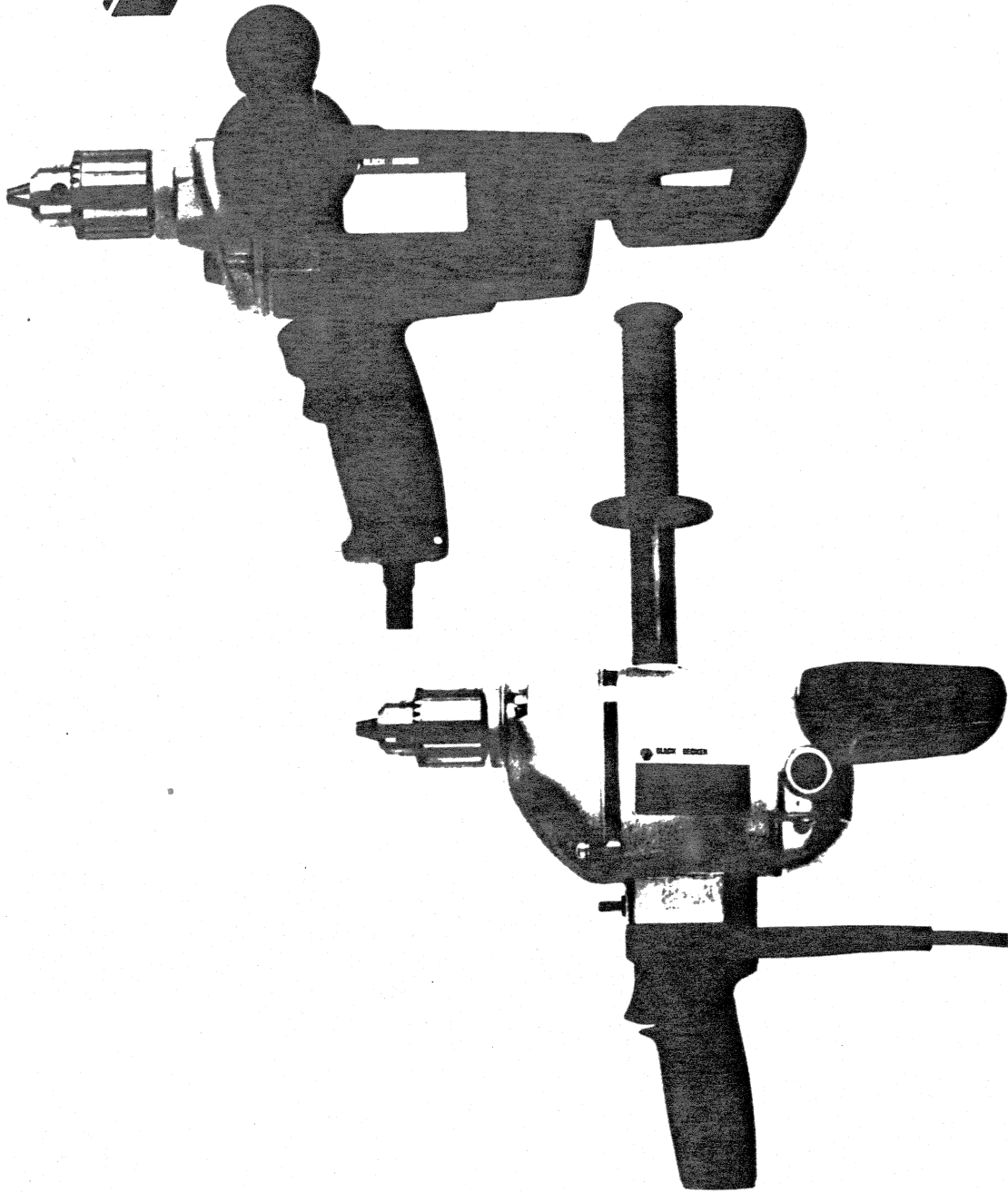


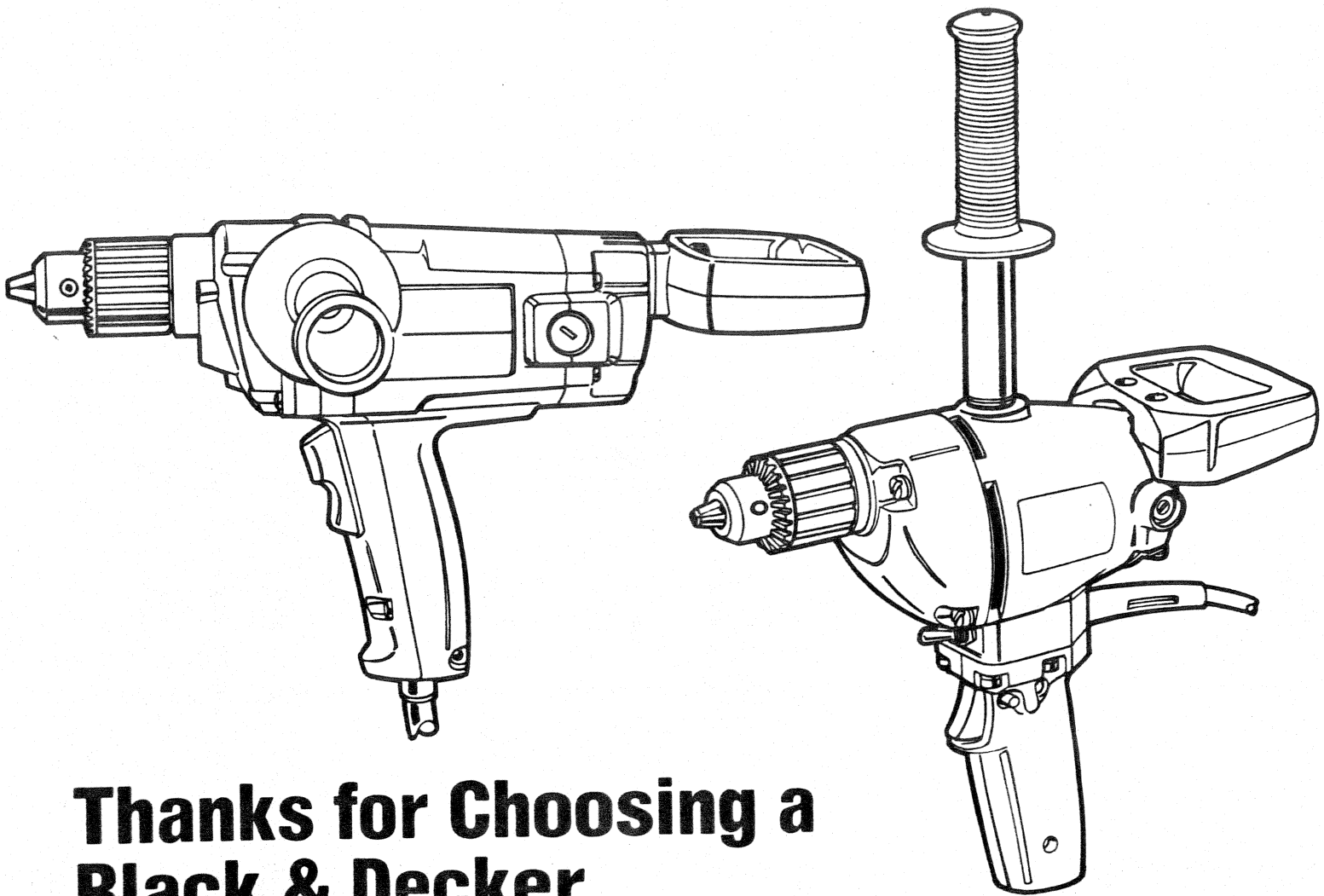


BLACK & DECKER®



Instruction Manual

1/2 Inch Reversing Spade Handle Drills



Thanks for Choosing a Black & Decker Power Tool.

Your new 1/2" Reversing drill is designed and built to Black & Decker's demanding specifications for dependability and long life. That same commitment to quality that has made Black & Decker the world leader for over 75 years has gone into this, and every other product we make.

Heavy duty construction and a wide array of available accessories to do all sorts of jobs make this drill an

exceptional value that's every bit the professional that you are.

Please take the time to read this informative manual and pay particular attention to the safety rules we've provided for your protection.

Don't forget to send in your owner's registration card.

And again . . . THANKS FOR BUYING A BLACK & DECKER!



BLACK & DECKER®

Important Safety Instructions

WARNING: When using Electric Tools, basic safety precautions should always be followed to reduce the risk of fire, electric shock, and personal injury, including the following:

READ ALL INSTRUCTIONS

1. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite injuries.
2. **CONSIDER WORK AREA ENVIRONMENT.** Don't expose power tools to rain. Don't use power tools in damp or wet locations. Keep work area well lit.
3. **GUARD AGAINST ELECTRIC SHOCK.** Prevent body contact with grounded surfaces. For example: pipes, radiators, ranges, refrigerator enclosures.
4. **KEEP CHILDREN AWAY.** All visitors should be kept away from work area. Do not let visitors contact tool or extension cord.
5. **STORE IDLE TOOLS.** When not in use, tools should be stored in dry, and high or locked-up place—out of reach of children.
6. **DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was intended.
7. **USE RIGHT TOOL.** Don't force small tool or attachment to do the job of a heavy-duty tool. Don't use tool for purpose not intended, for example, don't use circular saw for cutting tree limbs or logs.
8. **DRESS PROPERLY.** Do not wear loose clothing or jewelry. They can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.
9. **USE SAFETY GLASSES.** Also use face or dustmask if operation is dusty.
10. **DON'T ABUSE CORD.** Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil, and sharp edges.
11. **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.
12. **DON'T OVERREACH.** Keep proper footing and balance at all times.
13. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for better and safe performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and if damaged have repaired by authorized service facility. Inspect extension cords periodically and replace if damaged. Keep handles dry, clean, and free from oil and grease.
14. **DISCONNECT TOOLS.** When not in use, before servicing, and when changing accessories, such as blades, bits, cutters.
15. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
16. **AVOID UNINTENTIONAL STARTING.** Don't carry plugged-in tool with finger on switch. Be sure switch is off when plugging in.
17. **OUTDOOR USE EXTENSION CORDS.** When tool is used outdoors, use only extension cords intended for use outdoors and so marked. For more information on extension cords, see page 8.
18. **STAY ALERT.** Watch what you are doing. Use common sense. Do not operate tool when you are tired.
19. **CHECK DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine 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 defective should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in this instruction manual. Have defective switches replaced by authorized service center. Do not use tool if switch does not turn it on and off.
20. **DO NOT OPERATE** portable electric tools near flammable liquids or in gaseous or explosive atmospheres. Motors in these tools normally spark, and the sparks might ignite fumes.

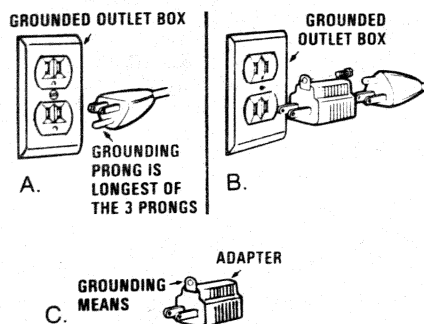
CAUTION: When drilling into walls, floors or wherever "live" electrical wires may be encountered, **DO NOT TOUCH THE CHUCK OR ANY FRONT METAL PARTS OF THE DRILL!** Hold the Drill only by the plastic handle to prevent shock if you drill into a "live" wire.

SAVE THESE INSTRUCTIONS FOR FUTURE USE.

Grounding

FOR TOOLS EQUIPPED WITH 3-WIRE CORDS

This tool should be grounded while in use to protect the operator from electric shock. The tool is equipped with an approved three-conductor cord and three prong grounding type plug to fit the proper grounding type receptacle. The green (or green and yellow) conductor in the cord is the grounding wire. Never connect the green (or green and yellow) wire to a live terminal. Your unit is for use on less than 150 volts and it has a plug like that shown in Figure A. An adapter, Figures B and C, is available for connecting Figure A plugs to two-prong receptacles. The green-colored rigid ear, lug, etc., must be connected to a permanent ground such as a properly grounded outlet box. **ADAPTER SHOWN IN FIGURES B & C IS NOT FOR USE IN CANADA.**



Double Insulation

FOR TOOLS EQUIPPED WITH 2-WIRE CORDS

DOUBLE-INSULATED tools are constructed throughout with TWO separate "layers" of electrical insulation or one DOUBLE thickness of insulation between you and the tool's electrical system.

Tools built with this insulation system are not intended to be grounded. As a result, your tool is equipped with a two-prong plug which permits you to use extension cords without concern for maintaining a ground connection.

NOTE: DOUBLE INSULATION does not take the place of normal safety precautions when operating this tool. The insulation system is for added protection against injury resulting from a possible electrical insulation failure within the tool.

CAUTION: When servicing all tools, **USE ONLY IDENTICAL REPLACEMENT PARTS.** Repair or replace damaged cords.

Motor Brushes

Be sure tool is unplugged before inspecting brushes. To inspect brushes, unscrew the plastic brush inspection caps (located in the sides of the motor housing) and the spring and brush assemblies may be withdrawn from the tool.

Keep brushes clean and sliding freely in their guides. Carbon brushes have varying symbols stamped into them, and if the brush is worn down to a point where the symbol is not visible, they must be replaced. New brush assemblies are available at Service Centers; see TOOLS, ELECTRIC in the Yellow Pages.

NOTE: This tool is designed to automatically turn itself off when the brushes are worn out.

Spade Handle Assembly: (Fig. 1)

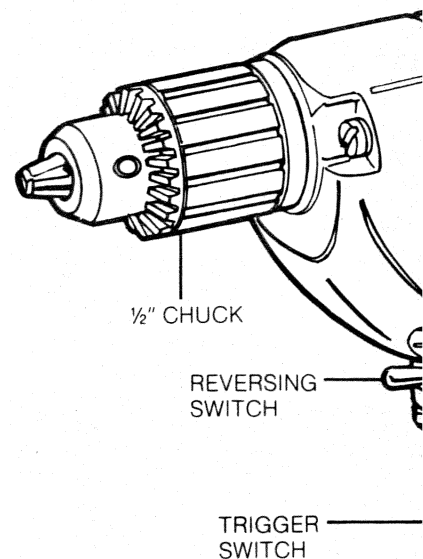
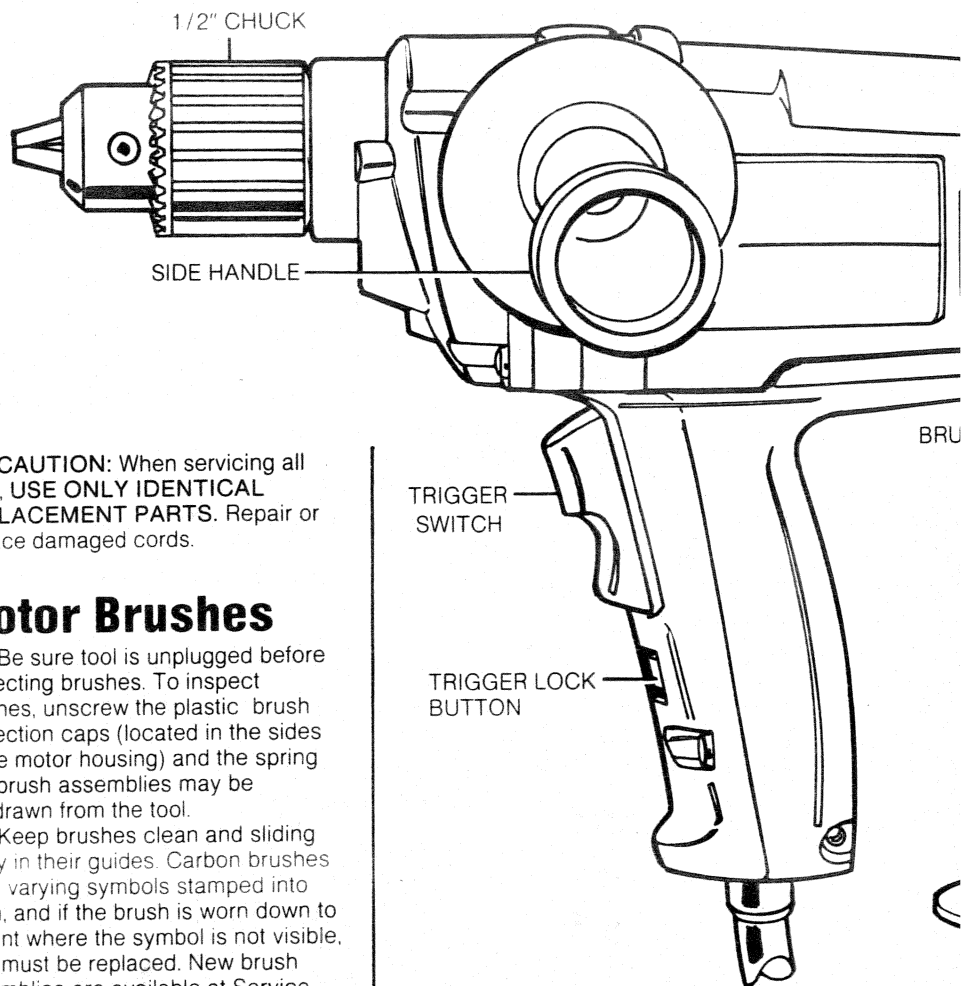
This spade handle can be attached either horizontally or vertically. Place the handle into the locating boss on the back of the drill and assemble with holding knob.

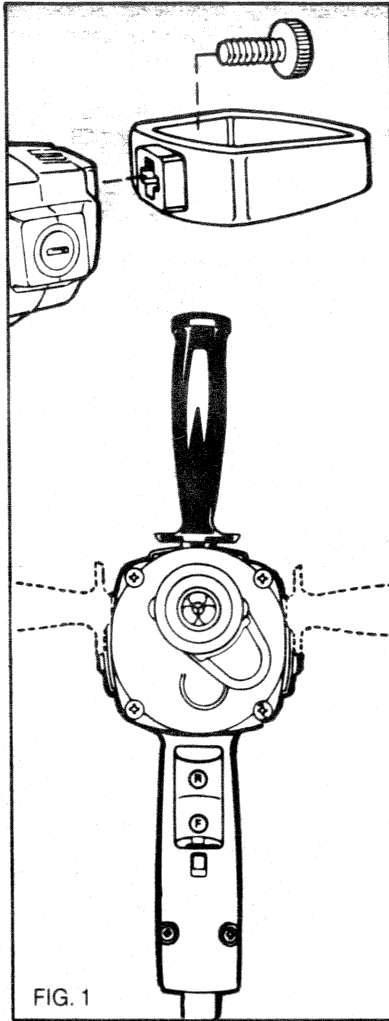
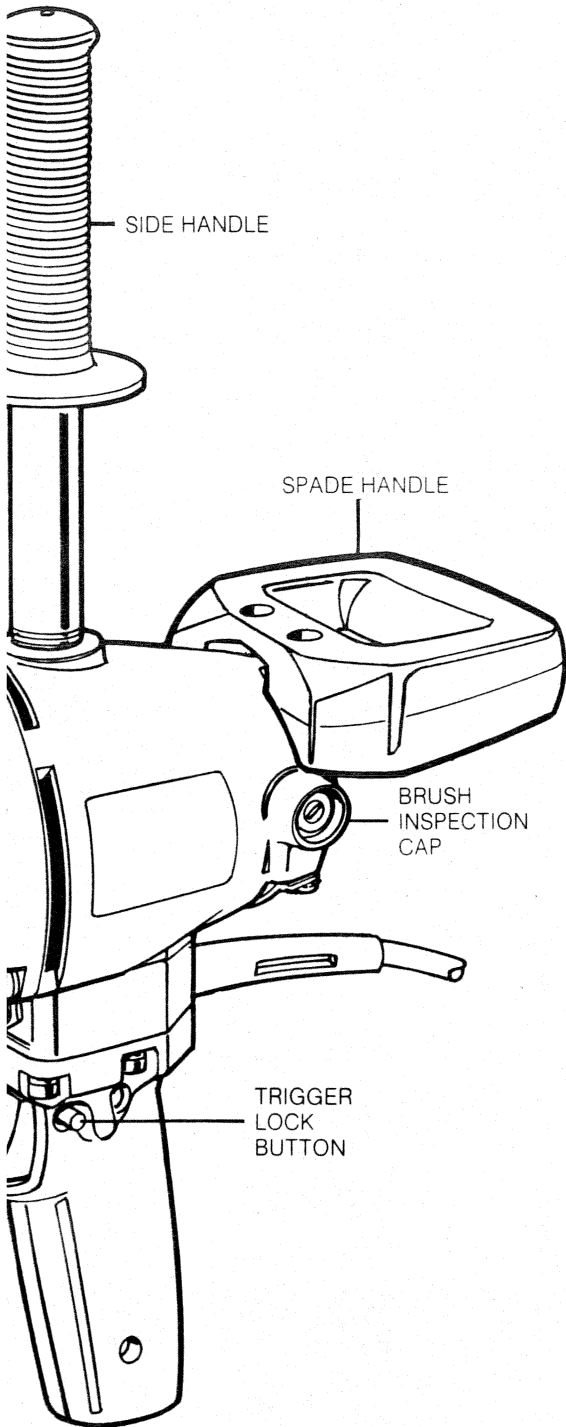
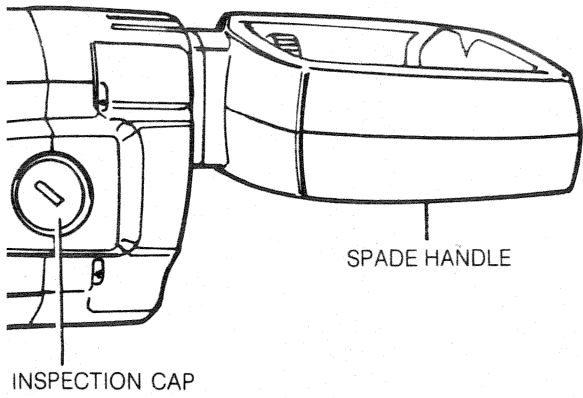
Side Handle (Fig. 1)

The Side Handle screws into the top or either side of the drill for added control (Figure 1).

CAUTION: Always use and hold firmly the side handle or spade handle. This is a high-torque Drill — always hold it with both hands when operating.

NOTE: The spade handle can be removed from the tool if additional working clearance is needed. Always operate drill with side handle or spade handle. Either handle may be removed but **NEVER** remove both handles at once.



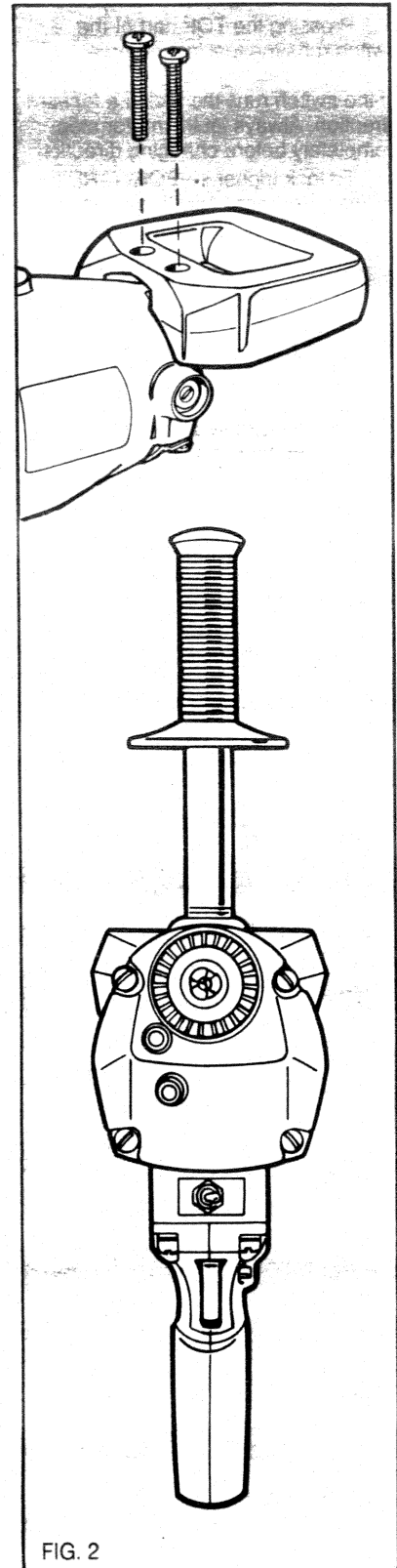


Spade Handle Assembly (Fig. 2)

The spade handle is installed as shown in Figure 2. Tighten the two screws securely.

Side Handle (Fig. 2)

The side handle screws into the large hole in the top of the tool.



Switch: (Fig. 3)

Pressing the TOP part of the switch runs the tool in a reverse direction. Pressing the BOTTOM part of the switch runs the tool in a forward direction. Always let the motor stop completely before changing direction.

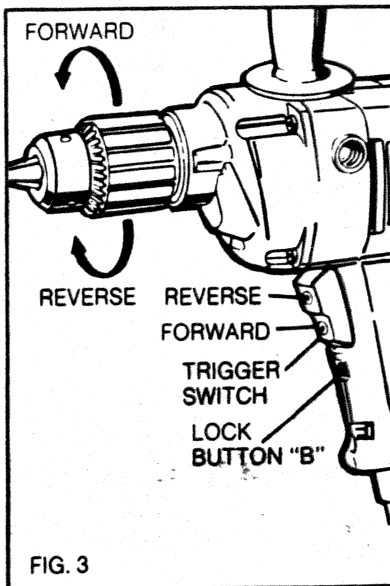
To lock trigger in "FORWARD" position, depress LOWER part of trigger and push up lock button "B". Then, while holding lock button in position, gently release trigger. To release locking mechanism, depress trigger fully, then release it.

NOTE: Locking mechanism will not function if upper part of trigger is depressed. (reverse operation).

Do not lock the switch "ON" when drilling by hand so that you can instantly release the trigger switch if the bit binds in the hole.

The locking feature is for use when the drill is mounted in a drill stand or otherwise firmly held . . . **NOT BY HAND.**

Be sure to release the switch locking button before disconnecting the plug from the power supply. Failure to do so will cause the tool to start immediately the next time it is plugged in. Damage or injury could result.



Switch: (Fig. 4)

To turn the tool on, depress the trigger. To turn it off, release the trigger.

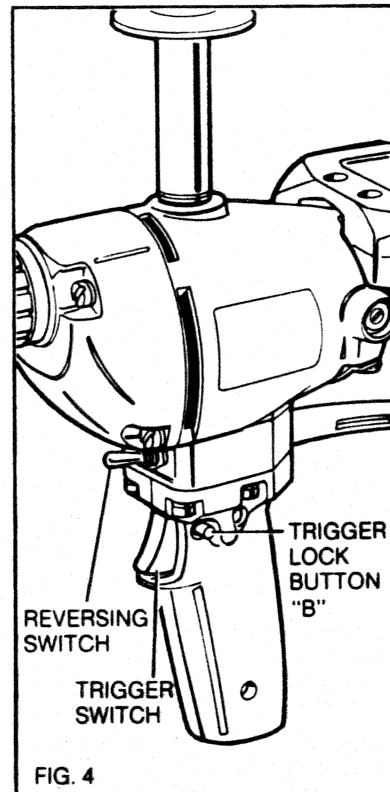
The toggle switch above the trigger is the Reversing Switch. Switch this toggle only when the tool is not running or coasting. After reversing operations are completed, switch the toggle back to FOR.

To lock the tool on, depress trigger and push in lock button "B". Then, while holding lock button in position, gently release trigger. To release locking mechanism, depress trigger fully, then release it.

Do not lock the switch "ON" when drilling by hand so that you can instantly release the trigger switch if the bit binds in the hole.

The locking feature is for use when the drill is mounted in a drill stand or otherwise firmly held **NOT BY HAND.**

Be sure to release the switch lock button before disconnecting the plug from the power supply. Failure to do so will cause the tool to start immediately the next time it is plugged in. Damage or injury could result.



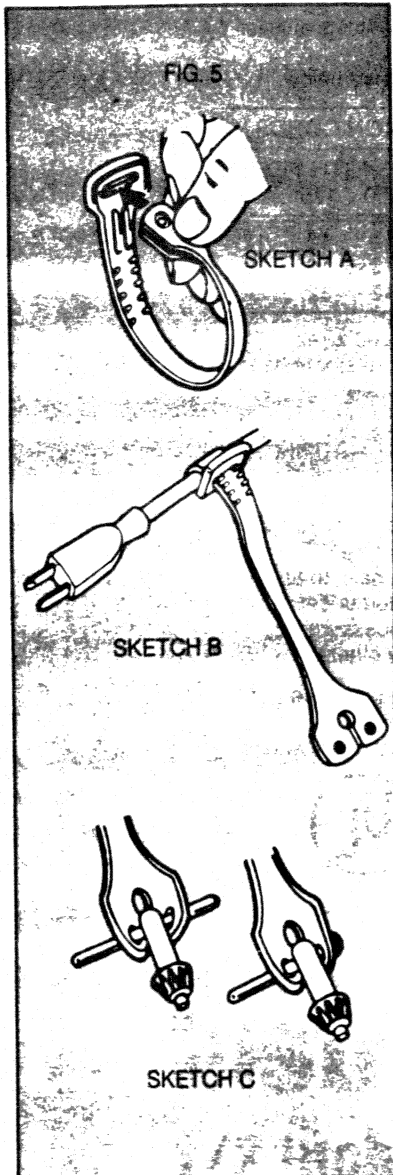
Operation

Drilling

1. Always unplug the Drill when attaching or changing bits or accessories.
2. Use sharp drill bits only. For WOOD, use twist drill bits, spade bits, power auger bits, or hole saws. For METAL, use high-speed steel twist drill bits or hole saws. For MASONRY, such as brick, cement, cinder block, etc., use carbide-tipped bits.
3. Be sure the material to be drilled is anchored or clamped firmly. If drilling thin material, use a wood "back-up" block to prevent damage to the material.
4. Always apply pressure in a straight line with the bit. Use enough pressure to keep drill biting, but do not push hard enough to stall the motor or deflect the bit.
5. Always use side handle or spade handle.
6. **IF DRILL STALLS**, it is usually because it is being overloaded or improperly used. **RELEASE TRIGGER IMMEDIATELY**, remove drill bit from work, and determine cause of stalling. **DO NOT CLICK TRIGGER OFF AND ON IN AN ATTEMPT TO START A STALLED DRILL — THIS CAN DAMAGE THE DRILL.**
7. To minimize stalling or breaking through the material, reduce pressure on drill and ease the bit through last fractional part of the hole.
8. Keep the motor running when pulling the bit back out of a drilled hole. This will help prevent jamming.

Chuck Key Holder (Fig. 5)

1. Push double-hole end of Holder through slot in other end of Holder (Sketch A).
2. Slip loop over electric plug and draw loop tight around cord (Sketch B).
3. Push ends of Chuck Key Handle through two holes in end of Holder (Sketch C).



Drill Accessories

The accessories listed in this manual are available at extra cost from your local dealer or Black & Decker Service Center.

A complete listing of service centers is included on the owner's registration card packed with your tool.

If you need assistance in locating any accessory please contact:

Black & Decker (U.S.) Inc.
 User Services Department
 10 North Park Drive
 P.O. Box 857
 Hunt Valley, MD 21030-0857
 U.S.A.

Recommended accessories for your Drill are shown in this manual (CAUTION: The use of any other accessory or attachment might be hazardous.) For safety in use, the following accessories should be used only in sizes up to the maximums shown in the table below.

ACCESSORIES

Bits, Metal Drilling	1/2"
Bits, Wood Drilling	1 1/2"
Bits, Masonry Drilling	3/4"
Hole Saws	4"
Wire Wheel Brushes	4"
Wire Cup Brush	3"
Buffing Wheels	3"
Rubber Backing Pads	4 7/8"

Lubrication

All ball bearings used are factory lubricated to last the life of the bearings. All needle bearings used receive their lubrication from the grease in the gear case. Clean and re-lubricate gear case yearly or whenever servicing requires the gear case to be removed. Use type and quantity of grease shown on Parts Bulletin packed with your tool.

Gear case is removed by removing the three screws from the front of the tool. If the chuck is too large to permit removal of the two top screws, see instructions for chuck removal.

Notes

Extension Cords

Double insulated tools have 2-wire cords and can be used with 2-wire or 3-wire extension cords. Tools that have 3-wire cords requiring grounding must only be used with extension cords that have 3-prong grounding type plugs and 3-pole receptacles. Make sure which construction your tool is before choosing an extension cord. Only round jacketed extension cords should be used, and we recommend that they be listed by Underwriters Laboratories (U.L.) (C.S.A. in Canada). If the extension will be used outside, the cord must be suitable for outdoor use. Any cord marked as outdoor can also be used for indoor work. The letters "WA" on the cord jacket indicate that the cord is suitable for outdoor use.

An extension cord must have adequate wire size (AWG or American Wire Gauge) for safety, and to prevent loss of power and overheating. The smaller the gauge number of the wire, the greater the capacity of the cable, that is 16 gauge has more capacity than 18 gauge. When using more than one extension to make up the total length, be sure each individual extension contains at least the minimum wire size.

To determine the minimum wire size required, refer to the chart below.

NAMEPLATE RATING-AMPS	CHART FOR MINIMUM WIRE SIZE (AWG) OF EXTENSION CORDS							
	25	50	75	100	125	150	175	200
0 - 10.0	18	18	16	16	14	14	12	12
10.1 - 13.0	16	16	14	14	14	12	12	12
13.1 - 15.0	14	14	12	12	12	12	12	—

Before using an extension cord, inspect it for loose or exposed wires, damaged insulation, and defective fittings. Make any needed repairs or replace the cord if necessary. Black & Decker has extension cords available that are U.L. listed for outdoor use.

Warranty

Black & Decker (U.S.) Inc. warrants this product for one year from date of purchase. We will repair without charge, any defects due to faulty material or workmanship. Please return the complete unit, transportation prepaid, to any Black & Decker Service Center or Authorized Service Station listed under "Tools Electric" in the yellow pages. This warranty does not apply to accessories or damage caused where repairs have been made or attempted by others.

Like most Black & Decker products your tool is listed by Underwriters Laboratories to ensure that it meets stringent safety requirements.

This symbol on the nameplate means the product is listed by Underwriters Laboratories, Inc.



See 'Tools-Electric'
—Yellow Pages—
for Service & Sales



BLACK & DECKER.

BLACK & DECKER (U.S.) INC., U.S. Power Tools Group, 10 North Park Drive, P.O. Box 798, Hunt Valley, MD 21030-0798 U.S.A.

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