NEW JERSEY
WIRE STITCHING MACHINE
DIVISION OF PRECISION AUTOMATION CO., INC.

Model M Operating Instructions & Parts List

1841 Old Cuthbert Rd.
Cherry Hill, NJ 08034
Tel: 856-365-0196
Fax: 856-365-0197

Before attempting to operate the machine, remove the rust preventive, which is used to protect the finished surfaces during shipment. Check the voltage and current on the motor nameplate. These values must be the same as that of the electrical service with which the machine is to be used.

Step on the foot pedal and turn the machine over manually by means of the large pulley in the rear. The machine must turn freely at all times.

WIRE

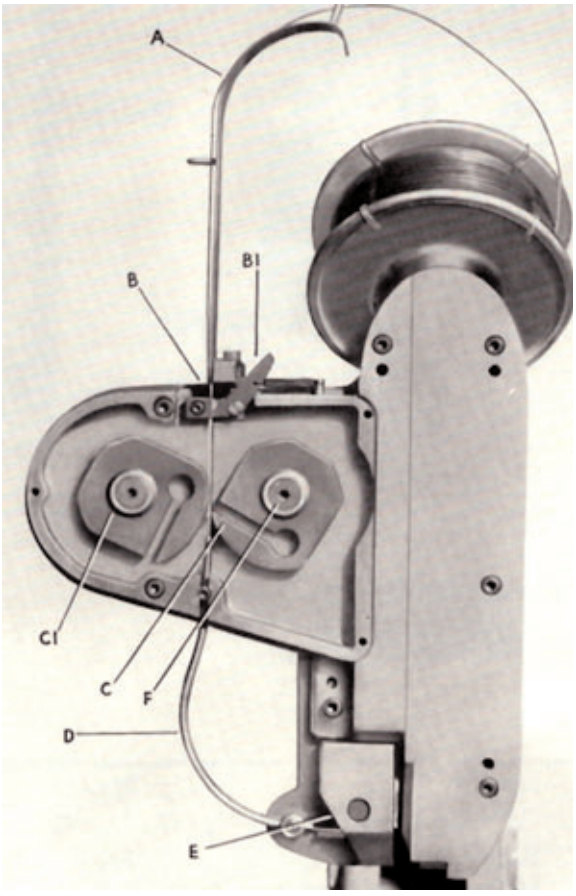
Wire is finished in coil form. It is wound on paper cores and a detachable spool is supplied for use with it. To put the wire on the spool, remove the wrapper (but do not cut the binding wires) and unscrew the loose flange of the spool. Put the wire in place with the end at the top pointing toward the left when looking at the solid flange. Securely tighten the loose flange. These machine are furnished to use EITHER of the following standard box wires: #17 (.103 x .017), #20 (.103 x .020), #1 Hy-Bar (.060 x .020) and #2 Hy-Bar (.060 x. .024).

For best results use New Jersey Wire.
Standard sizes carried in stock at all times.

THREADING THE MACHINE

Make certain that the machine is in its neutral position. Place the spool on the spool stud so that the wire will unwind from the top with the end pointing toward the left (See Fig. 1). Hold the end of the wire firmly, cut the binding wires and bend them back over the flanges. Clip off the end of the wire to remove kinks and to facilitate threading.

WARNING: Do not let go of the end of the wire as it will immediately unravel and become entangled. Pass the wire through the loops at the top of the wire guide spring (A) and the wire check (B) which is located between the wire guide spring and the feed rollers (C and C-1). The purpose of the wire check is to prevent the wire from moving backward after feeding. It is of utmost IMPORTANCE that the wire is in the wire check at all times to insure even feeding. The wire check is opened by pushing the long end of the wire check pawl (B-1) upward. Push the wire through the wire tube (D) and into the slot in the stationary cutter clamp (E). Release the wire check pawl and the machine is ready for operation.



CAPACITY

The stitching range of this machine is from zero to one-half inches in thickness. It is necessary to make adjustments to cover the entire range. However, the machines are generally set to the desired thickness before leaving the factory

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ADJUSTMENTS

CLINCHING - ARM STITCHER: In setting the clincher (part #1223) located in the front of the arm, turn the arm adjusting screw counterclockwise slightly, thus lowering the arm. Place some work on the arm and make one stitch. (Never drive staples one on top of another as this may clog the machine and result in unnecessary damage for which the manufacturer cannot be held responsible.) Examine the clinched staple. If too loose, turn the arm adjusting screw clockwise until a satisfactory clinch is obtained. The clincher has four positions. When one position becomes worn, it is merely necessary to loosen the clincher screw (part #1234) and turn the clincher 90° to a new position. When turning the clincher to a new position, it is advisable to make the screw finger-tight and turn the machine over manually until the legs of the staple are in the grooves of the clincher. This will automatically align the clincher. At this time, securely tighten the clincher screw.

CLINCHING - BOTTOM SEALER: The bottom sealer clincher (part #1242) is set in a similar manner as the arm stitcher clincher except that the clincher is raised and lowered by means of the post cap (part #1238). After the post cap is adjusted to the proper position, tighten the post cap lock nut (part #1239) securely by means of the two pins furnished with the machine. The position of the clincher in the post cap can be changed by loosening the small set screw which clamps it.

FEED ROLLERS: The left-handed feed roller (C-1 Fig. 1) is pinned at the factory and is not adjustable. The right-hand feed roller (C Fig. 1) is made adjustable so that the length of the wire feed can be varied as required. This is accomplished by loosening the feed roller clamp screw (F Fig. 1) and turning the feed roller (C Fig. 1) clockwise to increase the length of wire feed and counterclockwise to decrease the wire feed. When the wire feed is properly set, the clamp screw must be securely tightened.

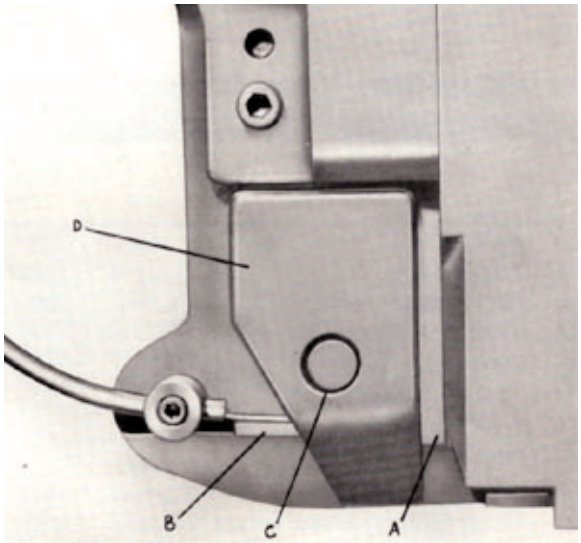

FIG. 2. To change cutters, turn the machine over manually, until the lower end of former cutter (A) is below stationary cutter (B). Remove stationary cutter clamp screw (C). The stationary cutter clamp (D) can then be detached to change either cutter. When reassembling the stationary cutter clamp, make certain that both the clamp and the stationary cutter are set tightly against the former cutter before tightening the cutter clamp screw.

CUTTERS: The former cutter (part #1204) is attached to the lower left-hand corner of the former assembly (part #15155) and must be changed whenever it becomes dull. It has four cutting edges and standard cutters are stocked as follows: Part Nos. 1204-1 (1/16" thk.), 1204-2 (1/8" thk.), 1204-3 (3/16" thk.), 1204-4 (1/4" thk.), 1204-5 (5/16" thk.), 1204-6 (3/9" thk.), and 1204-7 (7/16" thk.). Remember when changing the former cutter that the length of the wire feed must also be changed to equalize the staple legs. See preceding paragraph on feed rollers. The former cutter can be removed by detaching the stationary cutter clamp (part #1206) and turning the machine over manually until the end of the former is below the stationary cutter (part #1205). When reassembling the stationary cutter clamp, make certain that the cutter clamp and stationary cutter are set tightly against the former cutter before tightening the cutter clamp screw (part #1207). (See Fig. 2). Never grind ends of former cutters, as this will cause defective staples.

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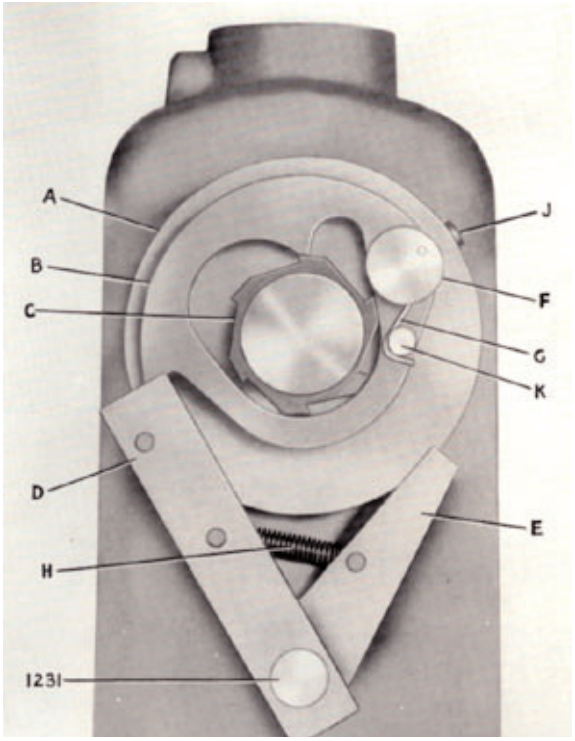
FIG. 3. The clutch is of the single-revolution positive type. It consists of a disc (A) which is keyed to the stitcher shaft, a ring (B) which is pivotally mounted on the disc, a ratchet (C) which is screwed into the large flywheel of the machine, a trip lever (D) for actuating the clutch and a retaining lever (E) for eliminating backlash. The trip lever spring (H) holds the two levers in position. The clutch ring spring (G) is attached to the clutch ring pivot pin (F) and applies pressure to the clutch ring at stud (K). The clutch spring pressure is set at the factory, therefore, the clutch normally requires no adjustment. However, should the set screw (J) get loose and the clutch becomes noisy, it can be reset as follows: Insert a pointed instrument into the hole in the small end of the clutch ring pin and turn the pin until just sufficient pressure is applied to the clutch ring to make it engage the ratchet teeth. Then securely tighten the set screw.



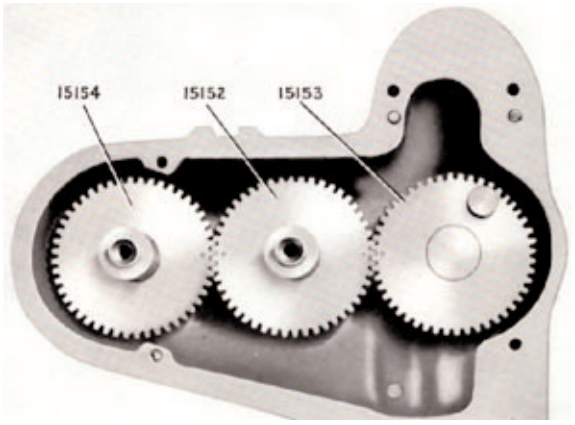
FORMING AND DRIVING UNIT

When replacing any of the wire bending or driving parts, it is necessary to remove this unit. This is accomplished by detaching the former guide plate (part #1202). The complete forming and driving unit can then be taken out. In replacing this unit, insert the former and driver studs into the holes in their respective links (part #1203). Turn the machine over manually to make sure that all parts are in their proper place and working freely.

REVERSIBLE PARTS

The former cutter and the stationary cutter have four cutting edges and can be changed, as the edges become dull. The driver is double-ended and can be reversed when necessary. The clincher has four positions and can be readily changed when it becomes worn.

FIG. 4. To simplify assembly, the gears are marked. If for any reason it becomes necessary to remove the gears, be sure when reassembling that the marked teeth are meshed with the marked spaces in the gears as shown. This properly sets the feeding mechanism with respect to the forming and driving mechanism.



DRIVE

The machine is equipped with a variable speed "V" belt drive, ranging from 200 to 300 RPM. An adjustable motor base is provided to compensate for speed changes and stretch in the "V" belt. Do not allow oil or grease to contact the belt as this will ruin the rubber.

LUBRICATION

The bearings of the machine are self-lubricating; however, oilers are provided to permit occasional lubrication. (Do not use grease.) The other working parts of the machine should be lubricated with a good grade of lubricant. The forming and driving mechanism must be regularly lubricated with light grease or Vaseline. Do not over-lubricate this mechanism, as the lubricant will mark the work.

IMPORTANT

Always turn machine over manually after making adjustments or repairs. Be sure it turns freely before using power.

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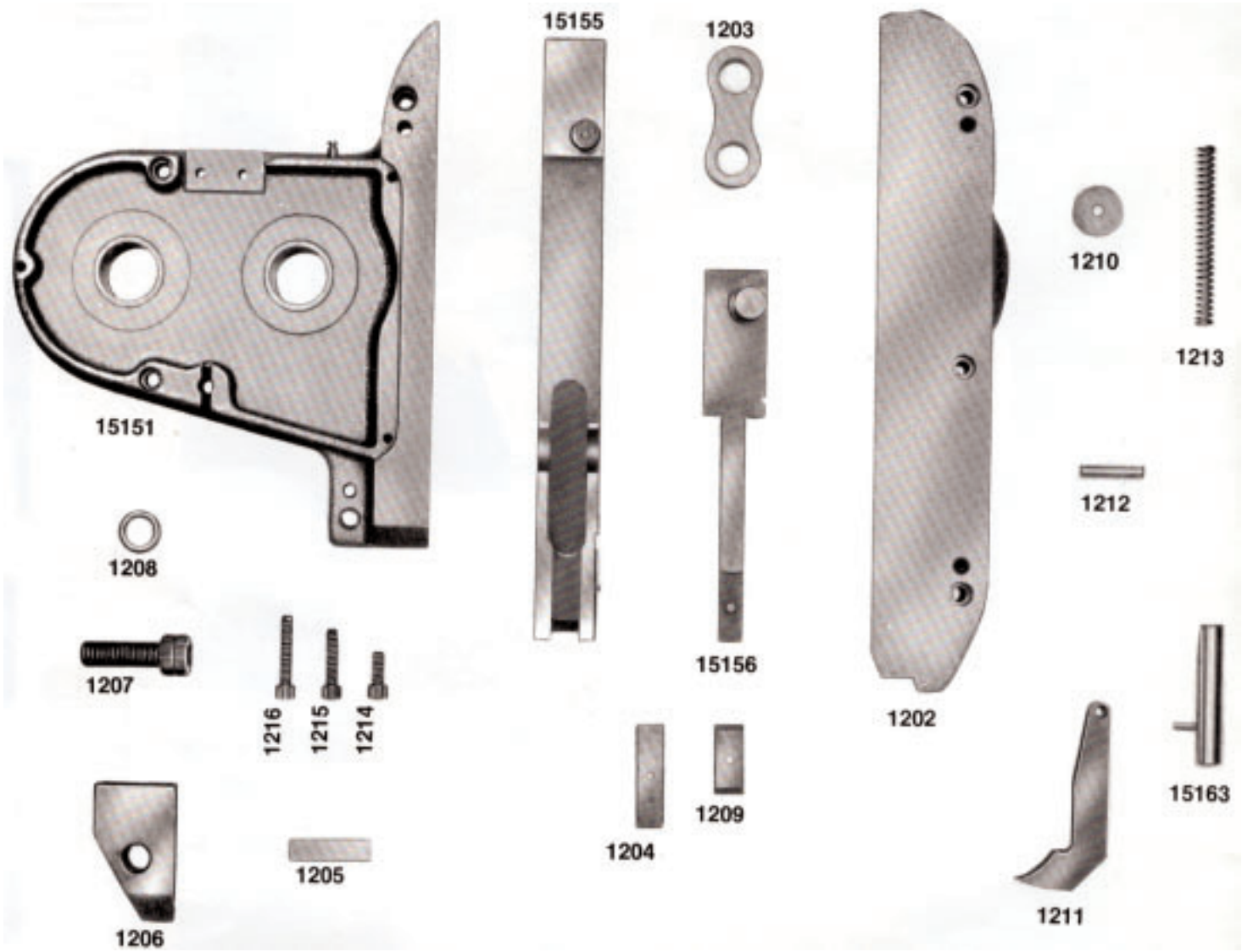
NO.	NAME
1202	Former Guide Plate
1203	Former & Driver Link
1204-1	Former Cutter 1/16" thk.
1204-2	Former Cutter 1/8" thk. (Not Shown)
1204-3	Former Cutter 3/16" thk. (Not Shown)
1204-4	Former Cutter 1/4" thk. (Not Shown)
1204-5	Former Cutter 5/16" thk. (Not Shown)
1204-6	Former Cutter 3/8" thk. (Not Shown)
1204-7	Former Cutter 7/16" thk. (Not Shown)
1205	Stationary Cutter
1206	Stationary Cutter Clamp
1207	Stationary Cutter Clamp Screw
1208	Stationary Cutter Clamp Washer

NO.	NAME
1209	Driver (Specify Wire Size)
1210	Anvil & Supporter Roller
1211	Anvil & Supporter (Specify Wire Size)
1212	Anvil & Supporter Pivot Pin
1213	Anvil & Supporter Plunger Spring
1214	Front Plate Screw 3/4" lg.
1215	Front Plate Screw 1" lg.
1216	Front Plate Screw 1 ¼" lg.
15151	Front Plate Assembly
15155	Former Assembly
15156	Driver Bar Assembly
15163	Anvil & Supporter Plunger Assembly



In ordering please give both name and number of part and wire size where specified, as well as serial number of machine.

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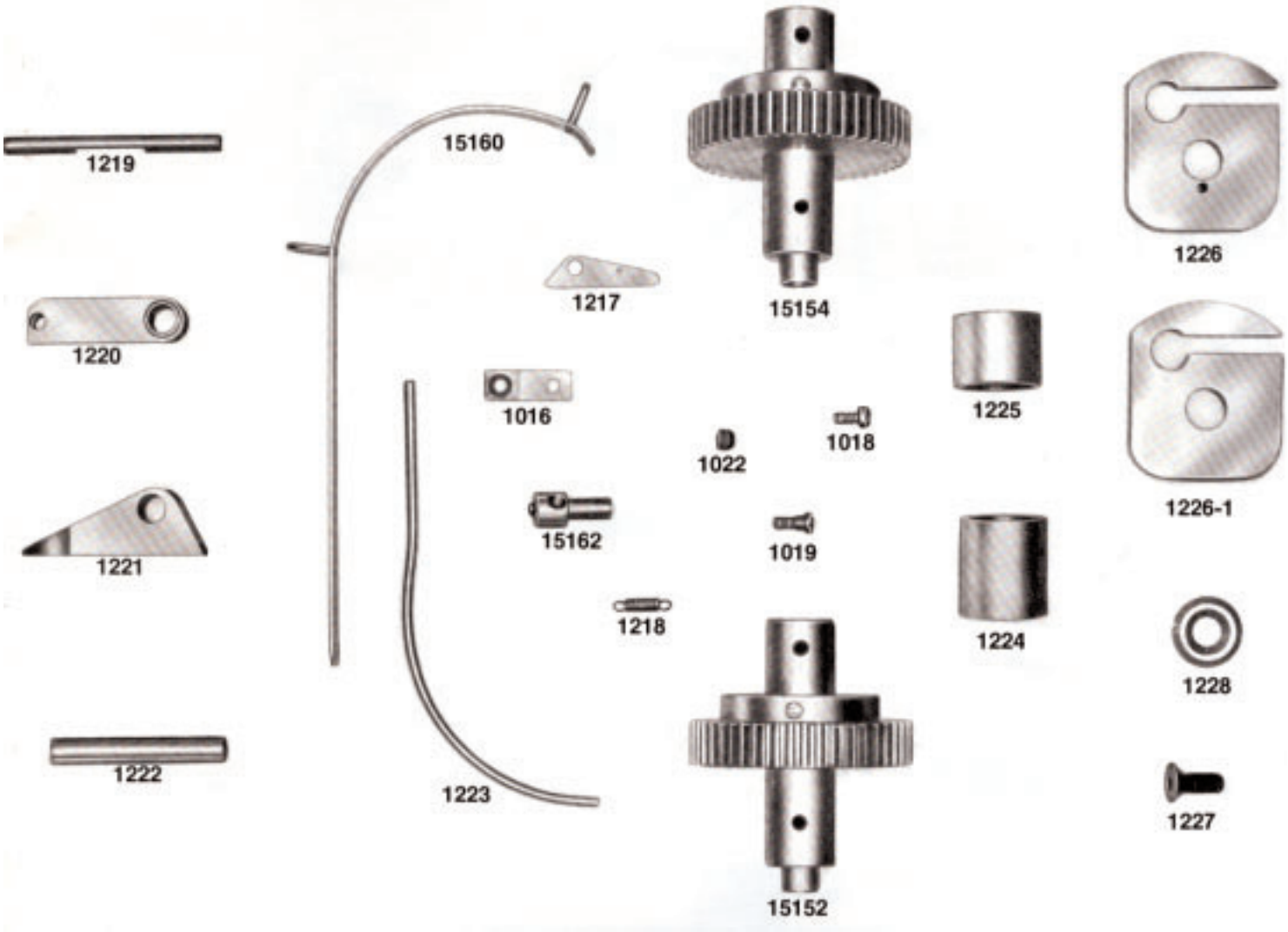
NO.	NAME
1016	Wire Check Body
1018	Wire Check Body Screw
1019	Wire Check Pawl Screw
1022	Wire Tube Adjusting Screw
1217	Wire Check Pawl
1218	Wire Check Spring
1219	Anvil & Supporter Stop
1220	Anvil & Supporter Link
1221	Anvil & Supporter Pusher
1222	Anvil & Supporter Pusher Stud
1223	Wire Tube (Specify Wire Size)

NO.	NAME
1224	Feed Roll Shaft Bushing - Front
1225	Feed Roll Shaft Bushing - Rear
1226	Feed Roll - Left Hand (Pinned)
1226-1	Feed Roll - Right Hand (Adjustable)
1227	Feed Roll Clamp Screw
1228	Feed Roll Clamp Washer
15152	Feed Roll Shaft Assembly - Right Hand
15154	Feed Roll Shaft Assembly - Left Hand
15160	Wire Guide Spring Assembly
15162	Wire Tube Post Assembly



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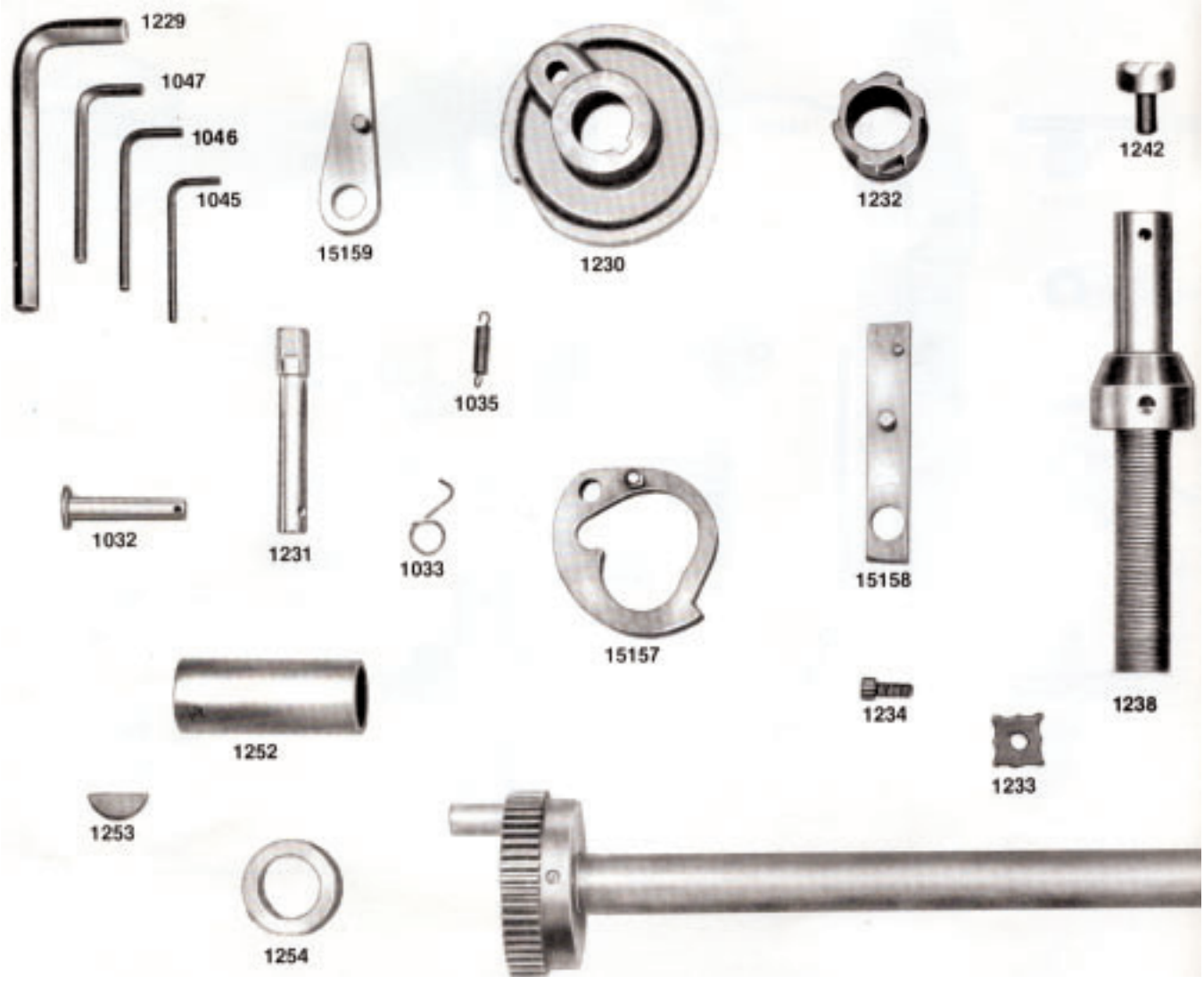
NO.	NAME
1032	Clutch Ring Pin
1033	Clutch Ring Spring
1035	Clutch Trip Lever Spring
1038	Spool Spring
1039	Spool Stud Nut
1040	Spool Stud Lug Washer
1045	Wrench for 1/4" Set Screws
1046	Wrench for Wire Tube
1047	Wrench for Feed Roll & Clutch Ring
1229	Wrench for Stationary Cutter Clamp

NO.	NAME
1230	Clutch Disc
1231	Clutch Trip Lever Pin
1232	Clutch Ratchet
1233	Clincher - Arm Stitcher
1234	Clincher Screw
1235	Arm Pivot Pin
1236	Post Pivot Pin
1237	Arm & Post Pin Collar
1238	Post Cap
1239	Post Cap Lock Nut



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NO.	NAME
1240	Post Plunger
1241	Post Plunger Spring
1242	Clincher - Bottom Stitcher
1243	Foot Pedal Roller
1244	Foot Pedal Roller Pin
1245	Foot Pedal Eccentric Pin
1246	Foot Pedal Spring
1247	Motor Support Seat
1248	Motor Support Seat Spring
1250	"V" Belt (Not Shown)

NO.	NAME
1251	Spool Stud
1252	Main Shaft Bushing
1253	Main Shaft Key
1254	Main Shaft Collar
15153	Main Shaft Assembly
15157	Clutch Ring Assembly
15158	Clutch Trip Lever Assembly
15159	Clutch Retaining Lever Assembly
15161	Motor Pulley Assembly

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FAULT FINDER

Stitching difficulties can often be attributed to a few common causes. The following illustrations with accompanying explanations cover many of the difficulties that occur. By comparing the faulty staple with the illustrations, the cause of the trouble can generally be found.

UNCLINCHED


1. Perfect staple.


2. Legs uneven - either leg may be too long. Adjust right-hand feed roller.


3. Right driver tip broken - either or both tips may break or chip.


4. Former cutter too short.


5. One leg missing. Wire slipping in feed rollers or obstruction in feed channel.


6. Wire comes out in pieces. Former grooves clogged up. Lubricate wire at wire tube. Wire too large.


7. Corner broken or nearly cut through. Wire too hard or corner of anvil too sharp.


8. Rounded corners. Forming edges of anvil worn

CLINCHED


9. Perfect staple.


10. Legs uneven - either leg may be too long. Adjust right-hand feed roller.


11. Right driver tip broken - either or both tips may break or chip.


12. Clincher too low. Adjust clincher up.


13. Clincher too high. Adjust clincher down. Too much wire.


14. Legs spread. Poor cut-off or worn formers.


15. One leg clinched in. Dull cutter or clincher out of line with driver.


16. One leg buckled. Worn clincher or clincher out of line with driver.


17. Short legs. Insufficient wire feed.


18. Uneven clinching. Clincher not level or parallel with end of driver.