

Owner's Guide

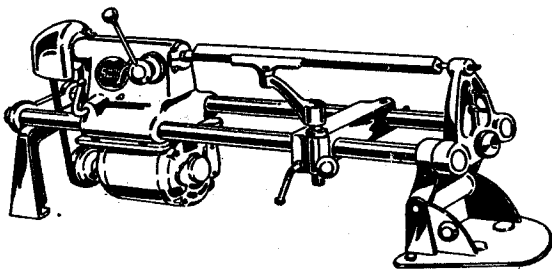
ASSEMBLY • MAINTENANCE • REPAIR PARTS LIST

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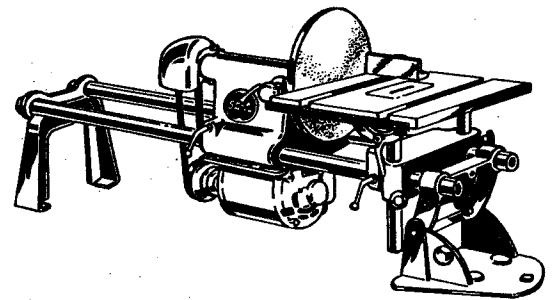


MULTI-PURPOSE

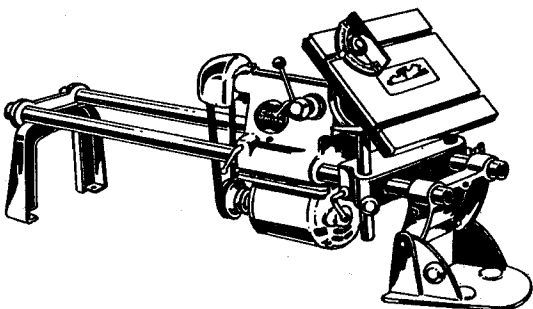
POWER TOOL



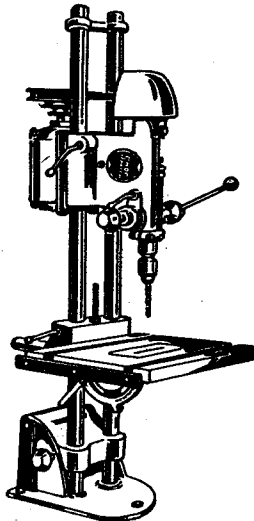
WOOD-TURNING LATHE



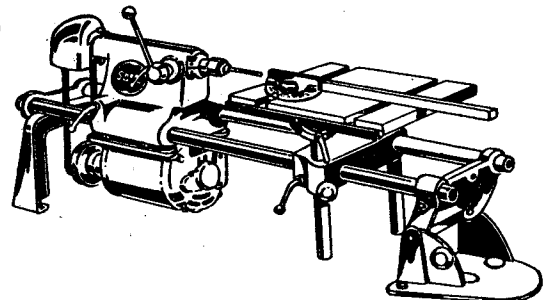
DISC SANDER



CIRCULAR SAW



VERTICAL DRILL PRESS



HORIZONTAL DRILL PRESS

M O N T G O M E R Y W A R D

TABLE OF CONTENTS

Packing List	3
Assembly	4
Operation	5
Wood Turning Lathe.....	8
Circular Saw	9
Saw Table Adjustments.....	12
Disc Sander.....	13
Horizontal Drill Press.....	13
Vertical Drill Press.....	14
Miscellaneous Applications.....	14
Safety Precautions.....	15
How to Order Repair Parts.....	15
Repair Parts List.....	18

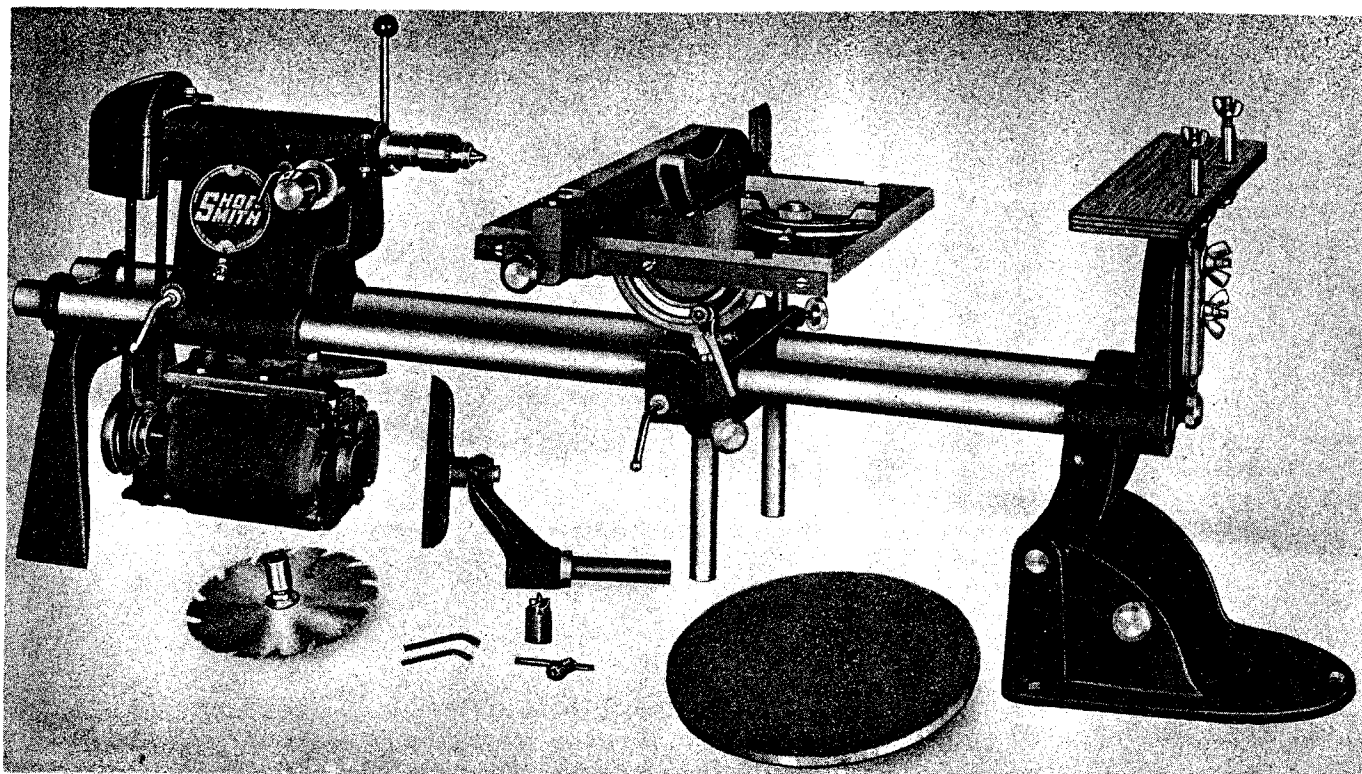


FIG. 1

SHOPSMITH MULTI-PURPOSE POWER TOOL

INSTALLATION

PACKING LIST — The crate in which your Shopsmith multi-purpose power tool is received contains the following items (Fig. 1):

1. Basic Shopsmith, complete with Frame Assembly, Headstock and Table Assembly.
2. Fiber carton containing one each: Tailstock, Headrest, Table Extension Bracket, Rip Fence, Miter Gauge, Saw Guard and Splitter, Motor Pulley, Lathe Tool-Rest, Sanding Disc (with sandpaper disc and tube of adhesive), 8-inch Combination Tooth Circular Saw Blade, Saw Arbor, Jacobs Key Chuck, Lathe Spur Center, Lathe Tail Center, Feed Lever, Tailstock Knob, Toggle Switch, four Cap Screws for attaching motor to motor bracket. Plywood Extension Table is attached to outside of carton.
3. Envelope containing Blueprint and Instructions for constructing a suggested bench; Warranty Card and Owners Guide and Instruction Book.

Unpack carefully and check to see that you have all the parts listed above. Do not release any levers or force any parts until you have read the following instructions:

Assembly of the Shopsmith will be facilitated if you first clean off the moisture and rust-resisting compound with which certain parts have been coated for shipment. Use a rag and kerosene and, after all parts have been thoroughly cleaned and wiped dry, cover all unpainted steel surfaces with a thin film of light machine oil to prevent rusting. These surfaces, the tubular ways in particular, should be kept lightly oiled at all times. The entire machine should be protected with a canvas or similar type cover when not in use. This protection is especially recommended when the unit is to be installed in a basement shop.

SETTING UP THE SHOPSMITH — Because the Shopsmith is not a floor-type machine, a suitable base must be provided for mounting it. Instructions for making this base or bench are included with the machine. The bench should be 20 inches high, but this measurement can be varied to suit individual requirements. The bench top should be strongly constructed and reinforced. If a plywood top is used, be sure it is suitably supported underneath. If the support is not sufficiently rigid, the weight of the machine will cause the bench top to bow in the middle. The bench need not be bolted to the floor since it may be convenient, when handling large stock or long pieces, to shift the position of the bench.

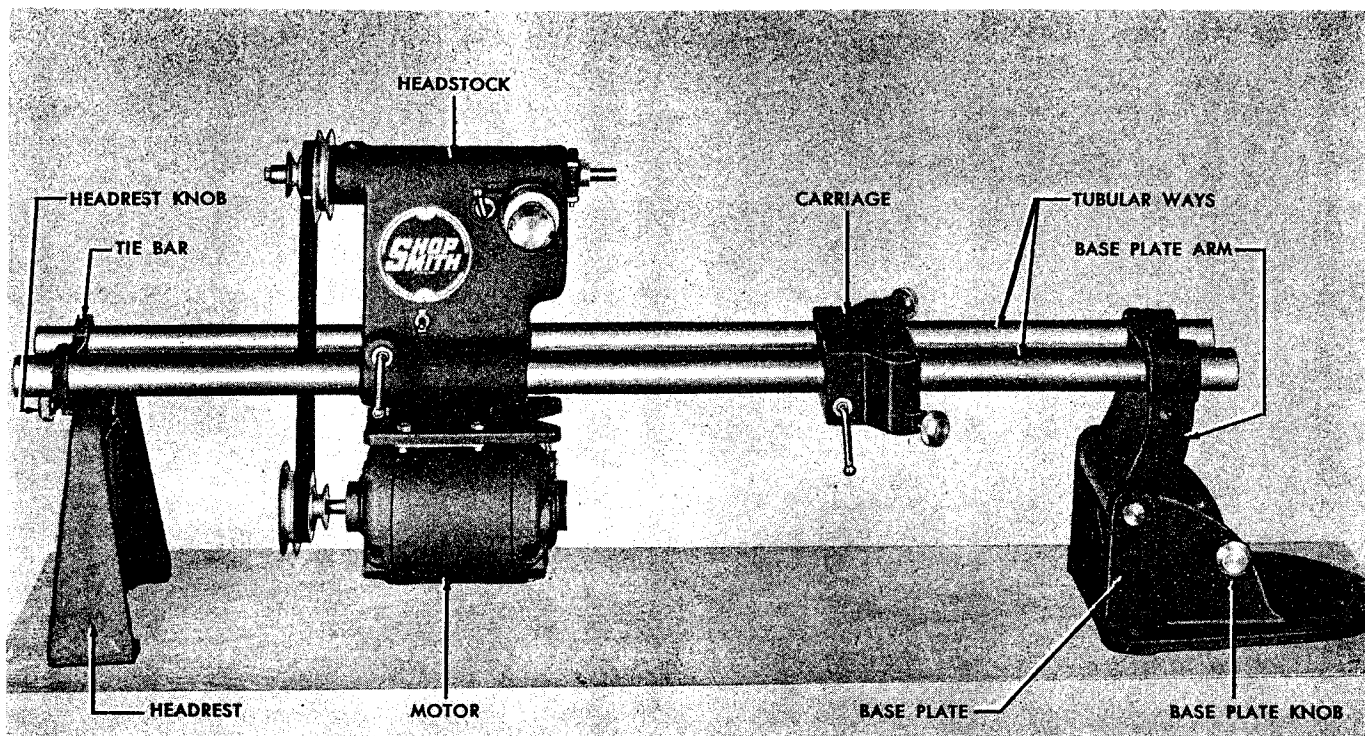


FIG. 2

ASSEMBLY

With a properly constructed bench provided, the machine can be completely assembled.

For convenience in packing, Shopsmith is secured in its crate in a vertical position. To assemble, loosen the carriage knob (Fig. 2) and pull the table completely free of the carriage. Hold the tubular ways with the left hand (to prevent falling), loosen the base plate knob and lower slowly until the ways rest on the bench.

Arrange Shopsmith on the bench top; locate and drill $\frac{3}{8}$ or $\frac{1}{2}$ -inch holes for the base plate and bolt down securely with machine bolts. Drive bolts through from the top side and apply nuts, with washers between them and the wood top, from below.

ATTACHING HEADREST — Because the tie bar, across the ends of the tubular ways, describes an arc when the ways are raised to the vertical position, it is necessary to move headrest $\frac{1}{8}$ inch toward base plate. With the tubular ways resting on the headrest and the headrest knob tightened, locate and mark centers of the headrest holes on the bench top. However, do not drill holes at these points; move the center marks $\frac{1}{8}$ inch forward, toward the base plate, drill $\frac{3}{8}$ or $\frac{1}{2}$ -inch bolt holes and bolt down solidly.

ATTACHING MOTOR SWITCH — The motor bracket (Fig. 3) is attached to the headstock by means of Allen setscrews. These setscrews are located on the top and bottom of the headstock. Loosen them with the wrench provided and remove the motor bracket. This will give access to the inside of the headstock and allow the toggle switch to be inserted easily through hole in the headstock.

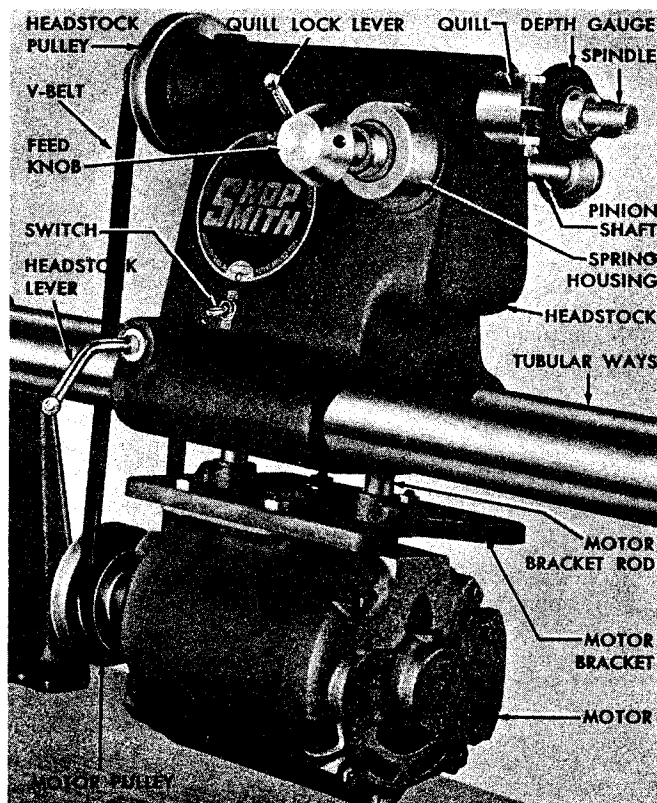


FIG. 3

The Shopsmith motor is equipped with a short lead wire to facilitate connection of the switch. After attaching motor to motor bracket, as described below, thread short wire through the motor bracket slot (Fig. 4). If you do not have a Shopsmith motor, use an 18-inch length of No. 18 rubber-insulated cord and connect as described.

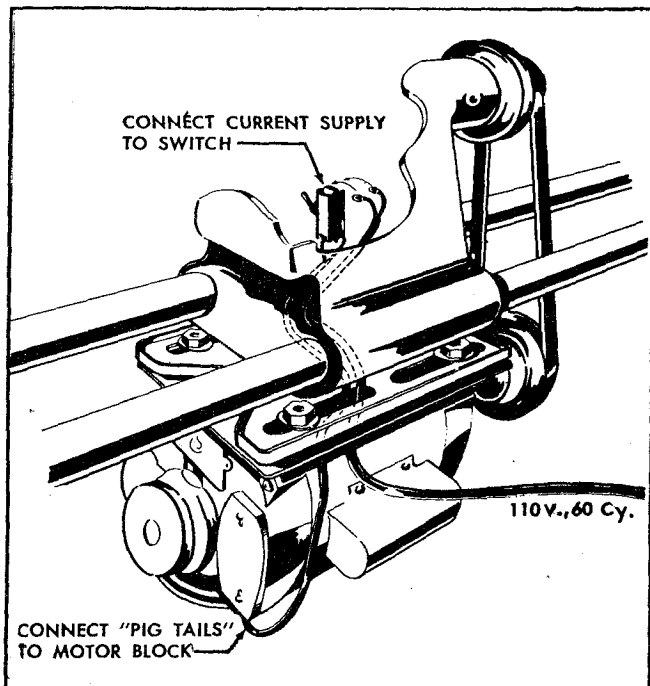


FIG. 4

To fit switch to the headstock, after the cord has been connected, remove the threaded lock nut and ON-OFF plate from shank of the switch and insert it through hole in the headstock. Replace ON-OFF plate and run the lock-nut down hand-tight temporarily. Do not tighten the switch in its final position until the OFF position of the toggle lever points toward the tubular ways.

Installation of the switch in this way is a safety precaution and prevents accidental contacts from turning on the power.

MOUNTING MOTOR — Shopsmith is designed to be operated by a ½ h.p. capacitor or repulsion-induction ball-bearing motor having a speed of 1750 rpm. Though some operations may be satisfactorily performed with a lighter motor, full utilization of this versatile tool can only be obtained by having adequate power.

The motor shaft must be ball-bearing mounted to operate in both vertical and horizontal positions, and extreme caution must be taken to prevent sawdust or chips falling into the motor through the vent holes. The special Shopsmith motor has been designed for "ceiling" mounting; that is, the vents are facing down when the motor is installed. When using other motors, invert the end caps or

shield the vent holes. Also, note that capacitor box should be side-mounted to eliminate interference with the bench.

Attach motor bracket with four ¼ by 1-inch machine bolts and washers, but do not tighten bolts until motor has been finally positioned. Hold motor bracket in place by tightening the Allen setscrews.

ADJUSTING PULLEYS AND BELTS — Attach motor pulley, small pulley next to motor, on the motor shaft. Lower Shopsmith to its horizontal position — be sure setscrews on motor bracket rods are tight — and align motor pulley with headstock pulley by adjusting motor until the two are in line. Tighten motor to bracket, but do not apply belt to pulley until motor wires have been connected to lead wire and switch and the motor tested for correct rotation.

Motor should run clockwise when viewed from the motor pulley end (Fig. 2).

Rotation of motor can be changed on capacitor-type motors by removing cover from the terminal box and reversing the field-winding terminals to opposite binding posts. In the case of repulsion-induction motors, rotation is reversed by moving the brush holders to one side or the other of a witness mark on the brush holder mounting. If there is any doubt, refer to the wiring diagram of connections supplied with motor or information given on the motor name plate.

With correct rotation of the motor established, apply the V-belt. Length of the belt will vary with the motor used, due to differences in the center distance between shaft and motor bracket. For most installations, a type A belt with an outside circumference of 38 to 39 inches will be needed.

Belt tension can be increased or diminished by adjusting motor bracket on its rods. Belt should be sufficiently tight so that it will not rub against ways at any pulley speed.

Avoid excessive belt tension, which will impose a damaging load on bearings, shorten belt life and waste power.

CAUTION: Should spindle bearings heat up, check belt tension immediately.

STORING ACCESSORIES — Shopsmith will perform most efficiently if some provision is made at once for properly storing the interchangeable parts on hooks, shelves, racks or cabinets where they will be convenient to the basic unit. In addition, take the usual precautions against accidental damage and corrosion.

OPERATION

To understand and appreciate what Shopsmith can do, you should be familiar with the principal parts and their uses. Carefully observe the brief descriptions and illustrations that follow:

FRAME ASSEMBLY is the basic structure (Fig. 2). It consists of two centerless-ground steel tubes, base plate, base plate arm, tie bar and headrest. With the exception of the tubes,

all parts are high quality cast iron, precisely bored in fixtures that assure their permanent alignment.

The headstock and carriage can be removed from the ways by releasing Allen screws on each side of the tie bar and sliding off the headstock and carriage. The tubular ways have been factory-aligned but, if they should be loosened, re-align them as follows:

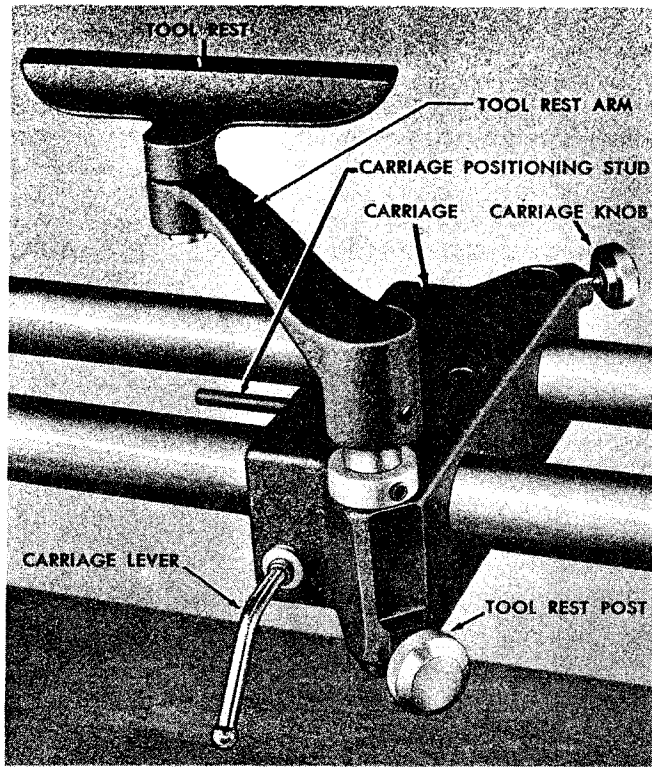


FIG. 5

Raise ways to vertical position and lock with base plate knob. Loosen Allen screws in base plate arm and slide tubes down until they rest on the base plate; lock Allen screws.

CAUTION: Maintain tubular ways with care. Tools and heavy pieces of work falling on or striking tubular ways will raise burrs that prevent headstock and carriage from sliding freely. Any such burrs should be carefully smoothed down. Wipe abrasive dust or metal chips from the ways before sliding carriage or headstock. Always keep ways protected from rusting by a thin film of oil.

HEADSTOCK — Shopsmith headstock (Fig. 3) is the key operating unit and contains the headstock spindle-shaft and bearings, quill, pinion shaft and gear, pulley shaft and bearings. Since the bearings are of the grease-sealed type, it should never be necessary to dis-assemble the headstock. If, however, adjustment or replacement ever should be required, components can be dis-assembled as follows:

To remove pulley bearing-assembly, remove belt, loosen Allen screw and pull out total assembly; to remove quill assembly, unscrew nut from depth stop-rod and wind out with feed lever. To remove pinion shaft and gear, take off feed knob, collar and spring and pull out.

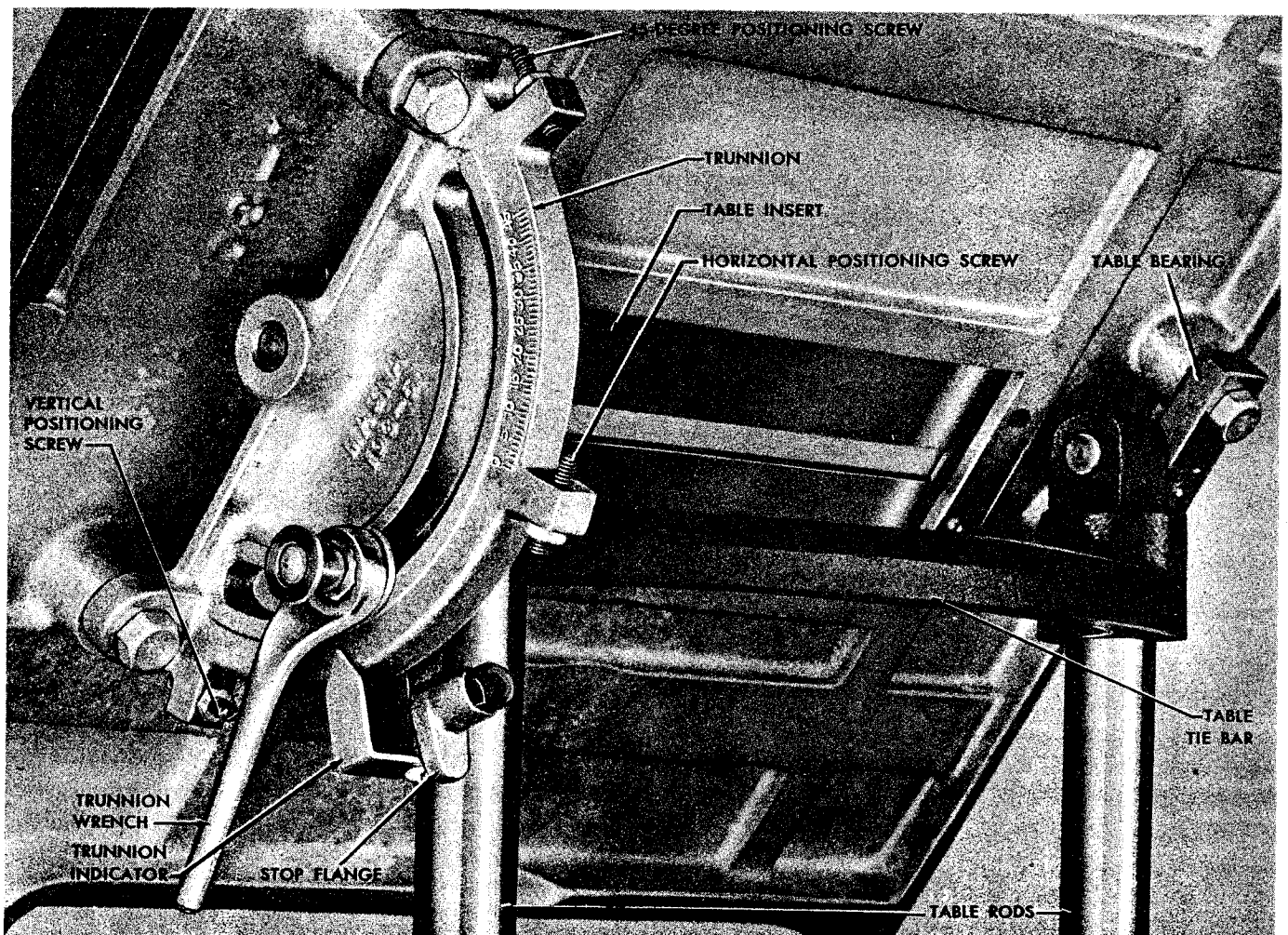


FIG. 6

CAUTION: Ball bearings can be easily injured or ruined by improper handling. When seating or unseating a bearing, apply pressure to the outer race only; when pressing bearing onto or off a shaft, apply pressure on the inner race only. Keep bearings free of grit and do not tap into place with hammer.

The headstock spindle is supported by ball bearings at either end of the quill, which is a movable steel sleeve. When the feed lever is turned, a simple rack-and-pinion gearing moves the quill and the spindle it supports.

When pressure on the feed lever is released, a coil spring returns the quill and spindle to their normal, retracted position. This spring is enclosed in a metal case on one side of the headstock. Spring tension is adjusted at the factory; if a different tension is required, adjust by either of two ways:

1. Remove nut from depth stop-rod; turn feed lever until quill rack disengages from pinion gear. Keep turning feed lever until desired tension is obtained. Remember that the external spline on the spindle and internal spline on the pulley shaft must mate; hold the pulley and turn spindle slightly when re-inserting the quill and spindle.

2. Release the Allen set screw in the collar outside the spring housing. Grip the spring housing tightly and pull it slowly away from the headstock until the housing clears the boss on headstock. To increase tension, turn the case counter clockwise. Other possible interference with proper spindle return may be investigated by slacking off all spring tension and working feed lever which, of course, should operate freely in this position.

CARRIAGE — The precision-bored carriage (Fig. 5) is locked at any position on the ways by the carriage lever, which applies wedges against the tubes. Carriage knobs on either side secure the table or lathe tool rest at desired height. **CAUTION:** Be sure that both carriage lever and knobs are tightened before starting any operation. The bolt extending from side of the carriage facing the headstock automatically stops the carriage in the correct position in relation to the headstock for using the circular saw.

TABLE — Shopsmith's precision-ground aluminum table (Fig. 6) is supported on the carriage by two steel rods and the adjustment is held by the carriage knobs. The table can be tilted from 45 degrees in one direction to 90 degrees in the opposite direction.

Table trunnion (Fig. 6) permits the table to be tilted and locked at any desired angle. Automatic stops are provided at the 45-degree, horizontal and 90-degree positions.

A removable insert to accommodate dado heads and formed cutters is provided. Insert is leveled flush with surface of the saw table by adjusting Allen screws on under side. Two table slots allow the miter gauge to be used on either side of the saw blade.

The saw guard and splitter (Fig. 7) combines clear view of the work with utmost safety; it can be adjusted to conform

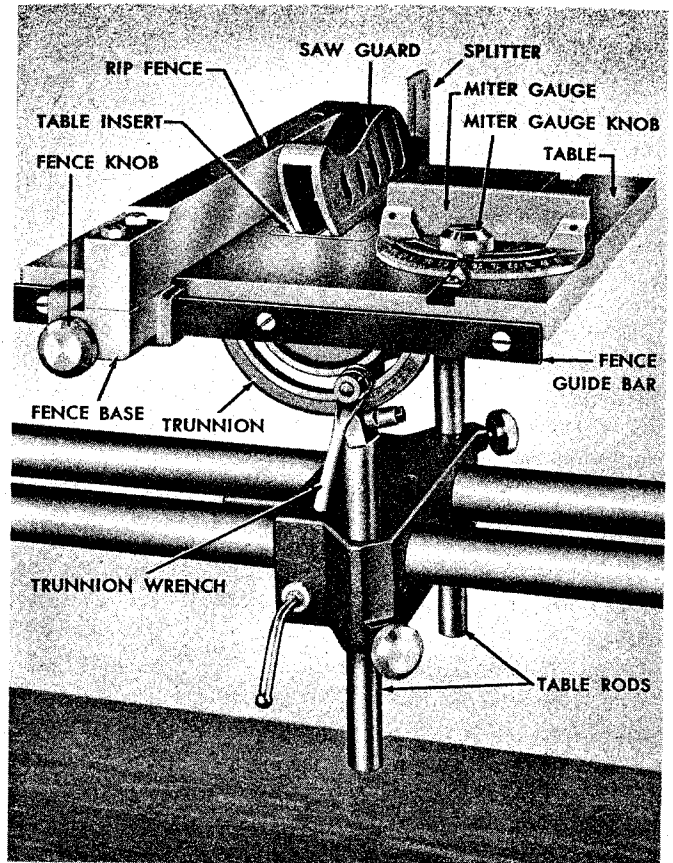


FIG. 7

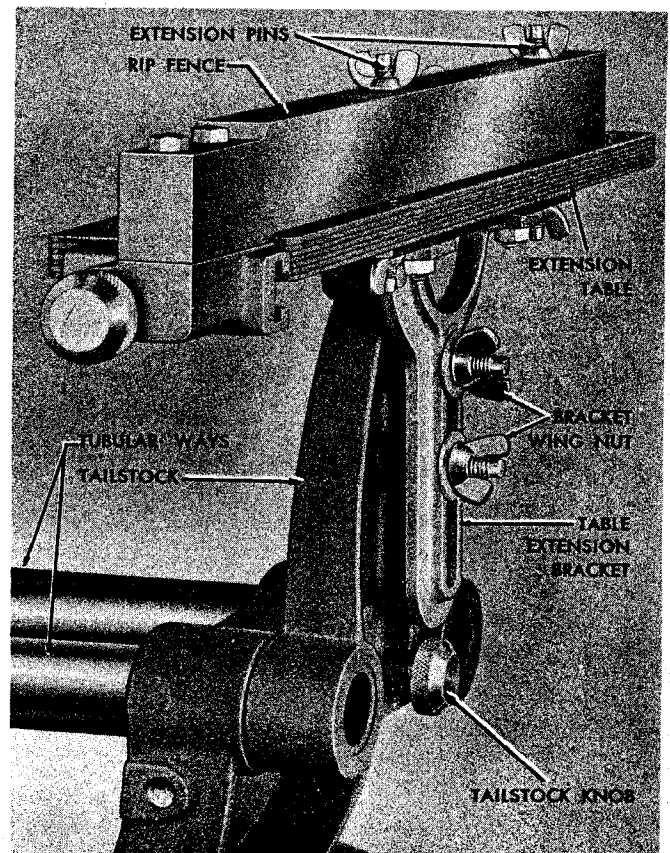


FIG. 8

to any position of the table by releasing screw on back of table. CAUTION: Use the saw guard and splitter for all sawing operations.

TABLE EXTENSION — There are two studs with wing nuts attached to the back of the tailstock (Fig. 8) to which the slotted bracket of the table extension is attached. Two vertical studs through the plywood table extension are provided so that the rip fence from the saw table can be used as a guide for the work as it is fed into the saw.

TAILSTOCK — When used as a lathe in spindle-turning operations, the Shopsmith departs from the conventional by using a fixed tailstock (Fig. 8) and a movable headstock. The tailstock is accurately machined to the ways and aligned so that the tailstock or "dead" center will line up accurately with the headstock center. The tailstock is bored to a No. 2 Morse taper so that the center is rigidly held.

PULLEY SPEEDS — Matching three-step cone pulleys on motor shaft and headstock spindle provide the necessary high (3500 rpm), intermediate (1750 rpm) and low (875 rpm) speeds (Fig. 10). This range of speeds provides relatively wide latitude but, while the following operating speeds for various operations are suggested, it will be best to use the lower speed on any questionable job until experience determines use of a higher speed.

WOOD TURNING

DIAMETER OF WORK	ROUGHING CUT	GENERAL CUTTING	FINISHING
Under 2 in.....	2	2	3
2 to 4 in.....	1	2	3
4 to 6 in.....	1	2	2
6 to 8 in.....	1	1	2
8 to 10 in.....	1	1	1
Over 10 in.....	1	1	1

	PULLEY POSITION
CIRCULAR SAW	
8-in. Combination Blade.....	3
SANDING AND GRINDING	
12-in. Disc Sander	2
3-in. Drum	2
4-in. Grinding Wheel	3
6-in. Grinding Wheel	3
Buffing and Polishing (cloth wheel).....	3
Scratch Brushing (rough finish).....	1
Scratch Brushing (smooth finish).....	3
DRILL PRESS	
Wood Boring (Bits to ½ in.).....	3
Wood Boring (Bits to 1 in.).....	2
Wood Boring (Bits over 1 in.).....	1
Mortising (Hardwood)	2
Mortising (Soft wood)	3
Routing	3
Shaping	3

WOOD-TURNING LATHE

When used for spindle turning, which describes all work when turned between centers (Fig. 9), square both ends of the work and locate center on each end. If hardwood, drill a small hole at each center point and make shallow diagonal saw cuts across the end to be driven by the spur center. Do not drive work onto the center.

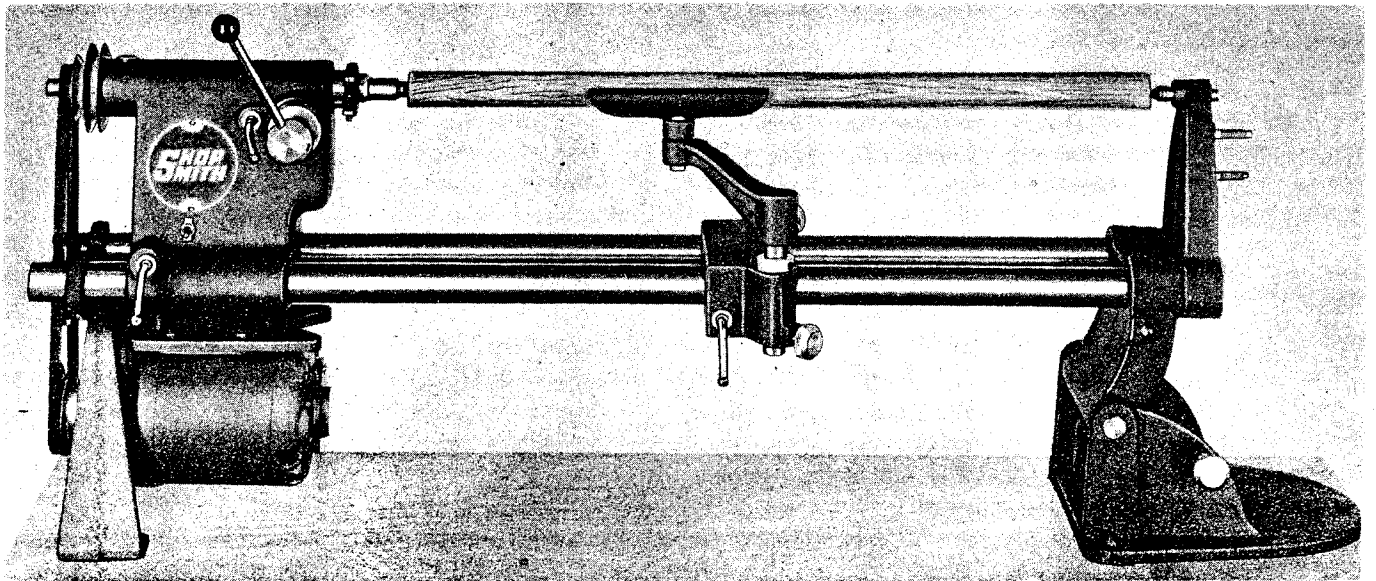


FIG. 9

Remove the spur center from the spindle and drive it into a firm seat in the wood with a mallet. Replace spur center on spindle and tighten setscrew. Be sure tailstock knob is tightly locked. Position and lock headstock on the ways at a point where it will be approximately $\frac{1}{4}$ -inch greater than the stock to be turned. Locate the work between centers and advance quill feed lever to seat centers solidly; turn work by hand to see that it does not bind and tighten quill lock lever. Apply a drop or two of oil to the tailstock center before or after centering work.

The tool rest (Fig. 5) is seated in carriage hole nearest the operator and adjusted about $\frac{1}{8}$ inch above center and so it will clear the work by about the same amount. **CAUTION:** Always turn work by hand to see that it clears the tool rest before starting motor.

FACEPLATE TURNING — If the work to be turned cannot be held between lathe centers, it is generally mounted on a faceplate (Fig. 11) or chuck. The Shopsmith faceplate is recommended.

The tool rest is easily turned parallel to the work. By removing the tailstock and then moving carriage and headstock to the extreme right position, the operator can face the work directly.

CIRCULAR SAW

Shopsmith, when used as a saw, is designed for use with an 8-inch saw blade (Fig. 12). Smaller blades can be used, but the table will not accommodate larger ones. To attach saw blade, push the arbor onto the spindle as far as it will go and tighten setscrew against flat side on spindle. (NOTE: All attachments used on the spindle should be located so that their setscrews, when tightened, will seat against this "flat"; otherwise, the spindle will be burred and attachments cannot be applied or removed freely.)

CAUTION Because it is not practical to completely guard that portion of the saw underneath the table, the user is cautioned not to make adjustments while the saw is in motion.

Place blade between washers, large washer first, on arbor, with teeth pointing toward the operator, and tighten.

Place saw table rods into carriage holes and lower to the point where they can be locked by the carriage knobs. Locate headstock at desired point on the ways and lock with headstock lever; slide carriage toward headstock until saw blade is directly below slot in table insert. When this location has been established, adjust the stud attached to front of carriage so that it just touches the headstock. Thereafter, or until the blade is changed on the saw arbor, this bolt will serve as an automatic stop for correctly positioning the table in sawing position.

To lower table to desired depth of cut, hold front table rod in the left hand; release back knob and then front one. When grip is relaxed, the table will lower itself slowly and evenly into position; lock carriage knobs. To raise table,

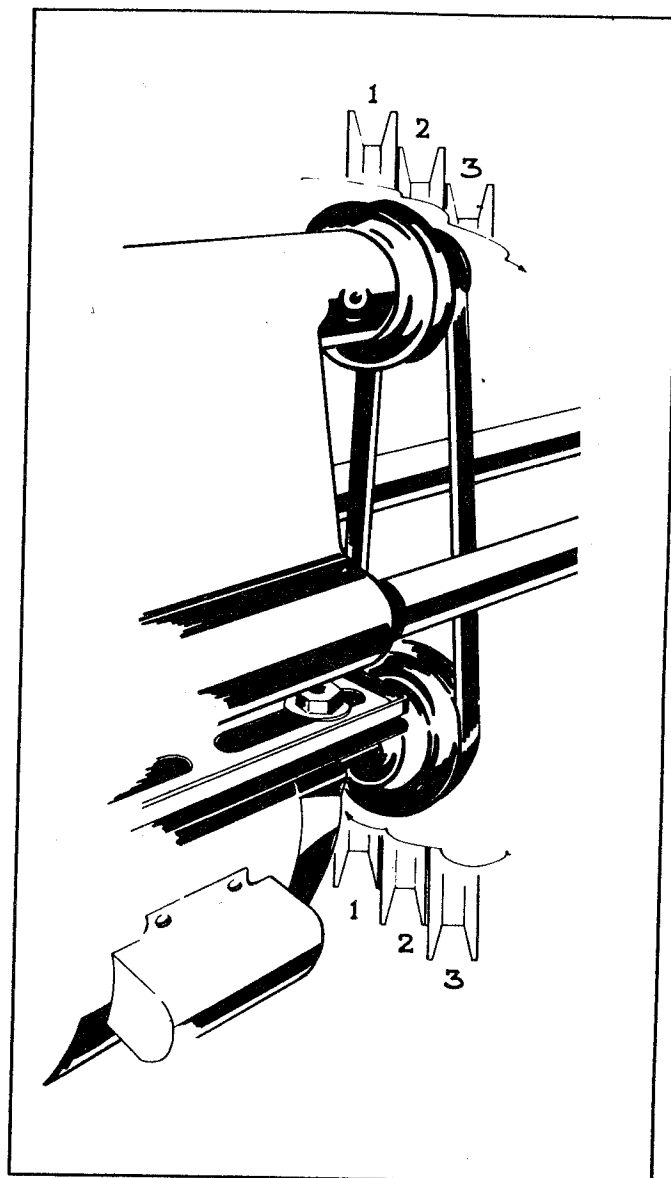


FIG. 10

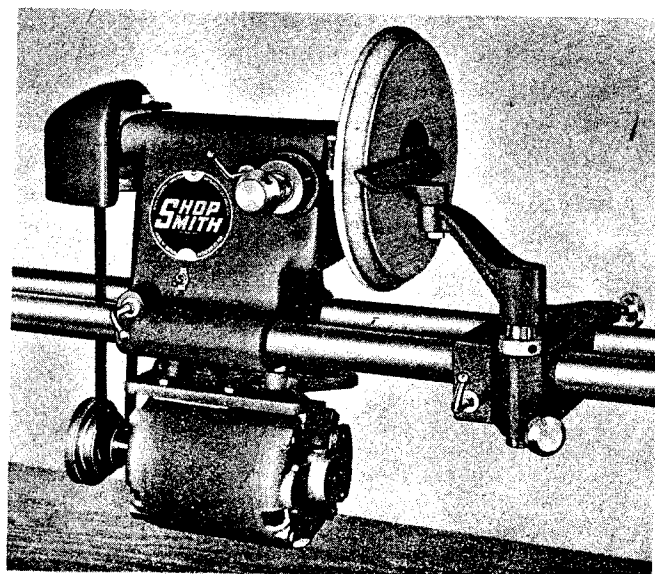


FIG. 11

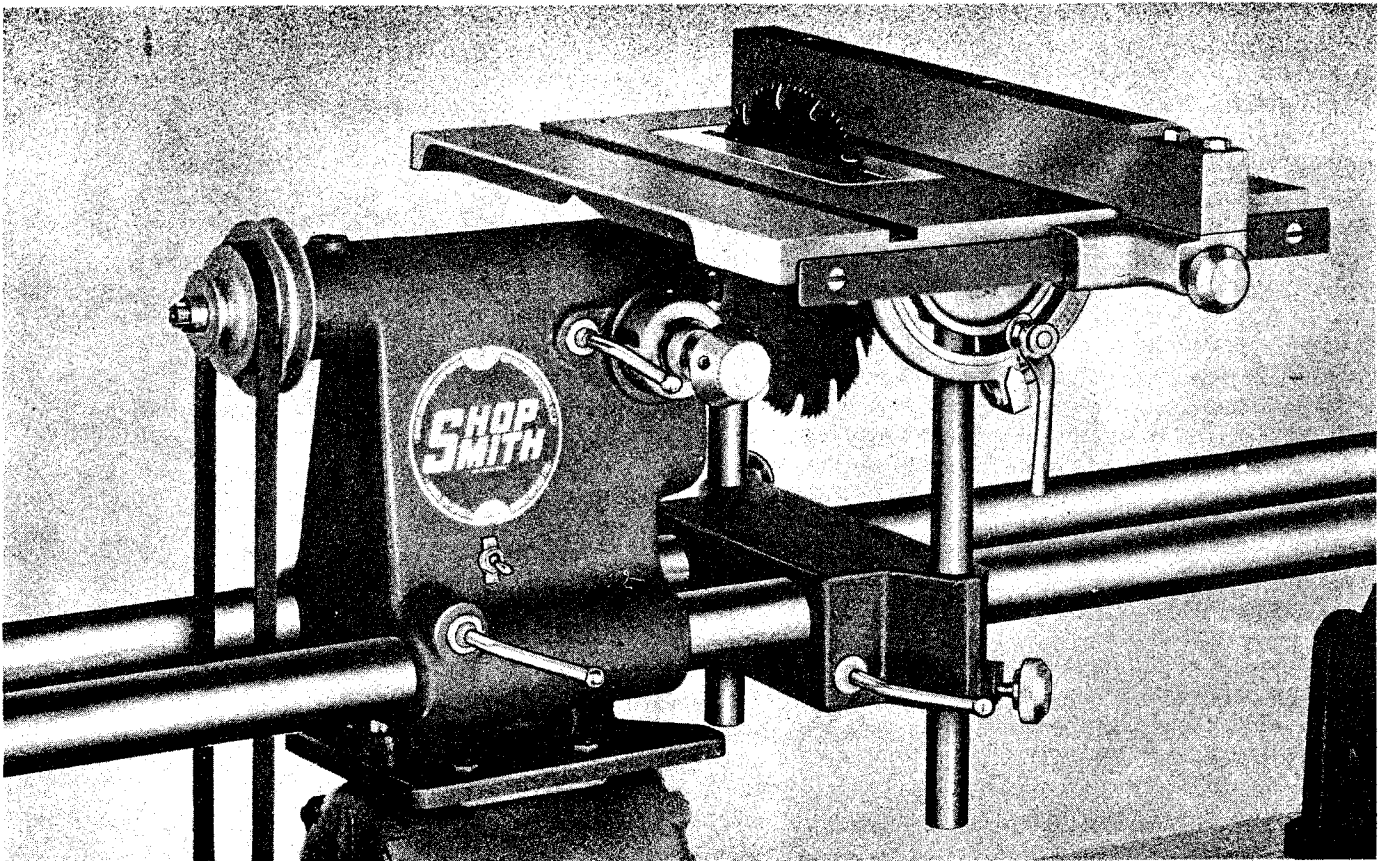


FIG. 12

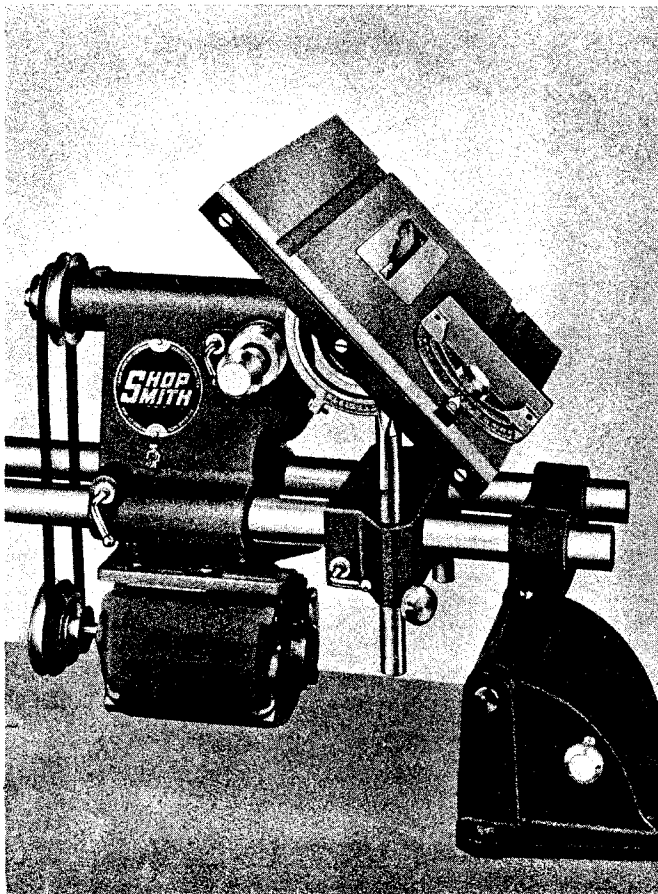


FIG. 13

hold top of table with left hand and release carriage knobs; lift table evenly from both sides and tighten knobs.

Always be sure both carriage knobs and carriage lever are locked before starting motor.

The table can be tilted (Fig. 13) by raising it to clear saw blade, locking the front carriage knob and releasing nut with trunnion wrench. To use automatic trunnion stops, pull the brass flange forward when tilting. NOTE: Because the pivot center of the table is below the table top, the saw slot will move in an arc; therefore the quill must be advanced and locked.

The rip fence is smoothly finished on both sides and can be used on either side of the saw. Adjustment is held by tightening fence knob.

Double miter-gauge grooves on the table allow cutting right or left-hand miters. Gauge pivots to 60 degrees in either direction. CAUTION: Miter gauge should be used only on right side of saw when table is tilted.

The exclusive table extension feature (Fig. 14) gives the Shopsmith the largest effective table of any 8-inch bench saw. Attached to the lathe tailstock by wing nuts, the extension table can be adjusted to the height of the saw table, either by sighting along the main table or, more accurately, by sliding the carriage and headstock together to the tailstock and adjusting extension to table height.

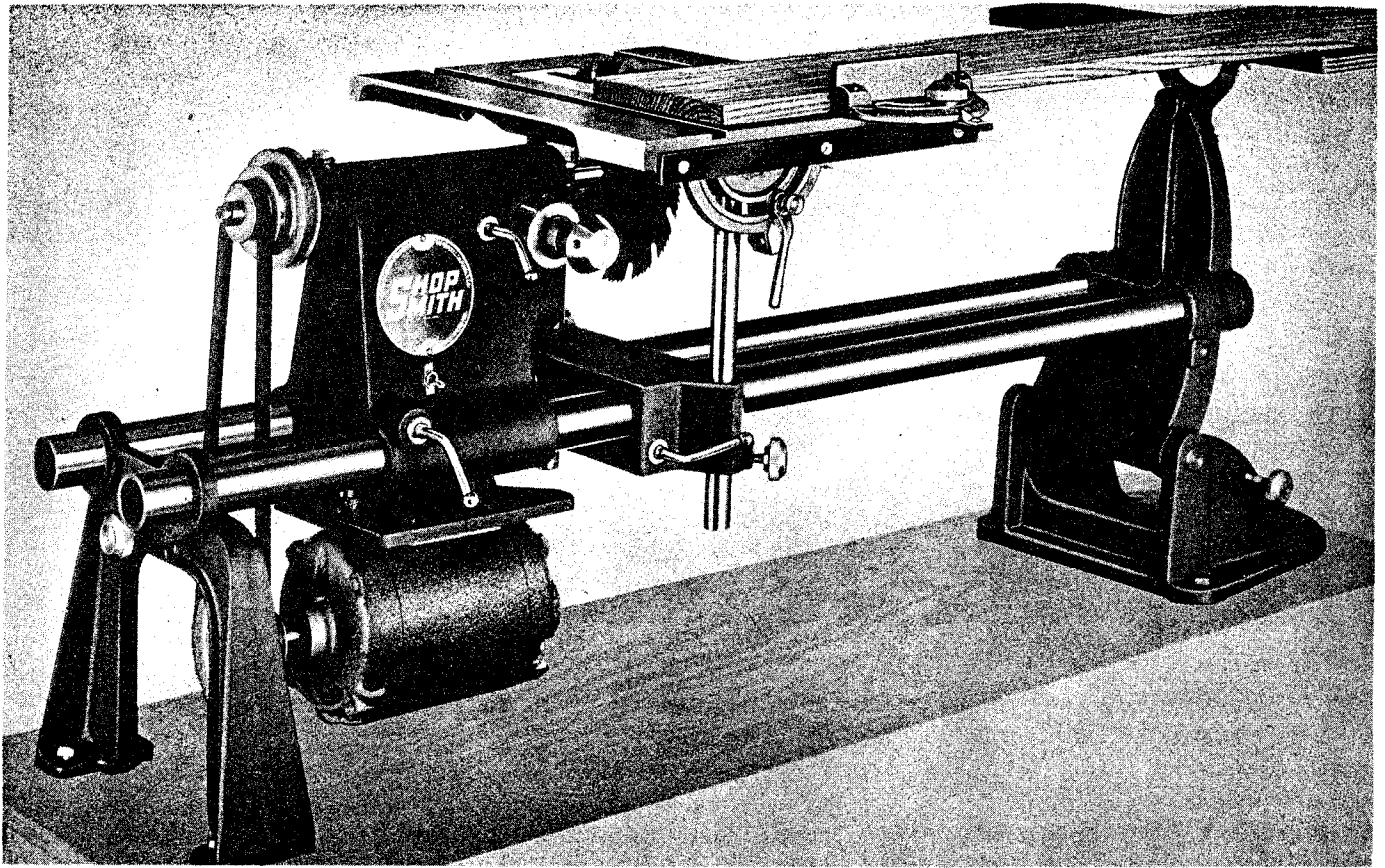


FIG. 14

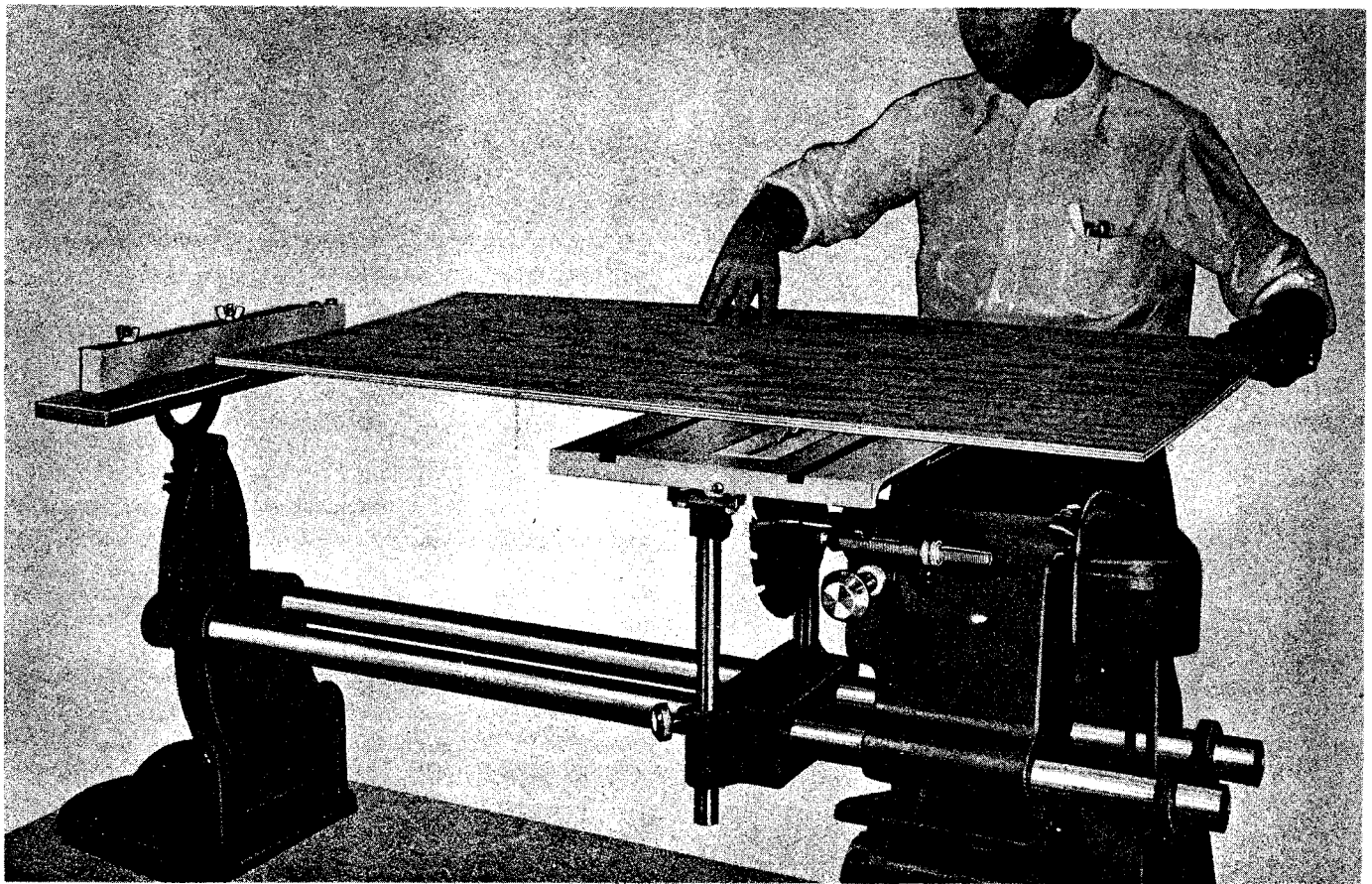


FIG. 15

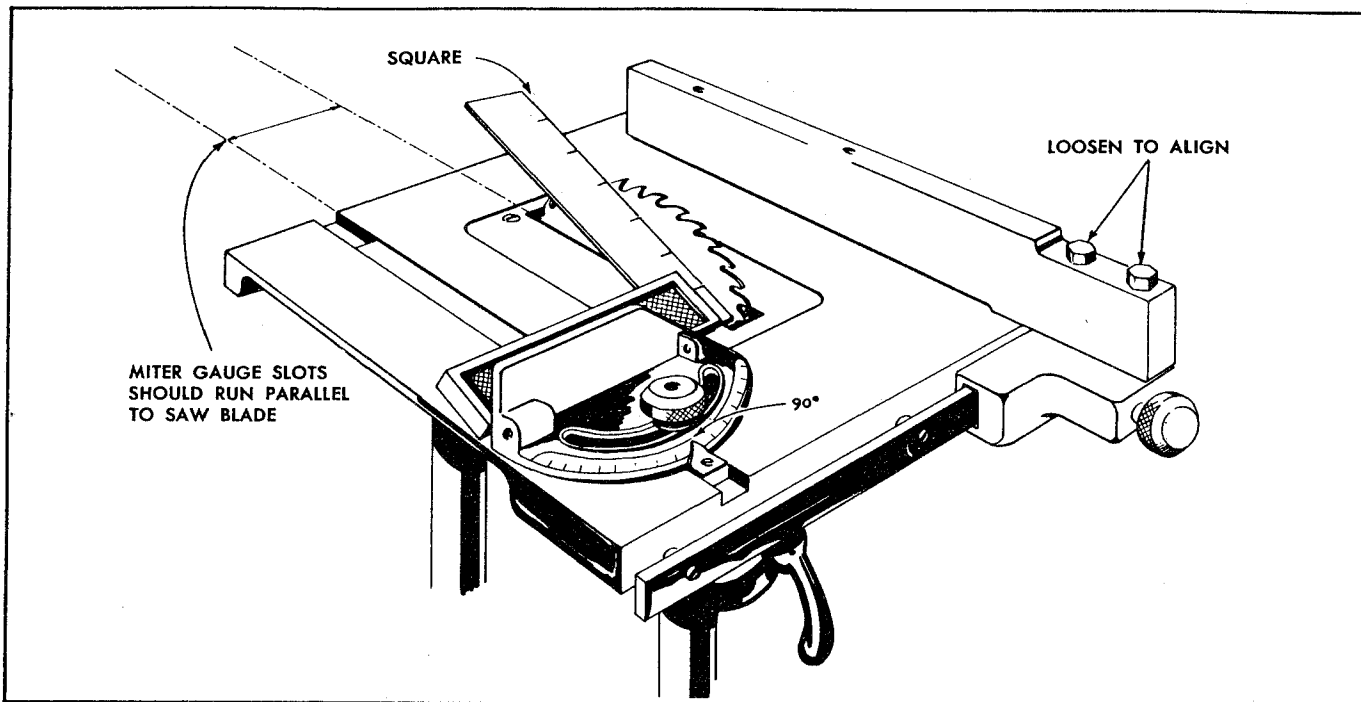


FIG. 16

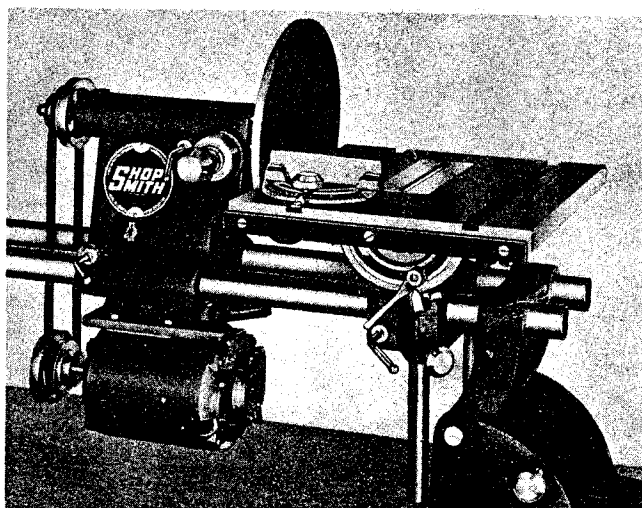


FIG. 17

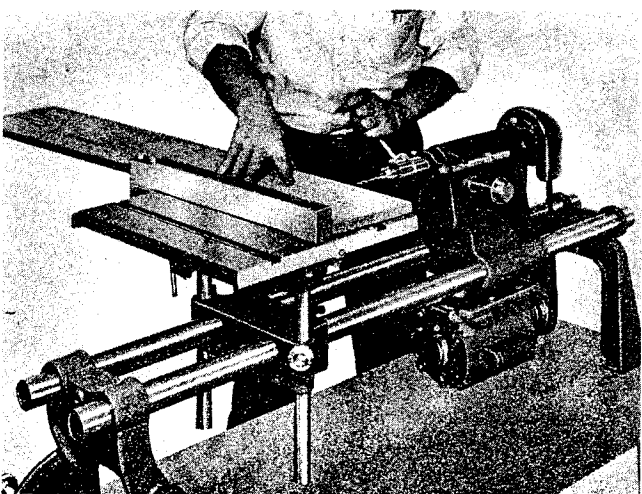


FIG. 18

For crosscutting, with the miter gauge, use the extension as a work rest. For ripping work beyond the capacity of the table, such as ripping a large panel (Fig. 15), the rip fence can be attached to the table extension by two threaded studs; these are attached to the underside of the extension with wing nuts and can be removed when they interfere with crosscutting jobs.

It is worth noting that the table extension and tailstock fit on either end of the tubular ways. When applied to the left, or motor-end, the greatest effective table area will be obtained.

CAUTION: To prevent accidents, do not leave saw blade on the spindle when the machine is not in use.

When using the circular saw, always use "push sticks" to feed work close to the blade. Keep a set of such sticks in different widths where they will be easily available. Always use the saw guard; it will slide smoothly over the work and protect the operator.

Re-check to see that carriage lever and knobs are tight before starting the saw.

Rotate the saw by hand, to check clearances, before turning on the motor.

SAW ADJUSTMENTS—Miter-gauge slots on saw table should be parallel to the saw blade; otherwise a true right-angle cannot be cut. Check by holding the blade of a square, or other straightedge guide, against the miter-gauge slot with the end against the saw blade (Fig. 16). Mark the saw tooth and turn it to the opposite side; measure the distance in the same way from the back. If the distance is not the same at front and back, the table must be "revolved."

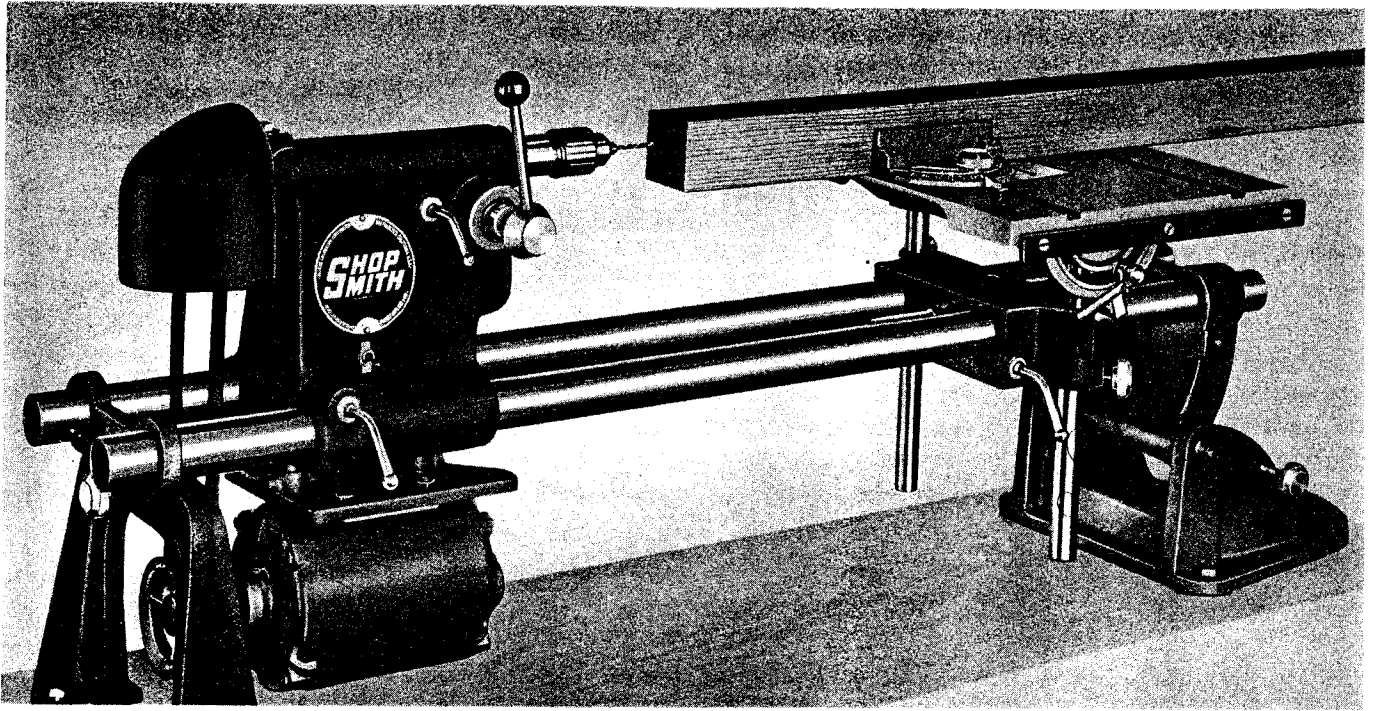


FIG. 19

To do this, loosen the four bolts underneath the table that hold it to the trunnion and table bearing. There is sufficient "play" in these holes to permit any adjustment the table might require. When alignment has been checked, tighten bolts. To check accuracy of miter-gauge settings, square the miter-gauge head with the table slots with a square; reset pointer if necessary.

Rip fence should be parallel to the saw blade. When miter-gauge slots have been checked (as above), the fence should be parallel to the slots. If adjustment should be necessary, loosen the two bolts in the rip fence head; correct alignment and tighten.

DISC SANDER

The 12-inch cast aluminum sanding disc (Fig. 17) fits directly onto the spindle tip. Be certain the setscrews are tightly applied against the spindle "flat." Do not operate at excessive speed; use "second" or intermediate speed, which is fast enough for all purposes.

The saw table is used as a work support. Set surface of the table about 1½ inches below center of the disc. Edge of table should clear disc by about ⅛ inch. Plain and compound miters are sanded by using the miter gauge, tilting the table, or both.

New abrasive discs can be applied by stripping off the worn disc and holding a stick of adhesive against the revolving disc until evenly coated and then pressing fresh disc into even contact.

The headstock and carriage can be moved to the extreme

right, which will give maximum operating convenience to the operator.

CAUTION: In sanding-disc operations, the table should always be horizontal or tilted away from the disc — never angle table into the disc.

HORIZONTAL DRILL PRESS

In addition to handling work too large or too awkward to be worked on a vertical drill press, Shopsmith, as a horizontal drill press, will do many jobs with greater precision and ease. Jacobs chuck is placed on the spindle and held in place by tightening its setscrew. Drills, reamers and other tools within the ½-inch capacity of the chuck are tightened or released by the accompanying chuck key.

CAUTION: Always be sure to remove key from chuck before applying power to motor.

Locate table at desired position on the ways and set for height. The rip fence and miter gauge can be used either as guides or stops. For example: if it is required to drill a series of holes along the edge of a 1 x 12" plank (Fig. 18) adjust table so point of drill will center at required points and set the rip fence, as a guide, to bear against opposite edge of the work. Back end of fence may be secured with a "C" clamp. For end-drilling in long stock, (Fig. 19) the work can be held to drill a true hole by clamping miter gauge to the table after the drill has been centered. When Shopsmith is used in its horizontal position, the feed lever should be screwed into the pinion shaft knob on the side nearest the operator, so that the drill feed can be made without reaching over the headstock.

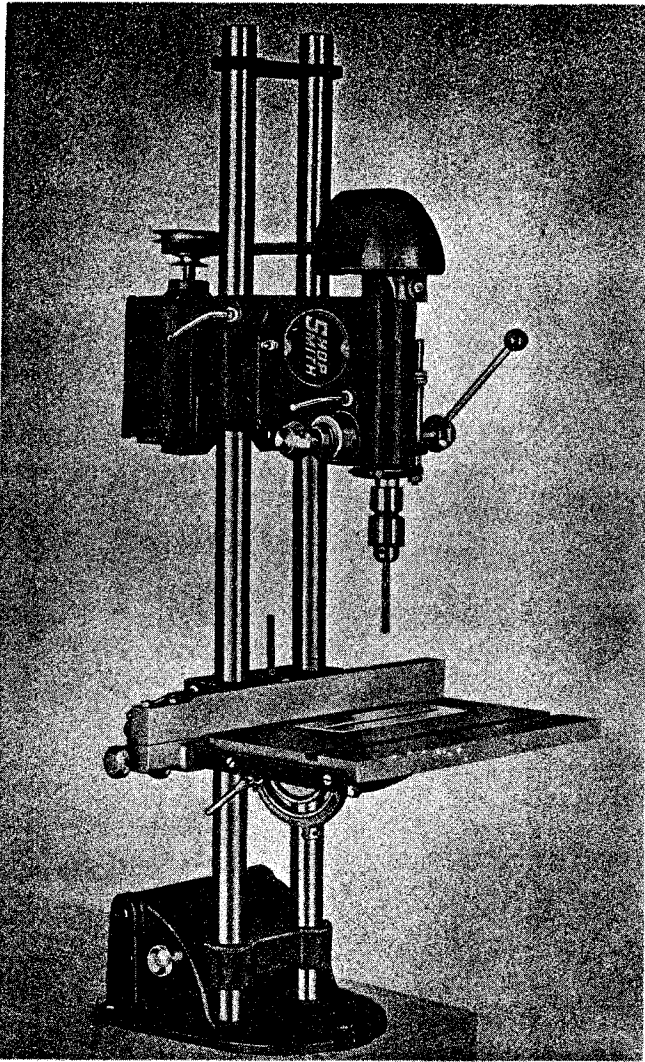


FIG. 20

VERTICAL DRILL PRESS

To change Shopsmith from any horizontal-operating unit to a vertical drill press, simply raise and lock the table to its highest position and swing it at a right angle to the ways (Fig. 20). Then release carriage knobs until table settles down against carriage. Move carriage to a point about 15 inches from base plate arm and tighten carriage lever. This point will vary according to the operator's height to give the most convenient operating level. Move headstock up until chuck is about 8 inches from the table and lock headstock lever. Check to see that the base-plate knob is unscrewed and unscrew the headstock knob. Grip the ways, with both hands, near the headrest and swing entire unit up to vertical position. Tighten base plate knob. The feed lever can be used on either side and the drill press operated from the right or left at the operator's convenience.

Lock nuts on the depth stop-rod can be set to control length of spindle stroke or boring depth. The quill lock-lever will hold the spindle at any extended position. The rip fence is a very useful guide for drilling a series of holes, or as part of a jig; and the table will tilt to any desired angle.

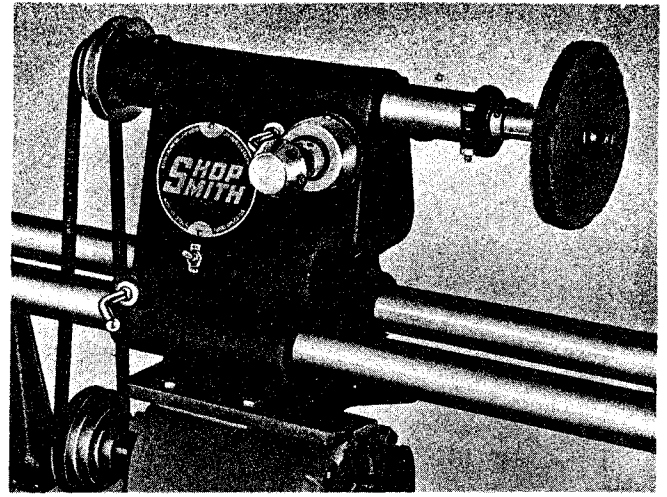


FIG. 21

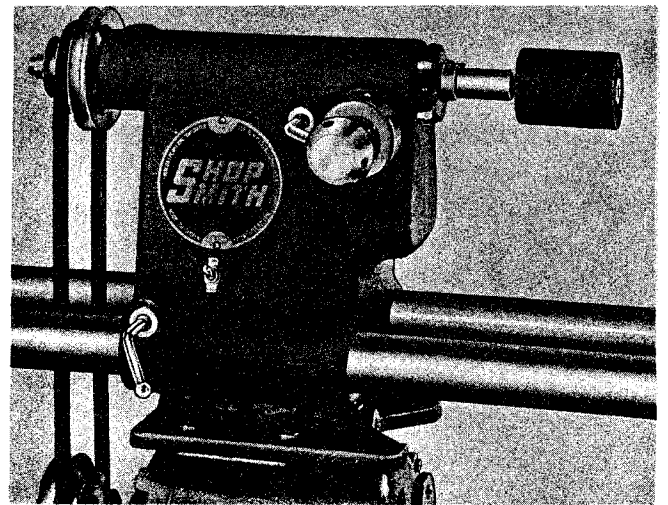


FIG. 22

It will be advisable to use a piece of wood as a "pad" between the table and work to be drilled in order to prevent the table from being scarred.

CAUTION: When drilling metal, always support the work in a table vise or clamp, or clamp it securely to the table; do not attempt to hold such work in the hands. Re-check to be sure headstock lever and carriage lever are tight before raising to vertical drill-press position.

MISCELLANEOUS APPLICATIONS

BUFFING — Use buffing wheels on the saw arbor (Fig. 21) and operate at high speed. Polishing compounds, such as tripoli, emery and rouge deposited on the ways should be carefully removed before sliding carriage or headstock.

SCRATCH BRUSHING — Steel or brass-wire scratch brushes in various degrees of fineness can be used to produce either a rough-textured or fine satin finish on metals, depending on type of brush and operating speed.

DRUM SANDER — In either its horizontal or vertical position, Shopsmith can be used to excellent advantage as a drum sander (Fig. 22). Tool rest can be used as a guide.

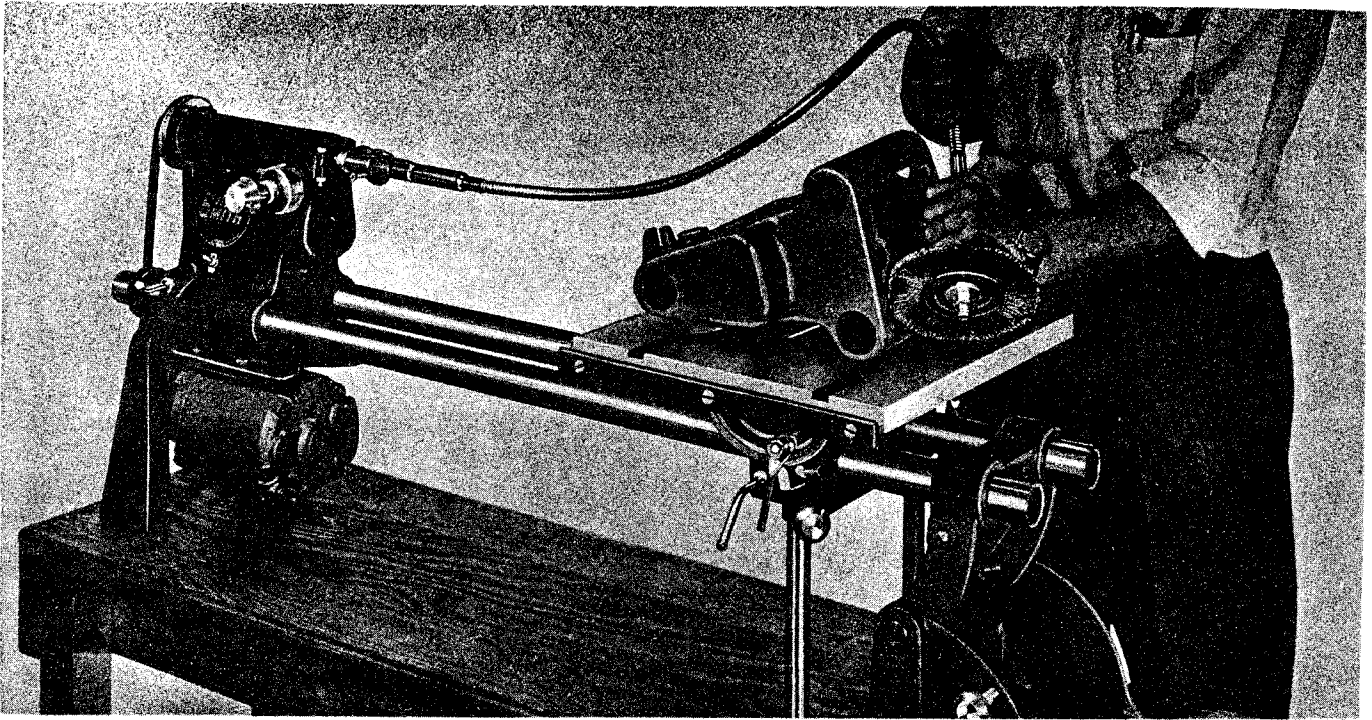


FIG. 23

ROUTER — The large work table makes an excellent surface for routing and veining operations. Both the miter gauge and rip fence can be used as guides.

SHAPER — Shopsmith can be used in either of two positions for shaping and molding: horizontal or vertical.

FLEXIBLE SHAFT — Shopsmith makes a good source of power for a flexible shaft (Fig. 23). The table makes an excellent base for resting or clamping work when grinding, routing, buffing, etc.

SAFETY PRECAUTIONS

Most accidents, whether they occur in industry, on the farm, at home, or on the highway, are caused by the failure of some individual to follow simple and fundamental safety rules or precautions. For this reason most accidents can be prevented, by recognizing the real cause and doing something about it before the accident occurs. Regardless of the care used in the design and construction of any kind of equipment, there are many conditions that cannot be completely safeguarded against without interfering with reasonable accessibility and efficient operation.

A careful operator is the best insurance against an accident. The complete observance of **one simple rule** would prevent many thousand serious injuries each year. The rule is **Never attempt to clean, oil or adjust a machine of any kind while it is under power or in motion.**

In addition to the recommendations for safe operating practices in the preceding text:

1. Never make any adjustment while the motor is running.
2. Keep belt guard on — extremely important in the vertical position to keep operator's hair out of the pulley.
3. Do not wear loose clothing — ties, loose sleeves, etc. — when operating power machinery of any kind.
4. Do not allow small children close to the unit when motor is running. Better still, do not allow children in room while operating under power. Always pull out electric plug when the machine is left unattended as children might turn on power.

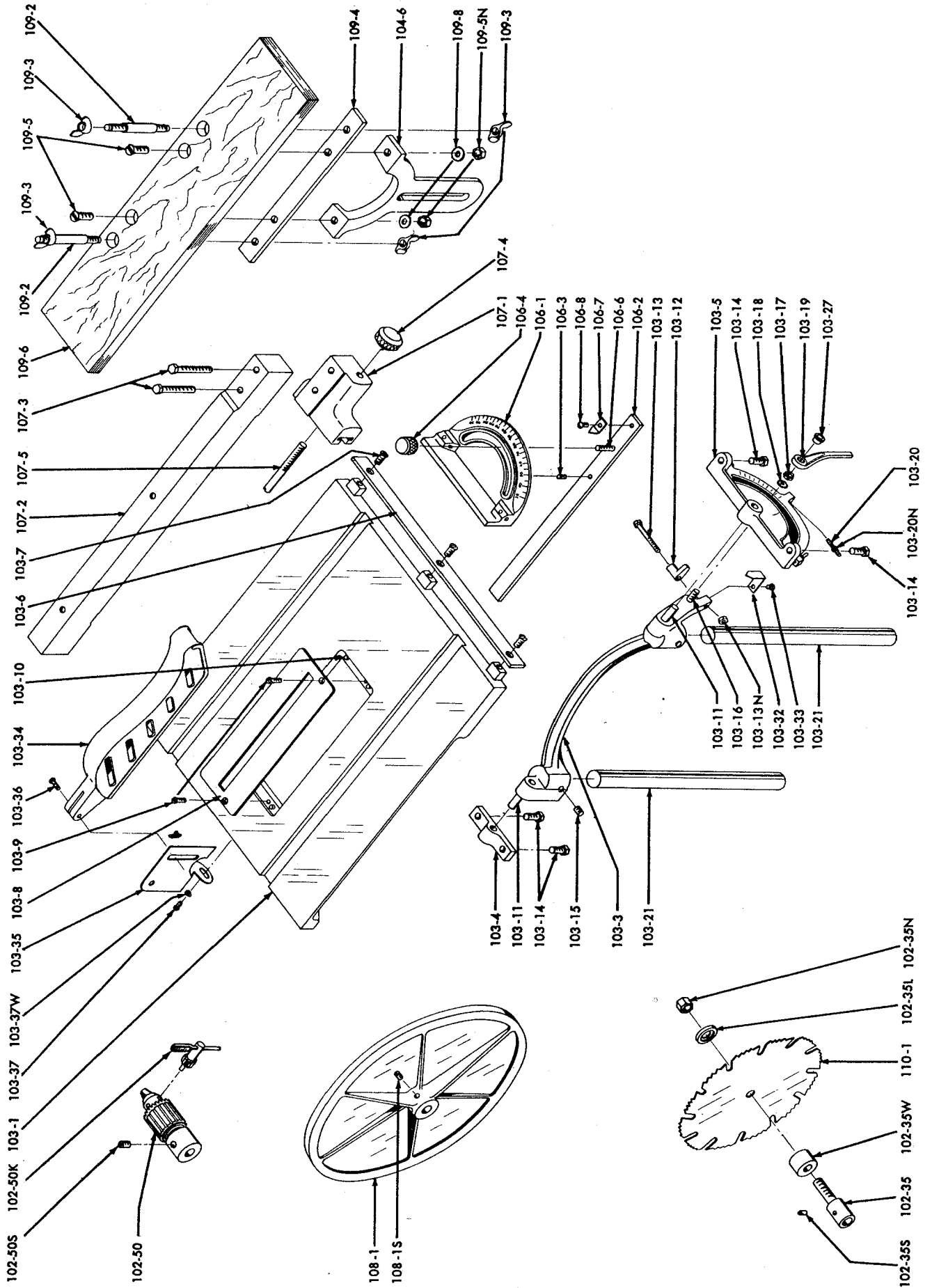
HOW TO ORDER REPAIR PARTS

To have your order filled promptly and correctly, please furnish **all** the following information:

1. **Model Number** appears on nameplate.
 2. **Part Number, Name and Description** of part (see list).
 3. **Complete Serial Number** as stamped on name plate. You pay charges from shipping point (San Francisco, Calif.). Charges based on size and total weight of order, use any one of the following shipping methods.
- PARCEL POST** . . . limit 70 lbs. Add postage to remittance.
- EXPRESS** . . . **fastest** for unmailable or bulky items.
- FREIGHT** . . . **cheapest** for unmailable or bulky items.

When goods arrive by express or freight, pay station agent; if no agent, add estimated shipping charges to remittance. **In all cases, any excess will be refunded.**

REPAIR PARTS



REPAIR PARTS

PART NO.	NAME AND DESCRIPTION	NO. REQ'D	PRICE (EACH)	SHIP. WT.	
				LBS.	OZ.
101-1	Baseplate.....	1	\$11.25	30	—
101-2	Baseplate Arm.....	1	7.50	15	—
101-3	Tie Bar.....	1	2.40	3	—
101-4	Headrest.....	1	4.85	14	—
101-5	Tubular Way.....	2	7.80	19	—
101-6	Headrest Knob studscrew.....	1	.20	—	5
101-7	Headrest Knob.....	1	.30	—	5
101-8	Allen Setscrew, 3/8"-16 x 1/2".....	2	.10	—	3
101-9	Base Hinge Pin.....	2	.70	—	9
101-10	Base Plate Knob Studscrew.....	1	.20	—	4
101-11	Allen Setscrew, 3/8"-16 x 1/2".....	2	.10	—	3
101-12	Base Plate Knob.....	1	.30	—	5
101-13	Allen Setscrew, 3/8"-16 x 1/2".....	2	.10	—	3
102-1	Headstock.....	1	17.90	35	—
102-2	Motor Bracket.....	1	2.75	5	—
102-3	Gauge Collar.....	1	.95	—	12
102-4	Quill Lock Lever.....	1	.45	—	7
102-4W	Washer 5/16".....	1	.05	—	3
102-5	Plastic Knob.....	1	.25	—	4
102-6	Feed Lever.....	1	.25	—	6
102-7	Feed Lever Knob.....	2	1.50	—	6
102-7S	Allen Setscrew, 3/8"-16 x 1/2".....	2	.10	—	3
102-9	Collar, 3/4".....	2	.50	—	5
102-9S	Allen Setscrew, 1/4"-20 x 1/4".....	2	.10	—	3
102-9W	S.A.E. Washer, 3/4".....	2	.05	—	3
102-10	Pinion Shaft.....	1	5.60	3	—
102-11	Spring Housing.....	1	.35	—	6
102-12	Motor Bracket Rod.....	2	.40	—	11
102-13	Allen Setscrew, 3/8"-16 x 1/2".....	2	.10	—	3
102-14	Headstock Pulley.....	1	1.10	2	—
102-14A	Motor Pulley 1/2", 3/8"-3/4".....	1	1.10	2	—
102-15	Drive Shaft.....	1	5.45	1	8
102-16	Spindle.....	1	3.00	2	—
102-17	Allen Setscrew, 3/8"-16 x 1/2".....	1	.10	—	3
102-18	Bearing — Fafnir No. 202KLL3.....	2	1.60	—	5
102-19	Spacer Ring.....	1	.30	—	8
102-20	Collar, 3/8".....	2	.45	—	5
102-20S	Allen Setscrew, 1/4"-20 x 1/4".....	2	.10	—	3
102-21	Bearing — Fafnir No. 205KLL2.....	2	2.15	—	9
102-22	Quill.....	1	4.55	3	4
102-23	Wedge.....	1	.30	—	6
102-23N	Wedge Nut.....	1	.05	—	3
102-23A	Wedge.....	1	.20	—	7
102-24	Allen Setscrew, 3/8"-16 x 1/2".....	2	.10	—	3
102-25	Gauge Rod.....	1	.75	—	12
102-26	Gauge Rod Nut.....	2	.15	—	3
102-27	Hex. Nut, 3/8"-16.....	1	.05	—	3
102-28	Spring.....	1	.95	—	9
102-29	Headstock Lever.....	1	.45	—	7
102-30	Wedge.....	1	.30	—	6
102-30N	Wedge Nut.....	1	.05	—	3
102-30A	Wedge.....	1	.20	—	7
102-30W	Washer, 5/16".....	1	.05	—	3
102-31	"V" Belt (38" outside dia.).....	1	.95	—	8
102-32	Hex. screw, 1/4"-20 x 1 3/4".....	1	.05	—	3
102-32N	Hex. Nut, 1/4"-20.....	1	.05	—	3
102-32W	Lock Washer, 1/4".....	1	.05	—	2
102-34	Drive Center.....	1	1.15	—	7
102-34A	Drive Center Pin.....	1	.15	—	3
102-34S	Allen Setscrew, 1/4"-28 x 1/4".....	1	.10	—	3
102-35	Saw Arbor.....	1	.90	—	8

PART NO.	NAME AND DESCRIPTION	NO. REQ'D	PRICE (EACH)	SHIP. WT.	
				LBS.	OZ.
102-35N	Hex. Nut, 1/2"-24.....	1	\$.05	—	3
102-35W	Arbor Washer (wide).....	1	.20	—	9
102-35L	Arbor Washer (narrow).....	1	.15	—	5
102-35S	Allen Setscrew, 1/4"-28 x 1/4".....	1	.10	—	3
102-36	Belt Guard.....	1	2.25	2	—
102-37	Hex. Head Cap Screw, 3/8" x 1/2".....	1	.05	—	3
102-37W	Washer, 3/8".....	1	.05	—	3
102-38	Switch Assembly.....	1	1.00	—	4
102-42	Parker Kalon Fastener, No. 4.....	2	.05	—	3
102-46	Parker Kalon Pin, No. 6 x 5/16".....	1	.05	—	3
102-50	Jacobs Key Chuck, No. 3326, with Integral Adaptor.....	1	7.50	1	12
102-50S	Allen Setscrew, 3/8"-16 x 3/8".....	1	.10	—	3
102-50K	Chuck Key.....	1	.10	—	6
103-1	Table.....	1	14.80	15	—
103-2	Carriage.....	1	7.90	15	—
103-3	Table Tie Bar.....	1	5.10	6	—
103-4	Table Bearing.....	1	1.50	—	6
103-5	Trunnion.....	1	2.30	1	—
103-6	Fence Bar.....	1	.50	1	8
103-7	Flat Hd. Mach. Screw, 1/4"-20 x 3/4".....	3	.10	—	3
103-8	Table Insert (saw blade).....	1	.70	—	8
103-9	Flat Hd. Mach. Screw, 10-24 x 5/8".....	2	.05	—	3
103-10	Allen Setscrew, 1/4"-20 x 1/4".....	4	.10	—	3
103-11	Table Hinge Pin.....	2	.30	—	5
103-12	Stop Flange.....	1	.30	—	4
103-13	Fillister Hd. Screw, 1/4"-20 x 1 1/2".....	1	.20	—	3
103-14	Cap Screw, 3/8"-16 x 1".....	4	.05	—	3
103-15	Allen Setscrew, 3/8"-16 x 1/2".....	2	.10	—	3
103-16	Trunnion Studscrew.....	1	.15	—	3
103-17	S.A.E. Hex Nut, 3/8"-24.....	1	.05	—	3
103-18	Washer, 5/16".....	2	.05	—	3
103-19	Trunnion Wrench.....	1	.75	—	5
103-20	Headless Setscrew, 10-24 x 1".....	3	.10	—	3
103-20N	Hex. Nut, 10-24.....	3	.05	—	3
103-21	Table Rod.....	2	1.75	4	8
103-22	Wedge.....	1	.30	—	6
103-22N	Wedge Nut.....	1	.05	—	3
103-22A	Wedge.....	1	.20	—	7
103-24	Carriage Lever.....	1	.45	—	8
103-24W	Washer, 5/16".....	1	.05	—	3
103-25	Carriage Knob Studscrew.....	2	.20	—	3
103-26	Carriage Knob.....	2	.30	—	5
103-27	Trunnion Stud Cap.....	1	.30	—	3
103-29	Carriage Positioning Stud.....	1	.15	—	6
103-29N	Hex. Nut, 3/8"-16.....	1	.05	—	3
103-32	Trunnion Indicator.....	1	.15	—	3
103-33	Rd. Hd. Mach. Screw, 10-24 x 1/4".....	1	.05	—	3
103-34	Saw Guard.....	1	2.25	1	10
103-35	Splitter.....	1	.80	—	8
103-36	Round Head Screw, 1/4"-20 x 1".....	1	.05	—	3
103-37	Round Head Screw, 1/4"-20 x 1/2".....	1	.05	—	3
103-37W	Lock Washer, 1/4".....	1	.05	—	3
104-1	Tailstock.....	1	4.85	11	—
104-3	Tailstock Stud.....	2	.20	—	5
104-4	Wing Nut, 1/2"-13.....	2	.15	—	5
104-5	Washer 1/2".....	2	.05	—	5
104-6	Extension Bracket.....	1	1.40	1	—
104-7	Tailstock Knob.....	1	.30	—	5
104-8A	Dead Center (60°).....	1	.95	—	8

REPAIR PARTS (Cont.)

PART NO.	NAME AND DESCRIPTION	NO. REQ'D	PRICE (EACH)	SHIP. WT.	
				LBS.	OZ.
104-9	Tailstock Knob Studscrew.....	1	\$.20	—	6
105-1	Tool Rest.....	1	1.25	1	8
105-2	Tool Rest Arm.....	1	1.65	3	—
105-4	Allen Setscrew, 3/8"-16 x 1/2".....	1	.10	—	3
105-5	Allen Setscrew, 3/8"-16 x 1/2".....	1	.10	—	3
105-6	Tool Rest Post.....	1	.65	1	14
105-7	Collar 1.....	1	.65	—	6
105-7S	Allen Setscrew, 3/8"-16 x 3/8".....	1	.10	—	3
106-1	Miter Gauge.....	1	2.00	1	—
106-2	Miter Gauge Bar.....	1	.90	1	—
106-3	Miter Gauge Pin.....	1	.10	—	3
106-4	Miter Gauge Knob.....	1	.30	—	5
106-6	Miter Gauge Studscrew.....	1	.15	—	3
106-7	Miter Gauge Indicator.....	1	.15	—	3
106-8	Rd. Hd. Mach. Screw, 10-24 x 1/4".....	1	.05	—	3
107-1	Fence Base.....	1	1.45	1	—
107-2	Fence.....	1	5.10	3	—
107-3	Cap Screw, 3/8"-16 x 2 1/2".....	2	.10	—	4
107-4	Fence Knob.....	1	.30	—	5
107-5	Fence Tightening Screw.....	1	.20	—	5
108-1	Sanding Disc.....	1	4.50	4	14
108-1S	Allen Screw, 3/8"-16 x 1/2".....	1	.10	—	3

PART NO.	NAME AND DESCRIPTION	NO. REQ'D	PRICE (EACH)	SHIP. WT.	
				LBS.	OZ.
108-3C	12" Garnet Paper Disc (coarse).....	1	\$.25	—	6
108-3M	12" Garnet Paper Disc (medium).....	1	.25	—	6
108-3F	12" Garnet Paper Disc (fine).....	1	.25	—	6
109-2	Extension Pin.....	2	.30	—	6
109-3	Wing Nut.....	4	.10	—	3
109-4	Base Top Bar.....	1	.35	1	—
109-5	Fl. Hd. Mach. Screw, 1/4"-20 x 1 3/8".....	2	.10	—	3
109-5N	Hex. Nut, 1/4"-20.....	2	.05	—	3
109-6	Extension Table.....	1	1.30	1	—
109-8	Washer, 1/4"-20.....	2	.05	—	3
110-1	8" Combination Tooth Saw Blade.....	1	4.10	1	—
110-2	Allen wrench, 3/16".....	1	.10	—	3
110-3	Allen Wrench, 1/8".....	1	.10	—	3
150-1	Shopsmith Motor 1/2 H.P. Ball Bearing, Capacitor, 1725 R.P.M.....		35.95	35	—
160-1	Owner's Guide and Instruction Book.....		.25	—	6

ACCESSORIES AND ASSEMBLIES

PART NO.	NAME AND DESCRIPTION	PRICE (EACH)	SHIP. WT.	
			LBS.	OZ.
GENERAL				
102-16X	Spindle, Quill and Bearing Assembly	\$11.75	6	—
102-15X	Drive Shaft and Bearing Assembly.....	9.75	2	4
102-28X	Spring and Spring Housing Assembly	1.25	—	13
104-1X	Tailstock Assembly.....	5.75	11	6
103-24X	Carriage Lever Assembly (incl. wedges).....	.90	1	—
102-29X	Headstock Lever Assembly (incl. wedges).....	.90	1	—
102-4X	Quill Lever Assembly (incl. wedges).....	.90	1	—
102-31	"V" Belt (38" outside diameter).....	.95	—	8
122-1X	Shopsmith Bench (Steel legs, angle supports, all bolts and screws, excluding wood top.)	9.95	20	—
123-1X	Table Raising Assembly.....	3.95	4	—
135-1X	Mitre Gauge Stop Rod.....	1.25	—	8
136-1X	3/8" to 1/2" Spindle Adapter for Flexible Shaft.....	.90	—	14
139-1X	Front Table Extension.....	2.75	1	—
DRILL PRESS				
102-50	Jacobs Key Chuck No. 3326 with Integral Adaptor.....	7.50	1	12
125-1	Table Insert — No Slot.....	.70	—	8

PART NO.	NAME AND DESCRIPTION	PRICE (EACH)	SHIP. WT.	
			LBS.	OZ.
SAW				
102-35X	1/2" Saw Arbor Assembly.....	\$ 1.25	—	14
110-1	8" Combination Circular Saw.....	4.10	1	—
106-1X	Miter Gauge Assembly.....	3.25	3	—
107-1X	Fence Assembly.....	6.50	4	—
126-1X	3/8" Arbor Assembly.....	1.25	—	14
124-1	Table Insert — 1" Dado.....	.70	—	8
LATHE				
102-34X	Drive Center Assembly.....	1.25	—	8
104-8A	60° Center.....	.95	—	8
105-1X	Tool Rest Assembly.....	3.50	5	8
120-1X	3 1/2" Face Plate.....	1.50	2	—
121-1X	6" Face Plate.....	2.50	3	—
104-8B	Cup Center.....	1.00	—	8
127-1	Screw Center.....	1.40	—	8
DISC SANDER				
108-1X	Sanding Disc Assembly (incl. one coarse garnet disc).....	4.50	5	—
108-3X	12" Garnet Paper Discs—Package of six (State grit desired).....	1.40	1	4
108-4	Disc Adhesive (Small Tube).....	.25	—	6
128-1	Disc Adhesive (Large Tube).....	.50	—	12

NOTICE TO CUSTOMERS: We reserve the right at any time to increase any price, if merchandising costs make an increase expedient. Prices are subject to an additional charge to cover any applicable sales tax, occupation tax or other tax affecting our purchase or sale of merchandise.