

37 TYPING UNIT  
 LUBRICATION

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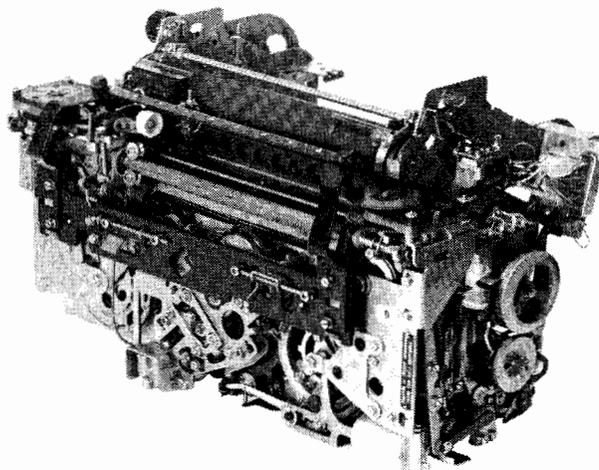


Figure 1 - 37 Typing Unit (Late Design)

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**1. GENERAL**

1.01 This section provides lubrication procedures for the late design 37 typing unit (Figure 1). For similar information about the early design 37 typing unit, refer to Section 574-320-701TC.

1.02 Lubrication of the 37 typing unit is presented by areas with the procedures arranged counterclockwise around the typing unit. Following the procedures in this manner minimizes shifting and handling of the unit.

1.03 Figures are used to show the lubrication areas. Paragraph numbers on the figures refer to the lubrication points. References made to front, bottom, rear, left, or right apply to the typing unit in its normal position as shown in 2.01.

1.04 Lubricate the 37 typing unit before placing it in service and just prior to putting it in storage. The mechanism of the typing unit should be relubricated after 200 hours of operation or four weeks, whichever comes first. Thereafter, lubricate all mechanisms of the typing unit according to the following schedule:

- 100 wpm . . . . . 2000 hours or 9 months\*
- 150 wpm . . . . . 1500 hours or 6 months\*

\*Whichever occurs first.

**CAUTION: DISCONNECT ALL AC POWER CORDS BEFORE PERFORMING ANY PROCEDURE.**

1.05 The general lubrication requirements consist of oil locations on hollow shafts, oil cups, felt washers, and in most locations where parts rub or move with respect to each other. Grease should be used on gears, rollers, points of heavy pressure, and some ball bearings. Lubrication areas for the typing unit are outlined as follows.

Pivot points require two or three drops of oil.

Coil springs require one drop of oil for each end and one to two drops on the coil.

Felt washers are saturated with oil.

Cams and sliding surfaces require a film of oil.

Note: Refer to the appropriate section for ordering information on lubricants. A list of maintenance tools can be found in Section 570-005-800TC.

1.06 Oil should be applied by means of an oiler to points where it will adhere or where pressure is nominal. In lubricating small parts, a minimum amount of oil should be applied so that the oil remains on the part and does not run off. Excessive lubricants should be removed with a dry lint-free cloth. Keep all electrical contacts free of oil or grease. If the surface between the selector relay armature and magnet

pole piece have oil or foreign matter, proceed as follows.

1. Place a piece of clean paper between the armature and pole piece.
2. Energize the magnet.
3. Pull the paper through the armature and pole piece and check to insure that lint or pieces of paper do not remain.

Note: Closed ball bearings do not require lubrication. All open ball bearings should be packed with grease (KS7471).

1.07 Symbols O1, O2, O3, etc, refer to 1, 2, 3, etc, drops of oil. The following list of symbols apply to the lubrication instructions:

- |   |                                   |
|---|-----------------------------------|
| O | Oil KS7470                        |
| G | Grease KS7471                     |
| D | Keep dry, no lubricant permitted. |

1.08 Over lubrication which would allow oil to drip or grease to be thrown on other parts should be avoided. Capillary action and vaporization tend to keep a thin film of oil on the mechanisms. This prevents rust and provides sufficient lubrication to many points.

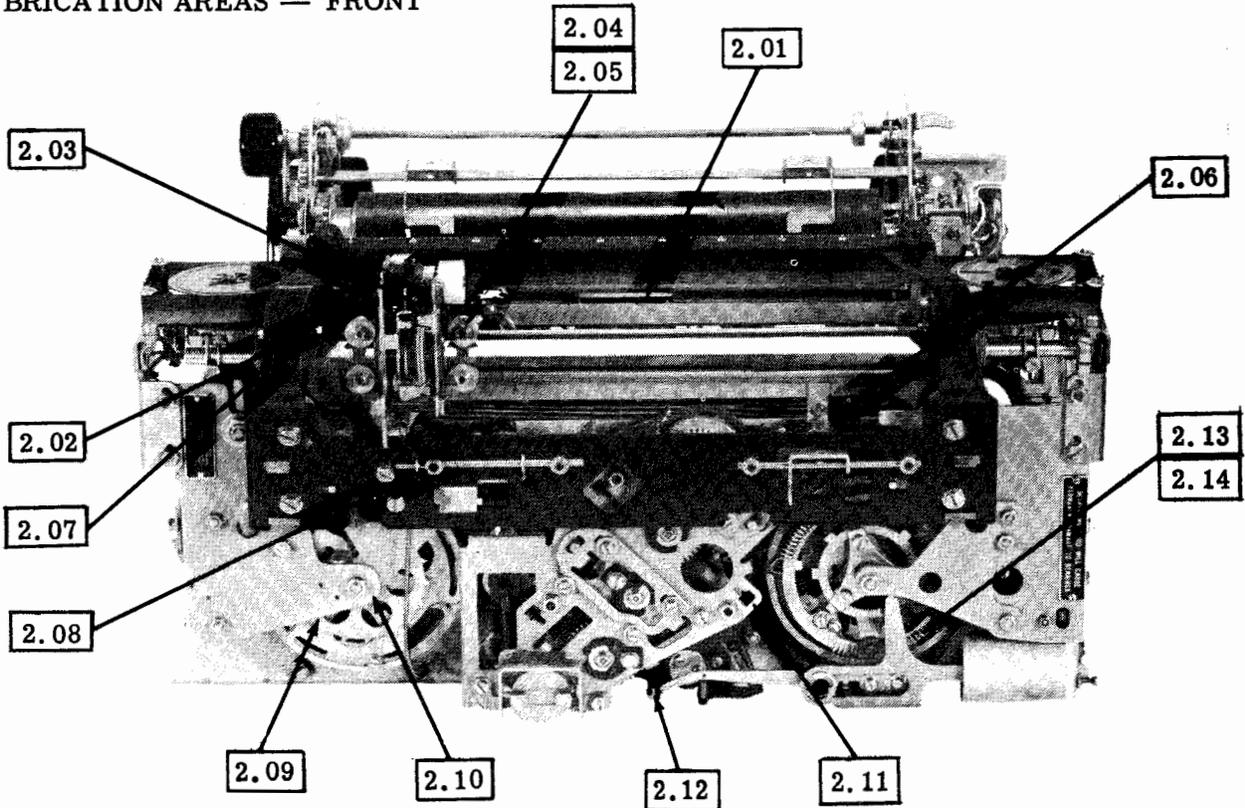
Note: Maintenance pad TP124828 is available to protect furniture and floor coverings from oil, grease, and dirt while lubricating the unit.

1.09 When replacing lubricating wicks or felt oilers, proceed as follows.

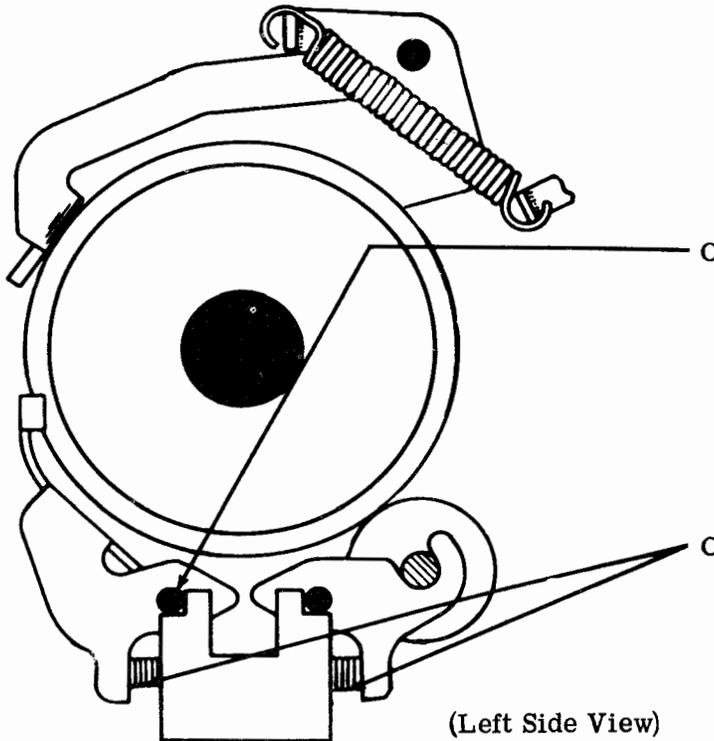
1. Thoroughly saturate with oil.
2. Remove all excess oil by pressing oiler or wick between a clean cloth.
3. Place the saturated wick or felt oiler in its proper position on the mechanism.

2. BASIC UNIT

LUBRICATION AREAS — FRONT



2.01 Platen Pressure Bail (Friction Feed)



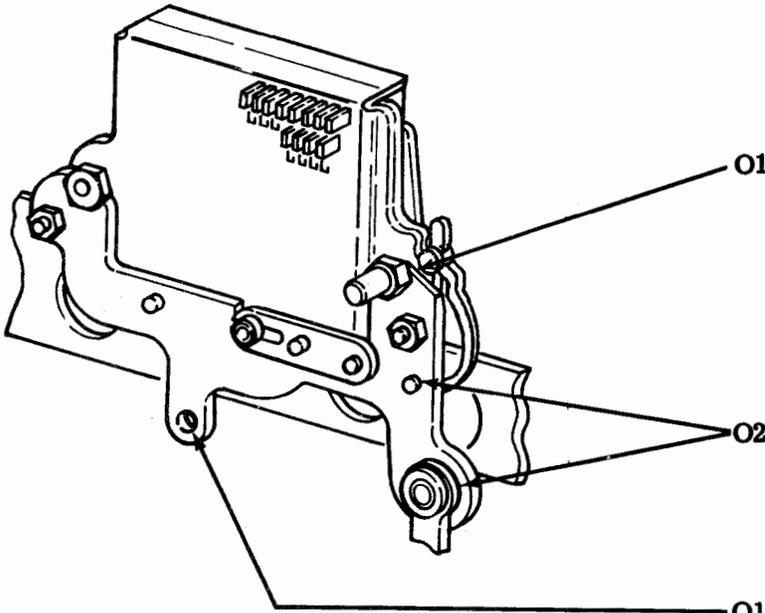
Thin Film on Engaging Surface

Pressure Bail

Thin Film on Engaging Surface

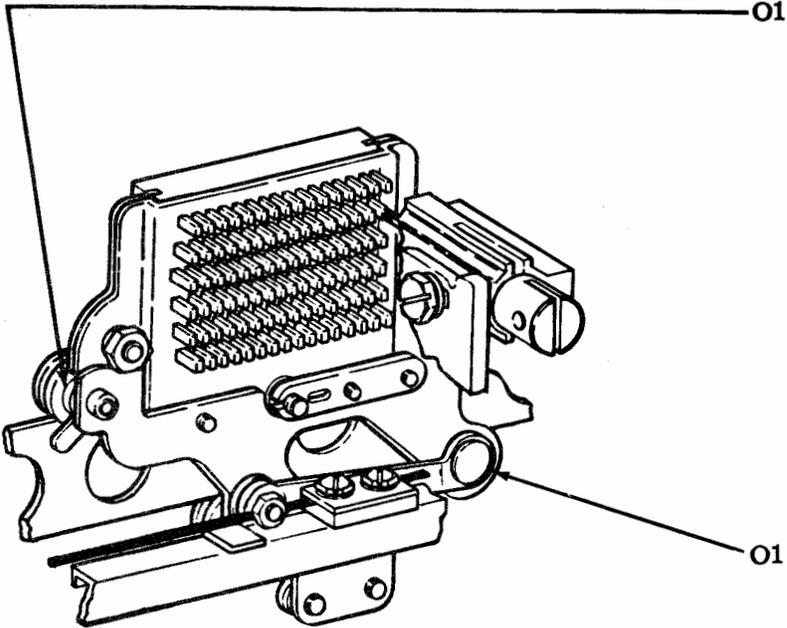
Compression Springs (4)

2.02 Typebox



(Left Front View)

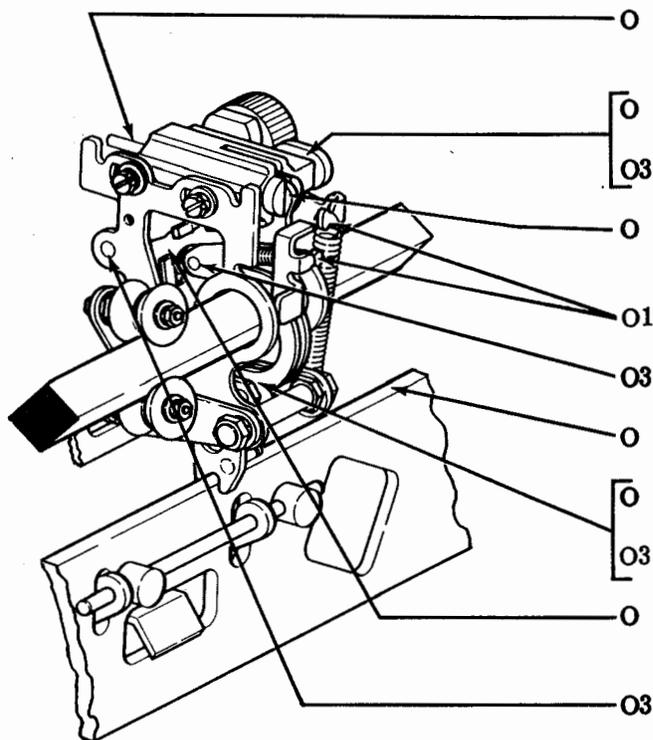
- O1 Contact Surface Typebox Carriage Latch
- O2 Pivot Typebox Carriage Latch
- O1 Bearing Roller



(Right Front View)

- O1 Bearing Rollers (Each End)
- O1 Pivot Point Typebox Carriage Link

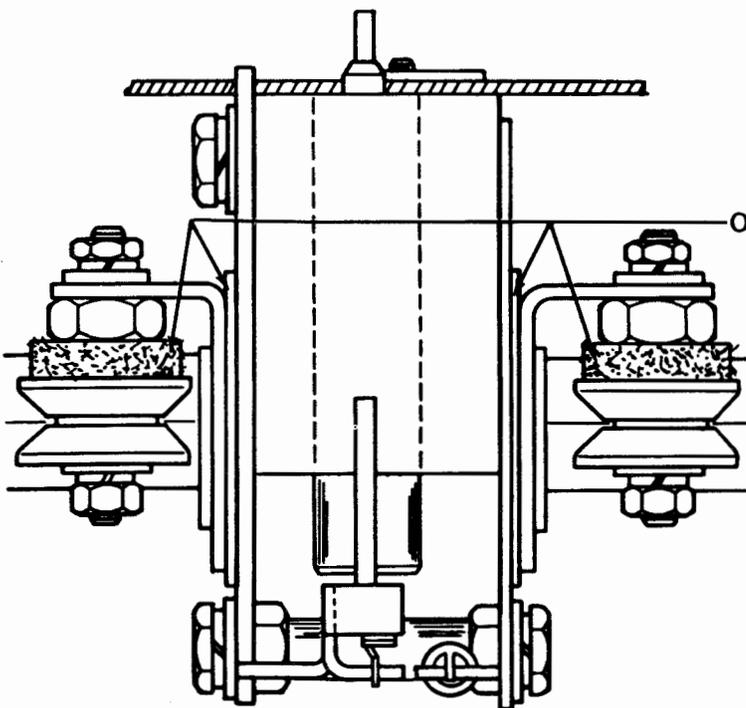
2.03 Print Hammer and Levers



(Left Front View)

- |    |                                |                    |
|----|--------------------------------|--------------------|
| 0  | Thin Film on Engaging Surface  | Plunger            |
| 0  | Thin Film on Engaging Surface  | Spring Tension     |
| 03 | Pivot                          | Lever              |
| 0  | Thin Film on Engaging Surface  | Print Hammer       |
| 01 | Hooks (Each End)               | Springs (2)        |
| 03 | Pivot                          | Print Hammer       |
| 0  | Thin Film                      | Rail               |
| 0  | Thin Film on Engaging Surfaces | Accelerating Lever |
| 03 | Pivot                          |                    |
| 0  | Thin Film on Engaging Surface  | Latchlever         |
| 03 | Pivot                          | Latchlever         |

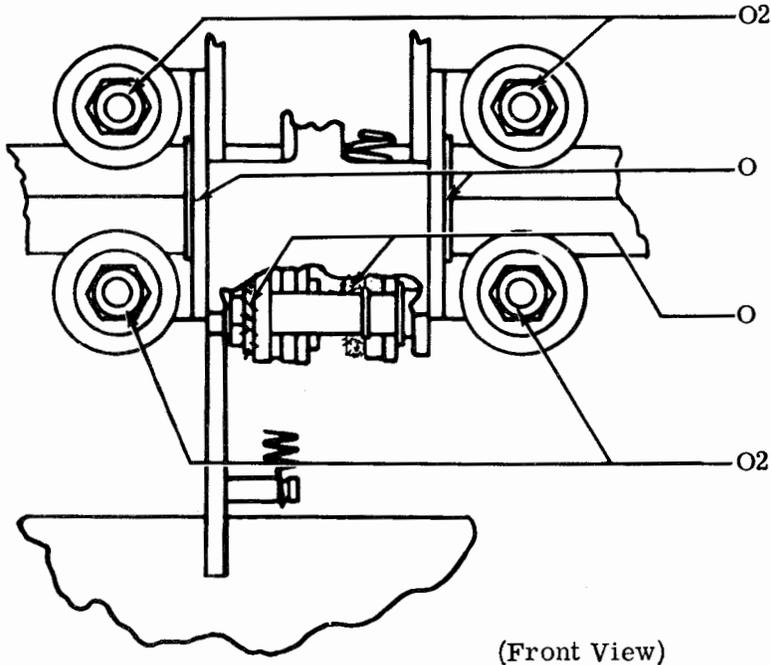
2.04 Print Hammer Carriage



(Top View)

- |   |                      |        |
|---|----------------------|--------|
| 0 | Saturate Felt Oilers | Roller |
|---|----------------------|--------|

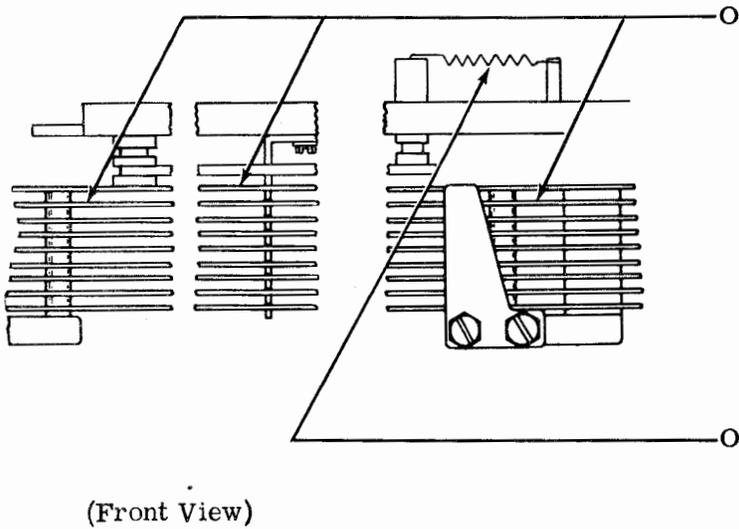
2.05 Print Hammer Carriage (continued)



- |                                |                            |
|--------------------------------|----------------------------|
| Bearings                       | Rollers (2)                |
| Thin Film on Engaging Surfaces | Carriage Frame and Bracket |
| Saturate Felt Oilers           | Print Hammer Shaft         |
| Bearings                       | Rollers (2)                |

(Front View)

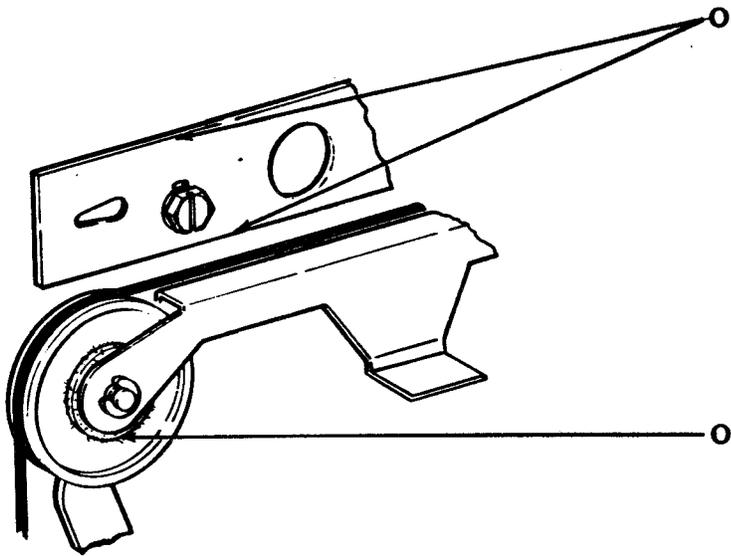
2.06 Codebars



- |   |          |
|---|----------|
| Thin Film on Guide Slots (Right, Center, and Left — 9 Bars) | Codebars |
| Hooks (Each End)  | Spring   |

(Front View)

2.07 Oscillating Rail



Thin Film on Engaging Surfaces

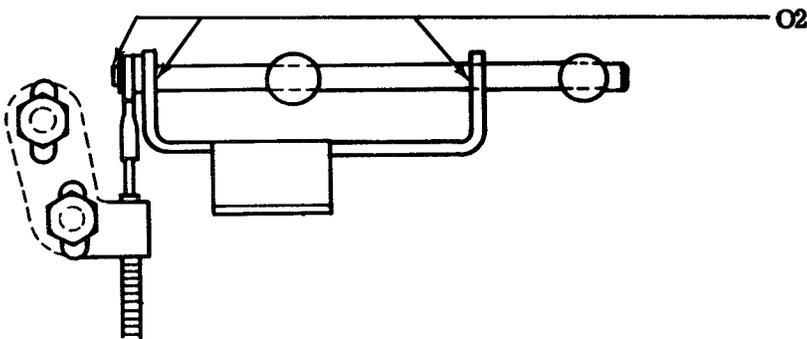
Oscillating Rail and Typebox Rail

Saturate Felt Oillers (2)

Pulleys (Left and Right Sides)

(Left Front View)

2.08 Local Line Feed Lever

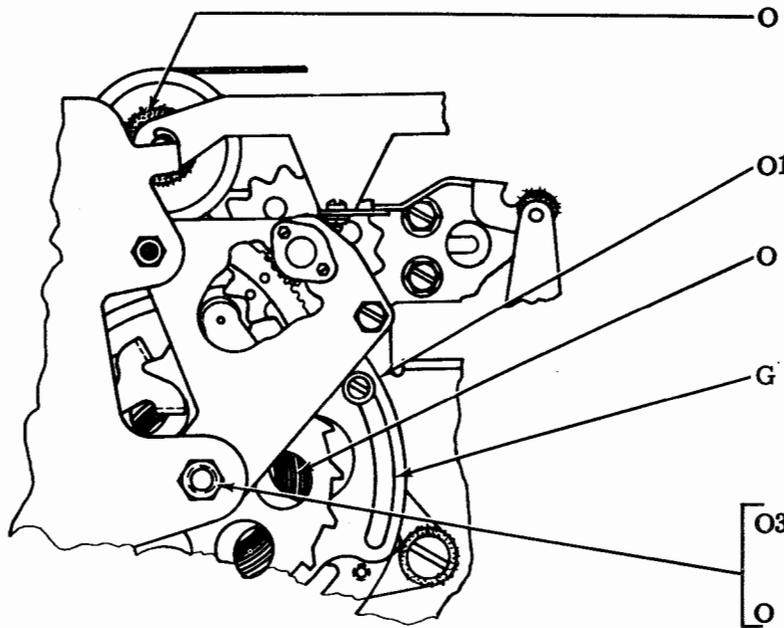


Pivot Points

Local Line Feed Lever

(Front View)

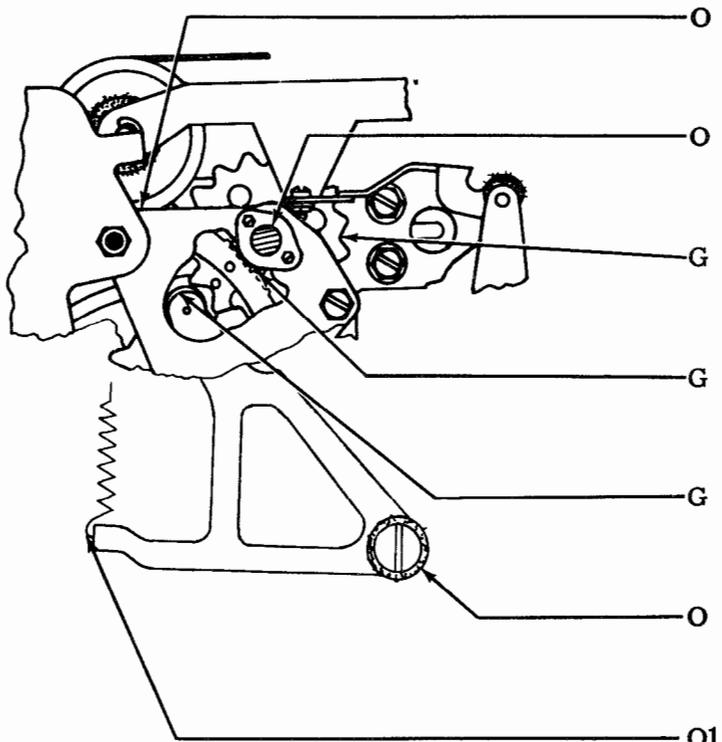
2.09 Spring Drum



(Front View)

- |    |                                    |                           |
|----|------------------------------------|---------------------------|
| O  | Saturate Felt Oilers               | Left and Right Pulleys    |
| O1 | Cable Grooves                      | Spring Drum               |
| O  | Thin Film Between Layers           | Carriage Return Spring    |
| G  | Thin Coat on Camming Surface       | Margin Indicator Cam Disc |
| O3 | Bearing (Outer and Inner)          | Spring Drum Shaft         |
| O  | Saturate Felt Oilers (Behind Drum) |                           |

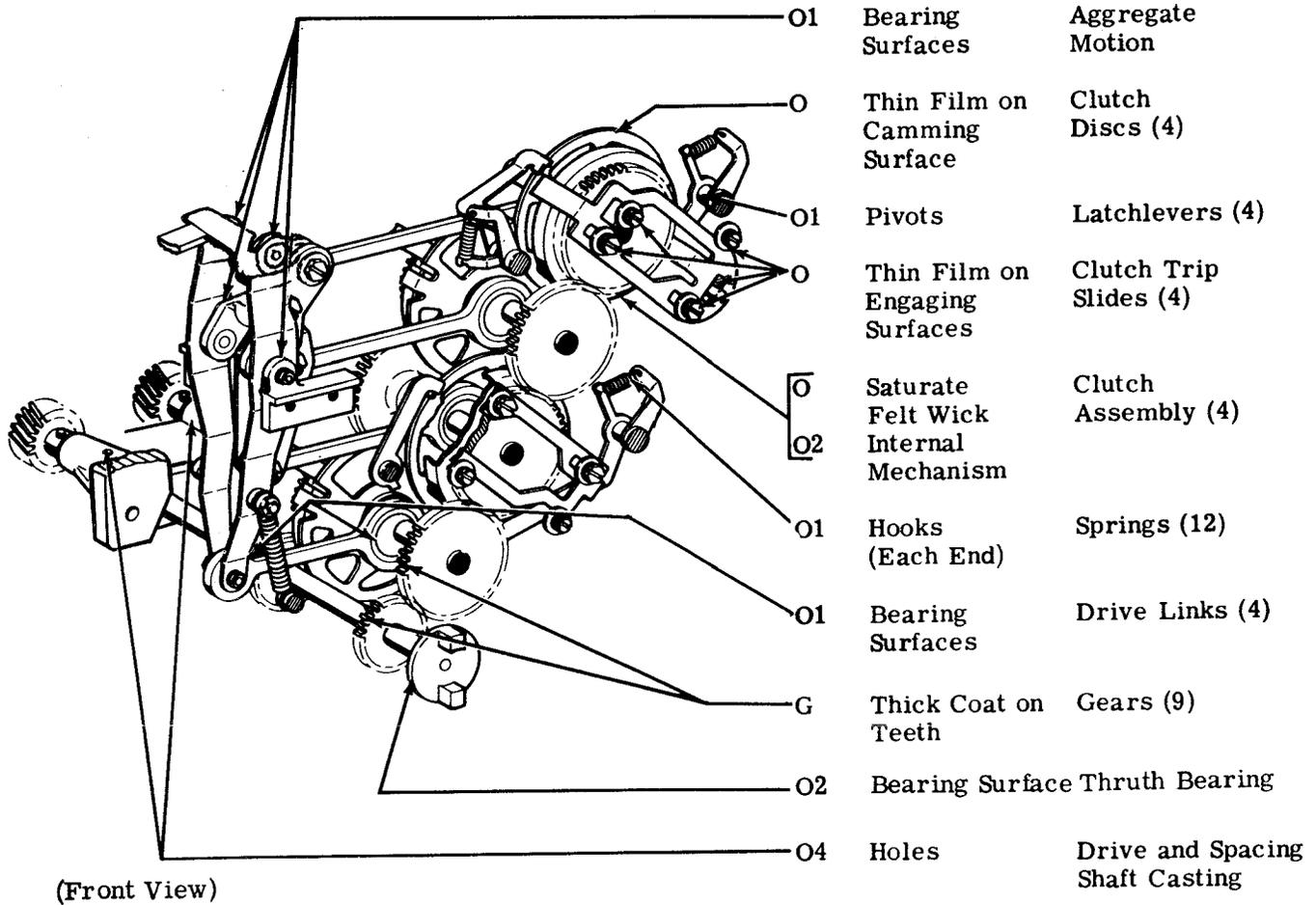
2.10 Horizontal Detent (Located Behind Spring Drum)



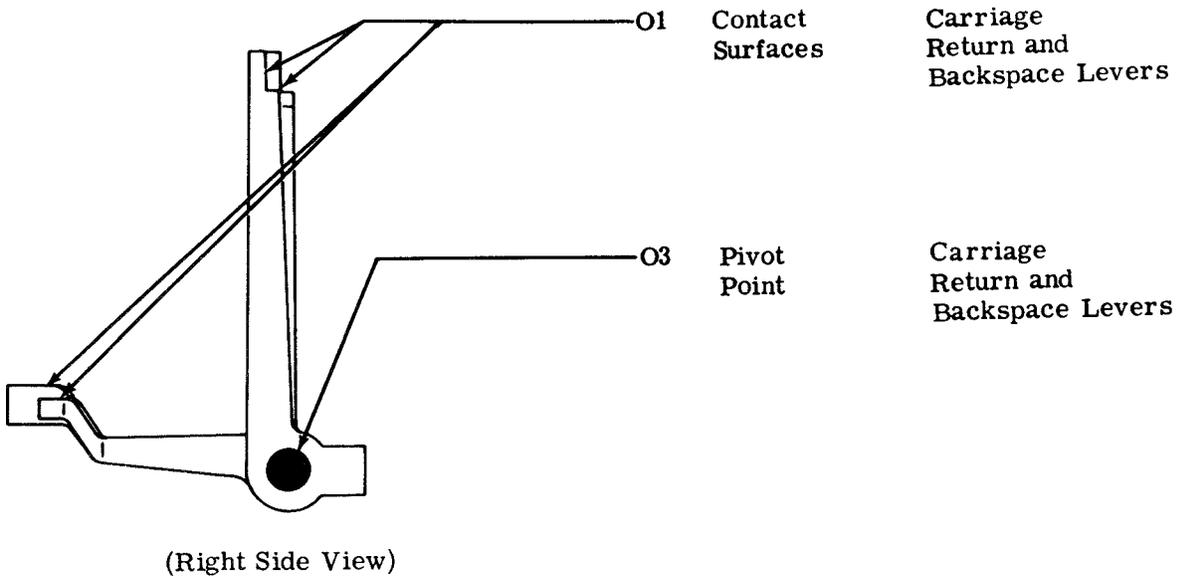
(Front View)

- |    |                       |                        |
|----|-----------------------|------------------------|
| O  | Saturate Felt Oilers  | Oscillating Arm        |
| O  | Thin Film on Shaft    | Pinion Gear            |
| G  | Thin Film on Detent   | Horizontal Detent Disc |
| G  | Thick Coat on Teeth   | Pinion Gear            |
| G  | Thick Coat on Bearing | Detent Roller          |
| O  | Saturate Felt Oiler   | Horizontal Detent Arm  |
| O1 | Hooks (Each End)      | Horizontal Detent Arm  |

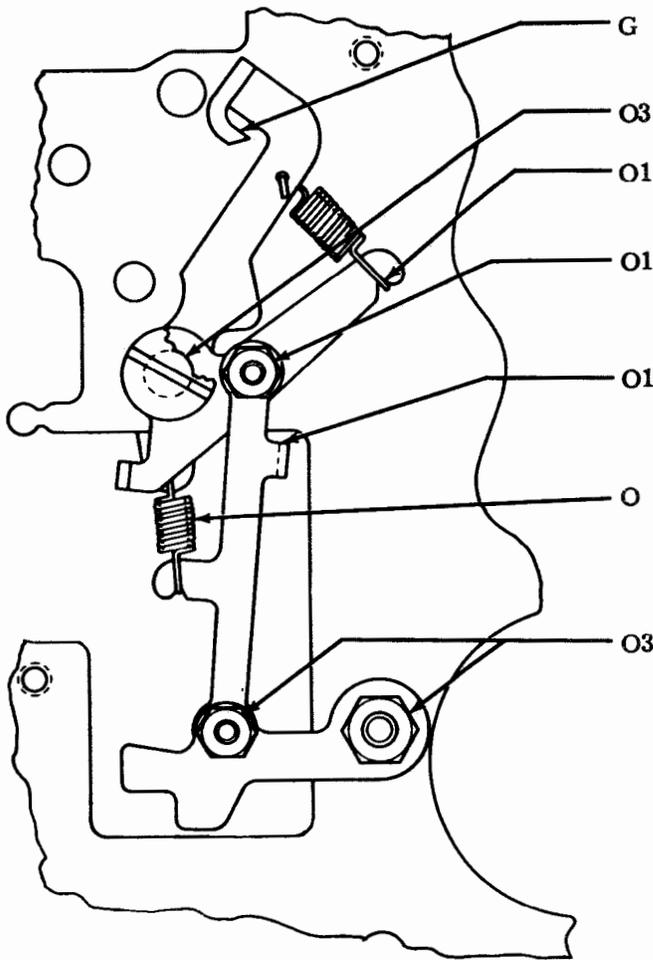
2.11 Horizontal Clutches, Gears, Levers, and Links



2.12 Carriage Return and Backspace Levers



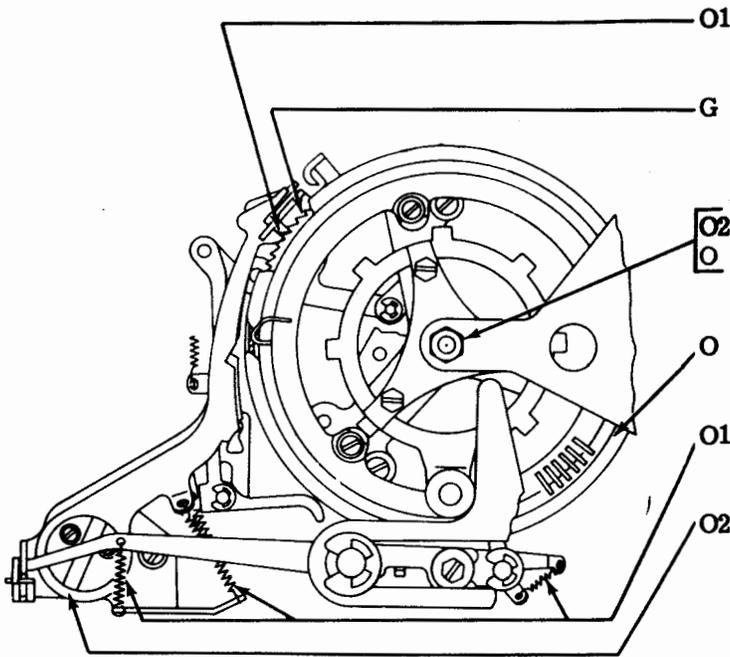
2.13 Backspace Bail, Lever, Link, and Pawl (Located Behind Spacing Drum)



(Front View)

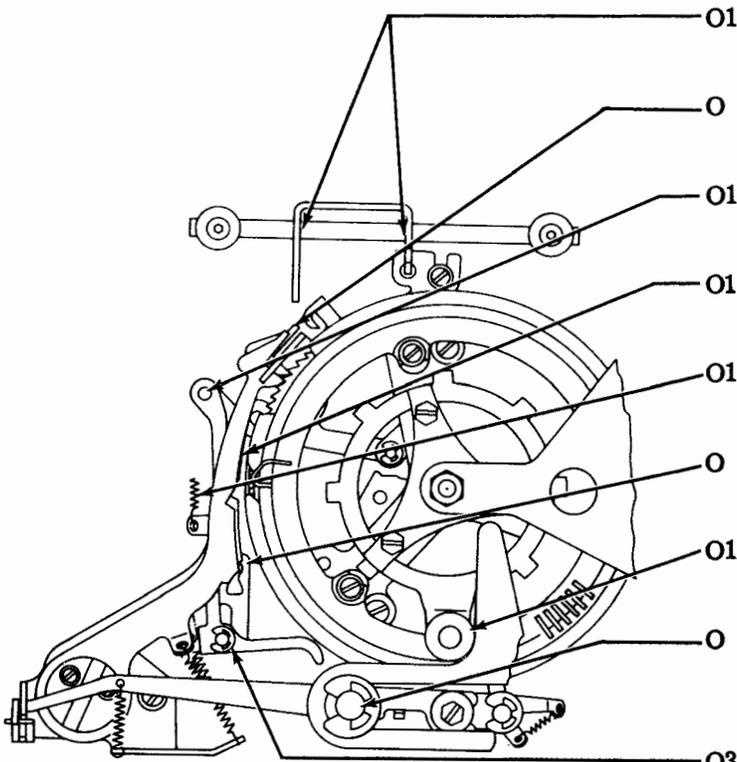
- |    |                              |                         |
|----|------------------------------|-------------------------|
| G  | Thin Coat on Contact Surface | Backspace Blocking Pawl |
| O3 | Pivot                        | Backspace Bail          |
| O1 | Hooks (Each End)             | Spring                  |
| O1 | Bearing and Engaging Surface | Backspace Bail and Link |
| O1 | Contact Surface              | Link                    |
| O  | Saturate Wick                | Spring                  |
| O3 | Pivots                       | Intermediate Lever      |

2.14 Spacing Drum



(Front View)

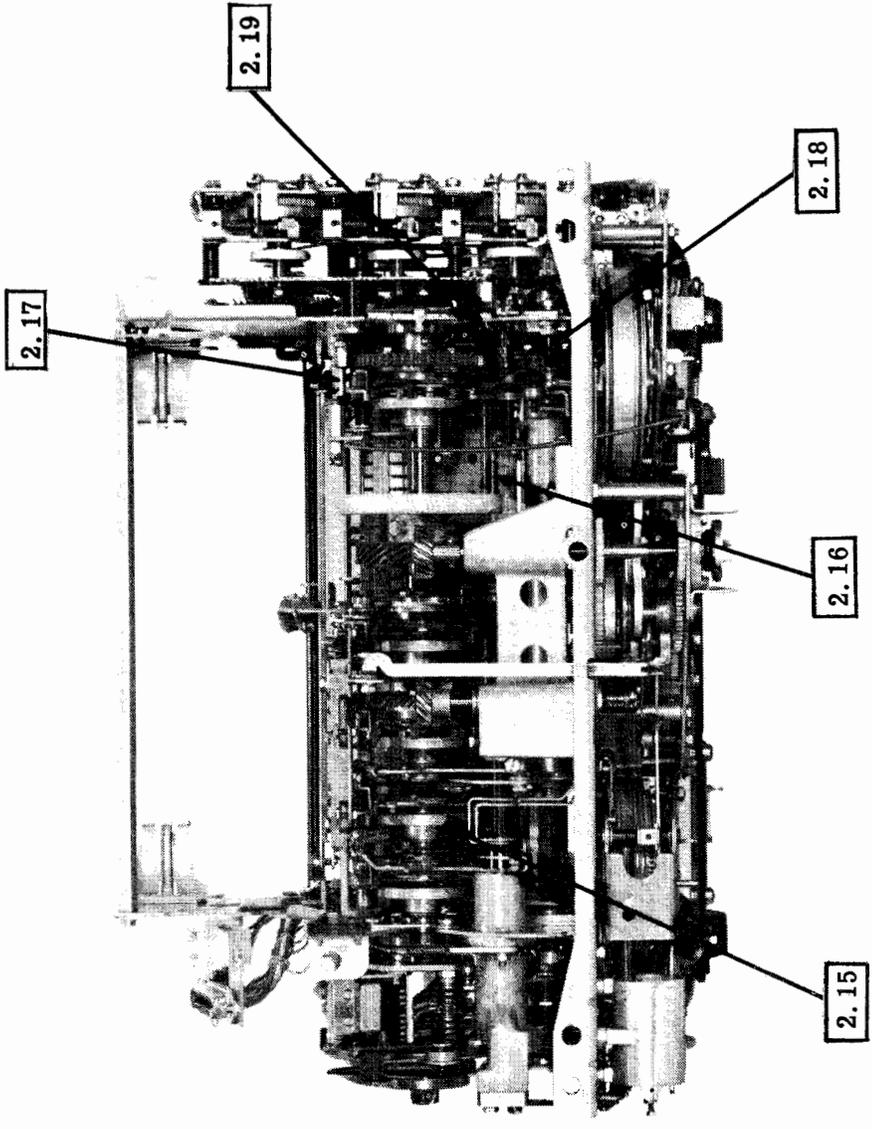
- |    |                                 |                    |
|----|---------------------------------|--------------------|
| 01 | Engaging Surface                | Spacing Feed Pawls |
| G  | Thin Coat on Teeth              | Ratchet            |
| 02 | Pivot Point Saturate Felt Oiler | Spacing Drum Shaft |
| 0  | Thin Film on Cable Grooves      | Spacing Drum       |
| 01 | Hooks (Each End)                | Springs            |
| 02 | Pawls                           | Spacing Eccentric  |



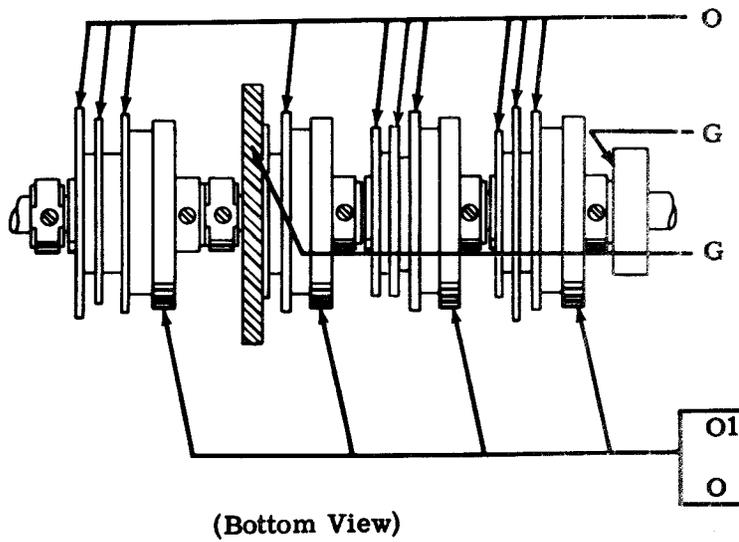
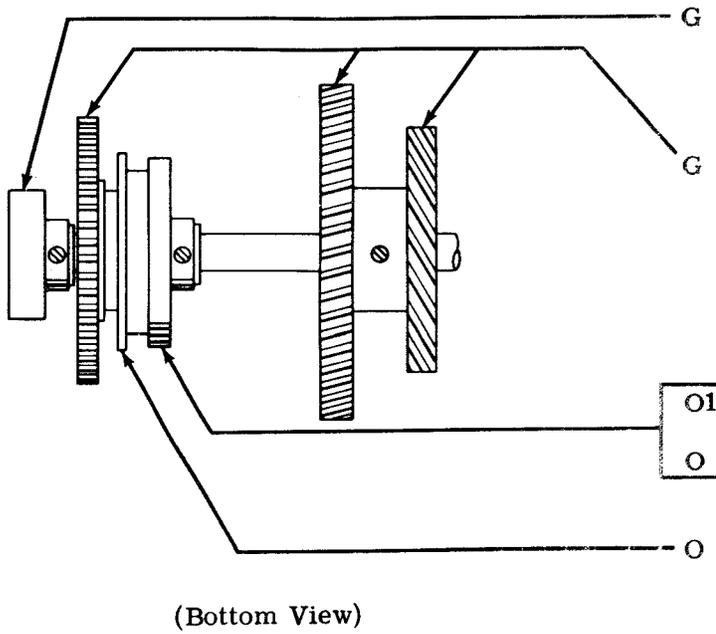
(Front View)

- |    |                                 |                             |
|----|---------------------------------|-----------------------------|
| 01 | Pivot Points                    | Local Carriage Return Lever |
| 0  | Thin Film on Contacting Surface | Feed Pawl, Release Link     |
| 01 | Pivot Points                    | Feed Pawl, Release Link     |
| 01 | Engaging Surfaces               | Feed Pawl Release Link      |
| 01 | Hooks (Each End)                | Spring                      |
| 0  | Thin Film on Contacting Surface | Carriage Return Latch Bail  |
| 01 | Bearing Surface                 | Roller                      |
| 0  | Thin Film on Engaging Surface   | Transfer Slide              |
| 03 | Pivot Point                     | Carriage Return Latch Bail  |

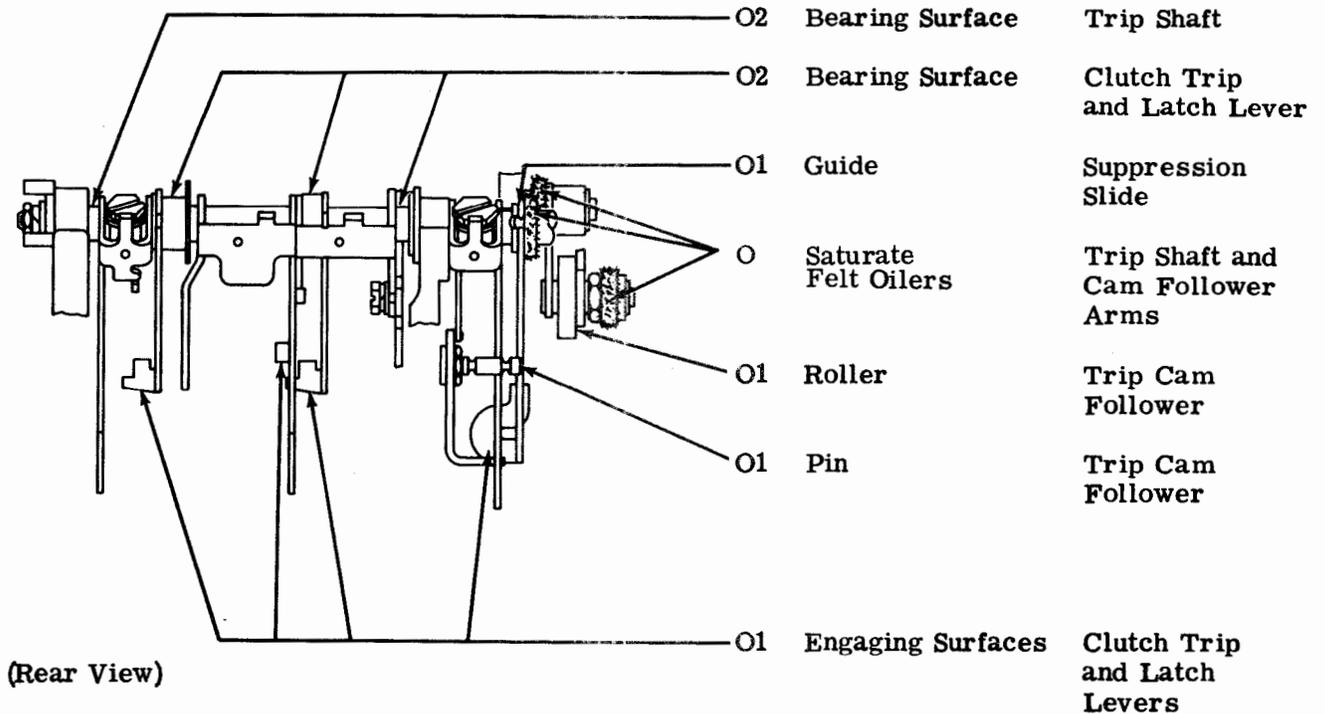
LUBRICATION AREAS — BOTTOM



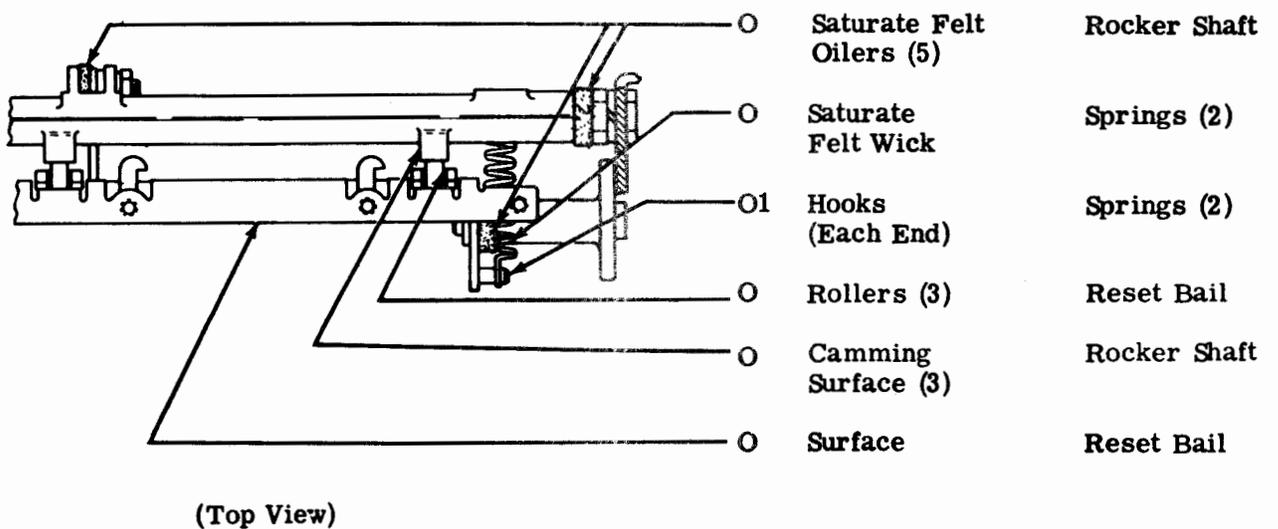
2.15 Main Shaft Clutches and Gears



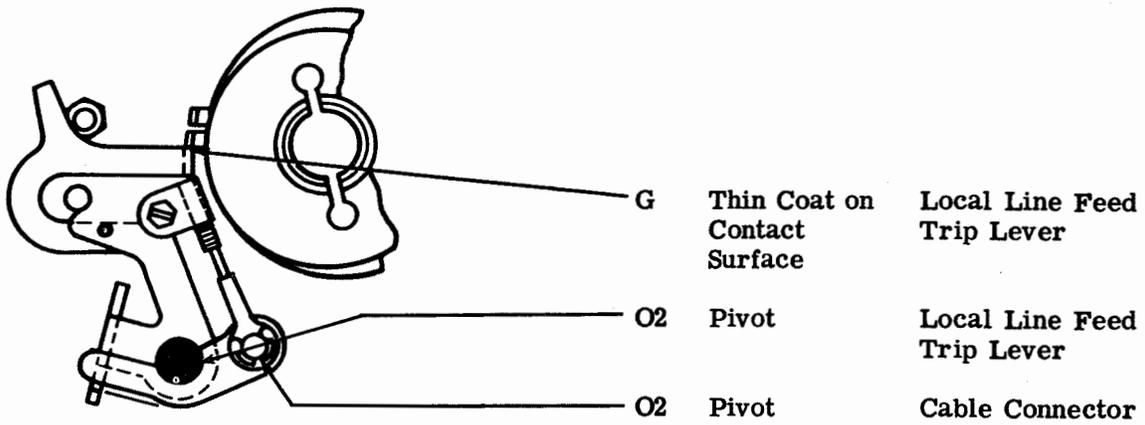
2.16 Trip Shaft Cam and Levers



2.17 Reset Bail and Shaft

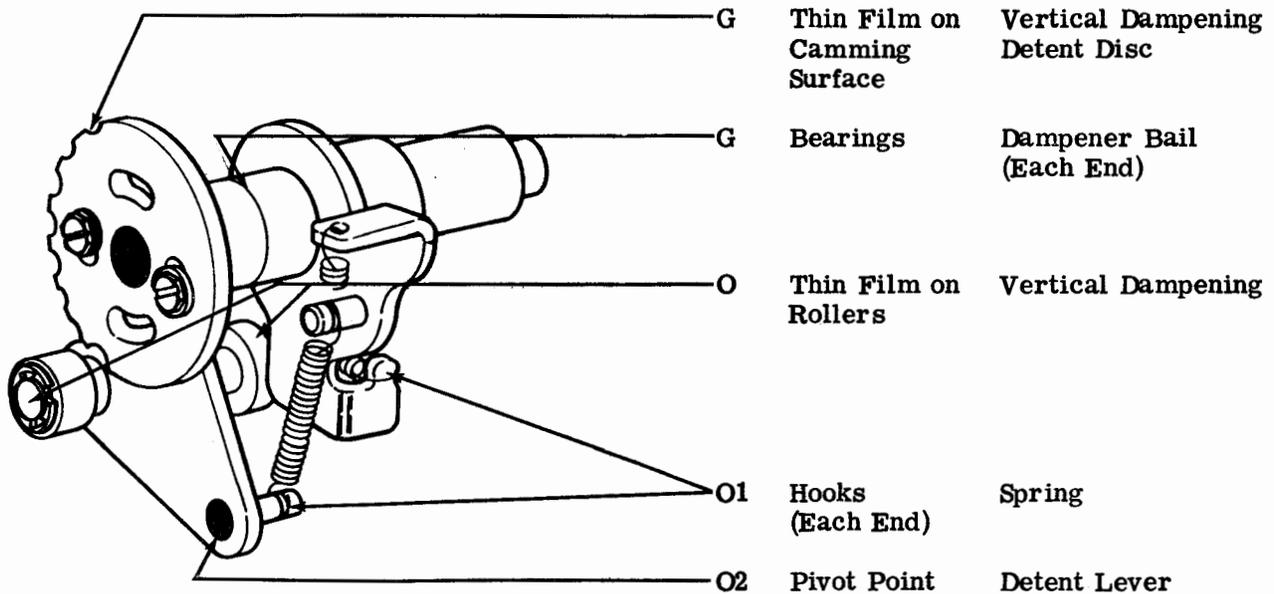


2.18 Local Line Feed Trip Lever



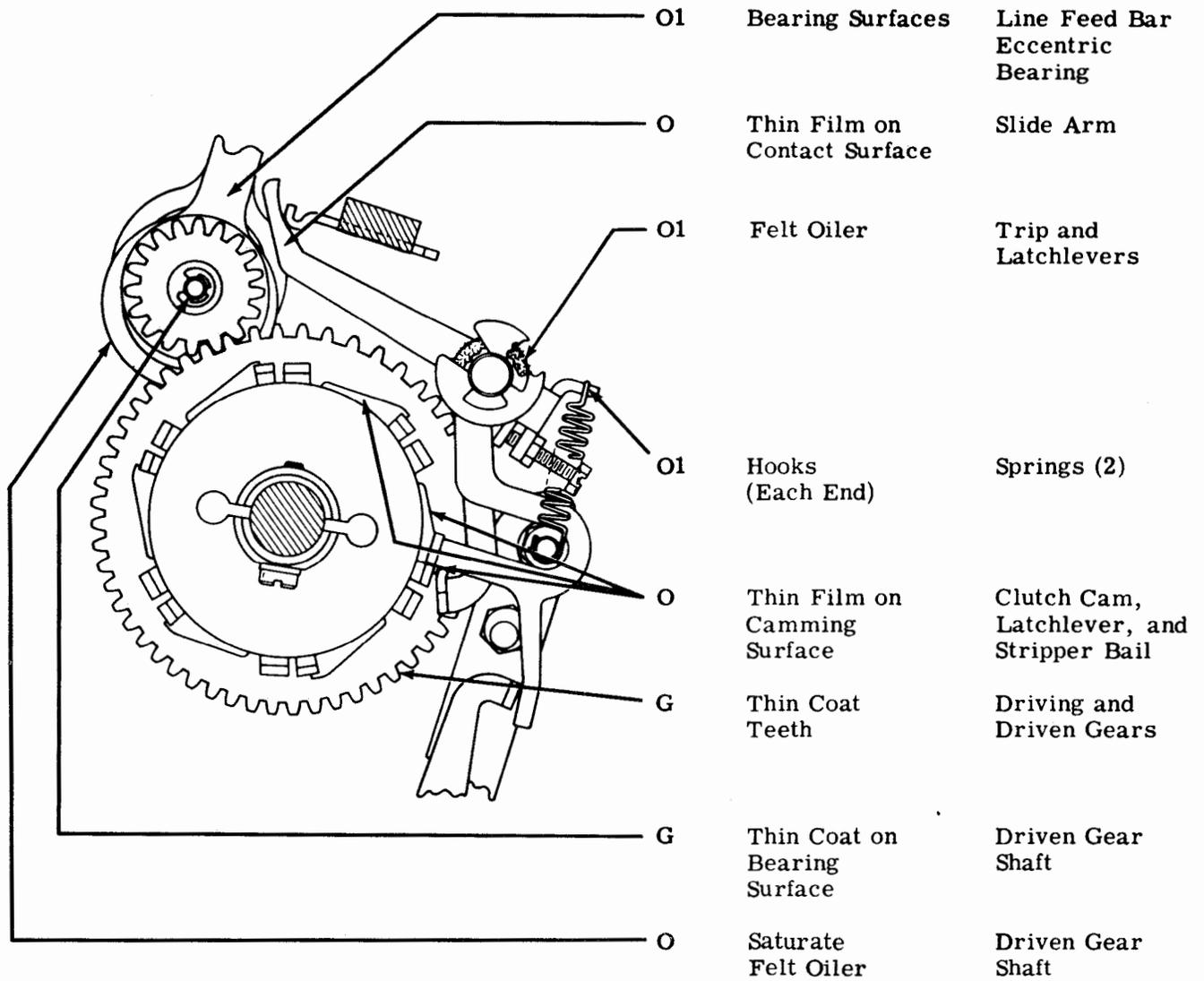
(Left Side View)

2.19 Vertical Detent



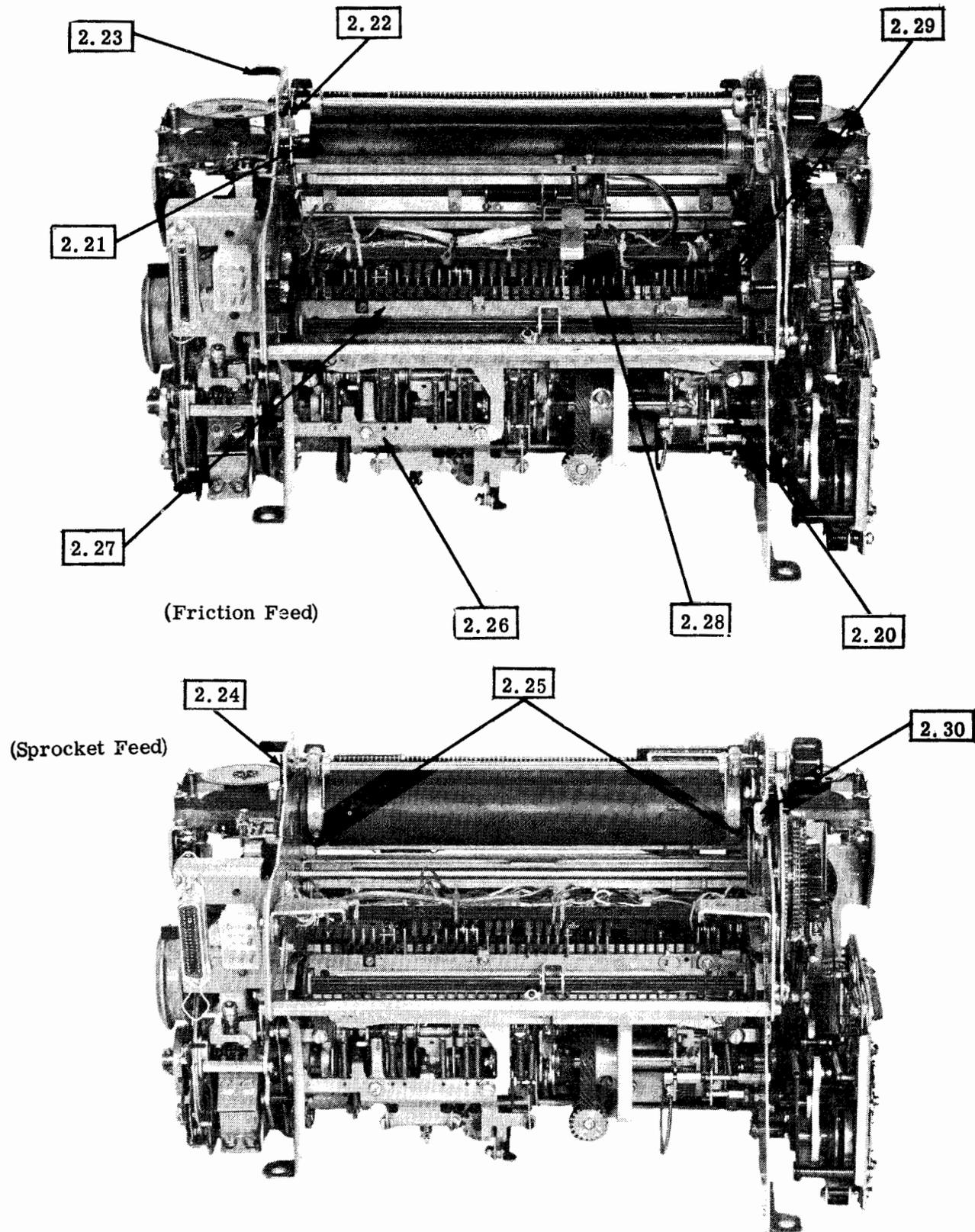
(Left Side View)

2.20 Line Feed Bail, Levers, and Gears

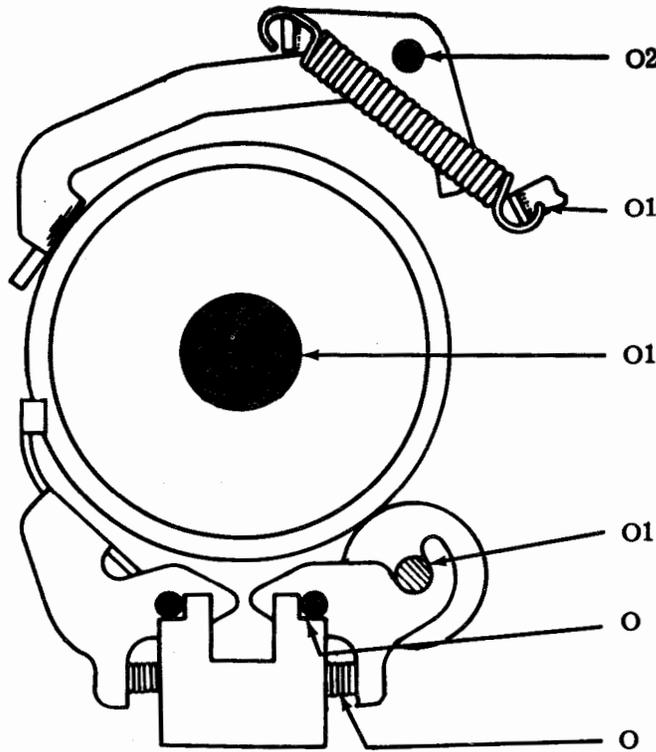


(Right Side View)

LUBRICATION AREAS — REAR



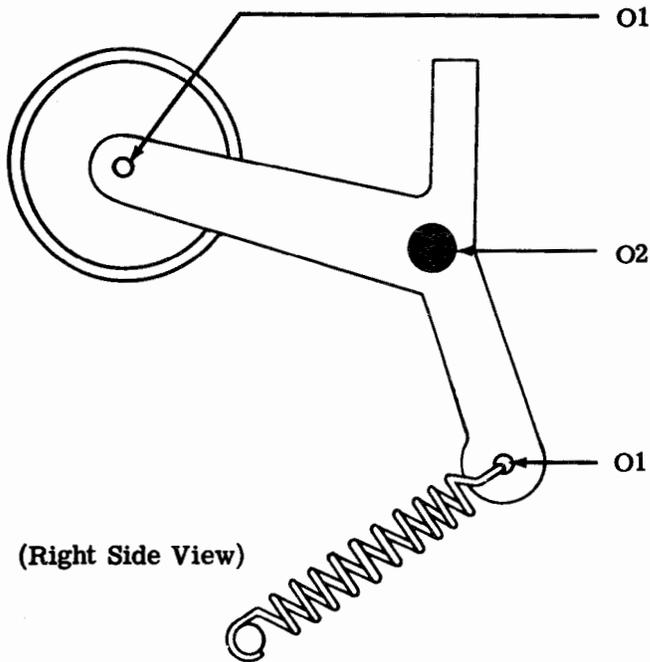
2.21 Platen Shaft and Rollers (Friction Feed)



(Right Side View)

- |    |                                |  |
|----|--------------------------------|--|
| O2 | Pivots                         | Paper Finger Shaft                     |
| O1 | Hooks (Each End)               | Springs (2)                            |
| O1 | Bearing Surfaces (Each End)    | Platen Shaft                           |
| O1 | Pivots                         | Pressure Rollers (Wipe Off Excess Oil) |
| O  | Thin Film on Engaging Surfaces | Pressure Rollers                       |
| O  | Thin Film on Engaging Surface  | Compression Springs (2)                |

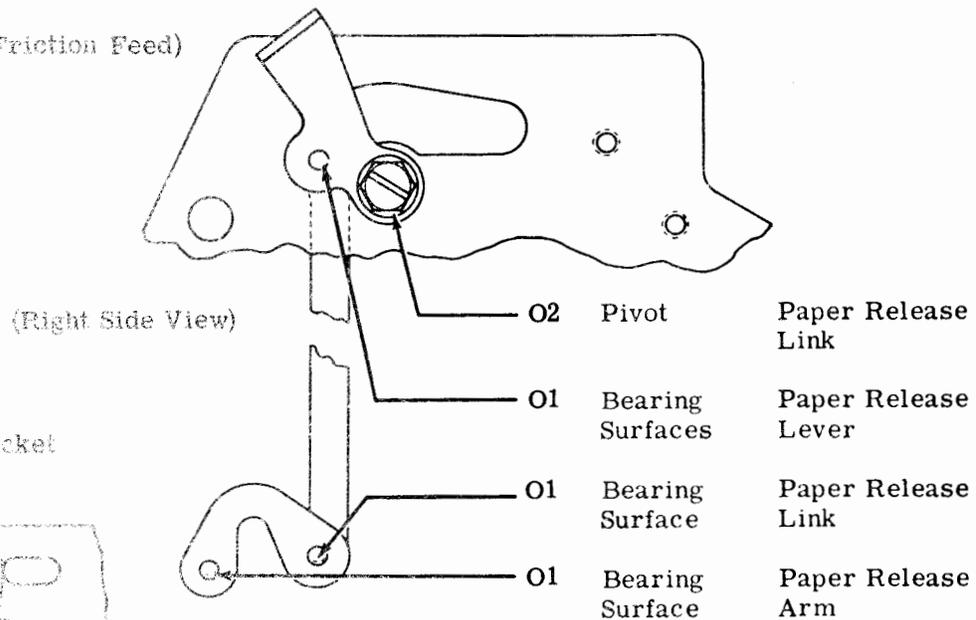
2.22 Paper Straightener (Friction Feed)



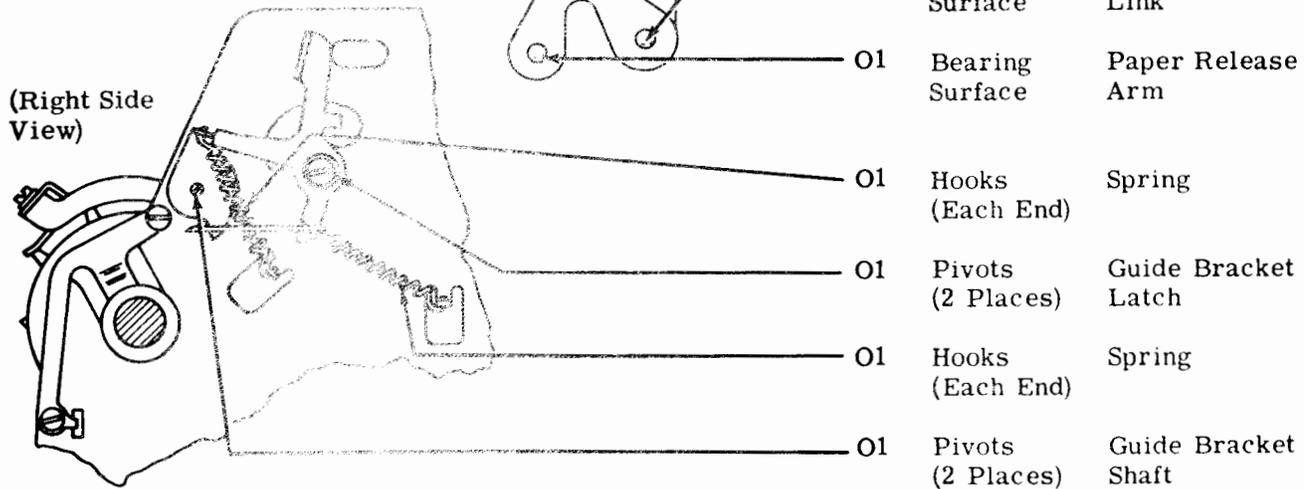
(Right Side View)

- |    |                             |                               |
|----|-----------------------------|-------------------------------|
| O1 | Bearing Surfaces (Each End) | Paper Straightener Shaft (2)  |
| O2 | Pivots (Each End)           | Paper Straightener Levers (2) |
| O1 | Hooks (Each End)            | Springs (2)                   |

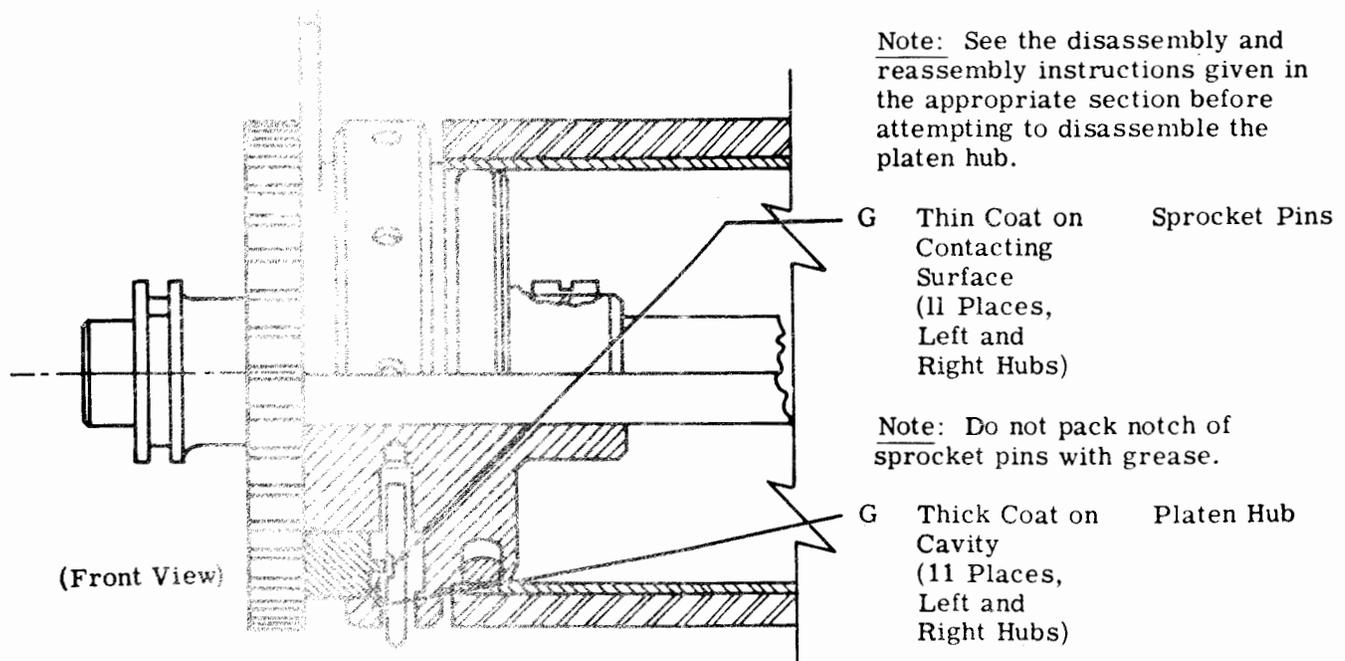
2.23 Paper Release (Friction Feed)



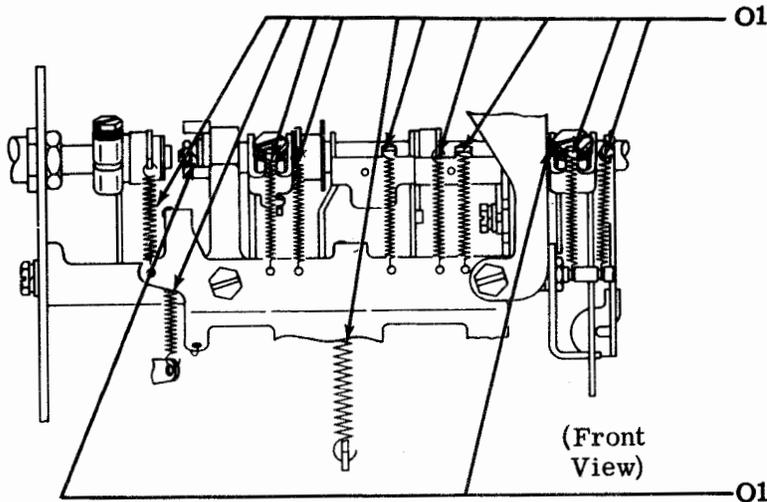
2.24 Paper Guide Bracket Shaft and Latch (Sprocket Feed)



2.25 Platen Hubs and Pins (Sprocket Feed)

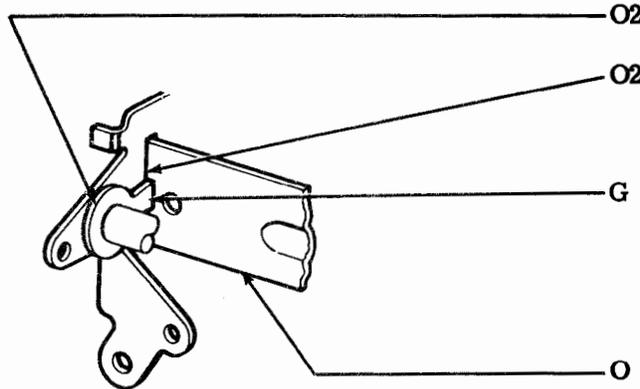


2.26 Trip Shaft Bearings and Springs



Hooks  
(Each End)      Springs

2.27 Function Stripper Blade



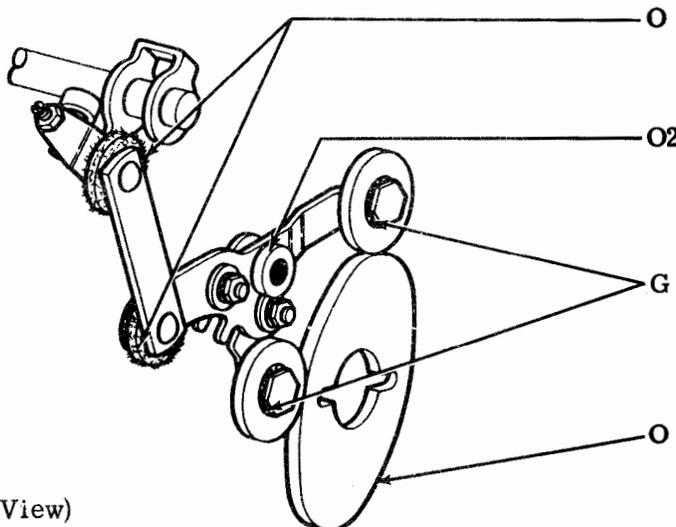
Bearings      Trip Shaft

Bearings      Drive Shaft

Bearing Surface  
(Each End)      Stripper Blade  
Drive Arm

Thick Coat on  
Edge of  
Engaging  
Surfaces  
(Each End)      Drive Arm  
(Each End)

Thin Film on  
Engaging  
Surfaces      Stripper Blade



Saturate  
Felt Oilers      Drive Link  
(Each End)

Pivot      Cam Follower  
Arm

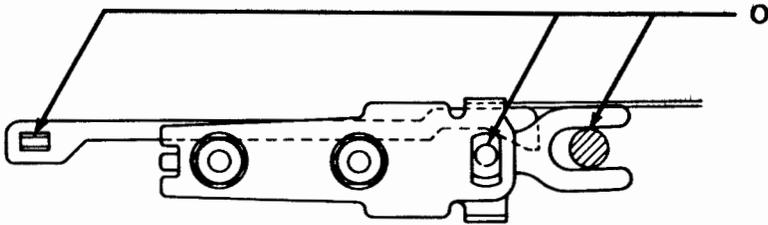
Pack  
Bearings      Cam Follower

Thin Film on  
Engaging  
Surfaces      Stripper Blade  
Cam

(Rear View)

SECTION 574-320-704TC

2.28 Suppression Function Lever

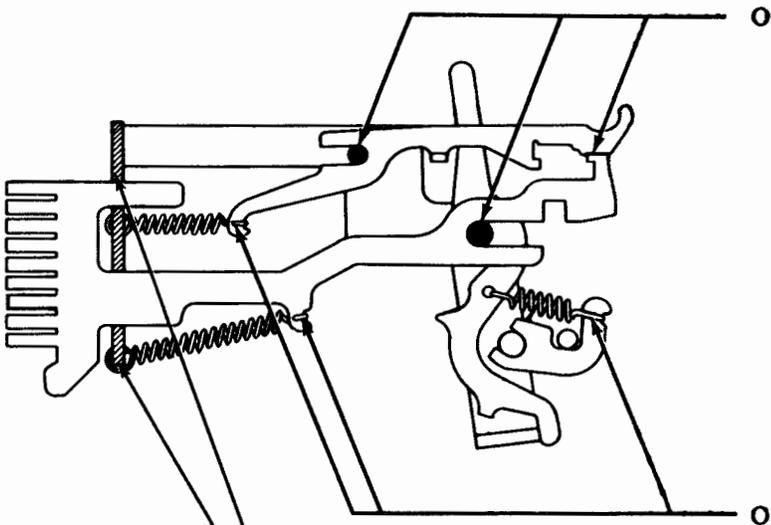


(Top View)

Thin Film on Engaging Surfaces

Suppression Function Lever

2.29 Function Bar and Pawl



(Right Side View)

Thin Film on Engaging Surfaces

Function Bar, Lever, and Pawl

Note: Contact clips and arms on function switches must be kept dry.

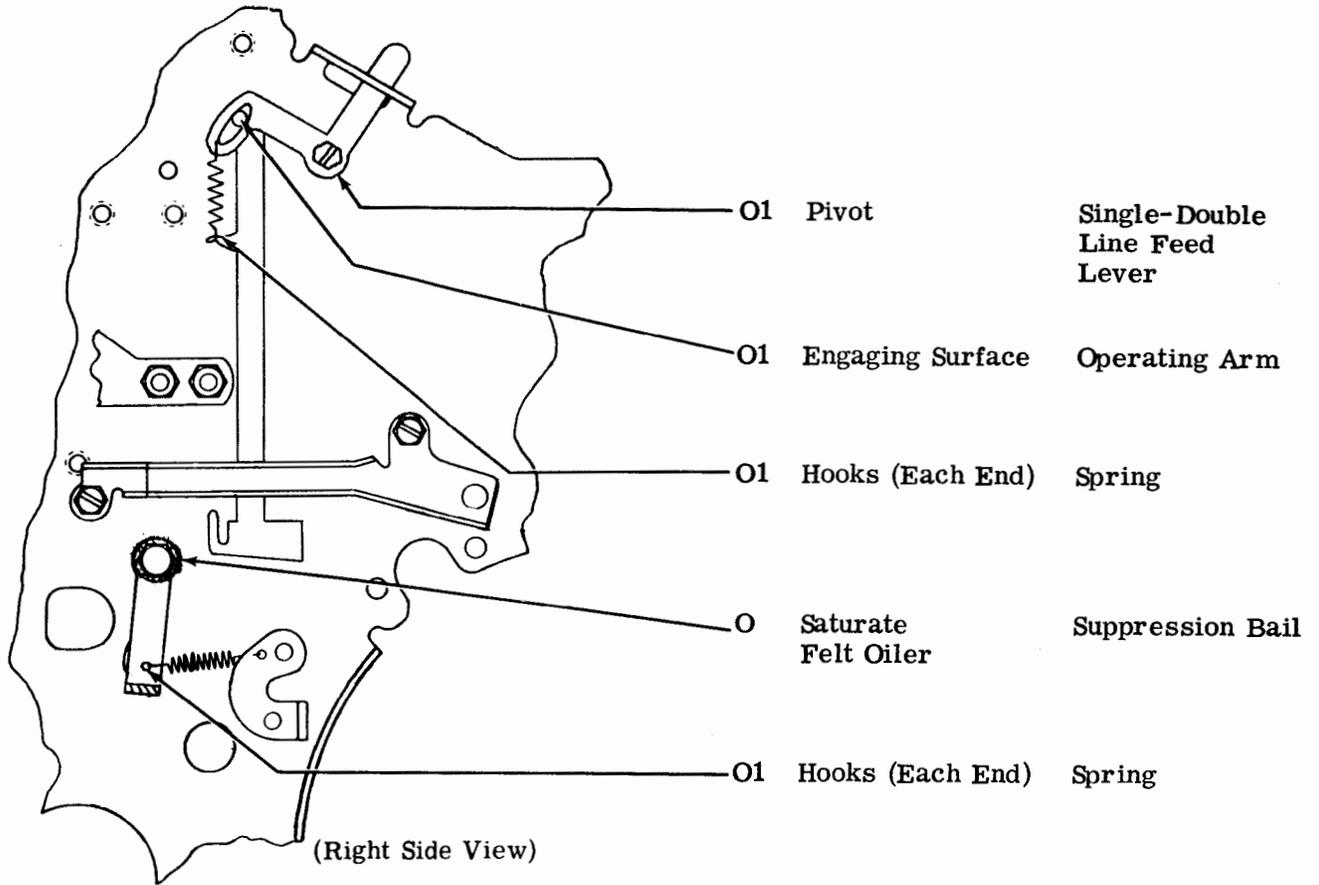
Hooks (Each End)

Springs

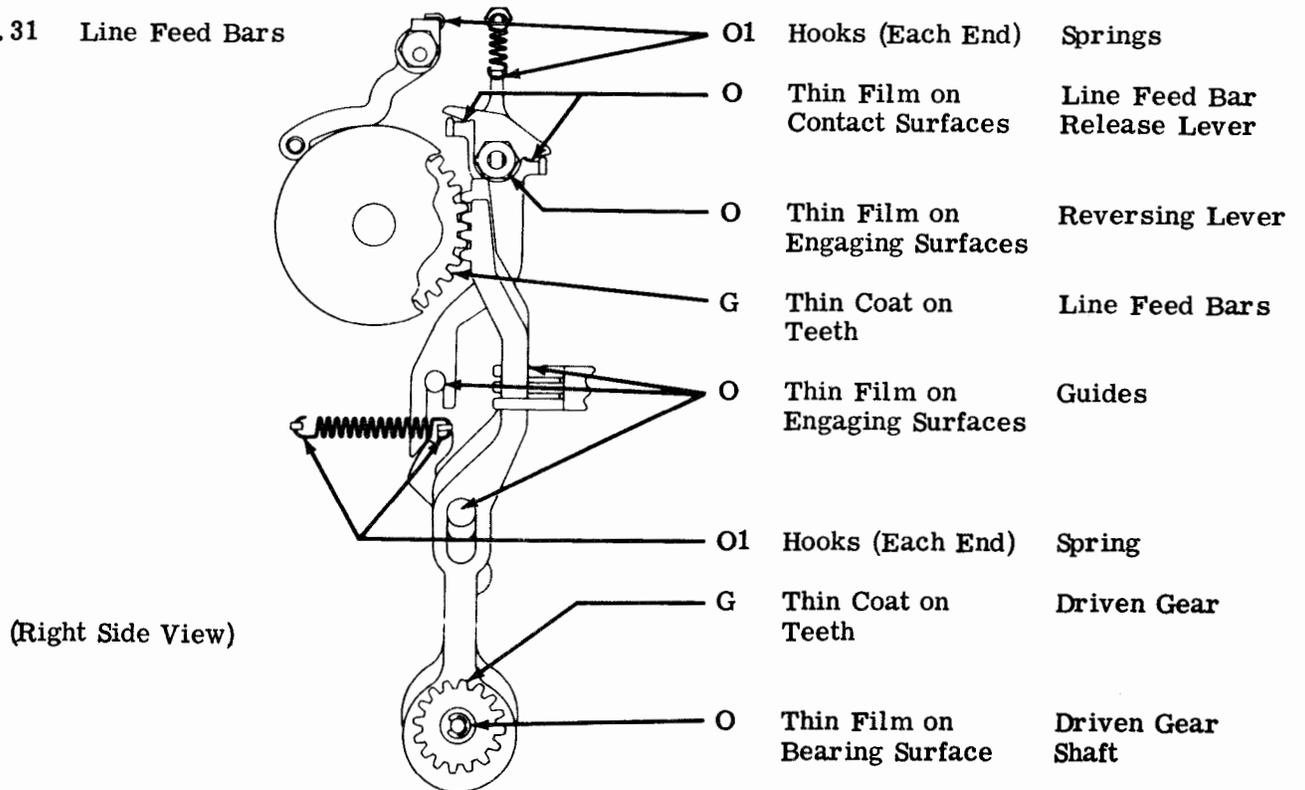
Engaging Surfaces

Function Bar

2.30 Single-Double Line Feed Lever

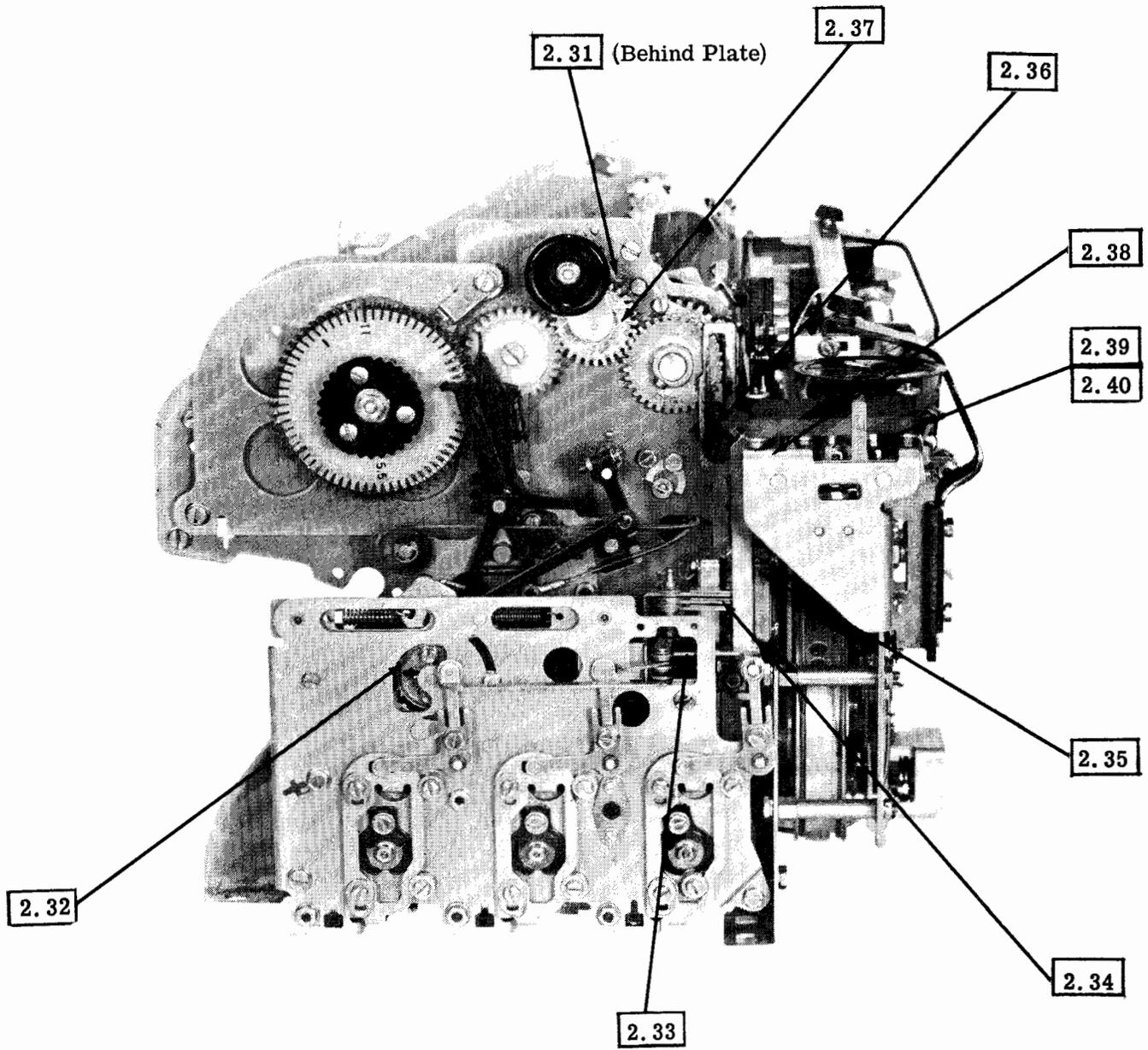


2.31 Line Feed Bars

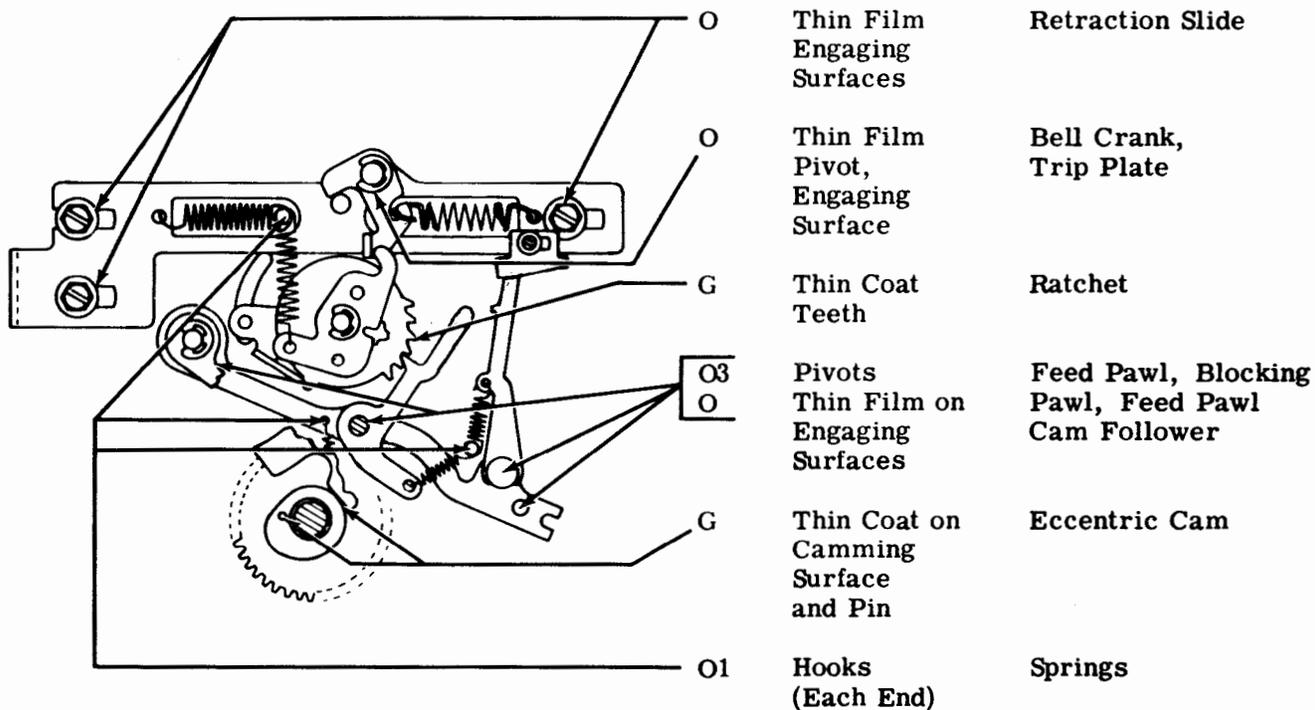


SECTION 574-320-704TC

LUBRICATION AREAS — LEFT SIDE

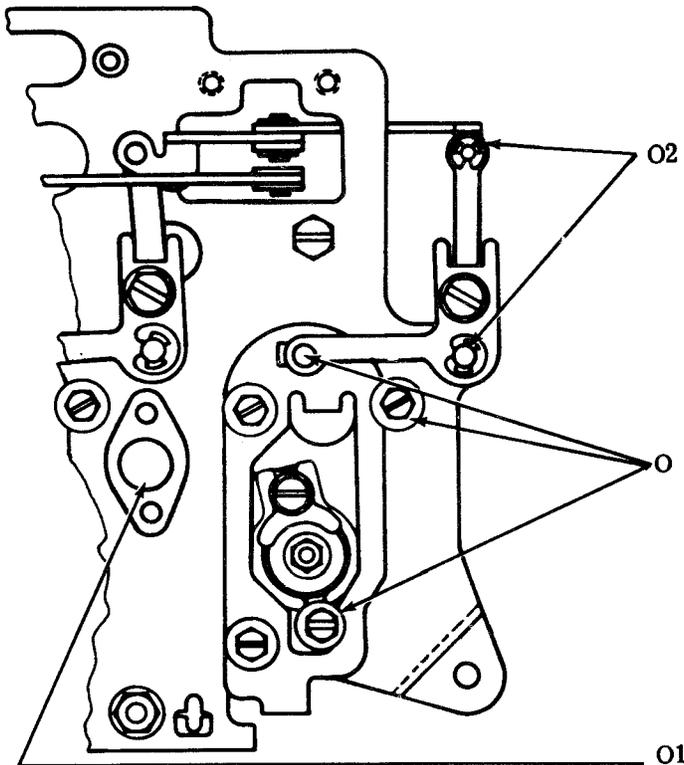


32 Retraction Slide and Pawls



(Right Side View)

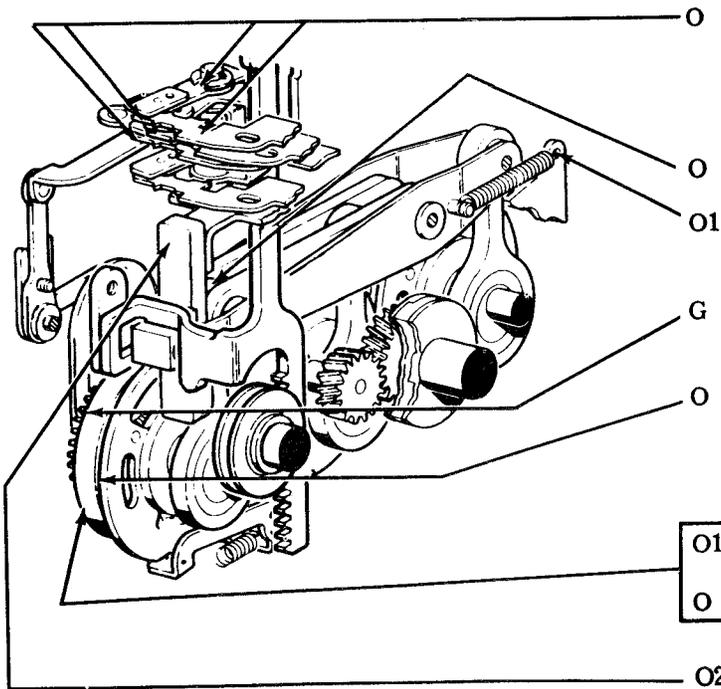
2.33 Vertical Linkage, Shafts, and Slides



(Left Side View)

- |    |                               |                        |
|----|-------------------------------|------------------------|
| O2 | Bearing Surfaces              | Trip Linkage           |
| O  | Thin Film on Sliding Surfaces | Clutch Trip Slides (3) |
| O1 | Bearing                       | Driven Gear Shaft      |

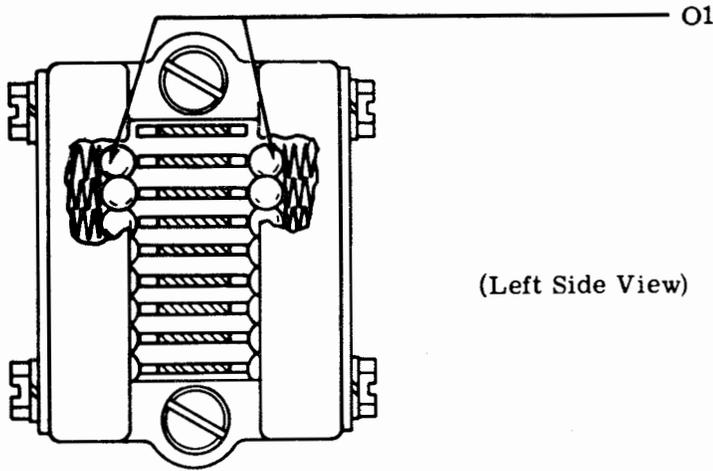
2.34 Vertical Clutches, Gears, and Bell Cranks



(Right Front View)

- |    |                                       |  |
|----|---------------------------------------|--|
| O  | Thin Film on Pivots Guide             | Positioning Trip Levers, Codebar Bell Cranks |
| O  | Bearing Surface                       | Output Bearing                               |
| O1 | Hooks (Each End)                      | Springs (13)                                 |
| G  | Thick Coat on Teeth                   | Gears (7)                                    |
| O  | Thin Film on Camming Surface          | Clutch Discs (3)                             |
| O1 | Internal Mechanism Saturate Felt Wick | Clutch Assembly (3)                          |
| O  | Track Surface                         | Track  |

2.35 Codebar Detent

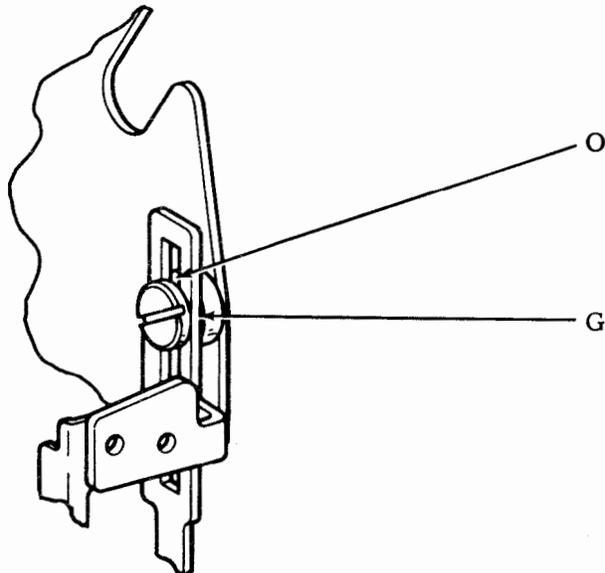


(Left Side View)

Bearings and  
Compression  
Springs

Codebar  
Detents

2.36 Vertical Positioning Rack

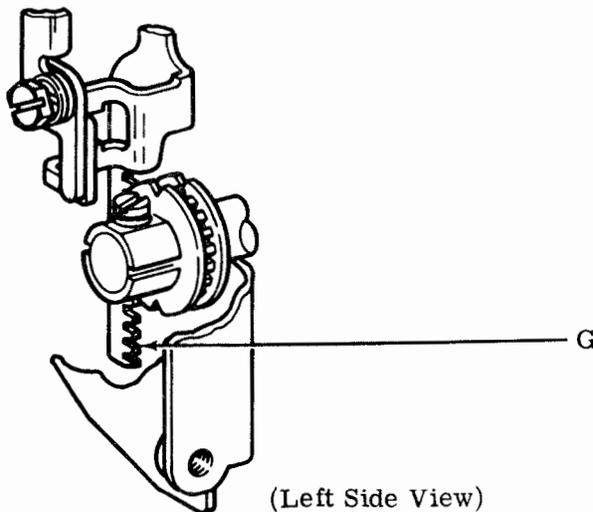


Saturate  
Felt Oiler

Spacer  
Guide

Thin Film  
on Engaging  
Surface

Spacer  
Upper Rack  
Guide

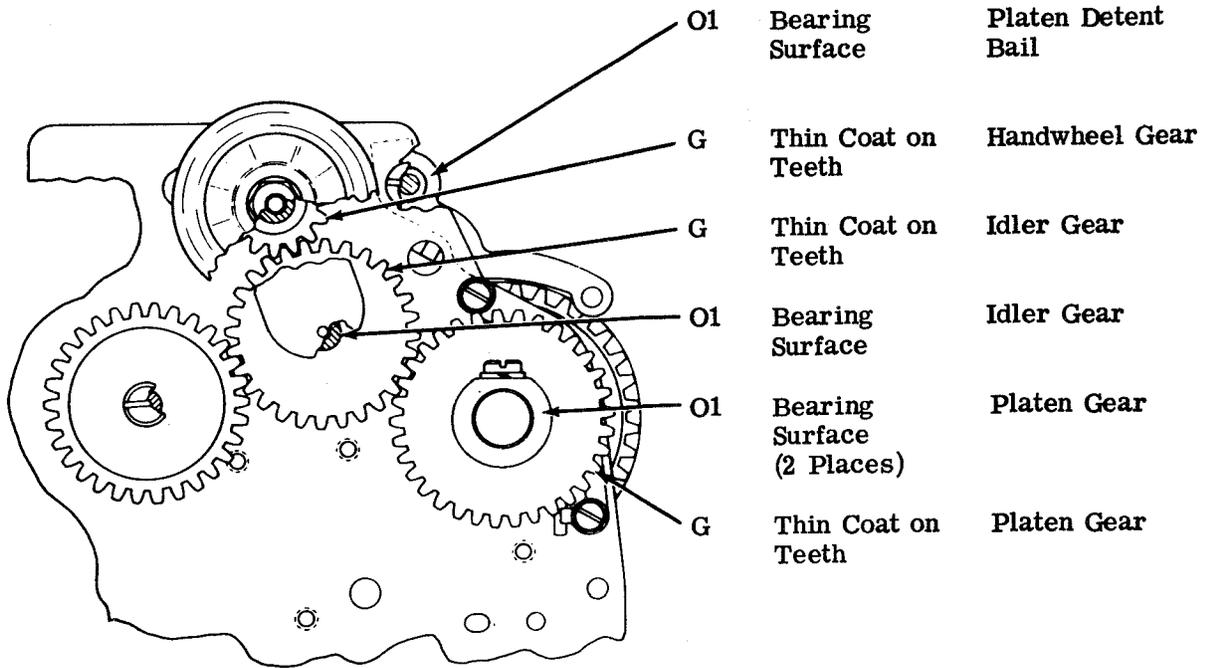


(Left Side View)

Thick Coat on  
Teeth, Engaging  
Surfaces, and  
Bearings

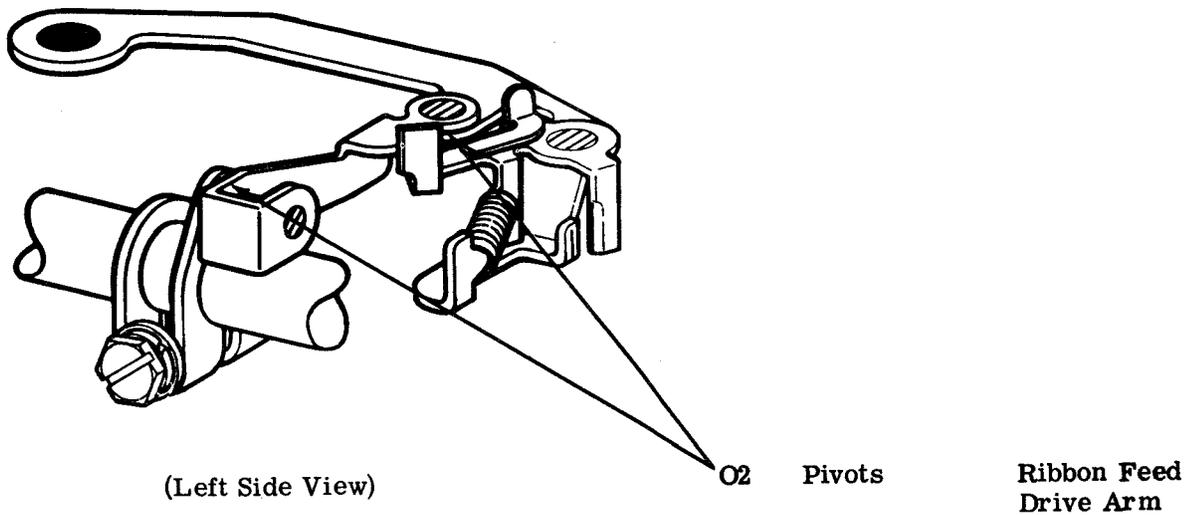
Lower Rack  
Guide Arm,  
Pinion, and  
Drive Shaft  
Bearings

2.37 Line Feed Gears



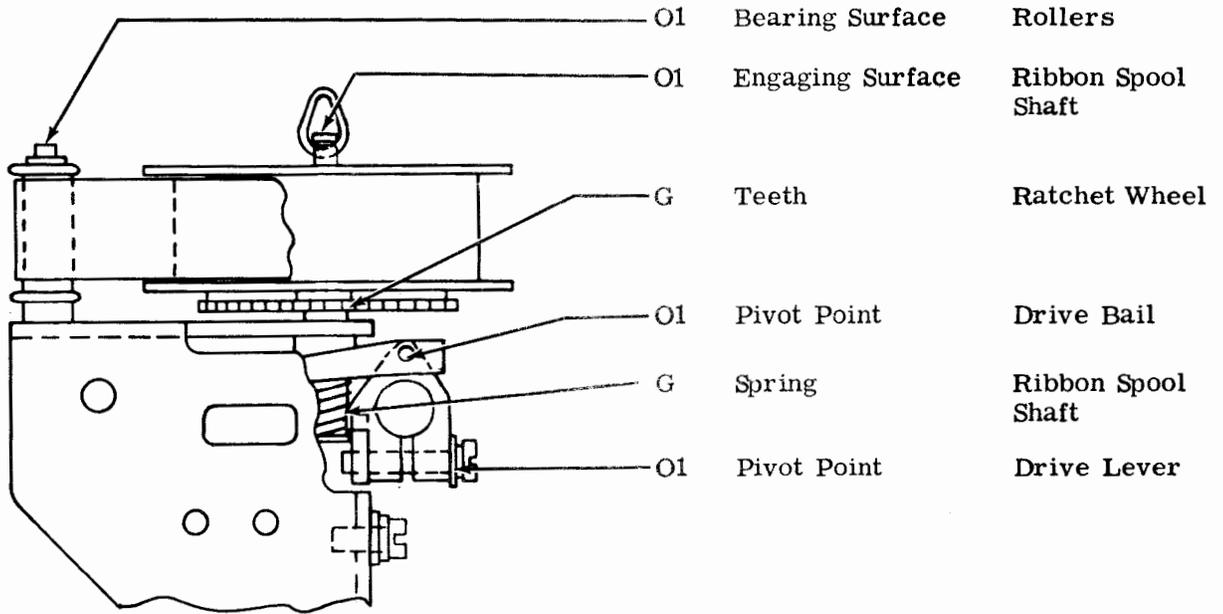
(Left Side View)

2.38 Ribbon Feed Drive Arm

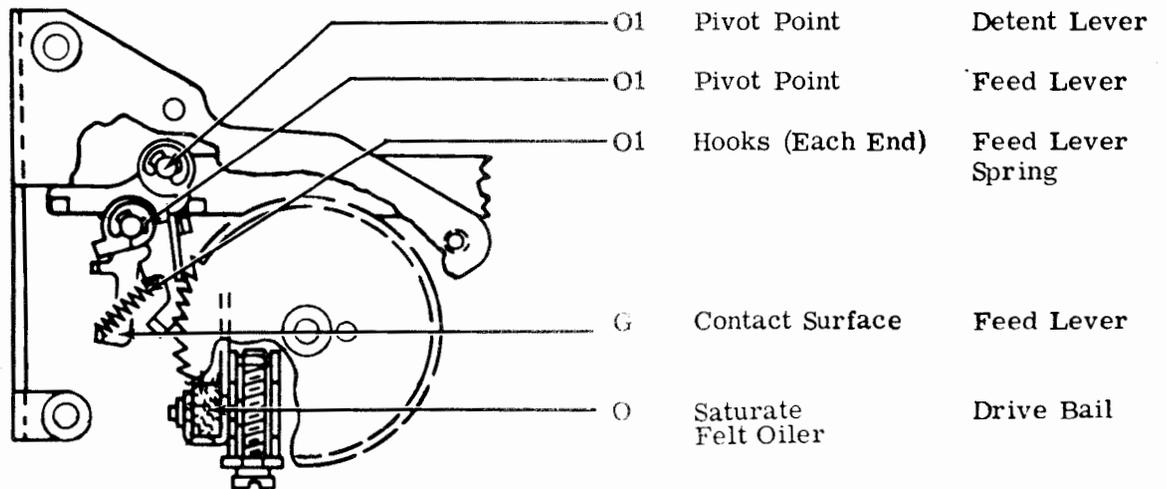


(Left Side View)

2.39 Ribbon Feed Bracket and Ratchet — Early Design

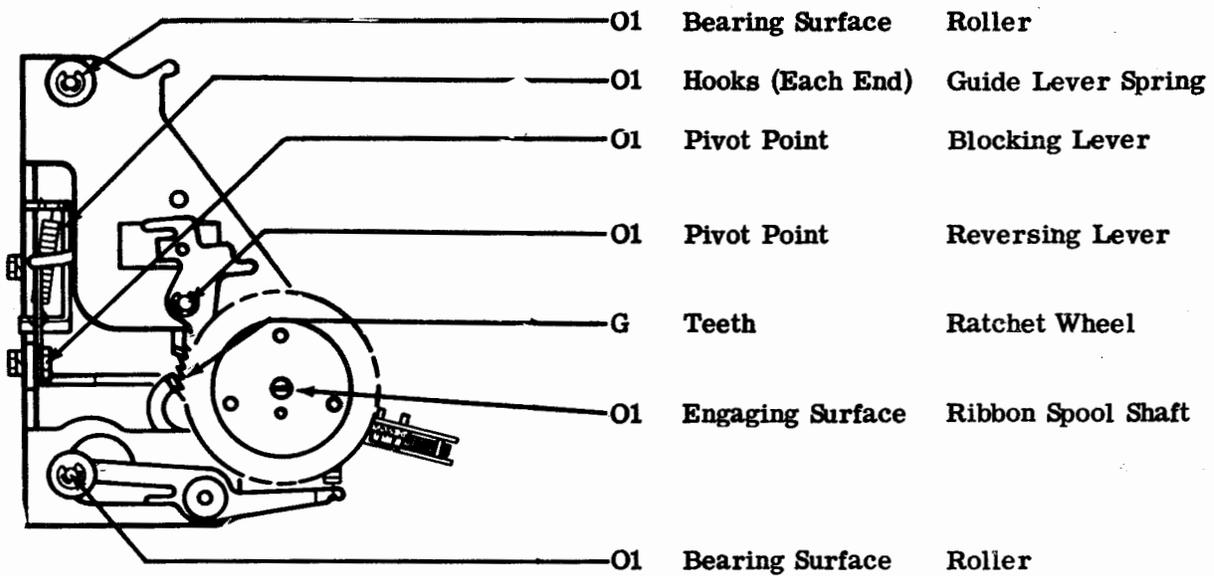


(Left Side View)

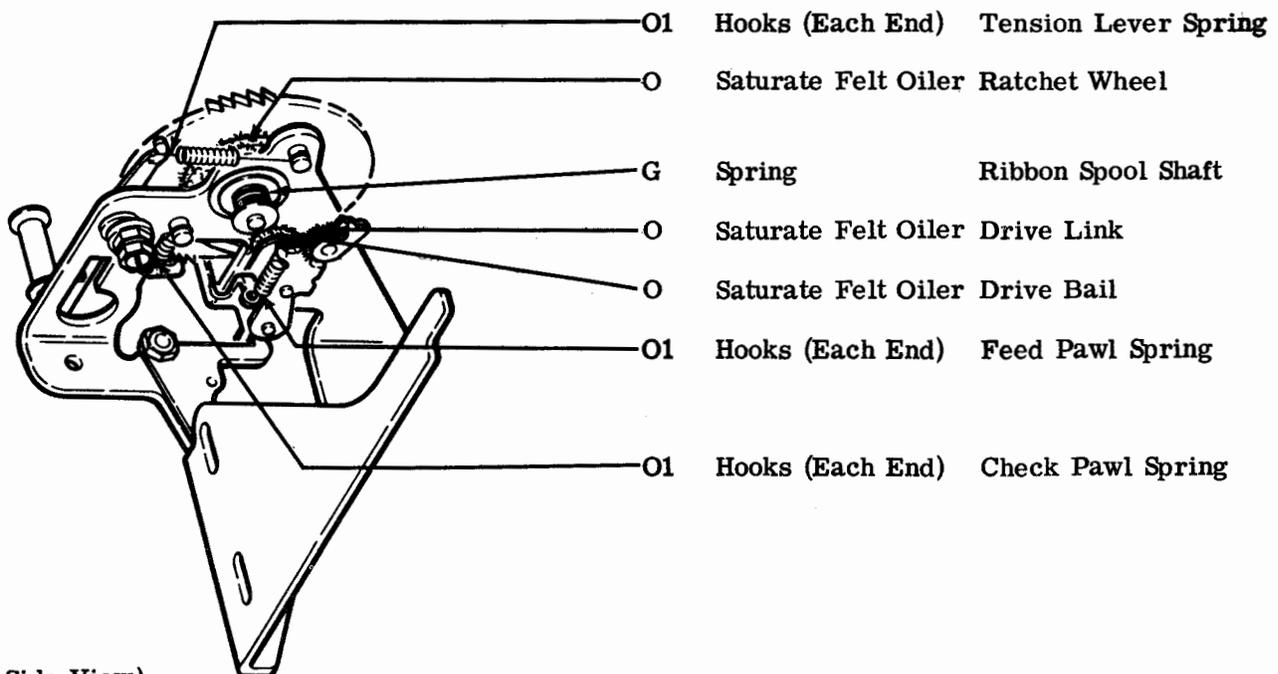


(Top View, Left Side)

2.40 Ribbon Feed Bracket and Ratchet - Late Design

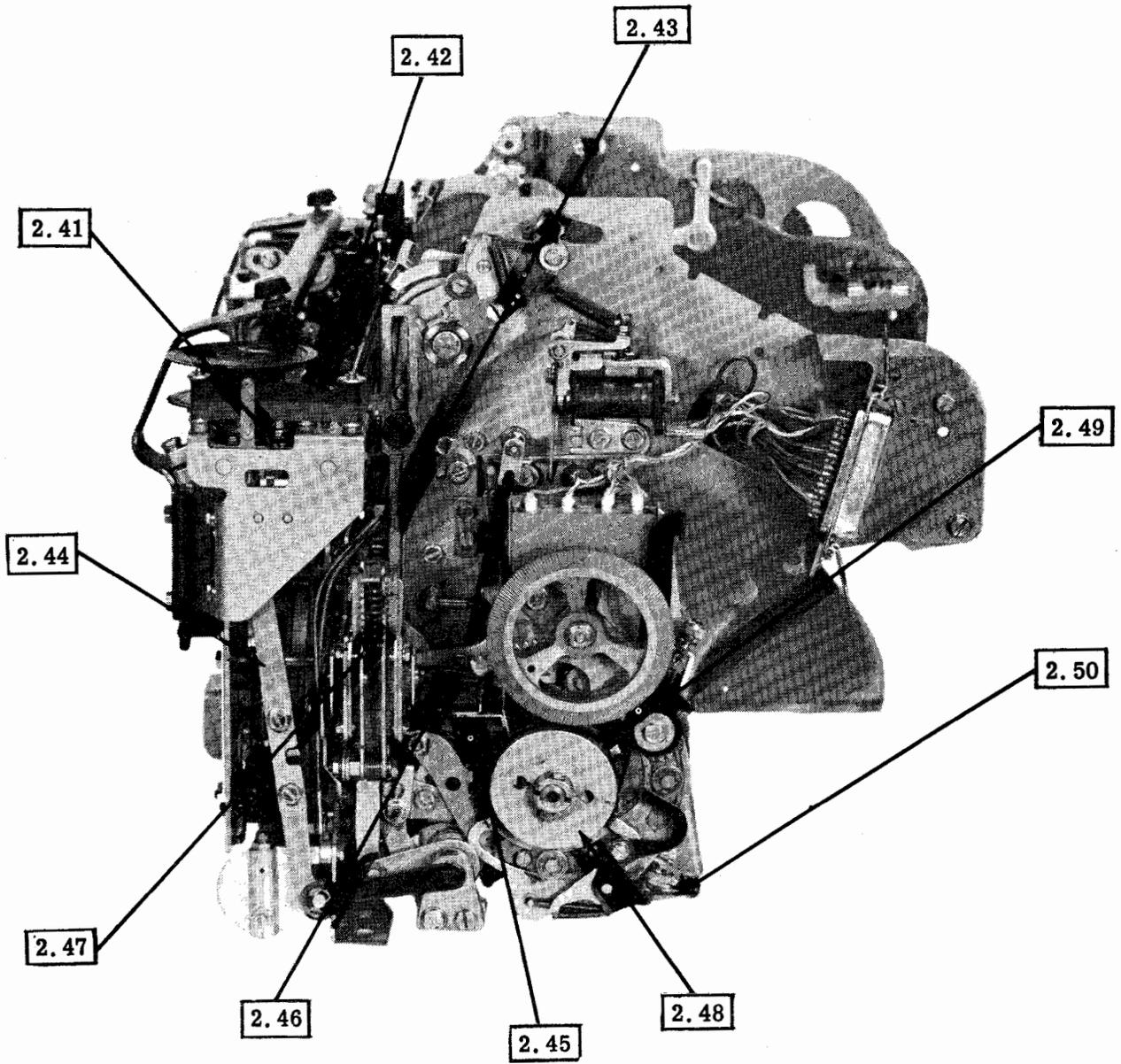


(Top Left View)

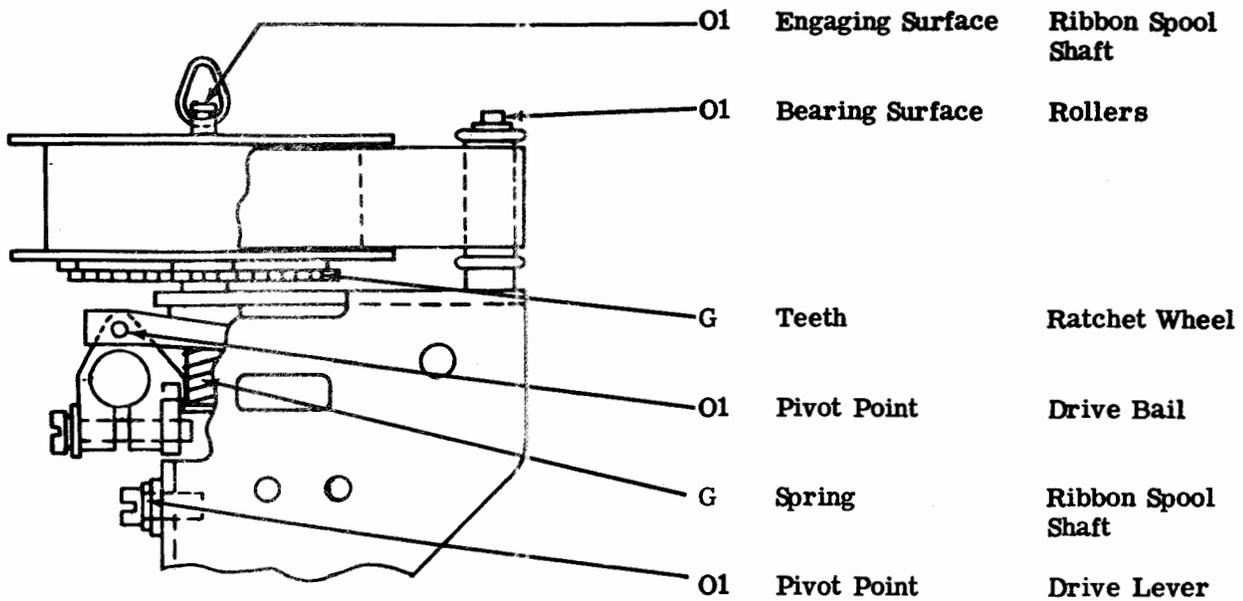


(Left Side View)

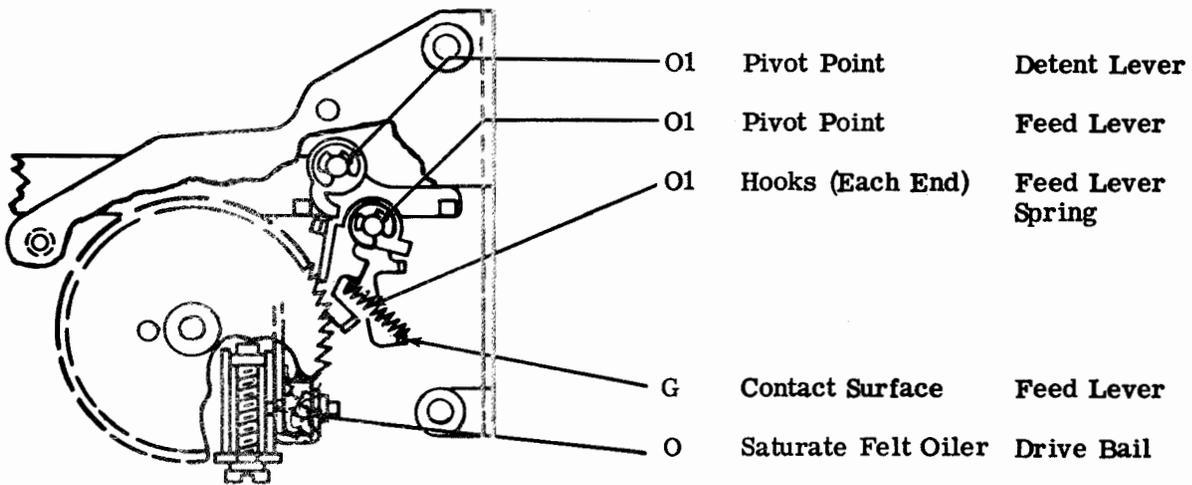
LUBRICATION AREAS — RIGHT SIDE



2.41 Ribbon Feed Bracket and Ratchet — Early Design

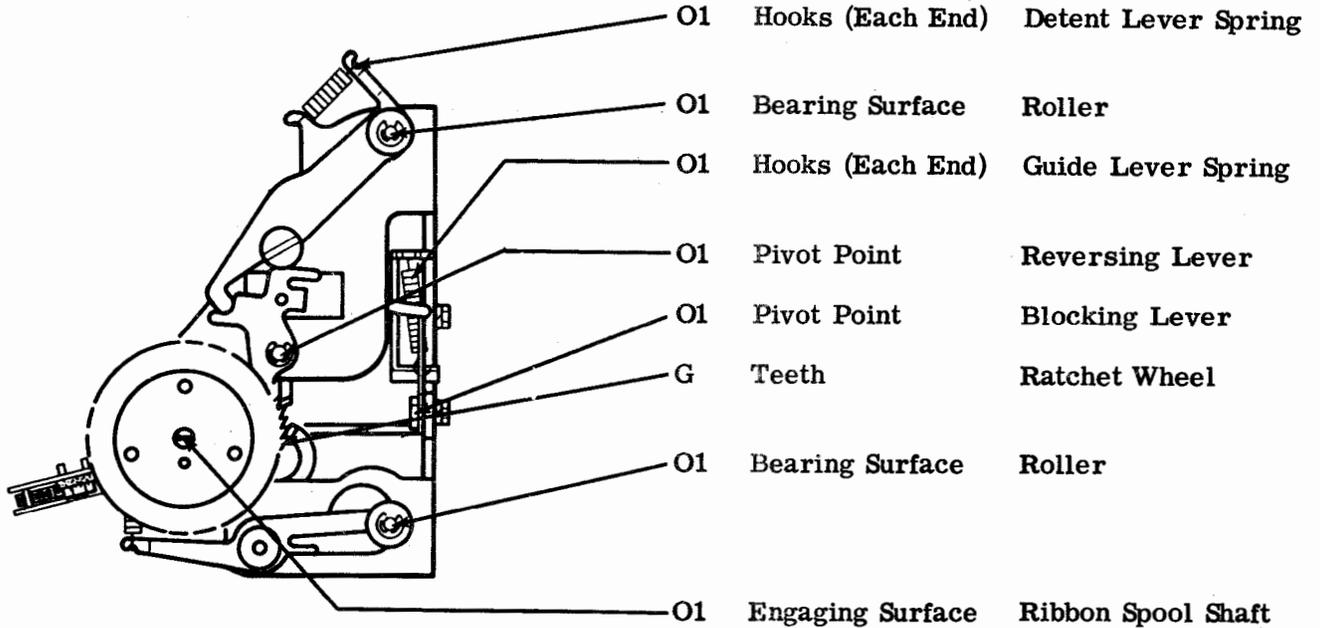


(Right Side View)

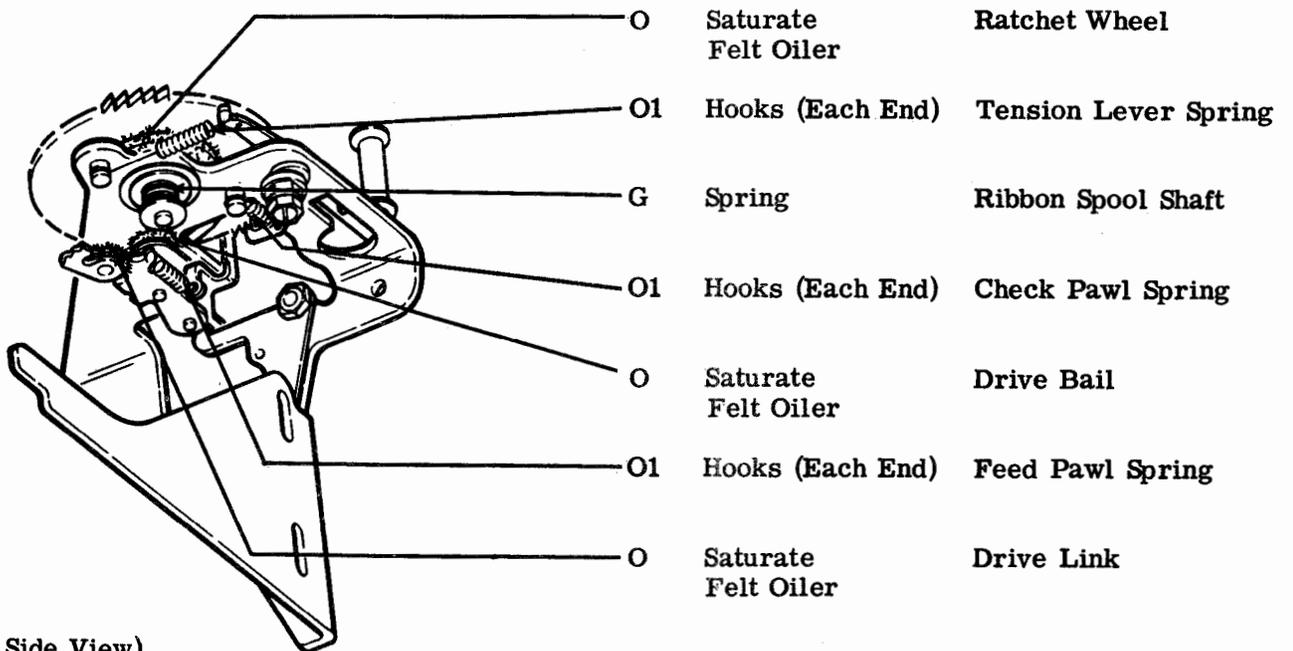


(Top Right View)

2.42 Ribbon Feed Bracket and Ratchet - Late Design

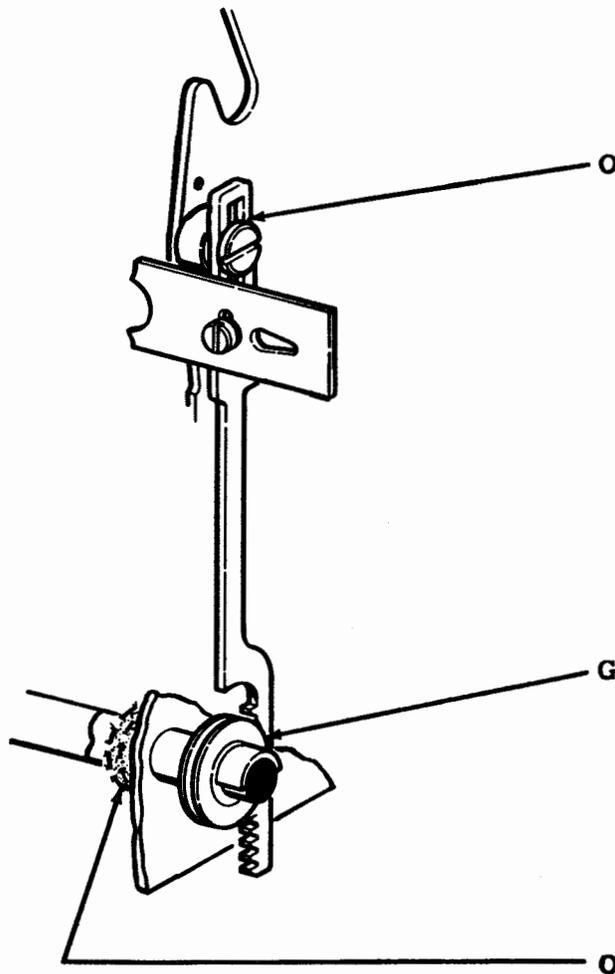


(Top Right View)



(Right Side View)

2.43 Vertical Positioning Rack



Thin Film on Engaging Surfaces

Upper Rack Guide

Thick Coat on Teeth, Engaging Surfaces, Bearings

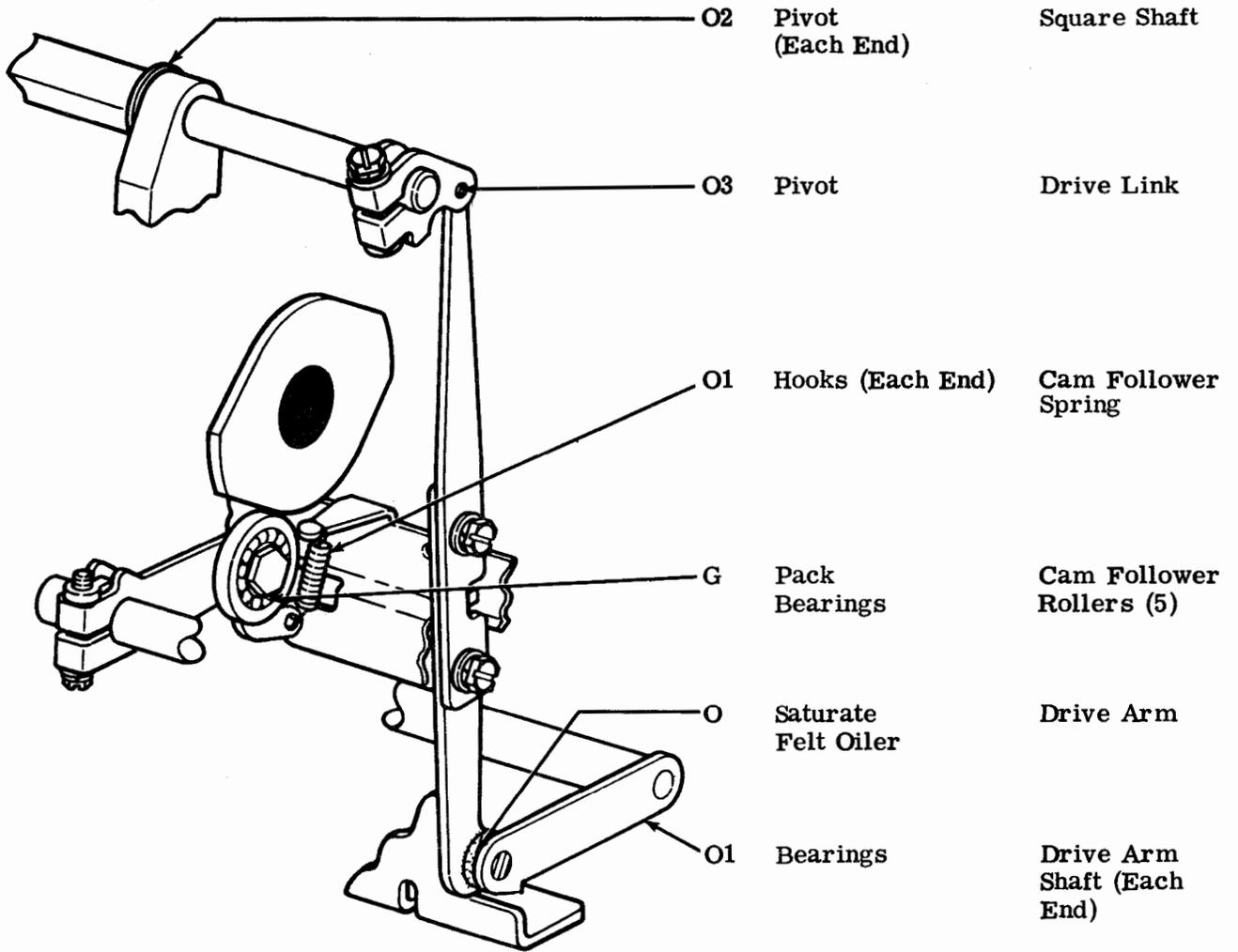
Lower Rack Guide Arm, Pinion, Drive Shaft Bearings

Saturate Felt Oiler

Drive Shaft

(Right Front View)

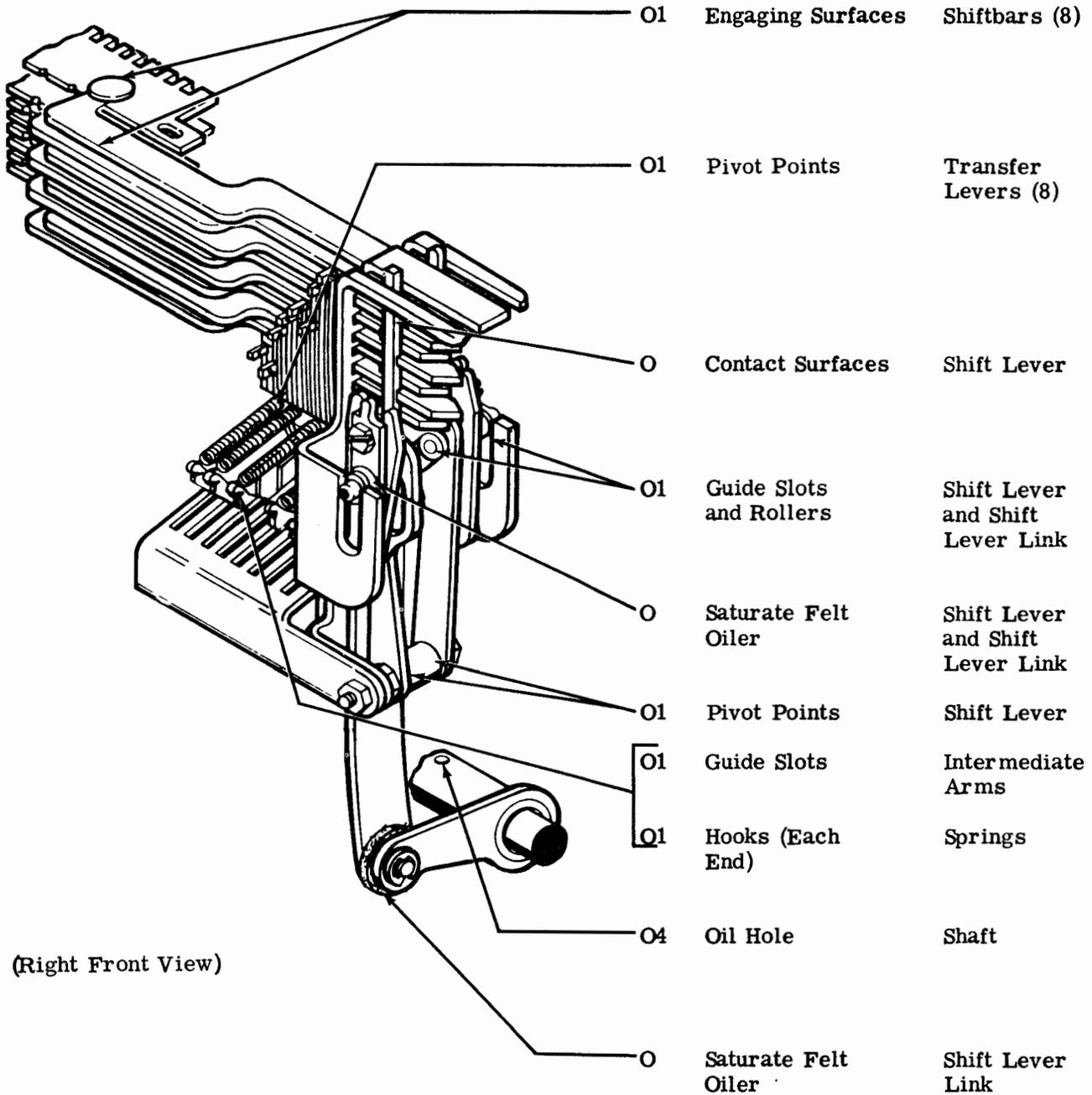
2.44 Printing Drive Arm and Link



(Right Front View)

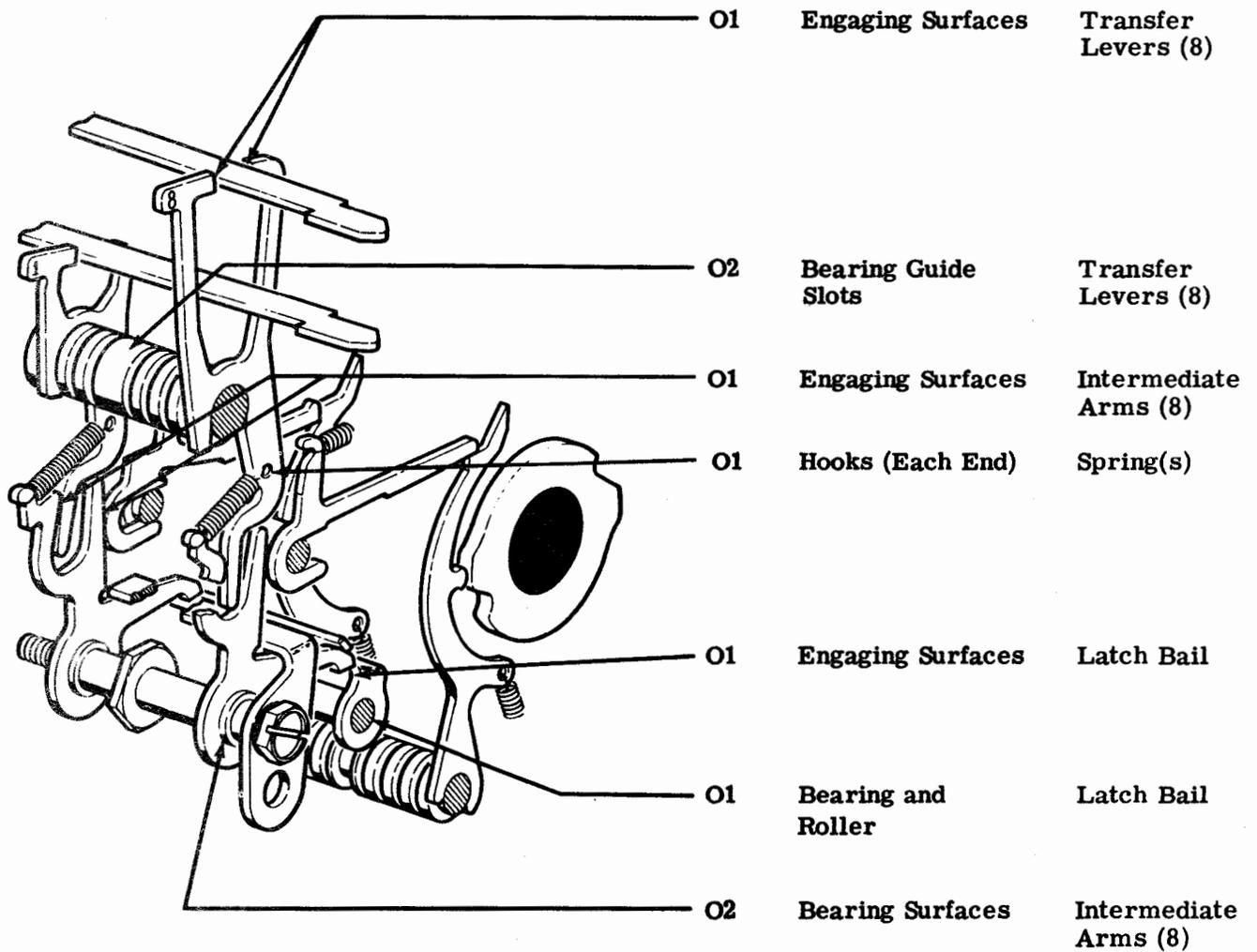
SECTION 574-320-704TC

2.45 Shiftbars and Shift Levers



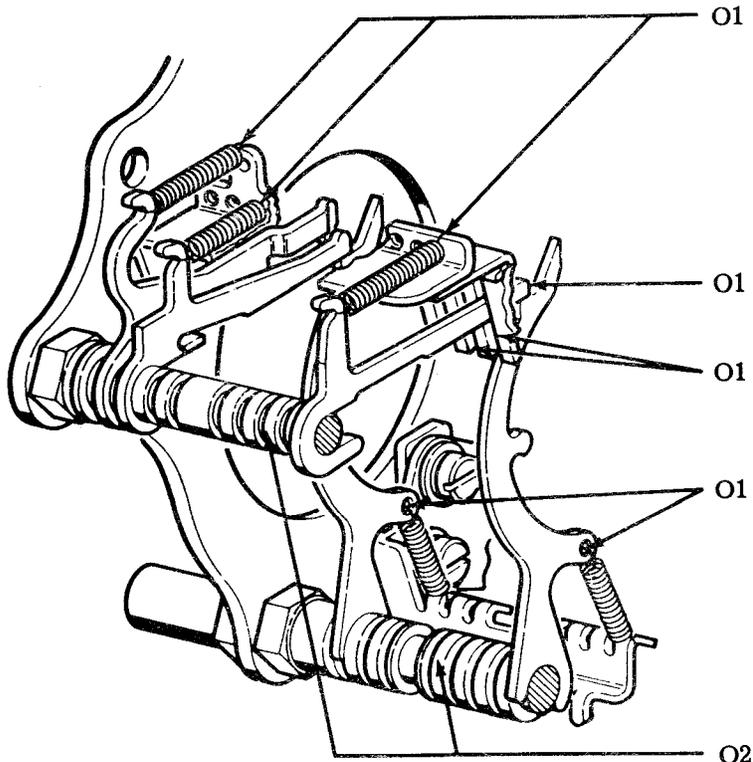
(Right Front View)

2.46 Transfer Levers



(Right Front View)

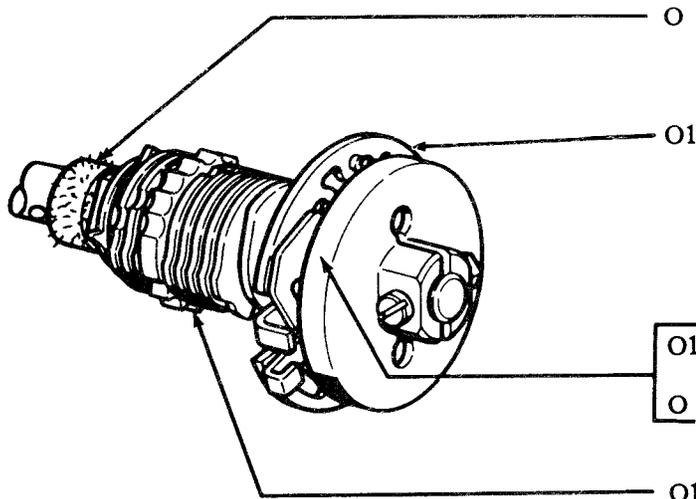
2.47 Selector Levers



(Right Front View)

- O1 Hooks (Each End) Springs (11)
- O1 Engaging Surfaces Push Levers
- O1 Guide Slots Start and Locklevers, Selector and Push Levers
- O1 Hooks (Each End) Springs (10)
- O2 Bearing Guide Slots Push and Selector Lever Guide Bearings

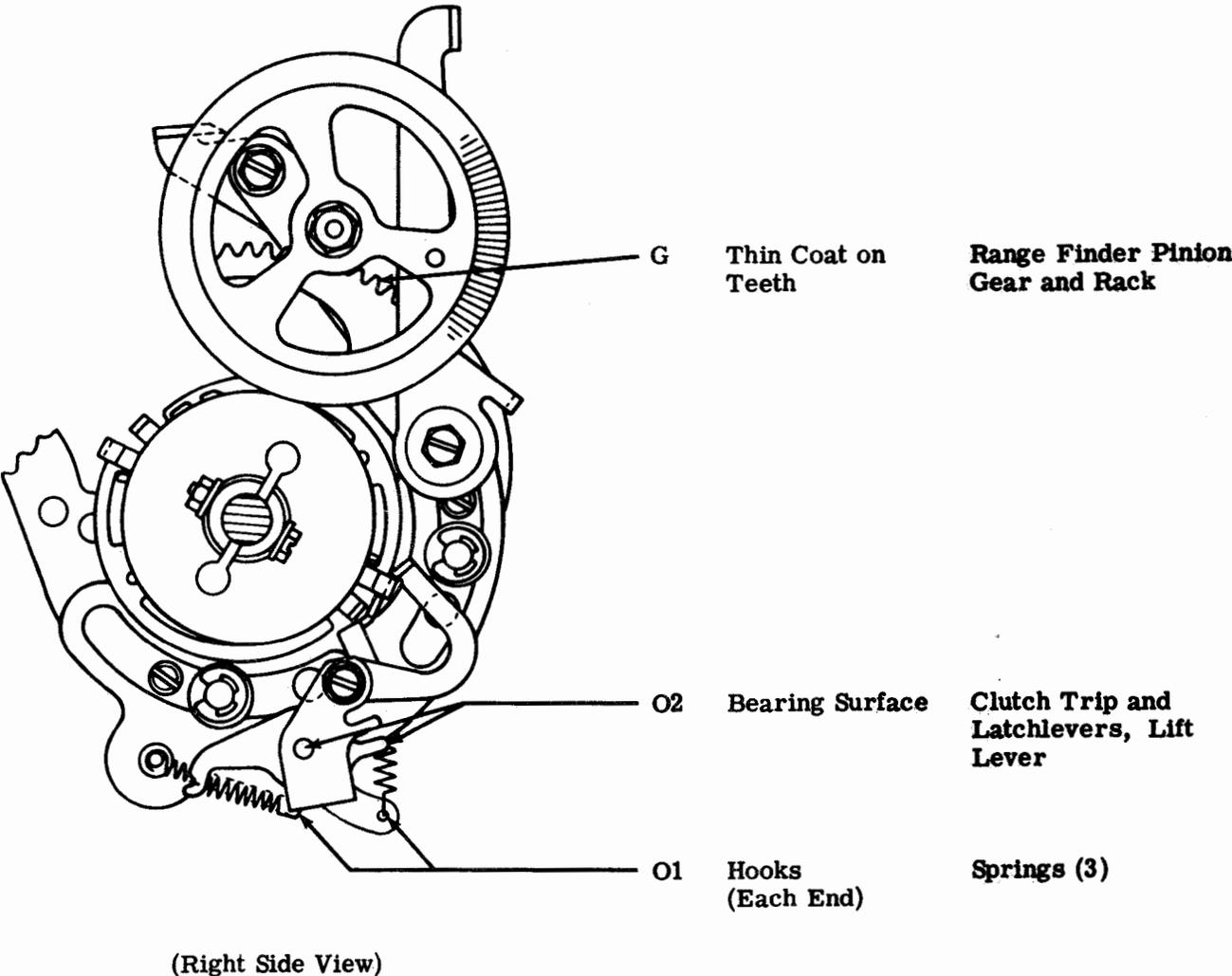
2.48 Selector Cams and Clutch



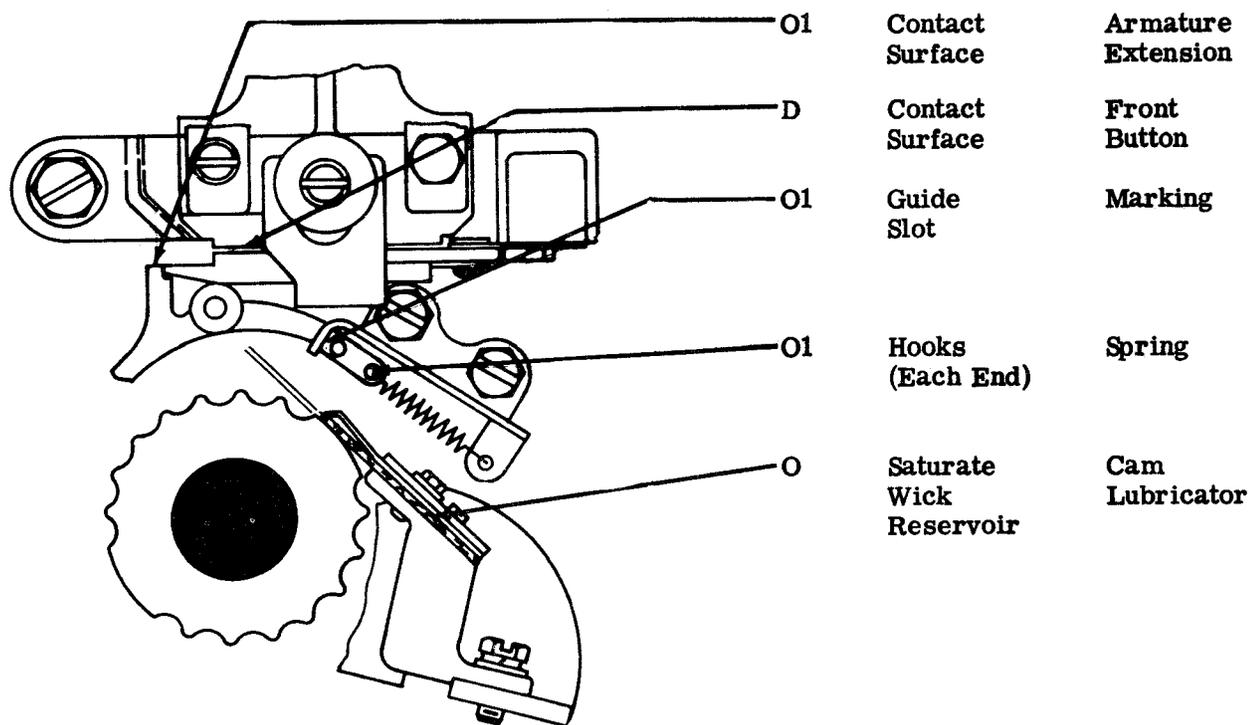
(Right Front View)

- O Saturate Felt Oiler Selector Camshaft
- O1 Camming Surface Clutch Disc
- O Internal Mechanism Saturate Felt Wick Selector Clutch
- O1 Camming Surface (Each Cam) Selector Cams

2.49 Selector Range Finder and Levers



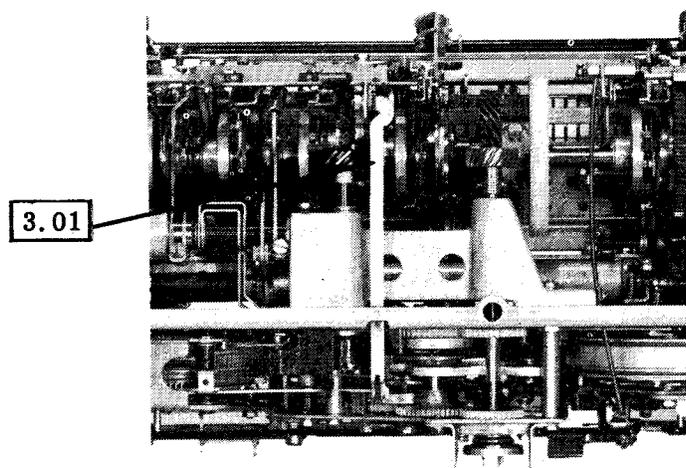
2.50 Selector Cam Lubricator and Marking Locklever



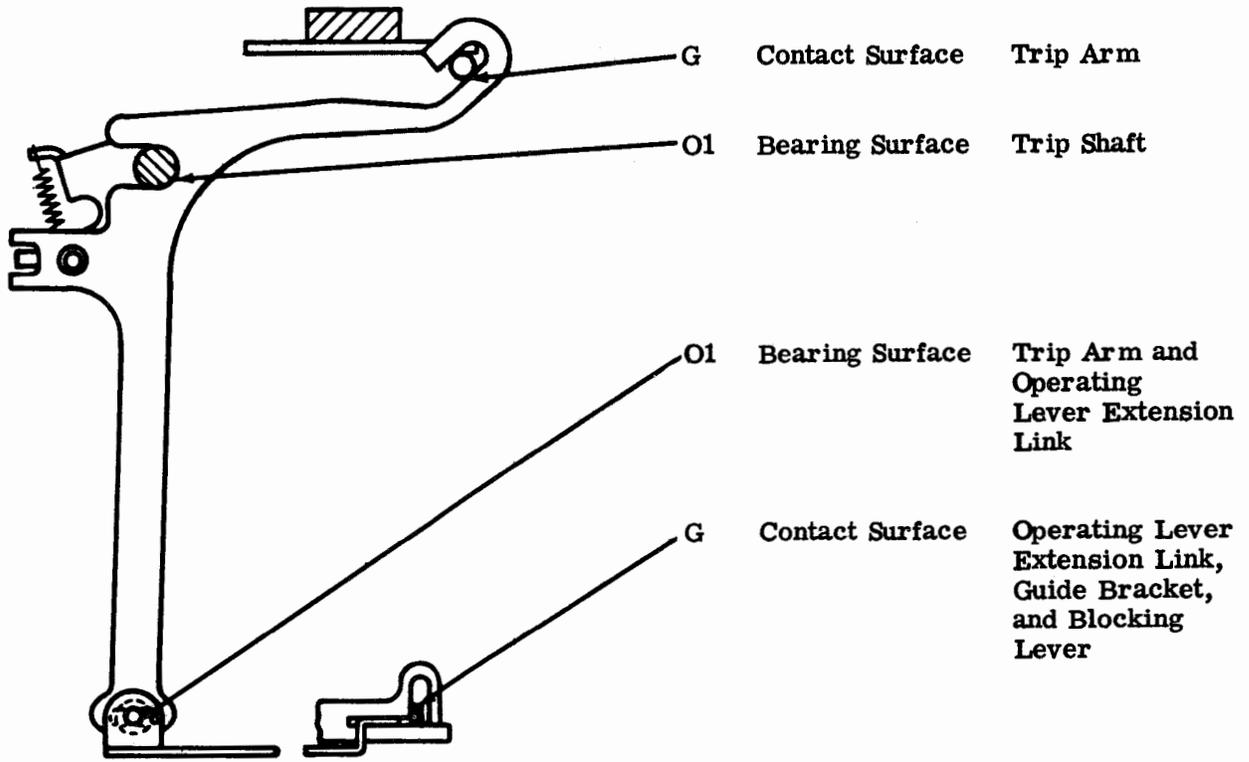
(Right Side View)

3. VARIABLE FEATURES

LUBRICATION AREA — BOTTOM

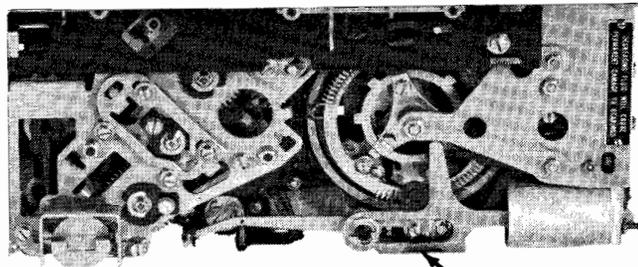


3.01 Horizontal Tabulator Cam and Levers



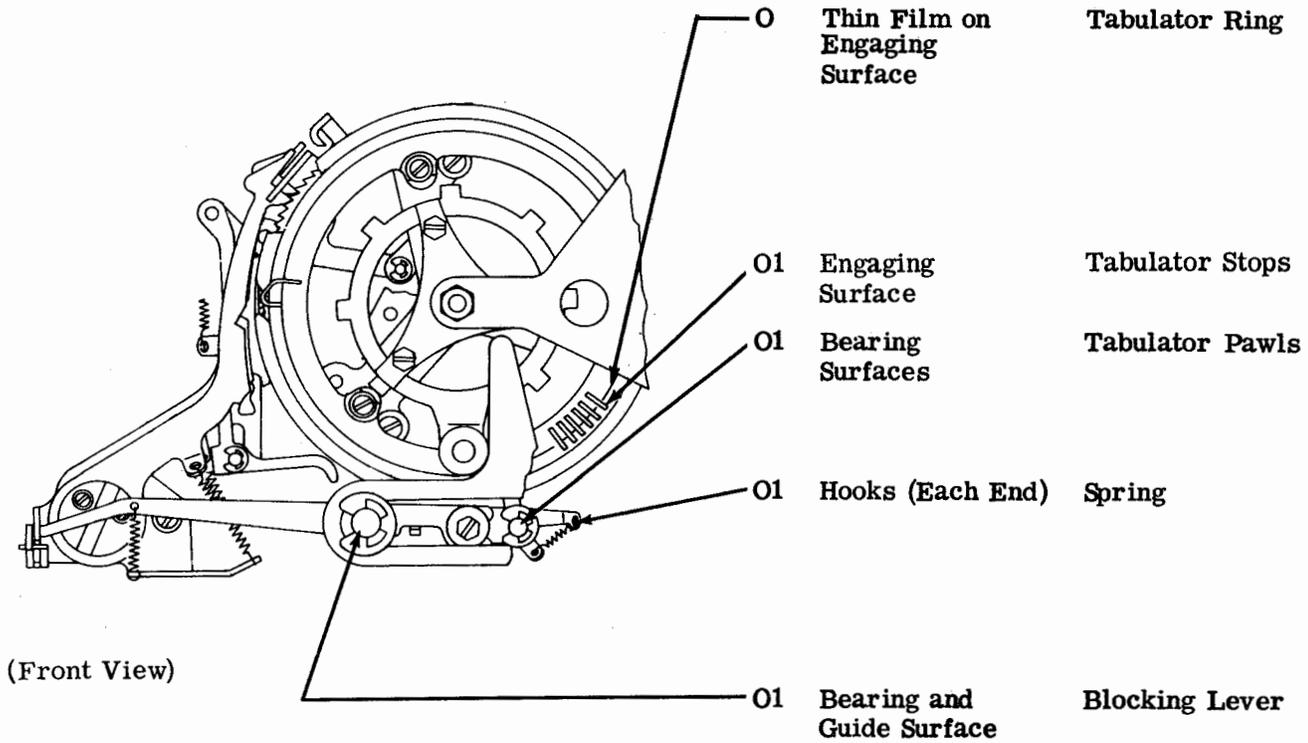
(Right Side View)

LUBRICATION AREA — FRONT

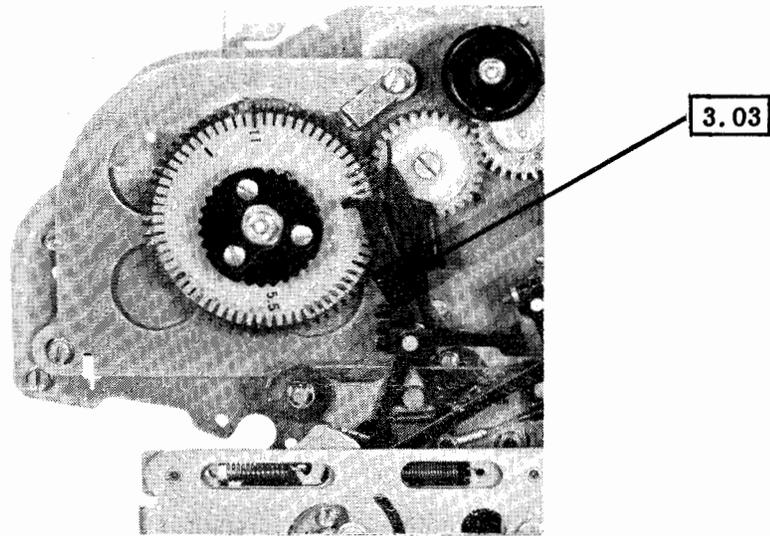


3.02

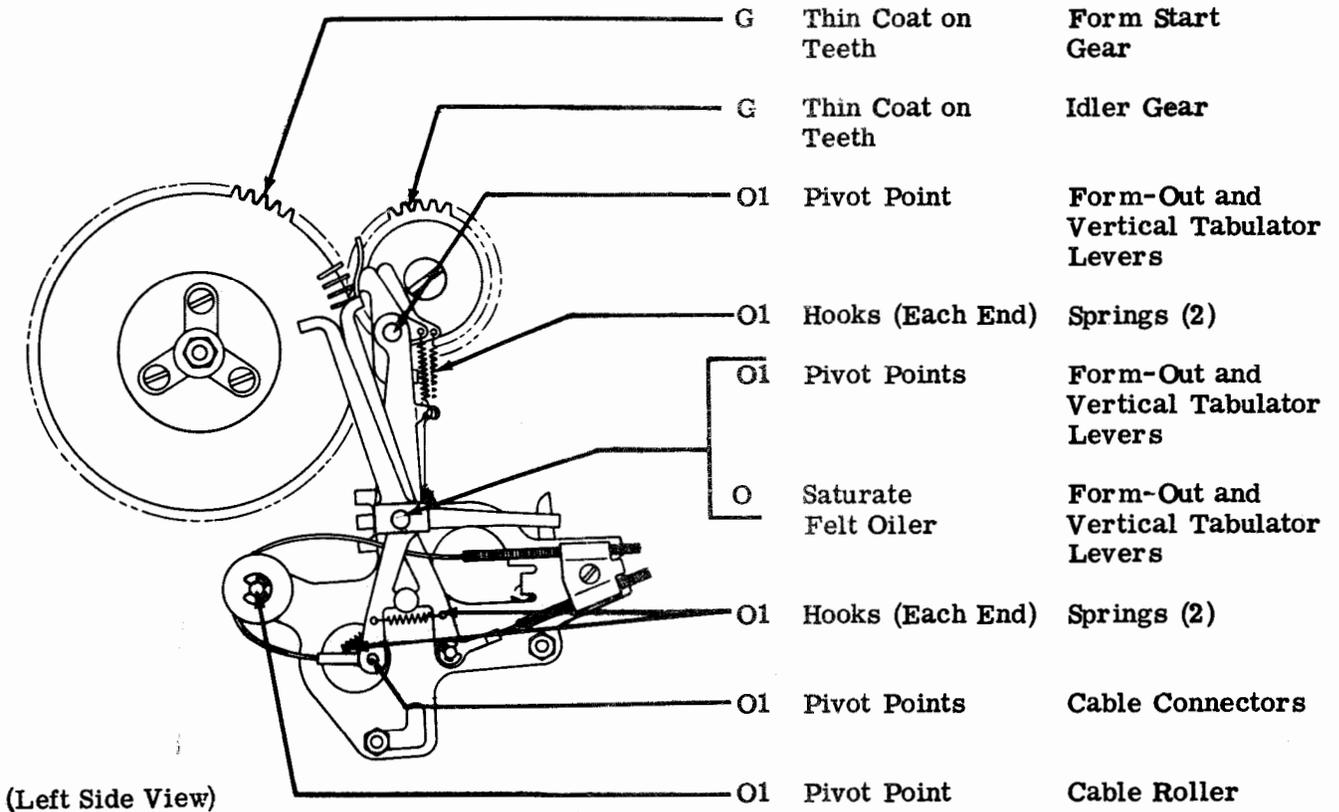
3.02 Horizontal Tabulator Stops and Pawls



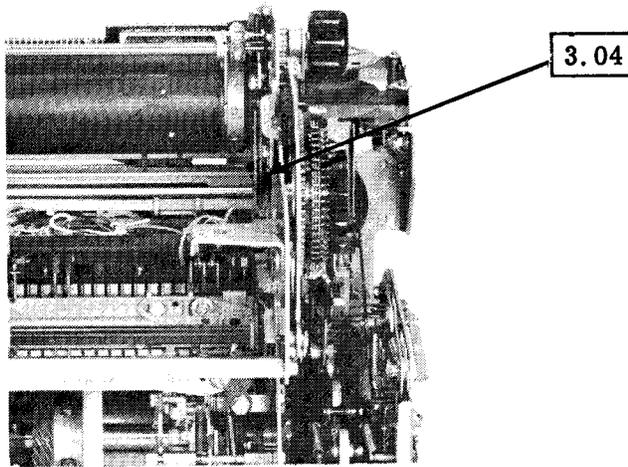
LUBRICATION AREA — LEFT SIDE



3.03 Vertical Tabulation and Form-Out Gears and Levers

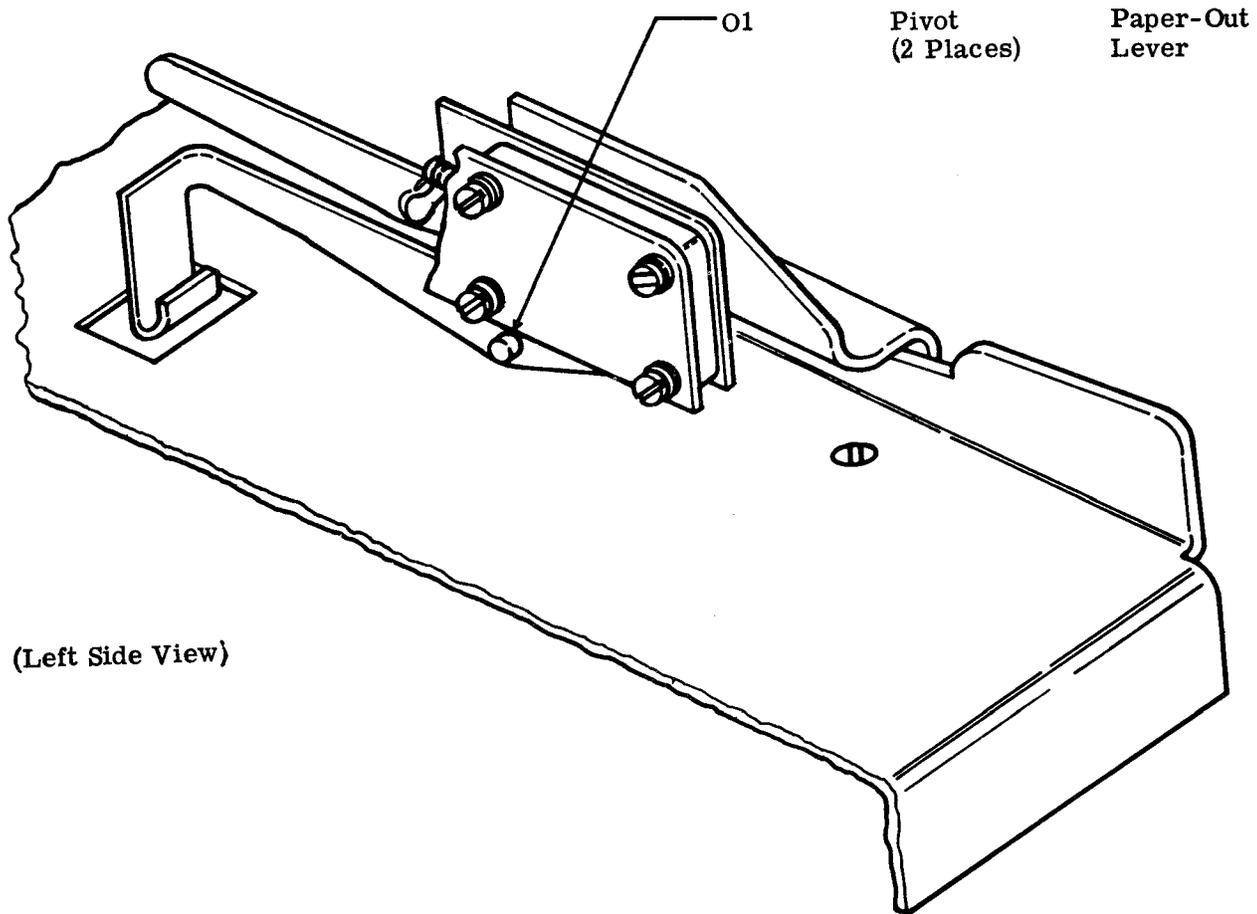


LUBRICATION AREA — REAR



(Sprocket Feed)

3.04 Paper-Out Alarm Switch (Sprocket Feed)



(Left Side View)