

33 TYPING UNIT

LUBRICATION

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Function rocker shaft . . . . .	6	1. GENERAL	
Function shaft area . . . . .	5	1.01 This section provides lubrication re-	
Intermediate gears . . . . .	5	quirements for the 33 typing unit. It	
Latchlever . . . . .	7	reissued to provide exclusive eight level typing	
Latchlever and trip lever . . . . .	19	unit coverage and present a new order of lubri-	
Main shaft area . . . . .	3	cation. Since this is a general revision, mar-	
Motor area . . . . .	5	ginal arrows used to indicate changes are	
Print hammer . . . . .	15	omitted.	
Pushlevers and stripper bail . . . . .	18	1.02 The general lubrication areas are illus-	
Reset arm . . . . .	15	trated by photographs. The specific	
Reset bail . . . . .	10	points to receive lubricant are indicated on line	
Ribbon guide spring . . . . .	17	drawings with appropriate textual instructions.	
Ribbon mechanism . . . . .	16	Line drawings and textual instructions follow	
Rocker and pawls . . . . .	10	each photograph and are keyed to the photograph	
Selector area . . . . .	17	by paragraph numbers.	
Selector clutch . . . . .	19		
Selector levers . . . . .	19		
Slides . . . . .	14		
Slide guideplates . . . . .	14		
Spacing area . . . . .	11		
Space bellcrank . . . . .	11		
Spacing mechanism - 1 . . . . .	12		
Spacing mechanism - 2 . . . . .	13		
Stop bail . . . . .	7		

1.03 Thoroughly lubricate the typing unit, but avoid overlubrication that might permit the lubricant to drip or be thrown onto adjacent parts. Saturate all felt washers and oilers with oil, and apply oil to each end of all bearings.

1.04 Lubricate the typing unit before placing it into service or prior to storage. After a short period of service, relubricate it to make sure no areas have been missed. Thereafter, lubricate the typing unit at regular intervals as indicated below:

<u>Operating Speed</u> (Words per Minute)	<u>Lubrication Interval</u>
100	500 hrs* or 6 mo.**

\*Station set operating hours

\*\*Whichever comes first

1.05 On occasion when the printer is disassembled, apply a coat of thoroughly mixed 50 percent KS7470 oil and 50 percent KS7471 grease at places indicated below.

- Selector Cam Surfaces (2.44)
- Spacing Gear Teeth (2.24)
- Codebar Pivot Shaft (2.18 and 2.19)
- Eccentric Cams (2.02 and 2.04)
- Stop Bail Adjusting Tab (2.12)
- Platen Shaft Bearings-Sprocket Feed Units only (2.49)

Note 1: On occasion when the clutch is disassembled, lubricate the Internal Clutch Assemblies (2.02, 2.04, 2.10, 2.44, and 2.53 on Form Feed Mechanisms only) as follows: Apply a thin coat of KS7471 grease at the loops of the clutch shoe lever spring, and lubricate the internal mechanism of the clutch with KS7470 oil.

Note 2: At regular lubrication intervals lubricate the clutch mechanism with KS-7470 oil only.

1.06 The textual instructions that accompany the line drawings consist of abbreviated directions, specific lubrication points, and parts affected. The meanings of the abbreviated directions (symbols) follow:

<u>Symbol</u>	<u>Meaning</u>
D	Keep dry — no lubricant permitted.
G	Apply thin coat of grease (KS7471).
O	Oil (KS7470).

1.07 References to left, right, front, or rear, etc, consider the typing unit to be viewed from a position where the carriage area faces up and the selector area is located to the viewer's left.

**CAUTION: DO NOT USE ALCOHOL, MINERAL SPIRITS, OR OTHER SOLVENTS TO CLEAN PLASTIC PARTS OR PARTS WITH PROTECTIVE - DECORATIVE FINISHES. NORMALLY, A SOFT, DRY CLOTH SHOULD BE USED TO REMOVE DUST, OIL, GREASE, OR OTHERWISE CLEAN PARTS OR SUBASSEMBLIES. IF NECESSARY, A SOFT CLOTH DAMPENED WITH SOAP OR MILD DETERGENT MAY BE USED. AFTERWARDS, RINSE EACH CLEANED PART OR SUBASSEMBLY WITH SOFT, DAMP CLOTH AND BUFF WITH A SOFT, DRY CLOTH.**

1.08 Tools and materials needed for teletypewriter lubrication are listed in Section 570-005-800TC.

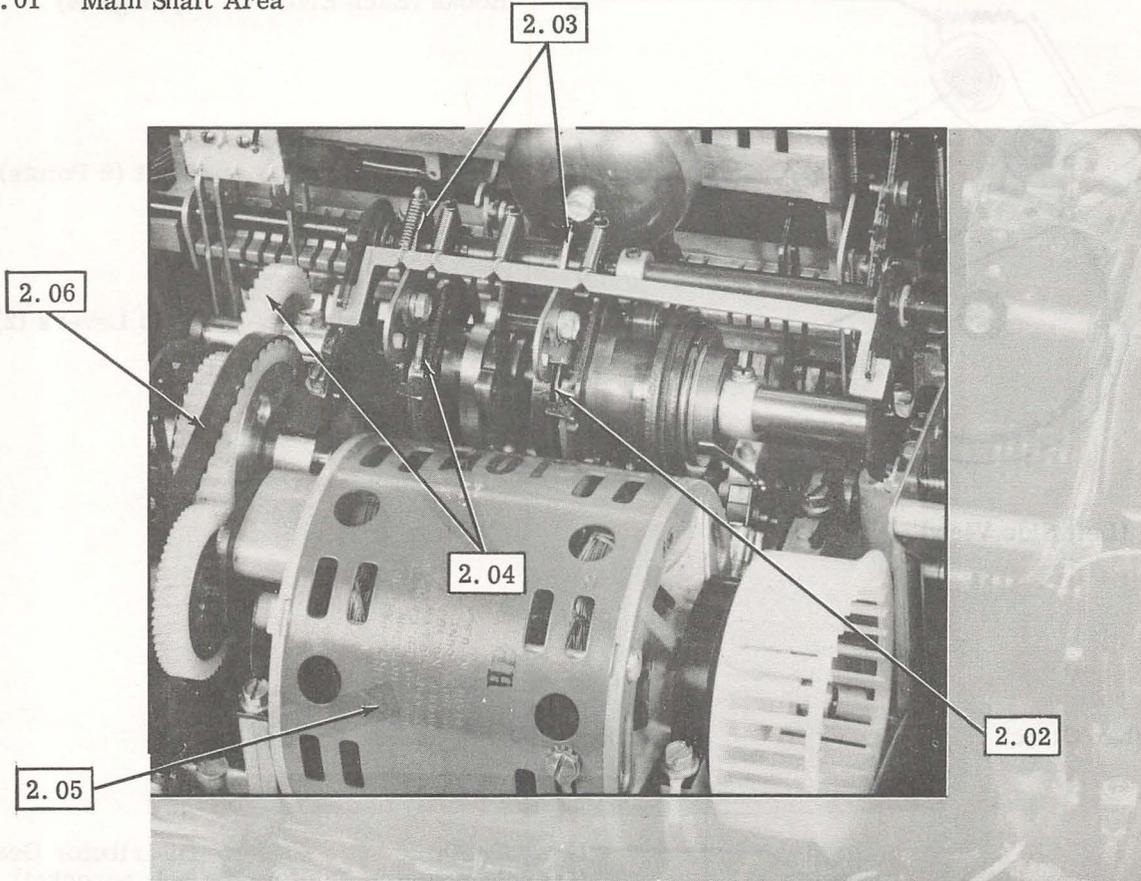
1.09 For disassembly and reassembly information, refer to Section 574-122-702TC.

**CAUTION: ALL ELECTRICAL POWER MUST BE REMOVED FROM UNIT BEFORE LUBRICATING OR REMOVING COMPONENTS FOR LUBRICATION.**

2. BASIC UNITS

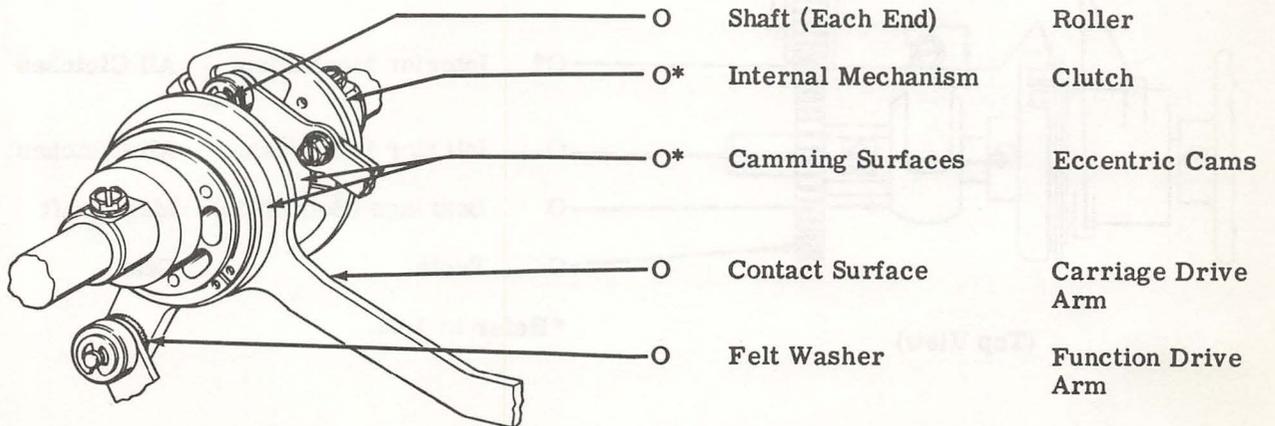
COMMON MECHANISMS

2.01 Main Shaft Area



(Rear View)

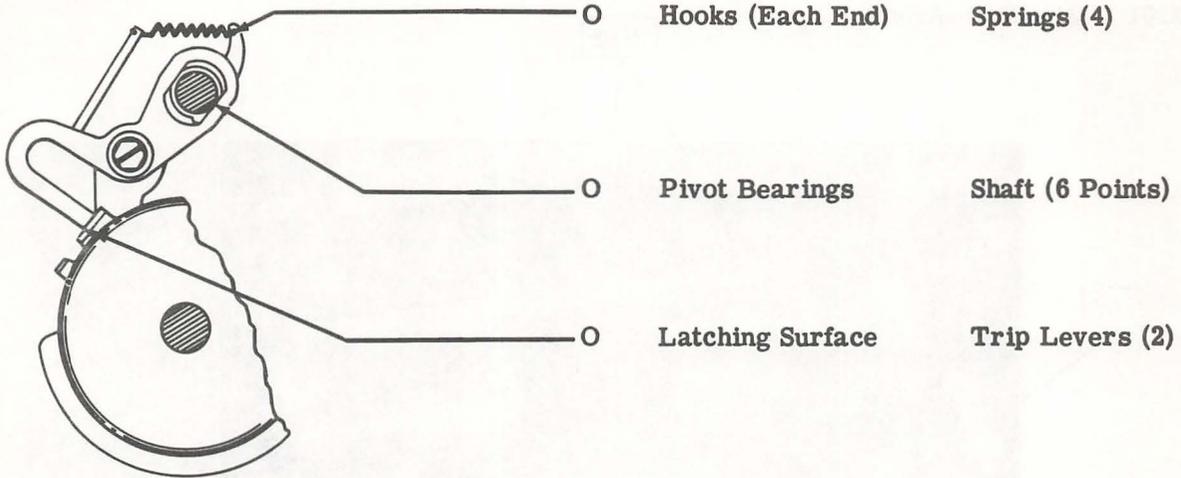
2.02 Function Clutch



\*Refer to 1.05.

(Left Front View)

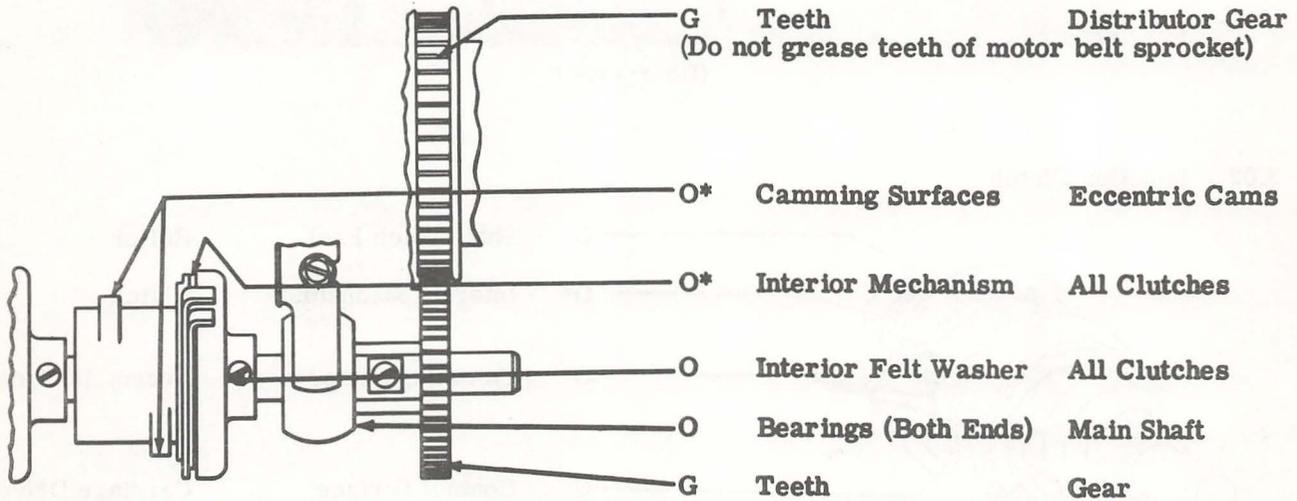
2.03 Trip Shaft



(Left Side View)

- |   |                  |                  |
|---|------------------|------------------|
| O | Hooks (Each End) | Springs (4)      |
| O | Pivot Bearings   | Shaft (6 Points) |
| O | Latching Surface | Trip Levers (2)  |

2.04 Codebar Clutch

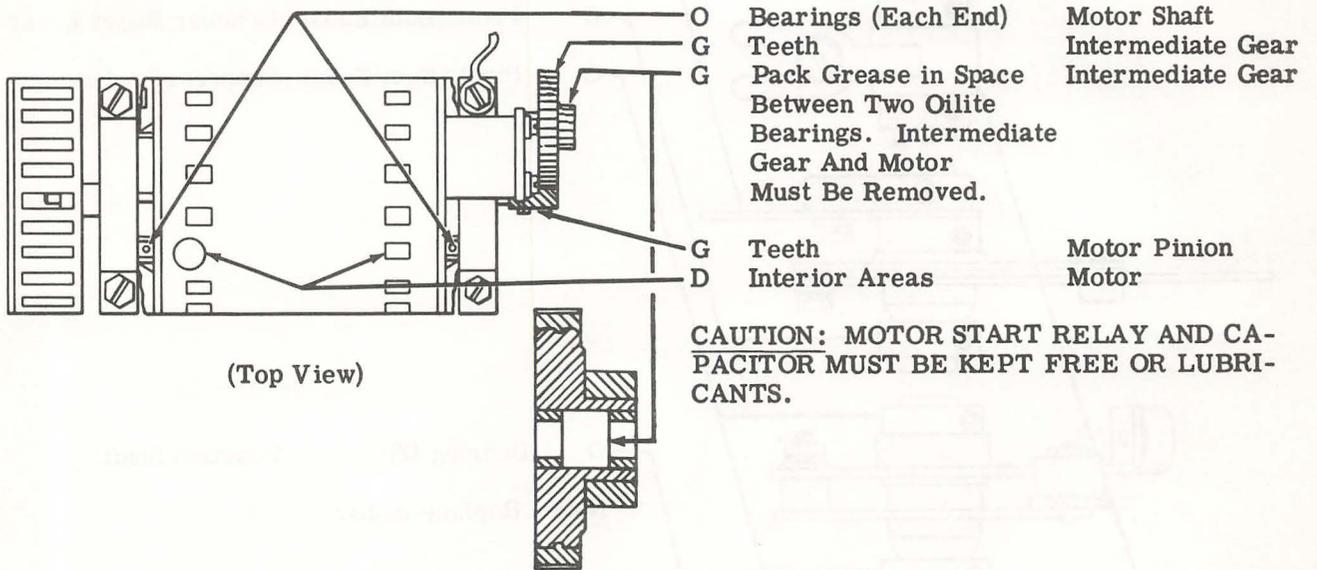


(Top View)

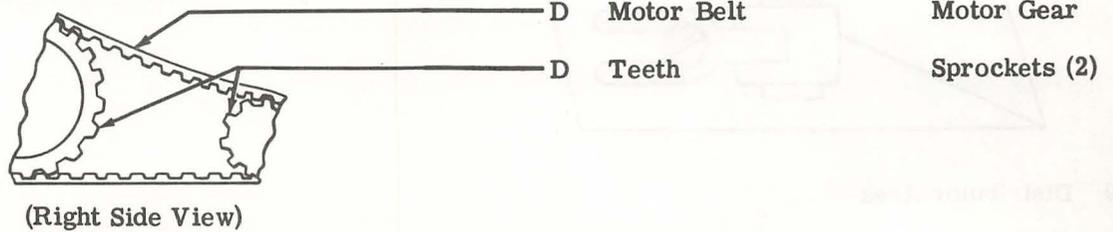
- |  |                      |                  |
|--|----------------------|------------------|
| G  | Teeth                | Distributor Gear |
| (Do not grease teeth of motor belt sprocket) |                      |                  |
| O*   | Camming Surfaces     | Eccentric Cams   |
| O*   | Interior Mechanism   | All Clutches     |
| O  | Interior Felt Washer | All Clutches     |
| O  | Bearings (Both Ends) | Main Shaft       |
| G  | Teeth                | Gear             |

\*Refer to 1.05.

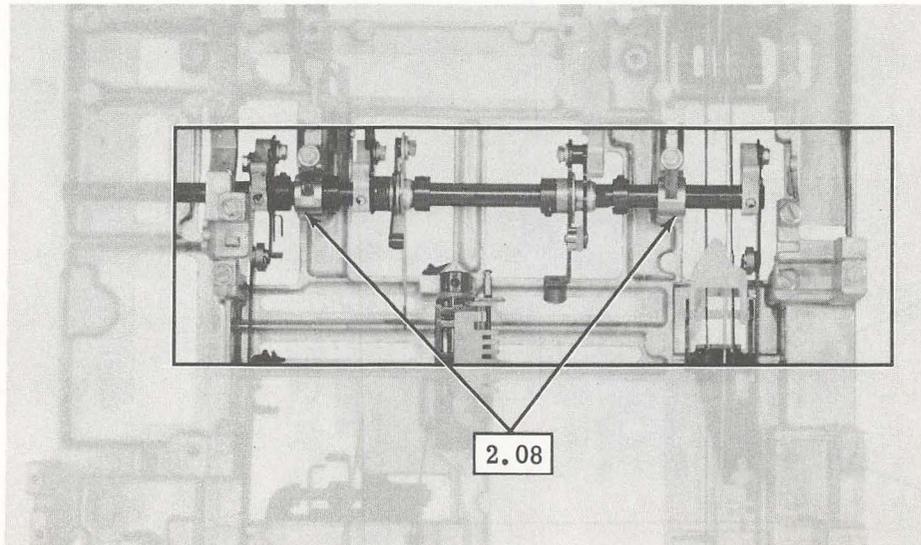
2.05 Motor Area



2.06 Intermediate Gears



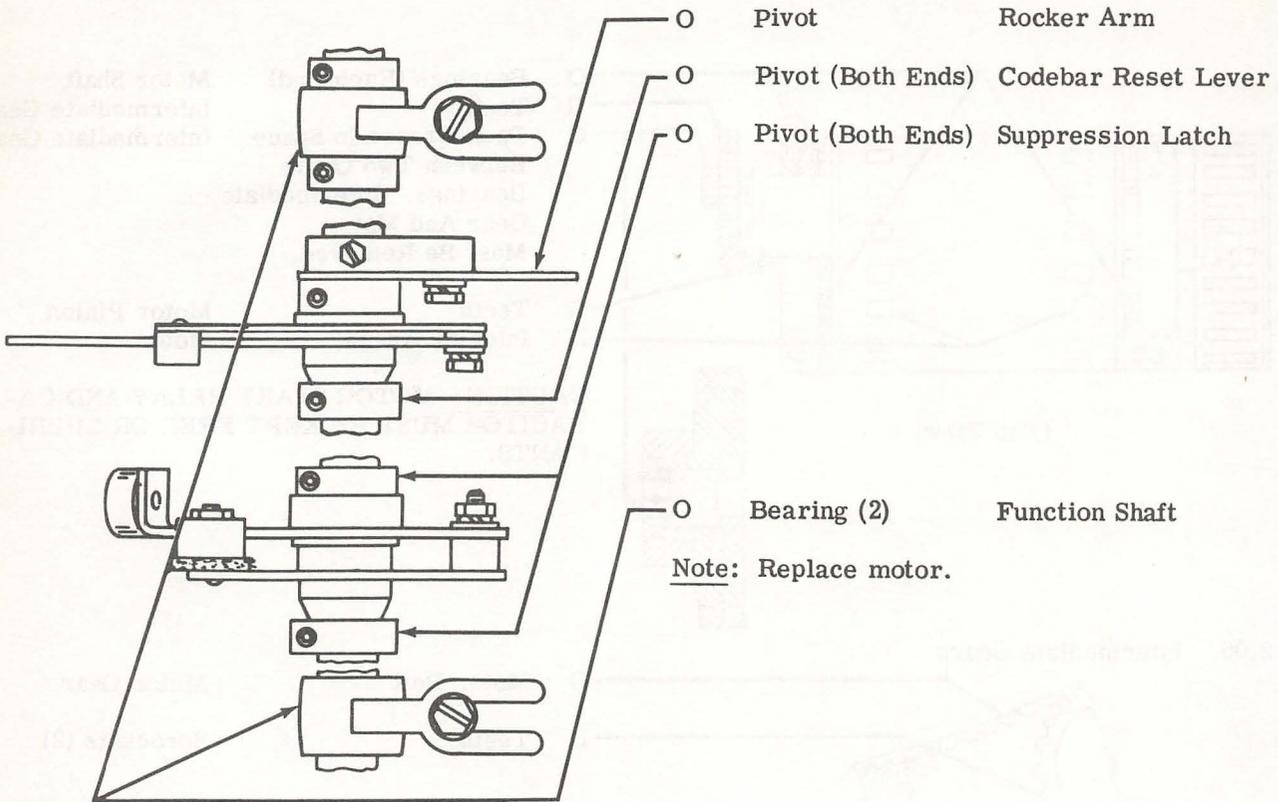
2.07 Function Shaft Area



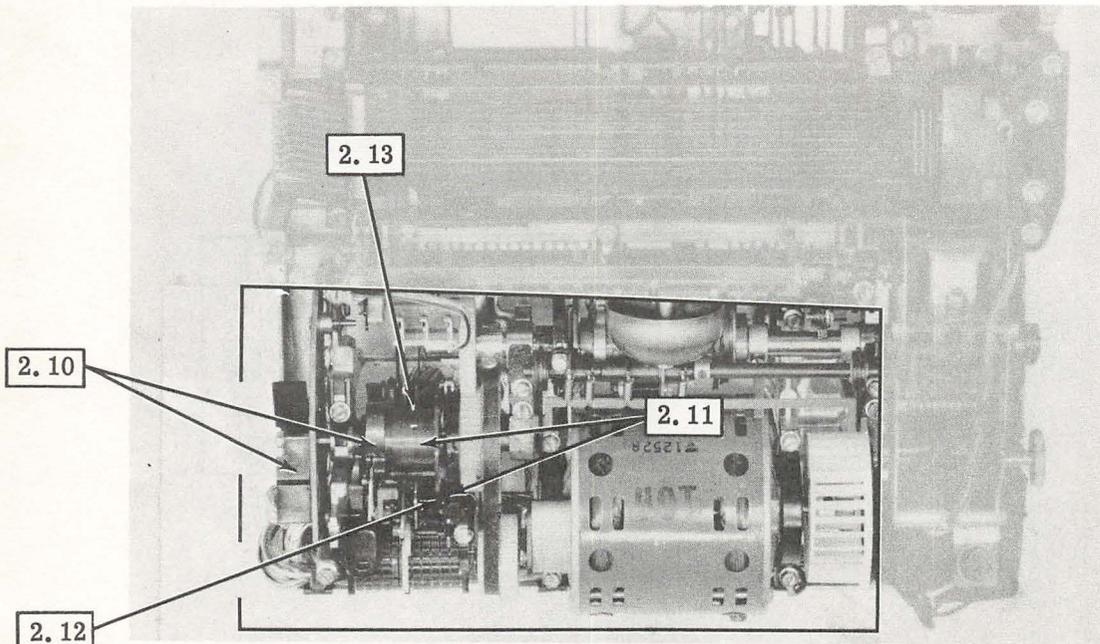
(Top View)

(Typing unit disassembled for illustration only.)

2.08 Function Rocker Shaft

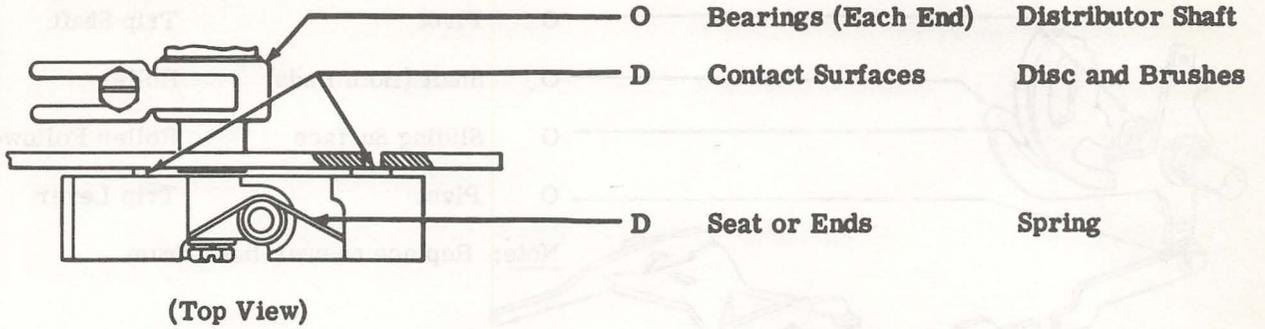


2.09 Distributor Area

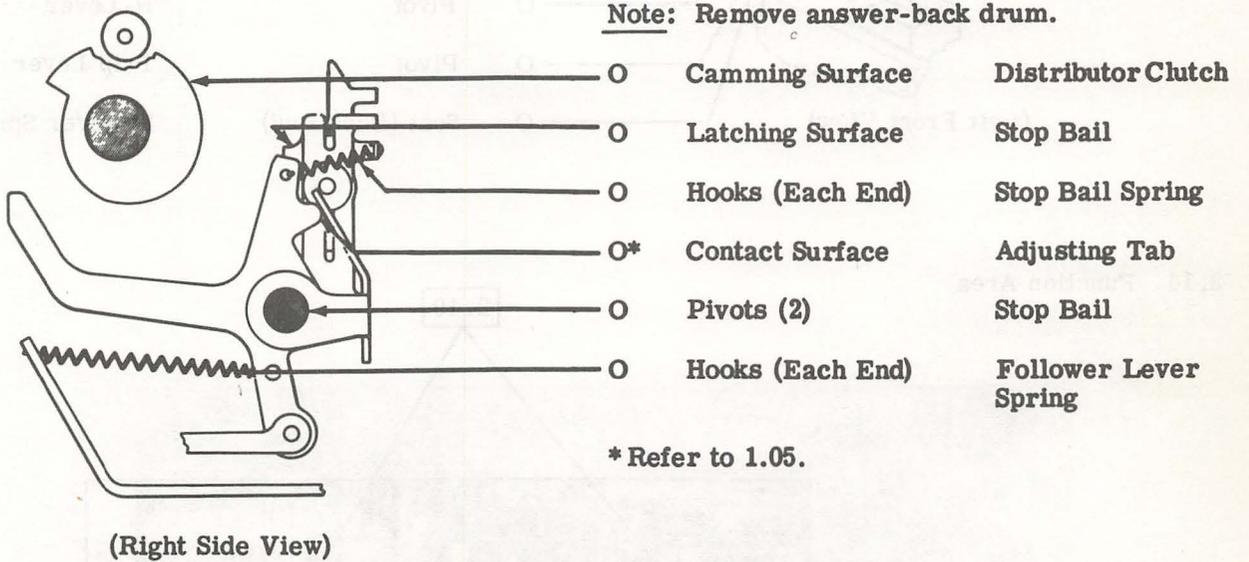


(Top View)

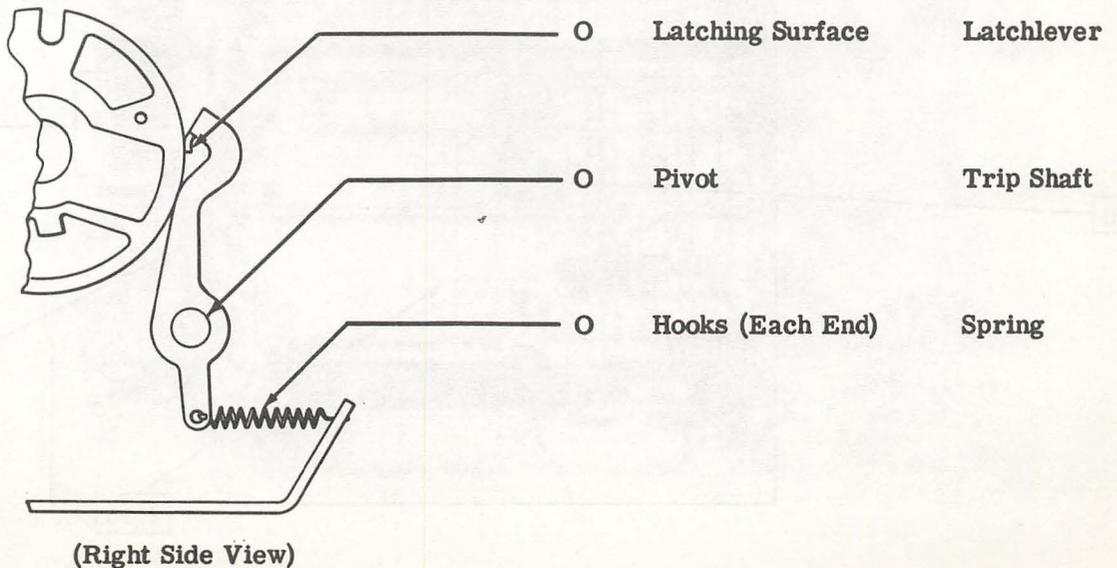
2.10 Disc and Brushes



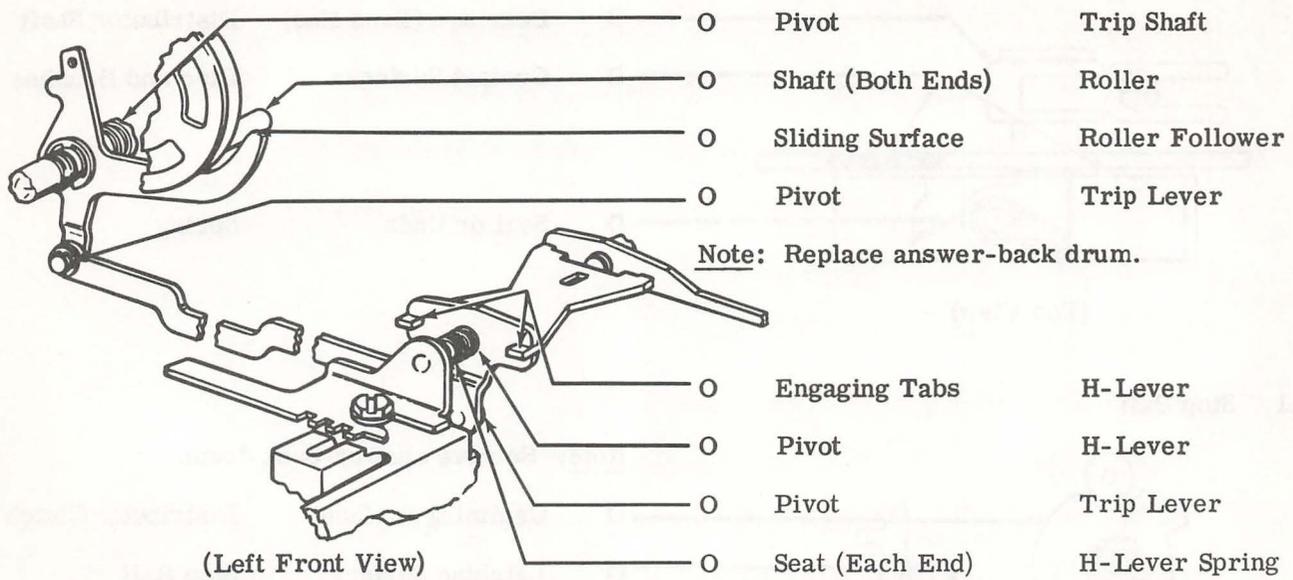
2.11 Stop Bail



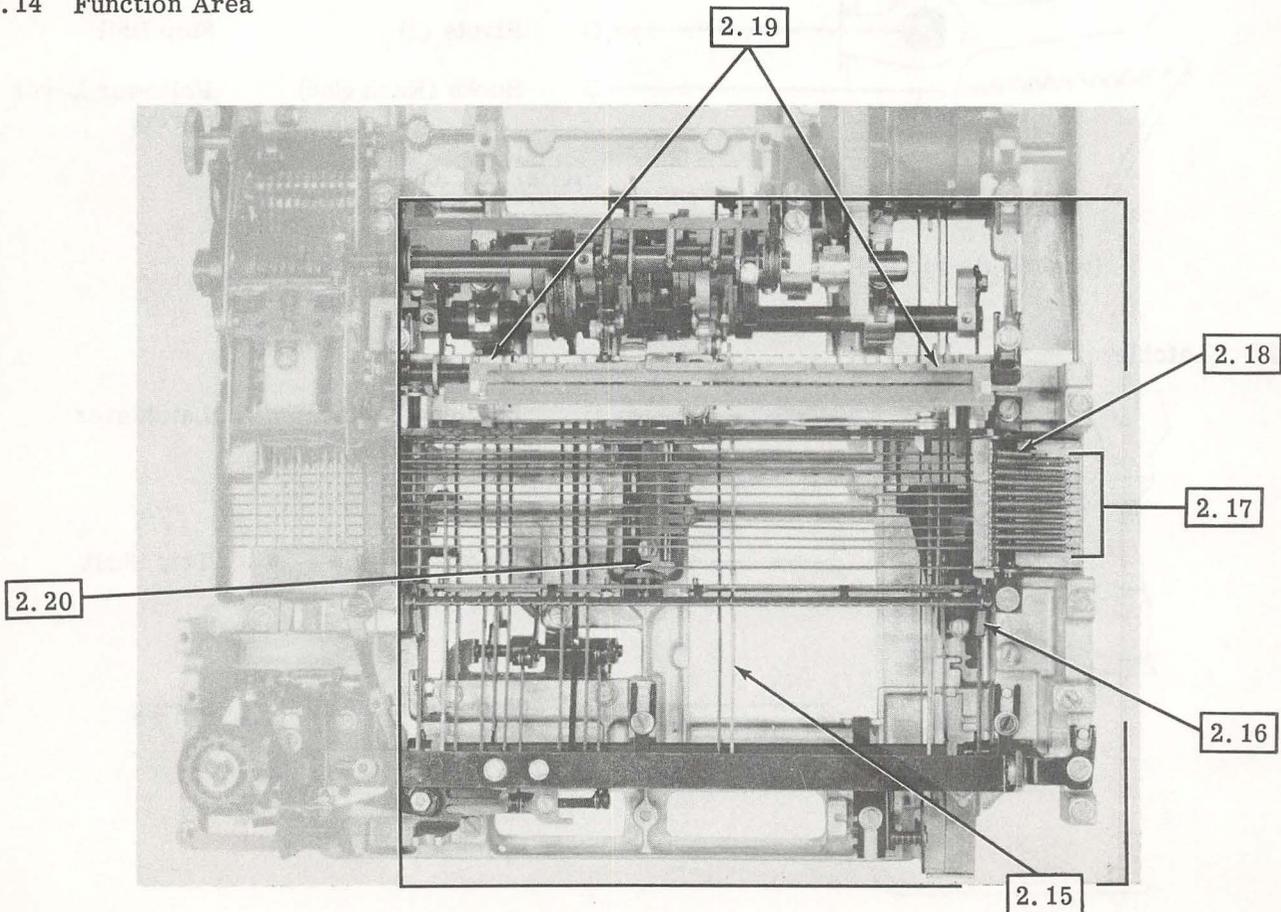
2.12 Latchlever



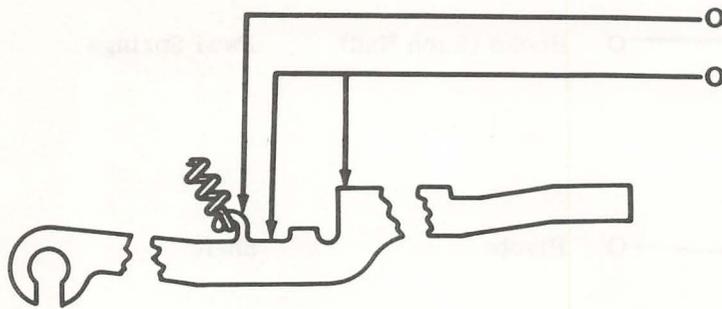
2.13 Trip Lever



2.14 Function Area



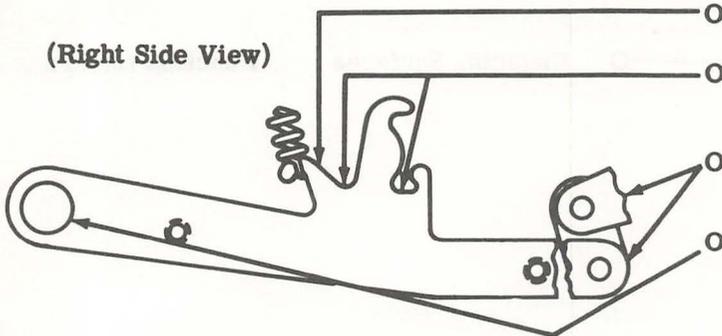
2.15 Function Levers



(Right Side View)

- O Hooks (Each End)      Springs
- O Engaging Surfaces      Function Levers

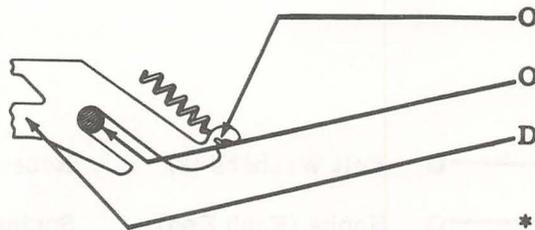
2.16 Stripper Drive Lever



(Right Side View)

- O Hooks (Each End)      Springs
- O Engaging Surfaces      Stripper Drive Lever
- O Pivots      Stripper Drive Link
- O Felt Washers (2) (Each End of Shaft)      Front Function Shaft

2.17 Codebars

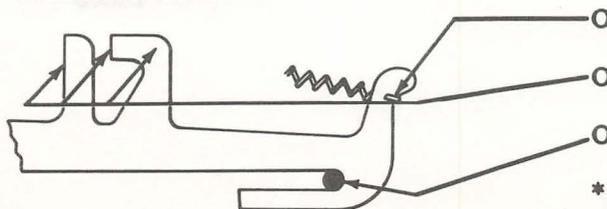


(Front View)

- O Hooks (Each End)      Springs
- O\* Pivots      Shaft
- D Area Between Codebars

\* Refer to 1.05.

2.18 Automatic Codebar

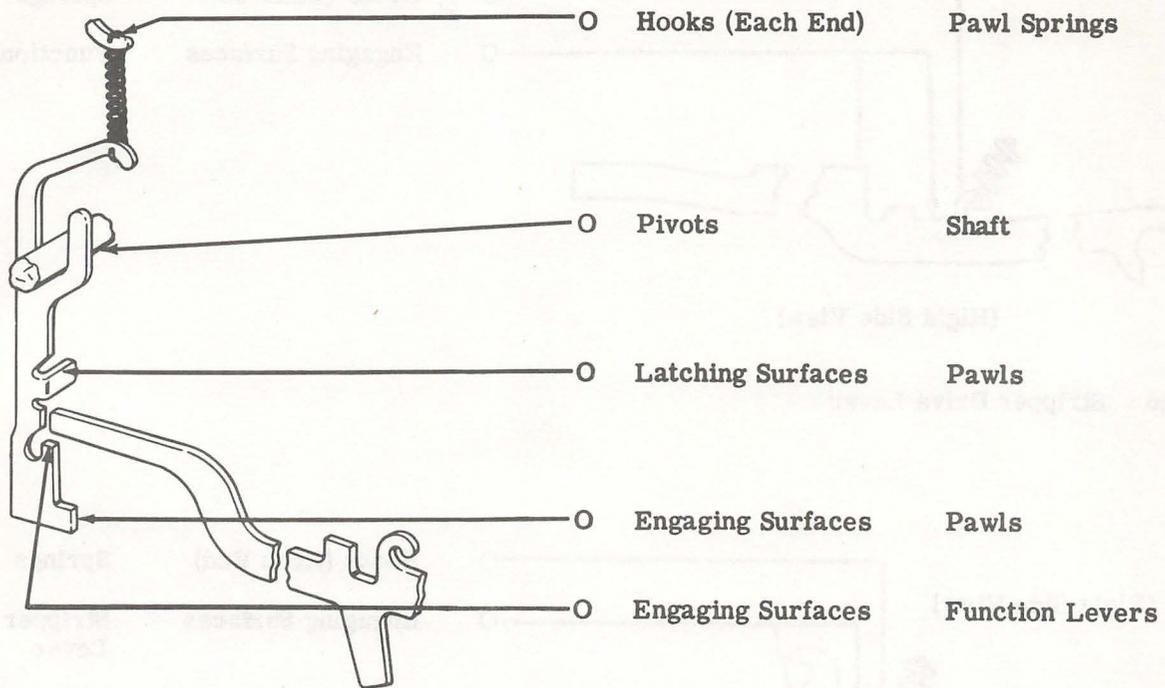


(Front View)

- O Hooks (Each End)      Spring
- O Blocking Contact      Tab (1 of 3)
- O\* Pivot      Shaft

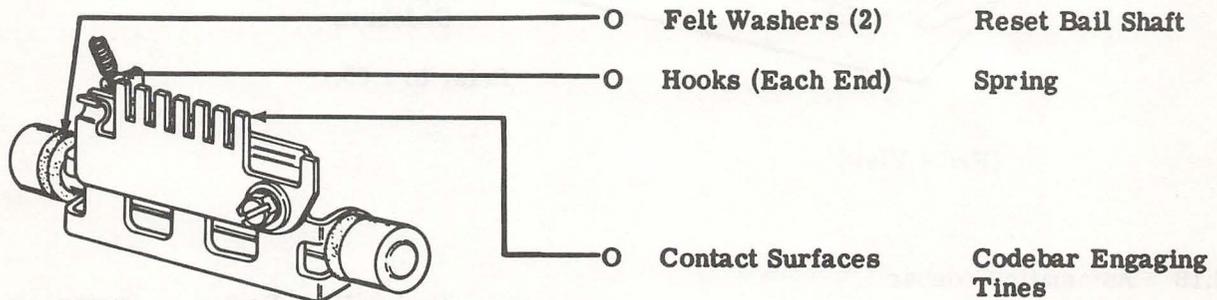
\* Refer to 1.05.

2.19 Rocker and Pawls



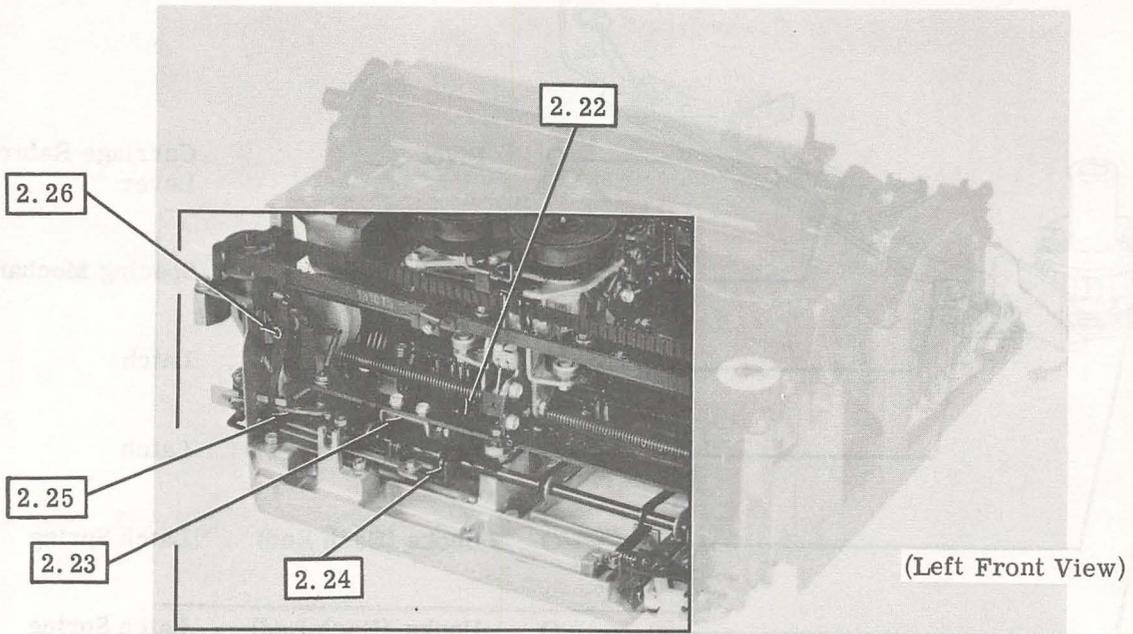
(Left Front View)

2.20 Reset Ball

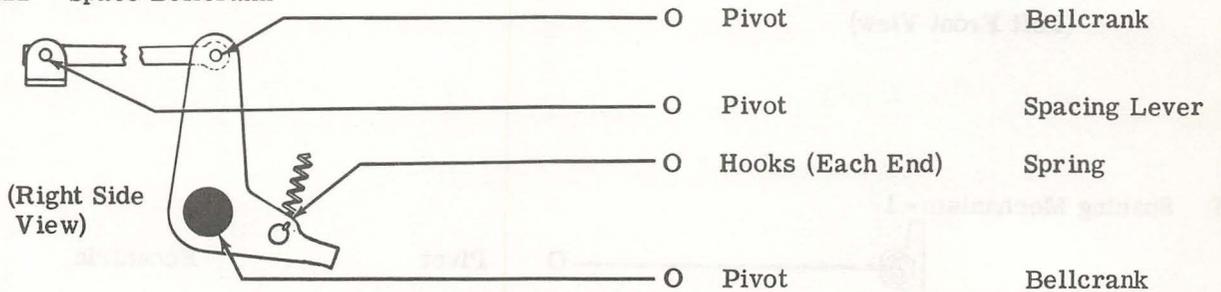


(Left Front View)

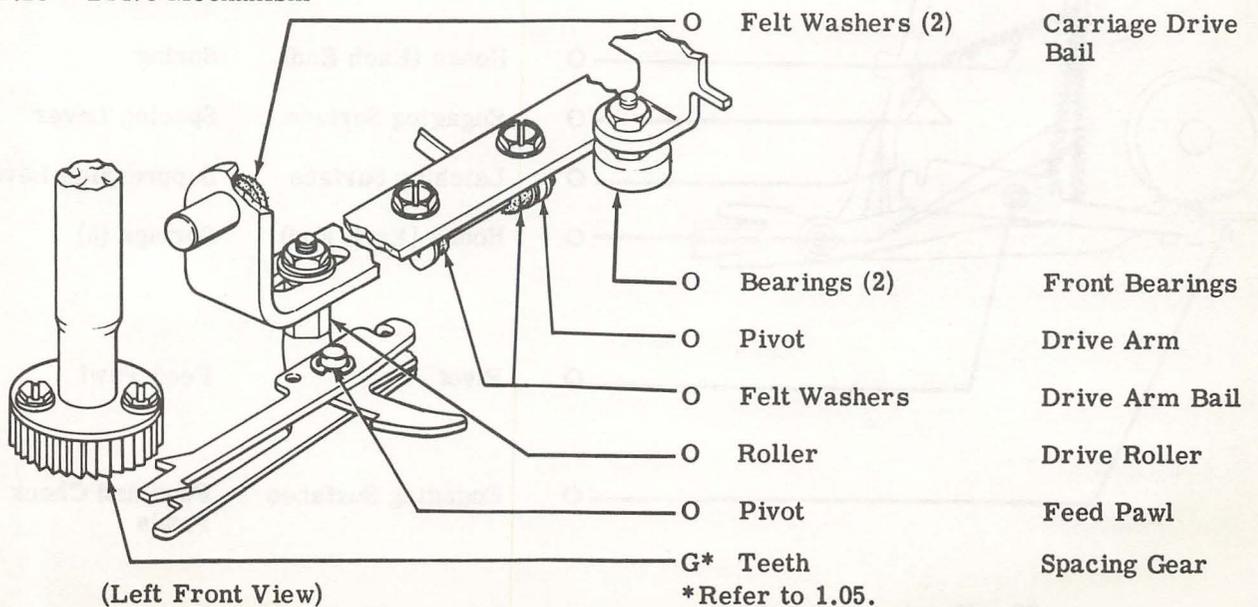
2.21 Spacing Area



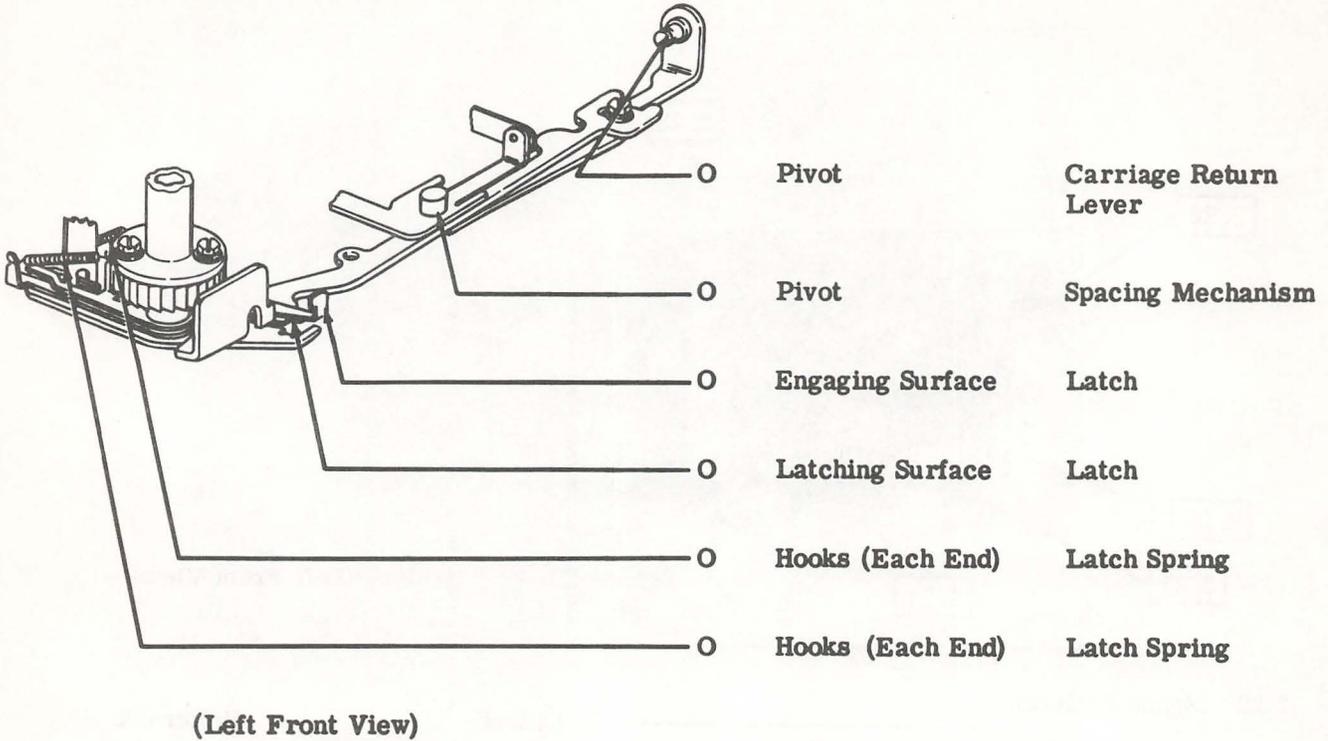
2.22 Space Bellcrank



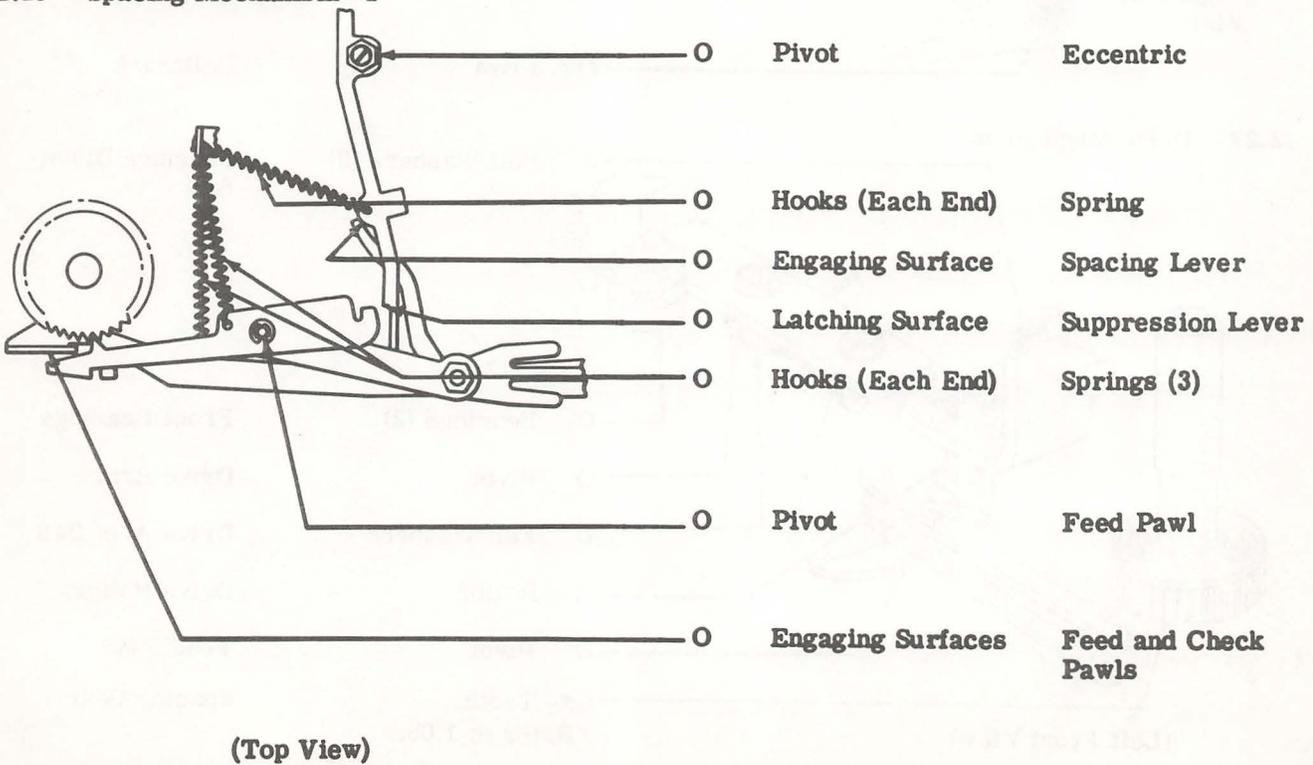
2.23 Drive Mechanism



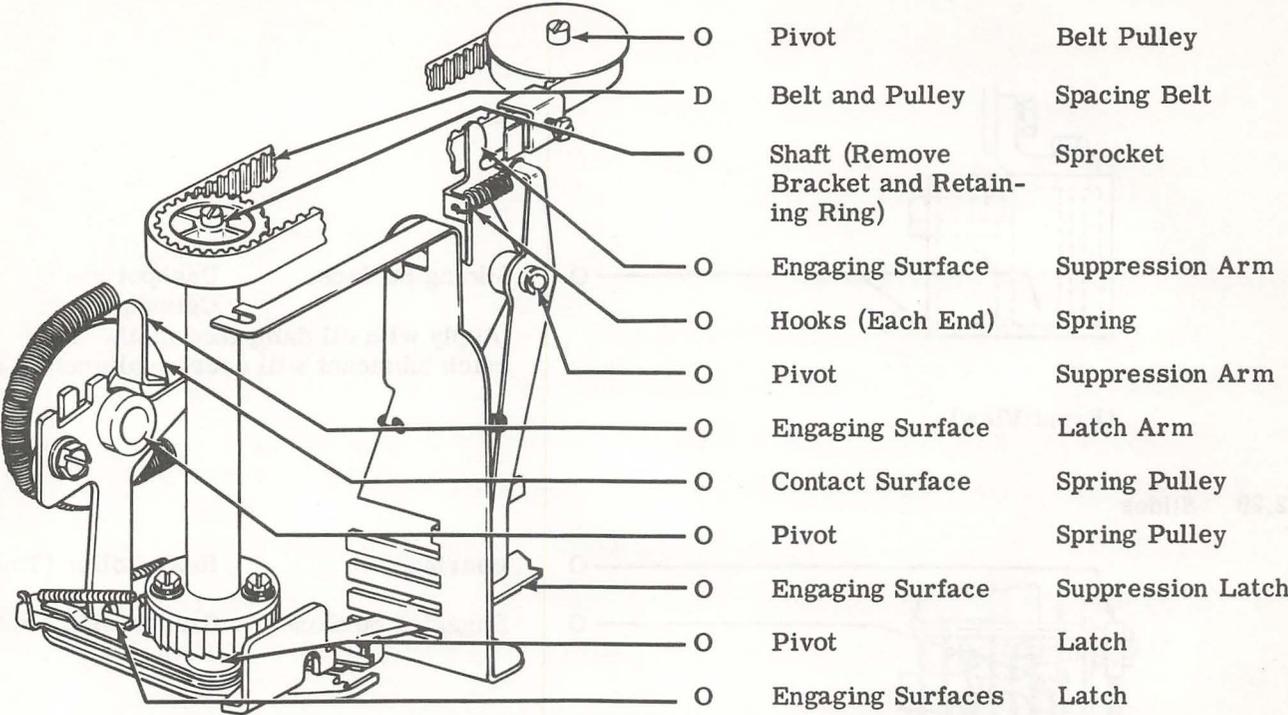
2.24 Carriage Return and Spacing Levers



2.25 Spacing Mechanism - 1

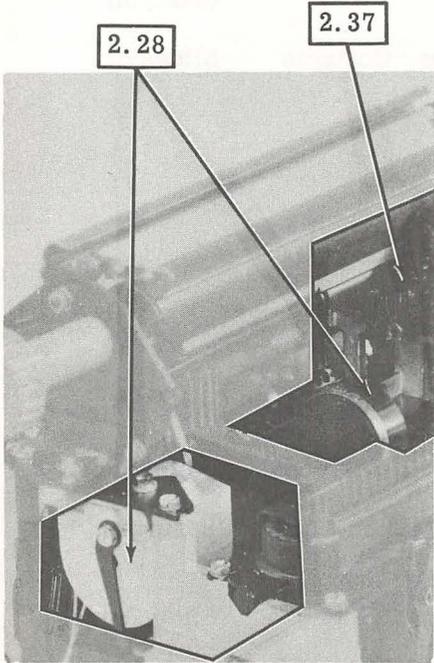


2.26 Spacing Mechanism - 2

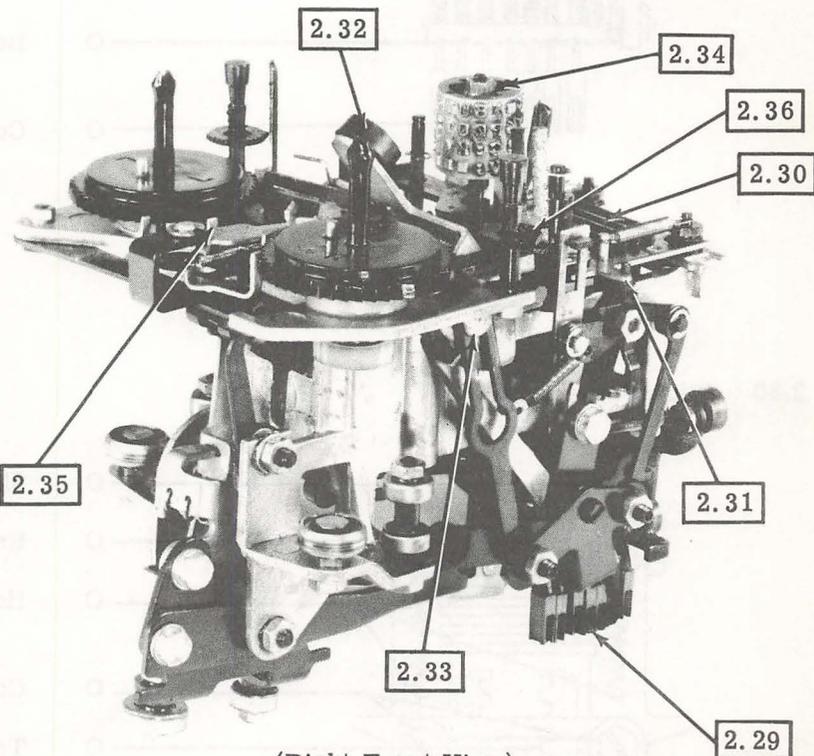


(Left Front View)

2.27 Carriage Area



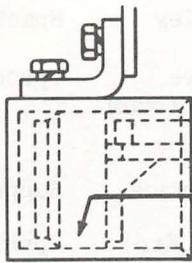
(Left Front View)



(Right Front View)

Note: Remove ribbon mechanism and carriage return spring before lubricating. For instructions, see the appropriate disassembly and reassembly section.

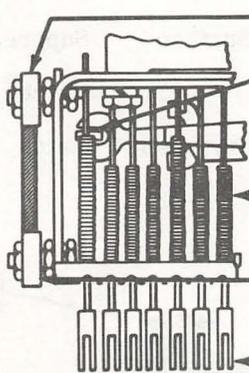
2.28 Dashpot



(Front View)

Sliding Surfaces      Dashpot and Cylinder  
 (Apply with oil dampened cloth. Too much lubricant will cause malfunction.)

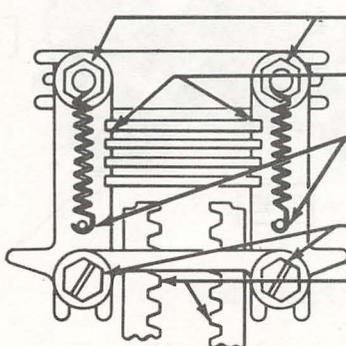
2.29 Slides



(Left Side View)

O	Bearing	Rear Roller (Top)
O	Engaging Surface	Suppression Latch Fork
O	Seats (Each End)	Slide Guide Springs
O	Bearing	Rear Roller (Bottom)
O	Codebar Contacts	Slides

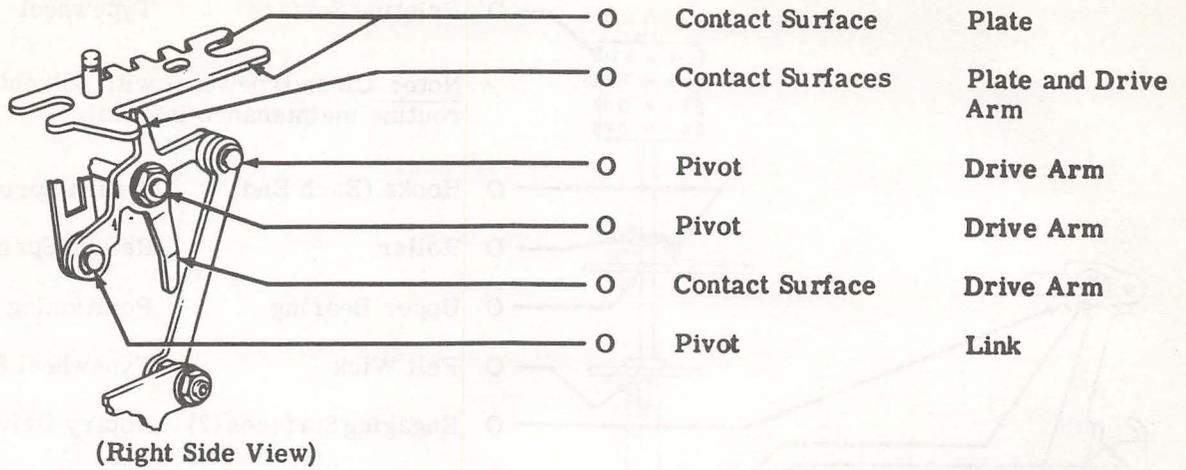
2.30 Slide Guideplates



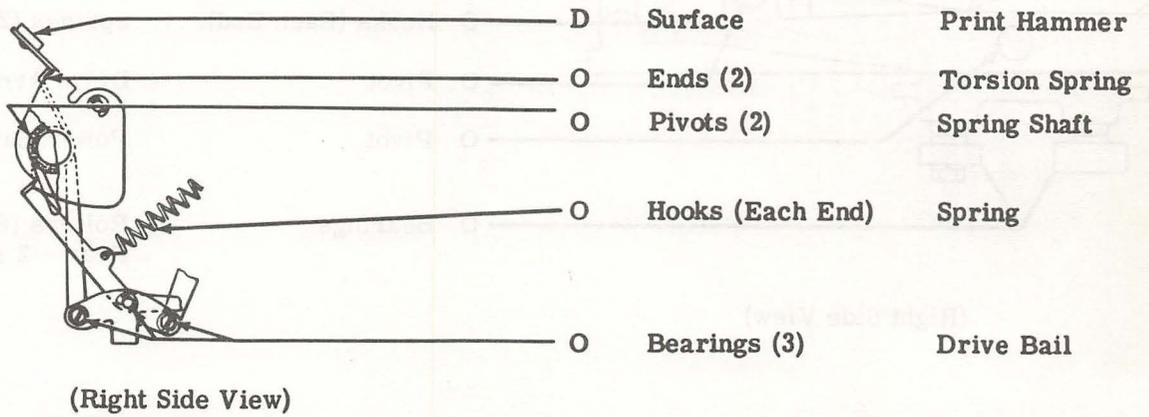
(Top View)

O	Sliding Contacts	Stop Plate
O	Engaging Surfaces	Stop Slides
O	Hooks (Each End)	Springs
O	Contact Points	Slide Guides
O	Teeth	Pinion Racks

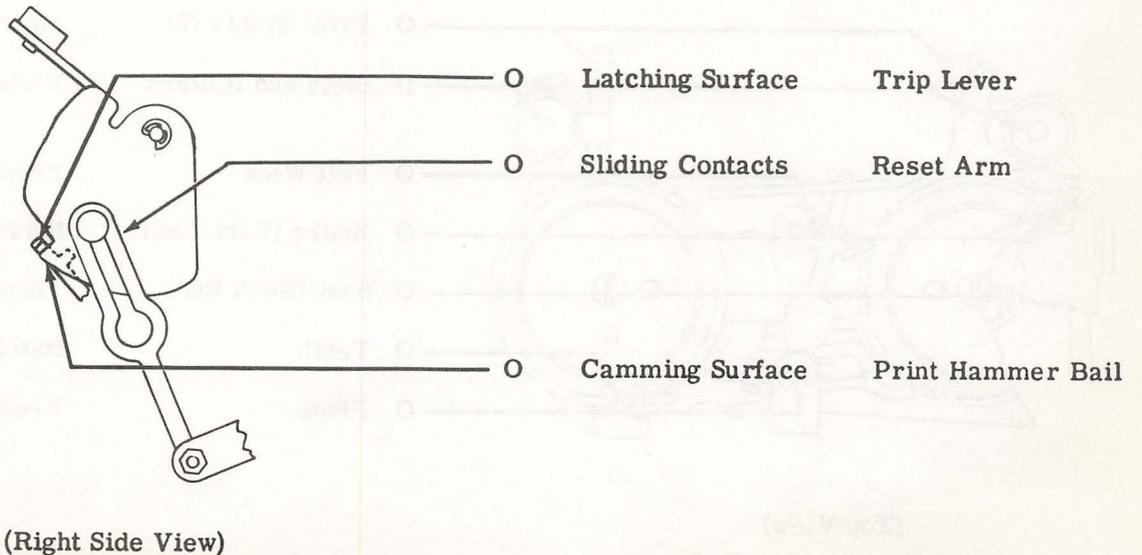
2.31 Drive Arm



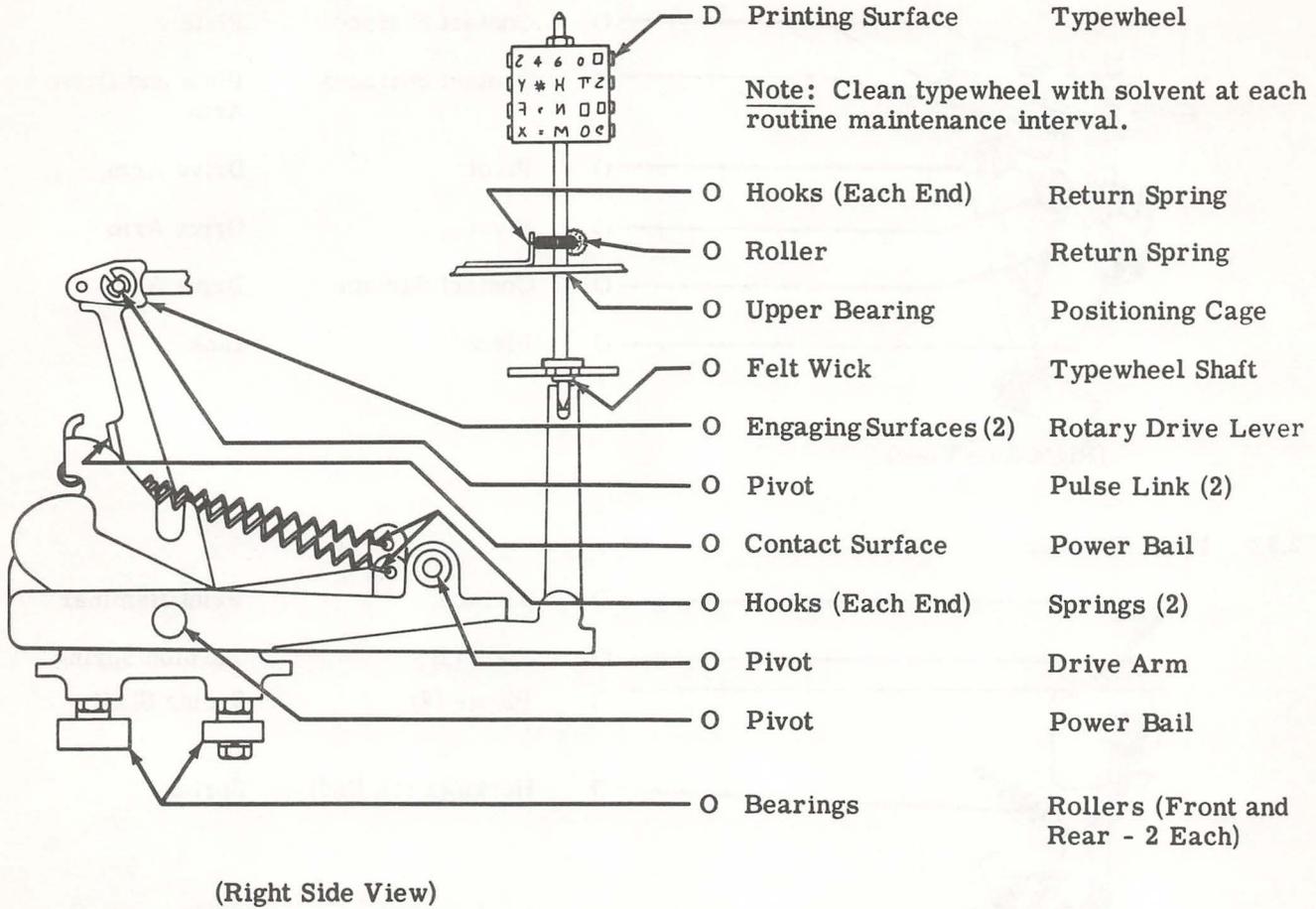
2.32 Print Hammer



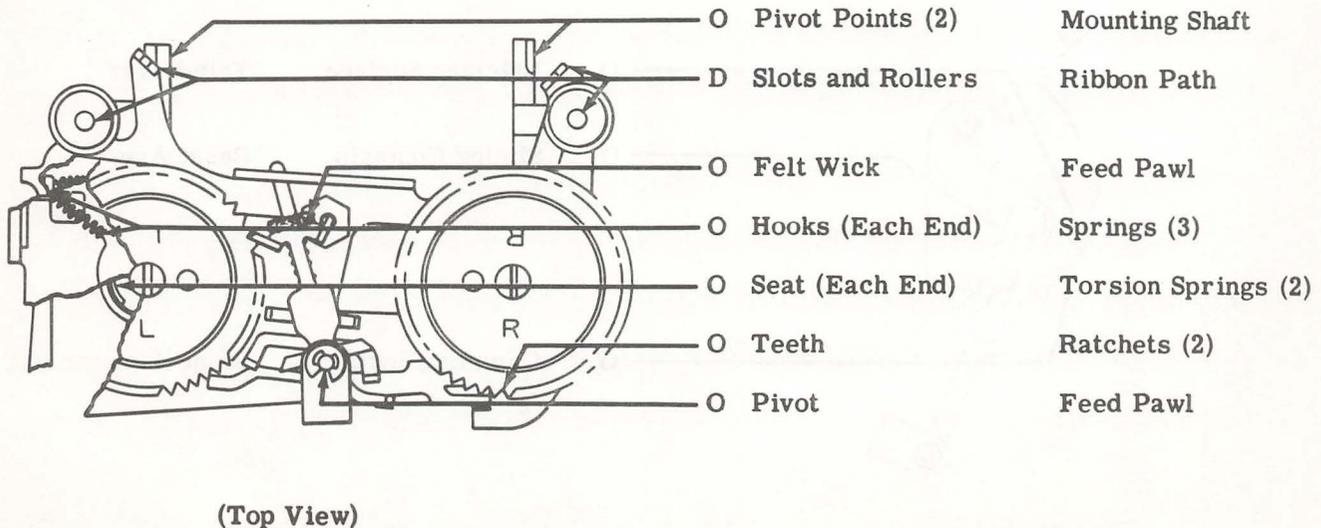
2.33 Reset Arm



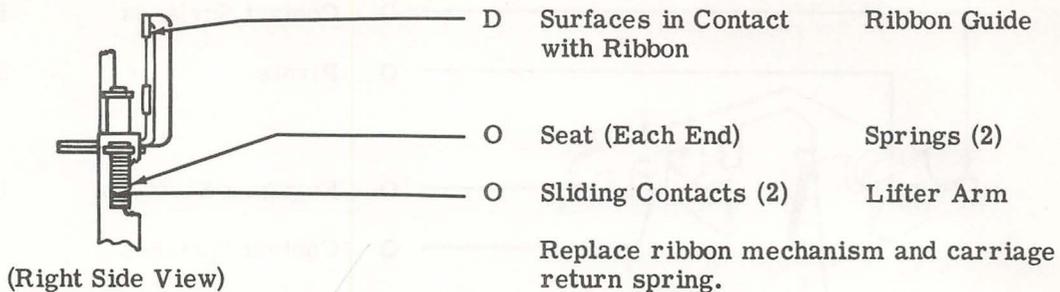
2.34 Typewheel Mechanism



2.35 Ribbon Mechanism

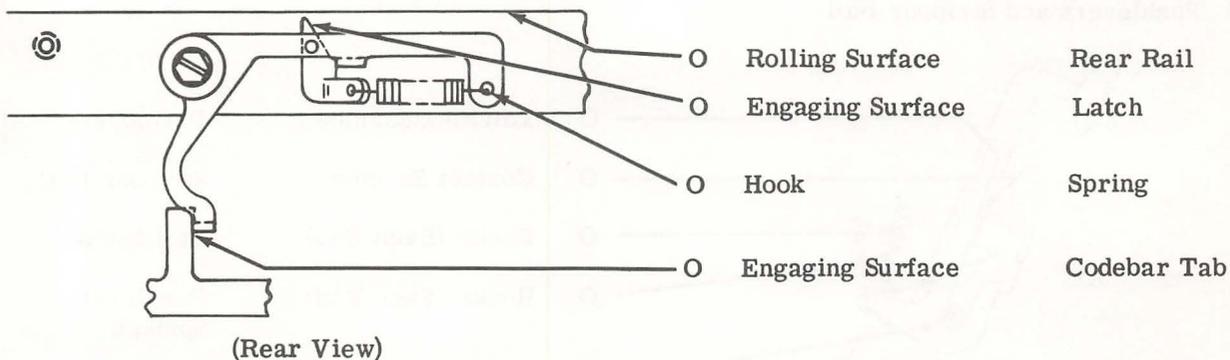


2.36 Ribbon Guide Spring

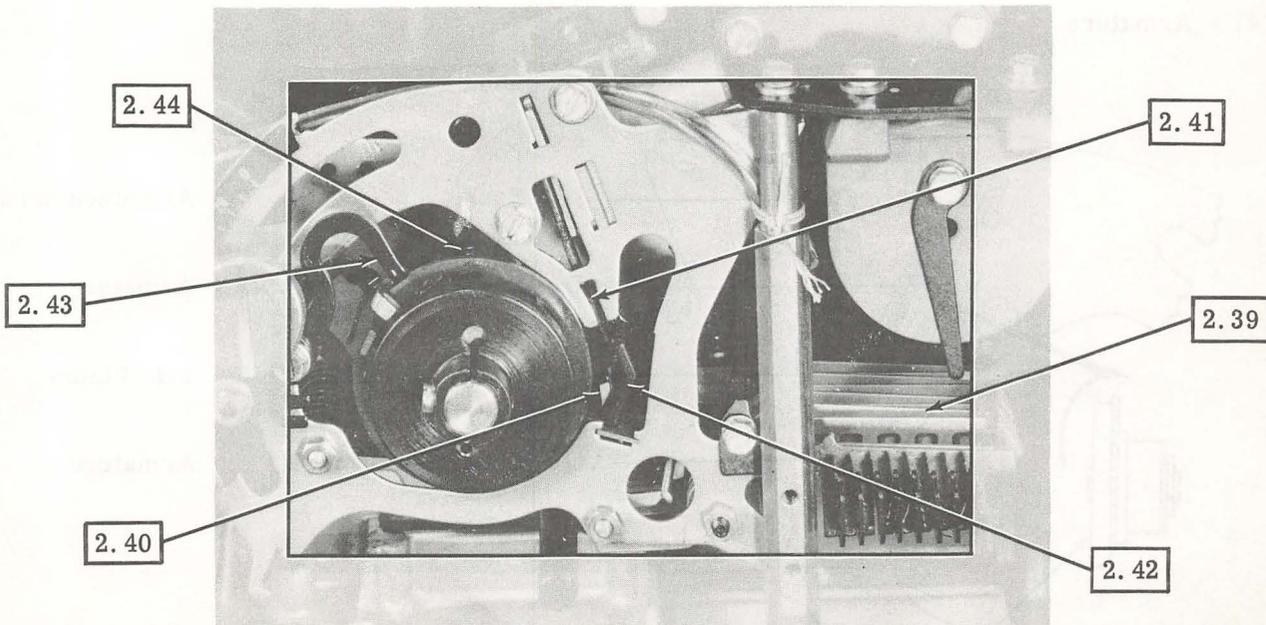


2.37 Carriage Rear Rail

Note: These lubrication instructions apply only to typing units equipped with a TP181304 latch.

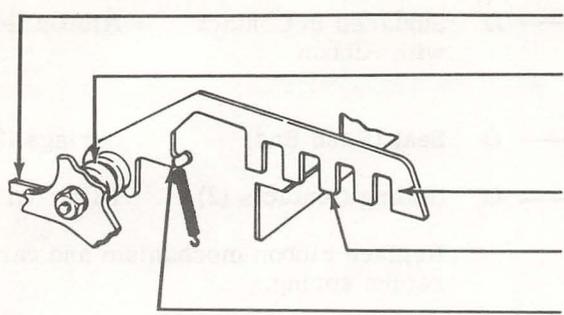


2.38 Selector Area



(Left Side View)

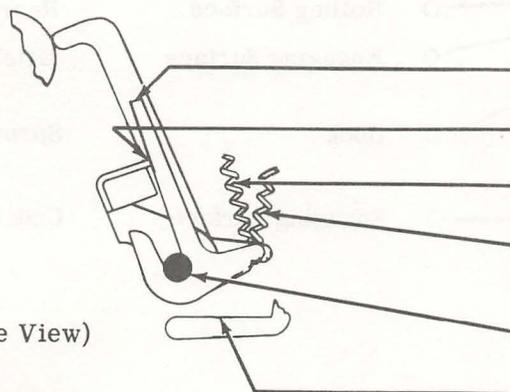
2.39 Blocking Levers



- O Contact Surfaces      Blocking Levers
- O Pivots                      Shaft
- O Engaging Surfaces      Codebar Slots
- O Contact Surfaces      Tines
- O Hooks                      Springs

(Left Front View)

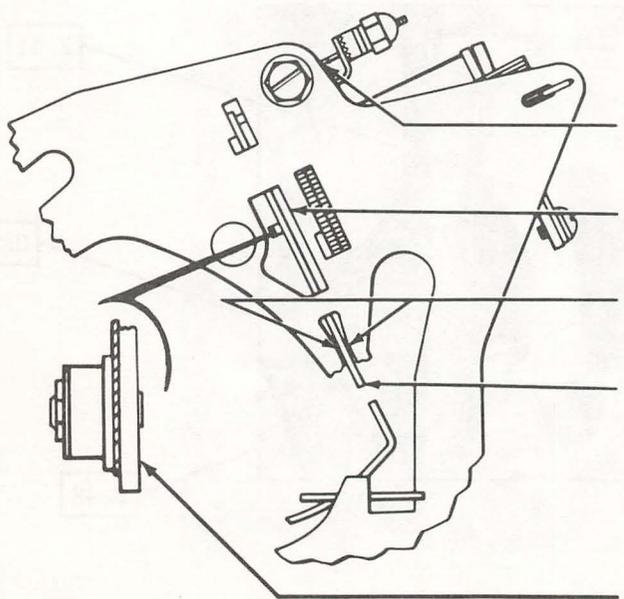
2.40 Pushlevers and Stripper Bail



- O Latching Surface      Pushlevers
- O Contact Surface      Stripper Bail
- O Hooks (Each End)      Bail Spring
- O Hooks (Each End)      Pushlever Springs
- O Pivots                      Pushlevers
- O Contact Surfaces      Blocking Levers

(Left Side View)

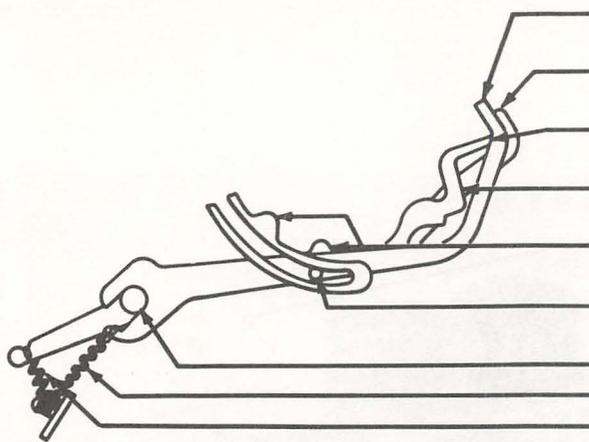
2.41 Armature



- D Hooks                      Armature Spring
- D Engaging Surfaces      Armature
- O Engaging Surfaces      Side Plates
- G Engaging Surface      Armature
- D Engaging Surface      Armature

(Left Side View)

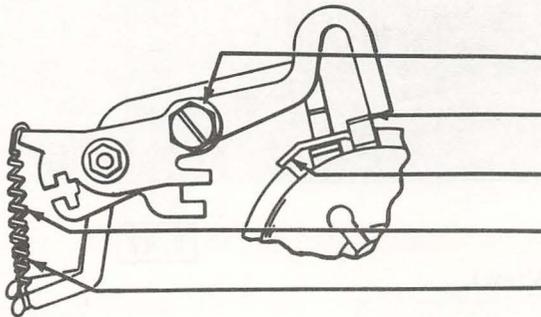
2.42 Selector Levers



(Left Side View)

- O Tip Start Lever
- O Contact Surface Locklever
- O Contact Surface Selector Levers
- O Engaging Surface Selector Levers
- O Camming Surface Selector Levers
- O Sliding Contact Start Lever
- O Pivots Levers
- O Hooks (Each End) Start Lever Spring
- O Hooks (Each End) Spring (9)

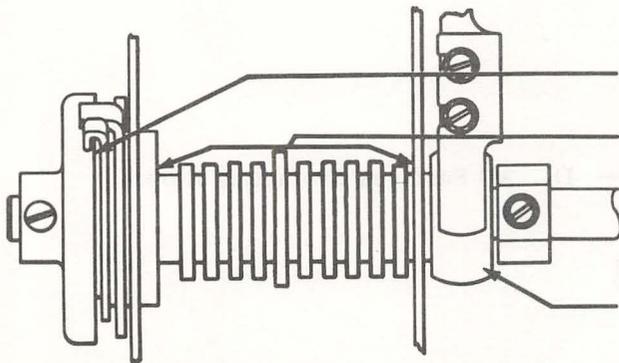
2.43 Latchlever and Trip Lever



(Left Side View)

- O Pivots (2) Levers
- O Engaging Surface Trip Lever
- O Latching Surface Latchlever
- O Hooks (Each End) Trip Lever Spring
- O Hooks (Each End) Latchlever Spring

2.44 Selector Clutch



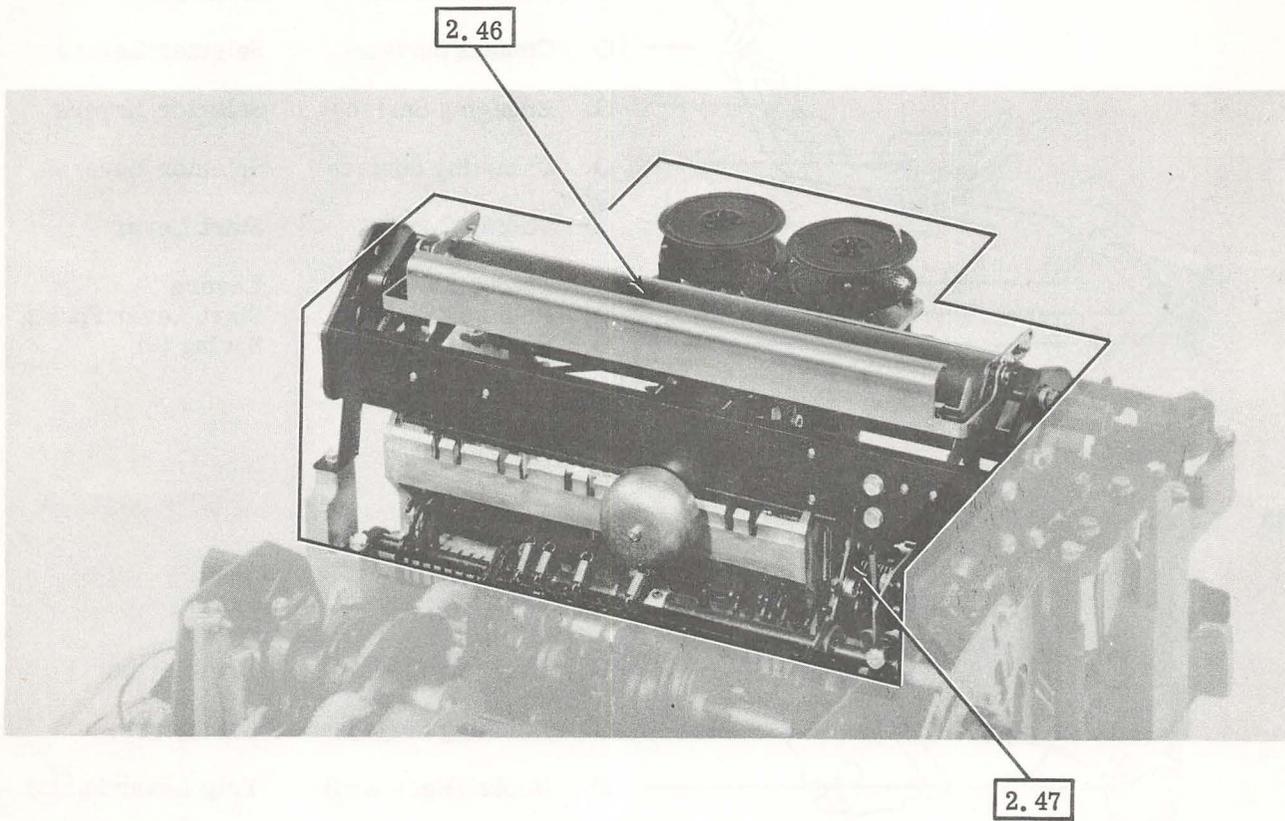
(Top View)

- O\* Internal Mechanism Selector Clutch
- O\* Camming Surface Selector Clutch
- O Bearing (Each End) Main Shaft

\*Refer to 1.05.

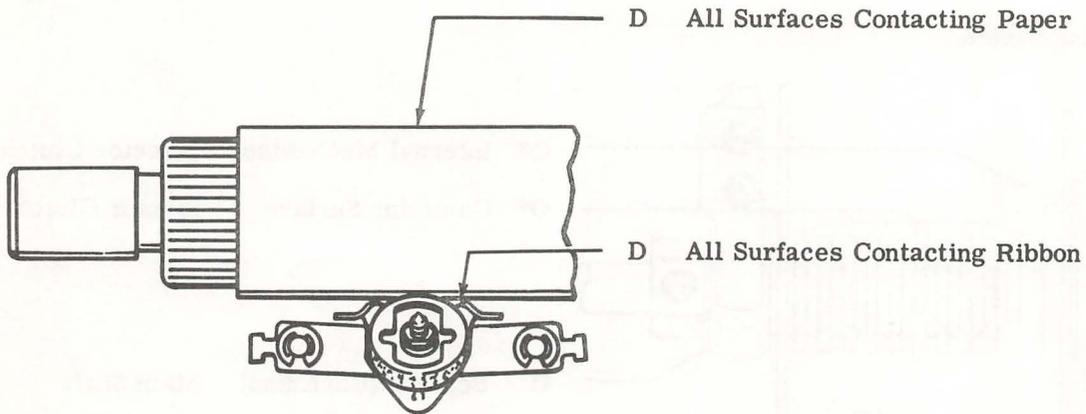
FRICION FEED MECHANISMS

2.45 Paper Feed Area



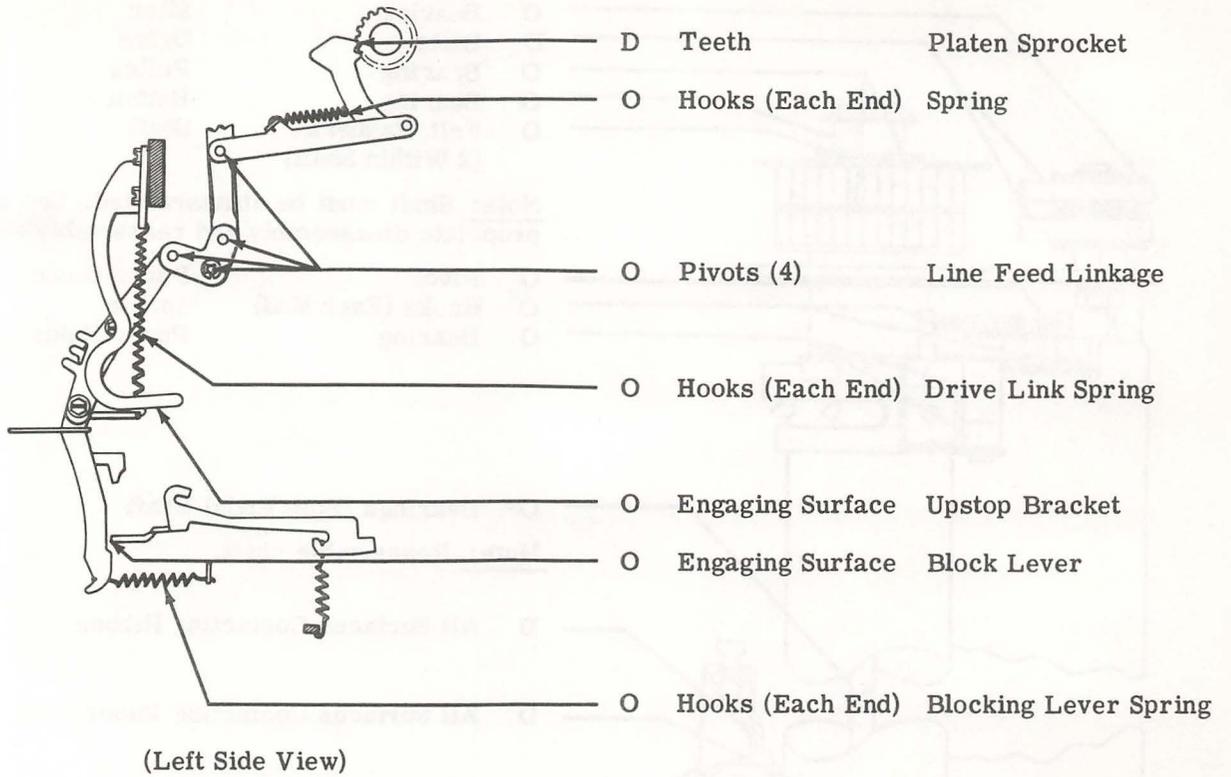
(Rear View)

2.46 Platen



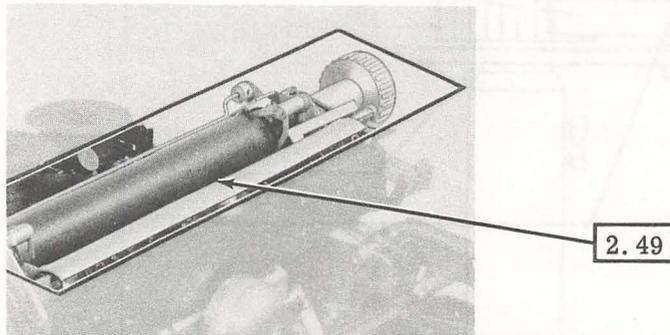
**CAUTION: DO NOT CLEAN PLATEN WITH SOLVENTS.**

2.47 Line Feed Mechanism



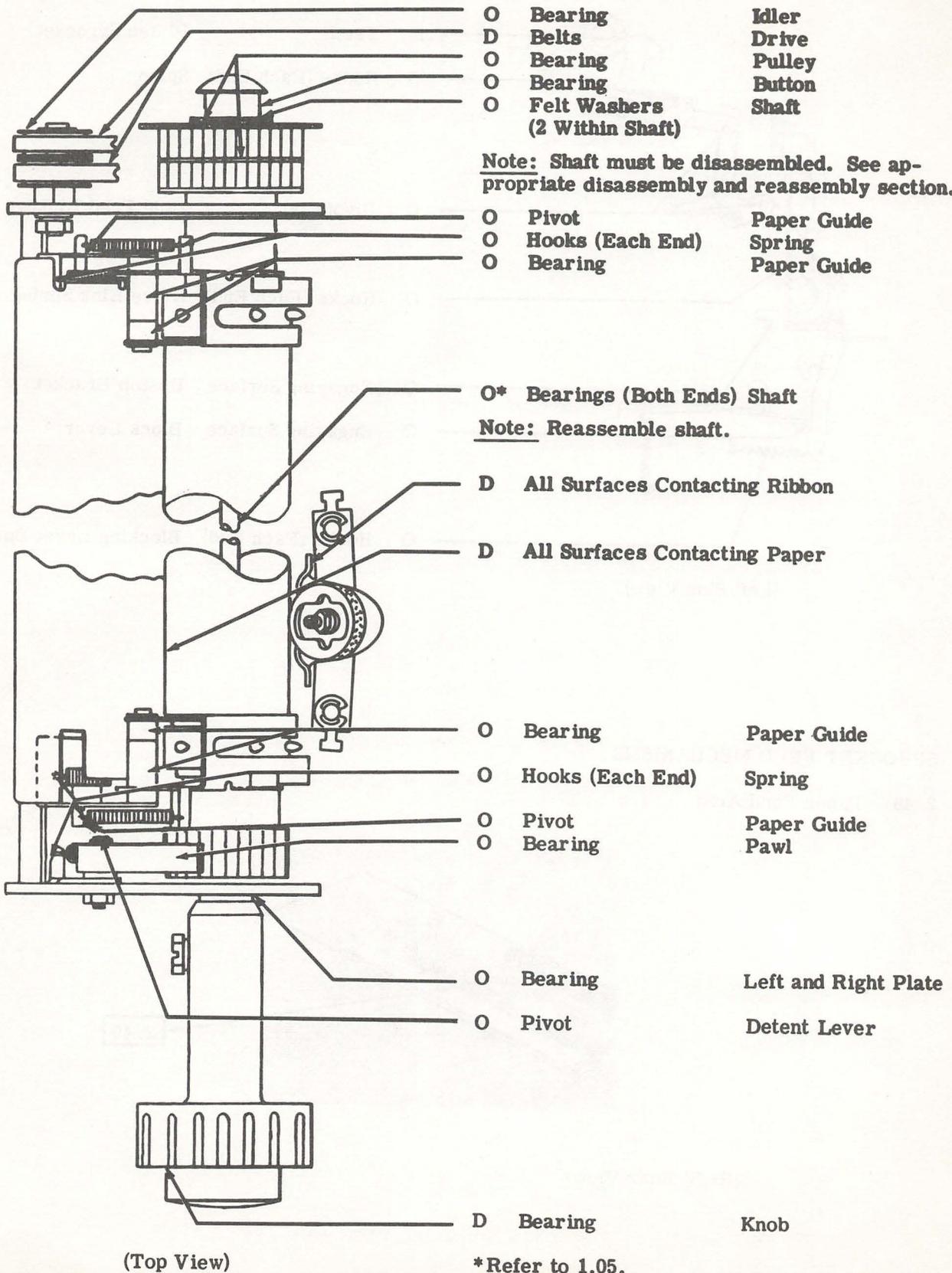
SPROCKET FEED MECHANISMS

2.48 Paper Feed Area

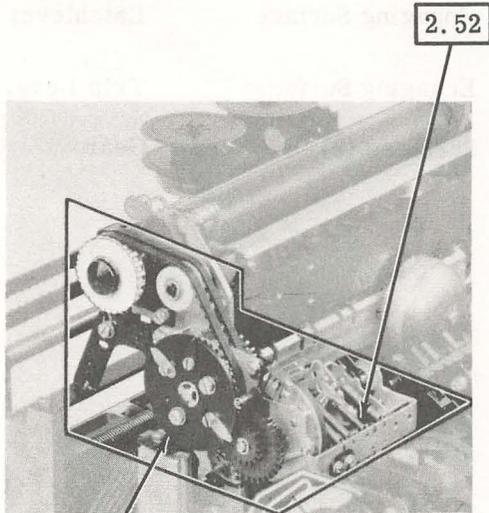


(Right Rear View)

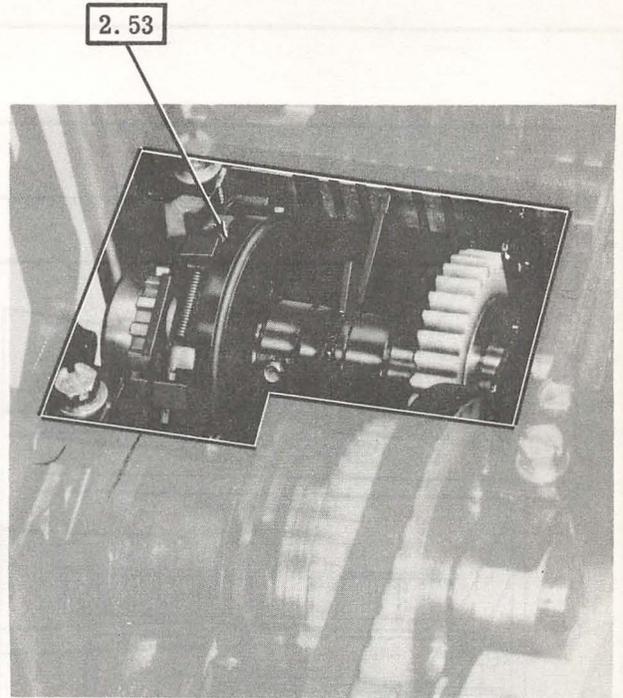
2.49 Platen Mechanism



2.50 Platen Drive Area



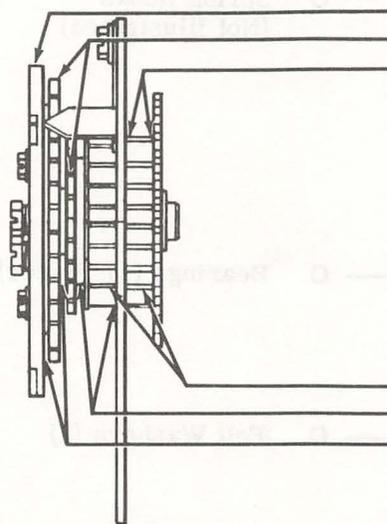
(Right Rear View)



(Left Rear View)

(Form-out mechanism removed for illustration purposes. Removal for lubrication is not required.)

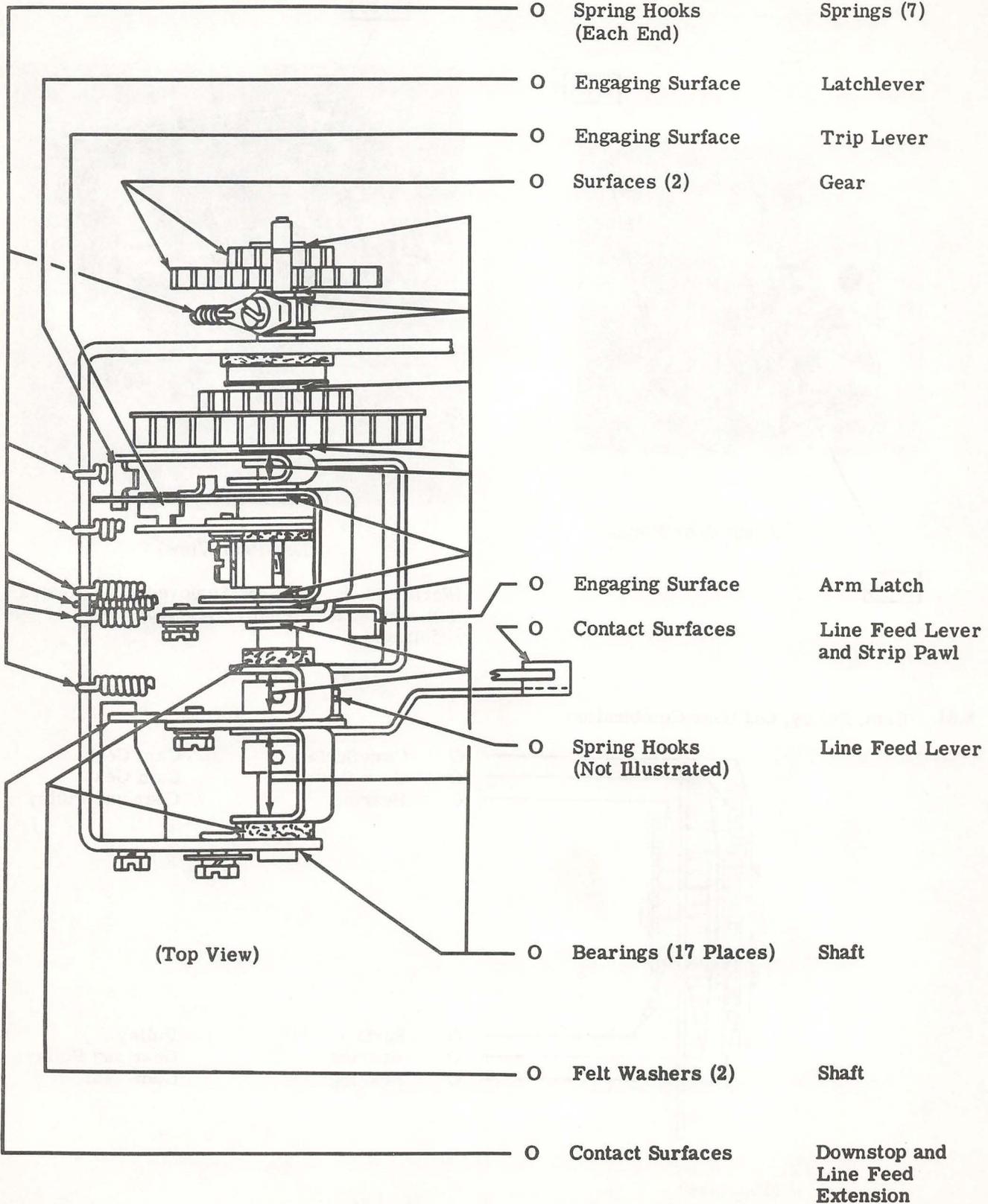
2.51 Cam, Pulley, and Gear Combination



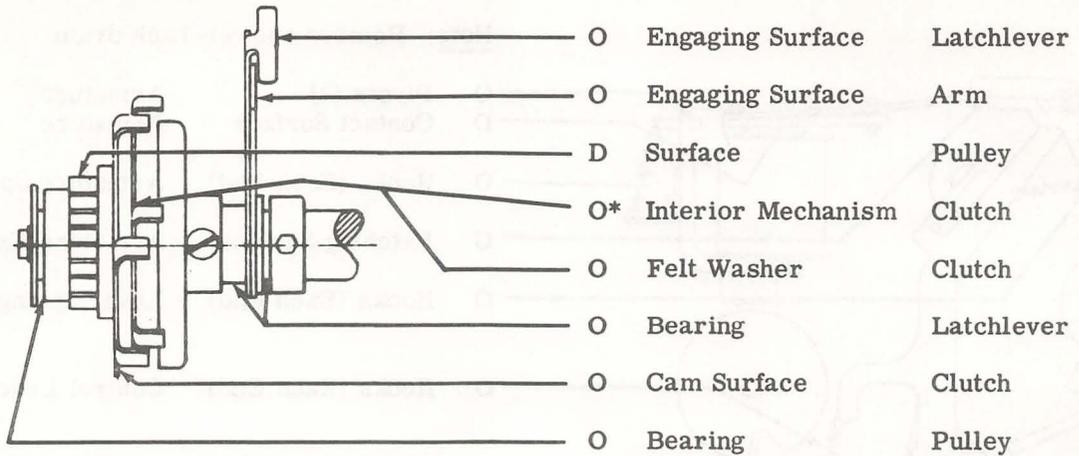
(Top View)

- |   |              |                 |
|---|--------------|-----------------|
| O | Cam Surface  | Cam Gear        |
| O | Gear Surface | Cam Gear        |
| O | Bearing      | Gear and Pulley |
|   |              |                 |
| D | Surface      | Pulley          |
| O | Bearing      | Gear and Pulley |
| O | Bearing      | Cam Gear        |

2.52 Form-Out Mechanism



2.53 Line Feed Clutch

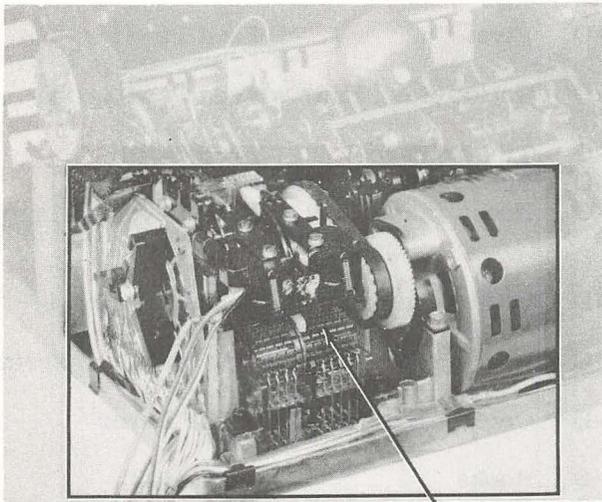


(Top View)

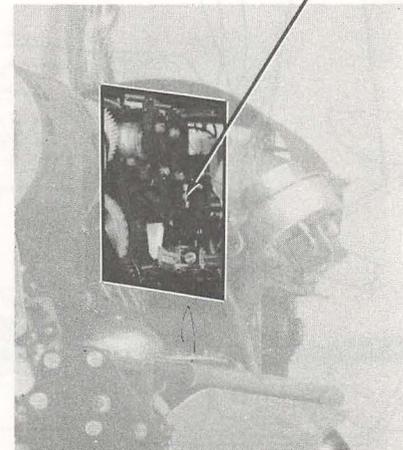
\* Refer to 1.05.

3. VARIATIONS TO BASIC UNITS

3.01 Answer-Back Area



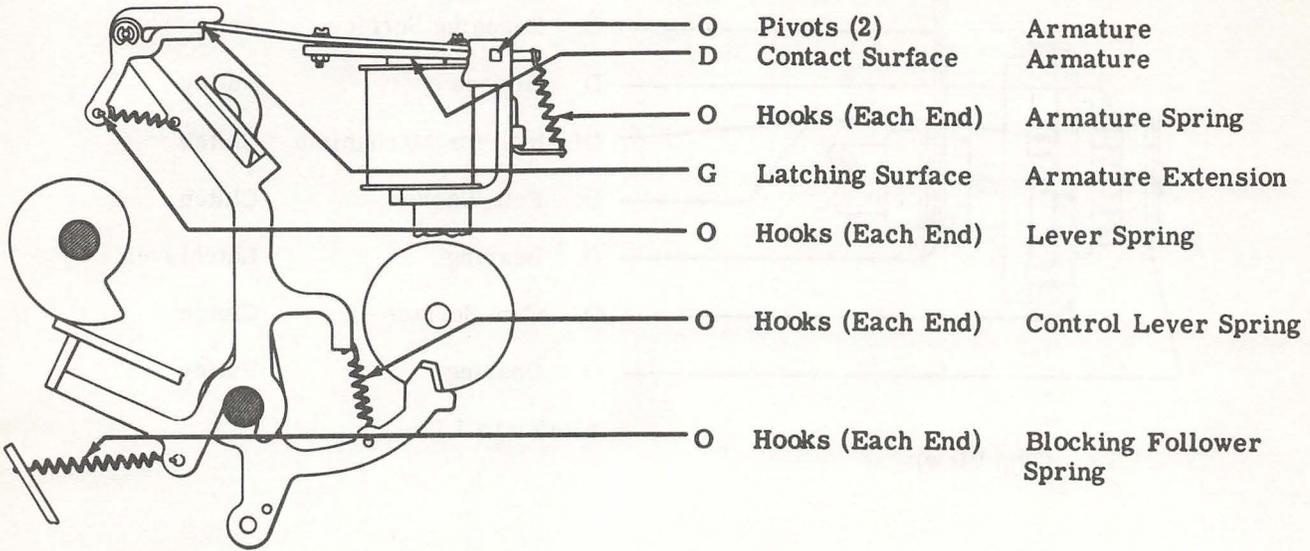
(Left Rear View)



(Left Side View)

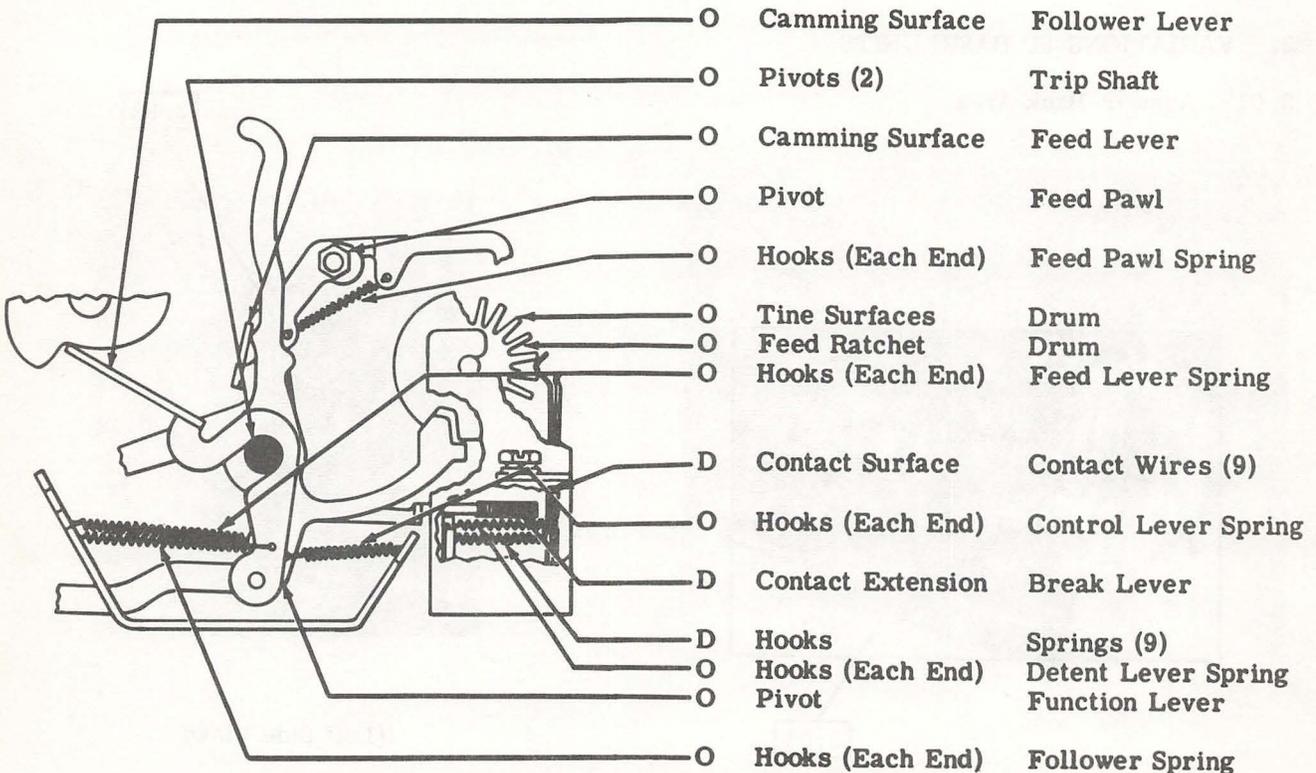
3.02 Trip Magnet

Note: Remove answer-back drum.



- |   |                  |                          |
|---|------------------|--------------------------|
| O | Pivots (2)       | Armature                 |
| D | Contact Surface  | Armature                 |
| O | Hooks (Each End) | Armature Spring          |
| G | Latching Surface | Armature Extension       |
| O | Hooks (Each End) | Lever Spring             |
| O | Hooks (Each End) | Control Lever Spring     |
| O | Hooks (Each End) | Blocking Follower Spring |

3.03 Answer-Back Mechanism



- |   |                   |                      |
|---|-------------------|----------------------|
| O | Camming Surface   | Follower Lever       |
| O | Pivots (2)        | Trip Shaft           |
| O | Camming Surface   | Feed Lever           |
| O | Pivot             | Feed Pawl            |
| O | Hooks (Each End)  | Feed Pawl Spring     |
| O | Tine Surfaces     | Drum                 |
| O | Feed Ratchet      | Drum                 |
| O | Hooks (Each End)  | Feed Lever Spring    |
| D | Contact Surface   | Contact Wires (9)    |
| O | Hooks (Each End)  | Control Lever Spring |
| D | Contact Extension | Break Lever          |
| D | Hooks             | Springs (9)          |
| O | Hooks (Each End)  | Detent Lever Spring  |
| O | Pivot             | Function Lever       |
| O | Hooks (Each End)  | Follower Spring      |

Note: Replace answer-back drum.

**CAUTION: DO NOT CLEAN CONTACT BLOCK WITH SOLVENTS.**