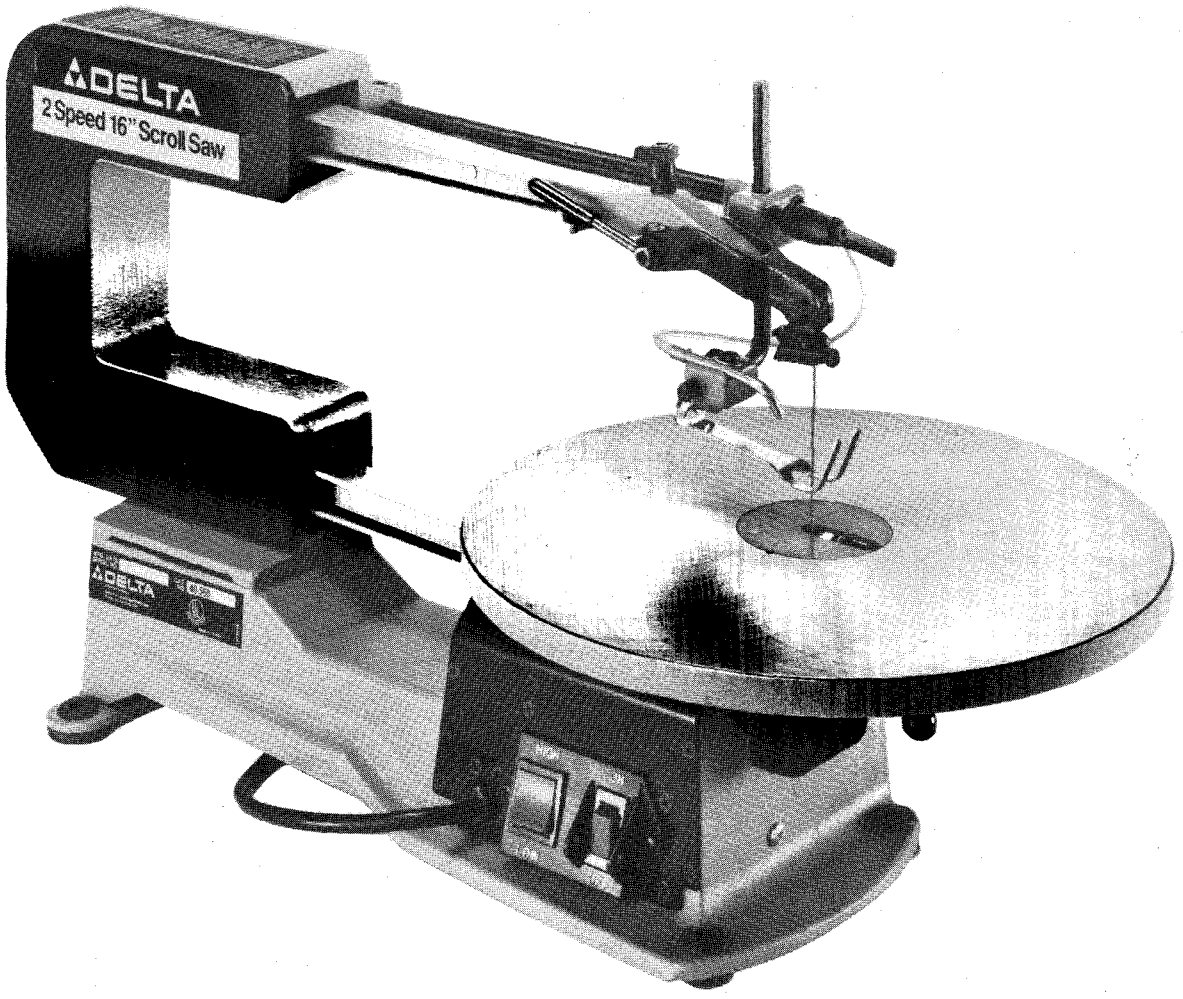
2 Speed 16" Scroll Saw
with Quickset Blade Changing Feature
(Model 40-560C Type II)

INSTRUCTION MANUAL



DATED 5-3-95

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DELTA GUARANTEE

Delta 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 engineering quality, Delta agrees to repair or replace any part or parts of Delta Power Tools or Delta Power Tool accessories which examination proves to be defective in workmanship or material within a period of two years. In order to take advantage of this guarantee, the alleged defective part or parts must be returned prepaid to the Delta factory or one of the service centres. The 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, Delta service centre or authorized service station relieves Delta of further liability under this guarantee. THIS GUARANTEE IS MADE EXPRESSLY IN PLACE OF ALL OTHER GUARANTEES OR WARRANTIES, EXPRESSED OR IMPLIED, WITH RESPECT TO QUALITY, MERCHANTIBILITY, OR FITNESS FOR A PARTICULAR PURPOSE.

CONSULT YOUR DELTA DEALER FOR PRICES OF REPLACEMENT PARTS, ACCESSORIES AND TOOLS – TO FACILITATE HANDLING WE SUGGEST ORDERING ALL PARTS THROUGH YOUR DELTA DEALER.

SAFETY RULES

Woodworking can be dangerous if safe and proper operating procedures are not followed. As with all machinery, there are certain hazards involved with the operation of the product. Using the machine with respect and caution will considerably lessen the possiblity of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result. Safety equipment such as guards, push sticks, hold-downs, featherboards, goggles, dust masks and hearing protection can reduce your potential for injury. But even the best guard won't make up for poor judgment, carelessness or inattention. Always use common sense and exercise caution in the workshop. If a procedure feels dangerous, don't try it. Figure out an alternative procedure that feels safer. REMEMBER: Your personal safety is your responsibility.

This machine was designed for certain applications only. Delta Machinery strongly recommends that this machine not be modified and/or used for any application other than that for which it was designed. If you have any questions relative to a particular application, DO NOT use the machine until you have first contacted Delta to determine if it can or should be performed on the product.

DELTA INTERNATIONAL MACHINERY CORP.
MANAGER OF TECHNICAL SERVICES
246 ALPHA DRIVE
PITTSBURGH, PENNSYLVANIA 15238
(IN CANADA: 644 IMPERIAL ROAD, GUELPH, ONTARIO N1H 6M7)

WARNING: FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS PERSONAL INJURY

1. **FOR YOUR OWN SAFETY, READ INSTRUCTION MANUAL BEFORE OPERATING THE TOOL.** Learn the tool's application and limitations as well as the specific hazards peculiar to it.

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

3. **ALWAYS WEAR EYE PROTECTION.**

4. **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.

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

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

7. **DON'T USE IN DANGEROUS ENVIRONMENT.** Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well-lighted.

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

9. **MAKE WORKSHOP CHILDPROOF** - with padlocks, master switches, or by removing starter keys.

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

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

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

13. **ALWAYS USE SAFETY GLASSES.** Wear safety glasses. Everyday eyeglasses only have impact resistant lenses; they are not safety glasses. Also use face or dust mask if cutting operation is dusty.

14. **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.

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

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

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

18. **USE RECOMMENDED ACCESSORIES.** The use of accessories or attachments not recommended by Delta may cause hazards or risk of injury to persons.

19. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure switch is in "OFF" position before plugging in power cord.

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

21. **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.

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

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

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

25. **MAKE SURE TOOL IS DISCONNECTED FROM POWER SUPPLY** while motor is being mounted, connected or reconnected.

26. **WARNING:** The dust generated by certain woods and wood products can be injurious to your health. Always operate machinery in well ventilated areas and provide for proper dust removal. Use wood dust collection systems whenever possible.

ADDITIONAL SAFETY RULES FOR SCROLL SAWS

1. **WARNING:** Do not operate your scroll saw until it is completely assembled and installed according to the instructions.

2. **IF YOU ARE NOT** thoroughly familiar with the operation of Scroll Saws, obtain advice from your supervisor, instructor or other qualified person.

3. **YOUR SCROLL SAW MUST** be securely fastened to a stand or workbench. If there is any tendency for the stand or workbench to move during operation, the stand or workbench **MUST** be fastened to the floor.

4. **THIS SCROLL SAW** is intended for indoor use only.

5. **MAKE SURE** blade is properly tensioned before operating saw.

6. **TO AVOID** blade breakage **ALWAYS** adjust blade tension correctly.

7. **MAKE SURE** the blade teeth point downward toward the table.

8. **NEVER** turn the saw "ON" before clearing the table of all objects (tools, scraps of wood, etc.).

9. **DO NOT** cut material that is too small to be safely supported.

10. **AVOID** awkward hand positions where a sudden slip could cause a hand to move into the blade.

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

12. **ALWAYS** adjust holddown foot for each new operation.

13. **DO NOT USE** dull or bent blades.

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

15. **MAKE** "relief" cuts before cutting long curves.

16. **NEVER** attempt to cut a curve that is too tight for the blade being used.

17. **WHEN** backing a blade out of a workpiece, the blade may bind in the saw kerf. This is usually caused by sawdust in the kerf. If this happens, turn "**OFF**" the switch and remove plug from power source outlet. Wedge open the kerf and back blade out of the workpiece.

18. **THE USE** of attachments and accessories not recommended by Delta may result in the risk of injuries.

19 **ALWAYS** hold the work firmly against the table.

20. **DO NOT** feed the material too fast while cutting. Only feed the material fast enough so that the blade will cut.

21. **NEVER** start the Scroll Saw with the stock pressed against the blade.

22. **WHEN** cutting a large workpiece **MAKE SURE** the material is supported at table height.

23. **USE CAUTION** when cutting material which is irregular in cross section which could pinch the blade before the cut is completed. A piece of moulding for example must lay flat on the table and not be permitted to rock while being cut.

24. **USE CAUTION** when cutting round material such as dowel rods or tubing. They have a tendency to roll while being cut causing the blade to "bite." Use a V-block to control the piece.

25. **ALWAYS** release blade tension before loosening the blade holder screw.

26. **MAKE CERTAIN** table tilting lock is tightened before starting the machine.

27. **NEVER** reach under the table while the machine is running.

28. **NEVER** perform layout, assembly or set-up work on the table while the saw is operating.

29. **ALWAYS STOP** the saw before removing scrap pieces from the table.

30. **SHOULD** any part of your Scroll Saw be missing, damaged or fail in any way, or any electrical component fail to perform properly, shut off switch and remove plug from power supply outlet. Replace missing, damaged or failed parts before resuming operation.

31. **SAVE THESE INSTRUCTIONS**. Refer to them often and use them to instruct others.

UNPACKING AND CLEANING

Your new scroll saw is shipped complete in one carton; carefully unpack the saw and all loose items. Remove the protective coating from the saw table surface. 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 the table surface with a good quality paste wax. Buff out the wax thoroughly to prevent it from rubbing into your workpieces.

ASSEMBLY INSTRUCTIONS

The table and table locking handle are furnished disassembled from the scroll saw to prevent damage during shipment.

1. To assemble the table (A) Fig. 2, to the machine, find the two special screws (B) and two locknuts (C).

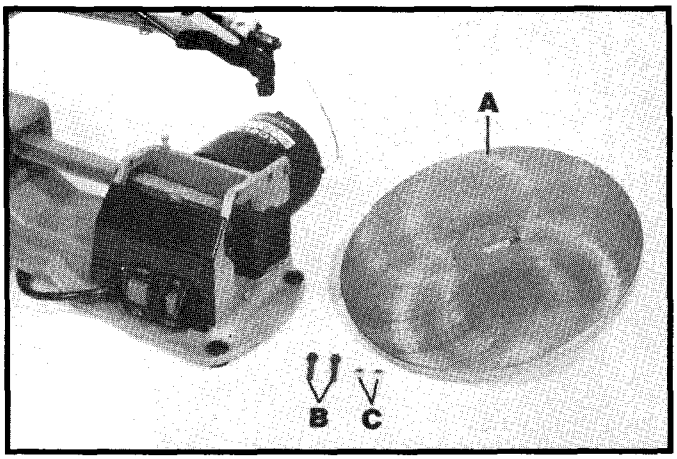

Fig. 2

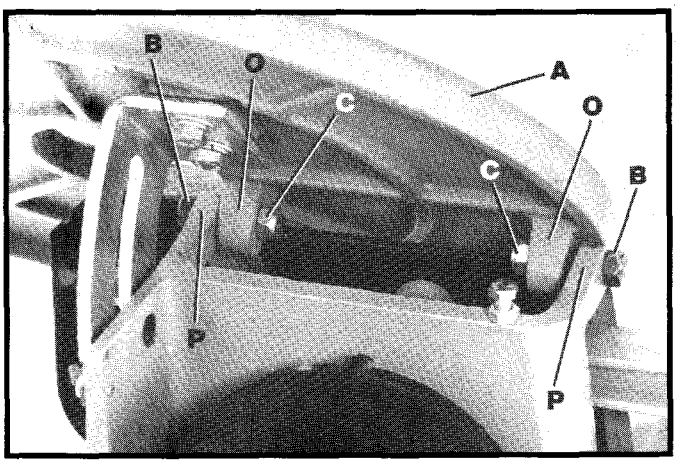

Fig. 3

2. Position table (A) Fig. 3, on the machine as shown. Align the two holes in the table trunnions (O) with the two holes in the base (P) of the machine and fasten the table (A) to the base (P) using the two special screws (B) and locknuts (C) as shown. **NOTE:** Before tightening the special screws (B) and nuts (C) make sure the angle of tilt scale (D) Fig. 4, is positioned inside pointer (E) as shown. Also, do not completey tighten the special screws (B) and nuts (C) Fig. 3. Table must be able to tilt freely.

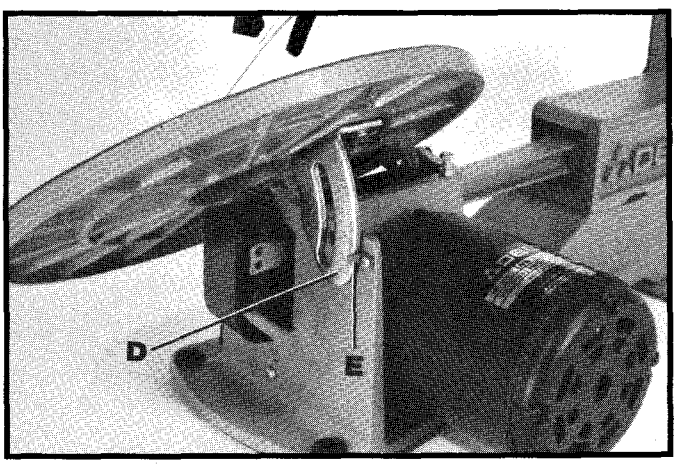

Fig. 4

3. To facilitate assembly of table lock knob assembly, remove screw and spring (F) Fig. 5, and handle (G) from stud (H). Place washer (J) on threaded end of stud (H).

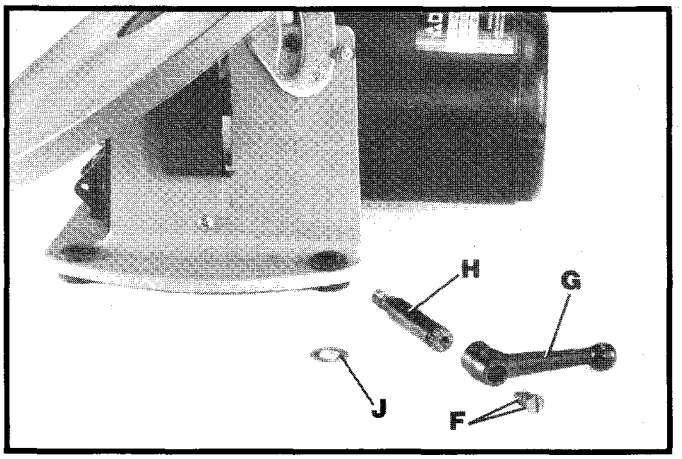

Fig. 5

4. Screw threaded end of stud (H) Fig. 6, with flat washer (J) through slot in angle of tilt scale (D) and into tapped hole (K).

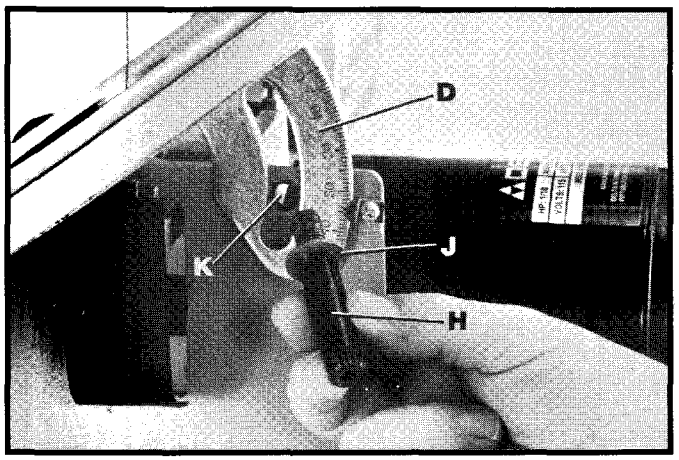

Fig. 6

5. Reassemble handle (G) Fig. 7, and screw and spring (F) which were removed in **STEP 3**, onto stud (H). Move table (A) to the horizontal position and lock table (A), by turning handle (G) clockwise.

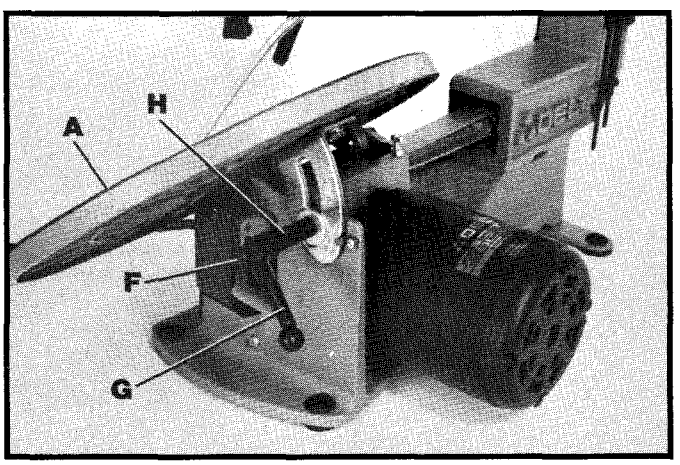

Fig. 7

5. Using the wrench (L) Fig. 8, supplied, loosen the two screws on bottom of bracket (M) that fasten bracket to rod (N).

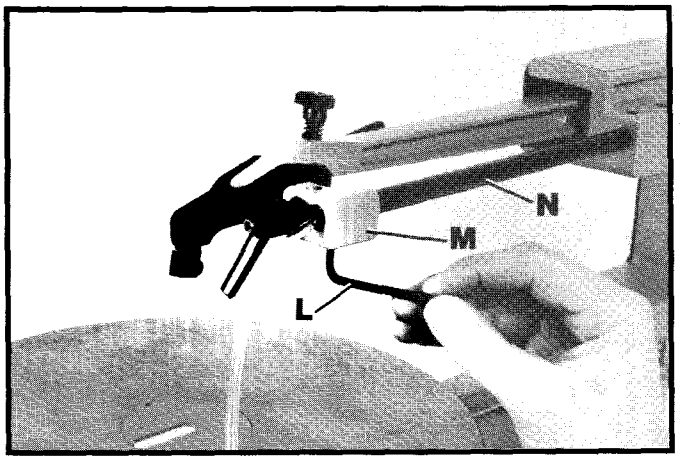

Fig. 8

7. Rotate bracket (M), to the position shown in Fig. 9. Loosen lock handle (R) and insert holddown rod (S) into hole in bracket (M), as shown.

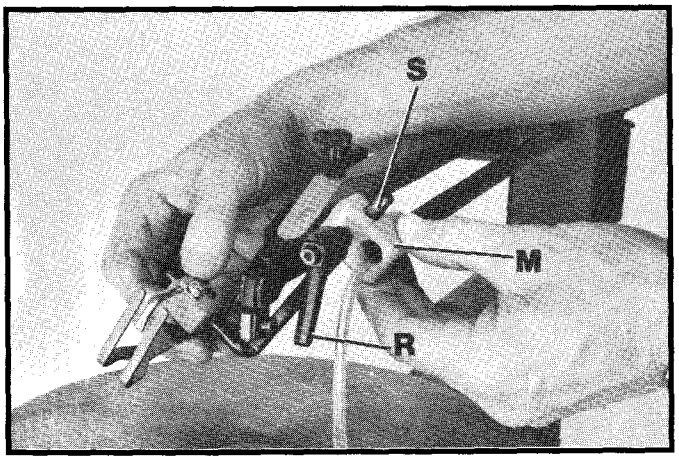

Fig. 9

8. Rotate bracket (M) Fig. 10, back to its original position as shown, and tighten the two screws that fasten bracket (M) to rod (N). These screws were loosened in **STEP 6**. Then tighten lockhandle (R) to hold rod (S) in position.

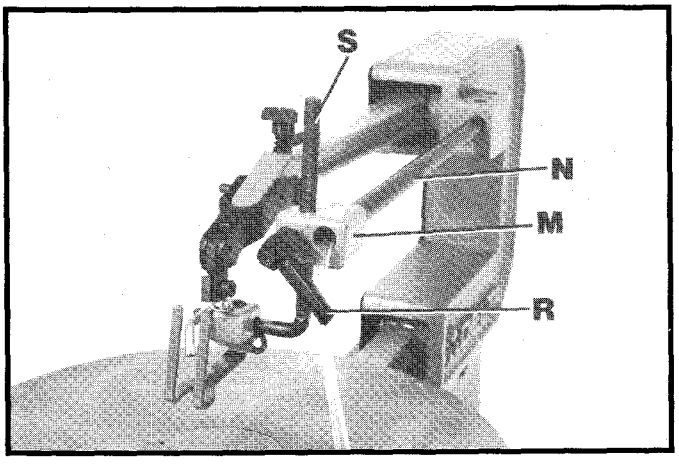

Fig. 10

9. Slide end of chip blower tube (T) Fig. 11, onto end of air nozzle (V), as shown.

10. Assemble tool holder (X) Fig. 12, to the right side of the scroll saw using two screws (W).

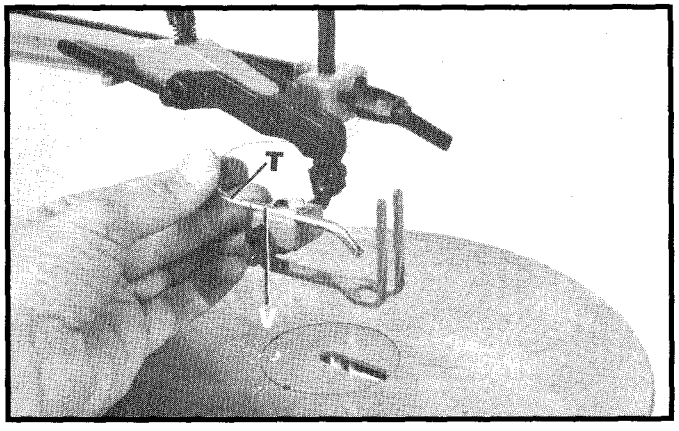

Fig. 11

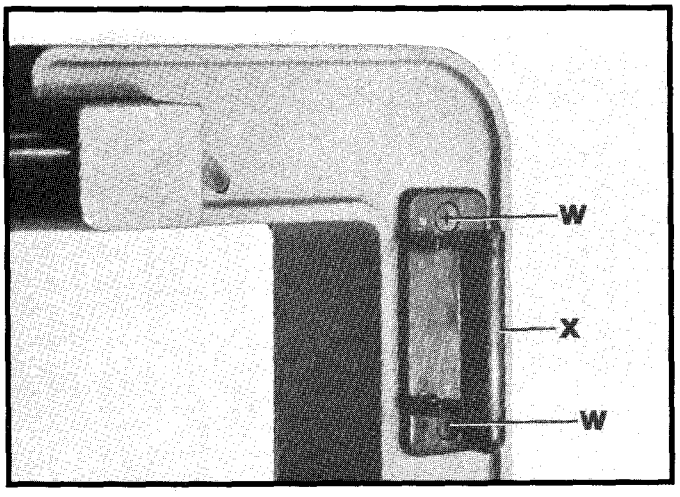

Fig. 12

11. The tool holder (X) Fig. 13, is used to hold the quickset blade changing wrench (Y), allen wrench (Z) and extra blades (O) as shown.

12. Refer to sections "CHANGING BLADES" and "ADJUSTING BLADE TENSION" for assembling blade and applying correct tension on the saw blade.

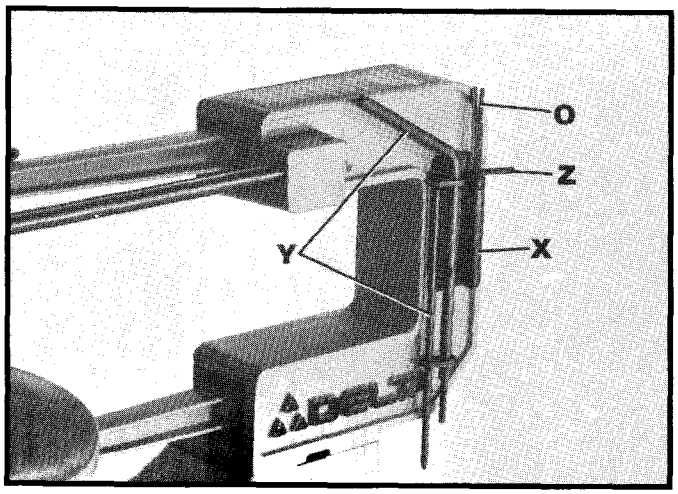

Fig. 13

CONNECTING SCROLL SAW TO POWER SOURCE

POWER CONNECTIONS

A separate electrical circuit should be used for your tools. This circuit should not be less than #12 wire and should be protected with a 20 Amp fuse. Have a certified electrician replace or repair a worn cord immediately. Before connecting the motor to a power line, make sure the switch is in the "OFF" position and be sure that the electric current is of the same characteristics as stamped on the motor name-plate. Running on low voltage will damage the motor. **WARNING: DO NOT EXPOSE THE TOOL TO RAIN OR OPERATE THE TOOL IN DAMP LOCATIONS.**

MOTOR SPECIFICATIONS

Your scroll saw is wired for 110-120 volt, 60 HZ current. Before connecting the saw to the power source, make sure the switch is in the "OFF" position.

EXTENSION CORDS

Use proper extension cords. Make sure your extension cord is in good condition and is a 3-wire extension cord which has a 3-prong grounding type plug and a 3-pole receptacle which will accept the tools plug. When using an extension cord, be sure to use one heavy enough to carry the current of the scroll saw. An undersized cord will cause a drop in line voltage, resulting in loss and overheating. Fig. 14 shows the correct gage to use depending on the cord length. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.

TOTAL LENGTH OF CORD IN FEET	GAGE OF EXTENSION CORD TO USE
0 - 25	18 AWG
26 - 50	16 AWG
51 - 100	16 AWG
101 - 150	14 AWG

Fig. 14

GROUNDING INSTRUCTIONS

CAUTION: THIS TOOL MUST BE GROUNDED WHILE IN USE TO PROTECT THE OPERATOR FROM ELECTRIC SHOCK.

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided - if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding con-ductor can result in risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding con-ductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment grounding conductor to a live terminal.

Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.Use only 3-wire extension cords that have 3-prong groundingtype plugs and 3-hole receptacles that accept the tool's plug, as shown in Fig. 15.

Repair or replace damaged or worn cord immediately.

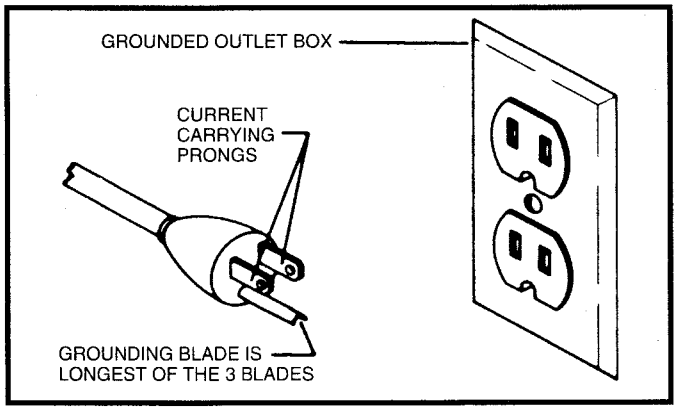

Fig.15

This tool is intended for use on a circuit that has an outlet and a plug that looks like the one shown in Fig. 15 A temporary adapter, which looks like the adapter illustrated in Fig. 16, may be used to connect this plug to a 2-pole receptacle, as shown in Fig. 16, if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. **THIS ADAPTER IS NOT APPLICABLE IN CANADA**. The green-colored rigid ear, lug, and the like, extending from the adapter must be connected to a permanent ground, such as a properly grounded outlet box, as shown in Fig. 16.

CAUTION: IN ALL CASES, MAKE CERTAIN THE RECEPTACLE IN QUESTION IS PROPERLY GROUNDED. IF YOU ARE NOT SURE HAVE A CERTIFIED ELECTRICIAN CHECK THE RECEPTACLE.

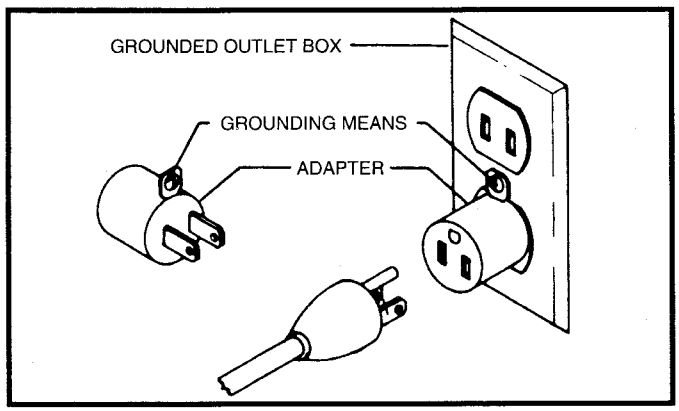

Fig. 16

FASTENING SCROLL SAW TO SUPPORTING SURFACE

Your scroll saw **MUST** be securely fastened to a stand or workbench using the holes in the four rubber feet, three of which are shown at (A) Fig. 17. **IMPORTANT:** When mounting the saw to a stand or workbench **DO NOT** over-tighten mounting bolts. Leave some cushion in the four rubber feet (A) for absorbing noise and vibration.

An alternate method of securing the scroll saw to a supporting surface is to C-clamp the front and side ledge of the saw base to a workbench.

IMPORTANT: If there is any tendency for the stand or workbench to move during operation, the stand or workbench must be fastened to the floor.

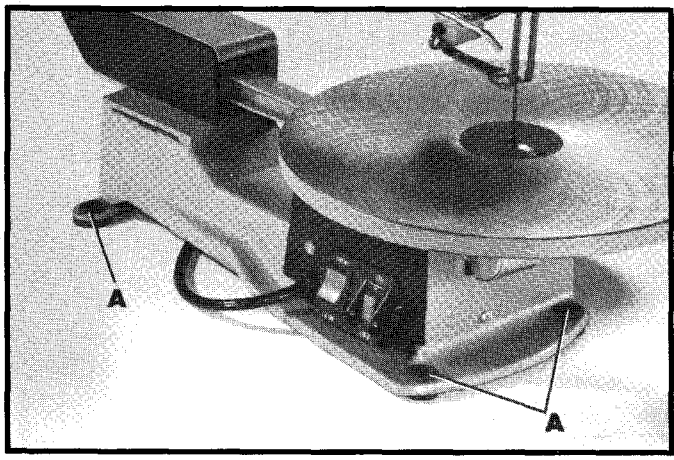

Fig. 17

ON-OFF AND TWO-SPEED SWITCHES

The on-off switch (A) Fig. 18, and two-speed switch (B) is located on the left side of the scroll saw base, as shown. To turn the saw "ON" move the switch (A) to the up position and to turn the saw "OFF" move the switch to the down position.

This scroll saw is supplied with two cutting speeds of 850 and 1725 cutting strokes per minute. To operate the saw at the 850 cutting strokes per minute speed move switch (B) Fig. 18, to the down (low) position and to operate the saw at the 1725 cutting strokes per minute speed move switch (B) to the up (high) position.

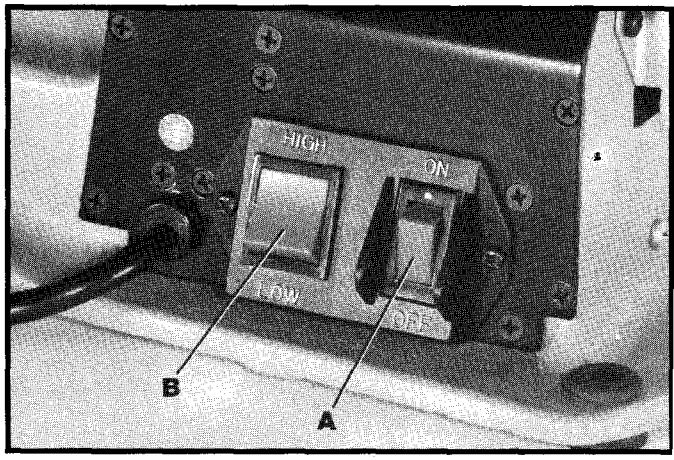

Fig. 18

LOCKING ON-OFF SWITCH IN THE "OFF" POSITION

IMPORTANT: We suggest that when the scroll saw is not in use, the on-off switch be locked in the "OFF" position using a padlock, as shown in Fig. 19.

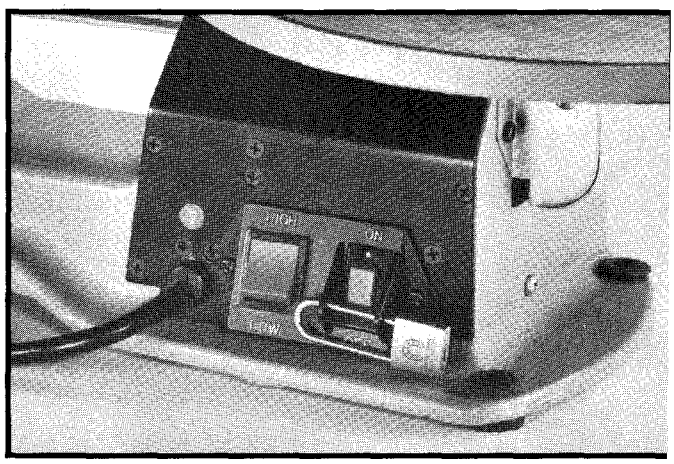

Fig. 19

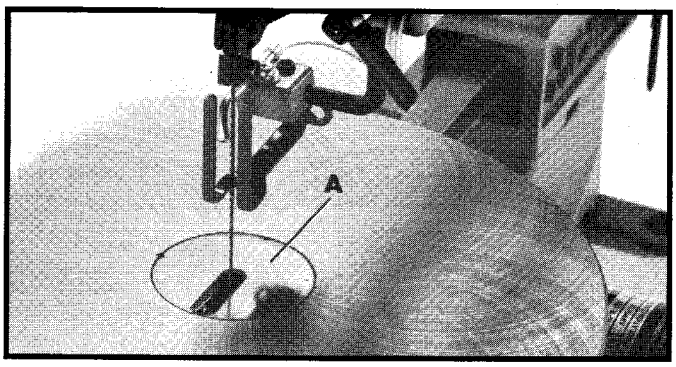

Fig. 20

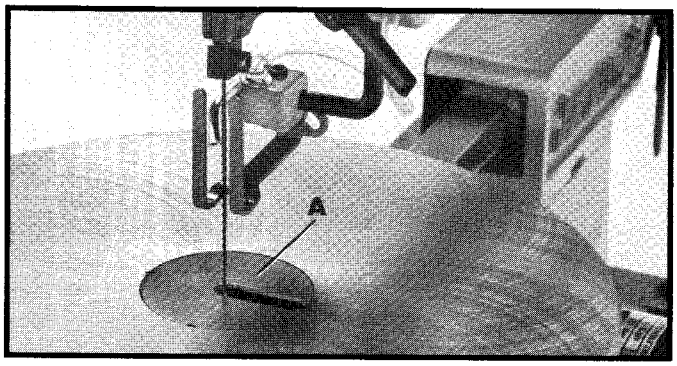

Fig. 21

TABLE INSERT

The table insert (A) can be assembled to the saw table with the opening in the insert pointing to the front of the table, as shown in Fig. 20, or to the right as shown in Fig. 21.

With the table in the level position, 90 degrees to the blade, the insert (A) should be positioned, as shown in Fig. 20. This allows for the blade to be pivoted forward after it is unclamped from the top blade holder, enabling you to quickly insert the blade into the next hole in a pattern when doing inside-cutting, as you will see later in this manual.

When tilting the table for bevel cutting operations the insert (A) should be positioned as shown in Fig. 21. This allows for clearance of the blade when tilting the table.

A table insert blank (B) Fig. 22, is supplied as standard equipment with your scroll saw and can be used when cutting very small workpieces to give added support to the bottom of the workpiece. Simply cut a slot into the blank and replace the standard insert (A) with the blank (B). The slot cut into the blank (B) will only be as wide as the blade giving maximum support to the bottom of the workpiece.

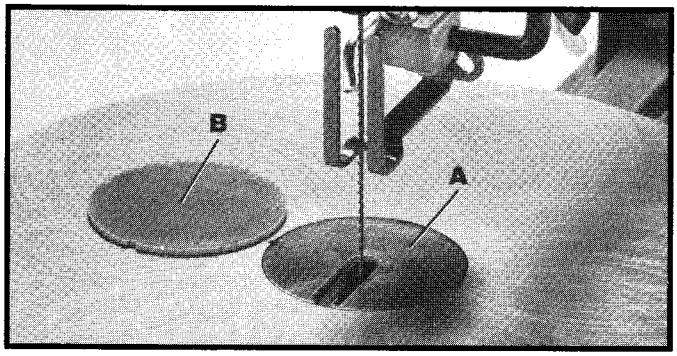

Fig. 22

CHANGING BLADES

1. **WARNING: TO AVOID INJURY FROM ACCIDENTAL STARTING ALWAYS TURN SWITCH "OFF" AND REMOVE POWER CORD PLUG FROM ELECTRICAL OUTLET BEFORE REMOVING OR REPLACING BLADE.**

2. Remove table insert (A) Fig. 23, and release blade tension by pulling tension lever (B) forward, as shown.

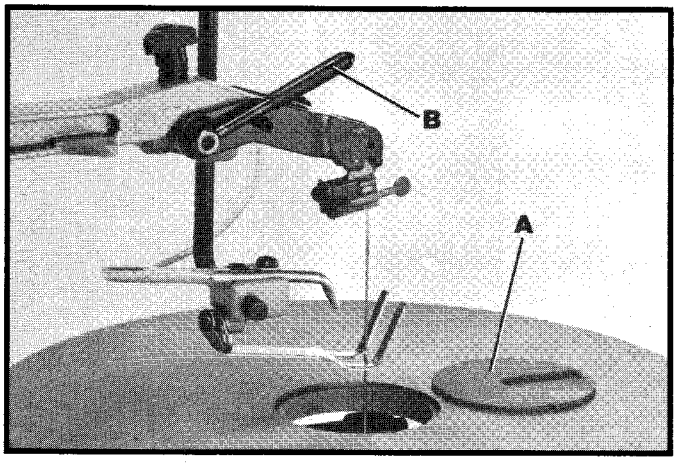

Fig. 23

3. Push chuck locking lever (C) Fig. 24, to the rear as shown. This will automatically release the blade (D) from the upper chuck (E).

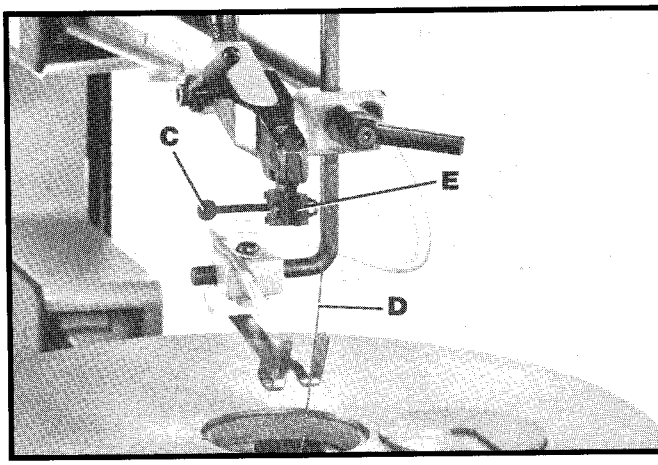

Fig. 24

4. Insert long end (F) Fig. 25, of quickset blade changing wrench into hole (G) in lower blade holder. This will automatically align wrench (H) with blade holder screw (J).

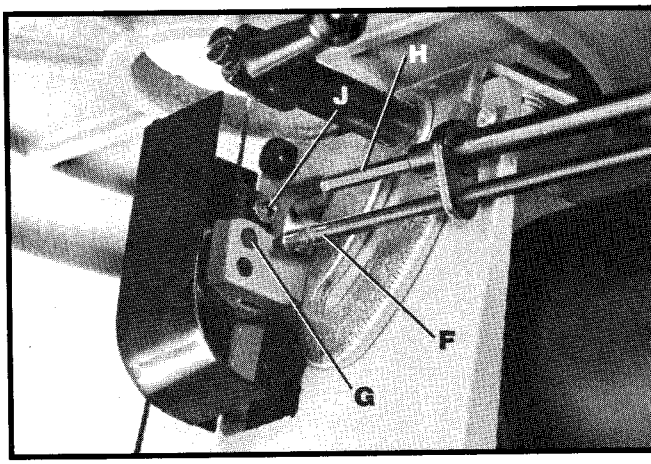

Fig. 25

5. Fig. 26 illustrates the quickset blade changing wrench (K) engaged with the lower blade holder assembly. Turn wrench counterclockwise to loosen screw (J) Figs. 26 and 27, and remove blade from lower chuck, as shown in Fig. 27.

6. Insert new blade into the lower and upper blade holders in the same manner, making certain the blade teeth are pointing down toward the table.

7. Apply blade tension by referring to the following section "ADJUSTING BLADE TENSION."

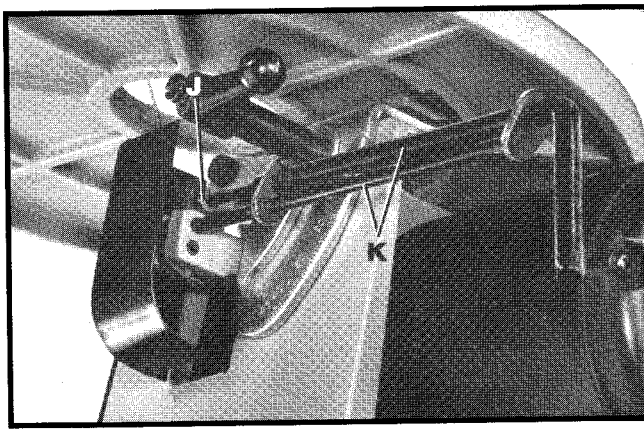

Fig. 26

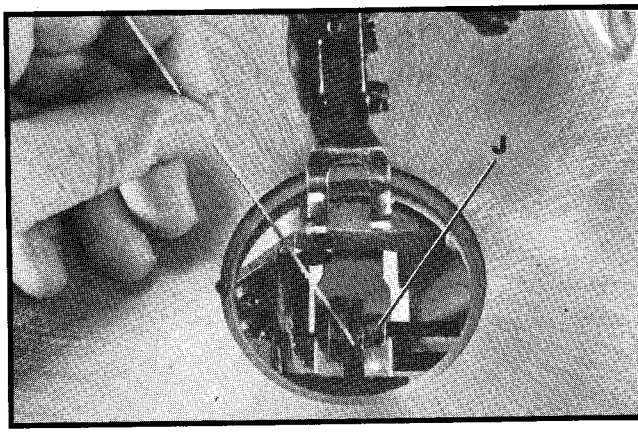

Fig. 27

ADJUSTING BLADE TENSION

Tension is applied to the blade when the blade tension lever (A) Fig. 28, is in the rear position, as shown. When the lever (A) is moved forward, as shown in Fig. 29, blade tension is released.

To increase blade tension, turn knob (B) Fig. 29, clockwise and to decrease blade tension, turn knob (B) counterclockwise. When adjusting blade tension, lever (A) should be in the forward position, as shown in Fig. 29. **NOTE:** It is necessary to adjust the blade tension knob (B) only when the blade is removed from both upper and lower blade holders and a new or different type of blade is assembled to the holders. It is not necessary to adjust blade tension when the blade is removed and replaced in only the upper blade holder as in performing inside cutting operations.

Adjusting the blade for proper tension is usually accomplished by trial and error; however, a good method to use is to pluck the rear of the blade, like a guitar string, after the tension lever (A) Fig. 29, is moved to the rear. A high-pitched tone of the blade should be heard and this usually indicates proper tension. Finer blades require more tensioning (a higher pitched sound) while thicker blades require less tension.

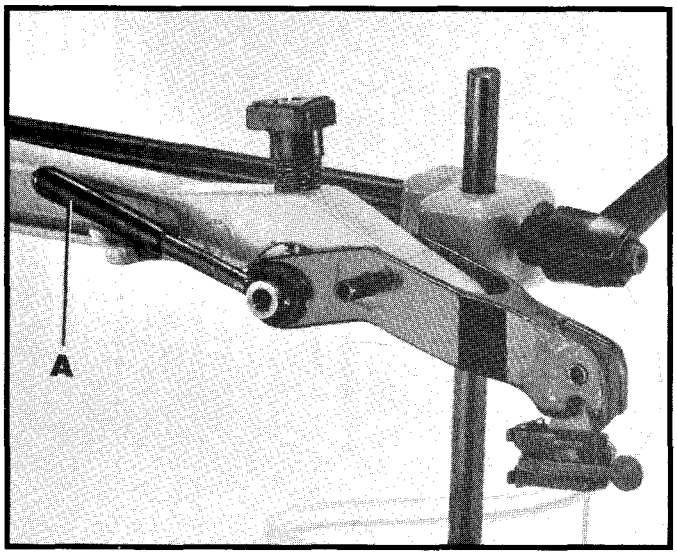

Fig. 28

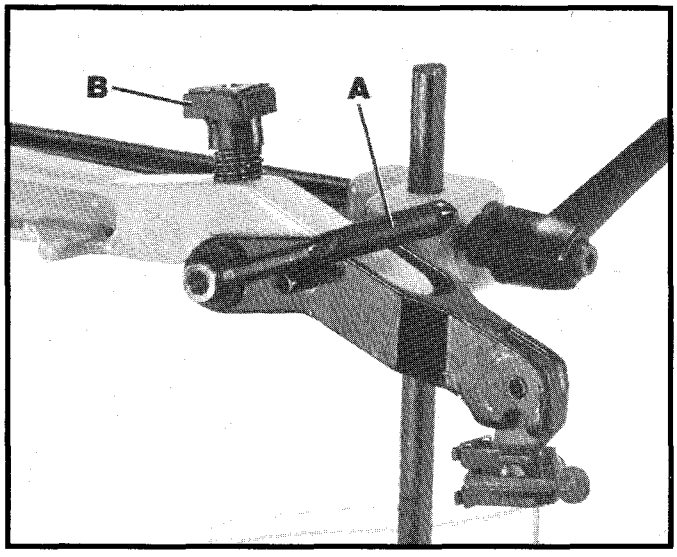

Fig. 29

ADJUSTING CLAMPING ACTION OF UPPER BLADE HOLDER

Different widths of scroll saw blades will make it necessary to adjust the clamping action of the upper blade holder. It should be noted, however, that very little adjustment is necessary and very little clamping force is required to hold the blade satisfactorily.

1. Move the chuck locking lever (A) Fig. 30, to the rear (open) position, as shown.

2. Using the special wrench (B) Fig. 30, supplied, turn locknut (C) clockwise to tighten and counterclockwise to loosen the clamping action of the blade holder. Very little movement of locknut (C) will be necessary.

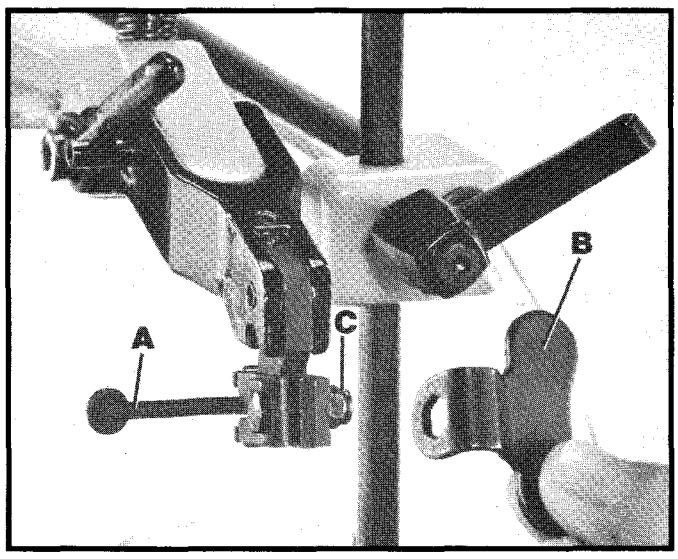

Fig. 30

TILTING THE TABLE

The table on your scroll saw can be tilted 45 degrees to the left for bevel cutting operations by loosening table lock handle (A) Fig. 31, tilt the table to the desired angle and tighten lock handle (A).

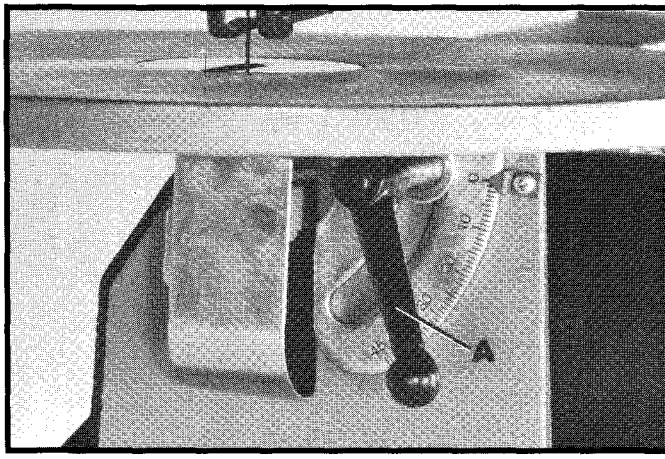

Fig. 31

When bevel cutting, the holddown (B) Fig. 32, can be adjusted to lay flat on the stock by loosening screw (C) and tilting the holddown (B) accordingly. Then tighten screw (C).

If the workpiece is too thick, causing the stock to contact the holddown arm (D) Fig. 32, the complete holddown assembly must be removed, since thick stock is heavy enough to resist lifting off the table during the blade up stroke.

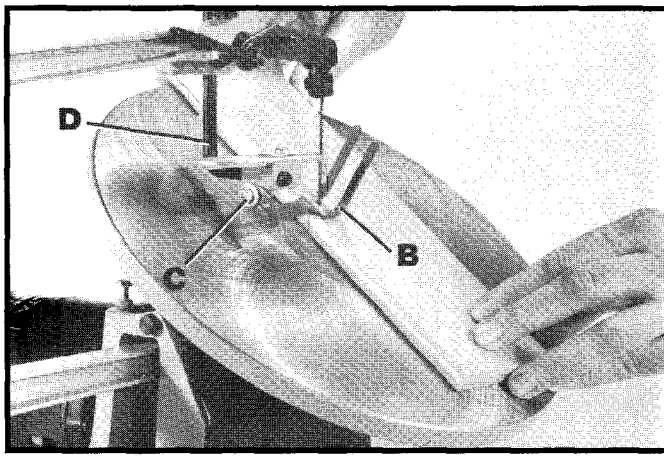

Fig. 32

LEVELING THE TABLE

1. Loosen table lock handle and move the table all the way to the right.

2. Using a square (A) Fig. 33, check to see if the table is 90 degrees to the saw blade, as shown.

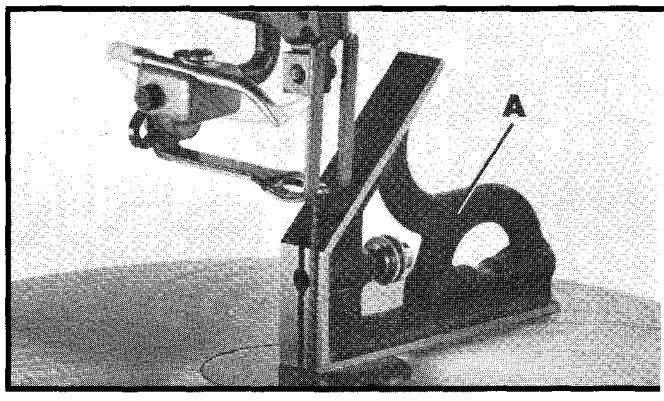

Fig. 33

3. If the table is not at 90 degrees to the blade, adjust the table accordingly making certain screw (B) Fig. 34, contacts bottom of table surface when table is 90 degrees to the blade. Screw (B) can be adjusted by loosening nut (C), thread screw (B) in or out the desired distance and tightnen nut (C).

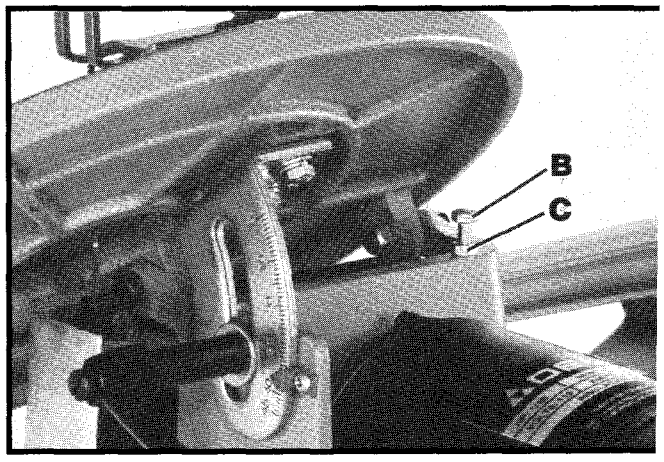

Fig. 34

ADJUSTING HOLDDOWN

The holddown (A) Fig. 35, should be adjusted so it contacts the top surface of the work being cut by loosening lock handle (B) and moving holddown rod (C) up or down. Then tighten lock handle (B).

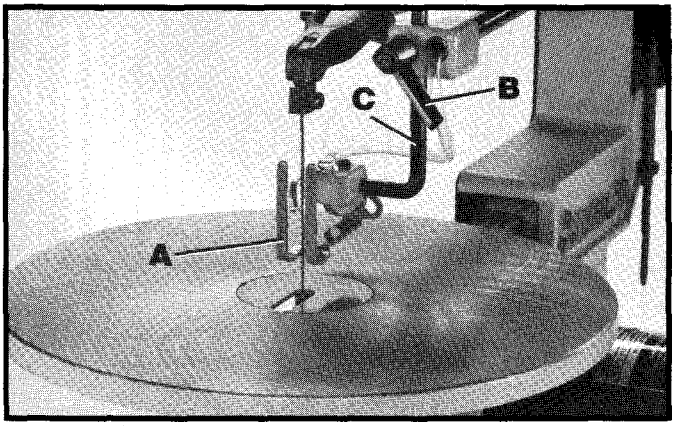

Fig. 35

ADJUSTING DUST BLOWER

The dust blower (A) Fig. 36, may be moved to direct air to the most effective point on the cutting line by loosening screw (B), adjust nozzle (A) accordingly and tighten screw (B).

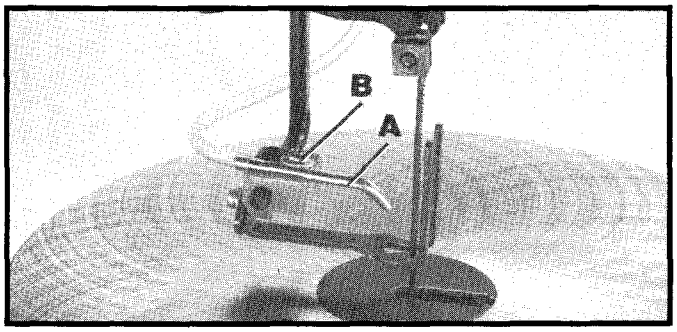

Fig. 36

INSIDE CUTTING

Inside cutting is where the blade must be threaded through a hole in the workpiece. The Delta 16" Scroll Saw has the capability of performing this operation quickly and easily as follows:

Let's assume you are performing an inside cutting operation on a project, similar to the one shown in Fig. 37, that has numerous inside cuts to be made. This can be accomplished quickly with the Delta saw. In Fig. 37, the operator has just completed one of the inside cuts and must move to the next hole.

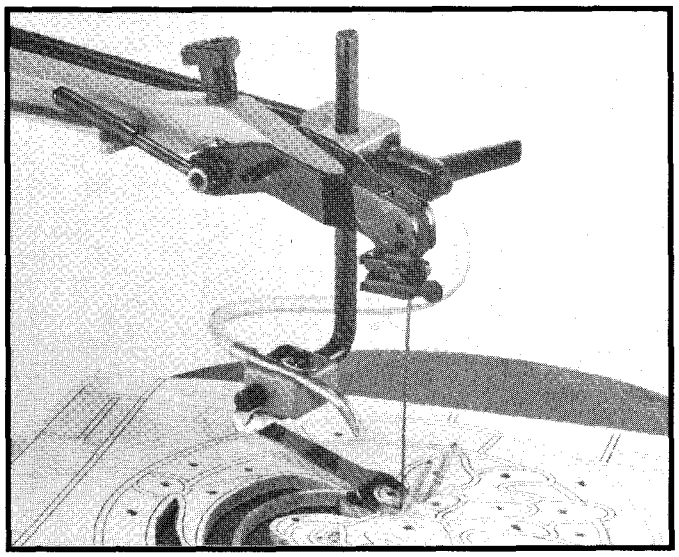

Fig. 37

Loosen lock handle (A) Fig. 38, and raise the spring holddown (B). Release blade tension by moving tension lever (C) forward and loosen upper blade holder by moving lever (D) to the rear as shown. This will release the blade (E). Insert the blade (E) into the next hole in the pattern, as shown.

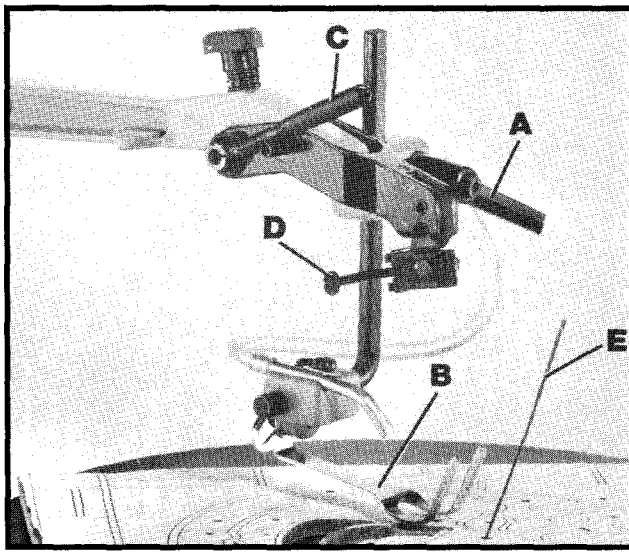

Fig. 38

Reassemble blade (E) Fig. 39, back into the upper blade holder and tighten blade by moving lever (D) forward. Move tension lever (C) to the rear as shown and lower spring holddown (B). You are ready to make the next inside cut.

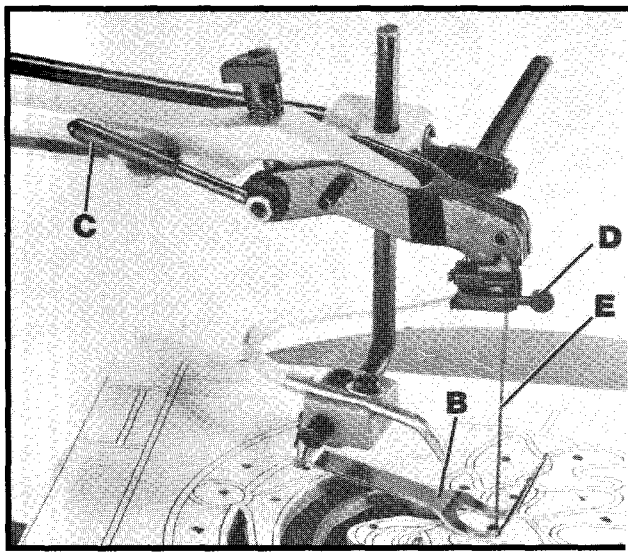

Fig. 39

LUBRICATION

To keep the scroll saw operating at peak efficiency, we recommend that a simple maintenance procedure be performed after approximately each 20 hours of use. Proceed as follows:

1. **MAKE CERTAIN THE MACHINE IS DISCONNECTED FROM THE POWER SOURCE.**

2. Remove four screws (A) Fig. 40, and remove side panel (B) from the scroll saw.

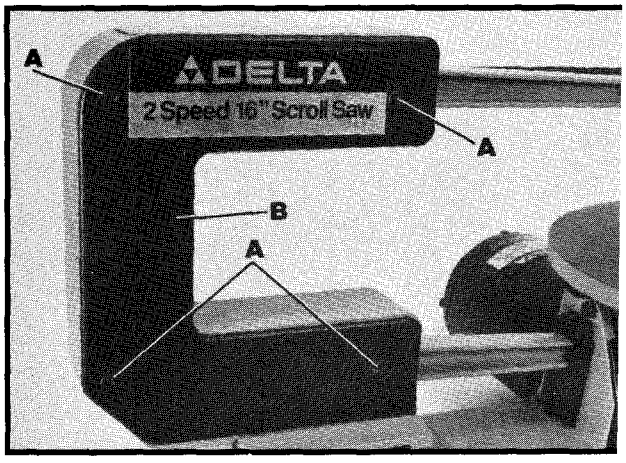

Fig. 40

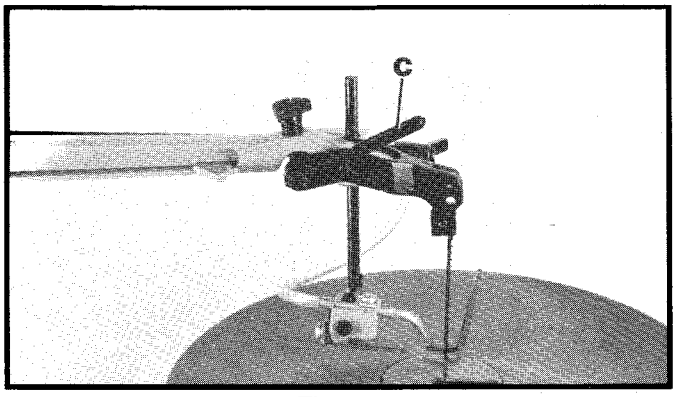

Fig. 41

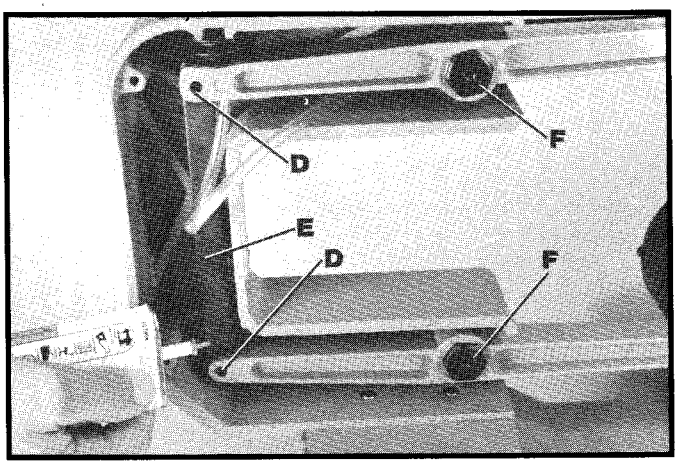

Fig. 42

3. Release blade tension by pulling tension lever (C) Fig. 41, forward as shown.

4. Lubricate the shafts of two special screws (D) Fig. 42, with a few drops of light machine oil in the areas where they pass through the connecting link (E). **NOTE: DO NOT REMOVE SPECIAL SCREWS TO LUBRICATE.**

5. Remove two pivot bolts (F) Fig. 42.

6. Thoroughly clean grease from shafts (G) Fig. 43, of both pivot bolts (F) and lubricate shafts (G) with a few drops of light machine oil.

7. Reassemble two pivot bolts (F) Fig. 43, to machine.

8. Replace side panel removed in **STEP 2** and reapply tension to the blade.

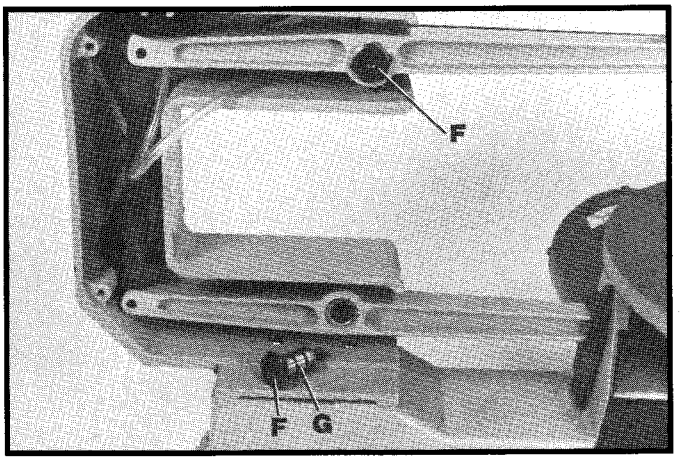

Fig. 43

USING ACCESSORY 31-055 FLEX SHAFT KIT

The accessory 31-055 Flex Shaft Kit (A) Fig. 44, can easily be adapted to the motor shaft of your 16" Scroll Saw enabling you to use sanding drums, grinding points, rotary cutters and wire and bristle brushes in the keyless 3-jaw chuck (B).

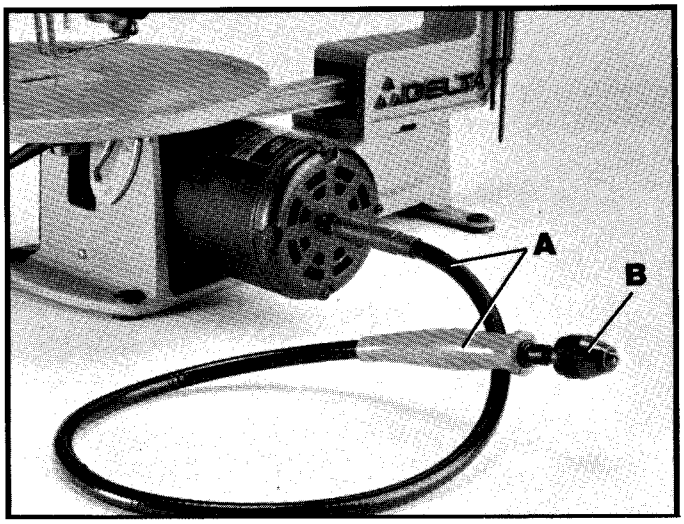

Fig. 44

OPERATION

CHOICE OF BLADE AND SPEED

Your scroll saw will accept a wide variety of 5" flat end blades and can be operated at 850 or 1725 cutting strokes per minute. Consider the following as a general guideline for selecting a blade and operating speed.

1. Use a finer blade for cutting thin workpieces, for hard materials, or when a smoother cut is required.

2. Use a coarser blade for cutting thick workpieces, when making straight cuts or for medium to soft materials.

3. Use a blade that will have 2 teeth in the workpiece at all times.

4. Most blade packaging is marked with the size of the wood the blade is intended to cut and the minimum radius which can be cut with that blade.

5. The 850 strokes per minute setting is more effective than the 1725 strokes per minute setting when using thin blades and making intricate cuts.

BLADE BREAKAGE

Blade breakage is usually caused by one or more of the following:

1. Bending the blade during installation.
2. Improper blade tension.
3. Improper blade selection for the work being cut.
4. Forcing the work into the blade too rapidly.
5. Cutting too sharp a turn for the blade being used.
6. Improper blade speed.

ACCESSORIES

Scroll Saw Blades

A proper blade for every job. All are 5" long with accurately spaced teeth. Heat treated for extra long life. Have 5/8" blank ends for fastening into chuck. 1/2 dozen to a package.

Catalog Number	Material Cut	Width inch	Thck. inch	Teeth per/inch
40-058	Steel - Iron - Lead Copper - Aluminum	.070	.018	26
40-159	Pewter - Paper - Asbestos Felt	.075	.018	20
40-160	Steel - Iron - Lead Copper - Brass	.078	.022	15
40-161	Aluminum - Pewter Asbestos	.085	.022	15
40-164	Sheet Metal - Iron Aluminum - Copper Brass - Pewter - Lead Wood - Asbestos	.110	.018	20
40-165	Asbestos - Mica - Brake Lining - Steel - Iron Lead - Copper - Brass Pewter - Aluminum	.250	.028	20
40-184	Wood Veneer - Plastics Celluloid - Hard Rubber Bakelite - Ivory - Extremely Thin Materials	.029	.012	20
40-185	Plastics Celluloid	.035	.015	15
40-187	Bakelite	.090	.022	7
50-188	Ivory Wood	.110	.022	7
40-191	Wall Board - Pressed Wood Wood - Lead - Bone - Felt Paper - Copper - Ivory Aluminum	.110	.022	15
40-192	Hard and Soft Wood	.110	.022	10
40-193	Hard and Soft Wood	.187	.025	10
40-194	Hard and Soft Wood	.250	.028	7
40-195	Pearl - Pewter Mica	.041	.019	30
40-196	Pressed Wood Sea Shells	.065	.023	20
40-198	Hard Leather	.085	.022	12

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

Double Tooth Blades

Two teeth together followed by a flat surface for efficient chip removal. For faster cutting; cleaner edges. All blades 5" long. Twelve per package.

Catalog Number	Material Cut	Width inch	Thck. inch	Teeth per/inch
40-641	For close radius cutting in materials 1/16" or thicker. Great for sawing hard/soft wood, bone, horn, plastics, etc.	.038	.016	16
40-642	Popular sizes for cutting hard and soft woods 3/16"	.044	.018	13
40-643	up to 2". Also plastics, paper, felt, bone, etc.	.053	.018	11
40-645	For smooth, splinter-free finish on top and bottom sides. Excellent for hard/soft wood, plywood, etc., with thickness of 1/4" or more	.061	.022	10

Skip Tooth Blades

All blades have skip teeth for fast cutting and greater chip clearance. All blades are 5" long and are supplied 12 blades per package, except for Assortment Pack.

Catalog Number	Material Cut	Width inch	Thck. inch	Teeth per/inch
40-605	For extremely intricate sawing. Very thin cuts in 1/16" to 3/32" materials. Excellent for cutting wood veneer, plastics, hard rubber, pearl, etc.	.022	.010	27
40-607	For close radius cutting in materials 1/2" or thicker. Great for sawing hard/soft wood, bone, horn, plastics, etc.	.037	.015	12.5
40-608	Popular sizes for cutting hard and soft woods 3/16" up	.043	.016	11.5
40-609	to 2". Also plastics, paper, felt, bone, etc.	.053	.018	12
40-610	For smooth, splinter-free finish on top and bottom sides. Excellent for hard/soft wood, plywood, etc., with thickness of 1/4" or more	.062	.024	9.5 with 6 reverse teeth
40-611	Wood, plastics, for extremely thin cuts on materials 3/32" to 1/2" thick	.070	.010	18.5
40-616	For cutting hard and soft woods 3/16" up to 2". Also cuts plastics, paper, felt, bone, etc.	.062	.024	9.5
40-621	For smooth, splinter-free finish on top and bottom sides. Excellent for hard/soft wood, plywood, etc. with thickness of 1/2" or more	.038	.016	12.5 with 9 reverse teeth
40-622	For smooth, splinter-free finish on top and bottom sides. Excellent for hard/soft wood, plywood, etc. with thickness of 1/4" or more	.047	.017	11.5 with 8 reverse teeth

Spiral Scroll Saw Blades

Cut in all directions without turning the workpiece. For cutting all types of material: wood, plastic, bone, horn, non-ferrous metals. All blades 5" long: 12 blades per package.

Catalog Number	Kerf inch	Teeth per inch
40-625	.047	36
40-626	.042	41
40-627	.035	46

Metal Piercing Blades

These premium quality blades are made of hardened and tempered steel for sawing metal and other hardened materials. All blades are 5" long, have regular teeth and are supplied 6 blades per package.

Catalog Number	Width inch	Thickness inch	Teeth per inch
40-617	.023	.012	48
40-618	.034	.016	36
40-619	.051	.022	25

Lectric Air™ Foot Switch. An air-activated switch with alternate action on-off power cont use with scroll saws. Safe, convenient, easy to and use!

No. 40-050C Lectric Air™ Foot Switch. Inc controller, 10-ft. air tubing, foot pedal, activato protective shroud.

No. 40-644 Stand. Converts bench saw to model unit.

No. 50-275 Mobile Base. Adds roll-away port to 40-644 stand-mounted machine.

No. 31-055 36" Flexible Shaft. With 3/16" ca keyless chuck. Attaches to motor power take-o mounting grinding points, rotary cutters, pol wheels and other attachments.

No. 31-060 Set of 5 Felt Polishing Bobs. Assorted sizes. 1/8" dia. shank.

No. 31-061 Set of 9 Felt Polishing Wheels. Assorted sizes, 1/8" dia. shank.

No. 40-512 5/8" Dia. x 3/8" Sanding Drum an Sleeves. 1/8" dia. shank.

No. 40-513. Set of 6 assorted grinding point dia. shank.

No. 40-514. Set of 3 rotary cutters. 3/32" dia.

No. 40-515. Set of 4 wire and bristle brushes dia. shank.

No. 40-620 Package of 36 Assorted Scroll Saw Blades. Includes 12 each blades: Nos. 40-605, 40-608 and 40-616.