

Sears

owners manual

CRAFTSMAN
COMMERCIAL

7-1/2 INCH CIRCULAR SAW
DOUBLE INSULATED

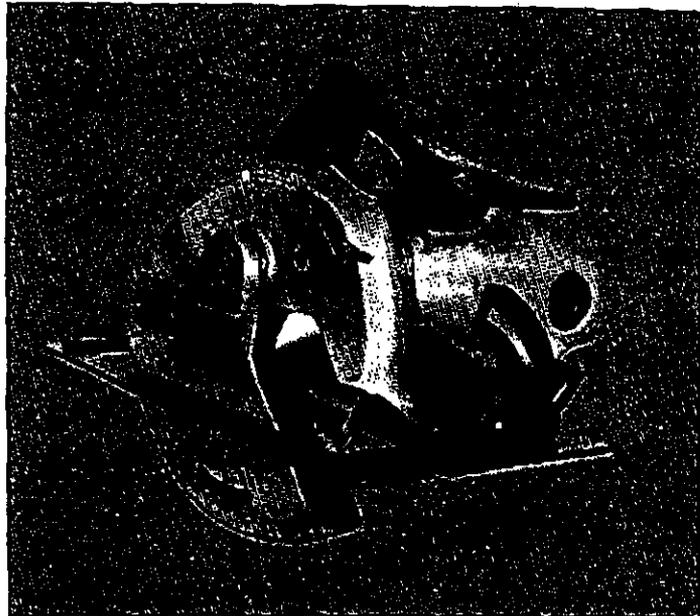
MODEL NO.

315.11870

CAUTION:

Read Rules for
Safe Operation
and Instructions
Carefully

- Introduction
- Operation
- Repair Parts



THIS SAFETY SEAL OF THE POWER TOOL INSTITUTE ASSURES YOU:



1. That the manufacturer's power tools, including the particular tool associated with the Seal, are produced in accordance with applicable Standards for Safety of Underwriters' Laboratories and American National Standards (ANSI).
2. That compliance with applicable safety standards is assured by independent inspection and testing conducted by Underwriters' Laboratories (UL).
3. That every motorized tool is inspected under power.
4. That every tool has with it adequate instructions and a list of safety rules for the protection of the user.
5. That the tool manufacturer is a member of the Power Tool Institute and is a sponsor of the Institute's Consumer Safety Education Program.

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GUARANTEE

CRAFTSMAN PORTABLE ELECTRIC TOOLS ARE UNCONDITIONALLY GUARANTEED FOR ONE YEAR TO GIVE COMPLETE SATISFACTION OR RETURN FOR FREE REPLACEMENT.

THIS GUARANTEE SERVICE IS AVAILABLE BY SIMPLY RETURNING THE TOOL TO ANY SEARS STORE.

SEARS, ROEBUCK AND CO. and SIMPSONS-SEARS LTD.

introduction

DOUBLE INSULATION

Double insulation is a concept in safety, replacing the standard grounded supply system, in electric power tools. The construction of a double insulated tool offers protection equal to a properly grounded tool without the necessity for using a grounded conductor. The double insulation system eliminates the need for the usual three wire grounded power cord and grounded supply system.

Wherever there is electric current in the tool there are two complete sets of insulation to protect the user. All exposed metal parts are isolated from the internal metal motor components with protecting insulation. The lead wires, switch, etc. with their functional insulation have the added protection of non-conductive sleeving or housings to complete the double insulation system.

SERVICING OF A TOOL WITH DOUBLE INSULATION REQUIRES EXTREME CARE AND KNOWLEDGE OF THE SYSTEM AND SHOULD BE PERFORMED ONLY BY A QUALIFIED SERVICE TECHNICIAN. FOR SERVICE WE SUGGEST YOU RETURN THE TOOL TO YOUR NEAREST SEARS STORE FOR REPAIR WHICH WILL BE DONE WITH ORIGINAL FACTORY REPLACEMENT PARTS.

Features include a rip guide for making fast, smooth, consistent rip cuts without penciled lines; push button arbor lock for fast, easy blade change-over; easy view saw blade port with directed air flow for keeping line of cut clear; uses 7, 7-1/4, or 7-1/2 inch blades; kick-proof clutch which allows blade to slip on spindle should binding or jamming occur along with exclusive riving knife assure maximum user safety.

When servicing use only identical replacement parts.

RULES FOR SAFE OPERATION



1. **KNOW YOUR POWER TOOL** — Read owner's manual carefully. Learn its applications and limitations as well as the specific potential hazards peculiar to this tool.
2. **GROUND ALL TOOLS — UNLESS DOUBLE-INSULATED.** If tool is equipped with three-prong plug, it should be plugged into a three-hole electrical receptacle. If adapter is used to accommodate two-prong receptacle, the adapter wire must be attached to a known ground. (Usually the screw securing the receptacle cover plate.) Never remove third prong.
3. **KEEP GUARDS IN PLACE** and in working order.
4. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
5. **AVOID DANGEROUS ENVIRONMENT.** Don't use power tool in damp or wet locations. And keep work area well lit.
6. **KEEP CHILDREN AWAY.** All visitors should be kept safe distance from work area.
7. **STORE IDLE TOOLS.** When not in use, tools should be stored in dry, high or locked-up place—out of reach of children.
8. **DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was designed.
9. **USE RIGHT TOOL.** Don't force small tool or attachment to do the job of a heavy duty tool.
10. **WEAR PROPER APPAREL.** No loose clothing or jewelry to get caught in moving parts. Rubber gloves and footwear are recommended when working outdoors.
11. **USE SAFETY GLASSES** with most tools. Also face or dust mask if cutting operation is dusty.
12. **DON'T ABUSE CORD.** Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil and sharp edges.
13. **SECURE WORK.** Use clamps or a vise to hold work. It's safer than using your hand and it frees both hands to operate tool.
14. **DON'T OVERREACH.** Keep proper footing and balance at all times.
15. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp at all times, and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
16. **DISCONNECT TOOLS.** When not in use, before servicing; when changing attachments, blades, bits, cutters, etc.
17. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
18. **AVOID ACCIDENTAL STARTING.** Don't carry plugged-in tool with finger on switch.

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1. **DO** read thoroughly INTRODUCTION and OPERATING INSTRUCTIONS before using your CIRCULAR SAW.
2. **DO** be sure the voltage of the power supply agrees with the data plate marking on the unit.
3. **DO** use correct size extension cord as recommended.
4. **DO** be sure switch is in "OFF" position before connecting tool to power supply.
5. **DO** be sure saw blade is properly mounted with teeth pointing upward at front of saw.
6. **DO** tighten locking nuts after making adjustments.
7. **DO** let saw blade come to full speed before beginning cut.
8. **DO** release switch immediately if blade binds or jams in work.
9. **DO** disconnect power cord when cleaning or doing maintenance on tool.
10. **DO** replace both brushes when either is worn to about 1/4 inch in length.
11. **DO** keep blades sharp.
12. **DO** disconnect from power source and store in a clean dry place.

1. **DON'T** use your CIRCULAR SAW before reading thoroughly, INTRODUCTION and OPERATING INSTRUCTIONS.
2. **DON'T** begin operation unless lower blade guard operates freely.
3. **DON'T** use a dull blade or damaged blade.
4. **DON'T** begin operation until saw blade clamp screw is securely tightened.
5. **DON'T** cut materials that are not suitably supported.
6. **DON'T** tie back lower blade guard.
7. **DON'T** force tool, allow Circular Saw to perform as it was designed.
8. **DON'T** leave Circular Saw unattended before disconnecting from power source.
9. **DON'T** allow the cord near saw blade when operating.
10. **DON'T** allow children to operate Circular Saw.
11. **DON'T** carry unit by power cord.
12. **DON'T** plug or cover air vents to keep dust from flying. Vents must be kept open to keep motor cool.

CAUTION



The operation of any power tool can result in foreign objects being thrown into the eyes, which can result in severe eye damage. Always wear safety glasses or eye shields before commencing power tool operation. We recommend Wide Vision Safety Mask for use over spectacles, or standard safety glasses . . . available at Sears retail or catalog stores.

KEEP HANDS AWAY FROM CUTTING AREA.

DO NOT REACH UNDERNEATH WORK PIECE FOR ANY REASON WHILE SAW BLADE IS ROTATING.

IF SAW SHOULD BE USED IN OVERHEAD OR VERTICAL POSITION, IT IS NORMAL THAT BLADE GUARD NOT COMPLETELY RETRACT, THEREFORE ALWAYS CHECK GUARD BEFORE MAKING NEXT CUT.

AVOID USE OF ALL SOLVENTS WHEN CLEANING PLASTIC PARTS. USE CLEAN CLOTHS AND WIPE PARTS AS MUCH AS POSSIBLE TO REMOVE DIRT, CARBON DUST, ETC. MOST PLASTICS ARE SUSCEPTIBLE TO VARIOUS TYPES OF COMMERCIAL SOLVENTS AND MAY BE DAMAGED BY THE USE OF THESE SOLVENTS.

THIS PRODUCT, or any electrical product, requires extreme care when service repairs are made. A dangerous electrical hazard can be created by tampering with the electrical or insulating systems or in the replacement or substitution of repair parts. Repairs should be made only by a qualified technician. If service is required we suggest you return the tool to your nearest Sears store for approved service with original factory replacement parts.

WHEN ELECTRIC TOOLS ARE USED ON FIBER-GLASS boats, sports cars, etc. it has been found that they are subject to accelerated wear and possible premature failure, as the fiberglass chips and grindings are highly abrasive to bearings, brushes, commutator, etc. Consequently it is not recommended that this tool be used for continuous production work on any fiberglass material. During any use on fiberglass it is extremely important that the tool is cleaned frequently by blowing with an air jet.

EXTENSION CORDS—The use of any Extension cord will cause some loss of power. To keep this to a minimum and to prevent overheating and motor burn-out, use the table below to determine the MINIMUM wire size (A.W.G.) Extension Cord.

| <u>Extension Cord Length</u> | <u>Wire Size A.W.G.</u> |
|------------------------------|-------------------------|
| 25- 50 Feet | 14 |
| 50- 75 Feet | 12 |
| 75-100 Feet | 10 |

Extension cords suitable for use with your Circular Saw are available at your nearest Sears Catalog Order or Retail Store.

Another time saving convenience is a cord-lock offered by Sears which prevents separation of cord. Cord-lock is available at your nearest Sears Retail Store or Catalog Order House.

operating

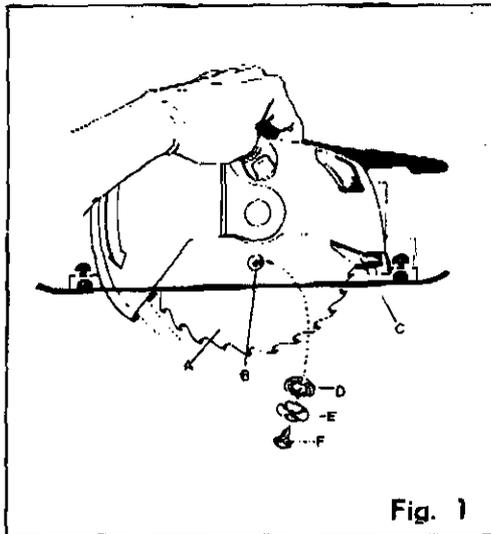


Fig. 1

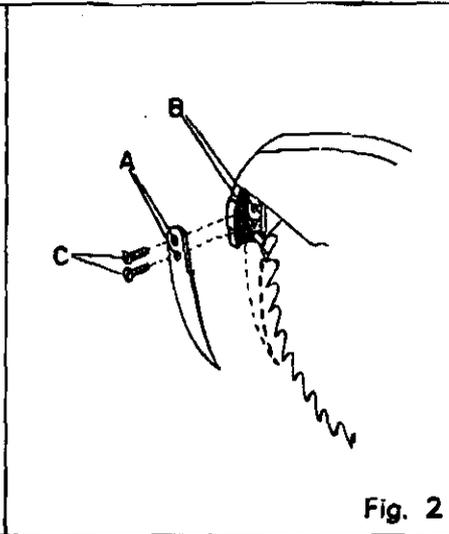


Fig. 2

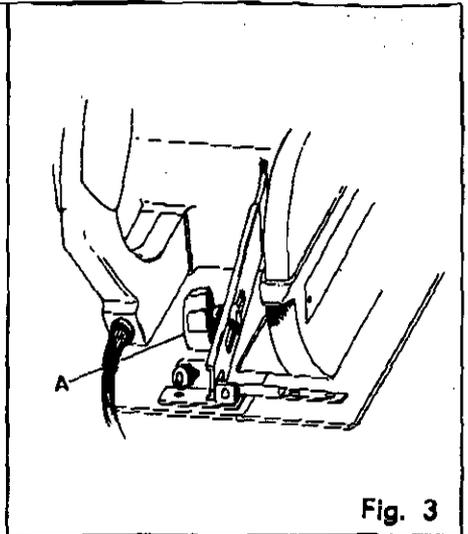


Fig. 3

PREPARING FOR OPERATION

When making accurate cuts take into consideration not only the width of the blade but also its kerf. Most blades have teeth that are set alternately to the right and left. This means the kerf or cut made is wider than the blade itself.

If a board is marked to precise length from the right, for example, the base edge (guide) must ride the left side of the line. Splitting the line or guiding to its right may cause the work piece to be shorter by the width of the kerf.

Always be certain guards are working properly before connecting unit to power supply. If guards do not work freely, clean thoroughly of all sawdust, etc. Should improper operating condition still exist the torsion spring in lower blade guard may need replacing. (See Torsion Spring Replacement instructions, page 6). The design of your saw allows unit to be positioned on the end of the motor housing for easy guard inspection, blade change-over, and riving knife assembly.

BLADE CHANGE-OVER: IMPORTANT—BE SURE POWER CORD IS DISCONNECTED FROM POWER SUPPLY. (See Fig. 1) Position unit on end of motor housing and depress lock pin fully. Using wrench, Key No. 46, (See parts list, page 9) turn blade screw, Key No. 54, clockwise while depressing lock pin until pin moves into lock position. While holding lock pin, turn blade screw counterclockwise to loosen. Release lock and remove blade screw, spring washer, Key No. 56, and blade washer, Key No. 55, from spindle shaft. Wipe a drop of oil onto flange bushing and blade washer (D) where contact is made with saw blade. Position saw blade (A) inside blade guard (C) with teeth pointing upward at front of saw. Place the undercut side of blade washer (D) and spring washer (E) over shaft, insert blade screw (F), engage lock pin and tighten blade screw until spring washer is flattened. Loosen blade screw 1/6 turn or one hex with

wrench to activate kick-proof clutch. Operating with blade screw securely tightened is recommended only for the users which prefer to operate without benefit of kick-proof clutch.

The best of saw blades will not cut efficiently if they are not kept clean and sharp. Using a dull blade will do nothing more than place a heavy load on your saw. Keep extra blades on hand, so that sharp blades are always available. Gum and wood pitch hardened on blade will slow it down. Use hot water or kerosene to remove these accumulations. **DO NOT USE GASOLINE.**

TO ASSEMBLE RIVING KNIFE: IMPORTANT—BE SURE POWER CORD IS DISCONNECTED FROM POWER SUPPLY. (See Fig. 2) The Riving Knife keeps wood apart to guard against blade binding or jamming. The effectiveness of the riving knife depends upon the amount of effort used in assembling and arriving at a proper setting. The saw blade should be in place before assembling riving knife as this is the determining factor for proper setting. Position holes in knife (A) over holes in upper blade guard (B) and insert screws (C) through holes in riving knife and into threaded holes in upper blade guard. Assure at least 1/16 inch clearance between tip of blade tooth and inside edge at tip of knife and tighten screws securely.

TO OPERATE

To start a cut, rest front edge of base on supported portion of work, line up guide (line where base and outboard base meet or edge of base when outboard base is removed) with line of cut, hold handles firmly and squeeze trigger switch. Allow saw blade to reach full speed, then guide saw into work with steady, even pressure. **DO NOT FORCE.** When cut is completed release switch and allow blade to stop before lifting saw from work.

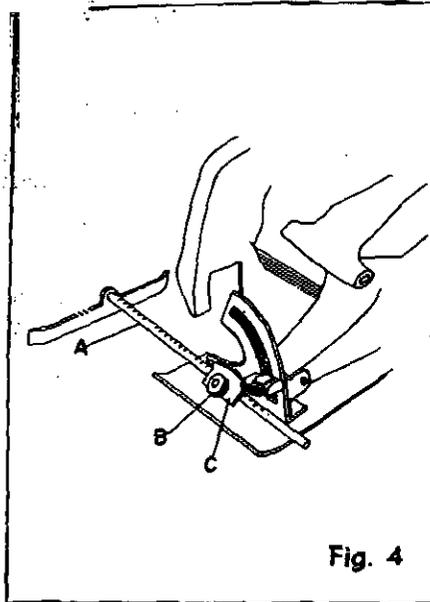


Fig. 4

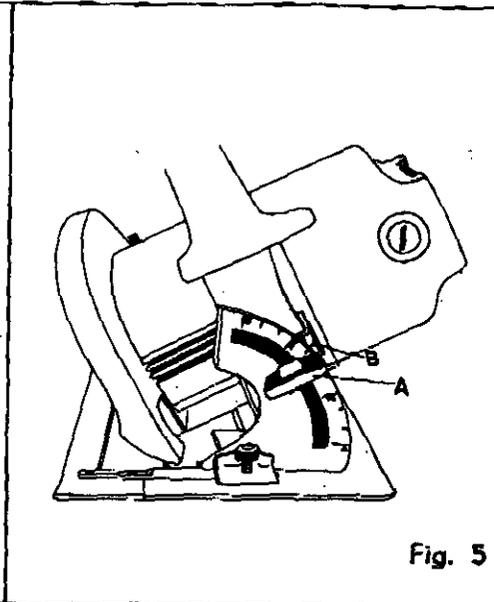


Fig. 5

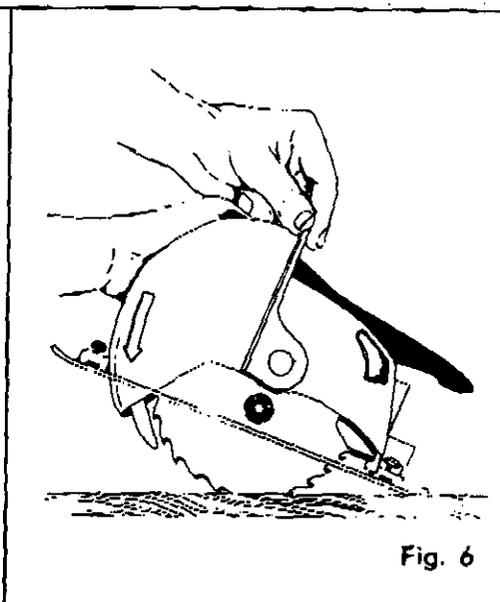


Fig. 6

DEPTH OF CUT—Correct depth adjustment should permit only one tooth of the blade to project below the material to be cut. (For carbide tipped blades, only $\frac{1}{2}$ of a tooth.) Depth adjustment should allow only the minimum blade exposure beyond maximum thickness of material to be cut. More depth will only increase friction and make for a rough cut. To adjust depth of cut (See Fig. 3) loosen knob (A), grasp handle, hold rear of base against flat surface and raise unit until required depth is reached. Tighten knob to lock. A setting approximately $\frac{1}{8}$ inch deeper than thickness of material to be cut is recommended for best performance. Depth setting should be at maximum depth when performing blade installation or change-over.

TO CROSS CUT AND RIP CUT—The guide (line where base and outboard base meet or edge of base when outboard base is removed) is in line with saw blade when bevel setting is at 0° . Inner face of notch in base is guide when bevel setting is at 45° . At intermediate settings blade will cut slightly to the left of the guide edge. To compensate offset your guide line to the right on the board to be cut.

The rip guide provided with your saw will assist you in making rip cuts of up to $5\frac{3}{4}$ inches. (See Fig. 4) Outboard base must be removed before assembling rip guide. **IMPORTANT—BE SURE POWER CORD IS DISCONNECTED FROM POWER SUPPLY.** Loosen

knurled head screw (B) by turning counterclockwise and remove outboard base. Insert rip guide (A) under clamp bracket (C) and adjust to desired setting with graduated surface up. Tighten knurled head screw in clamp bracket securely. Outboard base may also be removed for closer cutting parallel to walls etc. Closest cutting will be accomplished with bevel setting at 0° .

Hold guide face firmly against right edge of work to obtain a true cut without cramping the blade. Guiding edge of work must be straight for desirable results when using rip guide. Use caution to prevent blade from binding in the kerf at end of a cut.

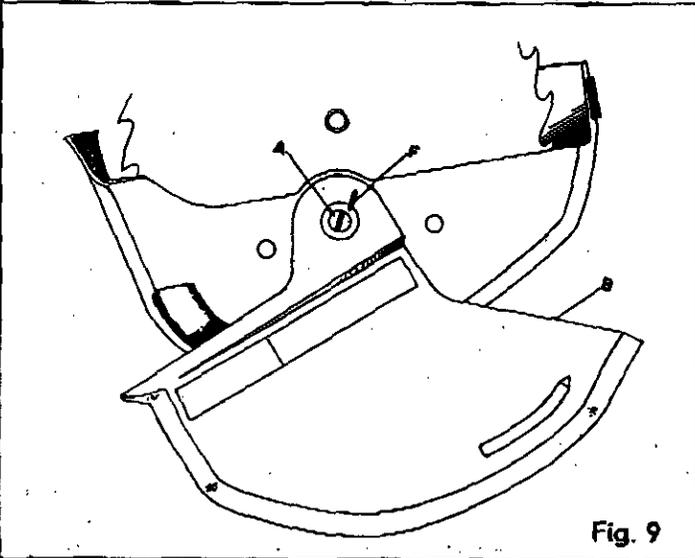
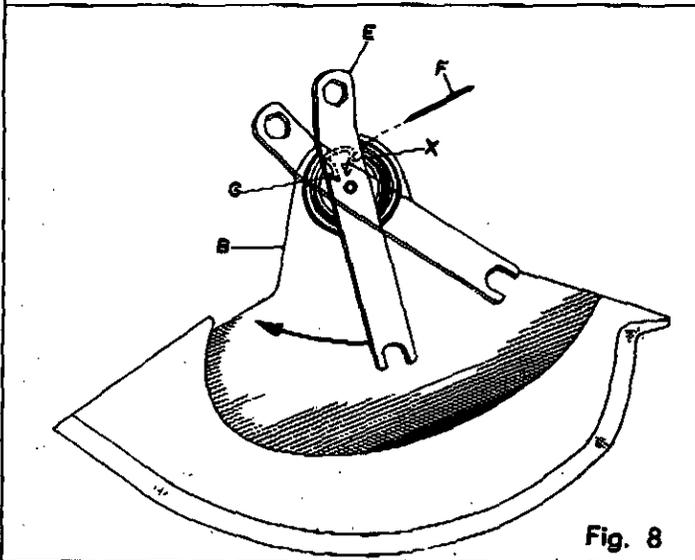
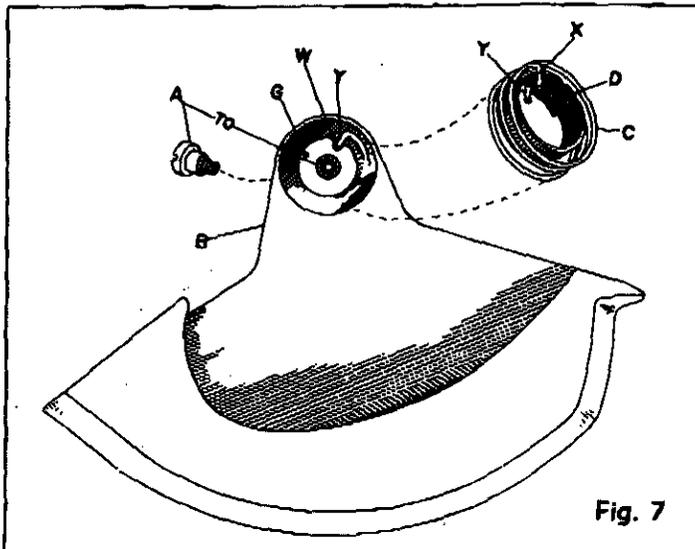
TO BEVEL CUT—True angle of cut may be adjusted to any desired setting between 0° and 45° . (See Fig. 5) **IMPORTANT—BE SURE POWER CORD IS DISCONNECTED FROM POWER SUPPLY.** Loosen knobs and adjust base so that index mark (B) is at 0° . Tighten knob (A) (See Fig. 5). Set desired depth of cut and tighten knob (A) (See Fig. 3). Set index mark (B) in line with required angle setting on bevel scale and tighten knob (A) (See Fig. 5). After setting at required angle make a trial cut in scrap material along a guide line to determine how much if any guide line must be offset to produce desirable cut.

TO POCKET CUT—(See Fig. 6) With bevel setting at 0° swing lower blade guard up and hold, rest front of base flat on work-piece. Start unit and slowly lower blade into work moving unit steadily forward to allow riving knife to move into kerf until base is flat on work. After cut is complete, release switch and allow blade to come to a complete stop before removing from work. Corners may be cleaned out with a hand saw or sabre saw.

TORSION SPRING REPLACEMENT

WEAR SAFETY GLASSES OR EYE SHIELD WHEN REPLACING TORSION SPRING.

IMPORTANT—BE SURE POWER CORD IS DISCONNECTED FROM POWER SUPPLY. In preparing to replace torsion spring a $3/32$ " pin at least one inch long will be required. In the event such a pin is not available a 4 or 5 penny finishing nail cut off below the head and scores will suffice.



Remove decal ($7\frac{1}{2}$ inch) to expose shoulder screw. Remove shoulder screw (A), holding lower blade guard (B) onto upper blade guard, by turning counterclockwise. Remove lower blade guard while exercising caution to retain spring washer in place on shoulder on upper blade guard.

(See Fig. 7) Position lower blade guard onto flat surface inside up with shoulder screw through hole in blade guard. Insert prong (X) of torsion spring (C) into slot in spring spacer (D) with prong (Y) resting against shoulder on reverse side of spacer. Insert spring and spacer into lower blade guard with prong (Y) placed into slot in blade guard. (See Fig. 8) Position $\frac{1}{4}$ inch hole in wrench (E) over threaded portion of shoulder screw, insert pin or nail (F) through small hole in wrench and engage pin behind prong (X) of torsion spring. Maintaining downward pressure on wrench to hold spring in place turn wrench clockwise approximately 270° or $\frac{3}{4}$ turn where pin will line up with through hole (G) in lower blade guard. To locate pin and hole tap pin lightly with hammer or mallet while turning wrench slowly in area of hole location. With pin seated in hole in lower blade guard position over open area and continue tapping until only approximately $1/16$ " of pin is exposed above wrench. Shoulder screw and wrench may now be removed. (See Fig. 9) Position lower blade guard onto upper blade guard with prong (X) positioned into slot in upper blade guard, insert shoulder screw and tighten securely before removing pin with a pair of pliers. Maintain clear area for lower blade guard when removing pin as sudden spring engagement will cause immediate retraction of lower blade guard.

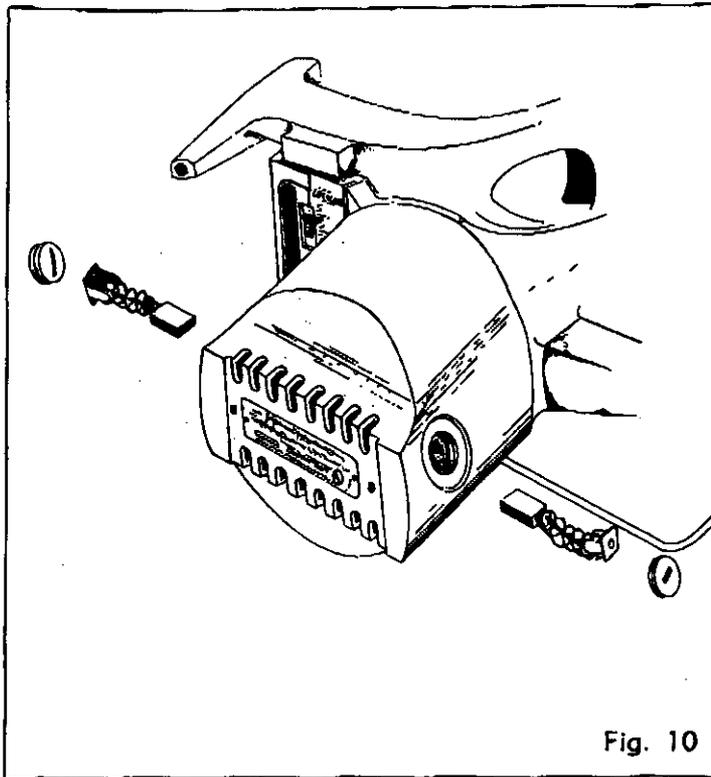


Fig. 10

BRUSH REPLACEMENT

Periodically check brushes for wear and replace both brushes when either is worn to about 1/4 inch in length. To check length of brushes they must be removed from the unit (see instructions below). Replacement of these relatively inexpensive parts, when necessary, will keep your Circular Saw operating more efficiently and prolong the life of the motor.

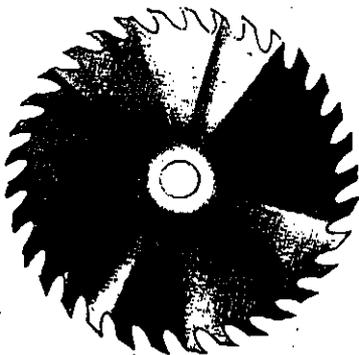
Replacement of worn-out brushes is considered normal operating maintenance and is not therefore covered by guarantee.

IMPORTANT—BE SURE POWER CORD IS DISCONNECTED FROM POWER SUPPLY. To replace carbon brushes (See Fig. 10), Key No. 71, (See parts list, page 9) unscrew brush caps, Key No. 70, and remove old brush. Reassemble new brush assembly making sure curvature of brush matches curvature of the surface of the motor to which it is mated and that the brushes move freely inside brush holder. Be sure brush caps are securely tightened.

LUBRICATION

All the bearings in this tool are lubricated with a sufficient amount of high grade lubricant for the life of the unit under normal operating conditions, therefore, no further lubrication is required.

ACCESSORIES ADD GREATER VERSATILITY

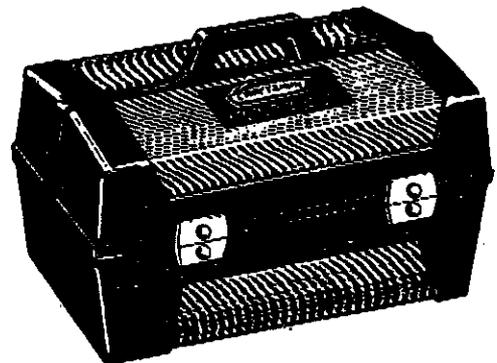
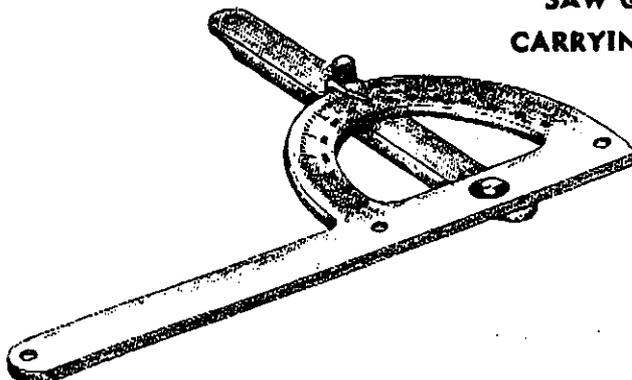


CORD LOCK
SAW BLADES



Buy Craftsman Shop Tested Accessories

SAW GUIDE
CARRYING CASE



WHEN USING ATTACHMENTS ALWAYS WEAR SAFETY GLASSES AND FOLLOW MANUFACTURERS RECOMMENDATIONS AS TO THEIR USE

ADDITIONAL ACCESSORIES AVAILABLE — VISIT YOUR NEAREST SEARS RETAIL STORE OR CATALOG OFFICE FOR A COMPLETE SELECTION