | Hold Down Spring |
| 35 | 400-02-360-0003 | Blade Support Assy, Incl: |
| 36 | 400-02-080-0001 | Blade Support Roller |
| 37 | 905-04-071-3122 | Roller Pivot Pin |
| 38 | 901-04-260-1520 | 5/16-18 x 1/2" Thumb Screw |
| 39 | 400-02-112-0002 | #8-32 x 1/2" Knurled Hd Set Scr |
| 40 | 400-02-095-0011 | Blade Guide |
| 41 | 400-02-080-0002 | Nozzle |
| 42 | 901-01-060-0826 | 1/4-20 x 3/4" Hex Hd Scr |
| 43 | 901-01-060-0811 | 1/4-20 x 1/2" Hex Hd Scr |
| 44 | 904-01-031-2924 | 1/4" Washer |
| 45 | 400-02-014-0006 | Saw Guide Bracket |
| 46 | 400-02-094-0008 | Blade Guard |
| 47 | 905-01-010-2720 | 1/4 x 1" Roll Pin |
| 48 | 400-02-005-0001 | Base |
| 49 | 901-01-060-0902 | 5/16-18 x 1 1/4" Hex Hd Cap Scr |
| 50 | 904-01-010-1604 | 5/16" Steel Washer |
| 51 | 902-01-010-1300 | 5/16" Hex Nut |
| 52 | 904-02-010-1702 | 5/16" Lockwasher |
| 53 | 905-01-010-0711 | 1/8 x 3/8" Roll Pin |
| 54 | 406-02-063-0001 | Table Insert |
| 55 | 400-02-091-0002 | Table |
| 56 | 901-05-460-2250 | #4 x 3/16" Drive Screw |
| 57 | 960-02-112-1400 | Nameplate |
| 58 | 400-02-027-0003 | Trunnion Clamp Plates |
| 59 | 406-02-095-0001 | Trunnion |
| 60 | 961-02-010-7603 | Index Plate |
| 61 | 904-02-020-1702 | 1/4" Lockwasher |
| 62 | 901-02-010-0514 | 1/4-20 x 3/8" Rd Hd Scr |
| * | 400-02-325-0010 | Lower Plunger Assy, Const of: |
| * | 400-02-325-0004 | Lower Chuck Assy, Const of: |
| 65 | 400-02-064-0003 | Plain Jaw |
| 66 | 400-02-064-0002 | V-Jaw |
| 67 | 901-04-260-1540 | #10-32 x 5/8" Thumb Screw |
| 68 | 905-01-010-2715 | Chuck Pin |
| 69 | 400-02-027-0002 | Yoke |
| 70 | 400-02-012-0005 | Chuck Body |
| 71 | 901-02-551-2997 | #6-4 x 13/64" Spec Fil Hd Scr |
| 72 | 400-02-360-0002 | Lower Plunger Assy, Incl: |
| 73 | 400-02-014-0001 | Cork Plug |
| 74 | | Coarse Steel Wool Filter |
| 75 | 402-01-020-0003 | Oil Hole Cover |
| * | 400-02-412-0001 | Bearing Assy, Consisting of: |
| 76 | 400-02-112-0001 | Bearing Retainer Screw |
| 77 | 904-01-031-3995 | Upper Bearing Packing |
| 78 | 201-10-050-7408 | Packing Spring |
| 79 | 400-02-079-0001 | Bearing Ring |
| 80 | 400-02-017-0002 | Upper Bearing |
| 81 | 901-02-180-2216 | 1/4-28 x 1" Hex Hd Scr |
| 82 | 904-01-031-2924 | Washer |
| 83 | 901-04-121-3603 | #6-32 x 5/16" Hdls Set Scr |
| 84 | 904-01-010-1610 | Steel Washer |
| 85 | 951-01-010-7802 | Pointer |
| 86 | 901-02-010-0551 | #10-32 x 1/4" Rd Hd Scr |
| 87 | 901-01-261-3239 | Trunnion Clamp Stud |
| 88 | 400-02-014-0003 | Trunnion Swivel Bracket |
| 89 | 904-01-031-2925 | Washer |
| 90 | 928-01-021-4125 | Spring |
| 91 | 931-03-011-4007 | Star Wheel |
| 92 | 907-03-020-2476 | Oil Cup (Early Models Only) |
| 92A | 400-02-074-0002 | Oil Plug (Current Models Only) |
| 93 | 400-02-079-0002 | Bearing Seat |
| 94 | 920-75-011-2795 | Lower Plunger Bushing |
| 95 | 400-02-079-0003 | Clamp Ring |
| 96 | 901-02-010-0503 | 1/4-20 x 5/8" Rd Hd Scr |
| 97 | 904-07-010-5573 | Fiber Washer |
| 98 | 400-02-116-0002 | Gasket |
| 99 | 400-01-020-0006 | Crank Case Cover |
| 100 | 904-07-020-5556 | Fiber Washer |
| 101 | 903-09-120-6122 | 3/8-16 x 3/8" Truss Hd Scr |
| 102 | 906-00-000-6273 | Oil Plug |
| 103 | 901-04-190-0276 | 1/4-28 x 1/8" Lock Screw |
| 104 | 400-01-365-0001 | Guide, Incl: (Current Models Only - See Note D) |
| 105 | 1096005 | Pin (Current Models Only - See Note D) |
| 106 | 901-04-160-9414 | 1/4-28 x 3/8" Dog Pt Set Scr |
| * | 400-02-312-0002 | Dr Shaft Hsg Assy, Const of: |
| 107 | 901-09-120-6143 | Exhaust Valve Screw |
| 108 | 901-09-090-6148 | Inlet Valve Screw |
| 109 | 928-01-021-4128 | Spring |
| 110 | 952-03-021-4801 | Valve Disk |
| 111 | 400-02-020-0005 | Pump Head |
| 112 | 901-02-010-0564 | #6-32 x 3/8" Rd Hd Screw |
| 113 | 400-02-116-0001 | Pump Head Gasket |
| 114 | 928-01-041-3215 | Blower Spring |
| 115 | 400-02-339-0001 | Blower Piston |
| 116 | 400-02-010-0002 | Plunger |
| 117 | 400-02-626-0001 | Dr Shaft Retrofit Kit (Current Models Only - See Note D) |
| 118 | 921-03-990-3464 | Timken Tapered Roller Bearing Cup & Cone (Early Models Only) |
| 118 | 920-04-010-7272 | Ball Bearing (Current Models Only - See Note B) |
| 120 | 400-02-012-0007 | Drive Shaft Housing (See Note C) |
| 121 | 400-02-319-0001 | Pump Eccentric, Incl: |
| 122 | 901-04-140-0275 | 1/4-28 x 1/2" Allen Set Screw |
| 123 | 902-01-201-2598 | Spec Jam Nut (Current Models Only - See Notes A & D) |
| 124 | 400-02-320-0001 | Bearing Seal Cup Assy, Incl: |
| 125 | 904-07-010-5566 | Fiber Washer |
| 126 | 904-07-031-4203 | Felt Washer |
| 127 | 400-02-116-0002 | Gasket |
| 128 | 904-07-010-5573 | Fiber Washer |
| 129 | 901-02-010-0503 | 1/4-20 x 5/8" Rd Hd Screw |
| 130 | 400-03-365-0005 | Guide (Early Models Only - See Note E) |
| 131 | 400-02-310-0001 | Block (Early Models Only - See Note E) |
| 132 | 400-02-626-0001 | Drive Shaft Retrofit Kit (Early Models Only - See Note E) |
| 133 | 920-75-011-2800 | Spec Jam Nut (Early Models Only - See Note E) |
| * | | NOT SHOWN ASSEMBLED |

SERVICE NOTES:

A - Back off first nut 1/16 turn before tightening second nut.

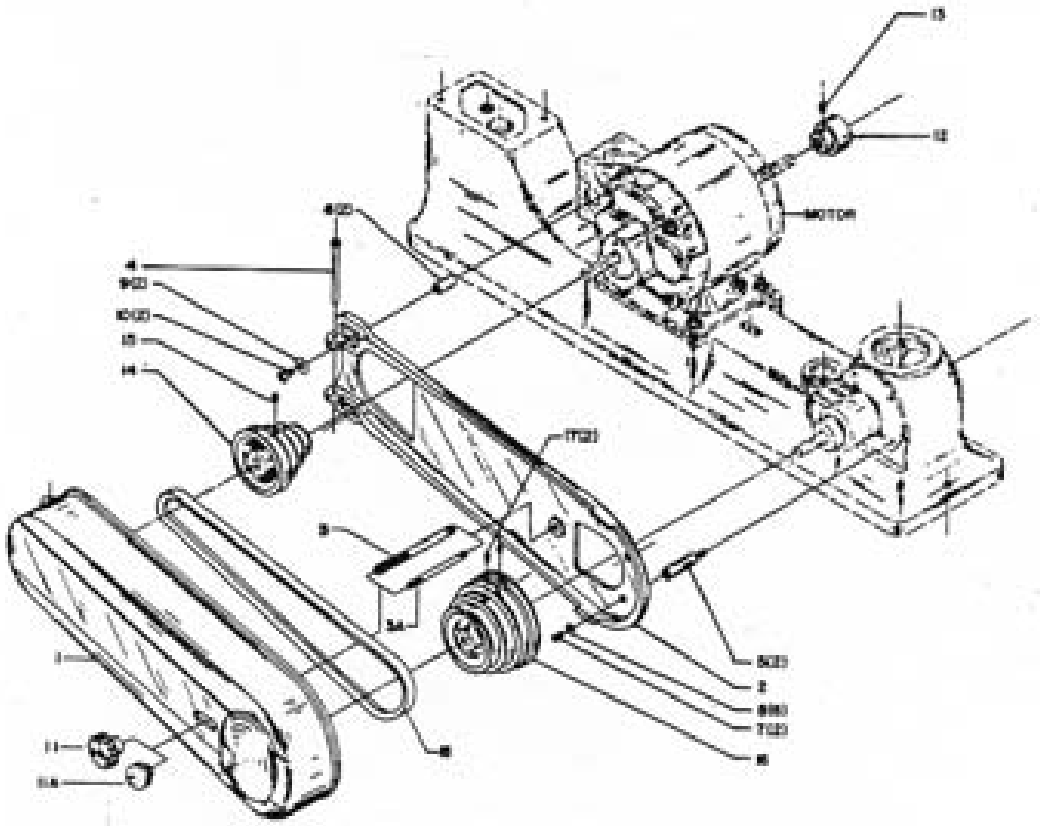
B - Remove both bearing seals before installing bearing.

C - When replacing housing on early models containing Timken tapered roller bearings, the tapered bearings must be replaced with current ball bearings.

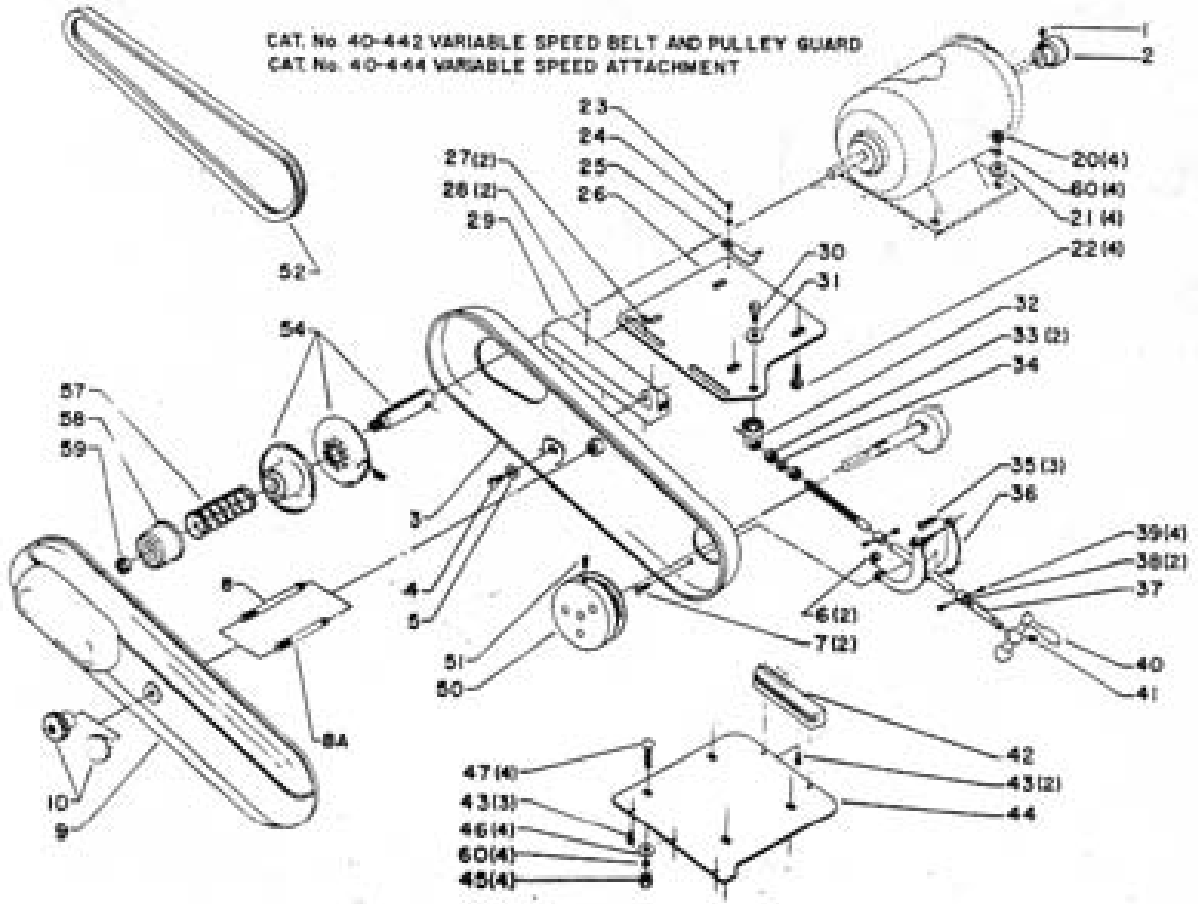
D - For saws with Serial Numbers CS-1395 and higher.

E - For saws with Serial Numbers CS-1394 and lower.

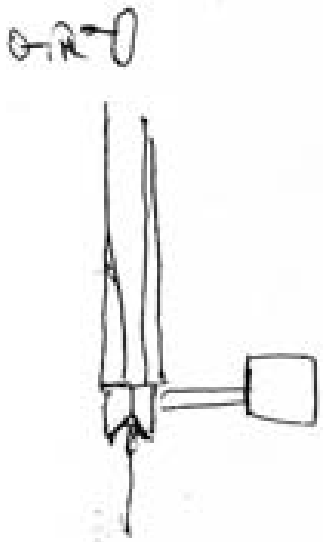
CAT. No. 40-203 FOUR SPEED BELT AND PULLEY GUARD
CAT. No. 40-207 FOUR SPEED ACCESSORY GROUP




CAT. No. 40-442 VARIABLE SPEED BELT AND PULLEY GUARD
CAT. No. 40-444 VARIABLE SPEED ATTACHMENT



## CAT. #40-203 BELT AND PULLEY GUARD
## CAT. #40-207 FOUR SPEED ACCESSORY GROUP



| REF. NO. | PART NO. | DESCRIPTION |
|---|---|---|
| * | 40-203 | 4 Speed Belt & Pulley Guard, Const of: |
| 1 | 430-02-054-0002 | Guard |
| 2 | 430-02-054-0003 | Guard |
| 3 | 901-07-261-3240 | Stud (Early Models Only) |
| 3A | 1087256 | Stud (Current Models Only) |
| 4 | 905-04-101-3137 | Pin |
| 5 | 905-04-051-4456 | Stud |
| 6 | 902-08-051-3070 | Spacing Nut |
| 7 | 901-02-010-0509 | 1/4-20 x 1/2" Rd Hd Scr |
| 8 | 904-01-010-1603 | Washer |
| 9 | 904-01-010-1604 | Washer |
| 10 | 901-02-010-0506 | 10-32 x 3/4" Rd Hd Scr |
| 11 | 901-02-031-3532 | Hand Knob (Early Models Only) |
| 11A | 1087256 | Knob (Current Models Only) |
| 12 | 430-02-320-0003 | Knob, Incl: |
| 13 | 901-04-190-0253 | 1/4-28 x 1/4" Soc Set Scr |
| * | 40-207 | 4 Speed Accessory Group, Const of: |
| 14 | 41-712 | Motor Pulley, Incl: |
| 15 | 901-04-190-0201 | 5/16-18 x 5/16" Soc Set Scr |
| 16 | 41-722 | Arbor Pulley, Incl: |
| 17 | 901-04-190-0201 | 5/16-18 x 5/16" Soc Set Scr |
| 18 | 49-340 | V-Belt |

* NOT SHOWN ASSEMBLED

## CAT. #40-442 BELT AND PULLEY GUARD
## CAT. #40-444 VARIABLE SPEED ATTACHMENT

| REF. NO. | PART NO. | DESCRIPTION |
|---|---|---|
| * | 40-442 | Var. Spd Belt & Pulley Guard, Const of: |
| 1 | 430-02-320-0003 | Knob Assembly, Incl: |
| 2 | 901-04-170-0253 | 1/4-28 x 1/4" Soc Set Scr |
| 3 | 430-02-054-0004 | Guard Pan |
| 4 | 901-02-010-0512 | 5/16-18 x 1/2" Rd Hd Scr |
| 5 | 904-01-010-1604 | Washer |
| 6 | 902-01-120-1004 | 1/4-20 Hex Nut |
| 7 | 901-02-010-0503 | 1/4-20 x 5/8" Rd Hd Scr |
| 8 | 901-07-261-3244 | Stud (Early Models Only) |
| 8A | 1087257 | Stud (Current Models Only) |
| 9 | 430-02-054-0005 | Guard |
| 10 | 901-02-031-3532 | Knob (Early Models Only) |
| 10 | 1087256 | Knob (Current Models Only) |
| * | 40-444 | Var Speed Attach, Const of: |
| 20 | 902-01-010-1300 | 5/16" Hex Nut |
| 21 | 904-01-010-1605 | Washer |
| 22 | 901-11-020-0834 | 5/16-18 x 3/4" Carriage Bolt |
| 23 | 901-02-010-0508 | #8-32 x 1/4" Rd Hd Scr |
| 24 | 904-01-010-1602 | Steel Washer |
| 25 | 951-01-051-3578 | Pointer |
| 26 | 430-02-005-0002 | Motor Base |
| 27 | 904-10-031-3945 | Roller |
| 28 | 905-04-071-3120 | Pin |
| 29 | 430-02-055-0008 | Guide |
| 30 | 901-01-060-0505 | 5/16-18 x 1/2" Hex Hd Scr |
| 31 | 904-10-031-2093 | Spec Washer |
| 32 | 430-02-014-0007 | Bracket |
| 33 | 902-01-010-5900 | 3/8-16 Hex Nut |
| 34 | 904-01-030-1650 | Spec Washer |
| 35 | 901-02-010-0504 | 1/4-20 x 3/4" Rd Hd Scr |
| 36 | 430-02-014-0008 | Bracket |
| 37 | 430-02-409-0001 | Rod Assy, Incl: |
| 38 | 904-10-021-3946 | Collar |
| 39 | 901-02-010-0507 | #6-32 x 1/4" Rd Hd Scr |
| 40 | 930-05-991-1643 | Crank, Incl: |
| 41 | 901-04-190-0225 | 5/16-18 x 1/4" Soc Set Scr |
| 42 | 430-02-055-0009 | Guide |
| 43 | 901-02-010-0501 | #10-32 x 3/8" Rd Hd Scr |
| 44 | 430-02-005-0003 | Base |
| 45 | 902-01-010-1300 | 5/16-18 Hex Nut |
| 46 | 904-01-010-1605 | Washer |
| 47 | 901-11-020-0830 | 5/16-18 x 1 1/4" Car Bolt |
| 50 | 40-443 | Pulley, Incl: |
| 51 | 901-04-150-0206 | 5/16-18 x 5/16" Soc Set Scr |
| 52 | 49-333 | V-Belt |
| 54 | 1200003 | Var Speed Pulley (Current Models Only) |
| 54 | 40-446 | Var Speed Pulley (Early Models Only), Incl: |
| 57 | 929-01-041-4119 | Spring |
| 58 | 430-02-031-0002 | Cover |
| 59 | 902-01-200-9764 | Spec Nut |
| 60 | 904-02-010-1703 | Lockwasher |

* NOT SHOWN ASSEMBLED