

OPERATING INSTRUCTIONS & PARTS BOOK



**CRIPPEN MANUFACTURING COMPANY, INC.
ST. LOUIS, MICHIGAN, U.S.A. 48880**

M

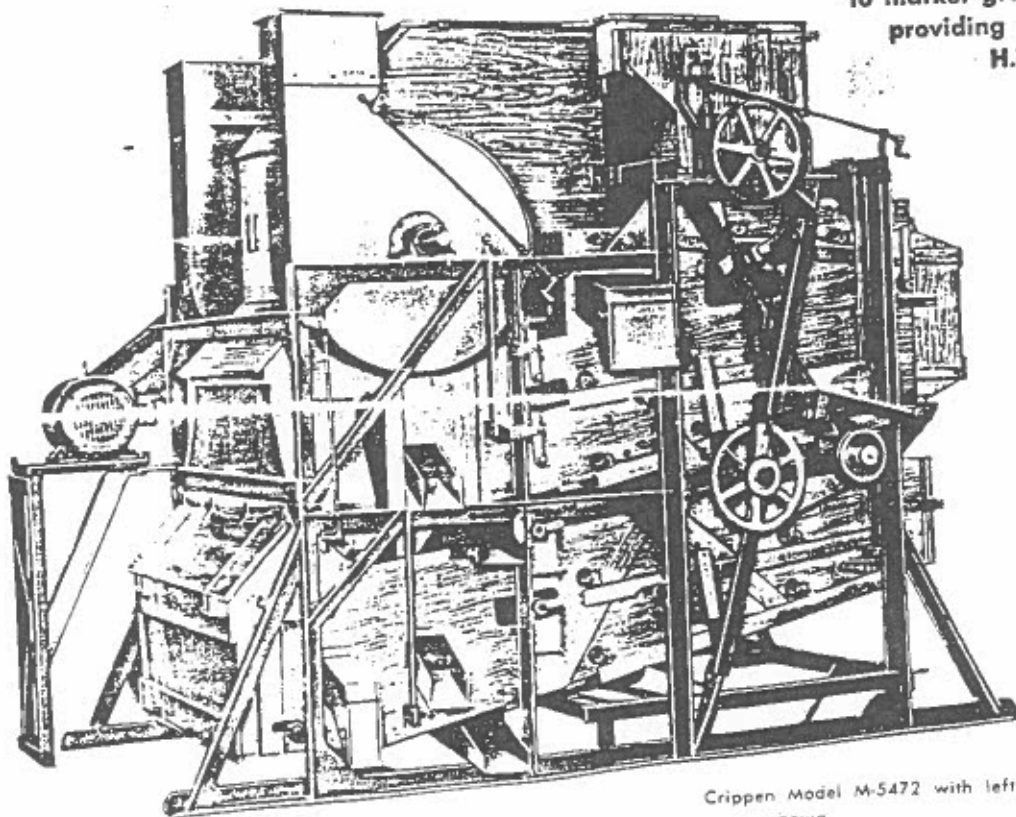
M-5472

MM-5472

CRIPPEN

DOUBLE CAPACITY CLEANERS

Two cleaners in one—for fast, accurate cleaning or rough scaping. These machines are adaptable for cleaning and grading all kinds of grain, corn, beans, rice, flax etc. They are capable of precise cleaning for seeding quality and for rapid cleaning to market grades in large volumes—providing large capacity with low H.P. and small floor space requirements.



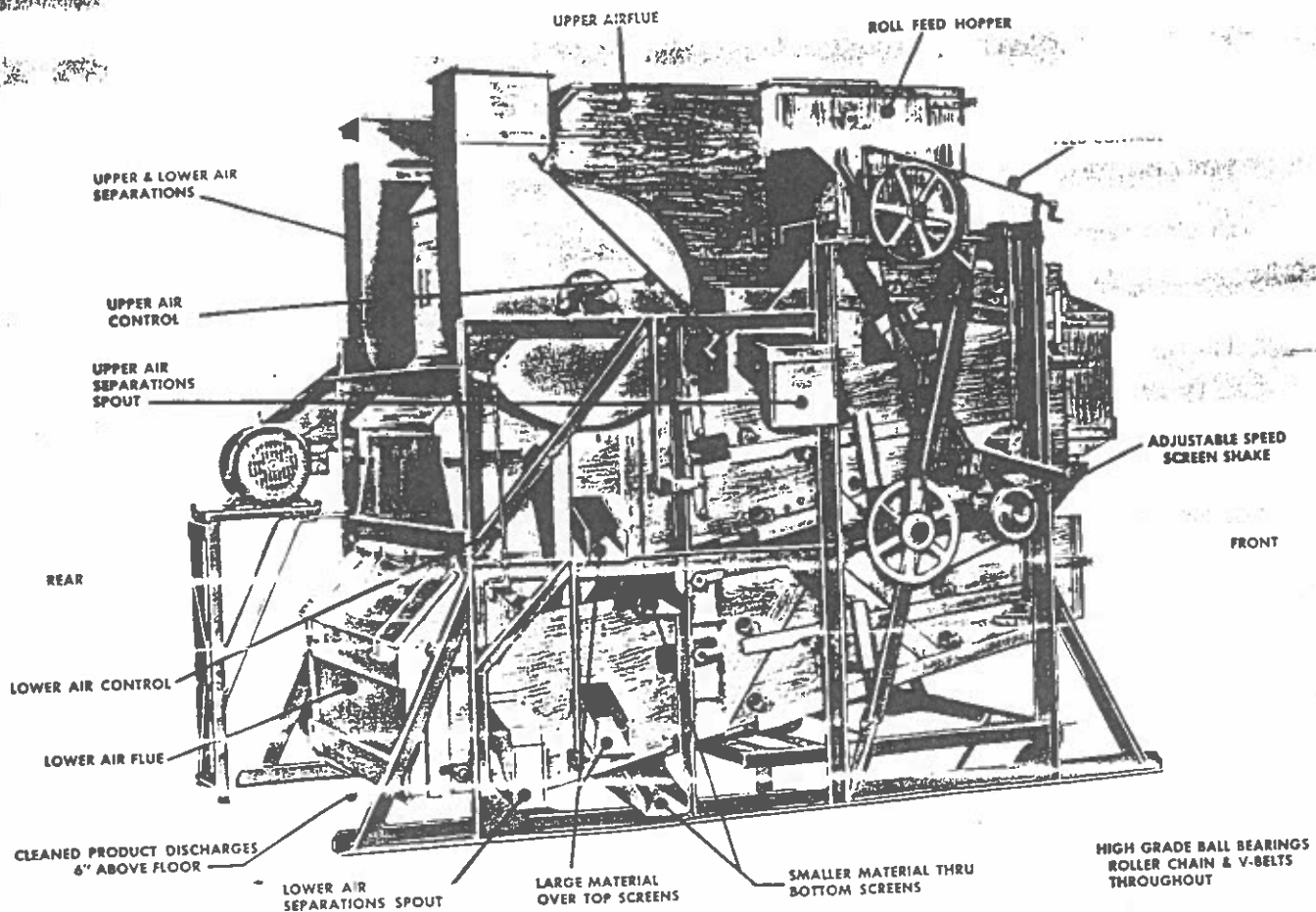
Crippen Model M-5472 with left hand spouts shown



CRIPPEN MANUFACTURING COMPANY, INC. • Alma, Michigan 48801, U.S.A.

GRAIN, BEAN AND SEED CLEANERS SEPARATORS SCALPERS, GRADERS AND POLISHERS

LEFT HAND SPOUTS



The Crippen Double Capacity Series M Cleaners are outstanding for high capacity cleaning. Actually two cleaners in one—they feature two full sets of screens and two independent air separations—offering twice the capacity for the same floor space.

The top rough scalping screen which is 26" and operates before the regular 72" screens, removing dirt, trash and other foreign matter, resulting in a greater capacity and finer work on the main screens. The 72" screens are made up in two sections of 36" lengths. Each set of screens operates independently of the other.

Extra large capacity is provided by using both shoes for the same commodity. The flow is divided evenly to both shoes by a simple trough arrangement. The advantage of this design can readily be appreciated (see flow diagram on back page). When the rush is over, two types of screens can be inserted—such as screens suitable for oats and barley in one shoe and in the other shoe screens for wheat and rye. In this

way a variety of grains can be cleaned without changing screens. For less capacity, only one shoe and one set of screens need be used.

The self-balancing compound shoes with adjustable speed drive enable the operator to adjust the screen shake to the exact speed required for the most efficient cleaning of grain and beans, etc.

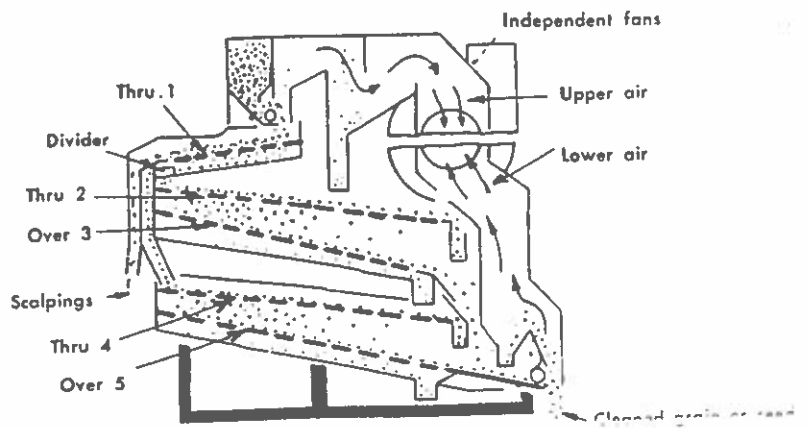
All Crippen Cleaners are constructed with rigid, welded and bolted steel frames. All shafts turn in precision ball bearings and are driven with V-belts or roller chain. The brush carriages are pulled by roller chain. Each brush carriage can be quickly detached from the roller chain without disturbing the chain hook-up.

Crippen Models MM-5472 and MM-4272 are of all metal construction with operation the same as Crippen M-series Cleaners which are constructed with hardwood bodies. Crippen Cleaners can be easily dismantled and reassembled for passage through narrow openings. For complete operating cycle of the Crippen M-Models see flow diagrams on the back page of this folder.

A rough scalper and two sets of top and bottom screens with divided flow operate together for greatest capacity — or act independently for cleaning different commodities without changing screens. Two independent air systems increase the test weight and purity of the product.

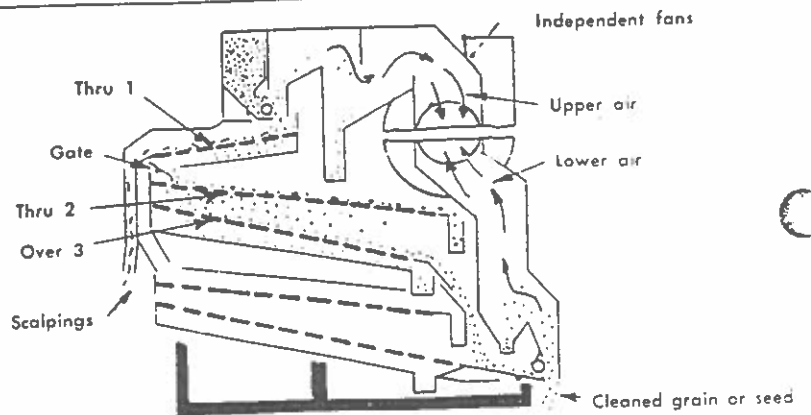
DOUBLE CAPACITY FOR ONE VARIETY

Commodity flows from hopper through the top air operation which removes light dust, chaff, trash, etc. — then through a 36" rough scalper which removes coarsest material. The commodity is then divided and flows evenly to screens in both shoes using identical sets of top and bottom screens. The second air separation lifts out light foreign material after commodity has been brought to uniform size by screening operations.



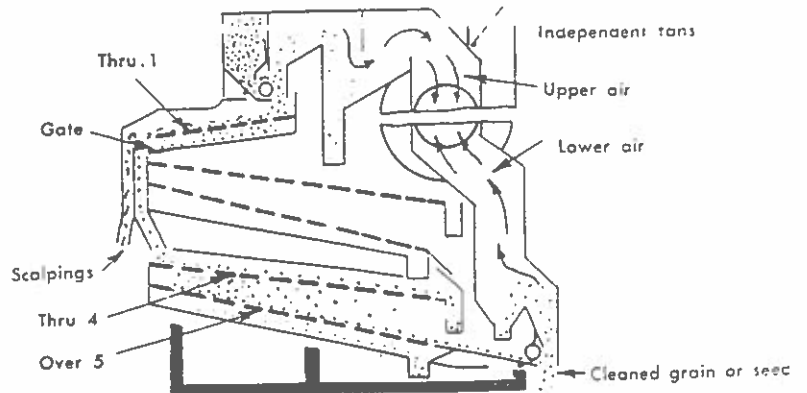
UPPER SHOE WITH SCREENS FOR ONE COMMODITY

The air systems operate as described above. Flow diagram shows rough scalper and the 72" top and bottom screens in upper shoe being used for processing of one commodity. The flow to either shoe is controlled by a lever on the side of machine.



LOWER SHOE WITH SCREENS FOR DIFFERENT COMMODITY

This diagram shows use of rough scalper with the 72" screens in lower shoe — the upper shoe being by-passed. This method permits machine to be set up to clean either of two commodities — without changing screens. Air operations are as previously explained.



CRIPPEN

MANUFACTURING COMPANY, INC. • Alma, Michigan 48801. U.S.A.

GRAIN. BEAN AND SEED CLEANERS. SEPARATORS. SCALPERS. GRADERS AND POLISHERS

HOPPERS

TYPE A - Used to feed the smallest kinds of seeds as well as beans, corn etc., containing pods, cob particles, sticks, straw or other foreign material. These hoppers will not become plugged or flood the screens when the commodity contains coarse material, and will feed the screens in a constant even flow. A switch is provided on the feed roll for instant shut-off.

TYPE B - Provided with spiked feed roll for feeding trashy kinds of seed.

TYPE C - Special hopper for feeding the light weight grass seeds such as Ryegrass, Bent, Fescue and Brome. It is especially valuable for feeding grass seeds containing Rattail, Fescue, etc.

TYPE D - Special hopper for feeding undelinted cotton seed.

SCREENS

The top rough scalping screen is 36" long and all other screens are 72" long (made up in two sections of 36" in length for easy handling and use of two different shapes or sizes of screen openings). Model M-5472 features screens that are 54" wide. Model M-4272 operates with screens that are 42" wide. Exceptionally accurate screening is made possible by the variable speed of the screen shake, which is standard equipment. Speed can be easily changed while the machine is in operation, enabling the operator to adjust the screening action to obtain accurate separation at greatest capacity on all conditions and varieties of seed, grain and beans. A wide selection of screens is available from our large stock of perforated and wire screens.

SCREEN FRAMES

Screen frames rest on steel angles and are instantly fastened in place or released by full length clamps on both edges of each screen. In addition to holding the screens in place, these clamps also prevent seed from running down edges or missing the screen surface.

BRUSHES

Under each screen are two brushes carried on four rollers with prelubricated bearings, running on two tracks. Brushes are not disturbed when screens are changed - the only adjustment required is for the normal wear of the fibre. This adjustment can be made easily and quickly at any or all of the four track ends. All shafts are carried on ball bearings. Hardened steel roller chain on the Brush-drive unit pulls the two brushes under each screen. The wide screen

clamps and the simple method of brush-chain adjustment eliminates

AIR SEPARATIONS

The exclusive Crippen air system provides precise separation. Air is connected to a gate at the fan outlet.

TWO AIR SEPARATIONS - The upper air separation removes all light trash, dust, empty pods, etc. as the commodity is fed from the hopper. After the commodity has been brought to uniform on the screens, the second air separation lifts out light foreign material, weed seeds and immature or hollow kernels to increase test weight and purity of the product. Samples can be easily inspected for any adjustment of the air control to make the critical separation that are possible with these accurate cleaners.

FANS - The air is provided by suction fans. Each air separation has its own individual fan so that each air separation is independently adjustable with but one control for each operation. Crippen fans are multi-blade type, constructed of heavy metal, carefully balanced and develop the air suction required with the lowest possible horsepower. All fans are of a size to give ample air suction for their required purpose. The housings are made of heavy steel. The fans are positioned at the factory. If desired, they can be set to discharge in a direction fitting a specified requirement. Position must be specified when ordering.

SCREENING SPOUTS

Crippen's non-plugging screenings spouts can be ordered to deliver to either the right side or to the left side when facing the machine from the front where the screens are changed. All screenings spouts vibrate with the screens, and are inclined for complete self-cleaning. Cleaned seed and all separations are discharged above work floor level for easy inspection at the machine.

USEFUL ACCESSORIES

Crippen Seed Cleaners require low horsepower and can be furnished with electric motors or gasoline engines. For quotation, specify cycle, phase, voltage and type of motor or engine desired. Other equipment available: Motor mountings and V-drives from motor to cleaner; fan outlet adapters for 14" round piping; adjustable elbows and straight piping for easy installation of air trunking; clay crushing rolls and screen tappers; special guards for drives on machine.

SPECIFICATIONS

	M-5472 MM-5472		M-4272 MM-4272	
Shipping Weight	Approx. 3800 Lbs.		Approx. 3450 Lbs.	
Screen Frame Size	Scalper 54" x 36"	Others 54" x 72" (2 sections)	Scalper 42" x 36"	Others 42" x 72" (2 sections)
O.A. Height	97 1/2"		97 1/2"	
O.A. Length	122"		122"	
O.A. Width	83"		71"	
C.A. Machine Frame Width	65"		53"	
Fan Shaft Speed	1000 - 1100		900 - 1000	
Horsepower Required	10		7 1/2	

CAPACITIES ** BUSHELS PER HOUR

	M-5472 MM-5472	M-4272 MM-4272
Wheat Soy Beans Corn	1000 - 1200	700 - 900
Oats	500 - 750	350 - 650
Edible Beans & Peas	500 - 700	350 - 650
Flax	300 - 500	225 - 350

** Capacities are for average market cleaning. For seed quality, capacity is dependent upon impurities to be removed and the desired finished grade.

FIG. 3

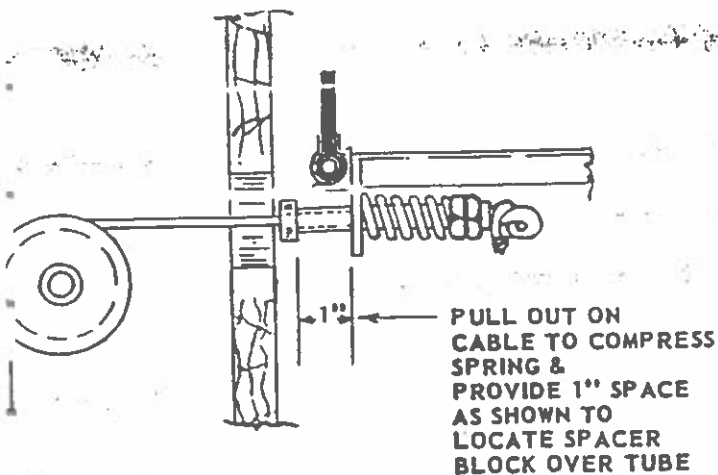
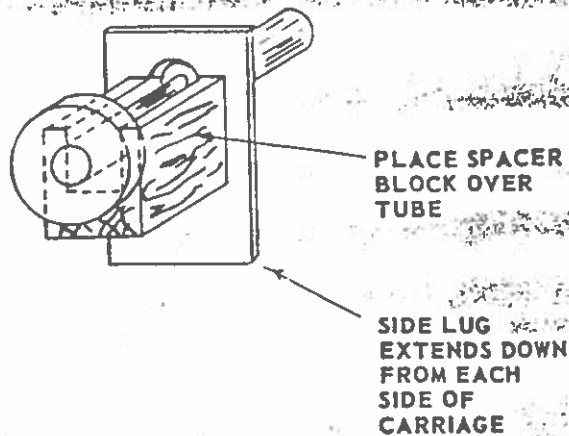


FIG. 4

TENSION SPACER - WOOD



BRUSH CABLES - INSTALLATION, ADJUSTMENT AND TIGHTENING: For any of these operations, it is necessary to install wood spacer blocks as shown in fig. 4. Each new machine is supplied with a set of spacer blocks which are wired to the machine. When installing new cables, or justifying old ones, the cable must be pulled from the outside of the machine to compress the spring attached to the brush carriage. Pull on the cable until the spring is compressed sufficiently to slip one of the wood spacer blocks in place over the tube which extends thru the carriage as shown.

inside the springs, and then around the pulleys. Pull on the cables to compress the springs at least 1" as shown in fig. 3 and slip a spacer block over the tube as shown. This puts the proper compression in all the springs.

ADJUST AND TIGHTEN PRESENT CABLES: Put a spacer block over the tube for each cable you are going to adjust. Both cables coming from the sides of the machine for any one carriage should be adjusted at the same time. Put a spacer block on both springs for the carriage. Turn the machine over until the shoulder bolt on the crosshead chain is just halfway around the sprocket on the LEFT HAND SIDE. This brings the carriages to the RIGHT SIDE. Loosen the cable pad that holds the cable and pull in on the cable coming from the right hand side. If the pad holds two cables, put a spacer block at the top end of each cable at the spring. This will hold the compression while tightening the cables. Pull the cables down on the pad with a pliers until all slack is out, and then tighten the pad. Do not tighten the cables so tight that the blocks drop off the springs.

Turn the machine over until the shoulder bolt on the crosshead chain is just halfway around the sprocket on the LEFT HAND SIDE, and connect all the cables coming in from the RIGHT HAND SIDE. Be sure the carriages are clear over to the right side of the shoe. After the cables from the RIGHT SIDE are tightened, turn the machine over until the shoulder bolt is just halfway around the right hand crosshead chain sprocket. Connect the cables coming in from the LEFT HAND SIDE.

After all the cables are tightened, remove the spacer blocks by pulling out on each cable from the side of the machine. The blocks will drop off the tube, and can be picked up from inside the machine for future use. Be sure and check to see that all the carriages move together and reach the side of the shoe at the same time.



Now move the shoulder bolt just halfway around the RIGHT HAND SPROCKET. This brings the carriages and brushes to the LEFT SIDE OF THE SHOE. Loosen the pad that holds the cable, pull all the slack out, and retighten. Be sure to check all the cables periodically. Also after tightening the cables, check the carriages to make sure they are all exactly one over the other.

ORDERING SCREENS: A complete screen list is shown on a separate sheet in the PARTS BOOK, giving sizes available and actual sizes of openings. Refer to this before ordering screens so that all necessary information is included on your screen order.

Remove the spacer blocks by pulling out on the cables from the side of the machine. The blocks will drop off the tube and can be collected and stored for future use.

LUBRICATING INSTRUCTIONS: Do not grease any of the ball bearing pillow blocks on this machine, nor the ball bearing eccentric units for at least 1 year from the time the machine is put in operation. Thereafter, grease the ball bearings very slightly just once a year. The shoulder bolt (2 on the dual crosshead) should be greased daily when the machine is operated continuously. Grease the plain bearing idler pulleys about once a month or as needed. Do not use a heavy grade grease at any time. All ball bearings are pre-greased at the factory and require very little additional grease during the entire life of the bearing.

INSTALL NEW CABLES: Cut the cables to the proper length and attach the small 3/16" cable clamp to one end (top end). Feed the cables thru the tubes that are

AIR SEPARATION CONTROLS: There are 2 air separations on this cleaner. The **UPPER AIR SEPARATION** draws air thru the grain as the grain is fed from the hopper. Material lifted by the air discharges from the **UPPER AIR SPOUT**. The crank that controls the amount of air suction is on the same side of the machine as the spout. The **LOWER AIR SEPARATION** draws air thru the grain after the grain has been screened. This separation takes place at the lower rear end of the cleaner where the cleaned product "F" discharges. The crank controlling the amount of air suction at this point is located near the lower air spout.

The hand crank controls a damper in the fan housing and regulates the air. Each fan is independent from the other, and the adjustment made on one fan does not effect the other. When running grain thru the cleaner for the first time, have both fan dampers fairly well closed at first. Starting with the **UPPER AIR CONTROL**, open it slowly until kernels of good grain discharge from the spout. Do the same with the **LOWER AIR CONTROL** next, and then make the final close adjustments by a slight turn of the hand cranks.

SPOUTS: All the spouts come to one side of the machine. In the photo, spouts are marked A, B, C, D or E, and the foreign material coming from each spout is indicated. Spouts B & E have hinged gates on the outlets. These gates must hang freely, and the weight of the foreign material building up behind the gate will open it sufficiently to let the material out. Spouts are self cleaning.

VARIABLE SPEED SCREEN SHAKE: The eccentric shaft speed can be adjusted to obtain the best screening action on all kinds of grain. The control for this adjustment is shown in the photo on front page. The hand knob for the adjustment is on the vertical rod extending up from the arm controlling the v-belt in the spring loaded pulley. By turning the knob, you can adjust the speed to get the proper action of the grain on the screens. The average eccentric shaft speed is usually between 425-450 RPM.

FEED CONTROL: To change the feed, turn the hand crank on the lower end of the 1/2" dia rod extending to the front from the side of the hopper. An arrow indicates the proper direction to increase the feed. There is a clutch on the feed-roll drive which enables you to shut off the feed without shutting down the machine.

HOPPER CLEANOUT GATE: A small hand crank extending from the top frame crossmember controls this gate. Open it wide to clean out the hopper. It can also be used as an auxiliary feed gate if sufficient volume is not obtained with the regular feed control.

BRUSH ADJUSTMENT: The brushes are mounted to the brush carriages, and the carriages move on square tracks. These tracks extend out thru the sides of the hopper and are held in place at each end by a slotted bracket. To raise, or lower the brushes, loosen the bolts that hold the track to the hopper. At one end of a track at a time, adjust it, and re-tighten the bolt. Then adjust the other end. There are two tracks under each carriage. Each one can be adjusted.

TO CHANGE BRUSHES: Each new machine is furnished with an extra set of 2 screen frames. Keep these frames especially for setting new brushes. On the long screens, insert both frames in place and then put in the new brushes. The frames will help locate the exact position for the brushes. On the top screen, use only the one section of frame without the lip, and make sure the 1" wide end cross-slat is to the high end of the screen.

INSTALLATION & ADJUSTMENT OF SIDE ROLLER CHAIN THAT USES 5 SEPARATE CHAINS TO CONNECT BRUSH CARRIAGES TO CROSSHEAD. (machines with DUAL CROSSHEAD ONLY). Installing new chain: Install the new length of chain with the same number of pitches as the old one. The adjustment is made at the crosshead, each chain being connected to it with a turnbuckle. The chains should be fairly snug but not taut. Adjust the chain coming from both sides of the carriage so that all carriages are directly one above the other. They must all come to the side of the shoe, with the screens in place, at the same time.

37 1/2
114 129 26

When installing new chain, first turn the machine over by hand until the swivel plate on the crosshead is just halfway around the **LEFT HAND** crosshead sprockets. The carriages will be over to the right side under the screen. Install the new chain, and then move the swivel plate halfway around the crosshead sprockets to the **RIGHT SIDE**. Install the chains on the left side of the machine. If the carriage doesn't come clear to the side or the outer brush is up against the screen frame, loosen the chain from the right side slightly and re-tighten the left side chain. It is very important that the swivel plate be just halfway around the crosshead sprockets when the outer brushes on the carriages are against the screen frames, as this is the maximum sideways travel of the brush.

INSTALLATION AND ADJUSTMENT OF SINGLE CONTINUOUS CHAIN CONNECTING BRUSH CARRIAGES TO BRUSH DRIVE

For any of these operations, it is necessary to bring the brush carriage to the side of the machine. To do this, turn the machine by hand, until the shoulder bolt on the cross-head chain is just half-way around the sprocket on the left hand side; this brings No. 1 and No. 3 and No. 5 Carriages to the right side; No. 2 and No. 4 will be to the left side of the machine.

Take up any slack in the chain on the turnbuckles at the cross-head.

Each brush carriage can be adjusted independently by loosening the bolt that holds the carriage to the slotted bracket, then move the carriage so that the brushes will travel to the sides far enough so they are under the screen clamp.

Check the carriages to be sure they are all exactly one over the other.

Now move the shoulder bolt just half-way around the right hand sprocket. This brings the carriages and the brushes to the opposite side. Again the brushes should be just under the screen clamp, and even with the edge of the screen clamp.

Turn the machine by hand several times, so that any necessary adjusting can be done without damage to

CRIPPEN MANUFACTURING COMPANY, INC.

ST. LOUIS, MICHIGAN, U.S.A.

PARTS CATALOG

When ordering parts for CRIPPEN CLEANERS, specify:

1. Machine Model Number
2. Serial Number of Machine
3. Catalog Number of Part
4. Part Name
5. Quantity

CRIPPEN
CRIPPEN MANUFACTURING CO. INC.
ST. LOUIS, MICHIGAN, U.S.A.
WHEN ORDERING REPAIRS GIVE
COMPLETE MODEL AND SERIAL NUMBER
MODEL SPECIFY
SERIAL NO. SPECIFY

Model Number and Serial Number must be specified on all parts ordered.

PULLEYS, SHEAVES, BELTING

When ordering a sheave (V-pulley) for ve-belt drive, send us the number on the sheave, as most sheaves are either stamped or embossed with a Part No. Also specify the exact outside diameter, and size of the bore. To order a ve-belt, specify the same number marked on the belt, or specify for which drive the belt is used.

When ordering a pulley for flat belt drives, specify pulley outside diameter, width of face, and the bore. To order flat belting, specify belt width and length required.

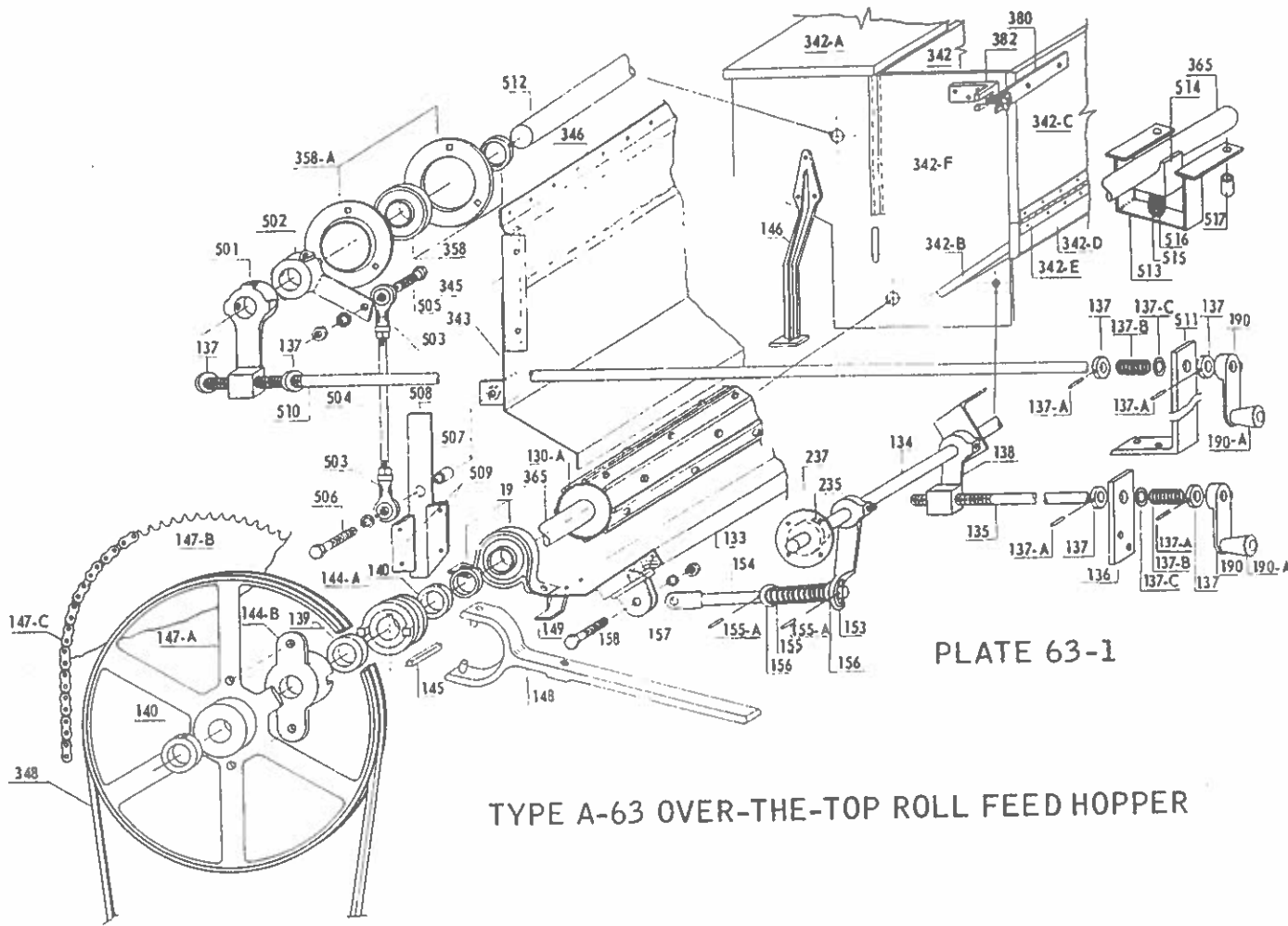
SPOUTS, PANS

When ordering spouts, specify if the spout is at the end of a screen or in the pan immediately below the screen. Also screen location number in machine, (highest screen is number 1), and if spout delivers to RIGHT side or LEFT side of the machine.

Example: For Model M-5472 RH, Ser. No. 65843-364
1-Spout for end of No. 2 screen,
or
1-Spout in pan immediately below No. 3 screen.

When ordering a pan, specify overall width and length of the metal, Machine Model and Serial Number.

RIGHT OR LEFT HAND SIDE is determined when standing at the front of the machine, facing the end where the screens are changed.



Model Number and Machine Serial Number must be specified on all Parts Orders

Cat. No.	Casting No.	ITEM
19		1" Rubber mounted ball bearing-pillow block & collar
130-A		Feed roll, combination peg & fin
133		Clean-out gate (#151 hinges & #157 brackets included)
134		Clean-out gate pivot rod, 5/8" dia.; specify length
135		Clean-out gate threaded control rod.
136		Clean-out gate control rod bracket; specify width & length
137		Control rod collar, 1/2" bore (#137A pin & set screws included)
137-A		Control rod collar pin
137-B		Control rod spring
137-C		Control rod spring retainer washer
138	F-669	Lever with swivel nut attached (Set screws included)
139		Clutch jaw floating collar 1" bore
140		Collar, 1" bore (Set screw included)
144-A	H-78	Clutch sleeve
144-B	H-79	Clutch jaw
145		Clutch key 1/4" Sq. x 1 1/2" Lg.
146		Hopper legs
147-A		Clutch Sheave
147-B		Clutch Sprocket
147-C		Hopper drive chain
148	H-82	Clutch lever
149		Clean-out gate stop

8

TYPE A-63 OVER-THE-TOP ROLL FEED HOPPER

Model Number and Machine Serial Number must be specified on all Parts Orders

Cat. No.	Casting No.	ITEM
151		Clean-out gate hinge (Not shown)
152		Clean-out gate pivot ass'y(Incl. parts #153, 154, 155, 155A, 156)
153	F-622	Slotted lever for clean-out gate (Set screws included)
154		Clean-out gate link rod (#155A pins included)
155		Link rod spring $\frac{3}{4}$ " O.D. x $3\frac{1}{2}$ " Lg.
155-A		Link Rod pin
156		Washer, spring retainer
157	G-139	Clean-out gate bracket
158		Link rod bolt $\frac{3}{8}$ "-16x $1\frac{1}{2}$ " machine bolt
190	F-669	Hand crank $\frac{1}{2}$ " bore(#137A pin, set screw & knob included)
190-A		Hand crank wood knob
235		Collar $\frac{5}{8}$ " bore (Set screw included)
237	B-39	Flange bearing $\frac{5}{8}$ " bore
342		Center crossboard
342-A		Cover board
342-B		Bottom board, covered with sheet metal
342-C		Front board (Upper section)
342-D		Front board (Lower section)
342-E		Front board hinge
342-F		Hopper end panels
343		Gate; above feed roll
345		Guide for #343 gate (Bolts included)
346		Cover for #343 gate (Screws included)
348		Hopper drive Ve-belt
358		1" Ball bearing and collar
358-A		Flanges for (#358 bearing)
365		Hopper feed roll shaft
380		Tailgate bracket, plain
382	F-681	Tailgate bracket with swivel bolt
501	M-49	Lever with swivel nut attached, 1" dia. hole (Set screws included)
502	M-49	Linkage lever, 1" dia. hole (Set screws included)
503	CTR-6	Linkage rod end bearings
504		Linkage rod (Jam nuts included)
505		Upper linkage bolt $\frac{3}{8}$ "-16x $1\frac{1}{4}$ " machine bolt (Nut & washers incl.)
506		Lower linkage bolt $\frac{3}{8}$ "-16 Machine bolt (Lock washer included)
507		Linkage spacer bushing
508		Slot cover
509		Slot cover guide
510		Threaded control rod for #343 gate (#190 hand crank attached)
511		Control rod bracket for #343 gate
512		Pivot shaft for #343 gate
513		Feed roll brake bracket
514		Feed roll brake wood block (Bolt included)
515		Feed roll brake spring
516		Feed roll brake washer
517		Feed roll brake spacer bushing

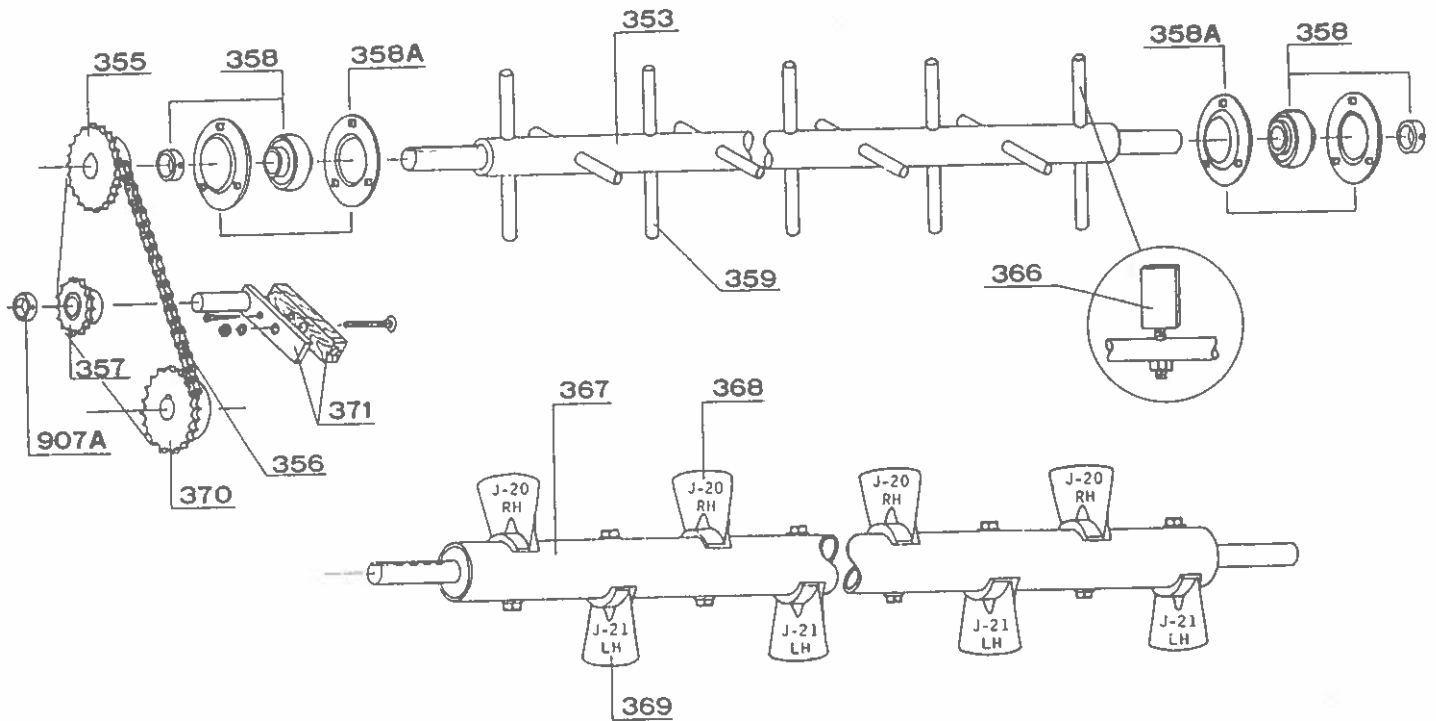
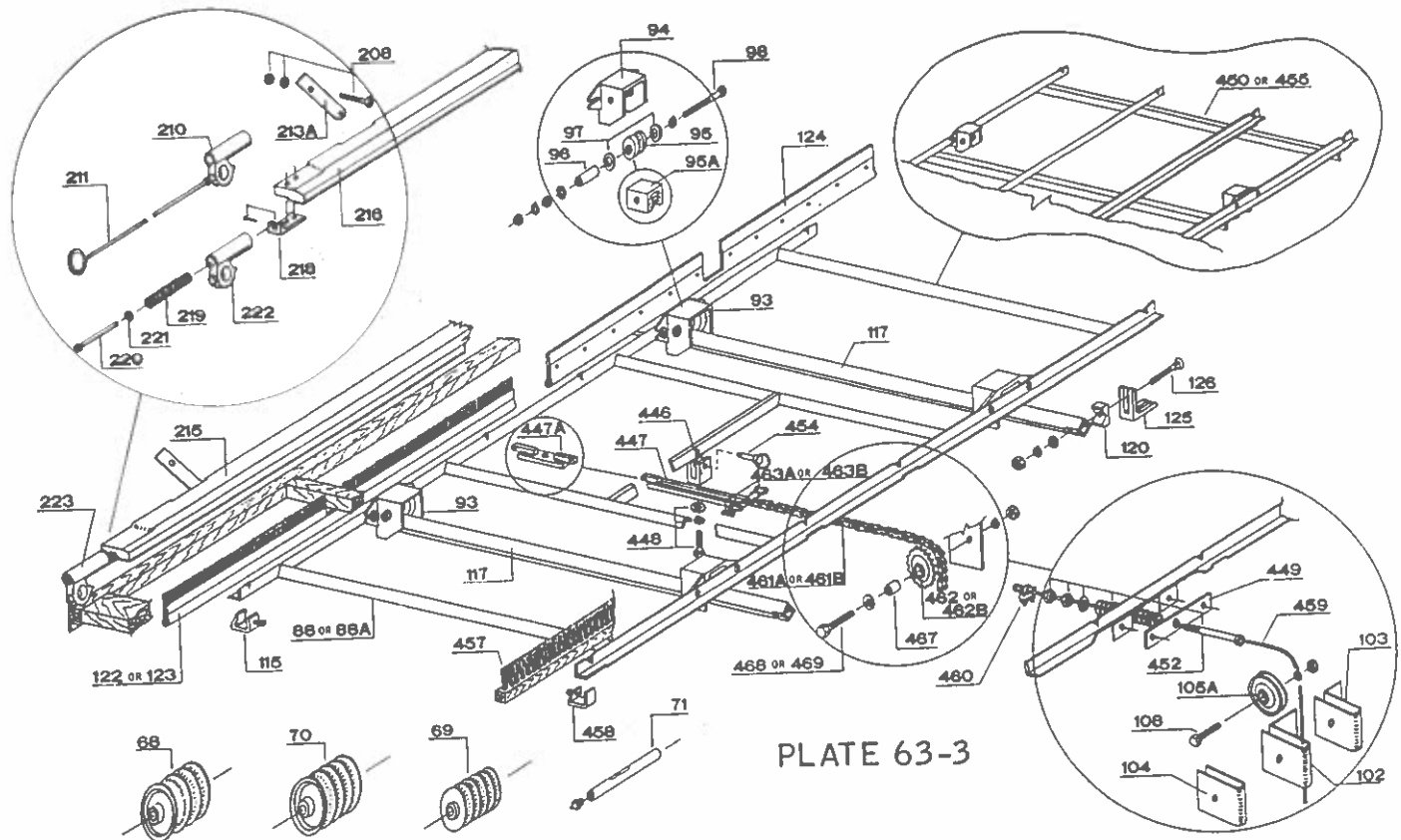


PLATE 63-2

AGITATORS FOR ROLL FEED HOPPERS

Model Number and Machine Serial Number must be specified on all Parts Orders

CAT. NO.	ITEM
353	Agitator with studs
355	Driven SPROCKET on agitator, number of teeth <u>Must</u> be specified
356	Drive CHAIN, quantity of links <u>Must</u> be specified
357	Idler SPROCKET
358	1" Ball BEARING and collar
358A	FLANGES for No. 358 bearing
359	STUD for agitator shaft
366	Adjustable pitch PADDLE for agitator shaft
367	Agitator with stationary pitch paddles
368	Agitator PADDLE, casting No. J-20 right hand
369	Agitator PADDLE, casting No. J-21 left hand
370	Driver SPROCKET, for agitator, number of teeth <u>Must</u> be specified
371	Idler BRACKET with stud, wood block, bolt and screw
907A	Collar, $\frac{3}{4}$ " bore



BRUSH CARRIAGE ASSEMBLY
FOR FIXED PITCH SCREENS

Model Number and Machine Serial Number must be specified on all Parts Orders

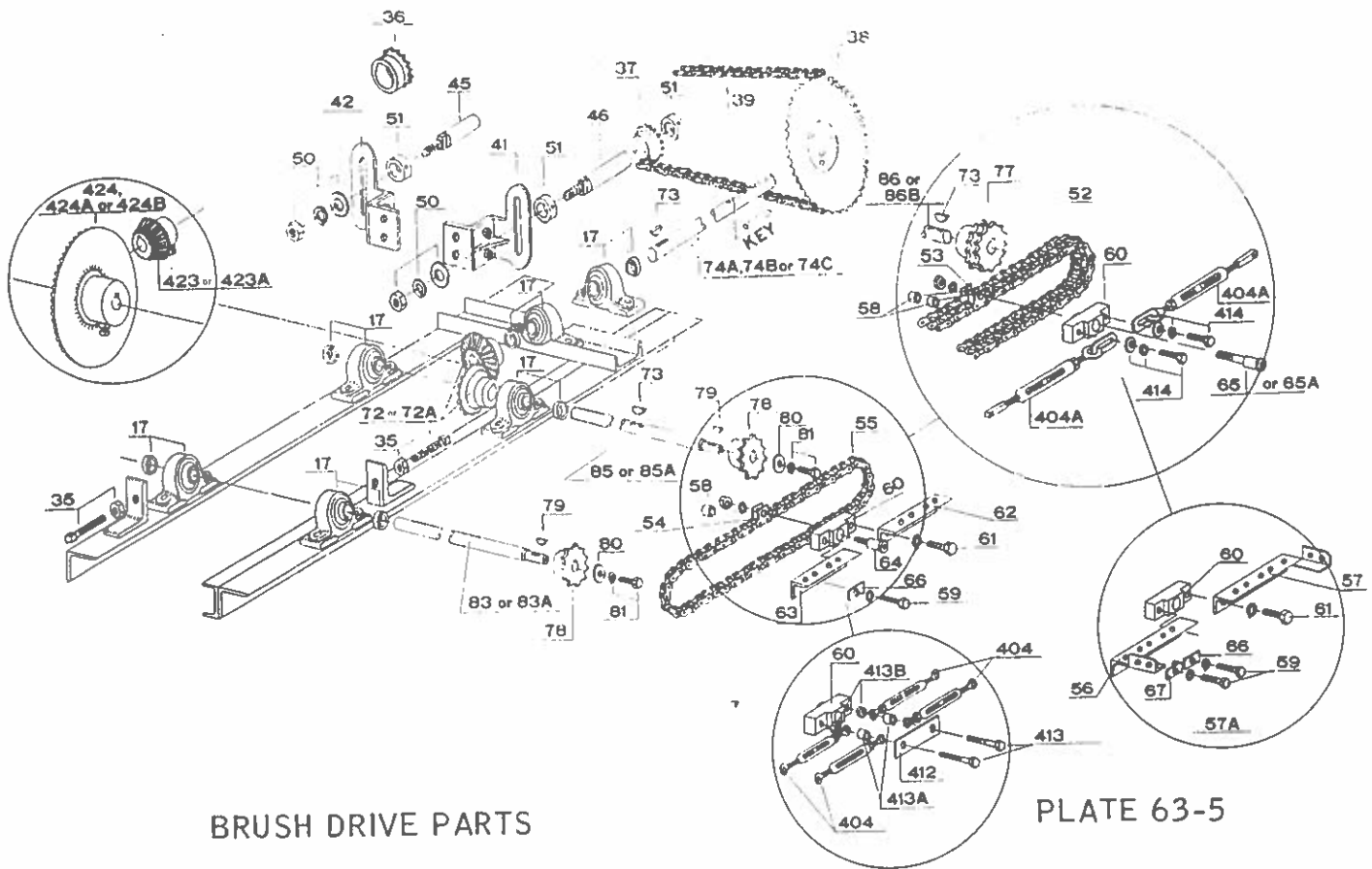
CAT. NO.	ITEM
68	3 groove cable sheave
69	5 groove cable sheave
70	4 groove cable sheave
71	Cable sheave shaft, for #68,69 and 70 cable sheaves
88	Brush carriage pulled with CABLE, specify location No. in machine (Highest screen is No. 1)
88A	Brush carriage pulled with ROLLER CHAIN specify location No. in machine (Highest screen is No. 1)
93	Brush carriage ROLLER ASSEMBLY for 1" square or angle brush track, includes #94,95,96,97 and 98
94	Brush carriage roller HOUSING for 1" square or angle brush track
95	Brush carriage ROLLER for 1" square or angle brush track
95A	Brush carriage wooden SLIDE BLOCK, interchangeable with #95 roller
96	Roller BUSHING, bronze, for #95 roller
97	FIBRE WASHERS for #95 roller
98	Brush carriage roller SHAFT, with flat washer, lock washers and nuts
102	Cable pulley housing, 2 1/2" foot
103	Cable pulley housing, 1 3/4" foot
104	Cable pulley housing, plain
105A	Ball bearing cable pulley
108	Cable pulley SHAFT with lock washer and nut
115	Brush CLAMP for fibre and C.L. rubber brush
117	Brush TRACK, 1" square, length <u>Must</u> be specified
120	V block, for 1" square brush track

**BRUSH CARRIAGE ASSEMBLY
FOR FIXED PITCH SCREENS**

Model Number and Machine Serial Number must be specified on all Parts Orders

CAT. NO.	ITEM
122	BRUSH, light (Medium) fibre, specify quantity and location No. in machine (Highest screen is No. 1)
123	BRUSH, dark (Coarse) fibre, specify quantity and location No. in machine (Highest screen is No. 1)
124	BRUSH C.L. rubber, specify quantity and location No. in machine (Highest screen is No. 1)
125	Brush height adjustment BRACKET
126	Brush adjustment bracket BOLT for 1" square track
208	Screen clamp hinge BOLT with nut and washer
210	Screen clamp PISTOL, finger ring tapped for $\frac{1}{4}$ " extension rod No. 211 used for F-54 No. 4 screen
210A	Screen clamp PISTOL ASSEMBLY, includes #210, 218, 219, 220 and 221 used for F-54 No. 4 screen
211	Screen clamp EXTENSION ROD, $\frac{1}{4}$ " dia. (Nut included)
213A	Screen clamp HINGE, drilled $\frac{5}{16}$ ", including bolt or screw for fastening to clamp
215	Screen CLAMP complete with hardware, specify location No. in machine, (Highest screen is No. 1) specify also if for RIGHT or LEFT side
216	Screen CLAMP WOOD ONLY specify location No. in machine (Highest screen is No. 1) specify also if for RIGHT or LEFT side
218	Screen clamp ANCHOR PAD (Bolts and rivet included)
219	Screen clamp pistol SPRING
220	Screen clamp pistol ROD, $\frac{1}{4}$ " dia. x $3\frac{1}{4}$ " long (Rivet included)
221	Screen clamp pistol WASHER
222	Screen clamp PISTOL
223	Screen clamp PISTOL ASSEMBLY (Includes #218, 219, 220, 221 and 222)
446	Brush carriage quick release steel CLEVIS
447	Brush carriage slotted adjusting BRACKET
447A	PLATE for attaching roller chain to clevis on brush carriage
448	Brush carriage steel clevis BOLT with flat & lock washer
449	Replaceable CABLE LUG for carriage (Bolts included)
450	4 ROW BRUSH CARRIAGE pulled with CABLE, specify location No. in machine (Highest screen is No. 1)
452	Brush carriage compression spring and inner pipe assembly
454	Quick release TOGGLE PIN
455	4 row BRUSH CARRIAGE pulled with ROLLER CHAIN, specify location No. in machine (Highest screen is No. 1)
457	BRUSH, nylon, specify quantity & location No. in machine (Highest screen is No. 1) specify also .022 fine, .028 med., & .040 coarse
458	Brush CLAMP, for nylon brush only
459	Brush CABLE, nylon coated steel cable, 100 ft. coils
460	Cable CLAMP
461A	BRUSH CHAIN connected to brush carriage $\frac{1}{2}$ " pitch x $\frac{5}{16}$ " inside width
461B	BRUSH CHAIN connected to brush carriage $\frac{5}{8}$ " pitch x $\frac{3}{8}$ " inside width
462	Brush chain SPROCKET, ball bearing, 18 tooth, used with #461A chain, $\frac{1}{2}$ " pitch
462B	Brush chain SPROCKET, ball bearing, 17 tooth, used with #461B chain, $\frac{5}{8}$ " pitch
463A	Brush chain CONNECTING LINK, for #461A chain, $\frac{1}{2}$ " pitch
463B	Brush Chain CONNECTING LINK for #461B chain, $\frac{5}{8}$ " pitch
467	Steel BUSHING for #462 brush chain sprocket
468	Brush chain sprocket SHAFT for #462 sprocket with lock washer & nut
469	Brush chain sprocket SHAFT for #462B sprocket with lock washer & nut

12



BRUSH DRIVE PARTS

PLATE 63-5

Model Number and Machine Serial Number must be specified on all Parts Orders

Cat. No.	ITEM
17	Ball bearing pillow block with collar(Size <u>Must Be Specified</u>)
35	Brush drive chain tightening screw with lock nut
36	Brush drive, driver sprocket(Number of teeth & bore <u>Must be specified</u>)
37	Brush drive, idler sprocket(Number of teeth & bore <u>Must be specified</u>)
38	Brush drive, driven sprocket(Number of teeth & bore <u>Must be specified</u>)
39	Brush drive SIDE chain
40	Brush drive ass'y complete, ball bearings(Machine Model No. & spout Delivery side <u>Must be specified</u>)
41	Idler bracket right hand, casting No. G-94R, with attaching angle
42	Idler bracket left hand, casting No. G-94L, with attaching angle
45	Idler shaft 4 1/2" long(For brush drive side chain idler)
46	Idler shaft 5 1/4" long(For brush drive side chain idler)
50	1/2"-13 Nut, lock washer and flat washer for idler shafts,#45 & #46
51	Collar, 1" bore, set screw included
52	Brush DRIVE chain, 3/4" pitch double strand roller chain,with attachment link
53	Attachment links, for 3/4" pitch <u>double</u> strand roller chain
54	Attachment links, for 3/4" pitch <u>single</u> strand roller chain
55	Brush DRIVE chain, 3/4" pitch single strand roller chain,with attachment link
56	Rope clamp angle, 5 hole, left hand
57	Rope clamp angle, 5 hole, right hand
57A	5 hole rope or cable clamp ass'y,complete with No. 56 & No. 57 angles attached to No. 60 swivel block, and pads No. 60 and 67
58	Attachment link spacer bushing, steel

BRUSH DRIVE PARTS

Model Number and Machine Serial Number must be specified on all Parts Orders

Cat. No.	ITEM
59	Cap screw, hex head, 5/16"-18x1", rope clamp pad cap screws
60	Rope clamp swivel block
61	Rope clamp angle bolt, 3/8"-16x3/4" machine bolt
62	Rope clamp angle, right hand (Number of rope or cable holes <u>Must</u> be specified)
63	Rope clamp angle, left hand (Number of rope or cable holes <u>Must</u> be specified)
63A	Rope or cable clamp assembly, complete with No. 62 and No. 63 angles attached to No. 60 swivel block, and pads No. 66 (Number of rope or cable holes <u>Must</u> be specified)
64	Shoulder bolt, 2 5/8" long, for single strand roller chain
65	3/8" shoulder bolt, 3 1/2" long, for double strand roller chain
65A	9/16" shoulder bolt, 3 1/2" long, for double strand roller chain
66	Rope clamp pad, straight
67	Rope clamp pad, angle
72	Brush drive miter gear, 18 tooth x1" bore, cast iron
72A	Brush drive miter gear, 24 tooth x1" bore, hardened steel
73	No. 13 Woodruff key 3/16"x1"
74A	Brush drive side shaft 3/4" dia. (Specify exact length)
74B	Brush drive side shaft 1 7/16" dia. (Specify exact length)
74C	Brush drive side shaft 1" dia. (Specify exact length)
77	13 tooth double row roller chain sprocket, 1" bore; for double strand roller chain only
78	11 tooth roller chain sprocket, 3/4" bore, for single strand roller chain only
79	No. 5 Woodruff key, 1/8"x5/8" for 11 tooth roller chain sprockets
30	Sprocket retainer pad, for 11 tooth roller chain sprockets
31	Sprocket retainer screw, 5/16"-18x3/4" hex head cap screw
33	Brush drive crosshead idle shaft, 1" dia. x14" long, for single strand roller chain
33A	Brush drive IDLE shaft, 3/4" dia. x12" long, for single strand roller chain
34	Brush drive IDLE shaft, 1" dia. x14" long, for double strand roller chain (not shown)
35	Brush drive DRIVE shaft, 1" dia. x14" long, for single strand roller chain
35A	Brush drive DRIVE shaft, 3/4" dia. x12" long, for single strand roller chain
36	Brush drive DRIVE shaft, 1" dia. x14" long, for double strand roller chain
36B	Brush drive DRIVE shaft, 1 7/16" dia. x14" long, for double strand roller chain
404	Turnbuckle, 1/4" dia.
404A	Turnbuckle, 3/8" dia. with one square end for single continuous chain connecting all brush carriages
412	Retainer plate for 1/4" turnbuckles
413	Retainer bolts for 1/4" turnbuckles with No. 413B lock nuts
413A	Spacer bushings for 1/4" turnbuckles
414	Retainer bolt for 3/8" turnbuckles with lock washer & flat washer
423	Brush drive PINION gear 1" bore
423A	Brush drive PINION gear 3/4" bore
424	Brush drive BEVEL gear 1" bore
424A	Brush drive BEVEL gear 3/4" bore
424B	Brush drive BEVEL gear 1 7/16" bore

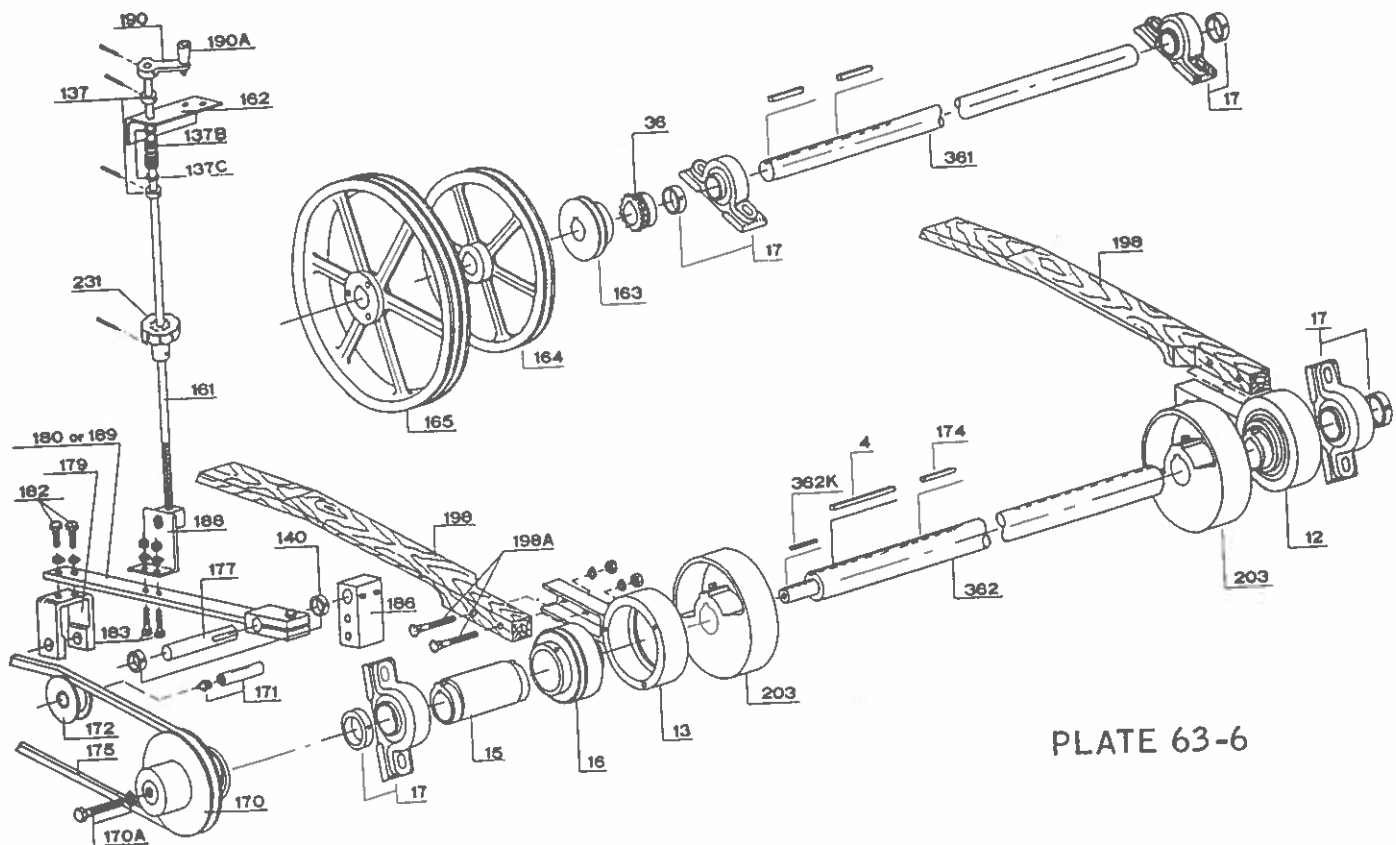


PLATE 63-6

ECCENTRIC AND COUNTERSHAFT ASSEMBLIES

Model Number and Machine Serial Number must be specified on all Parts Orders

CAT. NO.	ITEM
4	Eccentric KEY, 3/8" square x 4 3/4" long
12	Eccentric BEARING ASSEMBLY, includes No. 13, 15 & 16
13	Eccentric HOUSING
15	Eccentric SLEEVE
16	Eccentric BEARING
17	Ball BEARING PILLOW BLOCK with collar, size <u>Must</u> be specified
36	Brush drive, driver SPROCKET, number of teeth and bore <u>Must</u> be specified
137	Control rod COLLAR, 1/2" bore (Set screw and pin included)
137B	Control rod SPRING
137C	Control rod spring RETAINER WASHER
140	COLLAR, 1" bore
161	Eccentric speed control ROD, length <u>Must</u> be specified
162	Eccentric speed control rod BRACKET
163	1 Groove V-sheave, outside dia. and bore <u>Must</u> be specified
164	1 Groove V-sheave, outside dia. and bore <u>Must</u> be specified
165	2 Groove V-sheave, outside dia. and bore <u>Must</u> be specified
170	Variable speed PULLEY, for changing eccentric speed
170A	Variable speed pulley RETAINER BOLT with lock washer
171	Variable speed idle pulley SHAFT, with grease fitting

15

ECCENTRIC AND COUNTERSHAFT ASSEMBLIES

Model Number and Machine Serial Number must be specified on all Parts Orders

PART NO.	ITEM
72	Variable speed IDLE PULLEY
74	KEY 3/8" square 2" long
75	Eccentric drive BELT
77	Variable speed control arm STUD, 1" dia., length <u>Must</u> be specified
79	Variable speed idle pulley BRACKET
80	Variable speed CONTROL ARM, 12" O.A. length
82	Variable speed idle pulley bracket BOLT, with lock washers
83	BOLT for variable speed control arm swivel nut bracket, with lock washer & nut
86	STUD BLOCK with bolts and set screws
88	Variable speed control arm BRACKET with swivel nut
89	Variable speed CONTROL ARM, 17½" O.A. length
90	Control rod HAND CRANK, ½" bore (Set screw and pin included)
90A	Hand crank wood KNOB
98	Eccentric ARM, specify if for RIGHT HAND or LEFT HAND side, when standing at the front of the machine where the screens are changed. If machine has more than one shoe, specify to which shoe the arm attaches
	Example: R.H. arm for lowest shoe; or center arm for middle shoe; or L.H. for highest shoe.
98A	Eccentric arm BOLTS
93	COUNTERWEIGHT G-84 casting, 8" dia. x 2" face. SPECIFY BORE.
91	HAND KNOB ½" bore (Pin included)
61	COUNTERSHAFT, with keys, dia. and length <u>Must</u> be specified
62	ECCENTRIC SHAFT, with keys
62K	KEY for variable speed pulley on eccentric shaft

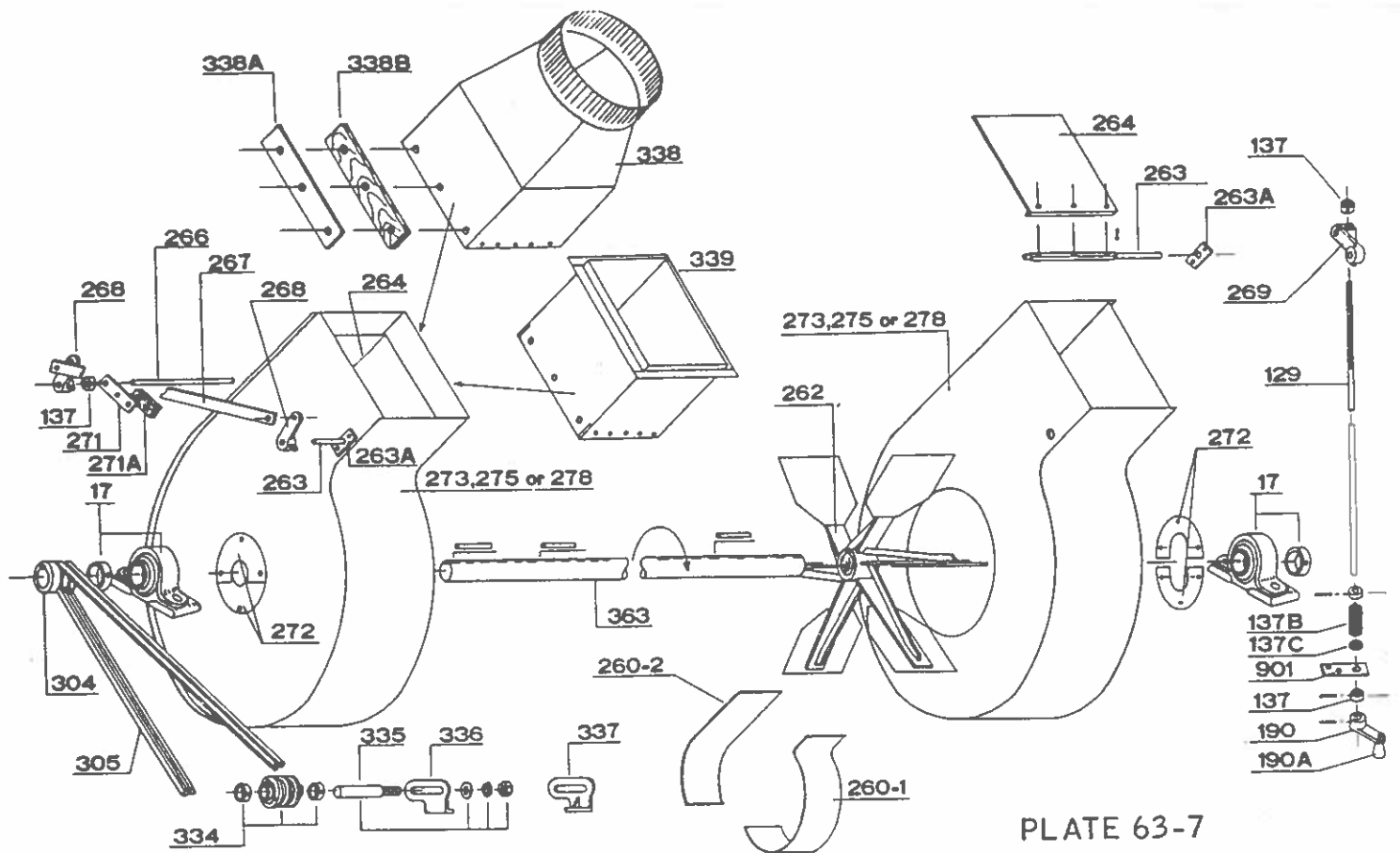


PLATE 63-7

FAN ASSEMBLY

Model Number and Machine Serial Number must be specified on all Parts Orders

CAT. NO.	ITEM
17	BALL BEARING pillow block with collar, size <u>Must</u> be specified
129	Fan damper CONTROL ROD, $\frac{1}{2}$ " dia., length <u>Must</u> be specified
137	Control rod COLLAR, $\frac{1}{2}$ " bore (Set screw and pin included)
137B	Control rod SPRING
137C	Control rod spring RETAINER WASHER
190	Control rod HAND CRANK, $\frac{1}{2}$ " bore (Set screw and pin included)
190A	Hand crank wood KNOB

FAN COVER INFORMATION: When ordering the following types of fan housing covers, the width and length of each section Must be specified

260-1	Steel fan COVER, full width, with end cleat
260-1-S	Steel LINING, to be bolted inside of original fan cover (Bolts included)
260-1-R	Special abrasive resistant rubber bonded to steel backing, to be bolted inside of original fan cover (Bolts included)
260-2	Steel fan COVER, full width, with end cleat
260-2-S	Steel LINING, to be bolted inside of original fan cover (Bolts included)
260-2-R	Special abrasive resistant rubber bonded to steel backing, to be bolted inside of original fan cover (Bolts included)

17

FAN ASSEMBLY

Model Number and Machine Serial Number must be specified on all Parts Orders

CAT NO.	ITEM
262	FAN WHEEL, dia. of hole in hub and width of blade <u>Must</u> be specified
263	Fan damper SHAFT. Cotter pin included. Specify width of damper
263A	Fan damper shaft END PAD. Screws included
264	FAN DAMPER, width <u>Must</u> be specified
266	HORIZONTAL ROD connecting fan damper control to opposite side of machine, length <u>Must</u> be specified
267	Fan damper control CONNECTING LINK, over-all length must be specified (Bolts included)
268	Fan damper control connecting link LEVER with set screw, casting No. F-669
269	LEVER with swivel nut attached, set screw included. Casting No. F-669
271	Horizontal rod BRACKET. Bolts included
271A	Horizontal rod bracket WOOD BLOCK
272	Outside HOLE COVER for fan housing (Screws included)
<p>FAN HOUSING INFORMATION: When ordering a complete fan housing the part number and rotation must be specified. When standing beside the machine and facing the bearing next to the fan housing, specify if fan shaft rotation is clockwise or counter-clock wise</p>	
273	FAN HOUSING 8" width
275	FAN HOUSING 10" width
278	FAN HOUSING 12" width
304	Counter shaft driver SHEAVE
305	V-BELT to countershaft
334	V-belt ball bearing IDLER PULLEY
335	Ball bearing idler SHAFT with flat washer, lock washer and nut
336	IDLER BRACKET, left hand, casting No. G-94-L
337	IDLER BRACKET, right hand, casting No. G-94-R
338	FAN OUTLET ADAPTER for use with round pipe, specify width of fan housing and if round pipe is 12" or 14" dia.
338A	Steel SIDE PLATE for fan outlet
338B	WOOD CLEAT for fan outlet
339	FAN OUTLET EXTENSION, specify width of housing
363	FAN SHAFT, dia. and length <u>Must</u> be specified
901	Fan damper control rod BRACKET

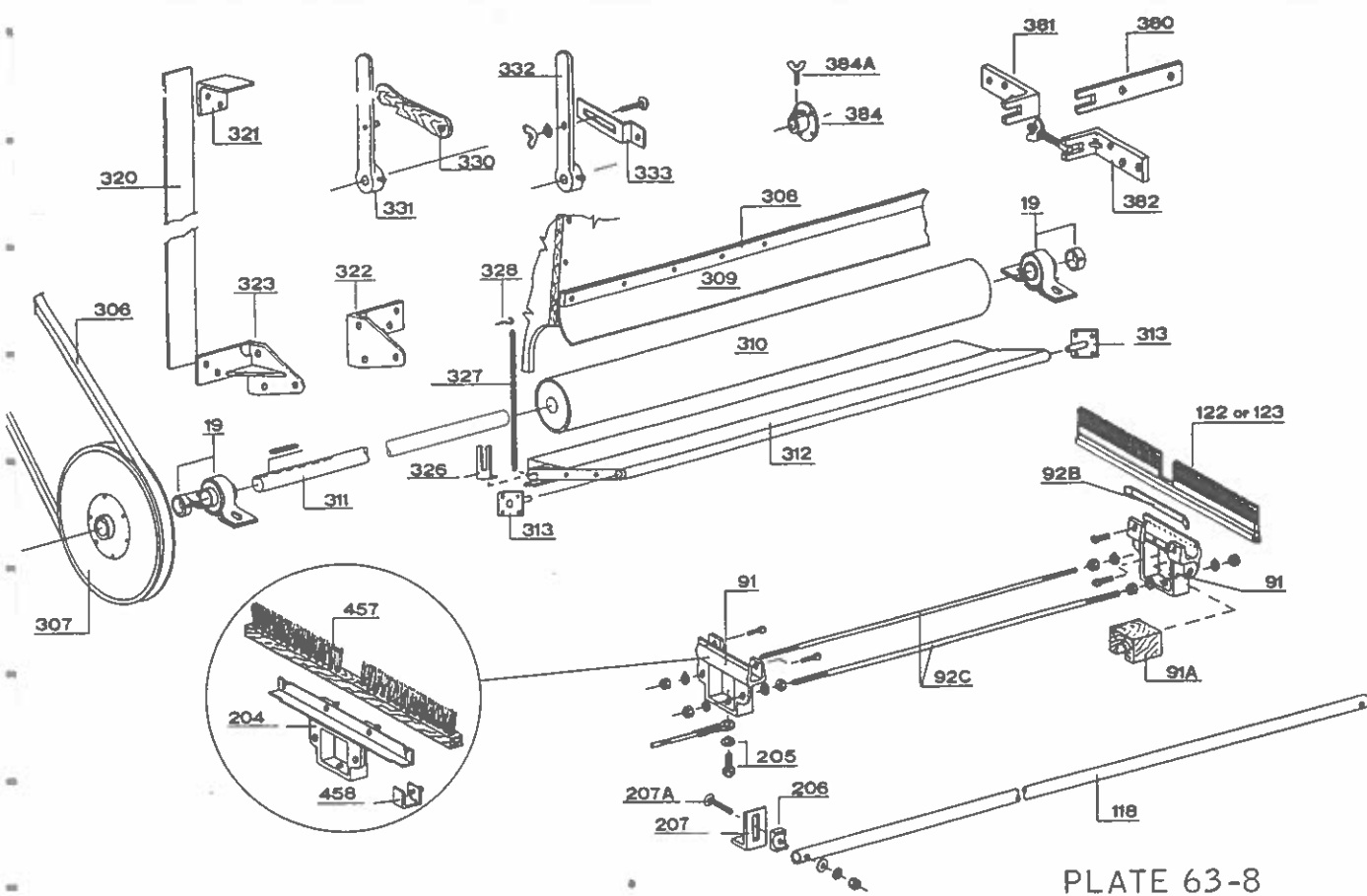


PLATE 63-8

AIR SEAL ASSEMBLY, MISC. PARTS AND
G-SERIES TOP BRUSH CARRIAGE ASSEMBLY

Model Number and Machine Serial Number must be specified on all Parts Orders

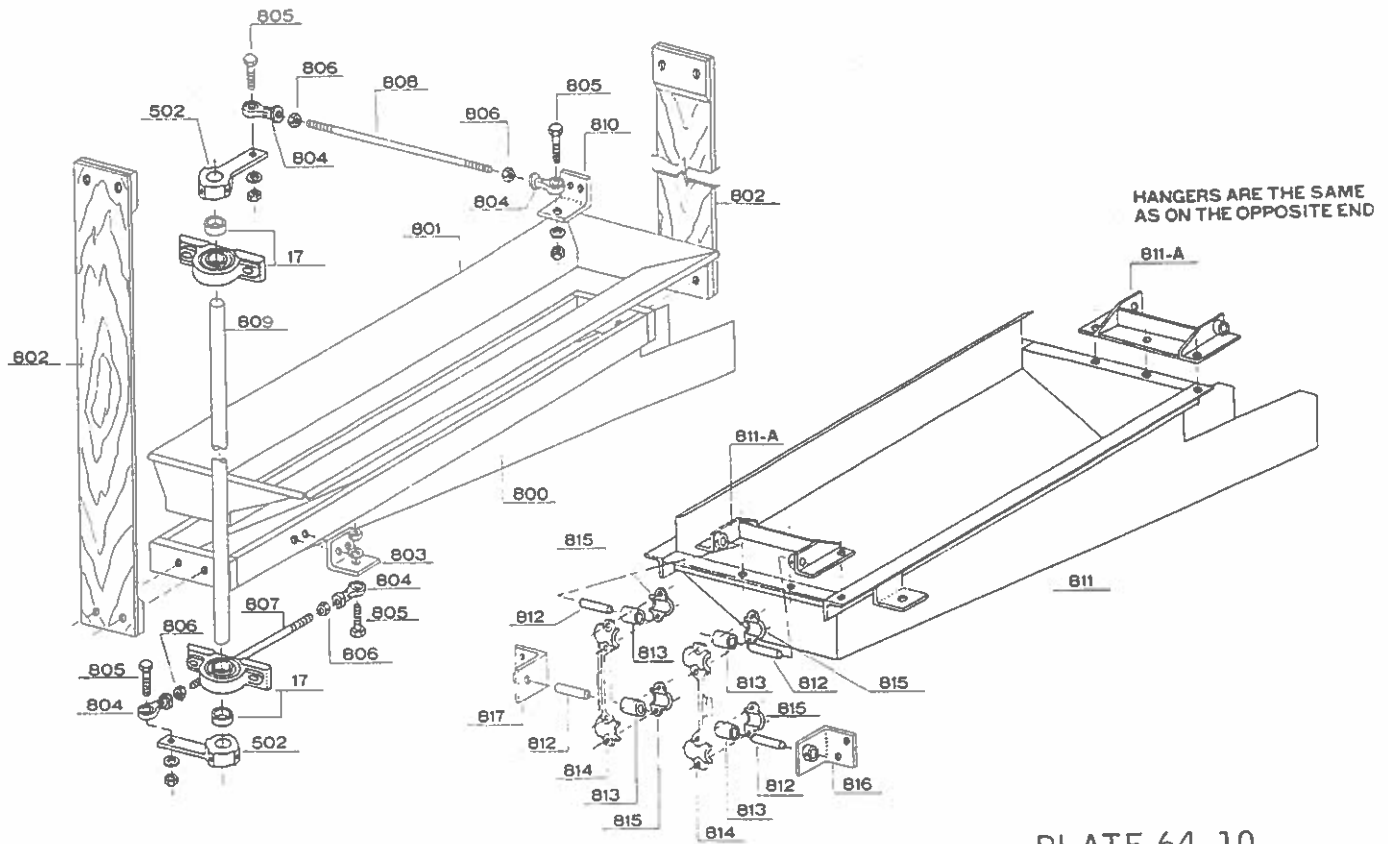
QTY.	ITEM
1	1" rubber mounted BALL BEARING PILLOW BLOCK and collar
1	BRUSH CLAMP, casting No. G-98, with set screws
1	Brush clamp wooden SLIDE BLOCK (with screws)
1	Brush clamp set-screw PAD, used with No. 91 clamp
1	Brush carriage ROD, 5/16" dia., length <u>Must</u> be specified
1	Round BRUSH TRACK, length <u>Must</u> be specified
1	See plate 63-3 for ordering BRUSHES
1	Brush holder CASTING, with angle
1	BOLT, with washer, for attaching cable to carriage
1	Brush track U-BLOCK
1	Brush track slotted ADJUSTING BRACKET (with bolt for fastening to frame)
1	BOLT, with washers and nut, for adjusting brush track
1	Air seal drive V-BELT
1	SHEAVE, on air seal shaft
1	Wooden SLAT, for air seal rubber flap
1	Air seal rubber FLAP
1	Air seal ROLL, 3 1/2" dia.
1	Air seal roll SHAFT, 1" dia., length <u>Must</u> be specified
1	Air seal GATE

19

AIR SEAL ASSEMBLY, MISC. PARTS AND
G-SERIES TOP BRUSH CARRIAGE ASSEMBLY

Model Number and Machine Serial Number must be specified on all Parts Orders

CAT. NO.	ITEM
313	Air seal gate PIVOT PAD
320	Shoe HANGER STRAP, length <u>Must</u> be specified
321	Shoe hanger strap frame BRACKET
322	Shoe hanger BRACKET, L.H., casting No. G-175-L
323	Shoe hanger BRACKET, R.H., casting No. G-175-R
326	Air seal gate adjustable STOP
327	Air seal gate SPRING
328	SCREW HOOK, for air seal gate spring
330	Upper air flue gate LEVER LOCK
331	Upper air flue gate LEVER
332	LEVER, for flow control gate, hole size in hub <u>Must</u> be specified
333	LEVER LOCK, slotted, for gate lever #332, with bolt and nut
380	Tail gate BRACKET, straight
381	Tail gate BRACKET, plain. Casting No. F-681
382	Tail gate BRACKET, with swivel bolt. Casting No. F-681
384	Tail gate ROD BEARING, with thumb screw. Casting No. H-89
384A	Tail gate rod WING SCREW
457	See Plate 63-3 for ordering nylon brushes
58	Brush CLAMP, for nylon brush only



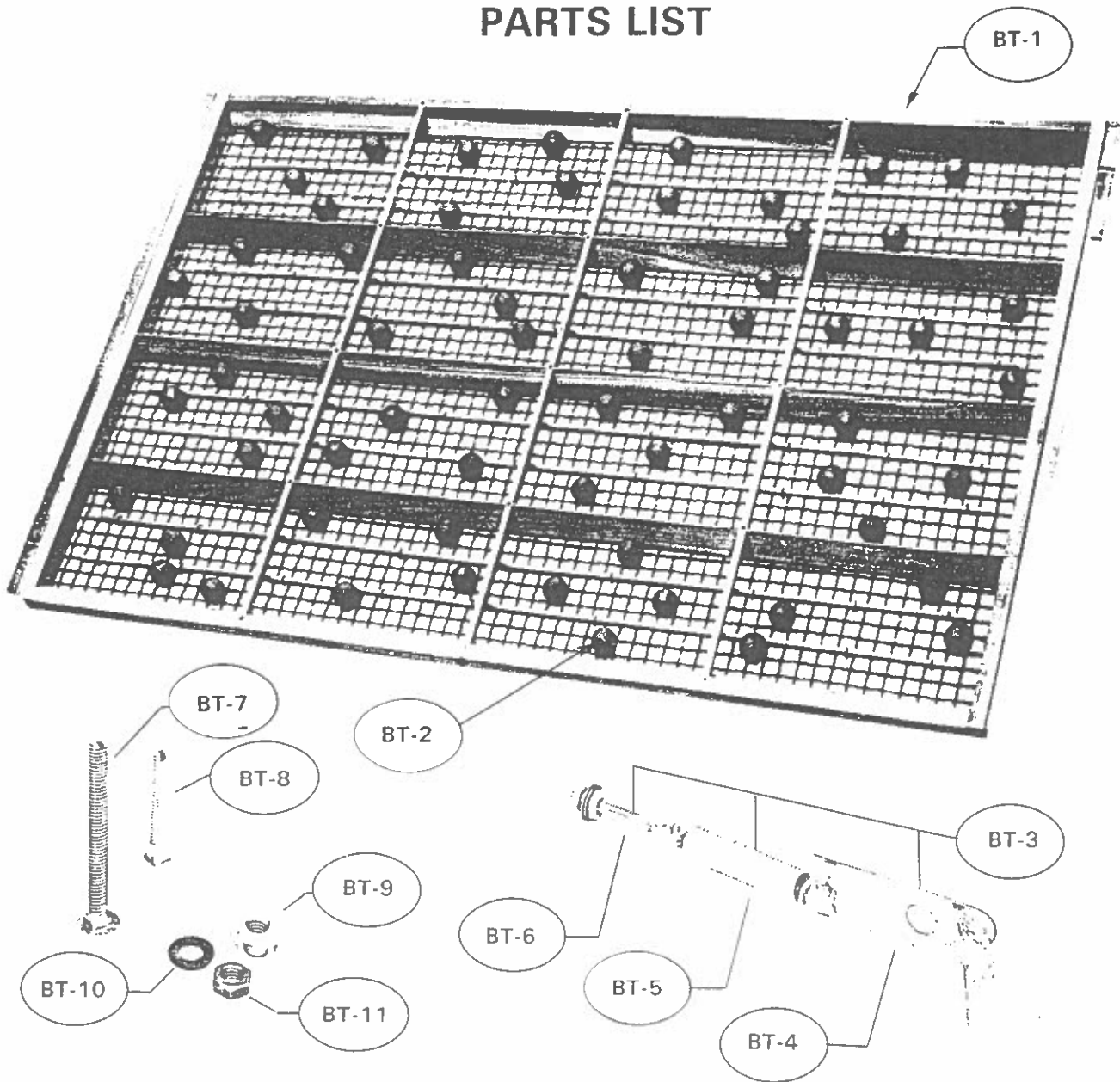
VIBRATING SIDE-DELIVERY SPOUT PARTS

Model Number and Machine Serial Number must be specified on all Parts Orders

Cat. No.	ITEM
17	Ball bearing pillow block with collar (Size <u>must</u> be specified)
502	Linkage Lever, 1" dia. hole in hub (Set screws included)
800	Spout, with hard wood frame construction
801	Upper sheet metal section of spout
802	Hard wood hanger, specify total length (Bolts included)
803	Linkage bracket, fastens to spout (Bolts included)
804	Rod end bearing, bearing No. AR-6
805	Linkage bolt (Lock washer & nut included)
806	Lock nut, for rod end bearing
807	Lower linkage rod (No. 806 lock nuts included)
808	Upper linkage rod (No. 806 lock nuts included)
809	Spout drive shaft, 1" dia. (Specify length)
810	Linkage bracket, fastens to machine (Bolts included)
811	Spout, all metal construction
811-A	Hanger brackets, fastens to spout (Bolts included)
812	Hanger stud., 5/8" dia.
813	Hanger rubber bushing
814	Hanger arm, casting No. PK-1630-H
815	Hanger arm cap, casting No. PK-1629-H (Bolts included)
816	Hanger bracket, right hand, fastens to machine frame (Bolts included)
817	Hanger bracket, left hand, fastens to machine frame (Bolts included)

BALL TRAY (Screen Cleaner)

PARTS LIST



Part No.	NAME
BT-1	Ball Tray Assembly complete; rubber balls not included. Machine Model No. and serial number must be specified. Also must specify whether ball tray is for No. 1 top screen, No. 2 screen, etc., and whether it is for the front or rear section of any 2-pc. screen; or front, middle, or rear section of any 3-pc. screen. Refer to the number marked on your present frame, for example "2F", or "4R", etc.
BT-2	Rubber ball, 1-3/8" dia., specify color and quantity.

Part No.	NAME
BT-3	Spring latch assembly complete; includes latch grip, eye-bolt, and spring.
BT-4	Latch grip
BT-5	Spring
BT-6	Eye-bolt
BT-7	Adjuster bolt, 5/16" dia., w/small head, slotted end.
BT-8	Adjuster bolt, 5/16" dia., w/large head, slotted end.
BT-9	"T" nut anchor, 5/16" threads.
BT-10	Flat washer, 5/16".
BT-11	Jam nut, 5/16" threads.

22