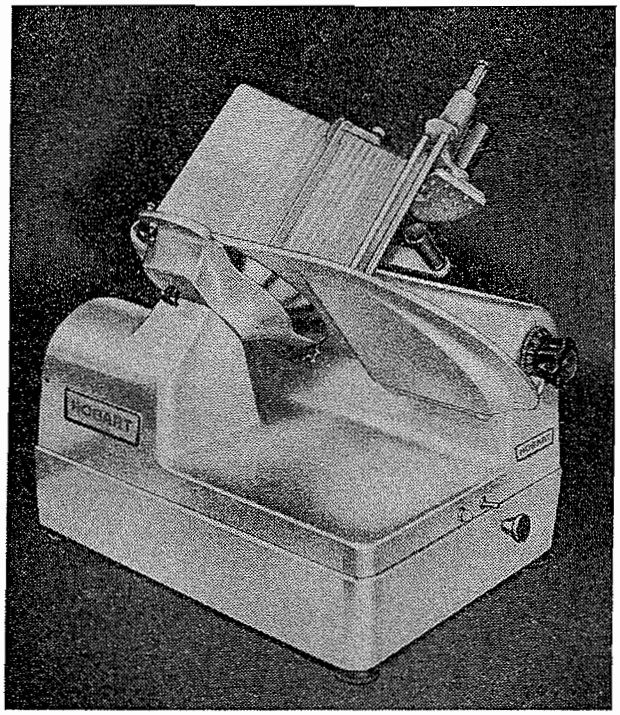
INSTRUCTION MANUAL

. . . *with Catalog of Replacement Parts*



HOBART

MODEL 1712 MEAT SLICER

M/L #15091

HOBART

The World's Oldest and Largest Manufacturer of Computing Scales and Food Store, Kitchen, Bakery and Dishwashing Machines

THE HOBART MANUFACTURING COMPANY TROY, OHIO

FORM 6585 (First Edition) (Dated Sept. 1966)

Instructions For Operation and Care of Hobart Model 1712 Slicing Machine

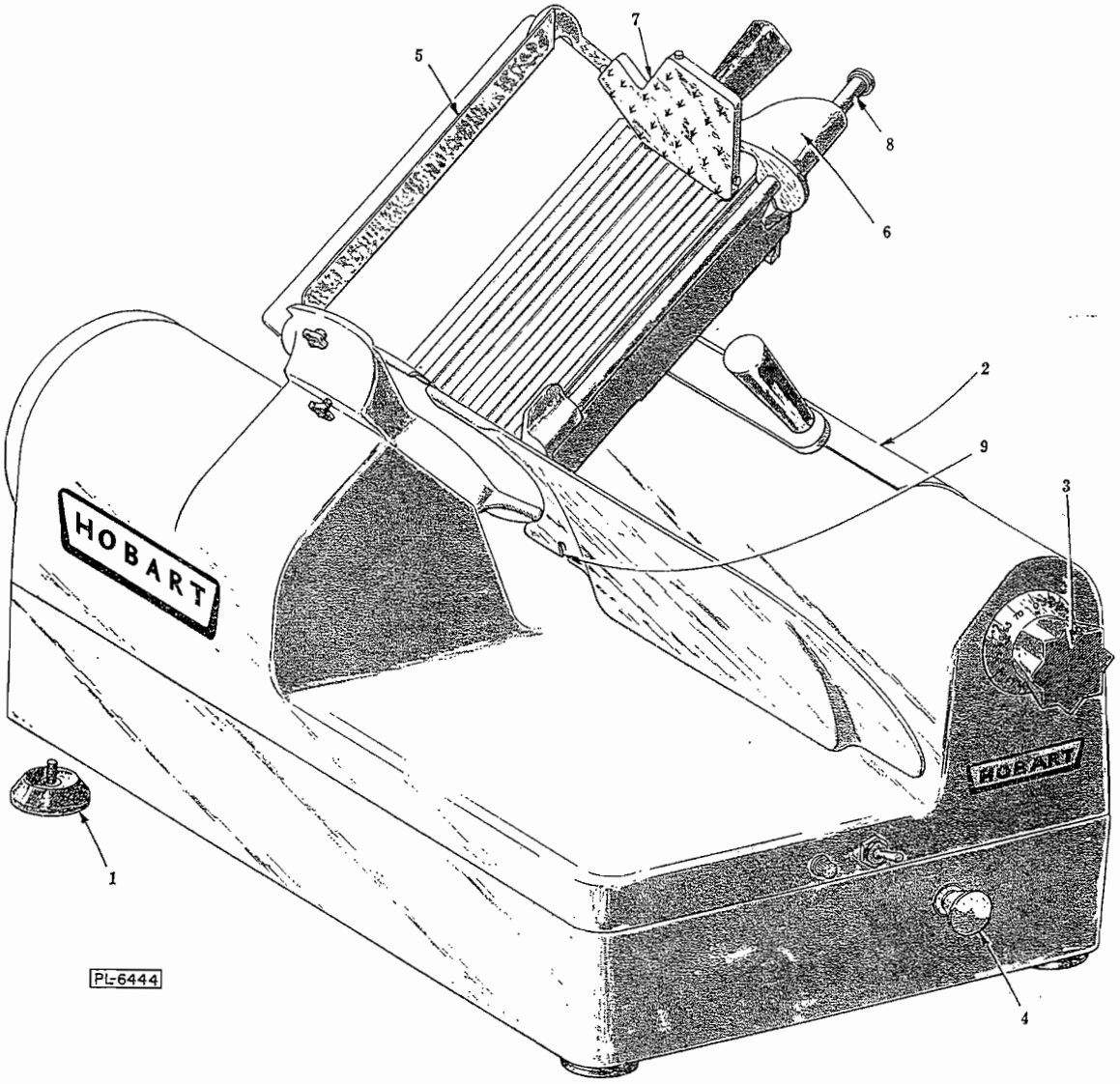


FIG. 1

1. INSTALLATION:

When the machine is packed for shipment, the four rubber feet (1, Fig. 1) are taken off to permit bolting the base to the shipping skid. The feet are shipped in a cloth bag and can be quickly installed. It is not necessary to fasten the slicer down in ordinary service, as the cup-shaped rubber feet will keep it from slipping on the table.

The oil for the transmission case is drained for shipping purposes and MUST be replaced before the machine is placed in operation. Tilt machine on side (panel side up), disassemble panel and remove oil level screw (5, Fig. 2). Next, use a medium sized funnel and pour entire contents of oil from can labelled "OIL FOR GEAR CASE." With the machine on its feet, the oil should then be at the proper level at the oil level screw (5, Fig. 2).

If cord and plug is not used with this machine, electrical connections should be made by qualified workmen who will observe all applicable Safety Codes and the National Electrical Code.

Before making electrical connections, CHECK THE SPECIFICATIONS ON THE NAME PLATE (2, Fig. 1), TO MAKE SURE THEY AGREE WITH THOSE OF YOUR ELECTRICAL SERVICE.

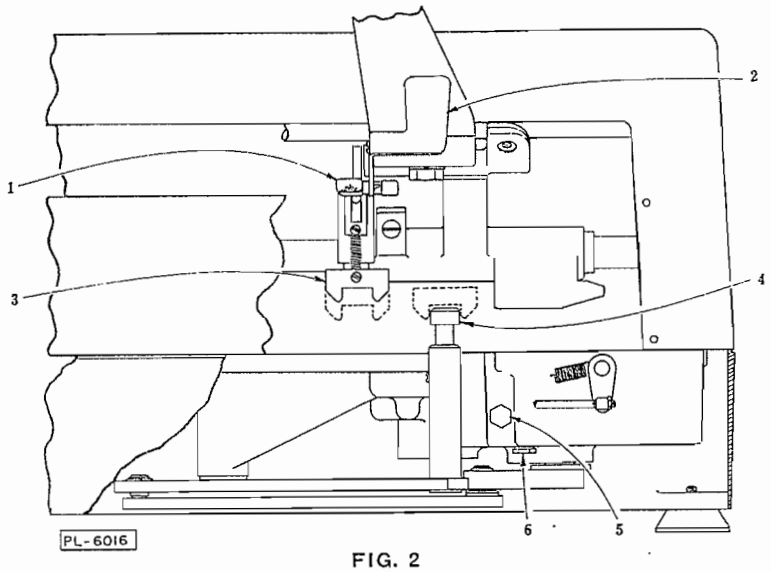


FIG. 2

2. THICKNESS OF SLICE:

The knob or dial (3, Fig. 1) adjusts the thickness of the slices cut. The numbers on the dial do not indicate actual measurements, but are helpful in duplicating past performances. To obtain the maximum slice thickness, it is necessary to turn the knob beyond one complete revolution.

3. SAFETY PRECAUTIONS:

When not actually slicing, keep the slice adjusting dial at zero. The gage plate will then be in line with the edge of the cutting knife and guard it.

4. POWER CARRIAGE OPERATION:

The model 1712 slicing machine is equipped with a dual (fast or slow) speed, power driven carriage, but when desired the carriage may be hand-operated. The carriage driving arm operates whenever the slicer motor is running. To connect the driving arm to the carriage, the operator should first pull the carriage toward the front (dial end) of the slicer. Next, lift the actuating mechanism lever (1, Fig. 2) to a point where it is locked by the locking clip (2, Fig. 2). The lever drops the yoke (3, Fig. 2) to a position where it can be picked up by the engaging roller (4, Fig. 2). Push the carriage forward toward the knife approximately 2″, where it will then be picked up automatically and operated by power.

NOTE: Always pull the carriage to the front at end of its travel before engaging the carriage power drive.

STOPPING THE CARRIAGE:

To stop the carriage, either turn off the switch of the machine or release the carriage power drive. Release the carriage power drive by lightly tapping the locking clip (2, Fig. 2).

If the locking clip is tapped when the carriage is at the end of its stroke closest to the operator, the carriage will stop instantly. This eliminates carriage coasting which might give an uncertain stopping position.

CHANGING CARRIAGE SPEED:

The carriage speed shift may be changed with machine running or not running and also with the carriage engaged or not engaged. Speeds are easily changed (when the carriage is moving or stopped) if there is no load on the diving key. The "no-load" condition on the diving key occurs at each end of the carriage stroke while machine is running, or can be produced when the machine is stopped by moving the carriage slightly back and forth by hand. To shift from low speed to high speed, pull the knob (4, Fig. 1) of the shifter rod outward and upward. In order to shift from high speed to low speed push the shifter rod knob (4, Fig. 1) down, a spring then automatically returns the shifter to its low speed position.

5. SLICING FOOD:

a. Use of the fence:

The use of the Fence (5, Fig. 1) can greatly improve the automatic operation of the slicer. It should be adjusted so that it comes close to the material being sliced without touching it. When thus adjusted, it keeps the material in proper position in the carriage tray on the return stroke, thereby insuring a straight, uniform cut, even at high speeds. One or more fences can be used to provide chutes for slicing a multiple number of smaller objects (for example, the cutting of onion rings).

b. Meat Grip:

The meat grip is made with an especially long travel so that it can back-up the largest pieces of material being cut.

It can be rotated for use in any one of three positions, depending upon the space available as determined by the position of the fence. A detachable, double pronged meat holder may be used with the meat grip for holding material from the top to suit special conditions.

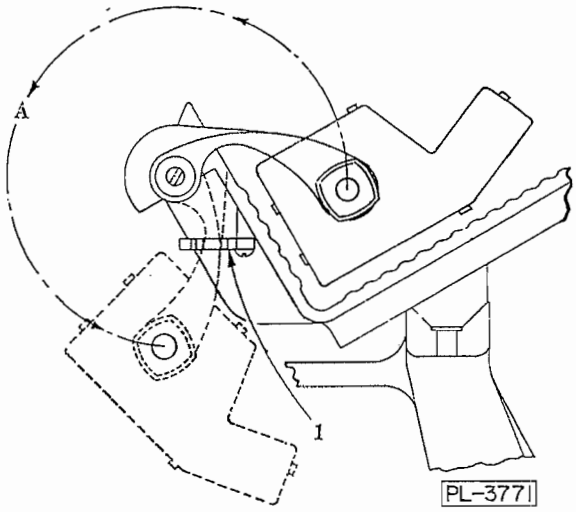


FIG. 3

The hub of the meat grip arm (6, Fig. 1) has a shape which prevents swinging the grip (7, Fig. 1) out of the carriage tray to a position where it could mar the finish of machine. Do not try to force this arm. The grip moves freely at the proper positions, and it must be at the top of the slide rod (8, Fig. 1) to swing clear of the tray. When the grip is not needed, move it out of the way by the following procedure:

1. Lift the grip to the top of the slide rod (8, Fig. 1).
2. Swing the grip around as shown by arrow and broken line (A, Fig. 3).
3. Rotate the grip into a position that allows it to nest in the grip retaining clip (1, Fig. 3).

6. CLEANING & SANITIZING:

Clean the surface of the machine daily. Make sure the knife guards are in place and the slice adjusting knob is at zero when performing this operation.

WARNING: Observe the same care while working around the knife that you would use with any sharp-edged tool.

PROCEDURE:

6.1 Materials required:

- 6.1.1 Small plastic two compartment pail.
- 6.1.2 Clean cloths.
- 6.1.3 Cleaner ("Soilax" All Purpose Cleaner).
- 6.1.4 Sanitizer ("Mikro-Klene" iodophor sanitizer).

6.2 Cleaning (using "Soilax" and "Mikro-Klene"):

- 6.2.1 Add two ounces of "Soilax" All Purpose Cleaner to a gallon of hot water in wash side of two compartment pail.
- 6.2.2 Mix rinse solution by adding two teaspoons of "Mikro-Klene" in one gallon of cool water in rinse side of pail.
- 6.2.3 Wipe off large scraps of meat soil.
- 6.2.4 Dip cloth into cleaning solution, then wring out cloth. Wipe the entire outside of slicer with cloth. Be sure to CAREFULLY wipe the gage plate.
- 6.2.5 Loosen the two retaining knobs (2 & 3, Fig. 4), rotate the front knife guard (1, Fig. 4) clockwise to clear slots at the screw heads and unhook from the stud (4, Fig. 4). Lift off guard.
- 6.2.6 After front guard is removed, the back guard (5, Fig. 4) can then be dis-assembled by unscrewing the knob (6, Fig. 4).
- 6.2.7 Carefully wash the front and rear of the knife with cloth that has been dipped in the cleaning solution.
- 6.2.8 Wash the front and back guards.
- 6.2.9 Rinsing and sanitizing can be done by going over all cleaned surfaces with a cloth that has been soaked in "Mikro-Klene" rinse solution and wrung out enough so that the solution does not run over the machine but still leaves it wet.
- 6.2.10 Re-assemble the back knife guard, then the front knife guard. In replacing the front knife guard, first hook the bottom clip over the necked diameter of the stud (4, Fig. 4) then drop the guard over the two round-nosed securing screws. This guard has been so designed, that if this procedure is followed, the knife will not be damaged.
- 6.2.11 Allow all surfaces to dry. Do not wipe. Cover slicer until next use.

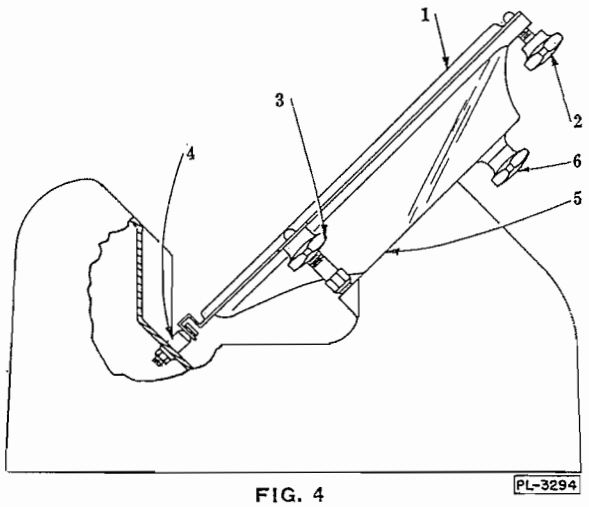


FIG. 4

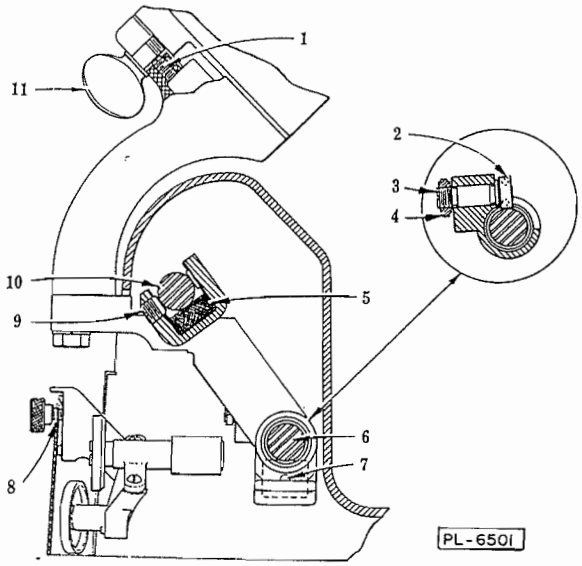


FIG. 5

6.2.12 Cloth used for rinsing should be sent to laundry, or discarded. Wash out pails.

CAUTION: Do NOT wash polished aluminum parts in dish or pan washer.

7. SHARPENING:

This machine is furnished with a Hobart "Stay-Sharp" stainless steel knife. It should be sharpened only when necessary. It is not unusual for this knife to retain its keen edge for months without re-sharpening. When not in use, hang the sharpening unit in the notch (8, Fig. 5) of the side panel. Use the thumb screw to secure the sharpener in position on the inside of the machine. The following sharpening procedure is recommended:

a. With the slice adjusting dial set at zero and the guards in place, wash all the grease from the exposed portion of the knife.

b. Remove the carriage (section 9) and set the slice adjusting dial at 50.

c. Remove the sharpener from its storage place.

d. Unscrew the thumb screw on the sharpener until the sharpener slips upward into the slot (9, Fig. 1) at the bottom of the gage plate. Push the sharpener firmly upward, with the right hand, to remove any rocking tendency. Tighten the thumb screw with the left hand.

e. Start the motor.

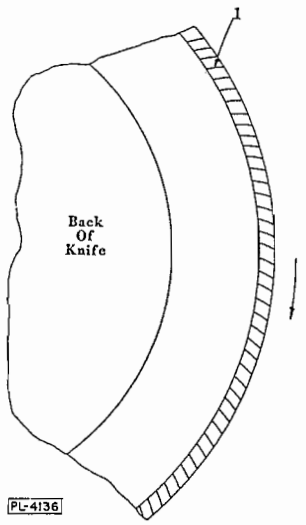


FIG. 6

f. Turn the slice adjusting knob (2, Fig. 7) slowly to the right. This will bring the grinding wheel into contact with the beveled side of the knife.

g. Stop knife and check to see if burr has started to develop on opposite face of knife.

h. As soon as burr appears depress truing wheel by pressing on plunger (1, Fig. 7) with right hand as shown. Grind and true simultaneously for approximately 3 seconds.

j. Release truing wheel and back away grinder at the same time.

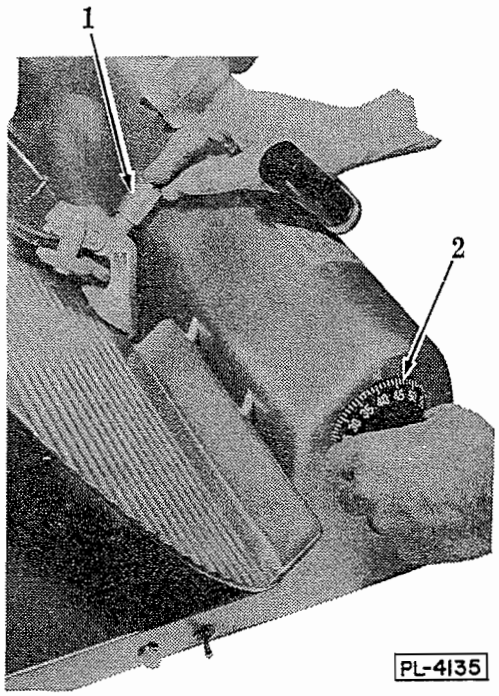


FIG. 7

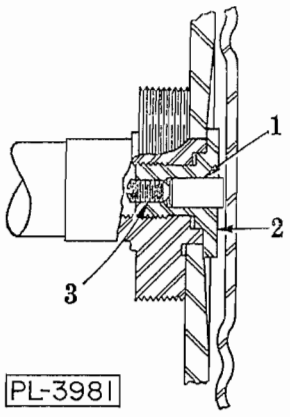


FIG. 8

k. Check to make sure that the characteristic grind marks (1, Fig. 6) are plainly visible on the ground surface, if not the grinding wheel is not cutting. (Many operators try to sharpen a knife with a grease-loaded stone which will not cut).

l. Stop the motor, remove the sharpener, turn the slice adjusting dial back to zero, and return the sharpener to its place on the inside of the side plate.

m. After sharpening; the slicer should be cleaned again to remove any dust, or dirt as a direct result of sharpening.

NOTE: The adjustments on the sharpening unit are factory-set for best operation on the machine.

8. CARRIAGE BEARING ADJUSTMENT:

1. Turning the adjusting screw (9, Fig. 5) will regulate the amount of looseness (or play) in the carriage. This set screw changes the clearance between the "Rulon" plugs and the upper slide rod. Note: Excessive tightening will cause needless friction on the upper slide rod.

2. To adjust the eccentric stud & brg. sub-assy. on the lower slide rod, loosen the locking nut (4, Fig. 5), then turn the eccentric stud (3, Fig. 5) to suit. A proper setting may be reached by turning the eccentric to a tight (or drag) position; then loosening so that outer race of ball bearing (2, Fig. 5) still turns on the lower slide rod, but with a minimum of bearing pressure. When properly adjusted, the carriage is free to glide on slide rods.

9. CARRIAGE REMOVAL & ADJUSTMENT:

The carriage tray assembly can be taken off as a unit by loosening the thumb screw (11, Fig. 5) and sliding the assembly out of the "V" support. Care should be used in order to prevent the tray from striking and damaging the knife edge. The carriage tray knife clearance may be changed by adjusting the self-locking set screw (1, Fig. 5) to suit.

10. WEAR ADJUSTMENT:

After long service and many sharpenings of the knife, it may be necessary to adjust the gage plate closer to the knife. Also the bevel on the worn knife may be changed. This work should be done by a Hobart Service technician. Align gage plate in plane with knife. Straight edge must lie flat across knife and gage plate.

11. FRONT PLATE THRUST PLUG ADJUSTMENT:

The front plate thrust plug (1, Fig. 8) is assembled in the center of the knife retaining screw. The end of this "Rulon" plug supports the front plate when a heavy load slides across it. To adjust the height of this plug, first disassemble the front plate (guard), then remove the hex head knife retaining screw (2, Fig. 8). From the rear of this knife screw, adjust the set screw (3, Fig. 8), until the plug projects approximately 7/64″ from the knife screw. If properly adjusted the thrust plug just clears or lightly touches (but must not raise) the front plate under normal operating conditions. If the plug (which is pressed into place) is adjusted too far forward, back up the set screw and press the plug back.

12. LUBRICATION:

Very little lubrication is needed. Both the upper (10, Fig. 5) and lower (6, Fig. 5) slide rods are lubricated by wicking pads. Add a few drops of oil (Texas "Havoline" or equiv.) occasionally to these pads. The lower slide rod pad is lubricated thru the oil hole (7, Fig. 5). Lubricate the upper slide rod pad (5, Fig. 5) directly. A wiping pad prevents a surplus of lubricant from accumulating on the upper slide rod.

Keep the two gage plate slide rods lubricated with a drop or two of tasteless oil (furnished) when required.

Keep the meat grip slide rod (8, Fig. 1) clean but do NOT lubricate it.

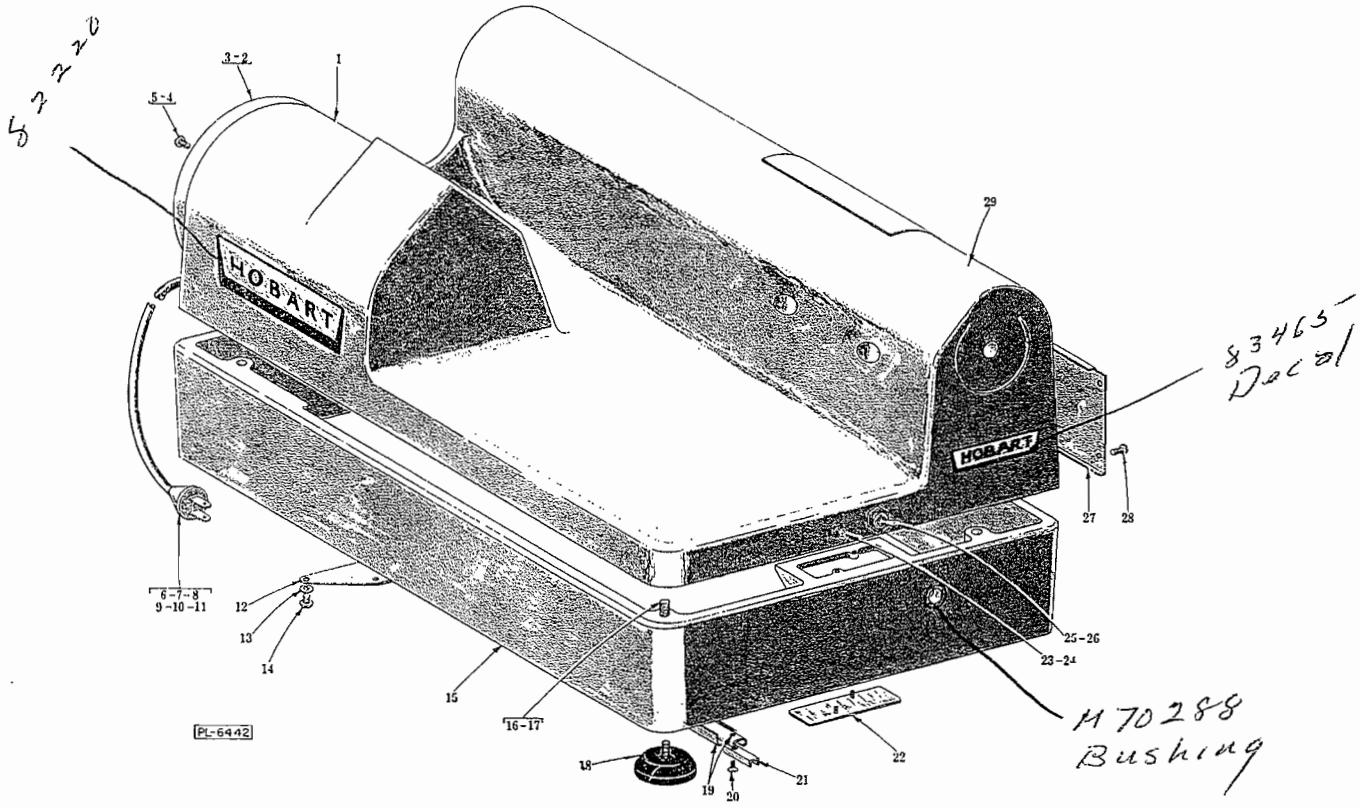
The slicer power transmission, including the knife shaft drive and the speed change gears, are lubricated by a medium weight transmission oil circulated by a gear pump. The transmission was filled level at the oil level screw (5, Fig. 2) at the time of installation. To drain the oil, tilt the machine on its side (panel side up) and remove the drain screw (6, Fig. 2). Return machine to level position and oil will drain out. The motor bearings are grease-packed and sealed, making additional lubrication unnecessary.

Bearings at the connecting points of the crank arm, connecting rod and engaging arm are self-lubricating porous bronze.

However, it may be desirable to re-lubricate these bearings annually in order to replenish the lubricant.

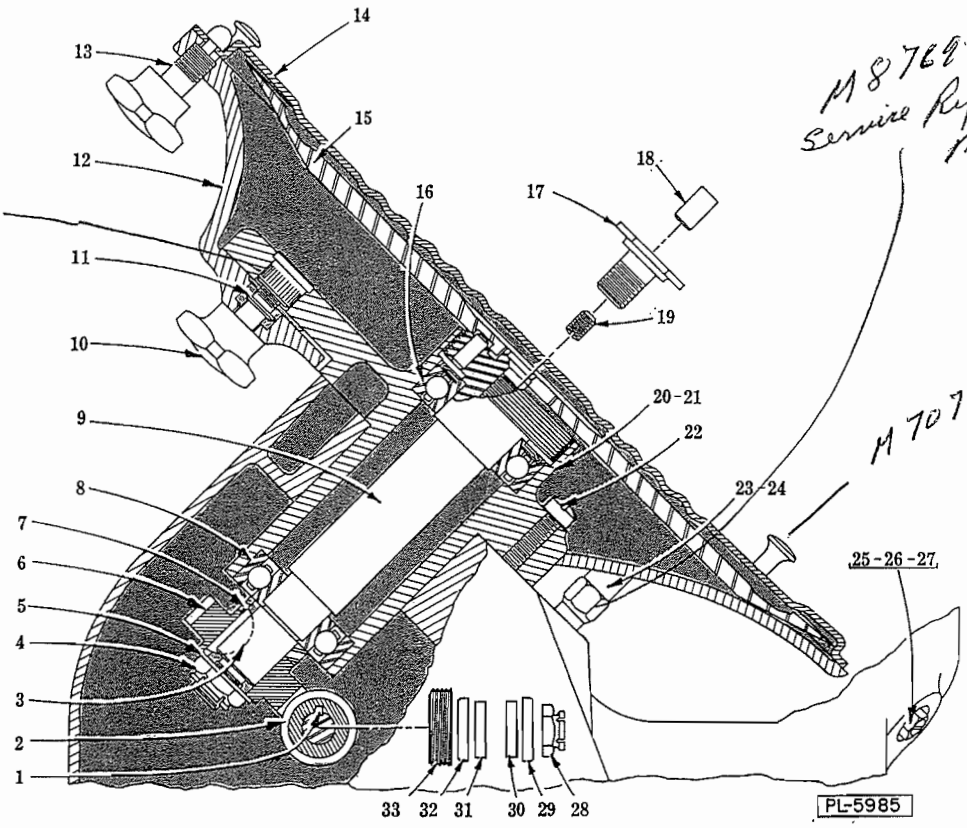
13. MOTOR:

No periodic service is required for the motor.



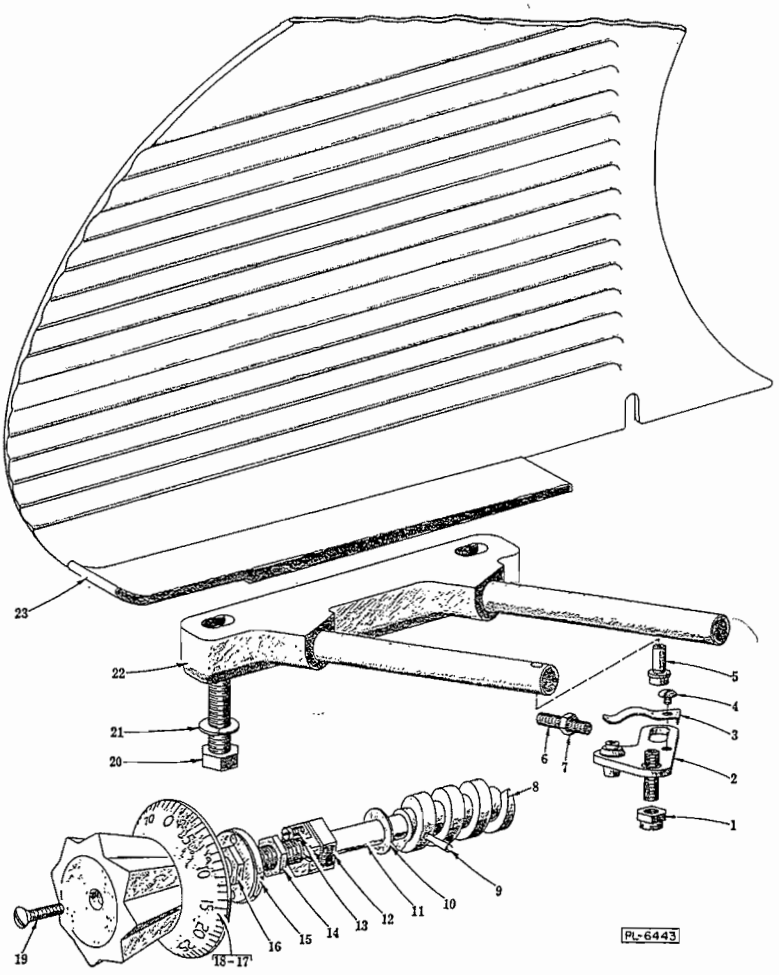
BASE UNIT

ILLUS. PL-6442	PART NO.	NAME OF PART	AMT.
1	--------	Motor (See separate Motor Sheet)	1
2	P-70238	Cover - Bearing Bracket (A.C.)	1
3	P-24093-4	Cover - Bearing Bracket (D.C.)	1
4	SC-10-32	Mach. Screw - #8-32 x 3/8" Truss Hd. (A.C.)	2
5	SC-10-13	Mach. Screw - #10-24 x 3/8" Truss Hd. (D.C.)	1
6	S-63335-13	Cord & Plug (2 Cond. under 125 V.)	1
7	M-64142-1	Cord & Plug (2 Cond. 200-250 V.)	1
8	S-63335-34	Cord & Plug (3 Cond. under 150 V.) (Ground)	1
9	M-64142-3	Cord & Plug (3 Cond. 200-250 V.) (Ground)	1
10	R-64898-6	Cord (Export)	1
11	FE-6-29	Nut - Wire	4
12	M-70021	Cover - Junction Box	1
13	WL-3-8	Lock Washer - #6 x .047" x .031"	3
14	SC-9-70	Mach. Screw - #6-32 x 1/4" Rd. Hd.	3
15	T-70252	Sub-Base	1
16	SC-37-85	Fin. Bolt - 5/16"-18 x 1" Hex Hd.	4
17	WL-3-44	Lock Washer - 5/16" x .125" x .078"	4
18	M-83681	Foot	4
19	P-70397-1	Conduit	1
20	SC-14-66	Mach. Screw - #6-32 x 5/16" Flat Hd.	2
21	M-70388	Insulator - Conduit Leads	2
22	FE-4-11	Cover - Switch Box	1
23	M-88732-1	Pilot Light (with nut) (115 V.)	1
24	M-88732-2	Pilot Light (with nut) (230 V.)	1
25	P-87711-95-1	Switch (with nuts)	1
26	M-70429 (12-)	Insulator - Switch	1
27	S-84067	Side Panel	1
28	SC-10-32	Mach. Screw - #8-32 x 3/8" Truss Hd.	4
29	M-83976	Base & Name Plate Sub-Assy.	1



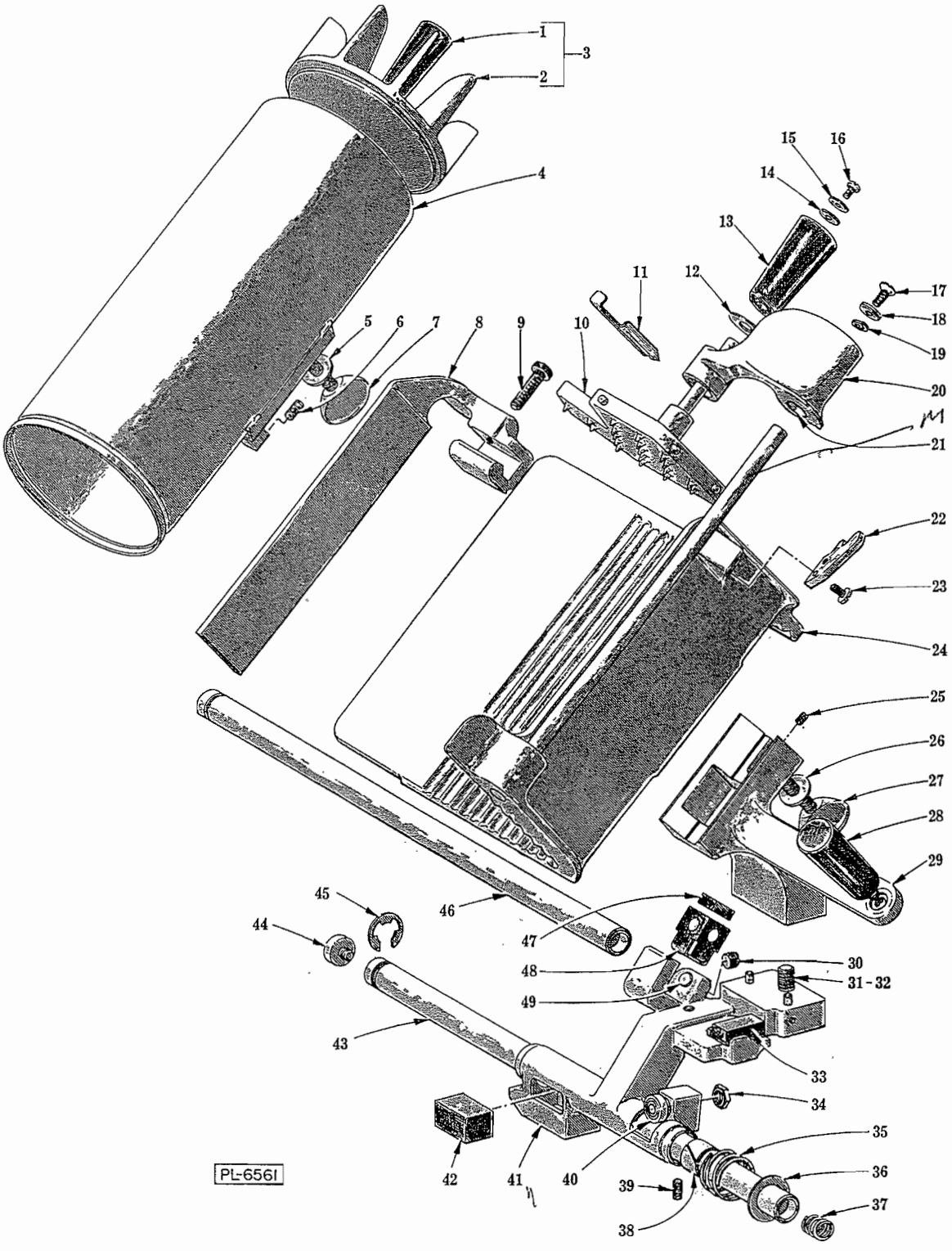
KNIFE UNIT

ILLUS. PL-5985	PART NO.	NAME OF PART	AMT.
1	R-12430-3	Key	1
2	M-70406	Worm (5T)	1
3	M-73348	Key - Special Woodruff	1
4	NS-32-29	Stop Nut - 1/2"-20 "Flexloc"	1
5	WS-8-9	Washer	1
6	M-70302	Gear - Knife Shaft Worm (24T)	1
7	V-20592	Washer - Thrust	1
8	BB-18-43	Ball Bearing - Hoover #9204	1
9	P-70435	Knife Shaft & Dowel Sub-Assy.	1
10	P-82957	Screw - Back Knife Guard Retaining	1
11	M-82934	Retaining Ring	1
12	S-82952	Back - Knife Guard	1
13	P-70196	Stud - Upper Knife Guard	1
14	R-83023	Knife Guard & Knob Assy.	1
15	S-70231	Knife	1
16	BB-16-19	Ball Bearing - Hoover #8505M	1
17	M-73355	Screw - Knife	1
18	M-73265	Plug - Plate Thrust	1
19	SC-64-4	Set Screw - 1/4"-28 x 3/8" Hdls. Flat Pt. "Nylok"	1
20	S-70160	Hub - Knife Shaft	1
21	P-70348	Knife Shaft & Hub Assy. (Incls. items #3, 4, 5, 6, 7, 8, 9, 16 & 20)	1
22	SC-12-34	Mach. Screw - 1/4"-20 x 1-3/8" Fil. Hd.	4
23	M-70241	Stud - Center Knife Guard	1
24	P-70198	Lock Nut - Center Stud	1
25	M-83021	Stud - Lower Retaining Clip	1
26	WL-7-15	Lock Washer - 1/4" Ext. Shakeproof	1
27	NS-17-1	Jam Nut - 1/4"-20 Hex Fin.	1
28	NS-32-23	Stop Nut - 7/16"-20 "Flexloc"	1
29	WS-7-50	Washer	1
30	V-17778-3	Washer - Shock (29/64" I.D.)	1
31	V-17778-2	Washer - Shock (41/64" I.D.)	1
32	V-17777-2	Retainer - Shock Washer (41/64" I.D.)	1
33	P-70239	Conveyor - Oil	1
	M-73356	Knife Screw Assy. (Incls. items #17, 18 & 19)	1



GAGE PLATE AND INDEXING MECH.

ILLUS. PL-6443	PART NO.	NAME OF PART	AMT.
1	NS-32-12	Stop Nut - 5/16"-18 "Flexloc"	1
2	M-70425	Indexing Plate, Roller, Collar & Stud Assy.	1
3	V-20610	Spring - Indexing Plate	1
4	SC-8-14	Mach. Screw - #10-32 x 3/16" Rd. Hd.	1
5	M-70343	Roller - Indexing Plate (Straight)	1
6	SC-63-28	Set Screw - 1/4"-20 x 1" Hdls. Flat Pt.	1
7	NS-17-1	Jam Nut - 1/4"-20 Hex Fin.	1
8	M-87495	Worm - Indexing	1
9	RP-3-2	Rollpin - 5/32" x 7/8"	1
10	M-88298	Washer - Belleville	2
11	M-87494	Shaft - Indexing	1
12	M-88887	Retaining Nut & Screw Sub-Assy. (Incls. item #13)	1
13	SC-12-49	Mach. Screw - #8-32 x 3/8" Fil. Hd.	1
14	V-10928-2	Nut - Special	1
15	M-70405	Disc - Indexing Drive	1
16	V-10928-2	Nut - Special	1
17	S-70205	Knob - Indexing	1
18	WS-11-32	Washer - Shim	As Reqd.
19	SC-15-38	Mach. Screw - #10-24 x 3/4" Oval Hd.	1
20	SC-62-33	Fin. Bolt - 3/8"-16 x 2" Hex Hd.	2
21	WL-6-28	Lock Washer - 3/8" x .141" x .094"	2
22	R-70255	Support - Gage Plate (Incls. Rods & Groov-Pins)	1
23	T-70152	Plate - Gage	1
	M-87493	Indexing Shaft & Worm Assy. (Incls. items #8. 9 & 11)	1

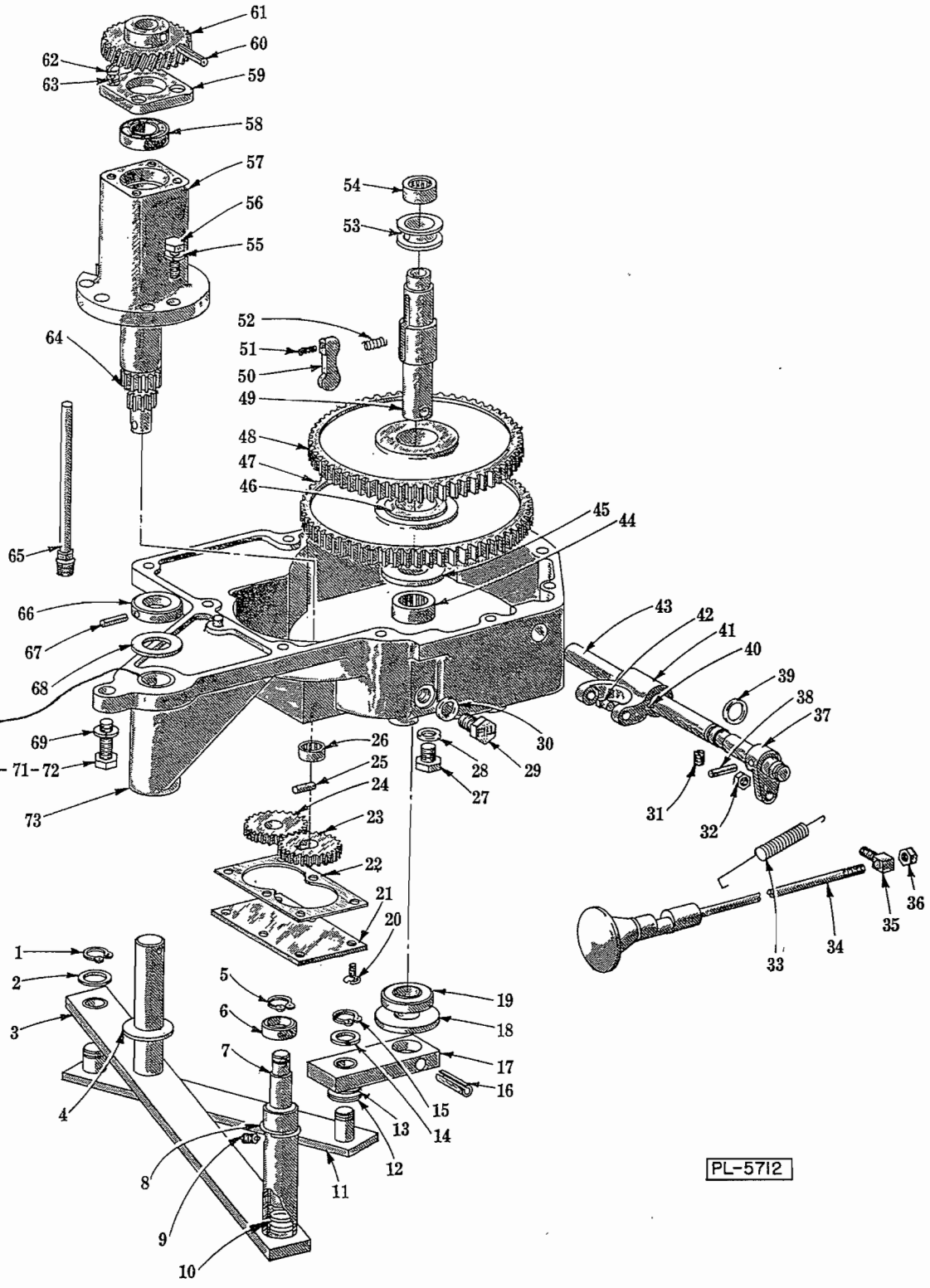


CARRIAGE UNIT

CARRIAGE UNIT

ILLUS. PL-6561	PART NO.	NAME OF PART	AMT.
*1	P-70194	Handle - Carriage Tray	1
*2	R-75930	Plate - Pusher	1
*3	M-75945	Pusher Plate & Handle Assy. (Incls. items #1 & 2)	1
*4	S-72119	Tube & Angled Seat Assy.	1
*5	WS-5-36	Washer	1
*6	SC-64-15	Set Screw - 1/4"-20 x 1/2" Hdls. Oval Pt. "Nylok"	1
*7	M-70304	Thumb Screw	1
8	S-70157	Fence - Carriage	1
9	M-70448	Thumb Screw - Fence	1
10	R-77534	Meat Grip Sub-Assy.	1
11	P-70341	Meat Holder - Meat Grip	2
12	M-70387	Washer - Handle	1
13	P-70202	Handle - Meat Grip	1
14	M-70344	Washer - Handle Tension	1
15	M-70345	Washer - Handle Retaining	1
16	M-68042	Screw - Truss Hd. "Nylok"	1
17	SC-16-5	Mach. Screw - 1/4"-20 x 5/8" Oval Hd.	1
18	M-70305	Washer - Meat Grip Retaining	1
19	WL-6-16	Lock Washer - 1/4" x .107" x .047"	1
20	M-75138	Meat Grip Arm & Brg. Sub-Assy. (Incls. item #21)	1
21	M-75135	Bearing - Meat Grip Arm	2
22	M-72579	Clip - Meat Grip Retaining	1
23	M-68042	Screw - Truss Hd. "Nylok"	2
24	M-72758	Carriage Tray & Slide Rod Sub-Assy.	1
25	SC-64-15	Set Screw - 1/4"-20 x 1/2" Hdls. Oval Pt. "Nylok"	1
26	WS-5-36	Washer	1
27	M-70304	Thumb Screw	1
28	P-70194	Handle - Carriage Tray	1
29	S-70155	Support - Carriage	1
30	M-86260	Adjusting Screw - "Nylok"	1
31	SC-37-21	Fin. Bolt - 1/2"-13 x 1-1/2" Hex Hd.	1
32	WL-6-35	Lock Washer - 1/2" x .170" x .099"	1
33	M-83422	Wiper - Felt (Upper Shaft)	1
34	V-10928	Nut	1
35	M-20622	Spring - Bumper	2
36	V-21046-1	Washer - Bumper	2
37	V-12734	Spring - Slide Rod End	2
38	--------	Open Number	--
39	SC-47-15	Set Screw - 1/4"-20 x 1/2" Soc. Hdls. Kn. Cup Pt.	1
40	M-86262	Eccentric Stud, Brg. & Nut Sub-Assy. (Incls. item #34)	1
41	R-86316	Carriage Bearing Sub-Assy. (Incls. item #30)	1
42	M-84014	Pad - Oiling (Lower Shaft)	1
43	M-75052	Slide Rod & Cap Assy. (Incls. item #44)	1
44	M-74908	Cap - Slide Rod	2
45	V-24094	Retaining Ring	2
46	M-75052	Slide Rod & Cap Assy. (Incls. item #44)	1
47	M-83421	Pad - Oiling (Upper Shaft)	1
48	M-83423	Wicking (Upper Shaft)	1
49	M-83416	Plug	2
	*M-72872	Food Chute Attachment Assy. (Incls. items #3, 4, 5, 6 & 7)	1
	M-72616	Carriage Tray, Meat Grip & Arm Sub-Assy. (Incls. items #10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, 24, 26 & 27)	1

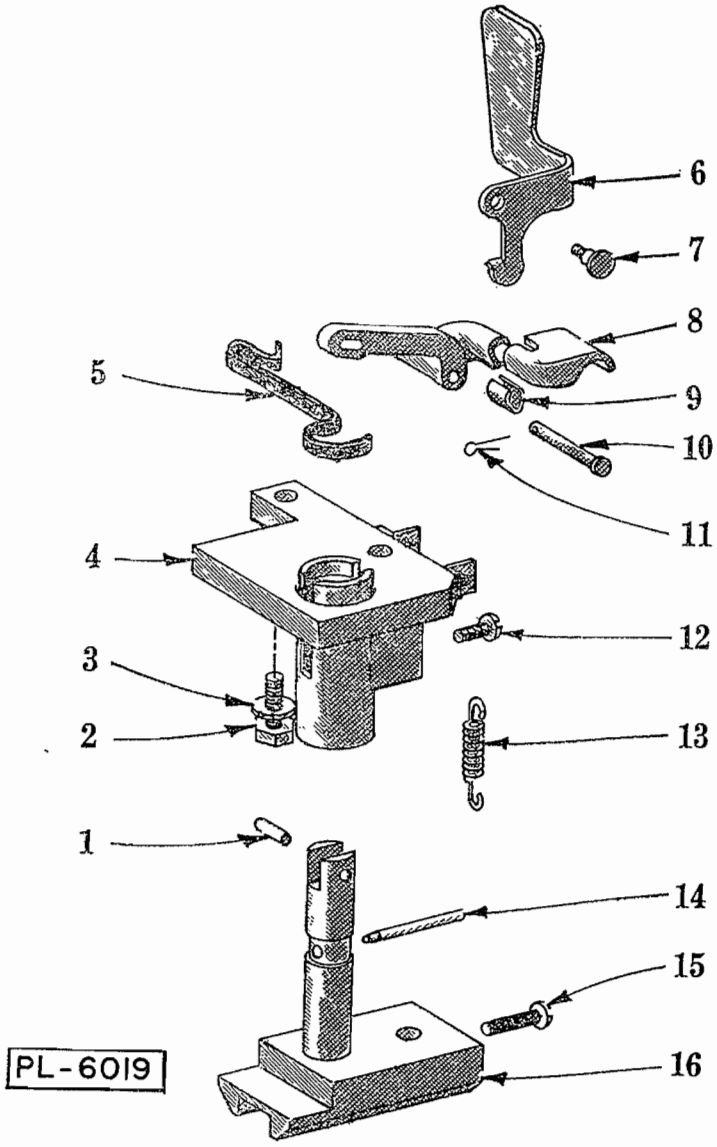
* Attachment Chute - (Special, used in place of Carriage)



GEAR CASE UNIT

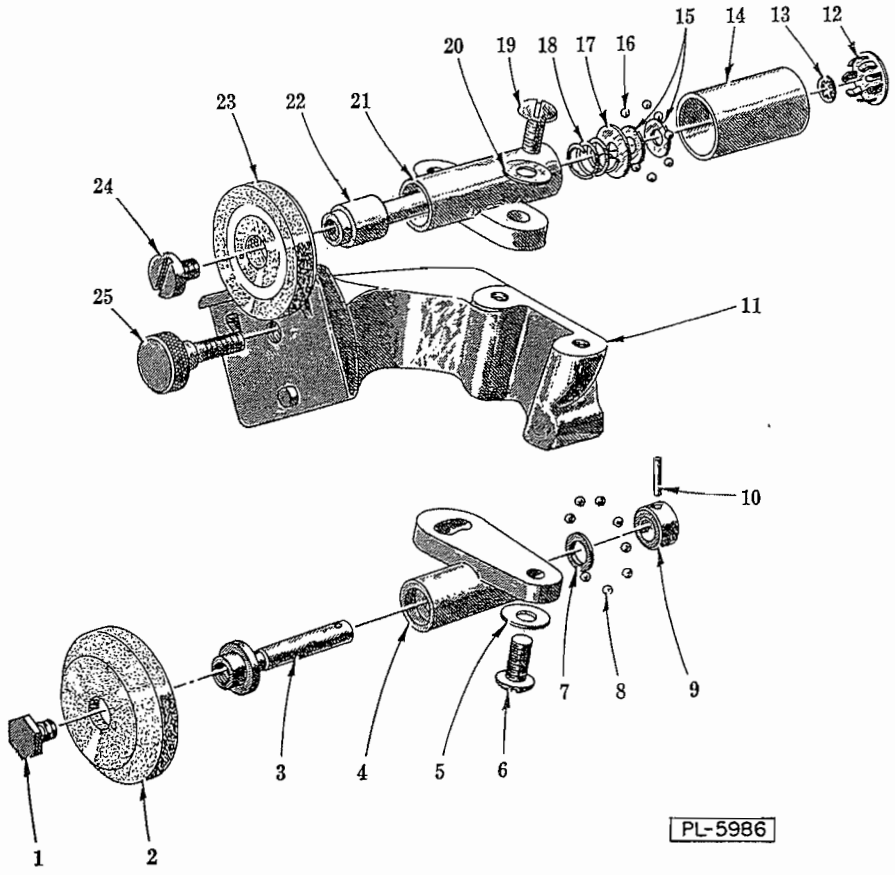
GEAR CASE UNIT

ILLUS. PL-5712	PART NO.	NAME OF PART	AMT.
1	RR-4-17	Retaining Ring	1
2	WS-7-21	Washer	1
3	R-70259	Engaging Arm Assy.	1
4	M-70283	Washer - Pivot Shaft Thrust	1
5	RR-4-3	Retaining Ring	1
6	M-70303	Roller - Engaging Mech.	1
7	M-70295	Shaft - Engaging Mech.	1
8	M-70396	Ring - Stop Retaining	1
9	M-70324	Stop - Engaging Mech. Shaft	1
10	M-70307	Spring - Engaging Mech.	1
11	P-70268	Connecting Rod Assy.	1
12	WS-8-9	Washer	2
13	WS-8-8	Washer	1
14	WS-7-21	Washer	1
15	RR-4-17	Retaining Ring	1
16	RP-2-46	Rollpin - 1/4" dia. x 1-1/4" Lg.	1
17	M-70293	Arm - Crank	1
18	M-70290	Washer - Crank Arm Thrust	1
19	M-70442	Seal - Drive Shaft	1
20	SC-14-76	Mach. Screw - #10-24 x 3/8" Flat Hd.	6
21	P-70234	Cover - Gear Pump Bottom	1
22	M-70244	Gasket - Bottom Cover	1
23	M-70243	Gear - Oil Pump Driven (27T)	1
24	M-70242	Gear - Oil Pump Idler (27T)	1
25	P-11800-200	Dowel	1
26	BN-2-13	Needle Bearing - Torrington #B-86	1
27	SC-62-68	Fin. Bolt - 1/2"-20 x 3/4" Hex Hd.	1
28	GR-2-1	Gasket	1
29	M-64465-2	Plug - Oil Fill	1
30	GR-2-4	Gasket	1
31	SC-63-14	Set Screw - #8-32 x 1/4" Hdls. Flat Pt.	1
32	NS-32-1	Stop Nut - #10-24 "Flexloc"	1
33	M-70285	Spring - Shifter Mech.	1
34	M-70446	Shift Rod, Selector & Knob Assy.	1
35	M-70286	Knuckle - Shifter	1
36	NS-9-30	Mach. Nut - #10-32 Hex	2
37	M-70296	Bracket - Shifter	1
38	RP-2-28	Rollpin - 3/16" dia. x 3/4" Lg.	1
39	R-67500-2	"O" Ring	1
40	R-12430-3	Key	1
41	M-61654	Yoke - Shifter	1
42	M-61655	Shoe - Shifter	2
43	P-70267	Shaft - Shifter	1
44	BN-2-15	Needle Bearing - Torrington #B-126	1
45	M-70281	Washer - Gear Thrust	1
46	M-70274	Collar - Diving Key	1
47	R-72715	Gear - Low Speed Driven (119T)	1
48	R-70170	Gear - High Speed Driven (114T)	1
49	P-70237	Shaft - Crank Arm Drive	1
50	P-70235	Key - Diving	1
51	M-70325	Set Screw - Diving Key	1
52	M-70308	Spring - Diving Key	1
53	M-61656	Sleeve - Clutch Shifter	1
54	BN-2-14	Needle Bearing - Torrington #M-881	1
55	WL-3-37	Lock Washer - 1/4" x .109" x .062"	3
56	SC-36-6	Fin. Bolt - 1/4"-20 x 1" Hex Hd.	3
57	R-70156	Carrier - Pinion Shaft Bearing	1
58	BB-15-37	Ball Bearing - N.D. #3L03	1
59	P-70158	Retainer - Bearing	1
60	RP-3-8	Rollpin - 3/16" dia. x 1-1/8" Lg.	1
61	P-70159	Gear - Worm (29T)	1
62	SC-11-17	Mach. Screw - #10-24 x 1/2" Fil. Hd.	4
63	WL-3-21	Lock Washer - #10 x .047" x .047"	4
64	P-72716	Shaft - Pinion	1
65	M-70248	Fitting & Oil Tube Assy.	1
66	M-70275	Collar - Pivot Shaft Thrust	1
67	RP-3-12	Rollpin - 1/8" dia. x 1-1/4" Lg.	1
68	M-70283	Washer - Thrust	1
69	WL-3-44	Lock Washer - 5/16" x .125" x .078"	11
70	SC-37-85	Fin. Bolt - 5/16"-18 x 1" Hex Hd.	4
71	SC-11-96	Mach. Screw - 5/16"-18 x 1" Fil. Hd.	1
72	SC-62-35	Fin. Bolt - 5/16"-18 x 3" Hex Hd.	6
73	M-72138	Gear Case, Bearing & Dowel Sub-Assy.	1
	R-72714	Brg. Carrier, Pinion Shaft & Gear Assy. (Incls. items #57, 58, 59, 60, 61, 62, 63 & 64)	1
	M-72867	Drive Shaft Sub-Assy. (Incls. items #49, 50, 51, 52 & 53)	1



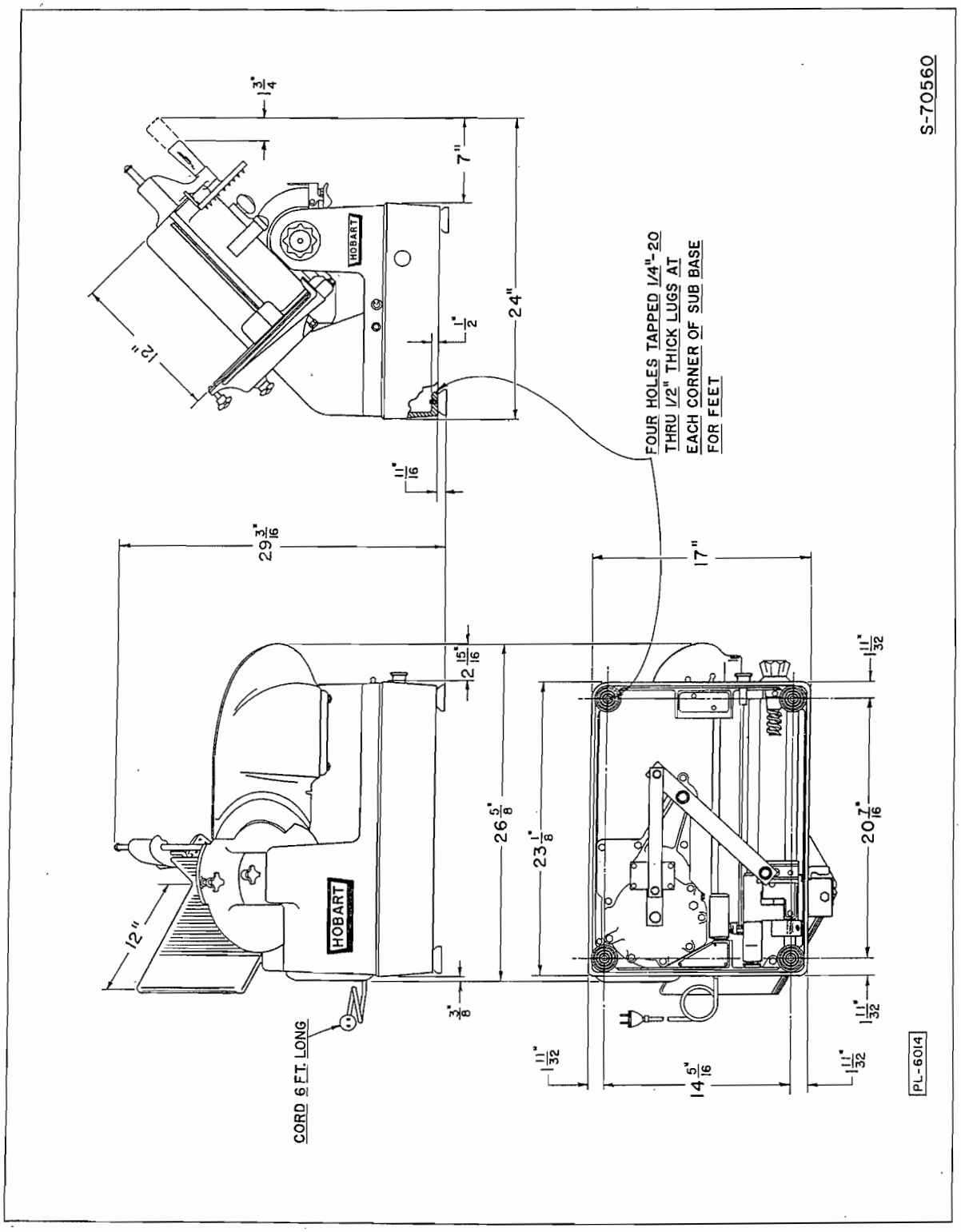
ACTUATING MECH. UNIT

ILLUS. PL-6019	PART NO.	NAME OF PART	AMT.
1	P-11800-137	Dowel	1
2	SC-37-75	Fin. Bolt - 5/16"-18 x 3/4" Hex Hd.	2
3	WL-3-44	Lock Washer - 5/16" x .125" x .078"	2
4	P-83424	Base and Brg. Sub-Assy.	1
5	M-70320	Wicking - Actuating Mech.	1
6	P-70240	Clip - Locking	1
7	M-70351	Screw - Special	1
8	R-70233	Lever - Actuating Mech.	1
9	M-70245	Clip - Lever Wear	1
10	M-70297	Pin - Hinge	1
11	PC-3-23	Cotter Pin - 1/16" x 1/2"	1
12	SC-60-21	Mach. Screw - #10-24 x 1/4" Rd. Hd.	1
13	M-70399	Spring - Actuating Mech.	1
14	M-81420	Dowel - Yoke & Shaft Locating	1
15	SC-60-20	Mach. Screw - #10-24 x 1" Rd. Hd.	1
16	P-70266	Yoke & Shaft Assy.	1



KNIFE SHARPENER UNIT

ILLUS. PL-5986	PART NO.	NAME OF PART	AMT.
1	M-74833	Screw - Retaining	1
2	M-73851	Wheel - Grinding	1
3	M-74900	Shaft - Grinding Wheel	1
4	P-22670	Carrier - Grinding Wheel	1
5	WS-2-18	Washer	2
6	SC-8-10	Mach. Screw - #10-24 x 1/2" Rd. Hd.	2
7	WS-3-40	Washer	1
8	BA-2-1	Ball - 1/8" Dia.	9
9	V-13199	Collar - Thrust	1
10	PG-3-7	Groov-Pin - Type #1, 3/32" x 7/16"	1
11	M-72801	Sharpener Support & Slice Indicator Plate Sub-Assy.	1
12	M-69585-1	Plug Button	1
13	M-83089	Retaining Ring	1
14	M-73974	Cap - Truing Wheel	1
15	WS-2-18	Washer	2
16	BA-2-1	Ball - 1/8" Dia.	7
17	WS-4-39	Washer	1
18	M-70313	Spring - Truing Wheel Load	1
19	SC-8-10	Mach. Screw - #10-24 x 1/2" Rd. Hd.	2
20	WS-2-18	Washer	2
21	M-73975	Carrier - Truing Wheel	1
22	M-83092	Shaft - Truing Wheel	1
23	M-13201	Wheel - Truing	1
24	M-3404-7	Screw - Retaining	1
25	M-70424	Thumb Screw - Sharpener Attaching	1
	R-74023	Knife Sharpener Assy. (Incls. items #1 thru 25)	1
	M-73979	Truing Wheel Sub-Assy. (Incls. items #12, 13, 14, 15, 16, 17, 18, 21, 22, 23 & 24)	1
	M-74007	Grinding Wheel Sub-Assy. (Incls. items #1, 2, 3, 4, 7, 8, 9 & 10)	1



INSTALLATION DIAGRAM