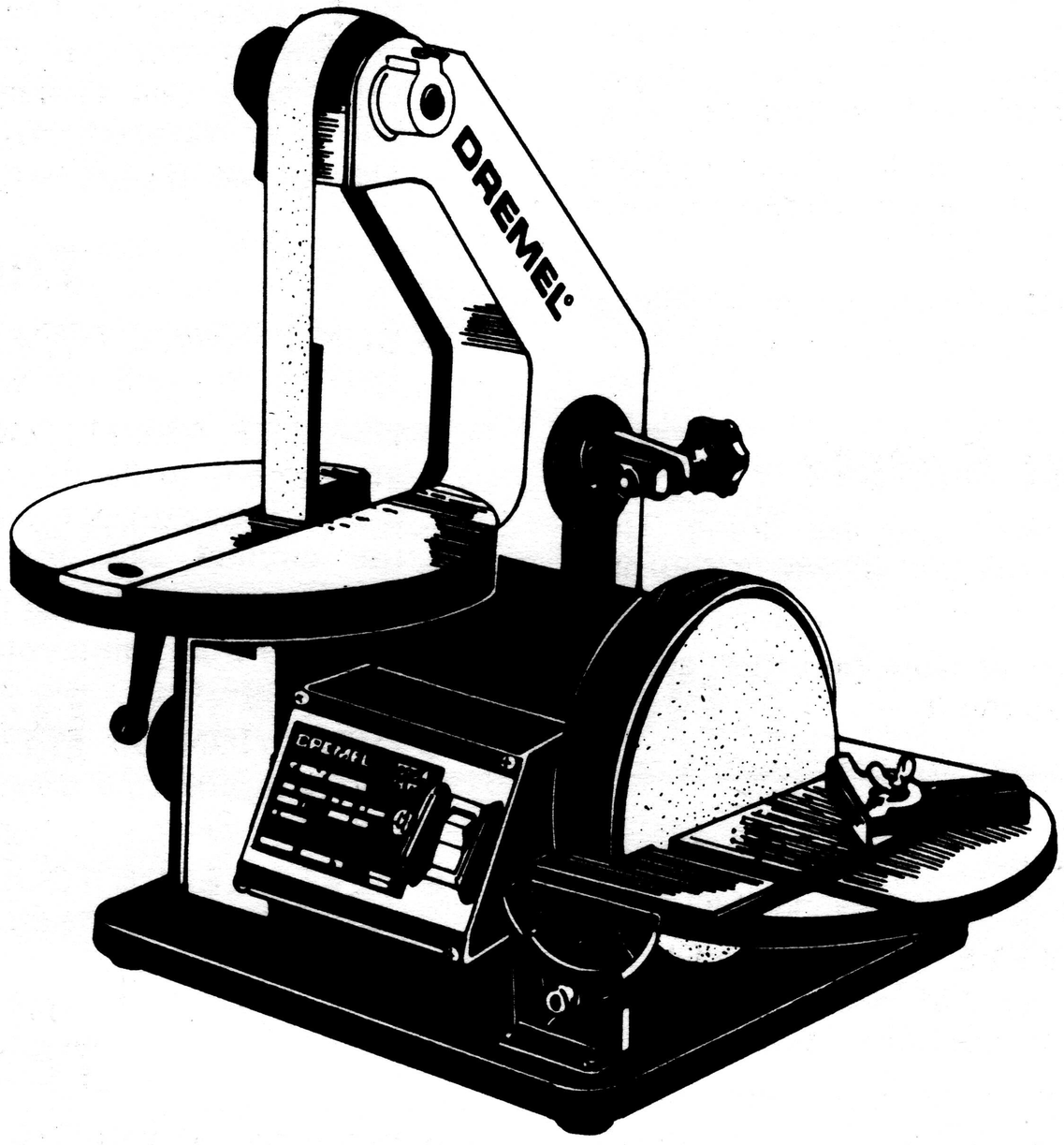
DREMEL® DISC/BELT SANDER

owner's manual



WARNING
For your own safety
read your
Owner's Manual
before operating
your
Dremel
Disc/Belt Sander

MODEL 1731 DISC/BELT SANDER

assembly • operation • safety instructions

If you have any problems or questions about your Sander, call 1-800-4-DREMEL before contacting your place of purchase. Your situation may be able to be resolved without returning your product to Dremel.

800 437-3635

DREMEL®
4915 - 21st Street Racine, Wisconsin 53406, U.S.A.

Form No. 5296348 4/90

PRINTED IN TAIWAN

For Your Safety. . .

⚠WARNING "READ ALL INSTRUCTIONS" Failure to follow the SAFETY RULES listed BELOW, and other basic safety precautions, may result in serious personal injury.

Work Area

- **KEEP WORK AREAS CLEAN.** Cluttered areas and benches invite accidents.
- **AVOID DANGEROUS ENVIRONMENT.** Don't use power tools in damp or wet locations. Keep work area well lit. Do not expose power tools to rain. Do not use tool in presence of flammable liquids or gases.
- **KEEP CHILDREN AWAY.** Do not let visitors contact tool or extension cord. All visitors should be kept away from work area.
- **MAKE WORKSHOP KID-PROOF**—with padlocks, master switches, or by removing starter keys.

Personal Safety

- **STAY ALERT.** Watch what you are doing. Use common sense. Do not operate tool when you are tired.
- **KEEP GUARDS IN PLACE** in working order, and in proper adjustment and alignment.
- **DON'T OVERREACH.** Keep proper footing and balance at all times.
- **DISCONNECT TOOLS.** When not in use; before servicing; when changing blades, bits, cutters, etc.
- **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
- **NEVER STAND ON TOOL.** Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.
- **AVOID ACCIDENTAL STARTING.** Be sure switch is in OFF position before plugging in the power cord.
- **USE RECOMMENDED ACCESSORIES.** Consult the owner's manual for recommended accessories. Follow the instructions that accompany the accessories. The use of improper accessories may cause hazards.
- **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.
- **ALWAYS USE SAFETY GLASSES.** Also use face or dust mask if cutting operation is dusty. Everday eyeglasses only have impact resistant lenses, they are NOT safety glasses.
- **⚠WARNING** All repairs, electrical or mechanical, should be attempted only by trained repairmen. Contact the nearest Dremel Service Center, or Authorized Dremel Service Station or other competent repair service. Use only Dremel replacement parts, any other may create a hazard.
- **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 damaged should be properly repaired or replaced. Have defective switches replaced. Do not use tool if switch does not turn it on or off.

Tool Use

- **DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was designed.
- **USE THE 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.
- **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.
- **DIRECTION OF FEED.** Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
- **NEVER LEAVE TOOL RUNNING UNATTENDED.** Turn power off. Don't leave tool until it comes to a complete stop.

Tool Care

- **DO NOT ALTER OR MISUSE TOOL.** These tools are precision built. Any alteration or modification not specified is misuse and may result in a dangerous condition.
- **AVOID GASEOUS AREAS.** Do not operate electric tools in gaseous or explosive atmospheres. Motors in these tools normally spark, and the sparks might ignite fumes.
- **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for better and safer 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.
- **⚠WARNING** Before connecting the tool to a power source (receptacle, outlet, etc.) be sure the voltage supplied is the same as that specified on the nameplate of the tool. A power source with voltage greater than that specified for the tool can result in SERIOUS INJURY to the user—as well as damage to the tool. If in doubt, DO NOT PLUG IN THE TOOL. Using a power source with voltage less than the nameplate rating is harmful to the motor.

"SAVE THESE INSTRUCTIONS"

Tool Safety Rules

- **WARNING** Do not operate your machine until it is completely assembled and installed according to the instructions.
- **WARNING** The dust generated by certain woods and wood products can be harmful to your health. Always operate machinery in well ventilated areas and provide for proper dust removal. Use wood dust collection systems whenever possible.
- **WARNING** The Disc/Belt Sander can be used for processing wood and metal products. However, combining both dust and metal filings can create a FIRE HAZARD. Make certain that sander is free of wood dust deposits before processing metal products.
- This machine is intended for indoor use only.
- If there is any tendency for the machine to tip over or move during certain operations such as when sanding long heavy workpieces, the machine must be securely fastened to a supporting surface.
- Make sure the sanding belt is tracking correctly so the belt does not run off pulleys.
- Make sure the sanding belt or sanding disc is not torn or loose.
- Always hold the work firmly when sanding.
- Always maintain maximum clearance of 1/16" or less between the slide plate and the sanding belt.
- Never wear gloves or hold the work with a rag when sanding.
- Do not sand pieces of material that are too small to be safely supported.
- Avoid awkward hand positions where a sudden slip could cause a hand to move into the sanding belt or sanding disc.
- Always remove scrap pieces and other objects from the table before turning the machine "ON".
- Never perform layout, assembly or set-up work on the table while the sander is operating.
- Always turn the machine "OFF" and disconnect the cord from the power source before installing or removing accessories.
- Never leave the machine work area when the power is "ON" or before the machine has come to a complete stop.
- Support workpiece with platen or worktable.

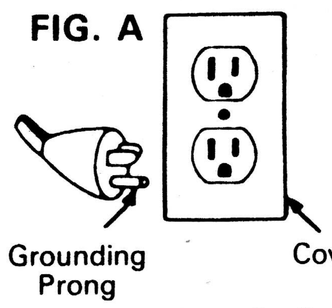
Grounding Instructions

Grounded Tools With Three-Prong Plugs

⚠WARNING Improper grounding can shock, burn or electrocute.

Grounding of this tool is necessary while in use to protect you from electric shock or electrocution. This tool is equipped with an approved three-conductor cord and three-prong grounding-type plug to fit the proper grounding-type receptacle. Do not remove grounding prong from the three prong grounding-type plug. 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 that looks like Fig. "A".

FIG. A



Grounding Prong

Cover of Grounded Outlet Box

FIG. B

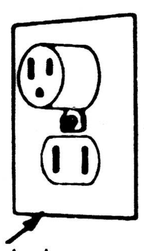
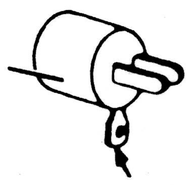


FIG. C Adapter



Grounding Means

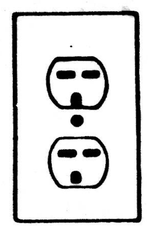
An adapter, Fig. "B" and "C" is available for connecting Fig. "A" plugs to two-prong receptacles. The green colored rigid ear, lug, etc., extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box.

NOTE: The grounding adapter, Fig. "C" is prohibited in Canada by Canadian Electrical Code-Part 1. Therefore the instructions for its use are not applicable in Canada.

If your unit is for use on 150 to 250 volts, it has a plug that looks like Fig. "D" plugs. No adapter is available for a plug like Fig. "D".

FIG. D

Grounding Prong



Extension Cords

⚠WARNING Use of damaged cords can shock, burn or electrocute.

Replace damaged or worn cords immediately. The table shows the correct size to use, depending on cord length and nameplate amperage rating of tool. If in doubt, use the next heavier gauge. An undersized cord will cause a drop in line voltage, resulting in loss of power and overheating. **NOTE:** The smaller the gauge number, the heavier the cord.

Use only three-wire extension cords with three-hole receptacles which accept the tool plug and have three-prong grounding-type plugs. Three-wire extension cords are available.

Recommended Minimum Gauge for Cord Extensions for Portable Electric Tools

Wire Gauge Chart A.W.G.					
Name Plate Amps.	120V 240V	Cord Length in Feet 25 50	50 100	100 200	150 300
5-6		18	16	14	12
6-8		18	16	12	10
8-10		18	14	12	10
10-12		16	14	10	8
12-14		16	12	10	8

UNPACKING

The Disc/Belt Sander is shipped complete in one carton. Carefully unpack the machine and all loose items from the carton. If any parts are missing, do not attempt to operate your sander until the missing parts are obtained and installed correctly.

⚠WARNING For your own safety, do not connect the sander to the power source until the machine is completely assembled and you have read and understood the entire owner's manual.

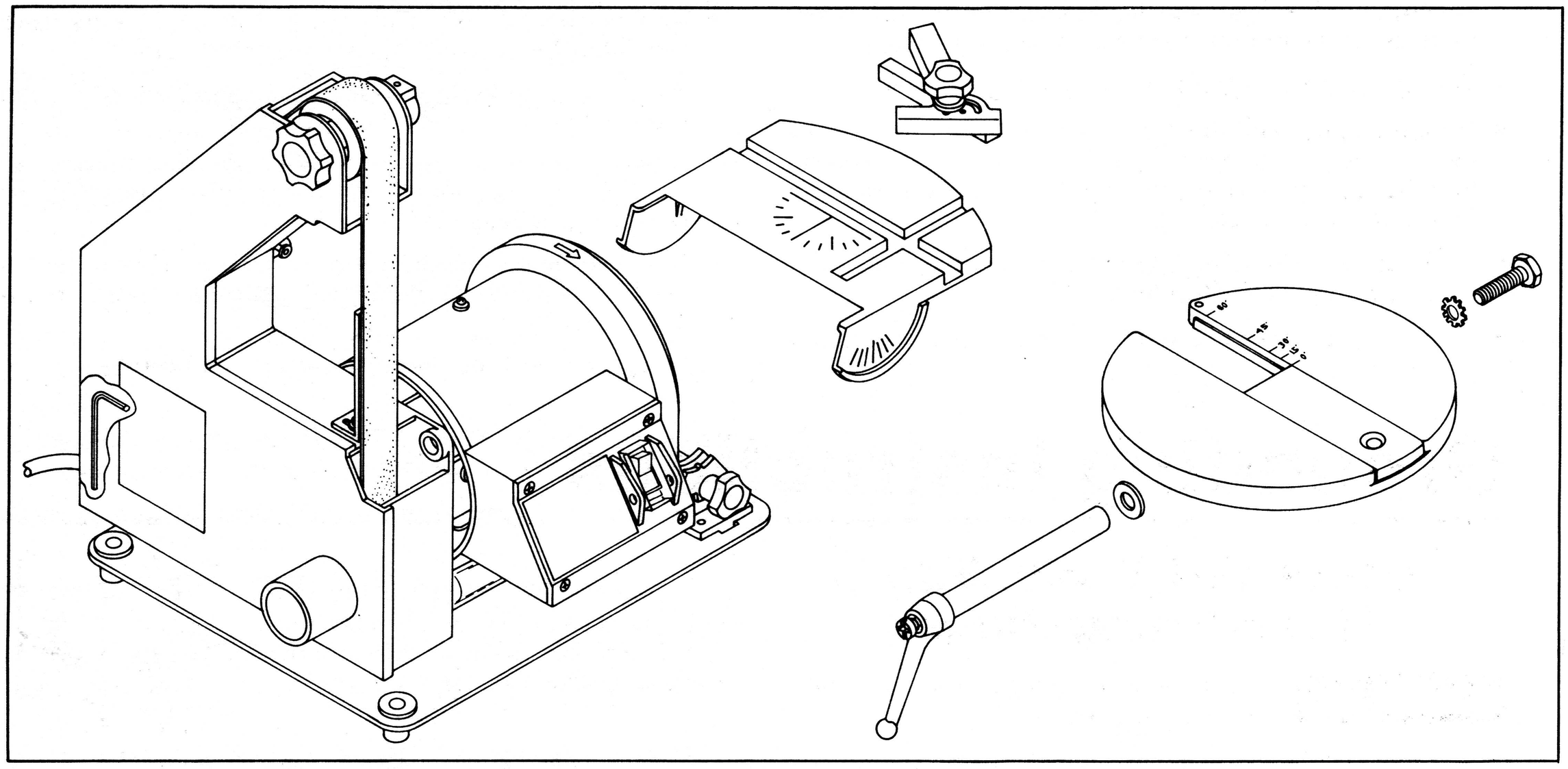


Fig. 1

ASSEMBLING BELT TABLE TO SANDER

1. Locate the 1-1/8" long screw (A) Fig. 2, star washer (B), flat washer (C), table locking handle assembly (D), and table (E).

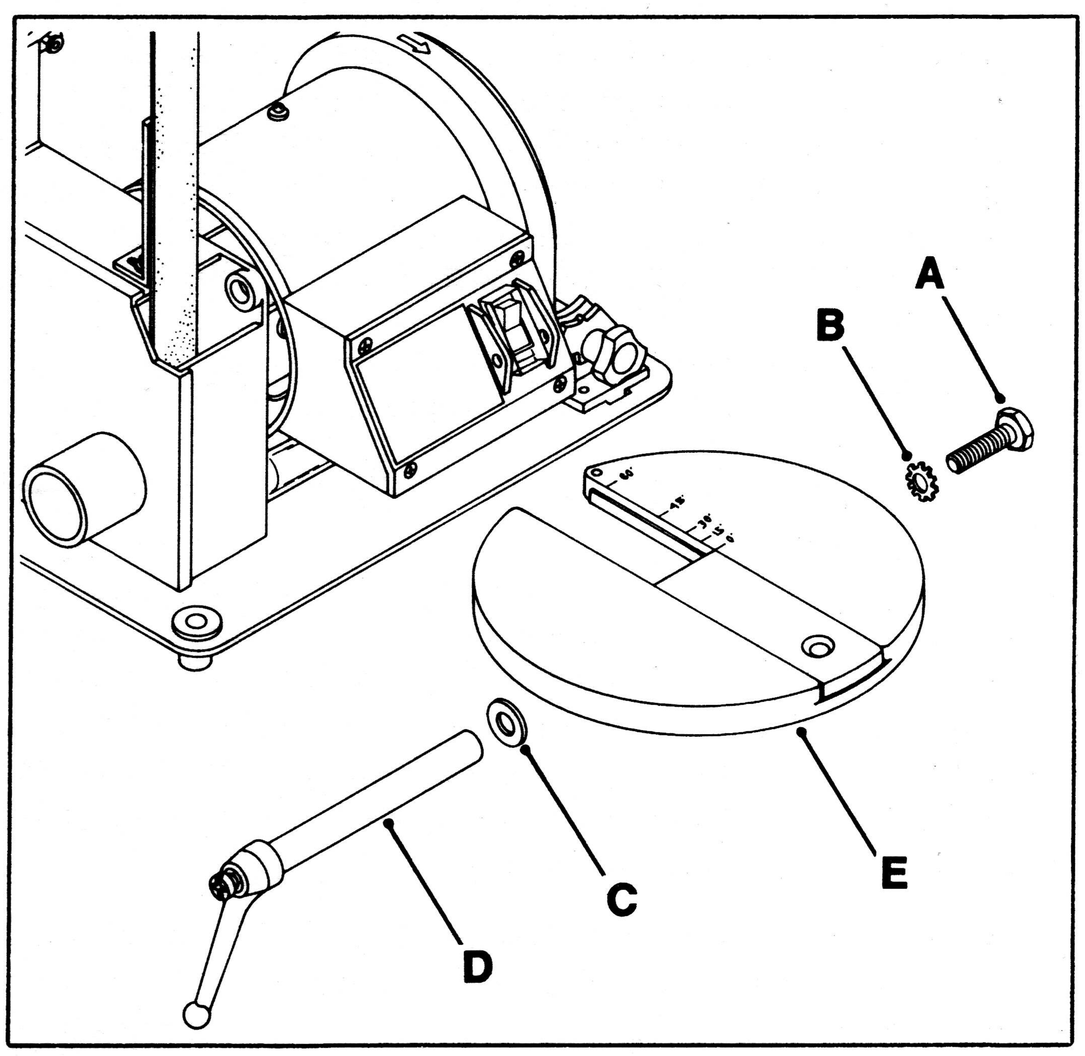


Fig. 2

2. Insert screw (A) through hole in table. Place star washer (B) onto screw (A). Insert screw (A) through hole in sander frame, as shown in Fig. 3.

3. Place flat washer (C) onto screw (A) Fig. 3.

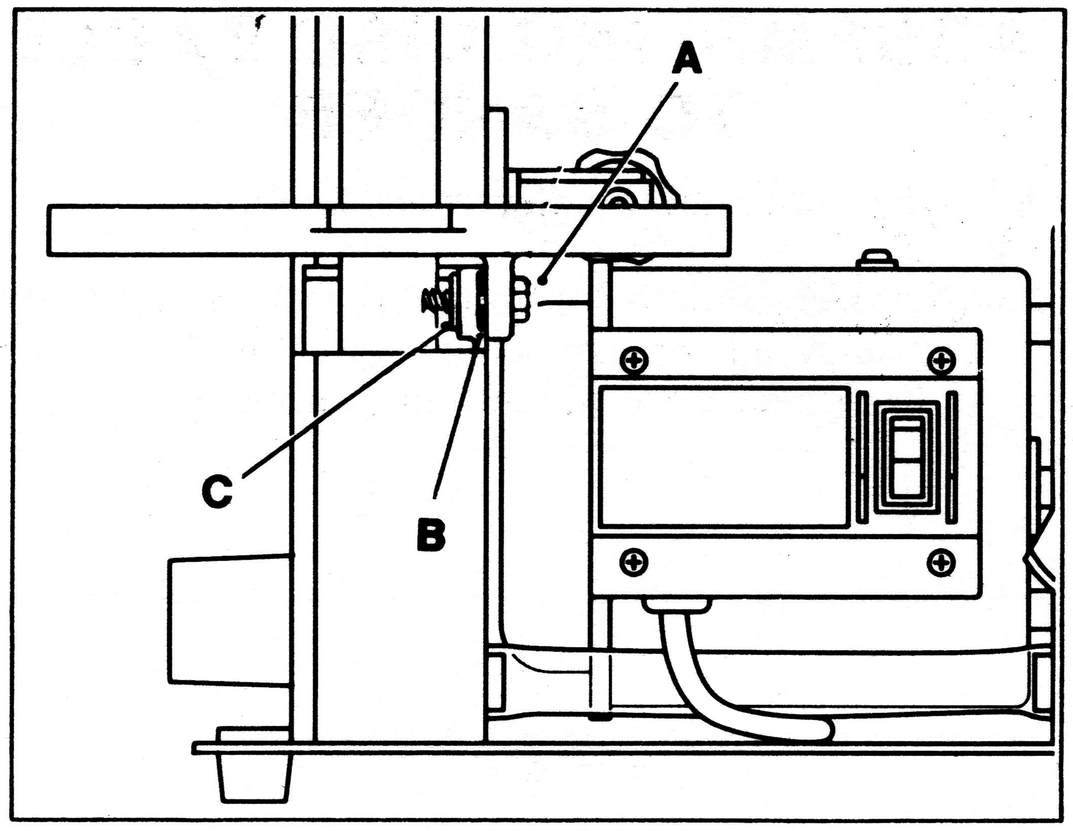


Fig. 3

4. Fasten table to sander frame using table locking handle assembly (D), as shown in Fig. 4. Tighten the table locking handle assembly (D) by hand.

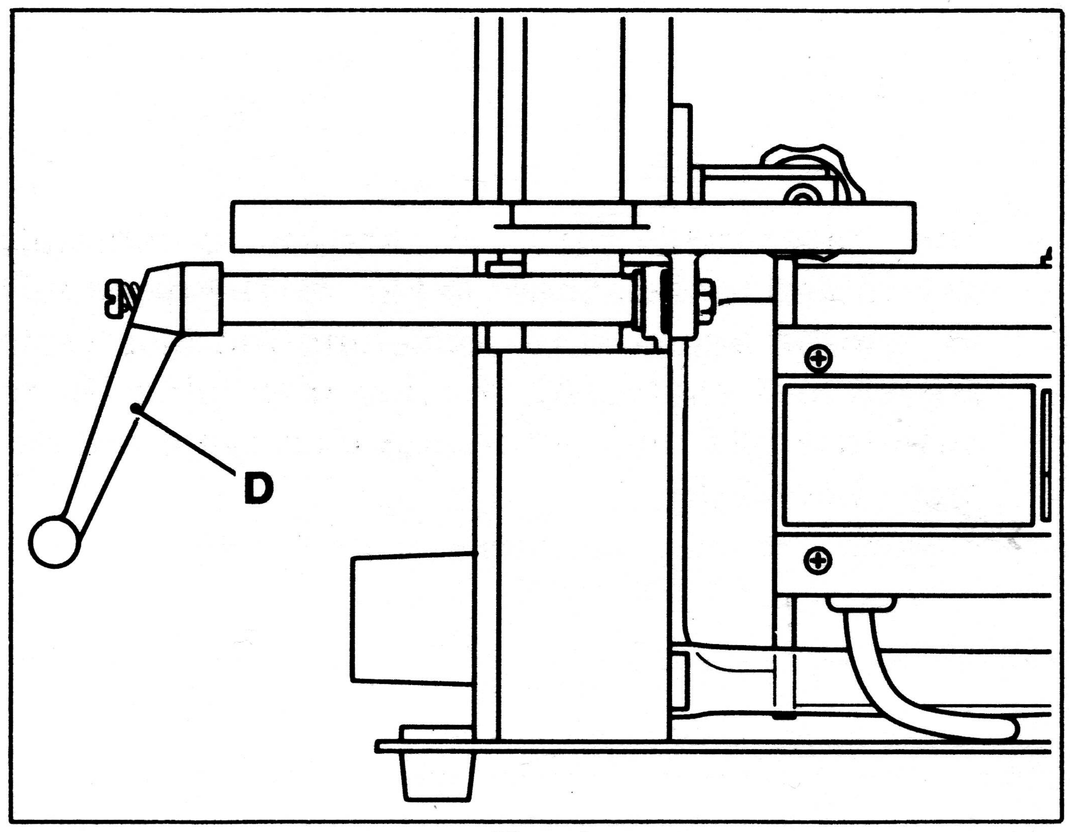


Fig. 4

5. The table (E) is shown completely assembled to the sander in Fig. 5. **NOTE:** The locking handle (D) is spring loaded and can be repositioned by pulling out on the handle and repositioning it on the serrated nut located underneath the handle.

⚠WARNING To avoid trapping the work or fingers between the table and sanding belt, the edge of the sliding plate (F) should be positioned a maximum of 1/16 inch from sanding belt (G), as shown in Fig. 5.

SLIDE PLATE ADJUSTMENT

The slide plate was designed so the plate can be quickly and easily adjusted by loosening screw (H), positioning the plate as required and tightening screw (H).

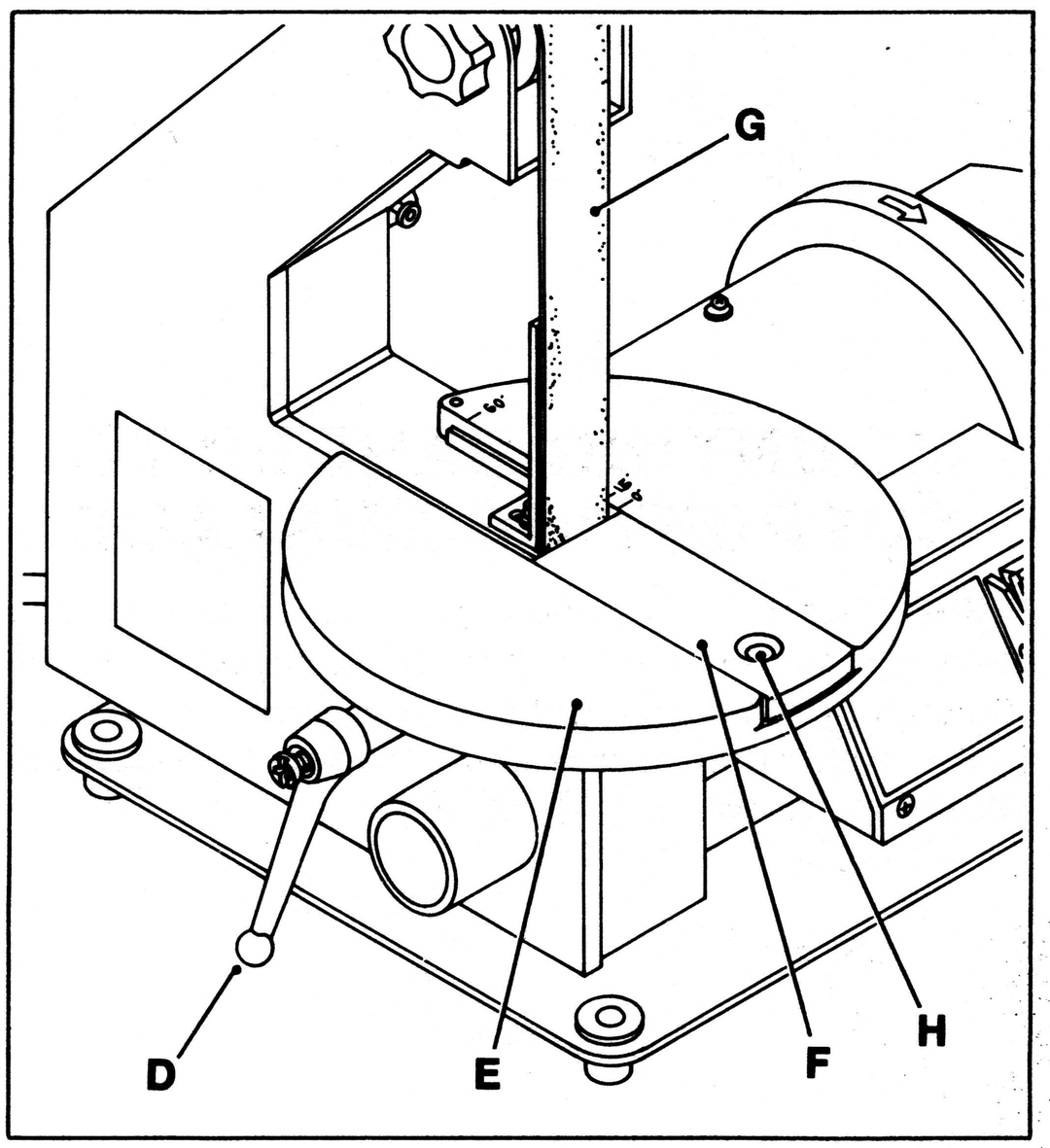


Fig. 5

ASSEMBLING DISC TABLE TO SANDER

1. Loosen disc table adjustment knobs (A).

2. Locate disc table (B) and slide rails on table (B) between rails on sander as shown in (Fig. 6) and tighten disc table adjustment knobs.

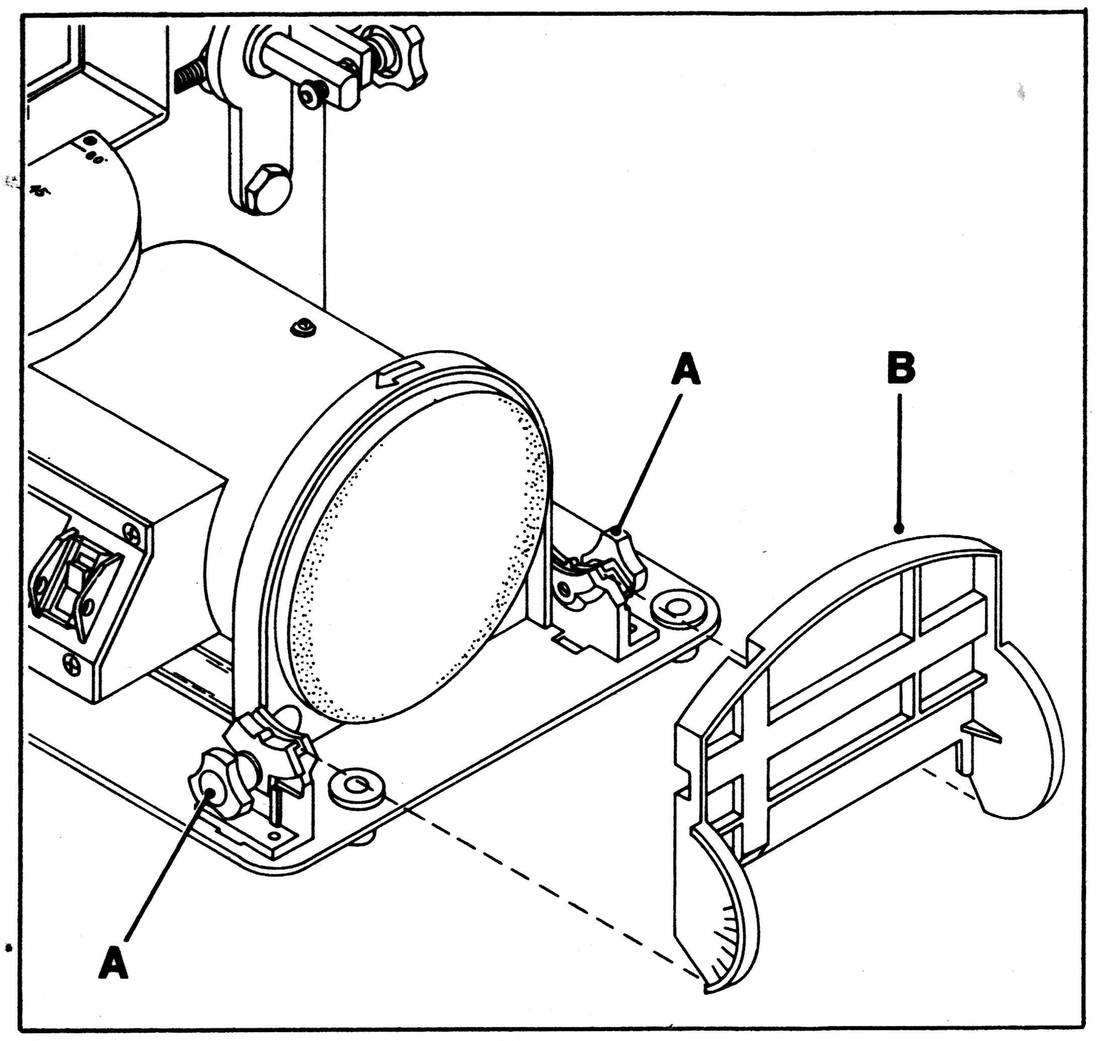


Fig. 6

3. The disc table (B) is shown completely assembled to the sander in Fig. 7. The disc table (B) can be adjusted by loosening the disc table adjustment knobs (A), moving disc table (B) to desired angle and tightening disc table adjustment knobs (B).

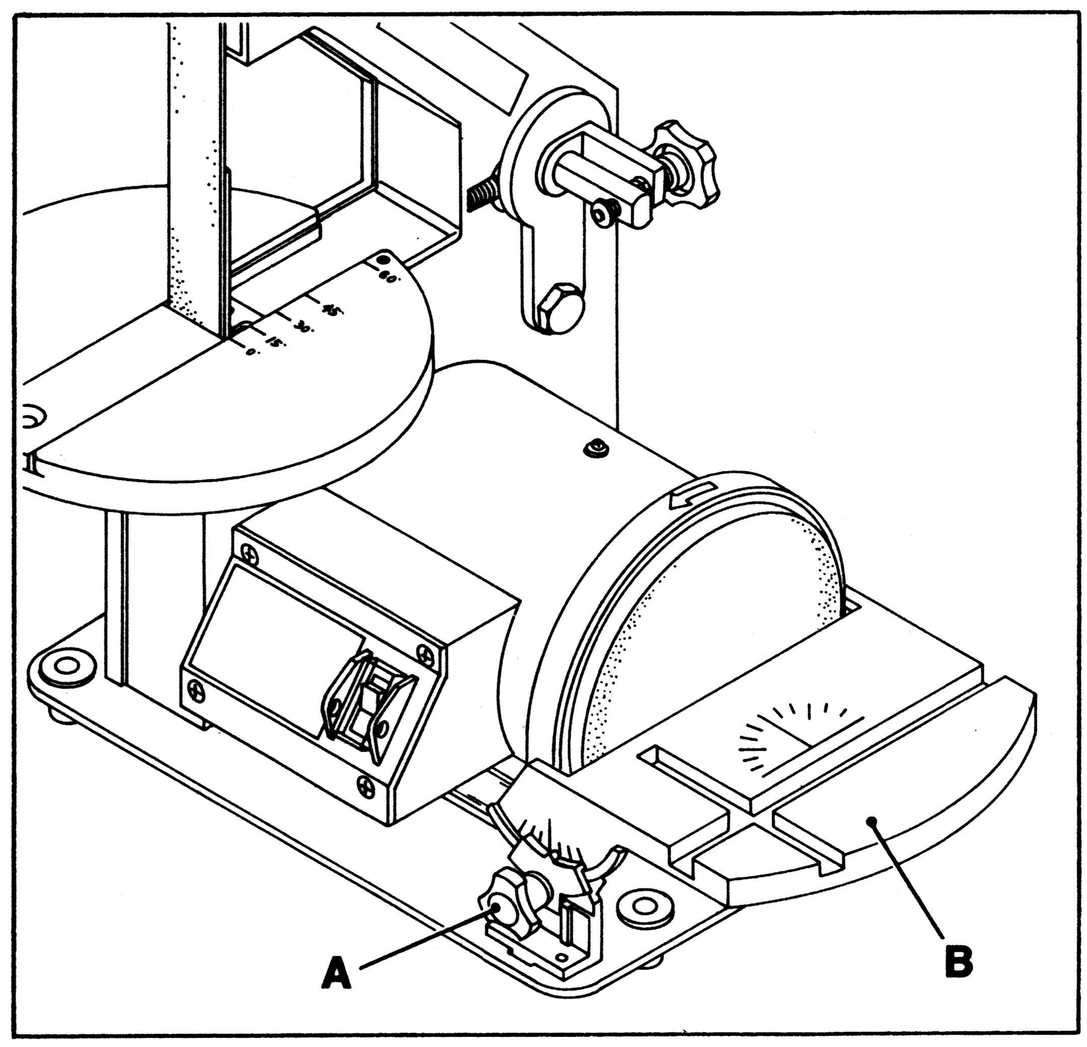


Fig. 7

MOUNTING SANDER TO SUPPORTING SURFACE

IMPORTANT: If during operation there is any tendency for the sander to tip over, slide or walk on the supporting surface, the sander must be secured to the supporting surface using the four holes, two of which are shown at (A) Fig. 8.

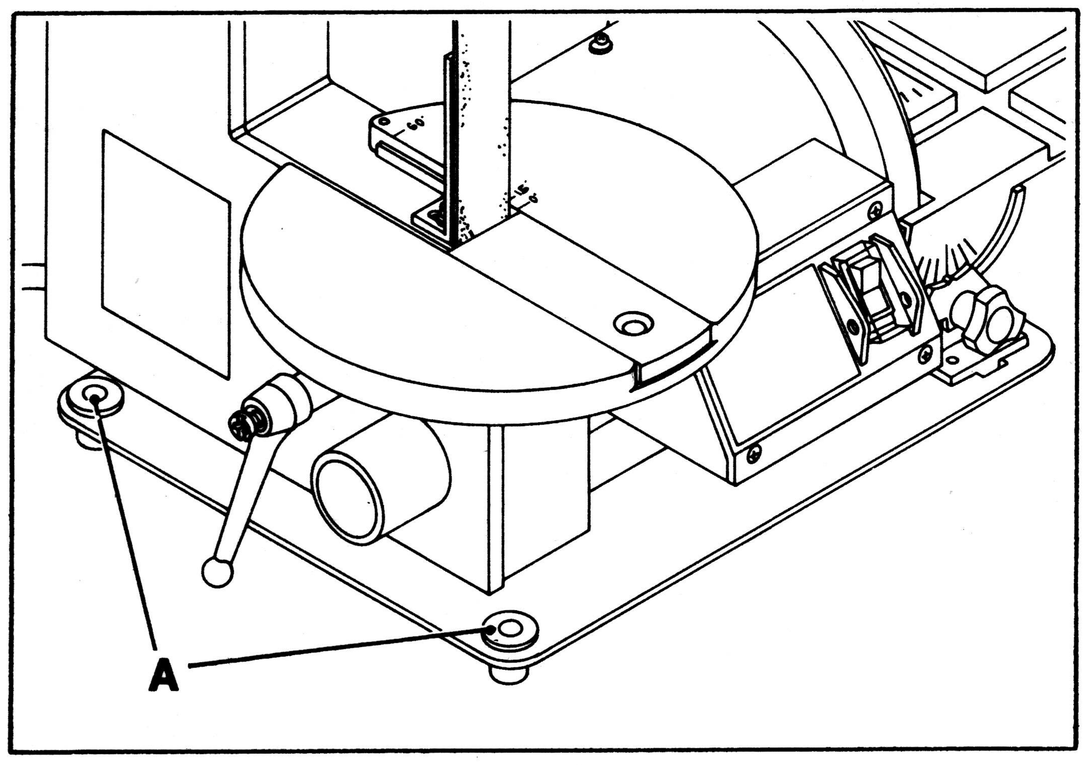


Fig. 8

STARTING AND STOPPING SANDER

The switch (A) Fig. 9, is located on the front of the switch box. To start the sander, push the upper half of switch to the "ON" position. To stop the sander push lower half switch to the switch to the "OFF" position.

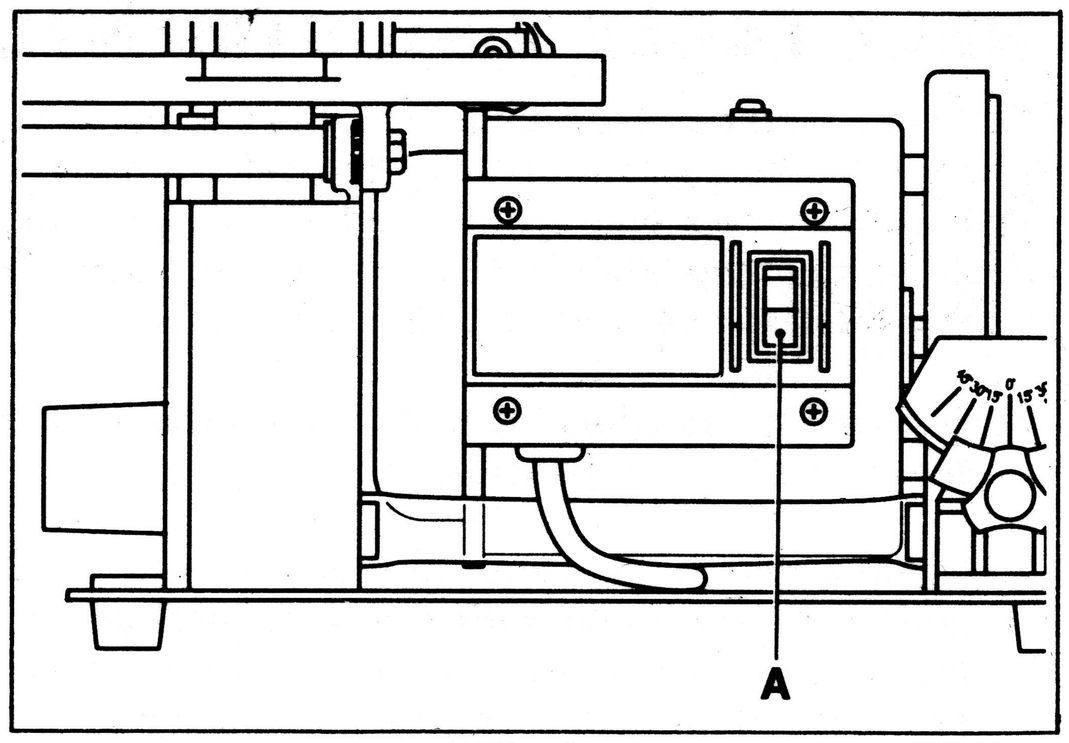


Fig. 9

LOCKING SWITCH IN THE "OFF" POSITION

We suggest that when the sander is not in use, the switch be locked in the "OFF" position to prevent unauthorized use of the machine, using a padlock (B), as shown in Fig.10.

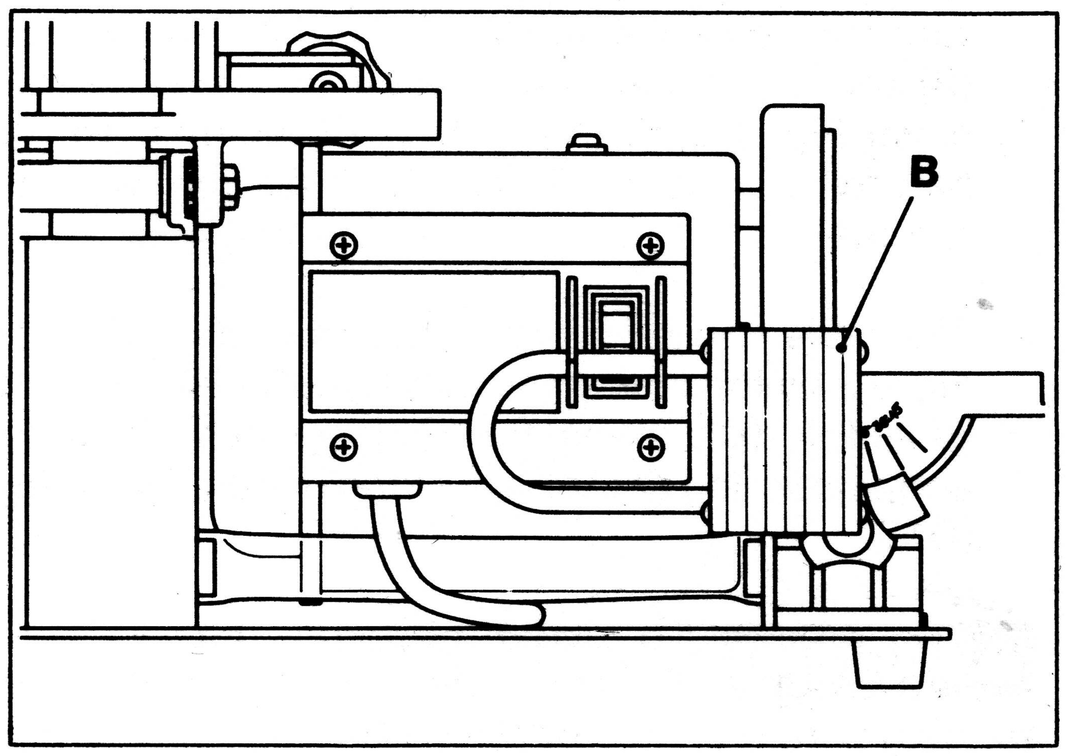


Fig. 10

TRACKING THE BELT

The belt tracking adjustment is set at the factory so that the abrasive belt will run true on the pulleys. If however, the belt should lead to one side or the other on the pulleys, an adjustment can be made by turning the tracking knob (A) Fig. 11. Turning the knob (A) clockwise will move the belt to the right when facing the sander. Turning the knob (A) counterclockwise will move the belt to the left. **THIS ADJUSTMENT IS USUALLY VERY SLIGHT.**

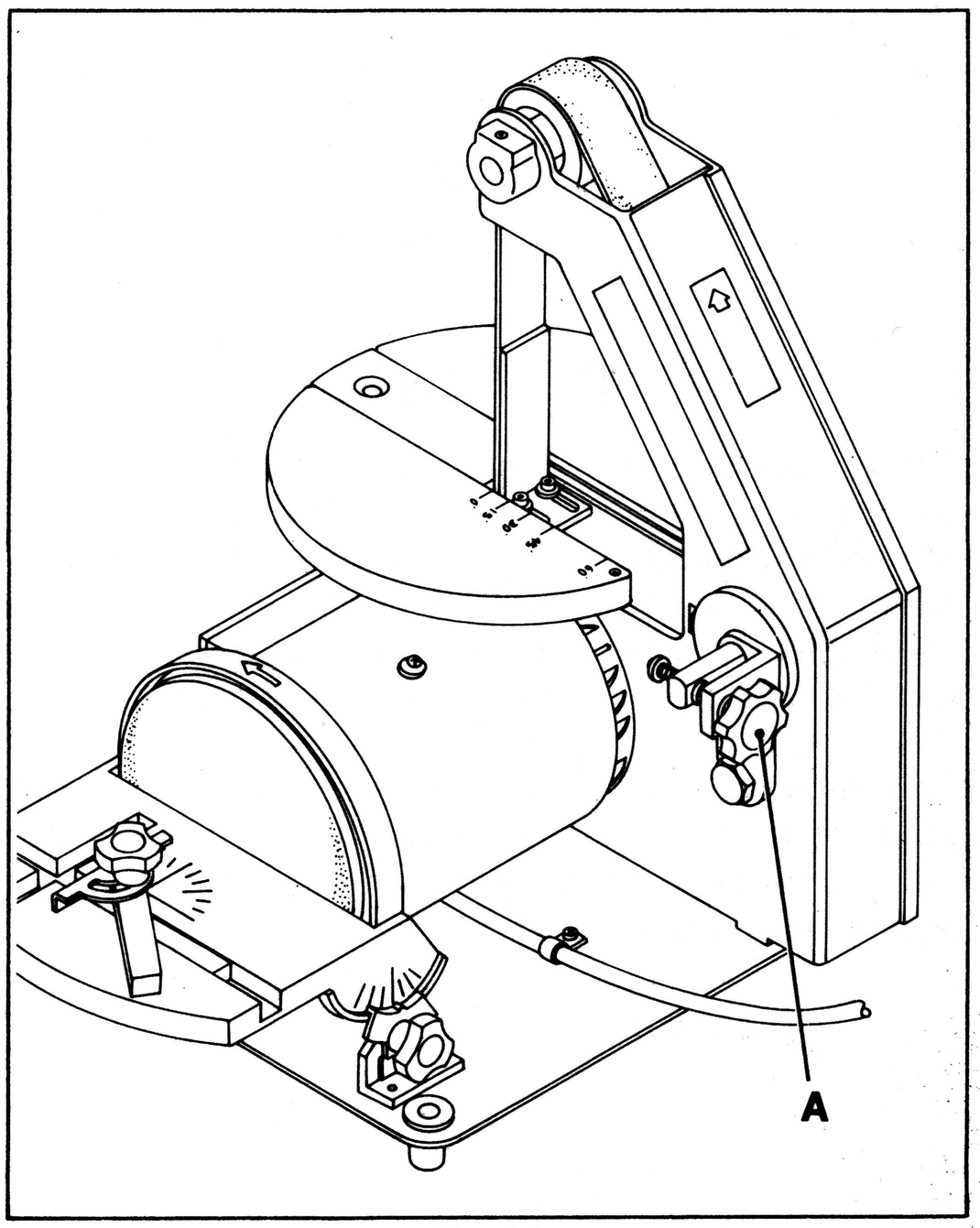


Fig. 11

BELT TABLE ADJUSTMENTS

For most sanding operations the table should be set at a 90 degree angle to the sanding belt. A positive stop is provided with your sander to insure fast positioning of the table at 90 degrees to the belt. To adjust the positive stop, proceed as follows:

1. Loosen the table locking lever and tilt the table to the rear as far as possible.

2. Using a combination square, place one end of the square on the table with the other end against the sanding belt, as shown in Fig. 12 and check to see if the table is 90 degrees to the belt.

3. If the table surface is not 90 degrees to the belt, turn the adjusting screw (A) Fig.12 with wrench (B) that's provided and stored on inside of side cover Fig. 1 until the table is 90 degrees to the belt when the table is tilted all the way to the rear.

4. The table can be tilted to the front as shown in Fig. 13 by loosening the belt table locking handle assembly (D), tilting the table to desired angle and tightening the table locking handle assembly (D).

⚠WARNING To avoid trapping the work or fingers between the table and sanding belt, the edge of the sliding plate (C) should be positioned a maximum of 1/16 inch from sanding belt (E), as shown in Fig. 13.

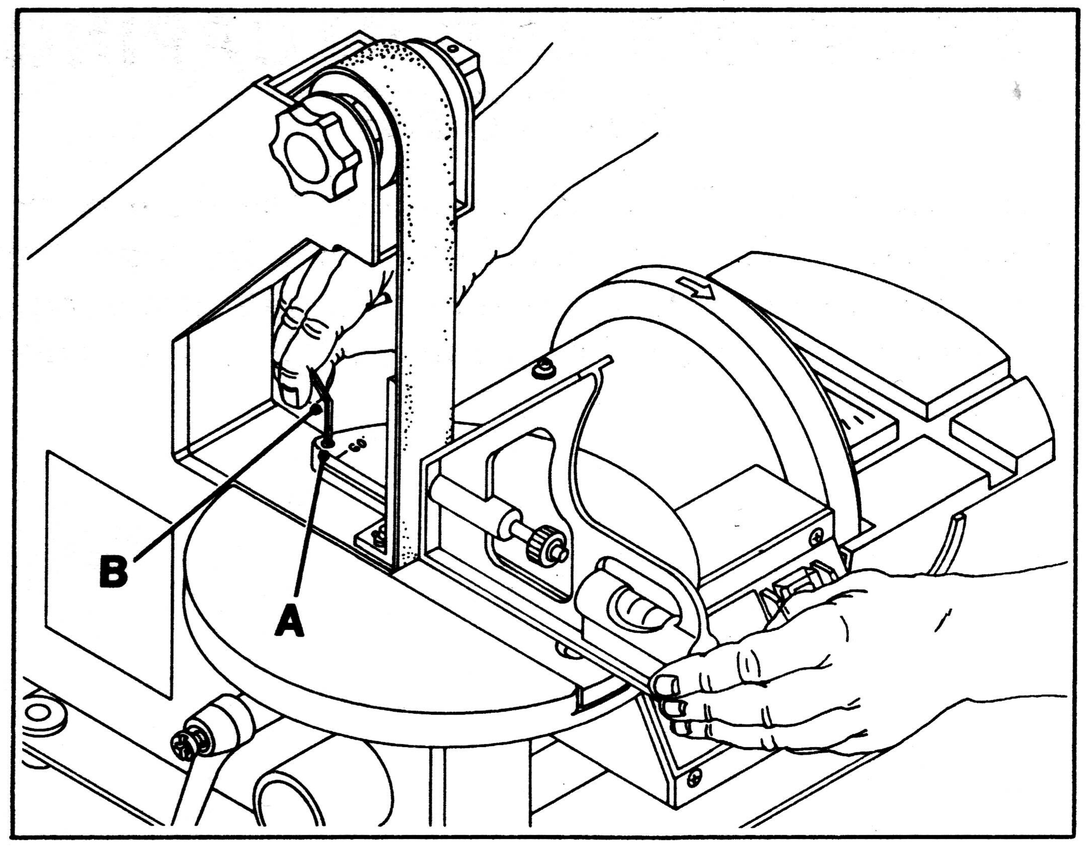


Fig. 12

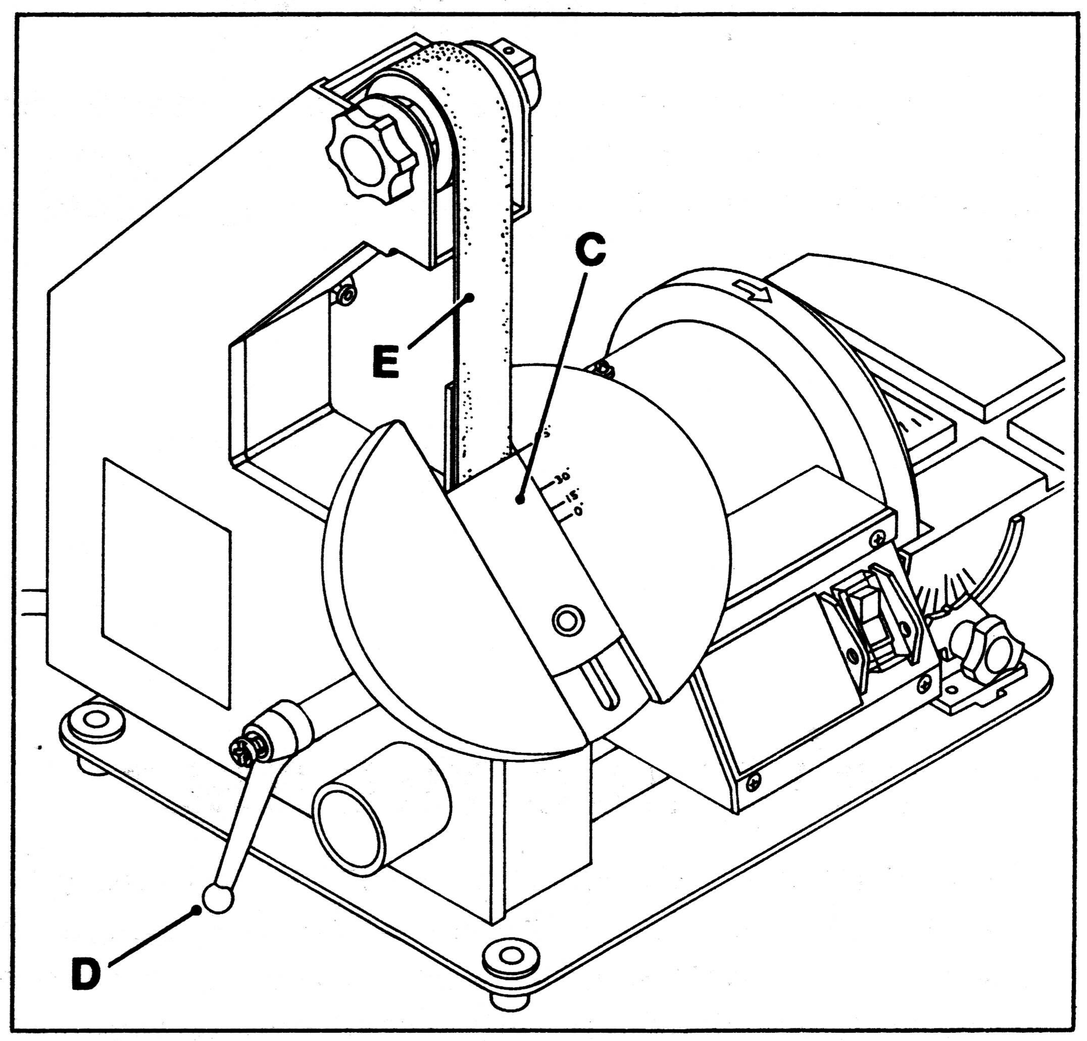


Fig. 13

PLATEN

The platen (A) Fig. 14, is constructed of heavy steel to properly support the work when sanding. The platen (A) should be adjusted so it is almost touching the back of the sanding belt by loosening the two screws (B) with the wrench provided, (Fig. 1) adjusting the platen, and tightening the two screws (B).

To remove the platen for operations such as strapping, polishing or other special operations, remove two screws (B) with allen wrench provided, and platen (A) (Fig. 14).

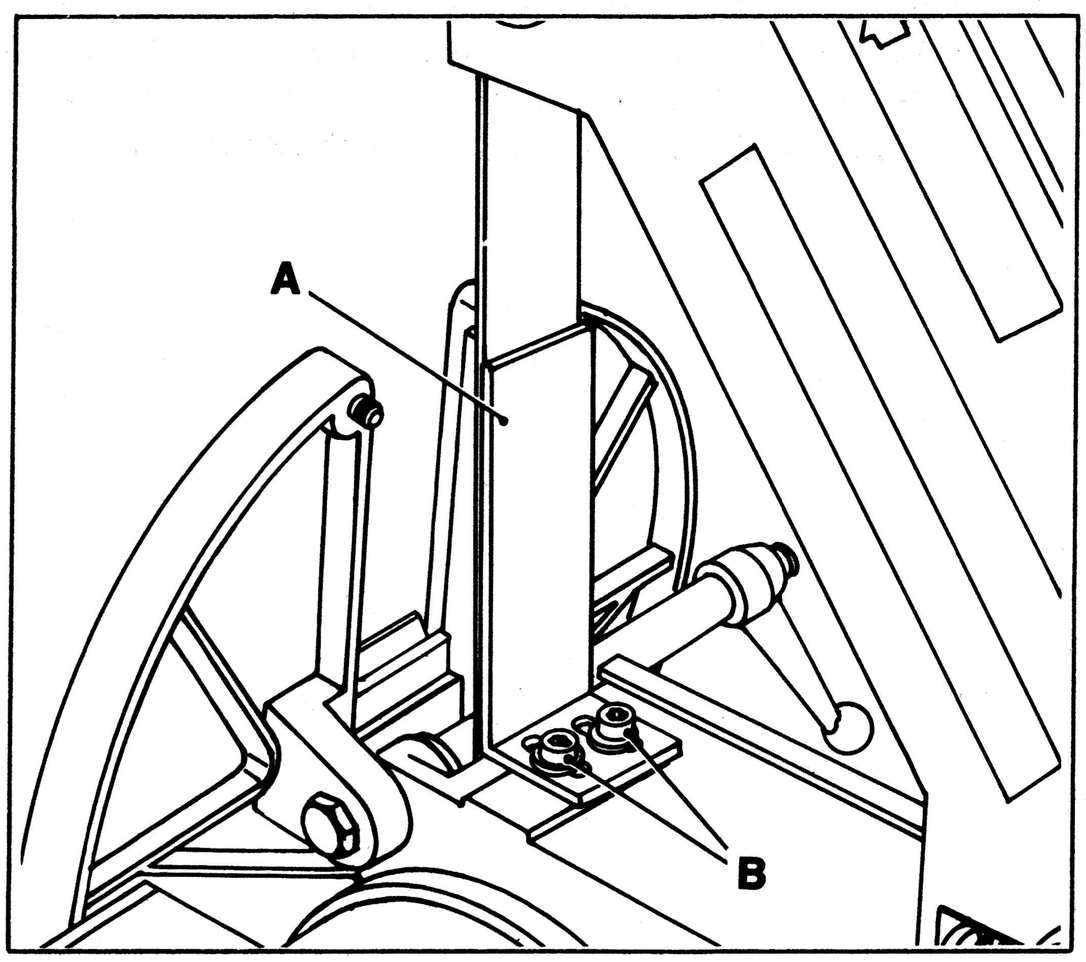


Fig. 14

DISC TABLE ADJUSTMENTS

For most of your work you will want the table square with the sanding disc. This should be checked using a combination square.

1. Place one of the square on the table with the other end against the sanding disc as shown in Fig. 15 and check to see if the table is 90 degrees to the disc.

2. If the table is not 90 degrees to the disc, loosen the table adjustment knobs (A) at each end of table and move the table (B) the desired amount. Retighten adjustment knobs (A) and recheck for squareness. Any desired angle can be set in the same way using a protractor instead of a square.

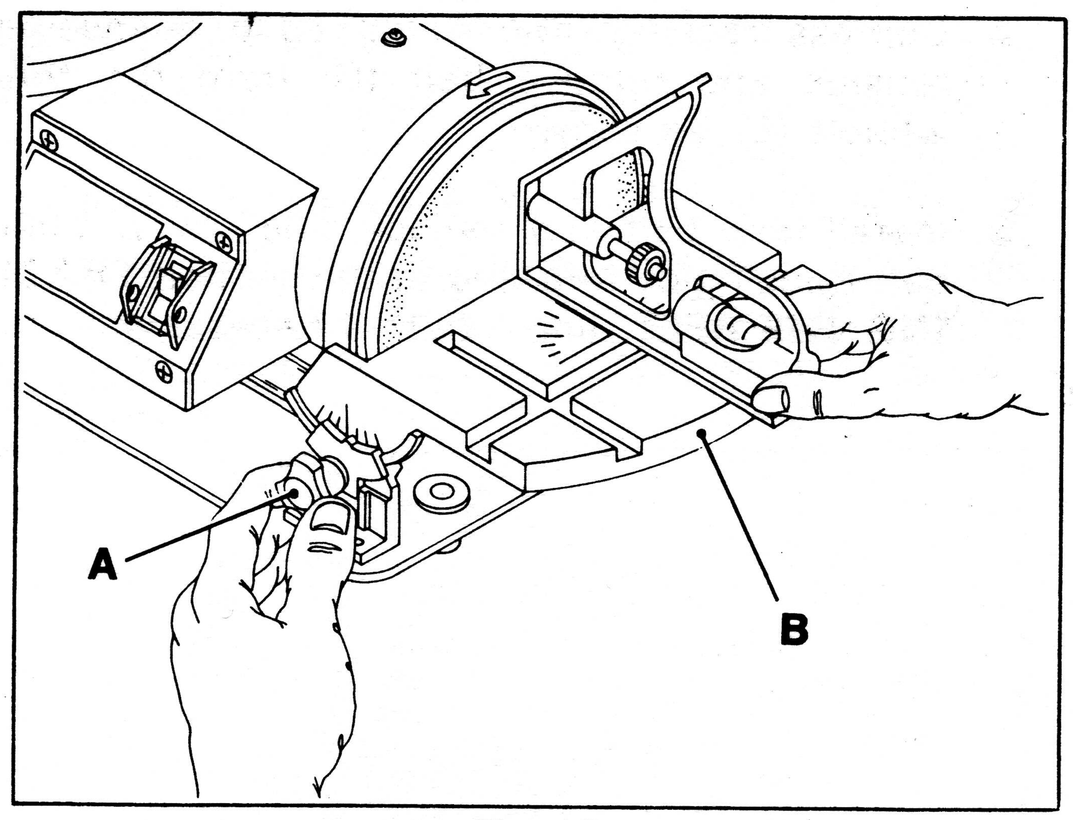


Fig. 15

Sanding is done only on the forward half of the disc as shown in Fig. 16 with the workpiece supported by the table. If you use the back half of the disc, dust and grit will be thrown up into your face and the workpiece can be pulled out of your hands resulting in painfully abraided fingers.

The miter gage (C) Fig. 16 is used for making most angles such as the corners of a picture frame. The angle setting on table should be used only for rough work. To make perfect joints such as required by picture framing, a protractor should be used to make settings. Adjustment are made by loosening adjustment knob (D) moving gage (C) to desired angle and tightening adjustment knob (D).

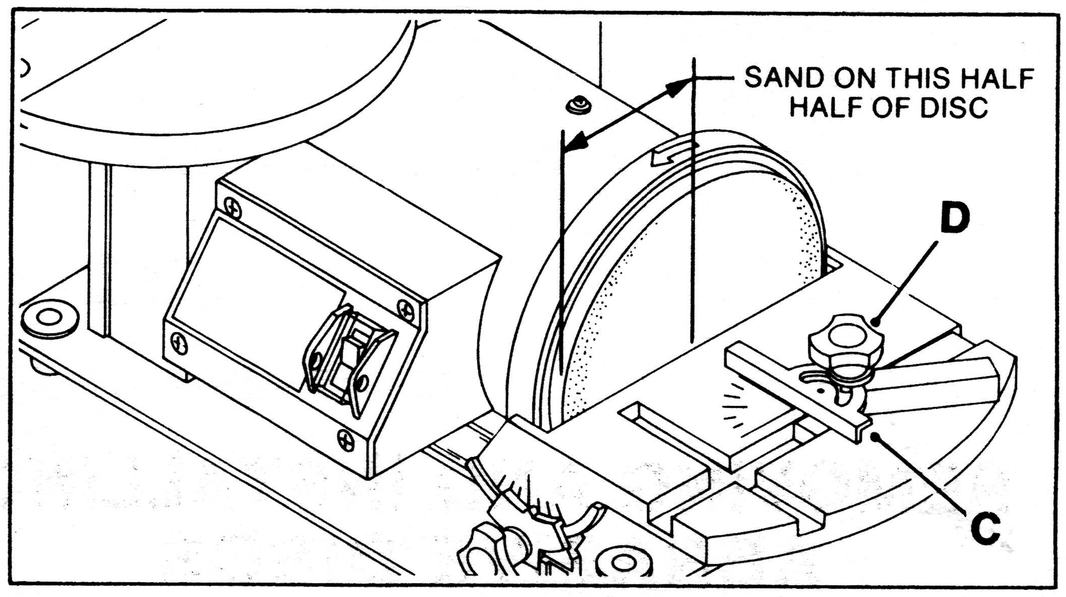


Fig. 16

REMOVING AND INSTALLING ABRASIVE BELTS

⚠WARNING To prevent personal injury always remove the plug from power source before removing or installing abrasive discs, abrasive belts, or buffing belts.

1. Remove cover lock knob (A) Fig. 17, and remove side cover (B).

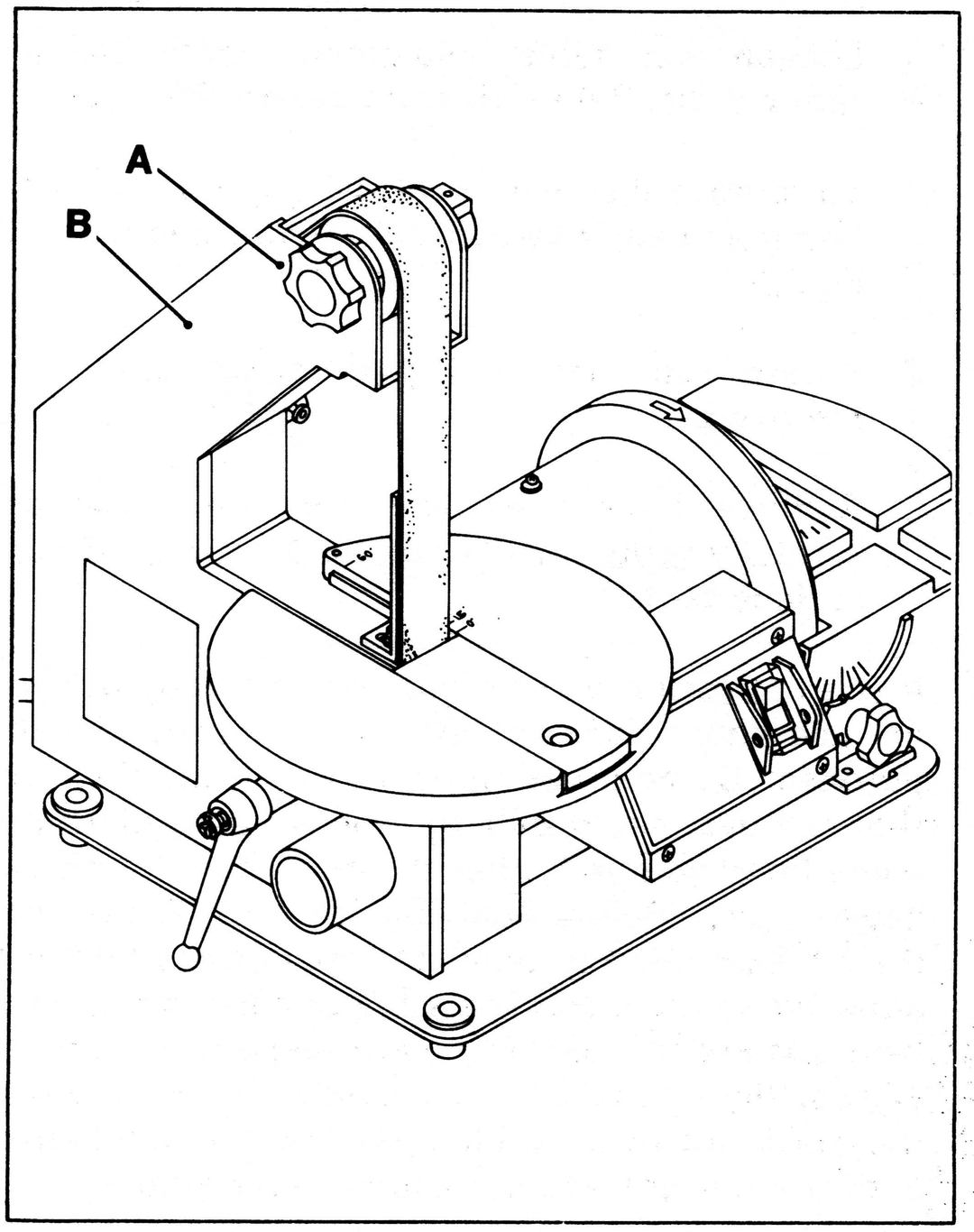


Fig. 17

2. Depress tracking knob (C) Fig. 18, to release belt tension and remove belt (D) from the three wheels (E), as shown.

3. Install new belt and replace side cover. Check belt tracking by referring to the section **TRACKING THE BELT,** and adjust if necessary.

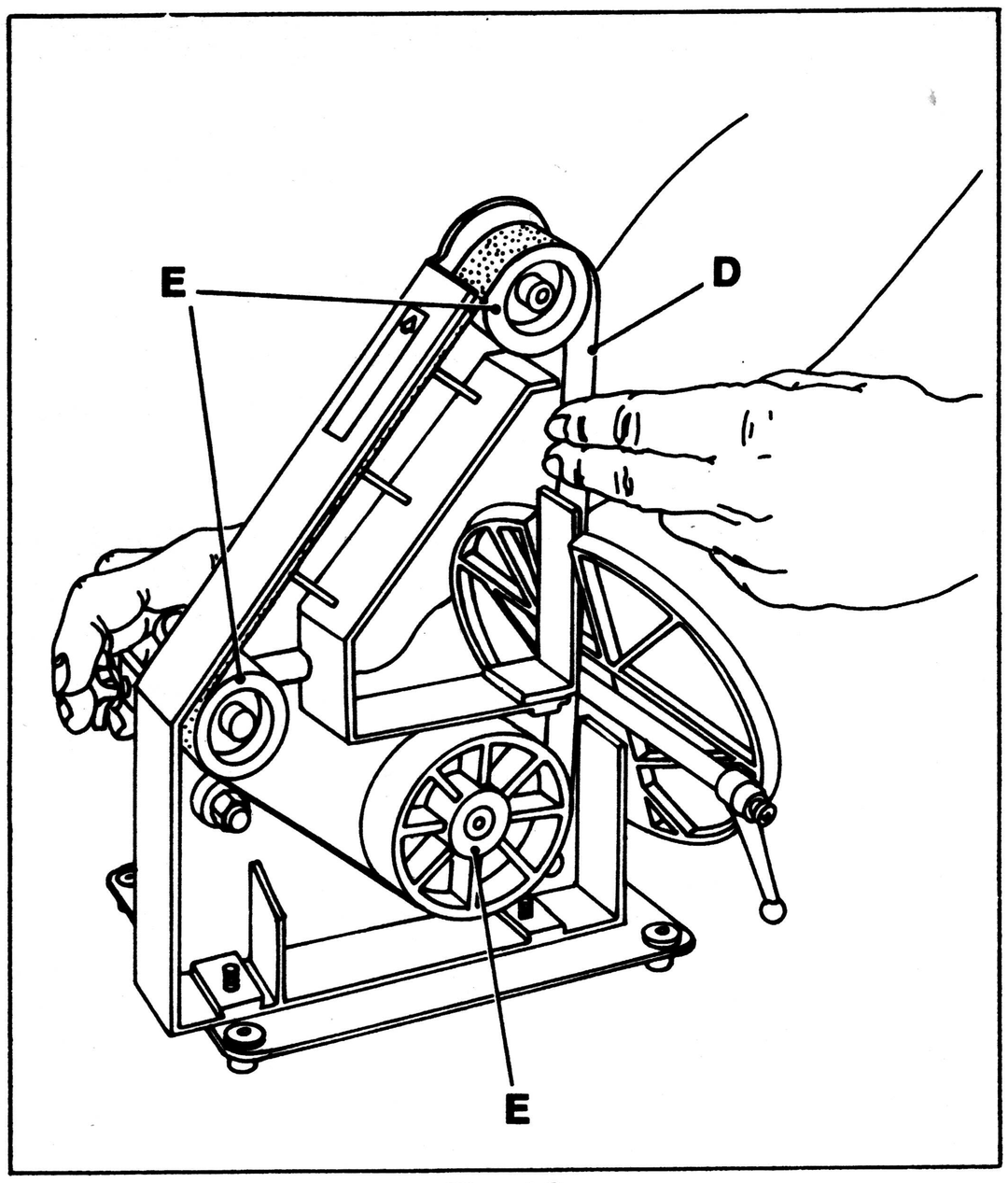


Fig. 18

REMOVING AND INSTALLING ABRASIVE DISCS

The disc furnished with the sander is self-adhesive type.

1. Loosen disc table adjustment knobs (A) and remove disc table (B) from sander Fig. 19.

1. To remove disc (C), work the edge of disc back and then peel it away from the backing plate (D) Fig. 20.

2. Rotate the disc and peel again until it is removed.

3. Remove protective back from new disc and carefully center disc (C) on backing plate (D) and replace table.

If you cut your own sanding disc and cement them on, use only "disc cement" which is made for this purpose. Some other types of cement hold so well that removal could damage the backing plate and some bond so poorly that the disc could fly off and cause injury. Before applying any new disc be sure the backing plate is clean and free of any lumps of adhesive or old disc. The edge of a hardwood stick held against the backing plate while it is spinning will usually scrape it off. If a solvent is used, be sure the cord has been unplugged and left unplugged until the solvent has completely evaporated.

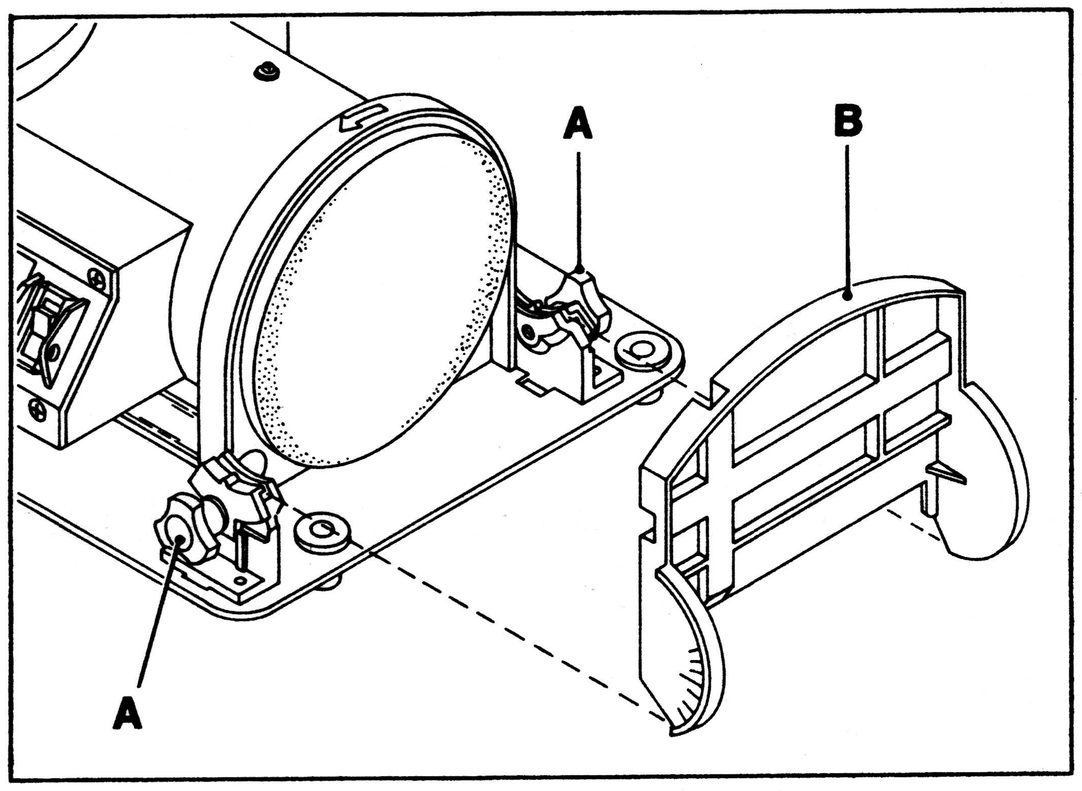


Fig. 19

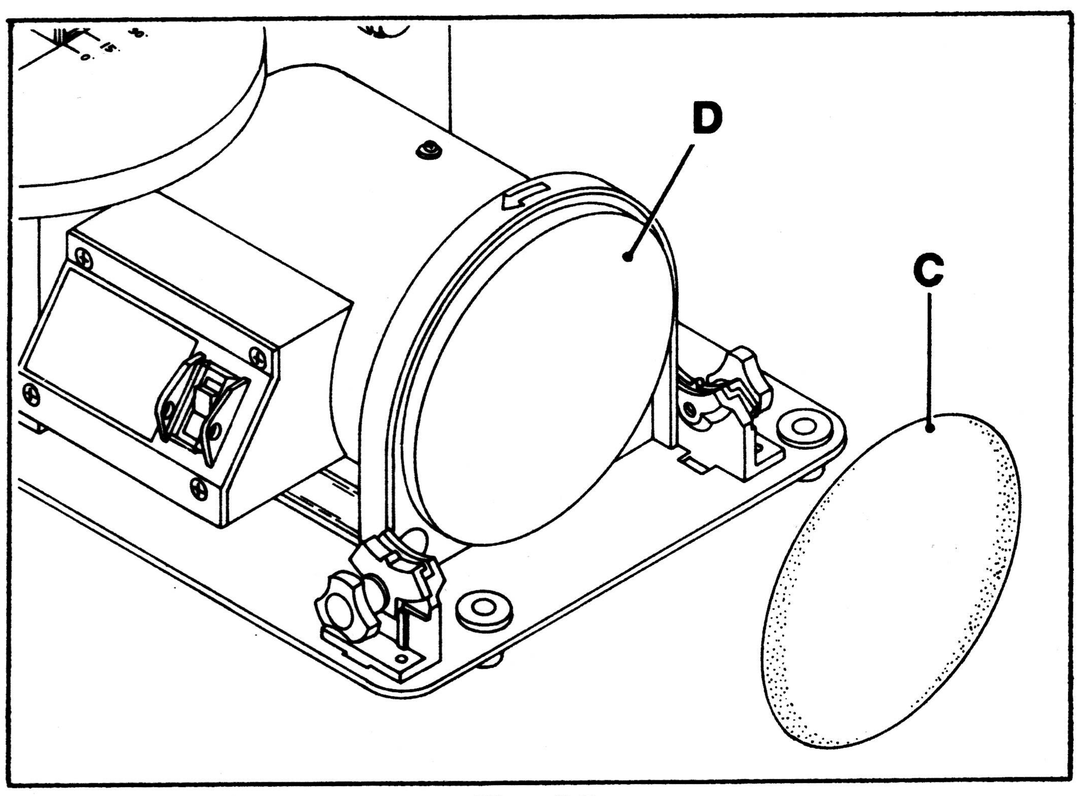


Fig. 20

USING ACESSORY 8100 BUFFING BELT

Numerous polishing, buffing and cleaning operations can be accomplished by using the accessory 8100 Buffing Belt (A) Fig. 21, in place of the sanding belt. Five ounce bars of the most common buffing compounds (B) are available from Dremel for cleaning all types of material. See Dremel Accessory sheet for complete listing.

(NOT INCLUDED WITH SANDER)
AVAILABLE AS ACCESSORY

Fig. 21 illustrates a typical buffing operation.

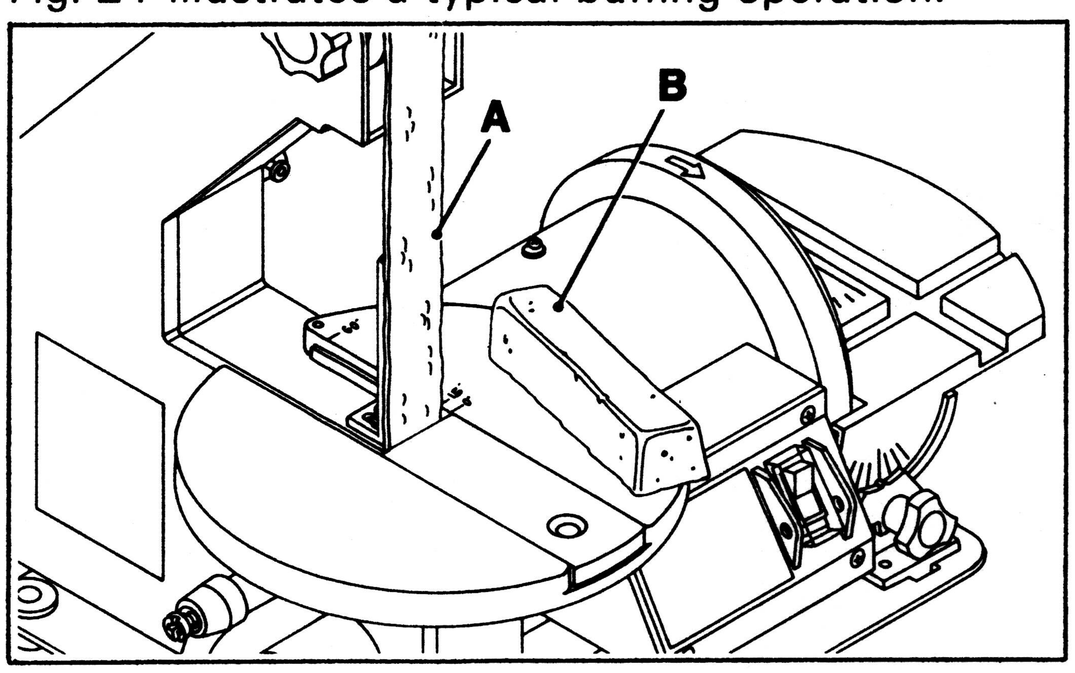


Fig. 21

Using the accessory 8100 Buffing Belt, numerous polishing, buffing and cleaning operations can be accomplished on many types of material, as shown in Fig. 22.

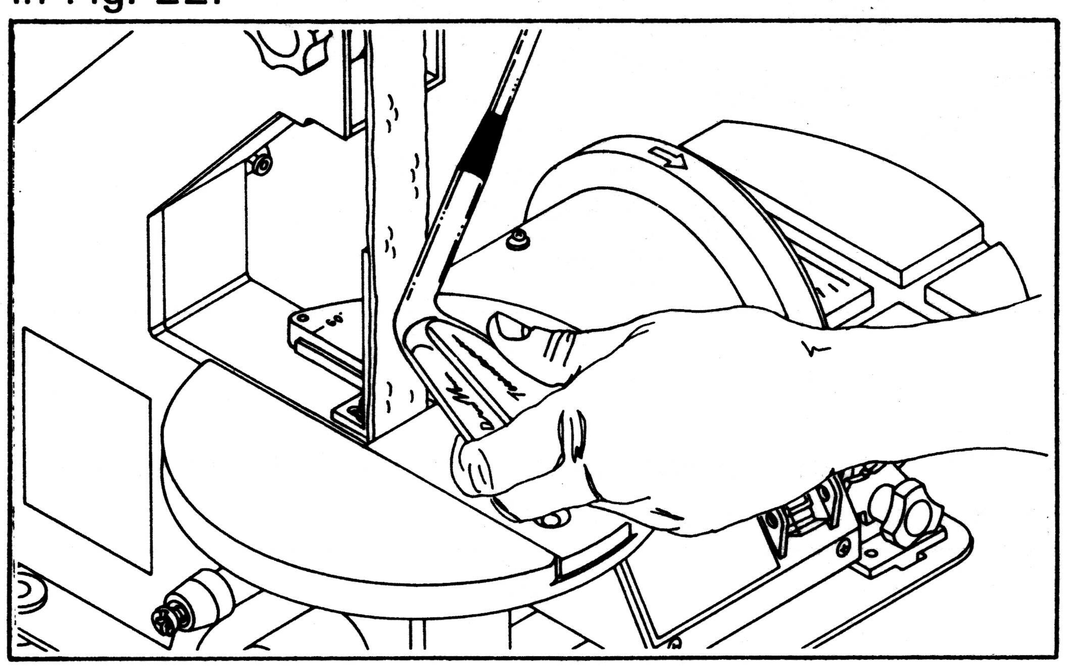


Fig. 22

ACCESSORIES

Sanding Belts - 1" x 30"

Cat. No.

8040 (2) Sanding Belts, 50 Grit, Coarse
8041 (2) Sanding Belts, 80 Grit, Medium
8042 (2) Sanding Belts, 120 Grit, Fine
8043 (2) Sanding Belts, 180 Grit, Extra Fine
8044 (2) Sanding Belts, 240 Grit, Very Fine
8045 (2) Sanding Belts, 320 Grit, Fine Polishing

Sanding Disc

8050 (2) Sanding Discs, 50 Grit, Coarse
8051 (2) Sanding Discs, 80 Grit, Medium
8052 (2) Sanding Discs, 120 Grit, Fine

Buffing Belt - 1" x 30"

8100 (1) Buffing Belt

Buffing Compound

Cat. No.

8110 Buffing Compound, 5 oz. bar, Emery Cake
8111 Buffing Compound, 5 oz. bar, Tripoli
8112 Buffing Compound, 5 oz. bar, White Rouge
8113 Buffing Compound, 5 oz. bar, Red Rouge
8114 Compound Set, (4) 5 oz. bars, one of each type

Attachments

Cat. No.

5736 Drill Bit Sharpener

TYPICAL OPERATIONS

The following are just some of the many operations that can be performed with your Disc/Belt Sander.

Sharpen screw drivers and lathe tools, as shown in Fig. 23.

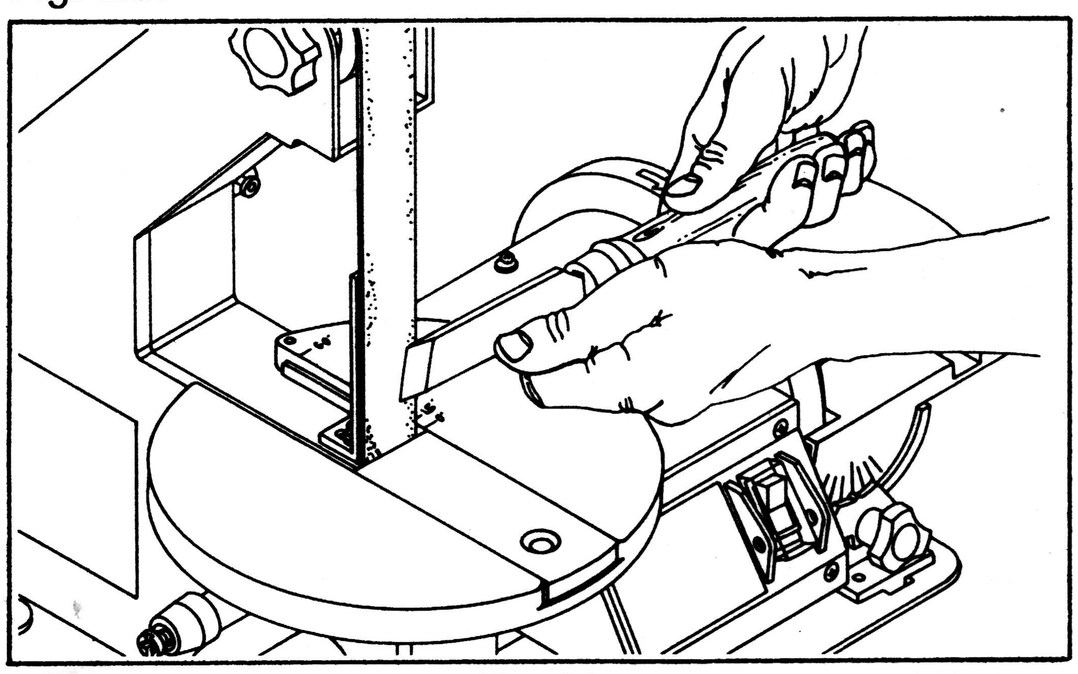


Fig. 23

Fig. 24, illustrates a typical metal grinding operation.

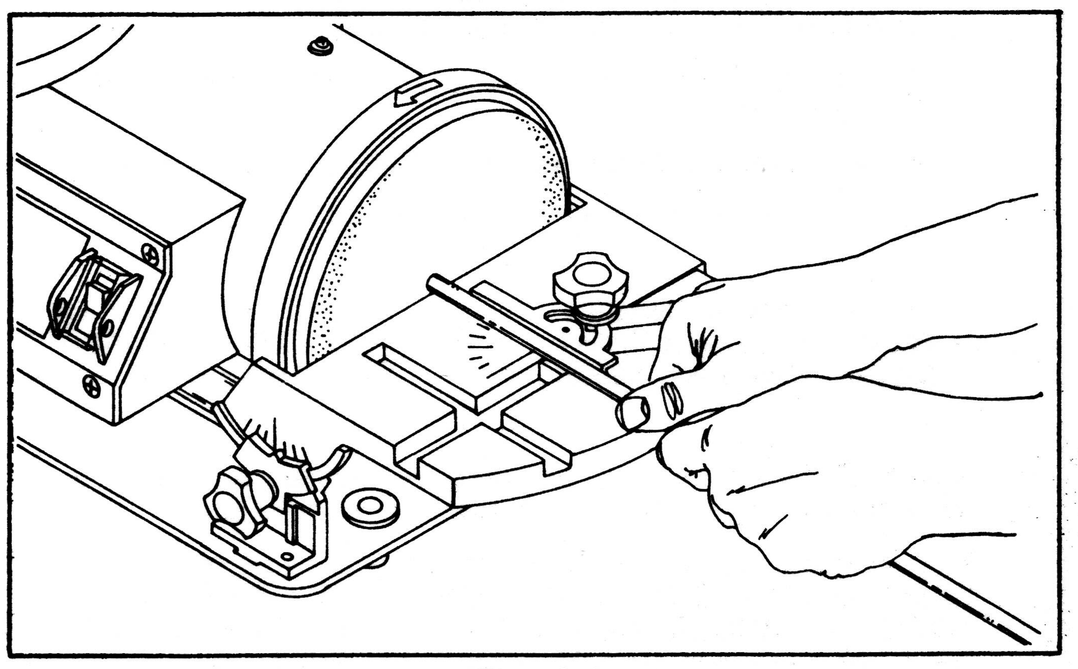


Fig. 24

Producing an outside curve on a workpiece, as shown in Fig. 25

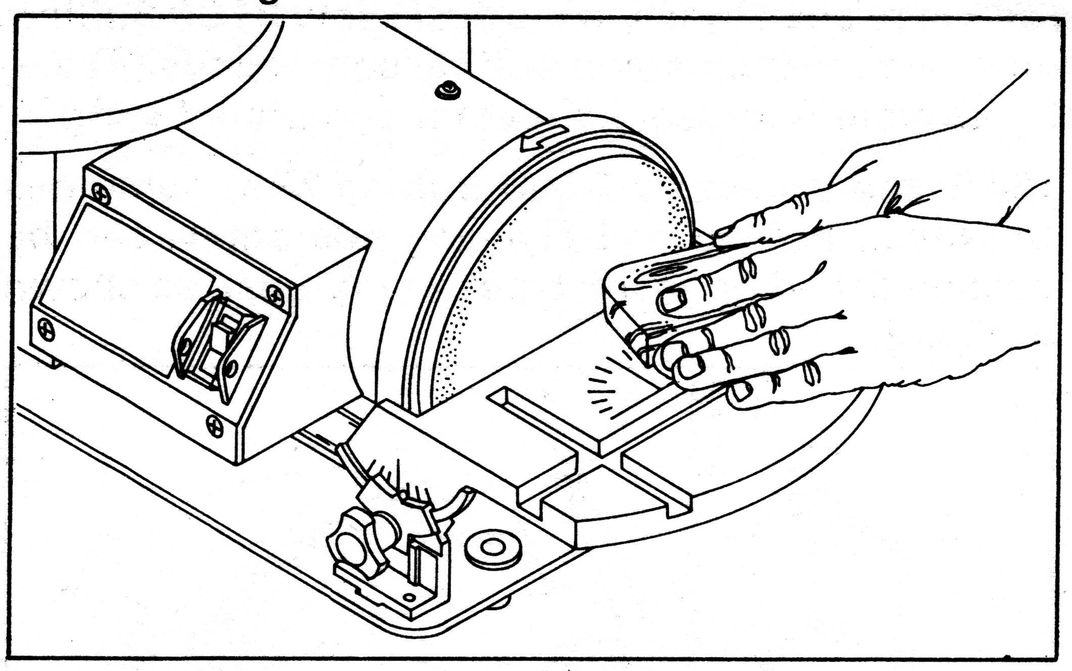


Fig. 25

Inside curves can be sanded using the top sanding wheel, as shown in Fig. 26.

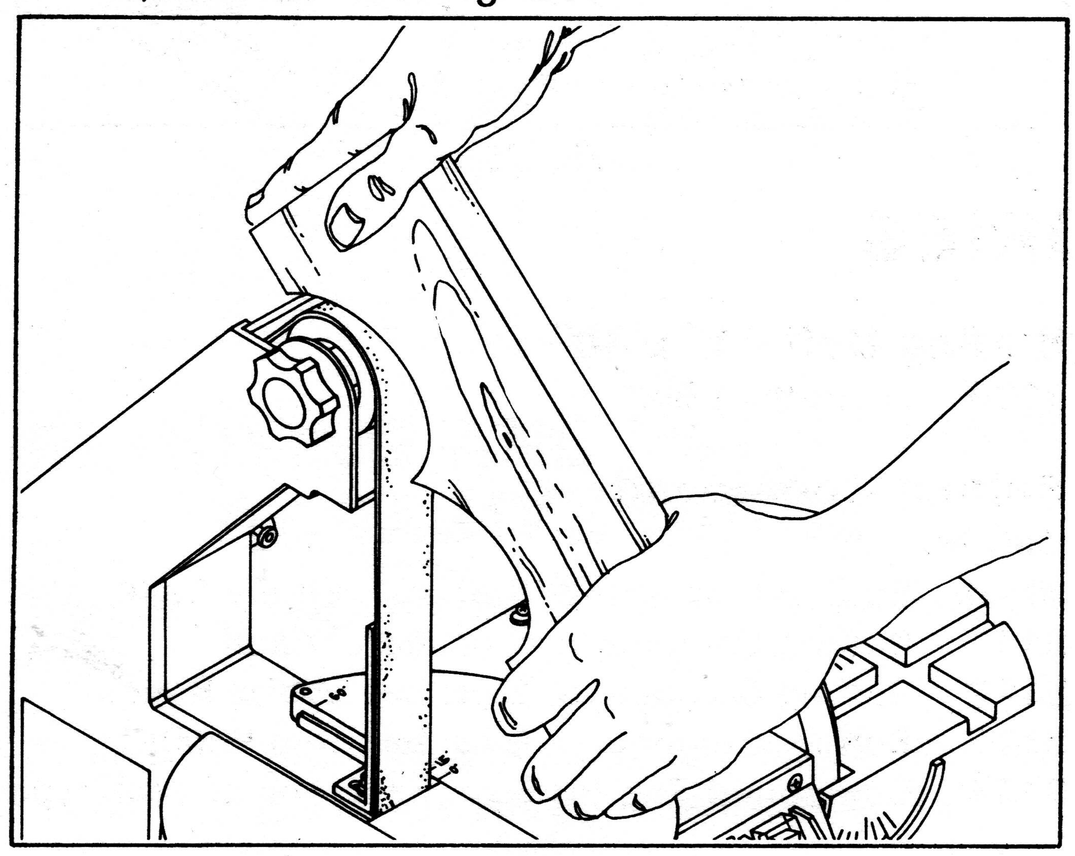


Fig. 26

Fig. 27, illustrates the table tilted to sand angles and miters.

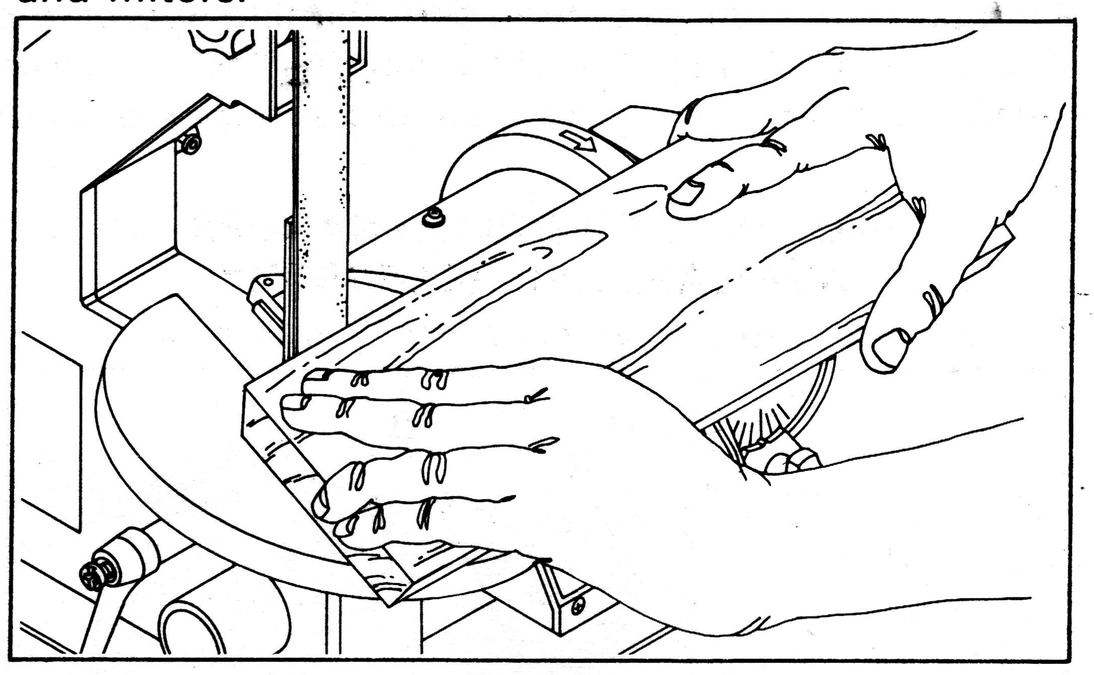


Fig. 27

Fig. 28 illustrates a drill bit with Model 5736 Drill Bit Sharpener.

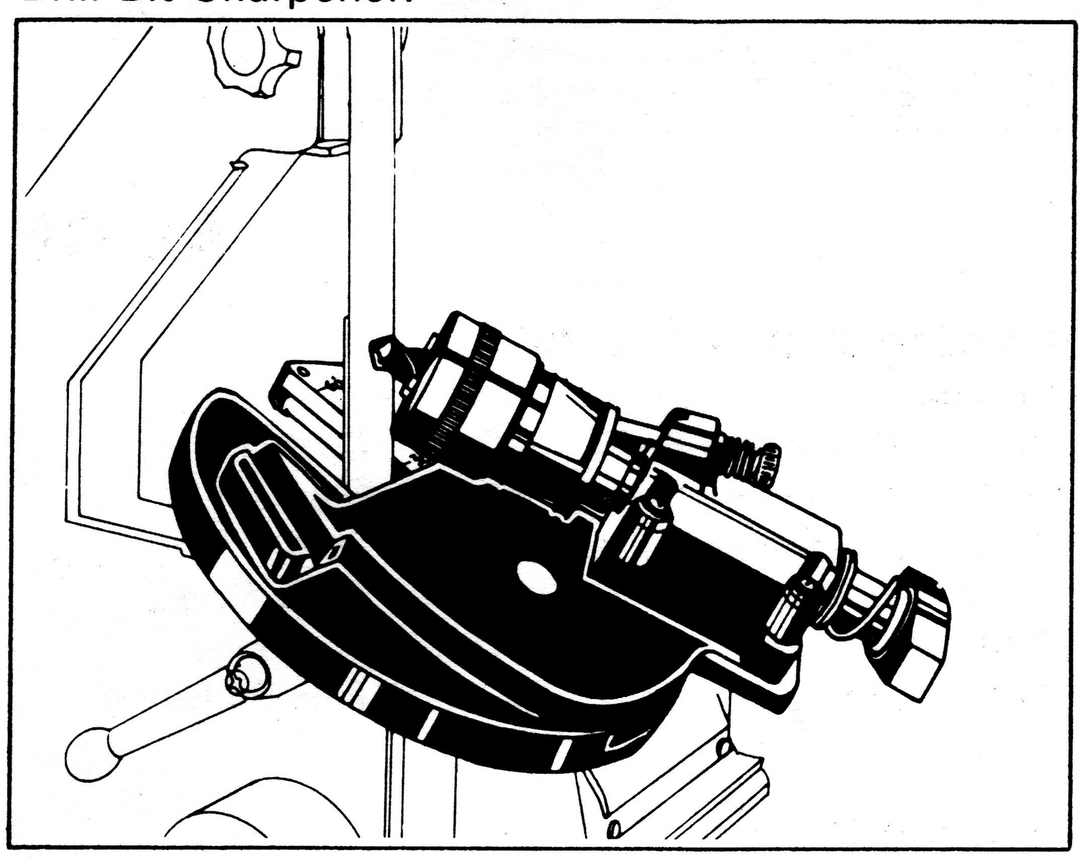


Fig. 28

Dremel Limited Warranty

Your Dremel product is warranty against defective material or workmanship for a period of one year from date of purchase. In the event of a failure of a product to conform to this written warranty, please take the following action:

1. DO NOT return your product to the place of purchase.
2. Carefully package the product by itself, with no other items, and return it freight prepaid, along with:

   A. A copy of your dated proof of purchase (please keep a copy for yourself).

   B. A written statement about the nature of the problem;

   C. Your name, address and phone number to:

Dremel Service Center
4915 Twenty-First Street
Racine, Wisconsin 53406

OR

Dremel Service Center
4631 E. Sunny Dunes
Palm Springs, CA 92264

We recommend that the package be insured against loss or in transit damage for which we cannot be responsible.

This warranty applies only to the original registered purchaser. DAMAGE TO THE PRODUCT RESULTING FROM TAMPERING, ACCIDENT, ABUSE, NEGLIGENCE, UNAUTHORIZED REPAIRS OR ALTERATIONS, UNAPPROVED ATTACHMENTS OR OTHER CAUSES UNRELATED TO PROBLEMS WITH MATERIAL OR WORKMANSHIP ARE NOT COVERED BY THIS WARRANTY.

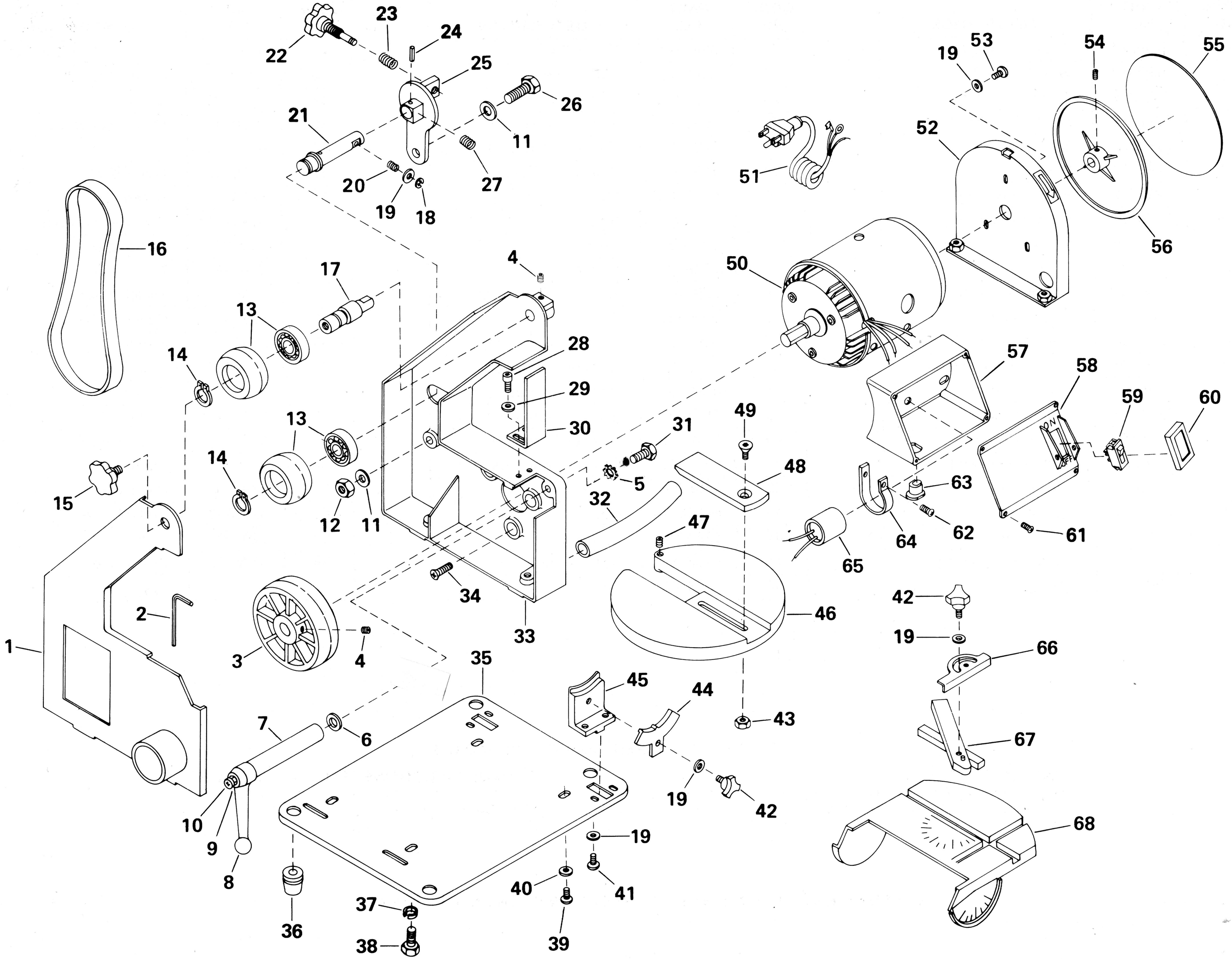
No employee, agent, dealer or other person is authorized to give any warranties on behalf of Dremel. If Dremel inspection shows that the problem was caused by problems with material or workmanship within the limitations of the warranty, Dremel will repair or replace the product free of charge and return product prepaid. Repairs made necessary by normal wear or abuse, or repair for product outside the warranty period, if they can be made, will be charged at regular service prices.

DREMEL MAKES NO OTHER WARRANTY OF ANY KIND WHATEVER, EXPRESSED OR IMPLIED, AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE ABOVE MENTIONED OBLIGATION ARE HEREBY DISCLAIMED BY DREMEL AND EXCLUDED FROM THIS LIMITED WARRANTY.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state. The obligation of the warrantor is solely to repair or replace the product. The warrantor is not liable for any incidental or consequential damages due to any such alleged defect. Some states do not allow the exclusion or limitations of incidental or consequential damages, so the above limitations or exclusion may not apply to you.

For prices and warranty fulfillment in the continental United States, contact your local Dremel distributor.

DREMEL® MODEL 1731 TYPE 1 DISC/BELT SANDER



CODE NO.	PART NO.	DESCRIPTION
1	5296381	Cover — Side
2	5296353	Wrench — Allen
3	5296259	Pulley — Motor
4	5296260	Screw Soc Set (2)
5	5296532	Star Washer
6	5296525	Washer
7	5296512	Stud — Locking
8	5296269	Handle — Locking
9	5296275	Spring
10	5296291	Screw
11	5296285	Washer — Plain (2)
12	351122	Nut — Chuck
13	5296363	Idler Wheel with Bearing (2)
14	5296286	Ring — Retaining (2)
15	5296263	Knob — Cover
16	5008041	Sanding Belt
17	5296265	Axle — Pulley
18	5296296	Ring — Retaining
19	5296295	Washer (9)
20	5296276	Spring
21	5296272	Axle — Tension
22	5296274	Handle — Tracking
23	5296277	Spring

CODE NO.	PART NO.	DESCRIPTION
24	5296294	Pin — Roll
25	5296273	Axle — Seat
26	5296297	Bolt — Hex Head
27	5296387	Spring — Tension
28	5296289	Bolt — Hex Soc Head (2)
29	5296288	Washer — Flat (2)
30	5296266	Platen
31	5296533	Bolt
32	5296386	Hose
33	5296380	Frame
34	5296261	Screw — Cout Head (3)
35	5296382	Base
36	5296385	Foot — Support (4)
37	5296396	Washer — Lock (2)
38	5296395	Bolt — Hex Head (2)
39	5296397	Screw — Pan Head (2)
40	5296399	Washer — Flat (2)
41	5296398	Screw — Pan Head (2)
42	5296394	Knob (3)
43	5296527	Nut
44	5296392	Fix Plate (2)
45	5296388	Seat — Angle (2)
46	5296509	Table

CODE NO.	PART NO.	DESCRIPTION
47	5296292	Screw — Hex Soc Set
48	5296511	Slide Plate
49	5296526	Screw
50	5296384	Motor Assembly
51	5296359	Cord
52	5296389	Disc Cover
53	5296450	Screw (3)
54	5296451	Screw — Hex Soc Set
55	5008051	Sanding Disc
56	5296390	Disc
57	5296518	Switch Housing
58	5296522	Cover — Switch
59	5296354	Switch
60	5296364	Dust Cover
61	5296357	Screw (4)
62	5296521	Screw
63	5296519	Strain Relief
64	5296520	Clamp
65	5296358	Capacitor
66	5296393	Angle Scale
67	5296391	Slider
68	5296383	Disc Table

WRITE FOR CURRENT PRICES - NO C.O.D.'S

UNITED STATES
Dremel Service Center, 4915 Twenty-first St., Racine, WI 53406
Dremel Service Center, 4631 E. Sunny Dunes, Palm Springs, CA 92264

OUTSIDE OF CONTINENTAL UNITED STATES
See your Local distributor or write to Dremel, 4915 Twenty-first St., Racine, WI 53406

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