

37 TYPING UNIT

LUBRICATION

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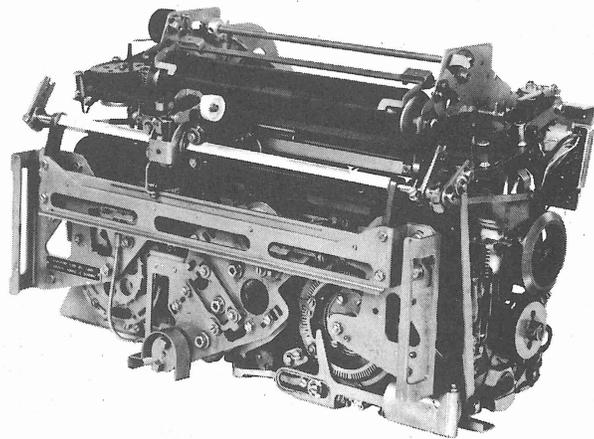


Figure 1 - 37 Typing Unit with
Variable Features

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 1. GENERAL	
1.01 This section provides lubrication pro- cedures for the early design 37 typing unit (Figure 1), and is reissued to incorporate changes in lubrication requirements. Marginal arrows have been included to indicate these changes.	
1.02 Lubrication of the 37 typing unit is pre- sented 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 fig- ures 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 Part 2. Lubrication of the mechanisms located on the right side of the unit should be done last to prevent draining of the selector mechanism cam lubricator reservoir shown in 2.52.	
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 570-005-800.

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: Shielded roller bearings do not require lubrication. All open roller bearings should be packed with grease TP88973 (KS7471).

1.07 The 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 TP88970 (KS7470)
- G Grease TP88973 (KS7471)
- D Keep dry, no lubricant permitted.

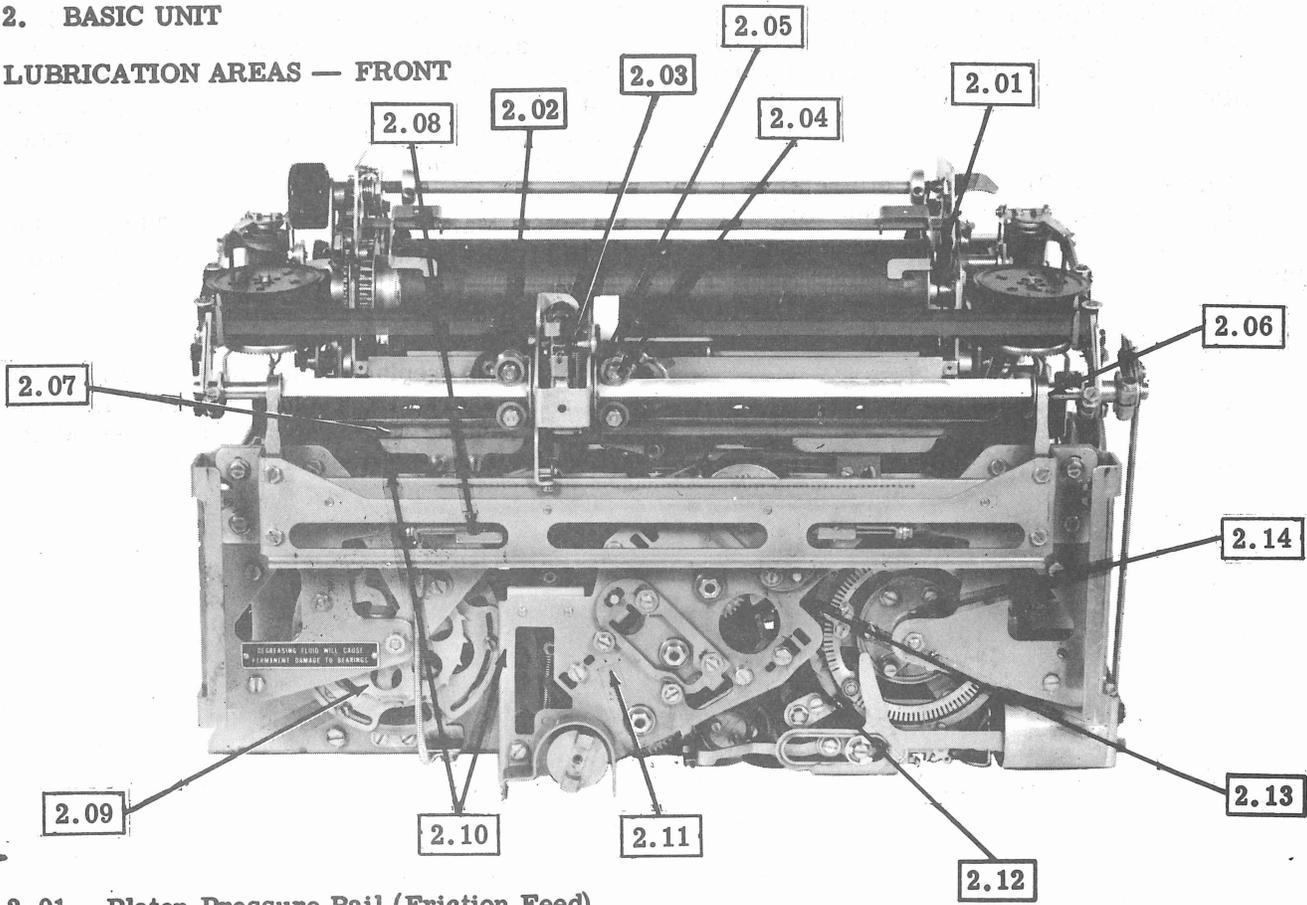
1.08 Over lubrication which would allow oil to drip or grease to be thrown on other parts should be avoided. Capillary action and vaporization tend to keep a thin film of oil on the mechanisms. This prevents rust and provides sufficient lubrication to many points.

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

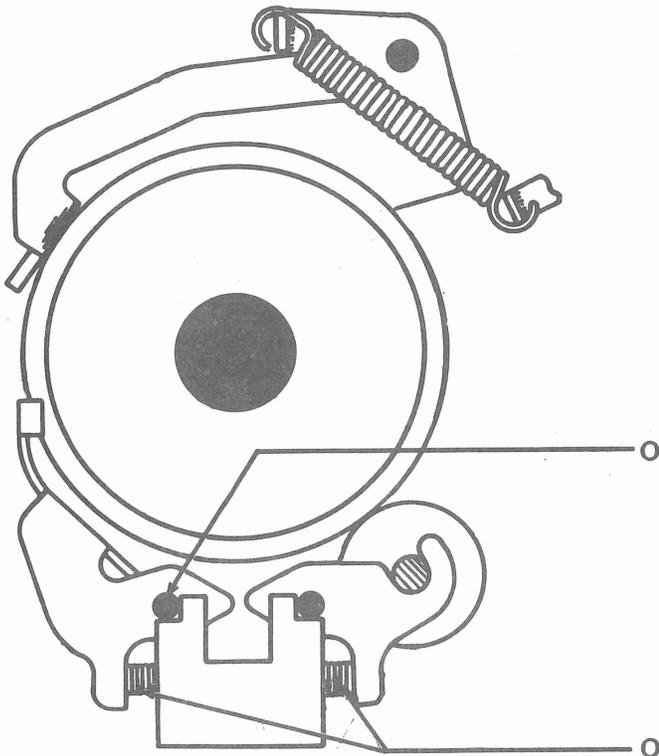
1.09 When replacing lubricating wicks and washers, thoroughly saturate them with oil and remove the excess oil by pressing the wick or washer between clean cloths.

2. BASIC UNIT

LUBRICATION AREAS — FRONT



2.01 Platen Pressure Bail (Friction Feed)



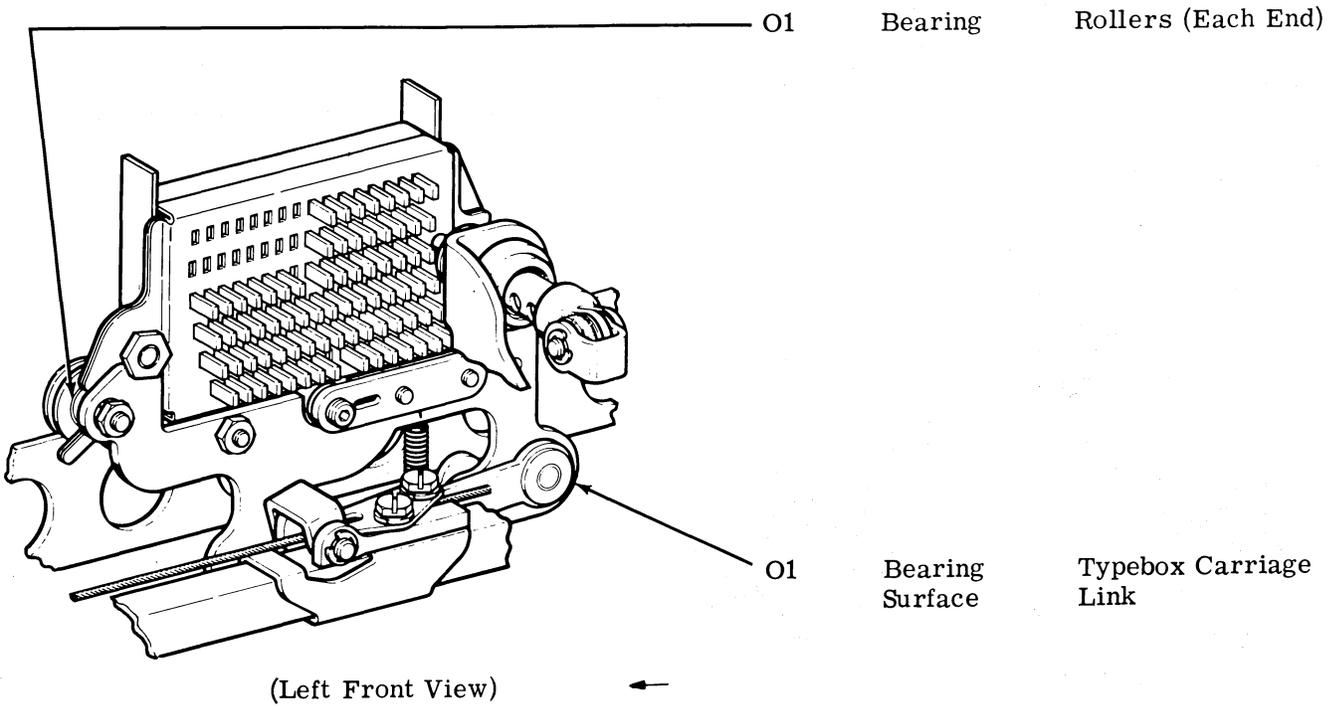
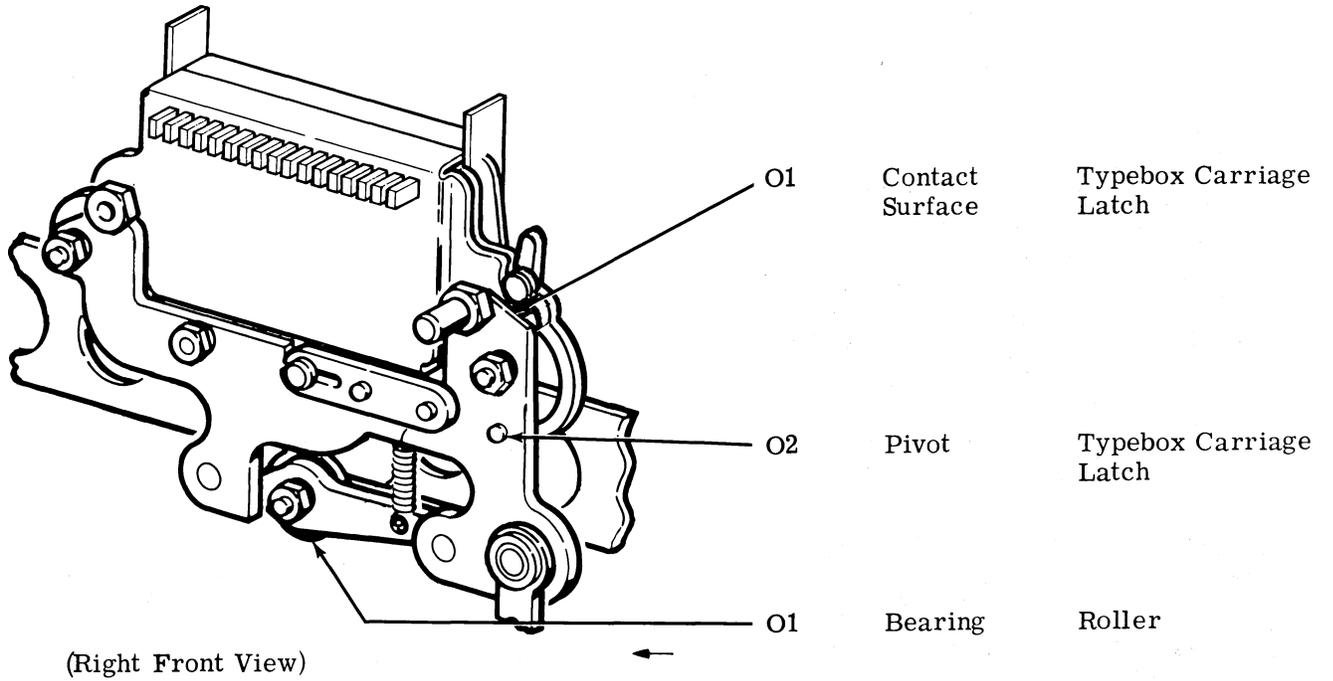
Thin Film on Engaging Surface

Pressure Bail

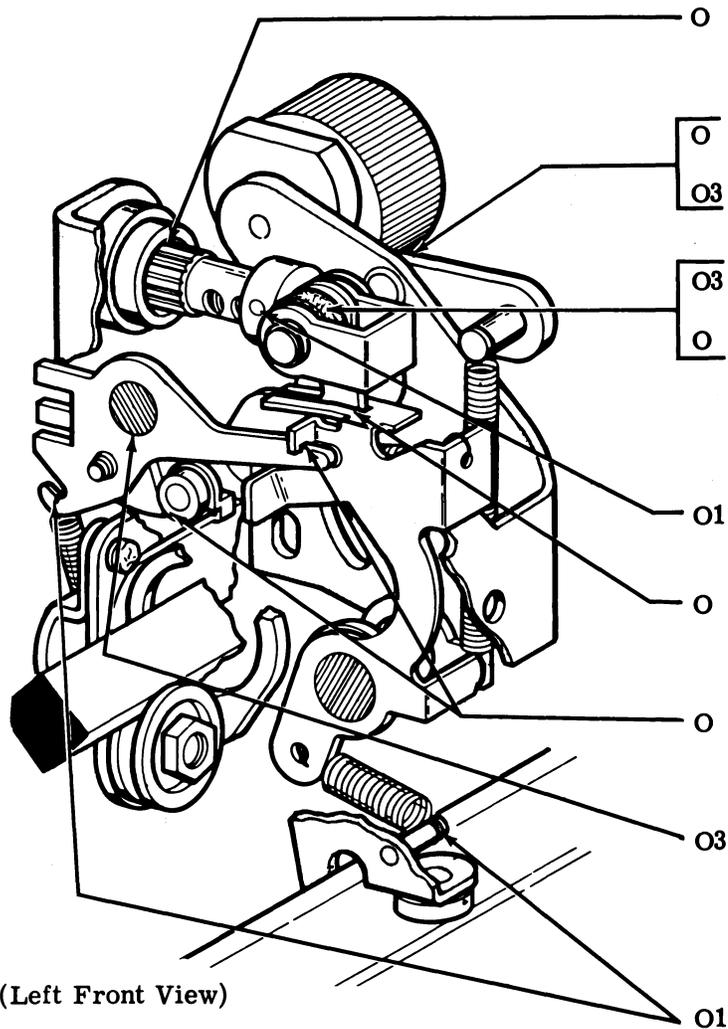
Thin Film on Engaging Surface

Compression Springs (4)

2.02 Typebox



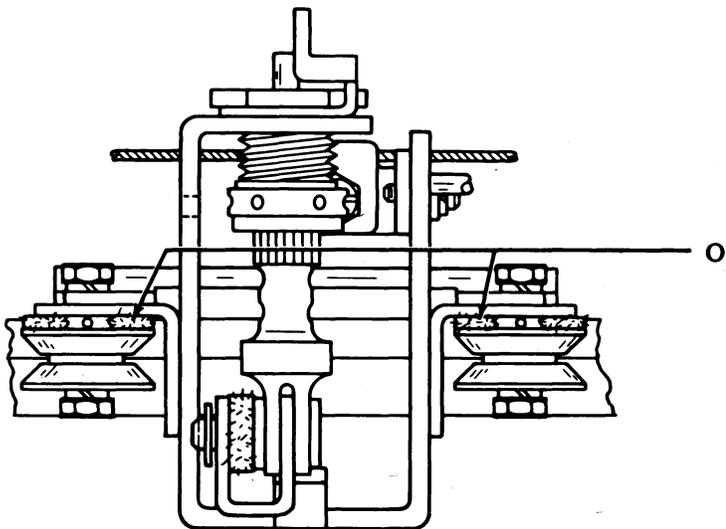
2.03 Print Hammer and Levers



- O Thin Film on Engaging Surface Print Hammer
- O3 Thin Film on Engaging Surface Pivot Spring Tension Lever
- O3 Pivot and Engaging Surface Saturate Felt Washer Print Hammer
- O1 Hooks (Each End) Springs
- O Thin Film on Engaging Surface Print Hammer and Accelerating Levers
- O Thin Film on Engaging Surfaces Latchlever
- O3 Pivot Latchlever
- O1 Hooks (Each End) Spring

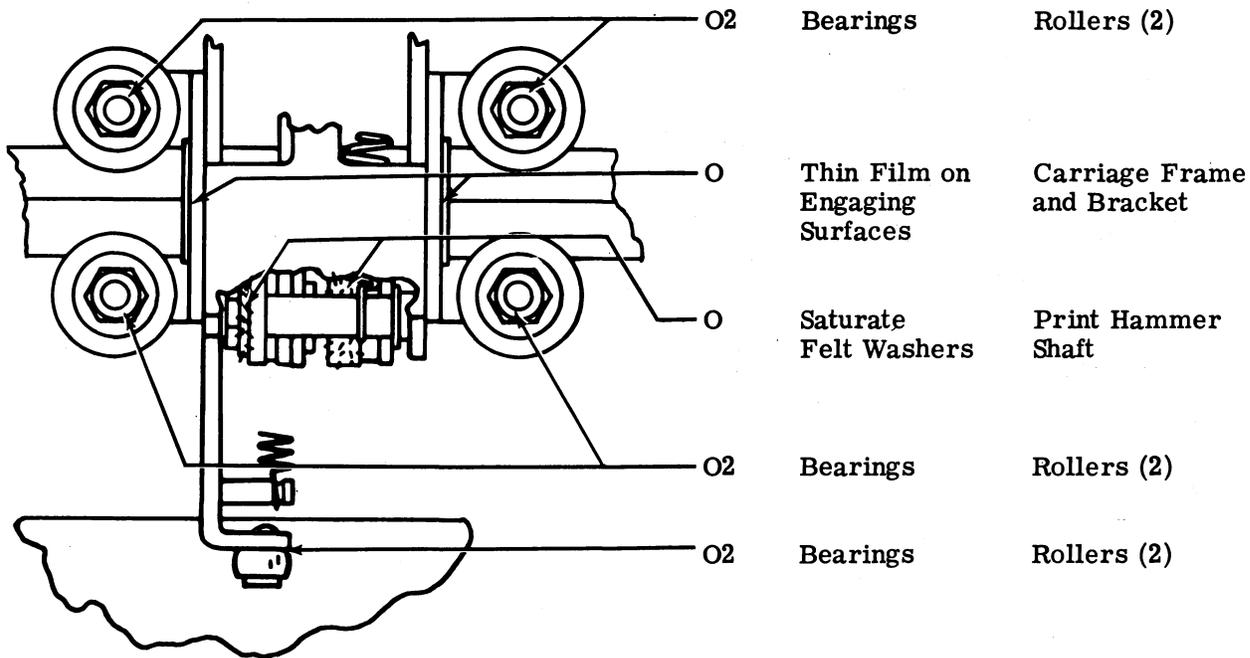
(Left Front View)

2.04 Print Hammer Carriage



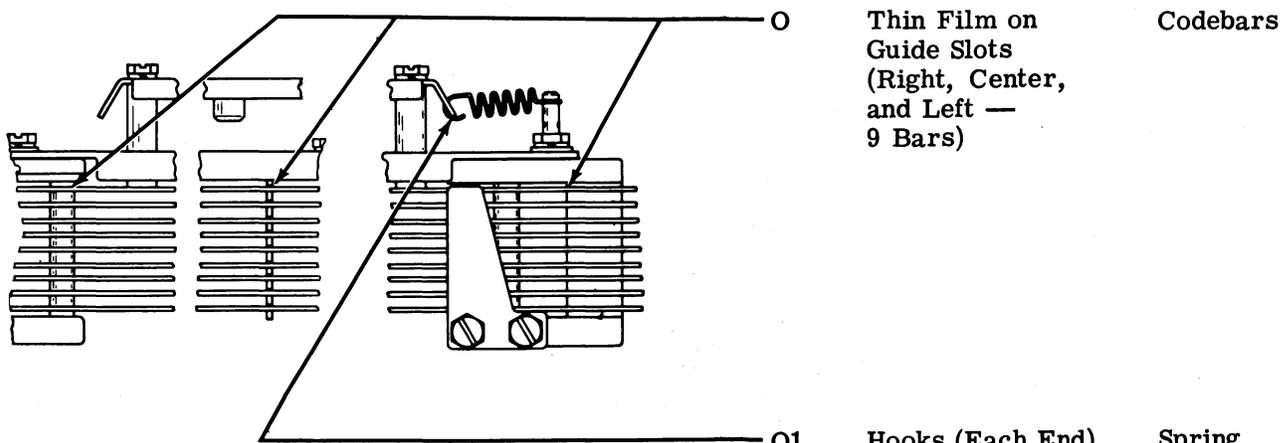
- O Saturate Felt Washers Roller

2.05 Print Hammer Carriage (continued)



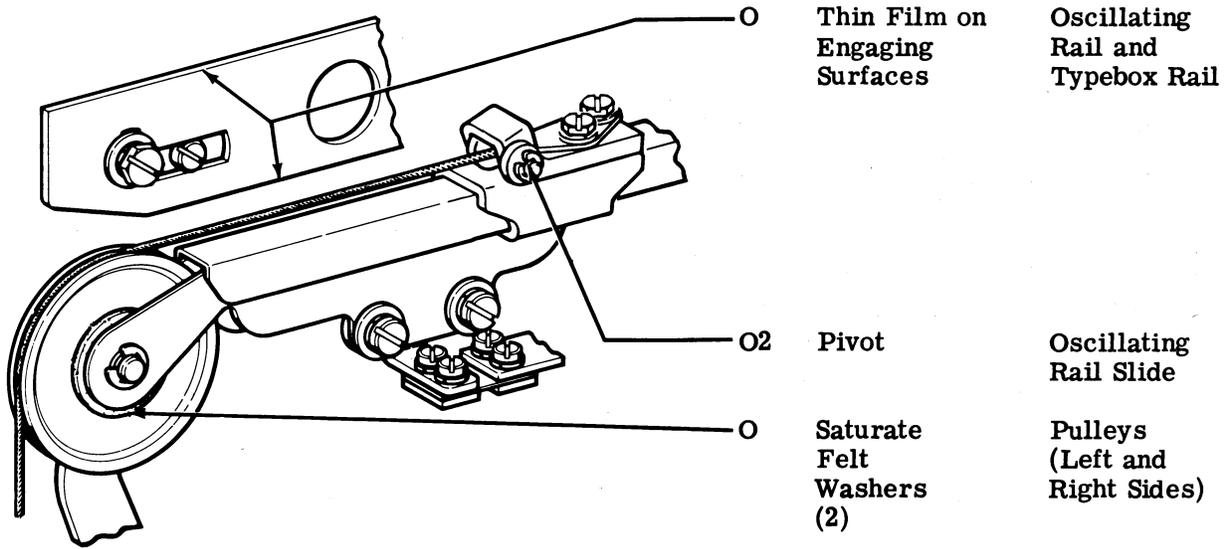
(Front View)

2.06 Codebars



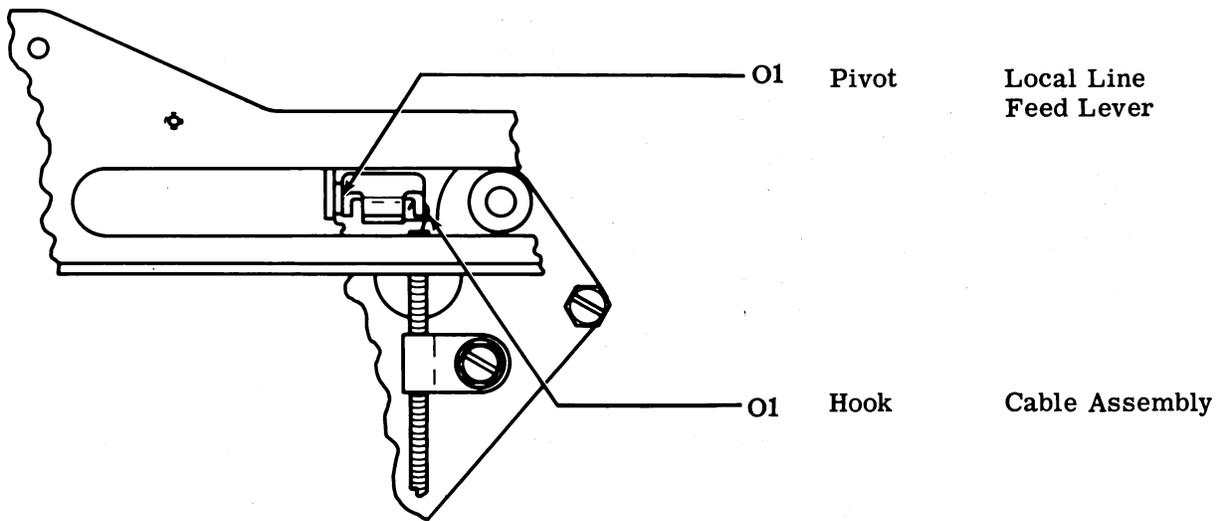
(Front View)

2.07 Oscillating Rail



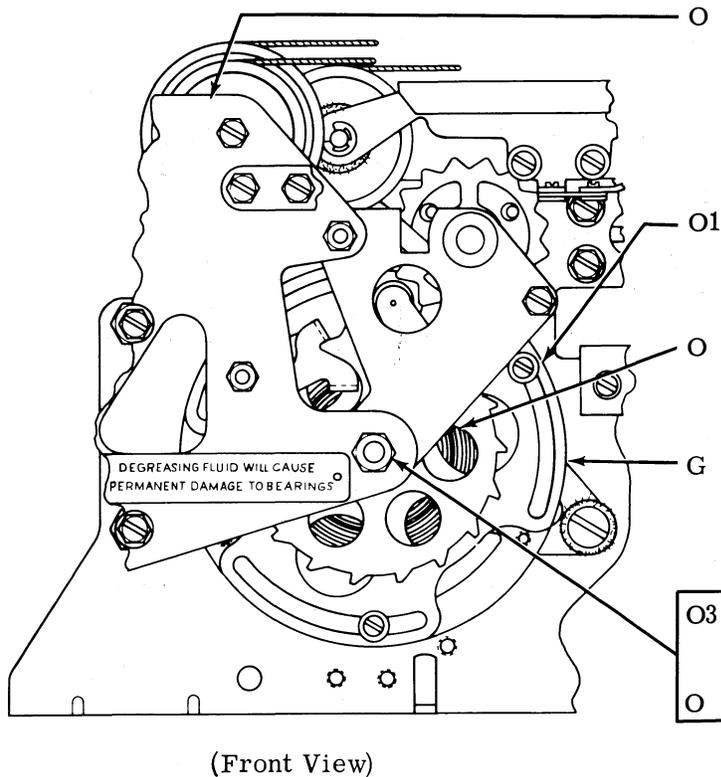
(Left Front View)

2.08 Local Line Feed Lever



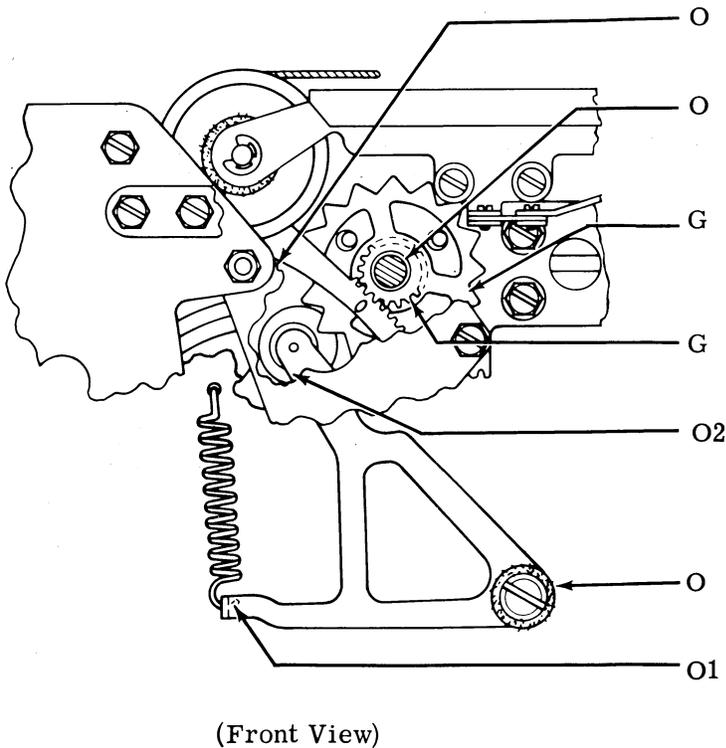
(Front View)

2.09 Spring Drum



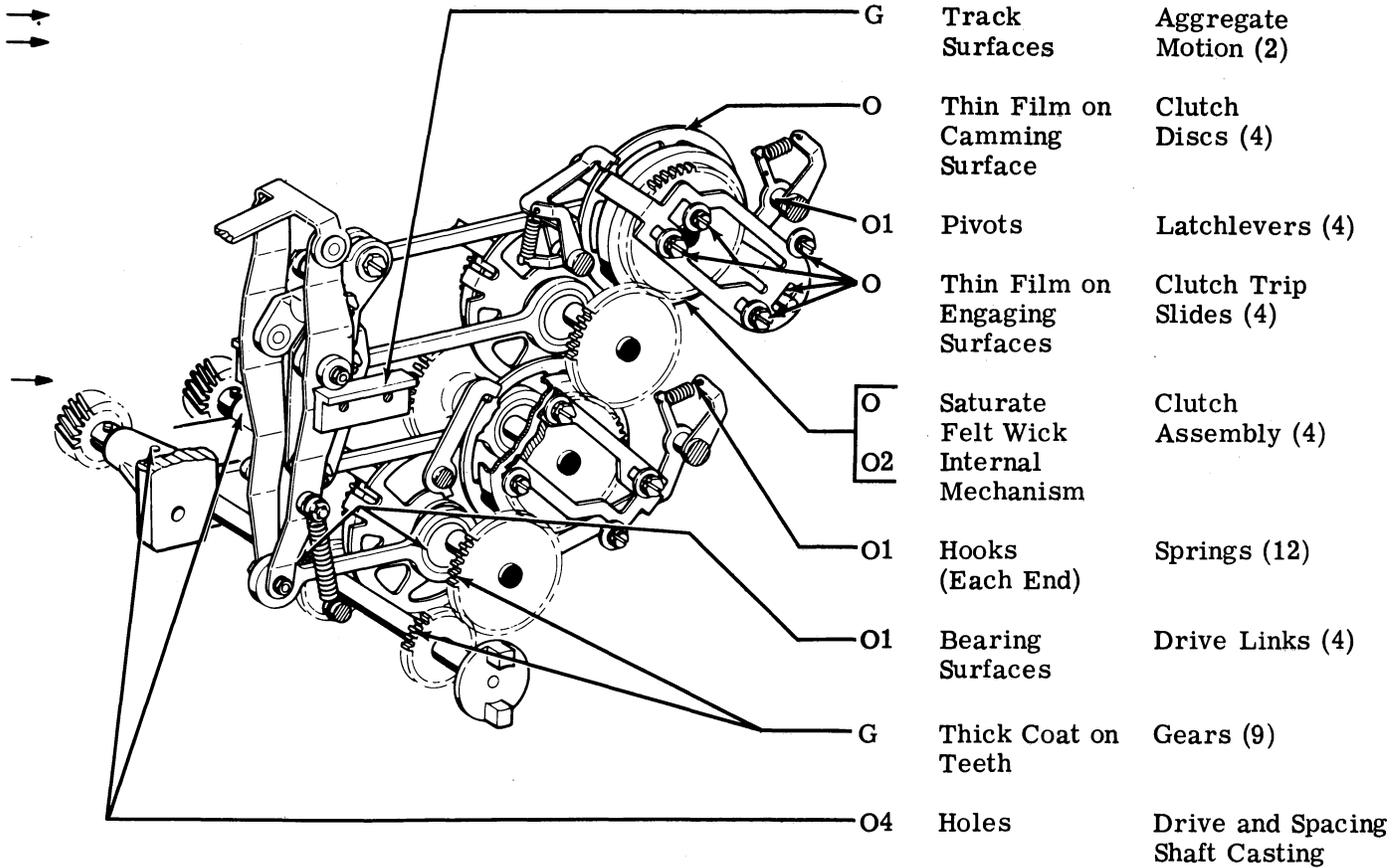
- O Saturate Felt Washers Left and Right Pulleys
- O1 Cable Grooves Spring Drum
- O Thin Film Between Layers Carriage Return Spring
- G Thin Coat on Camming Surface Margin Indicator Cam Disc
- O3 Bearing (Outer and Inner) Spring Drum Shaft
- O Saturate Felt Washer

2.10 Horizontal Detent (Located Behind Spring Drum)



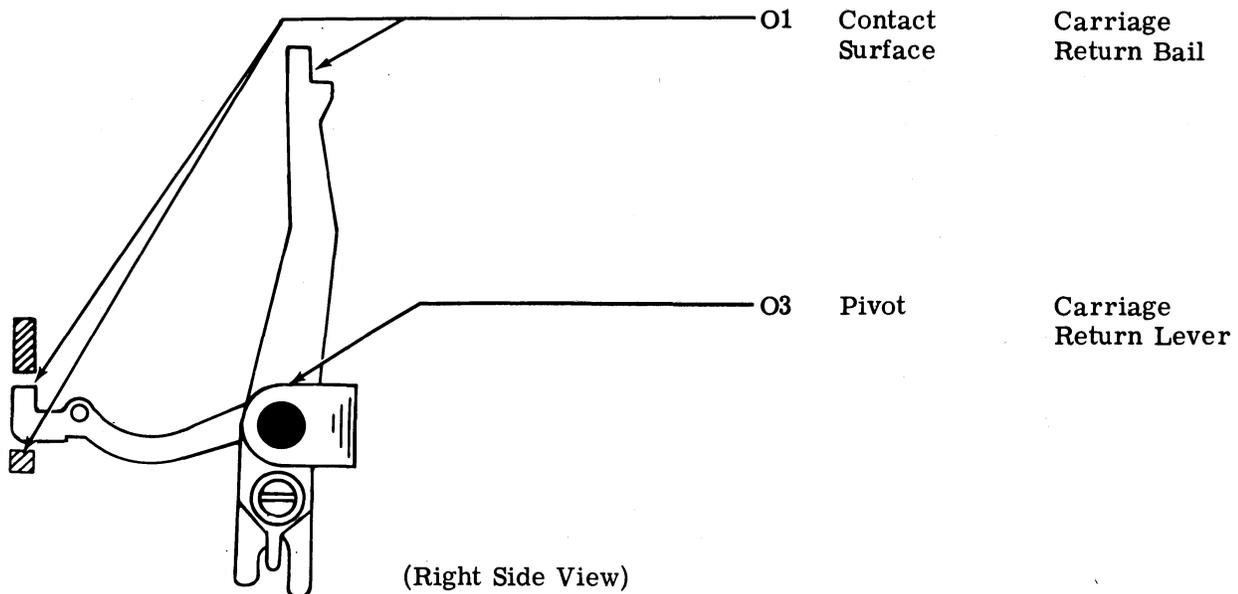
- O Saturate Felt Washer Oscillating Arm
- O Thin Film on Shaft Pinion Gear
- G Thick Coat on Detent Horizontal Detent Disc ←
- G Thick Coat on Teeth Pinion Gear
- O2 Roller Detent Roller ←
- O Saturate Felt Washer Horizontal Detent Arm
- O1 Hooks (Each End) Horizontal Detent Arm

2.11 Horizontal Clutches, Gears, Levers, and Links



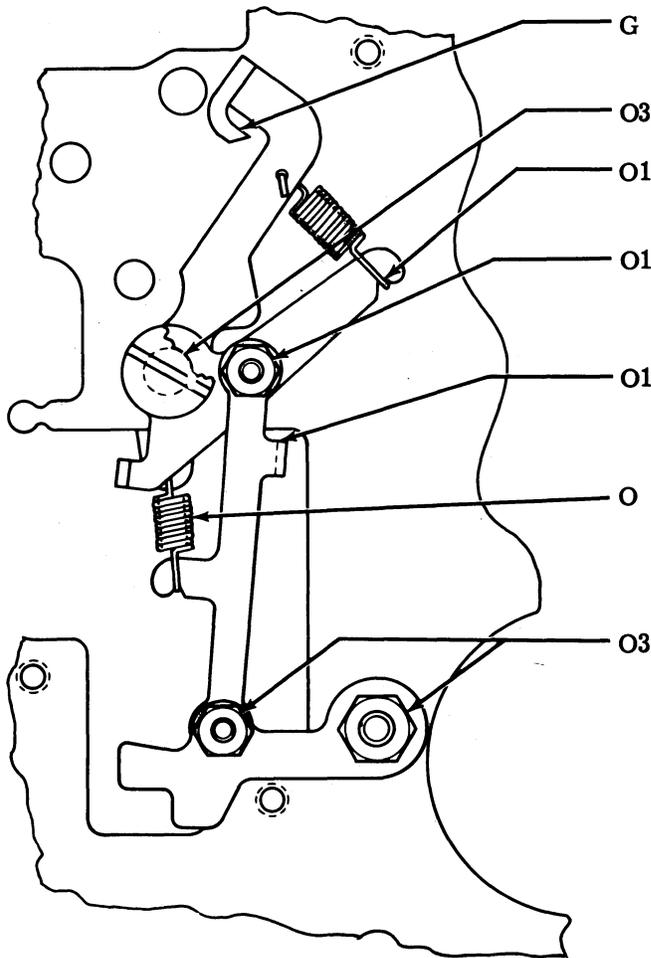
(Front View)

2.12 Carriage Return Lever and Bail



(Right Side View)

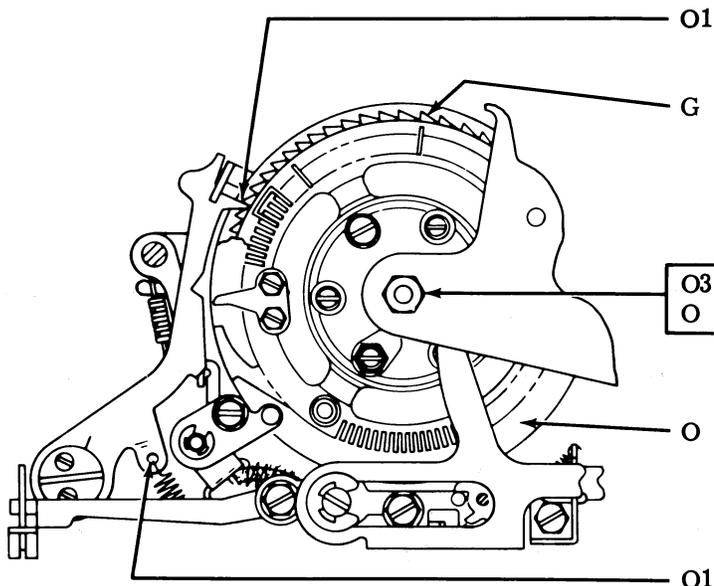
2.13 Backspace Bail, Lever, Link, and Pawl (Located Behind Spacing Drum)



(Front View)

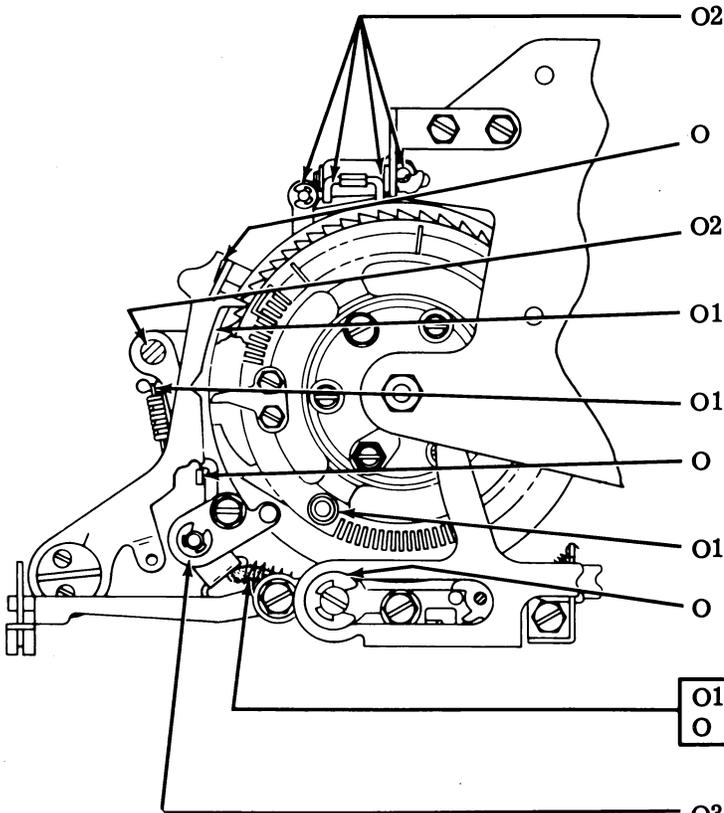
- | | | |
|----|------------------------------|-------------------------|
| G | Thin Coat on Contact Surface | Backspace Blocking Pawl |
| O3 | Pivot | Backspace Bail |
| O1 | Hooks (Each End) | Spring |
| O1 | Bearing and Engaging Surface | Backspace Bail and Link |
| O1 | Contact Surface | Link |
|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

2.14 Spacing Drum



(Front View)

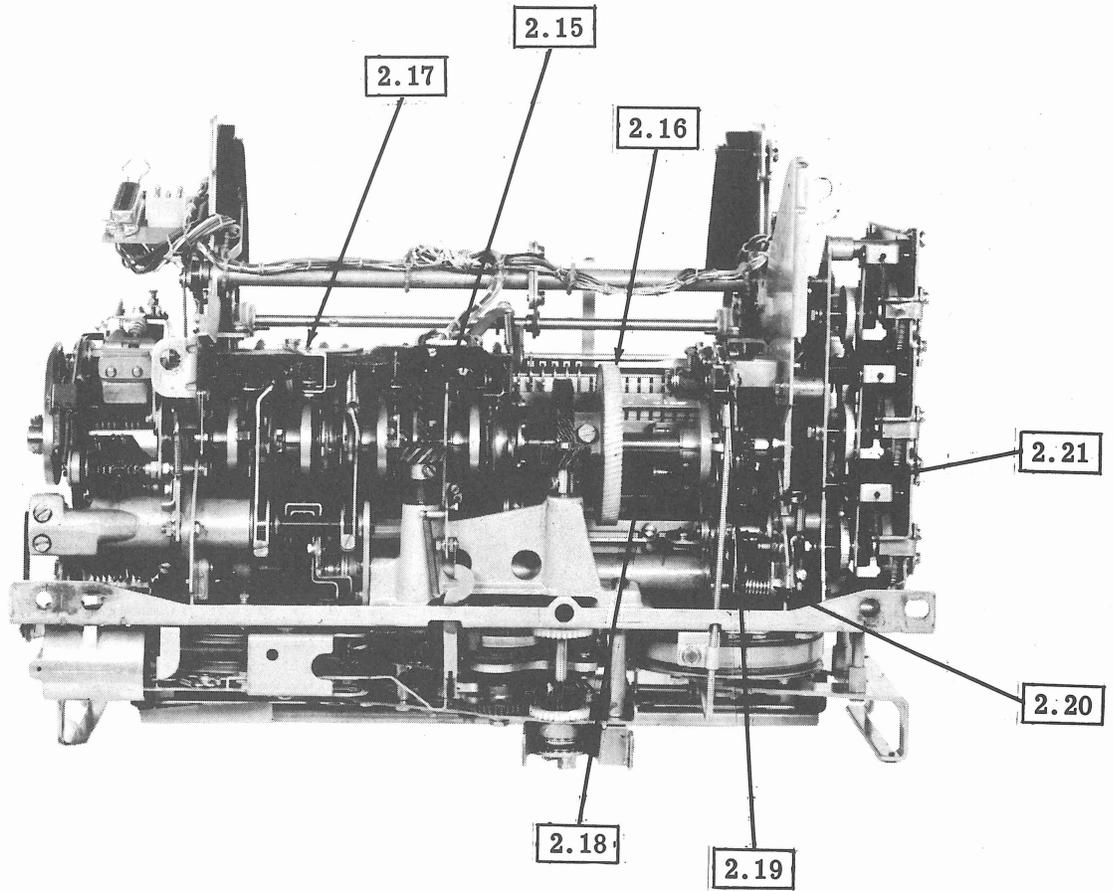
- | | | |
|---------|----------------------------|--------------------|
| O1 | Engaging Surface | Spacing Feed Pawls |
| G | Thin Coat on Teeth | Ratchet |
| O3
O | Pivot
Felt Washer | Spacing Drum Shaft |
| O | Thin Film on Cable Grooves | Spacing Drum |
| O1 | Hooks (Each End) | Springs (2) |



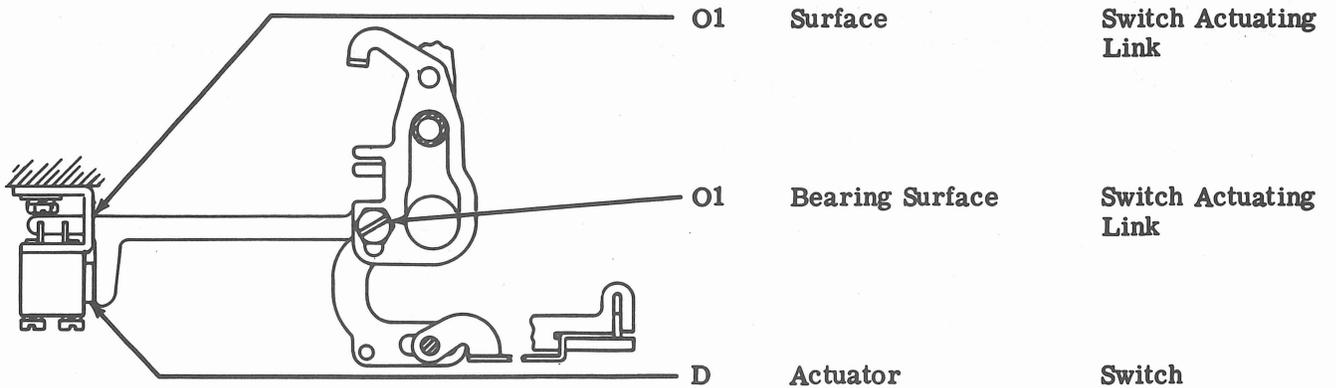
(Front View)

- | | | |
|---------|--|--------------------------------------|
| O2 | Pivots | Local Carriage Return Lever and Link |
| O | Thin Film on Contacting Surface | Feed Pawl, Release Link |
| O2 | Pivots (3) | Feed Pawl, Release Link |
| O1 | Engaging Surfaces | Feed Pawl, Release Link |
| O1 | Hooks (Each End) | Spring |
| O | Contacting Surface | Carriage Return Latch Bail |
| O1 | Bearing Surface | Stop Arm Roller |
| O | Thin Film on Engaging Surface | Transfer Slide |
| O1
O | Hooks (Each End)
Saturate Felt Wick | Spring |
| O3 | Pivot | Carriage Return Latch Bail |

LUBRICATION AREAS — BOTTOM

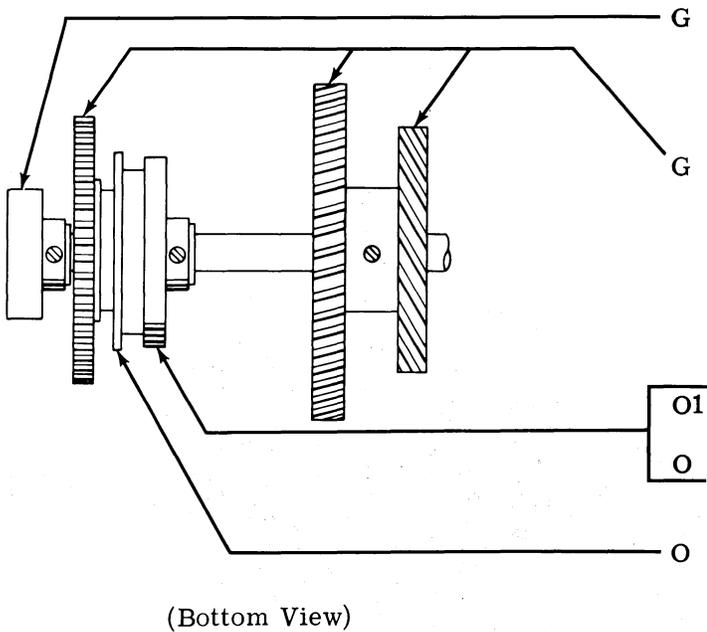


2.15 Transmitter Control Switch

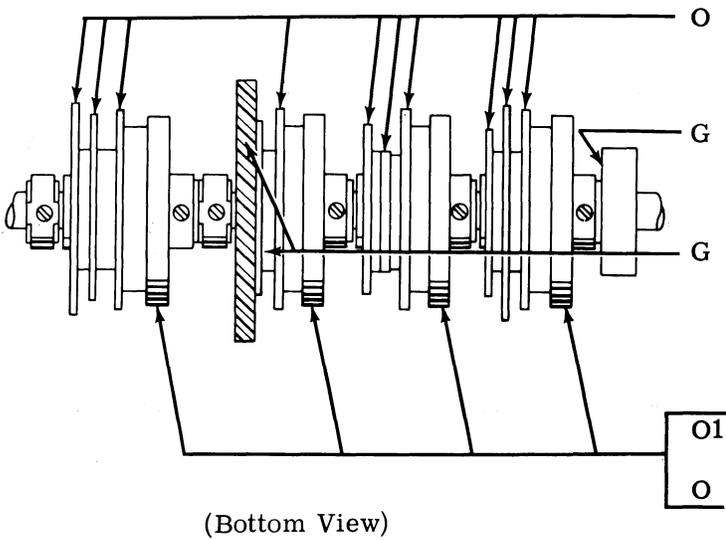


(Left Side View)

2.16 Main Shaft Clutches and Gears

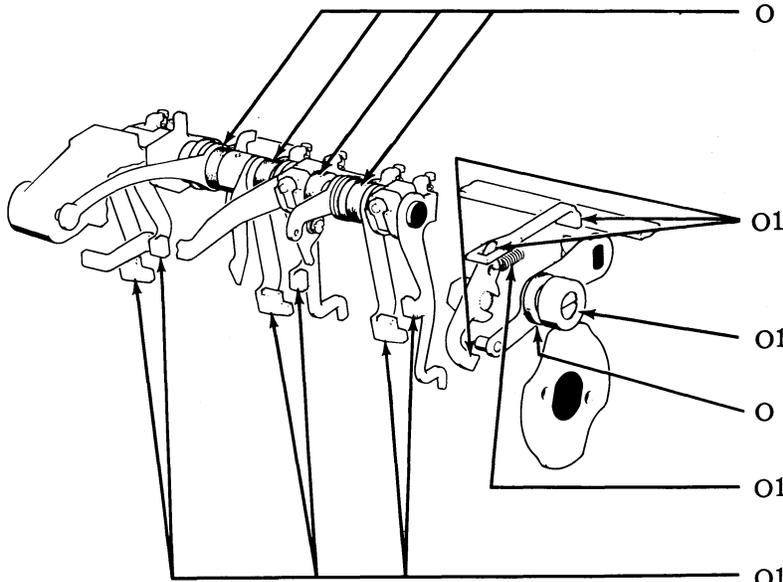


G	Pack Ball Bearing	Main Shaft Bearing
G	Thick Coat on Teeth	Main Shaft Gears (3)
O1	Internal Mechanism Saturate Felt Wick	Clutch Assembly
O		
O	Thin Film on Camming Surface	Clutch Disc



O	Thin Film on Camming Surfaces	Clutch Discs and Eccentric Cams
G	Pack Ball Bearing	Main Shaft Bearing
G	Thick Coat on Teeth and Cam Surface	Spacing Gear and Reset Cam
O1		
O		

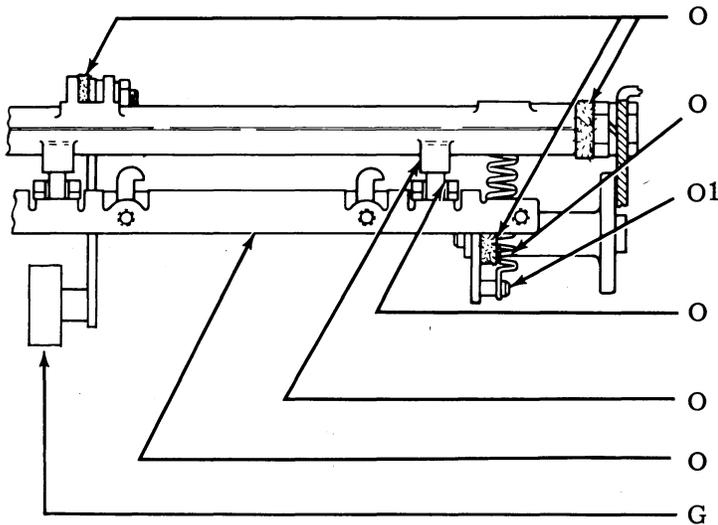
2.17 Trip Shaft Cam and Levers



(Right Front View)

- | | | | |
|----|-----------------------|-----------------------------|---|
| O | Saturate Felt Washers | Trip Shaft Arm | ↖ |
| O1 | Engaging Surface | Suppression Lever and Slide | ↖ |
| O1 | Camming Surface | Trip Cam Follower | |
| O | Saturate Felt Washer | Trip Cam Follower | ← |
| O1 | Hooks (Each End) | Spring | ← |
| O1 | Engaging Surfaces | Clutch Trip and Latchlevers | |

2.18 Reset Bail and Shaft

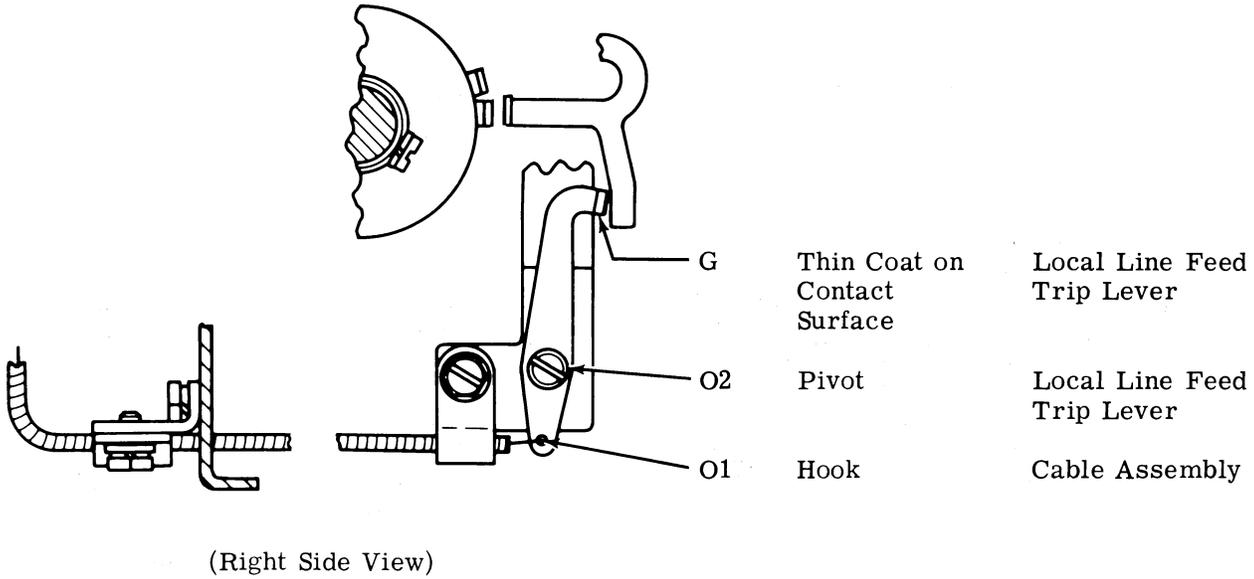


(Top View)

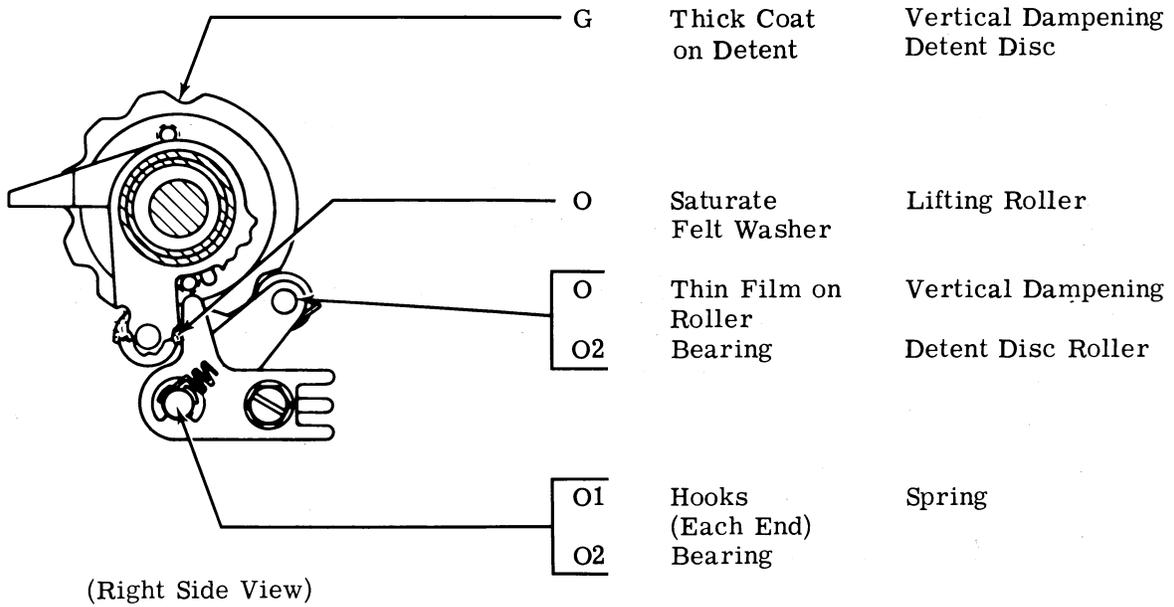
- | | | | |
|----|---------------------------|-------------------------|---|
| O | Saturate Felt Washers (5) | Rocker Shaft | |
| O | Saturate Felt Wick | Springs (2) | |
| O1 | Hooks (Each End) | Springs (2) | |
| O | Camming Surface (3) | Rocker Shaft | |
| O | Rollers (3) | Reset Bail | |
| O | Surface | Reset Bail | |
| G | Pack Bearing | Reset Bail Cam Follower | ← |

SECTION 574-320-701

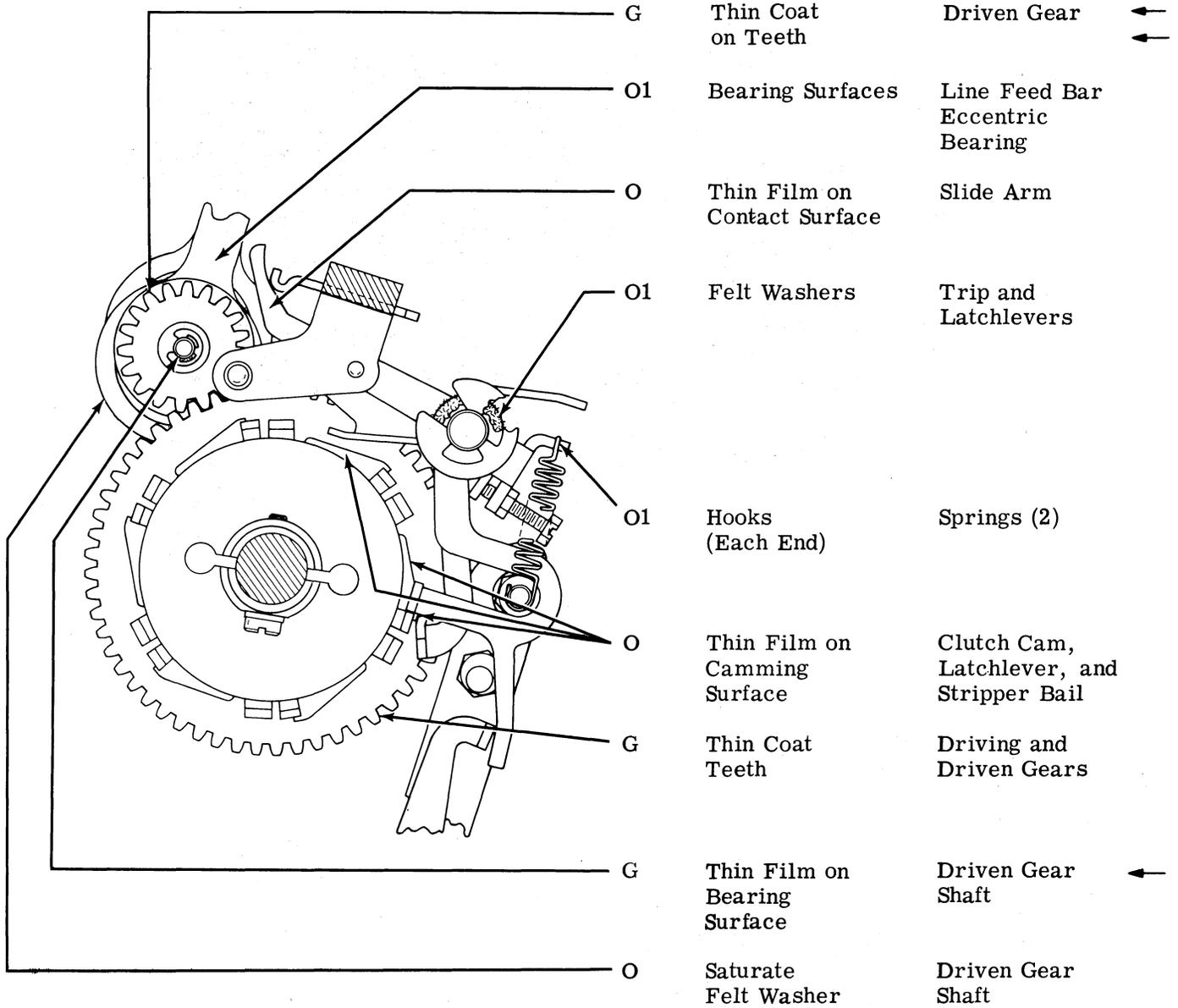
2.19 Local Line Feed Trip Lever



2.20 Vertical Detent

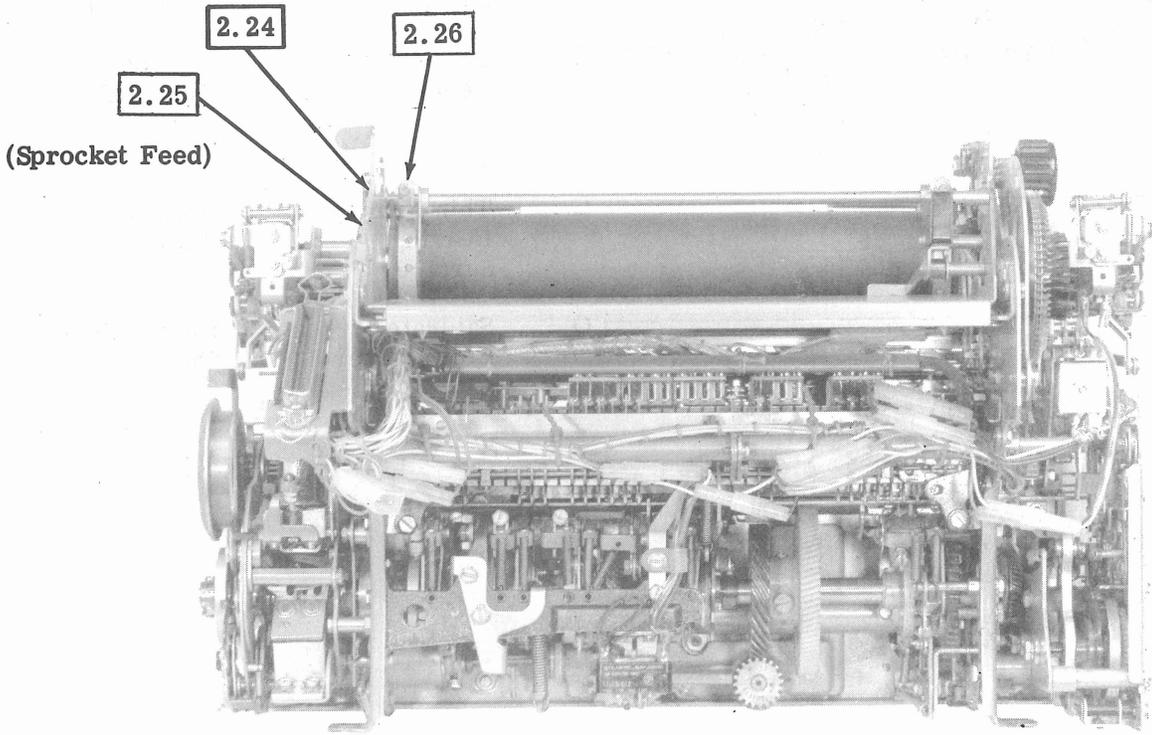
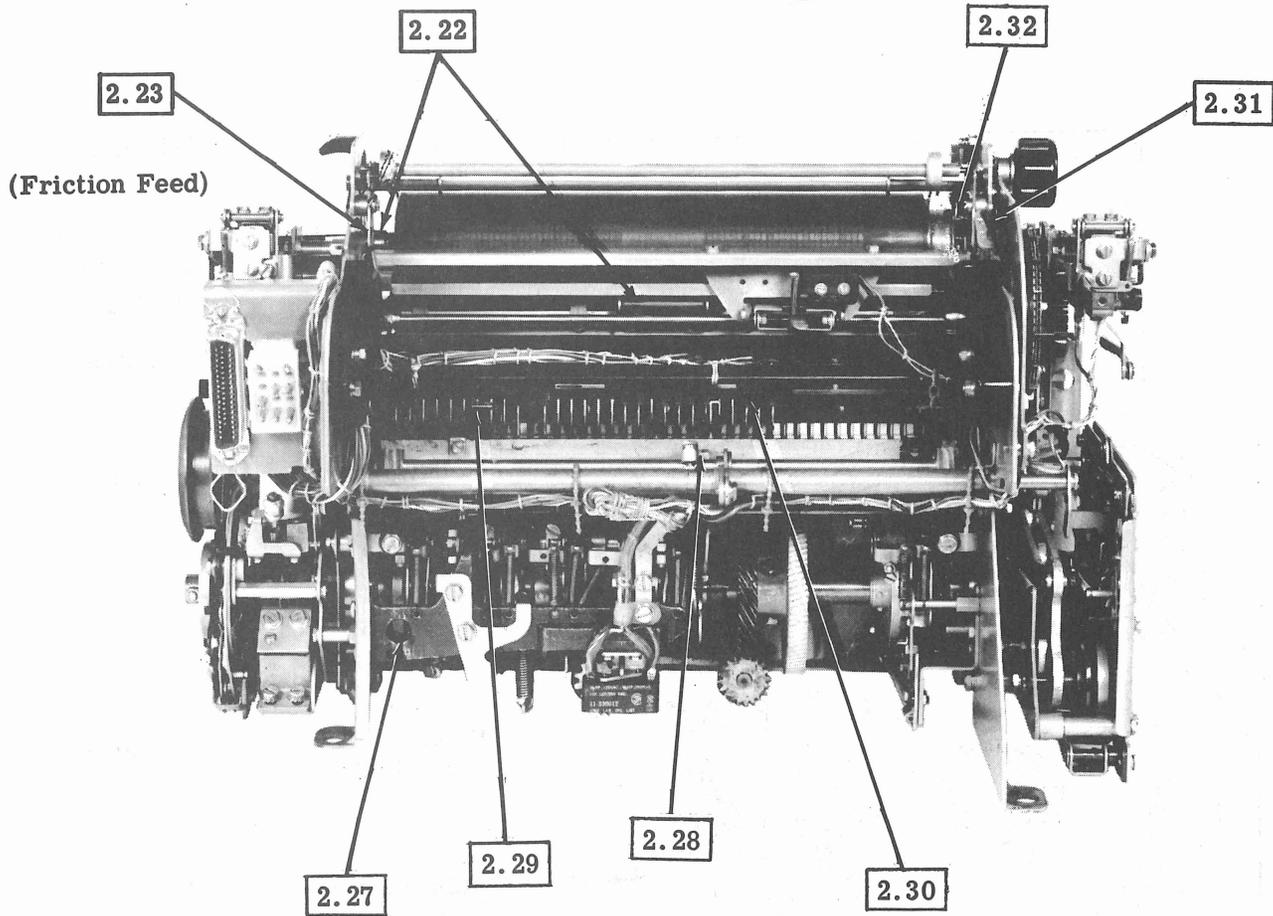


2.21 Line Feed Bail, Levers, and Gears

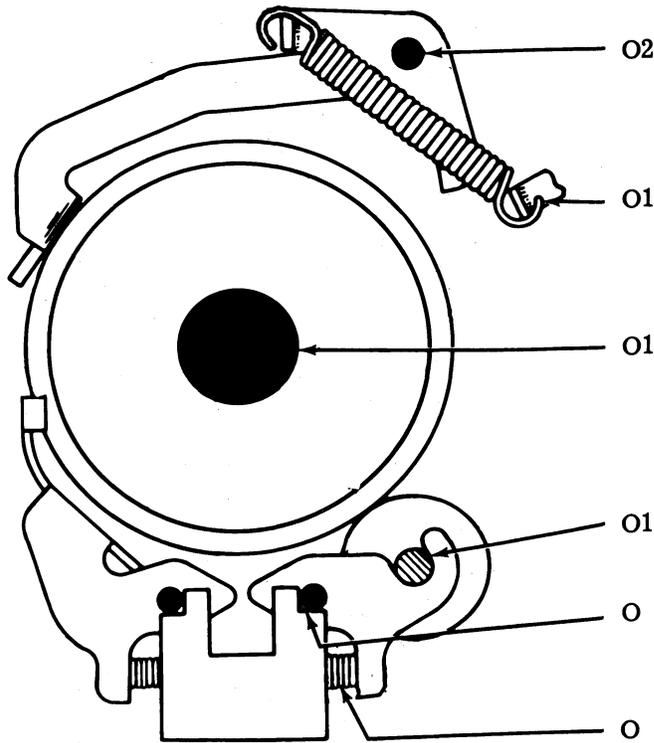


(Right Side View)

LUBRICATION AREAS — REAR



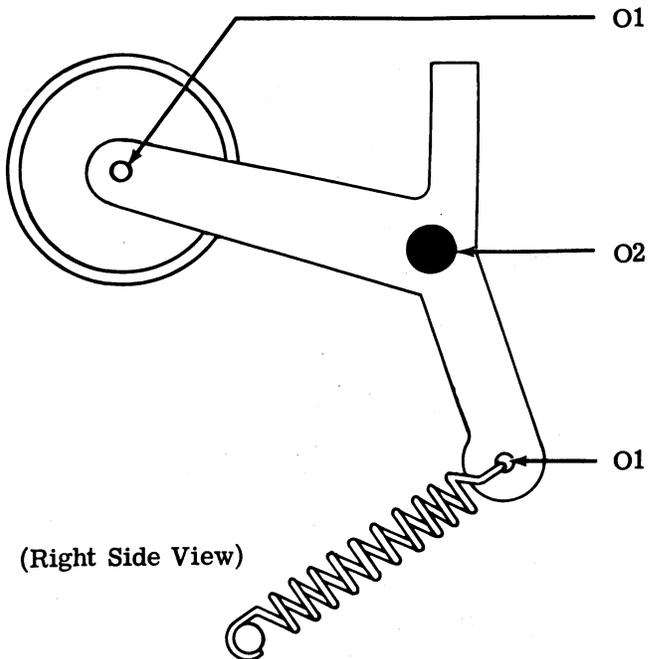
2.22 Platen Shaft and Rollers (Friction Feed)



(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) |

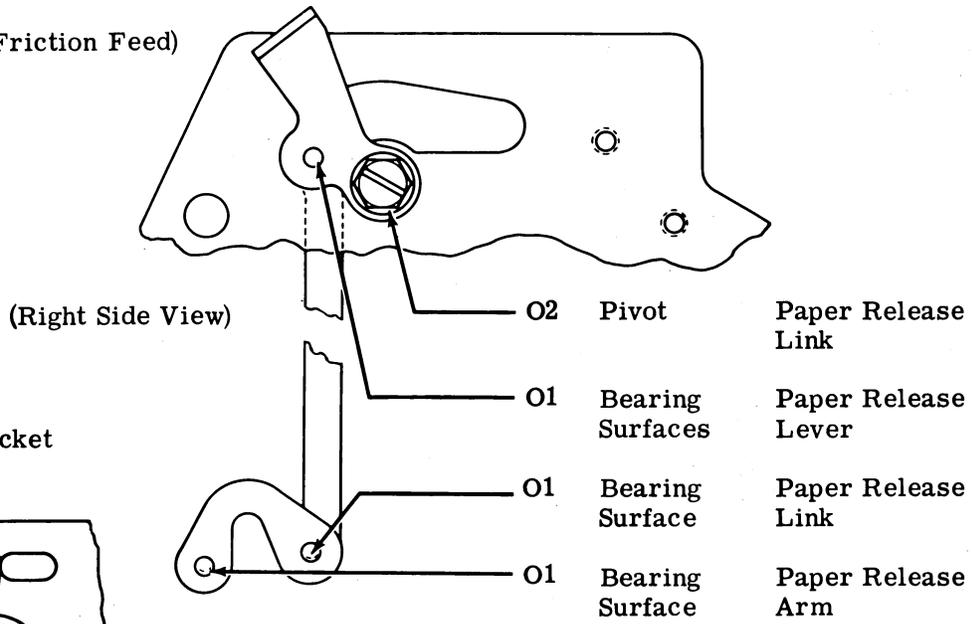
2.23 Paper Straightener (Friction Feed)



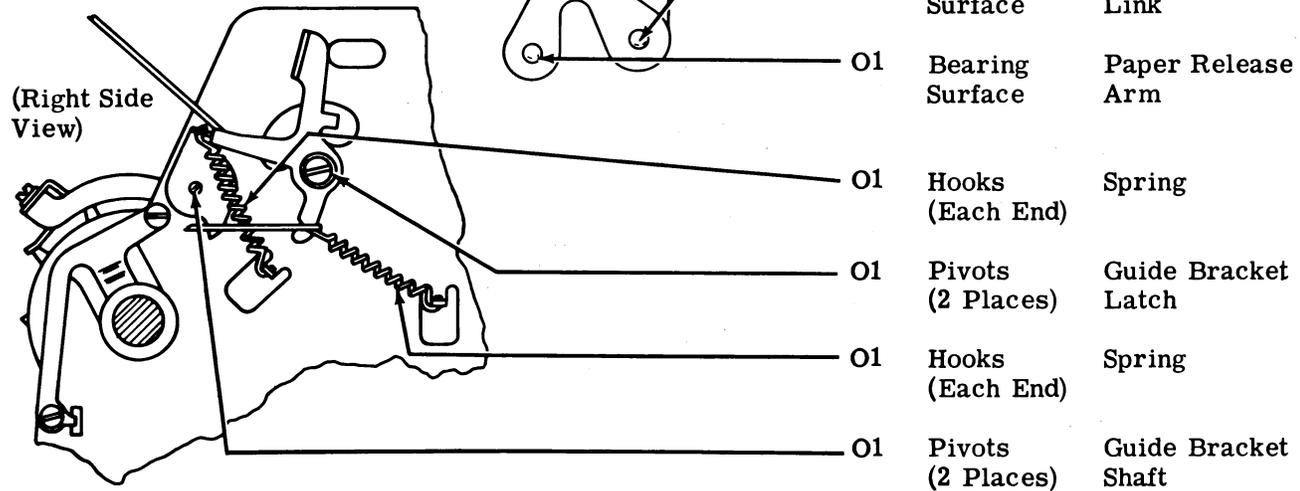
(Right Side View)

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

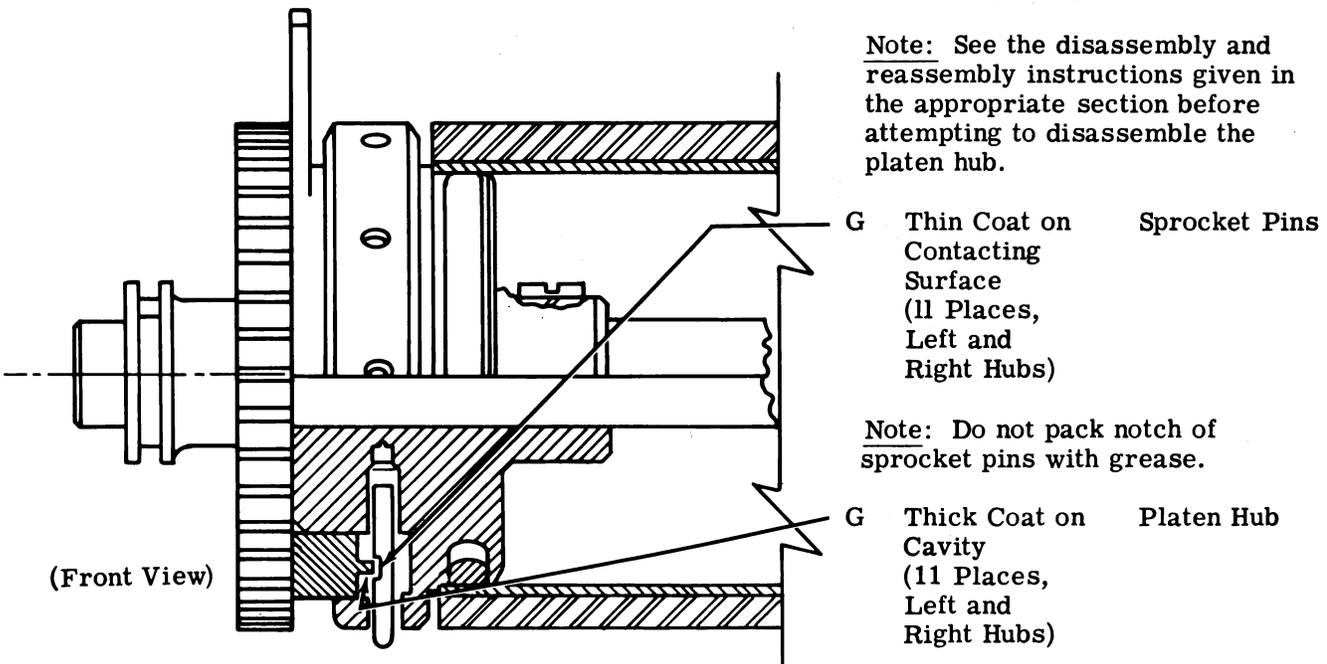
2.24 Paper Release (Friction Feed)



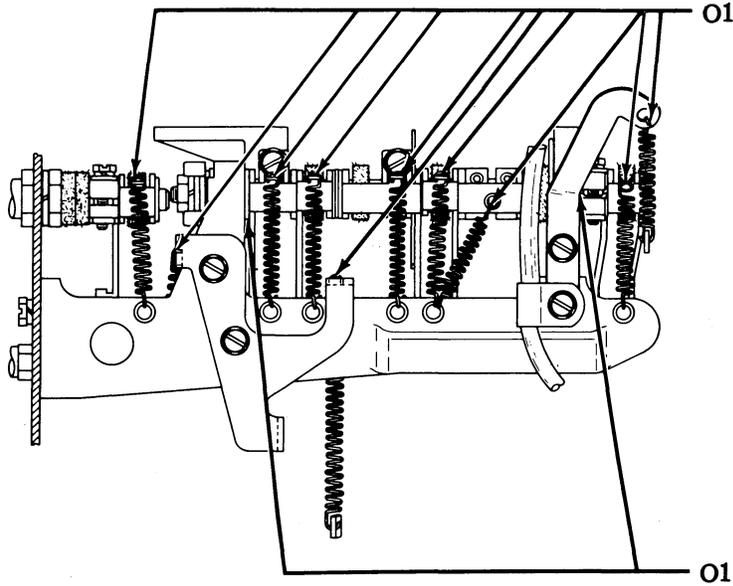
2.25 Paper Guide Bracket Shaft and Latch (Sprocket Feed)



2.26 Platen Hubs and Pins (Sprocket Feed)



2.27 Trip Shaft Bearings and Springs



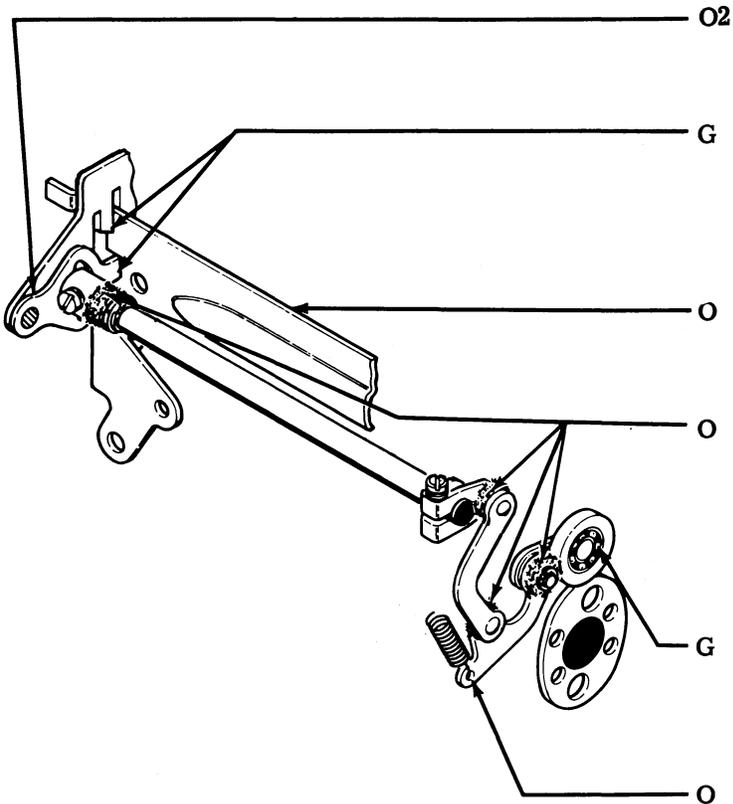
Hooks
(Each End)

Springs

Bearings

Trip Shaft

2.28 Function Stripper Blade



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 Washers

Stripper Blade
Cam (Each End)

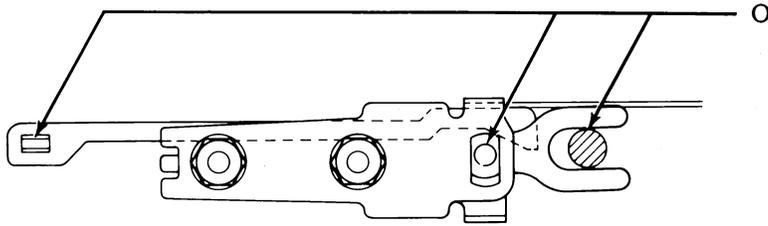
Pack
Bearing

Cam Follower

Hooks
(Each End)

Spring

→ 2.29 Shift Fork Mechanism

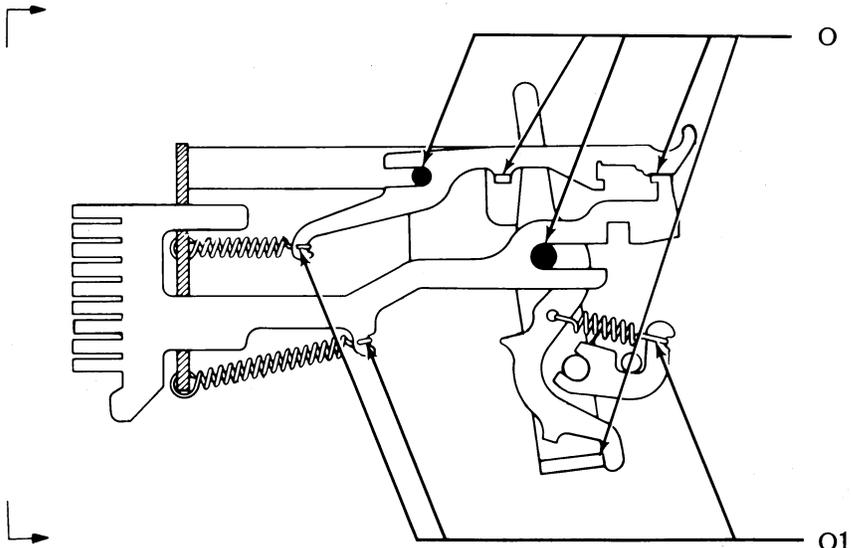


(Top View)

Thin Film on Engaging Surfaces

Suppression Function Lever

2.30 Function Bar and Pawl



(Right Side View)

Thin Film on Engaging Surfaces

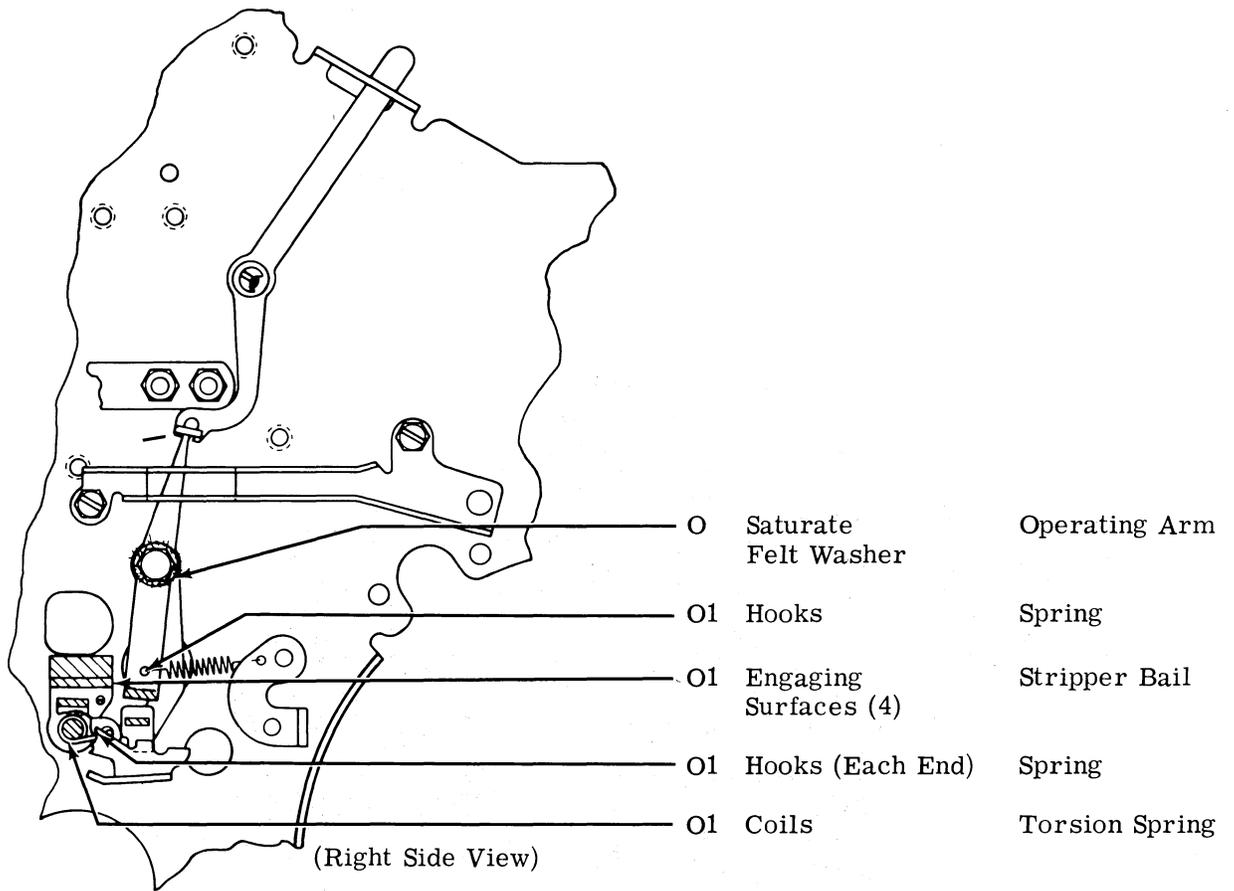
Function Bar, Lever, and Pawl

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

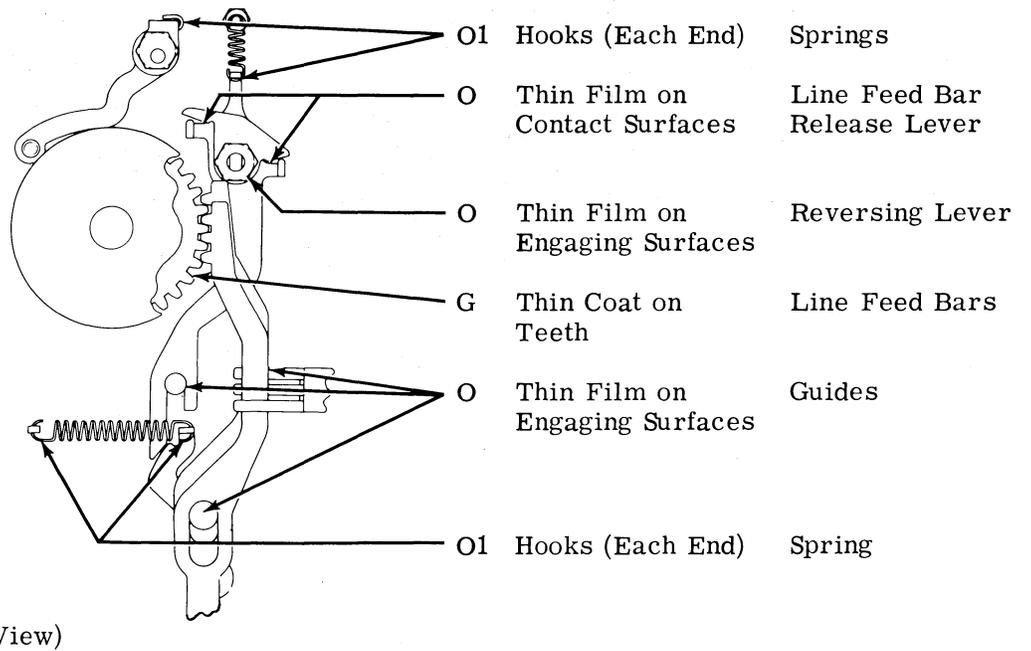
Hooks (Each End)

Springs

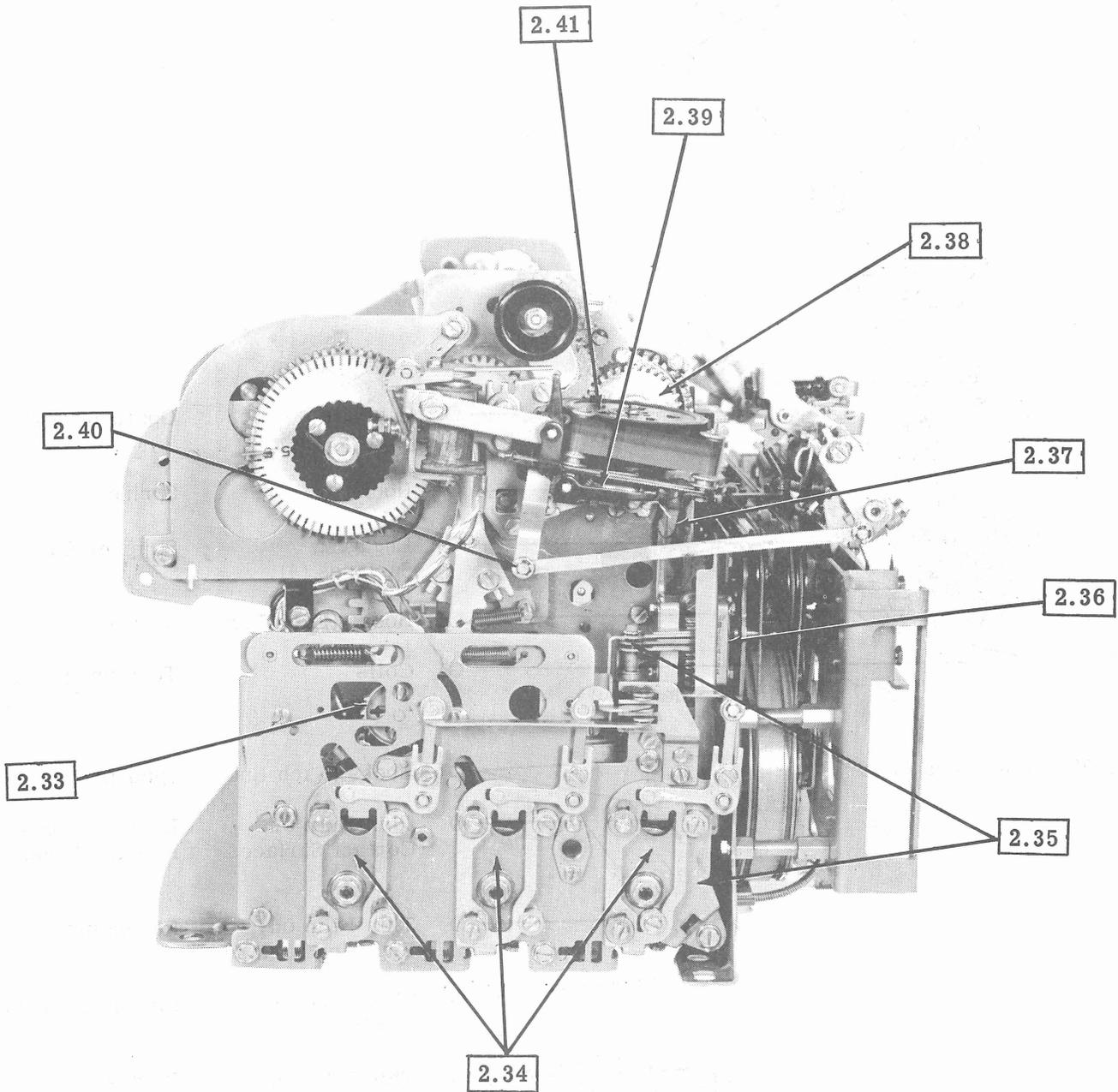
2.31 Single-Double Line Feed Lever



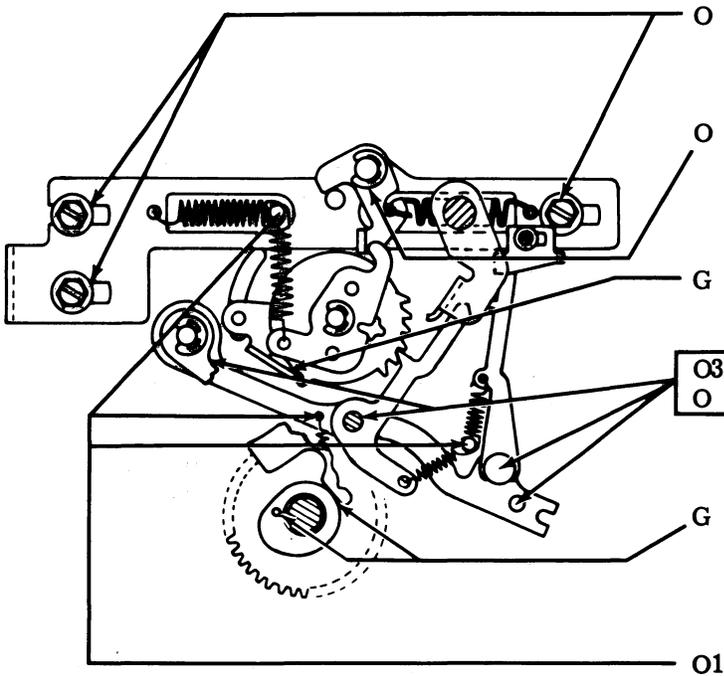
2.32 Line Feed Bars



LUBRICATION AREAS — LEFT SIDE



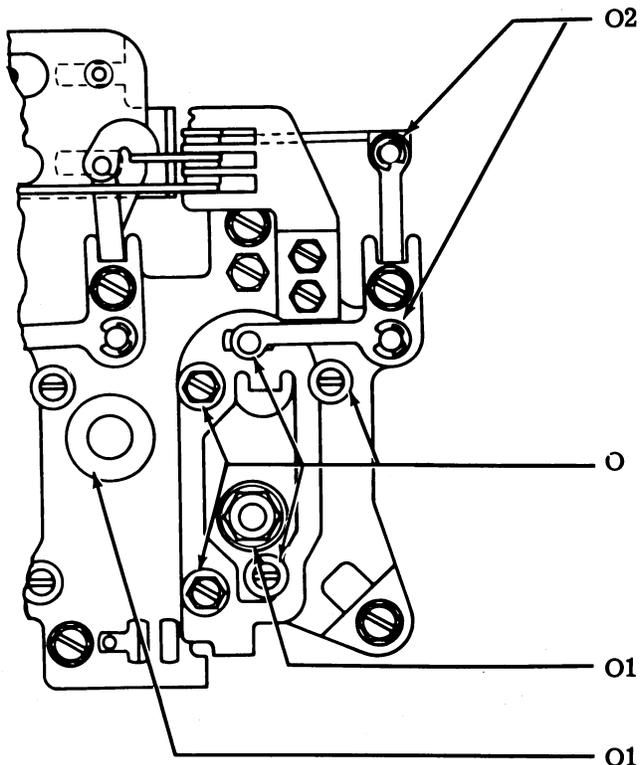
2.33 Retraction Slide and Pawls



- | | | |
|----|--------------------------------------|--|
| O | Thin Film Engaging Surfaces | Retraction Slide |
| O | Thin Film Pivot, Engaging Surface | Bell Crank, Trip Plate |
| G | Thin Coat Teeth | Ratchet |
| O3 | Pivots | Feed Pawl, Blocking Pawl, Feed Pawl Cam Follower |
| O | Thin Film on Engaging Surfaces | |
| G | Thin Coat on Camming Surface and Pin | Eccentric Cam |
| O1 | Hooks (Each End) | Springs |

(Right Side View)

2.34 Vertical Linkage, Shafts, and Slides



(Left Side View)

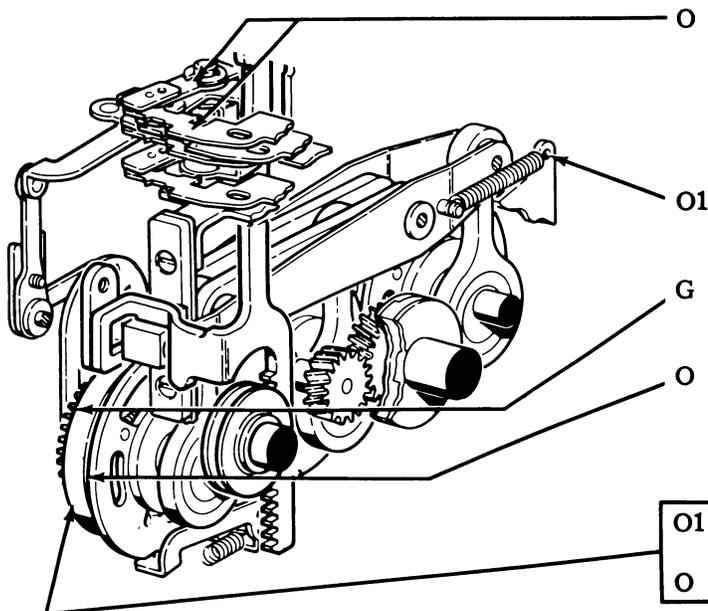
Bearing Surfaces Trip Linkage

Thin Film on Sliding Surfaces Clutch Trip Slides (3)

Bearing Shaft

Bearing Driven Gear Shaft

2.35 Vertical Clutches, Gears, and Bell Cranks



(Right Front View)

Thin Film on Pivots Guide Positioning Trip Levers, Codebar Bell Cranks

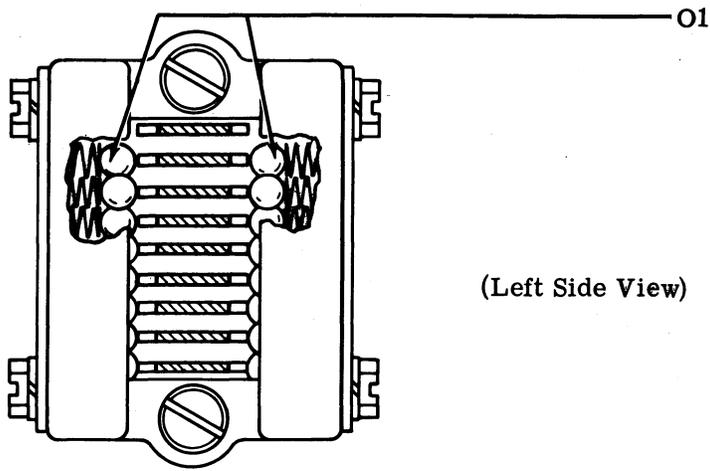
Hooks (Each End) Springs (13)

Thick Coat on Teeth Gears (7)

Thin Film on Camming Surface Clutch Discs (3)

Internal Mechanism Saturate Felt Wick Clutch Assembly (3)

2.36 Codebar Detent

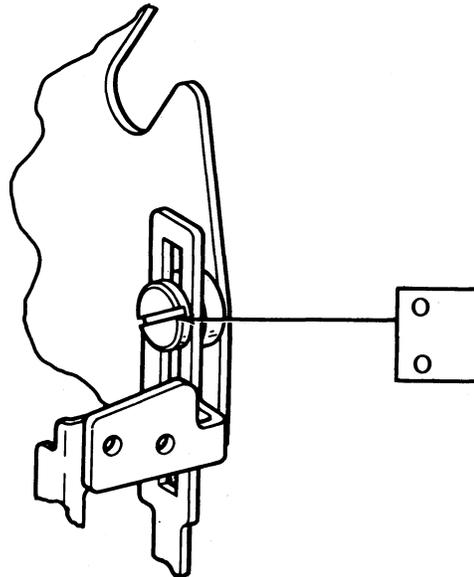


(Left Side View)

Bearings and
Compression
Springs

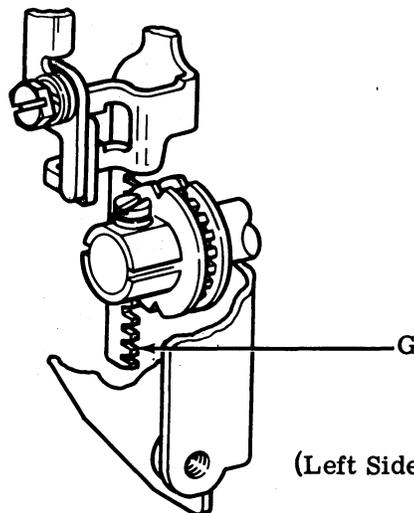
Codebar
Detents

2.37 Vertical Positioning Rack



Saturate
Felt Washer
Thin Film on
Engaging
Surface

Spacer
Upper Rack
Guide

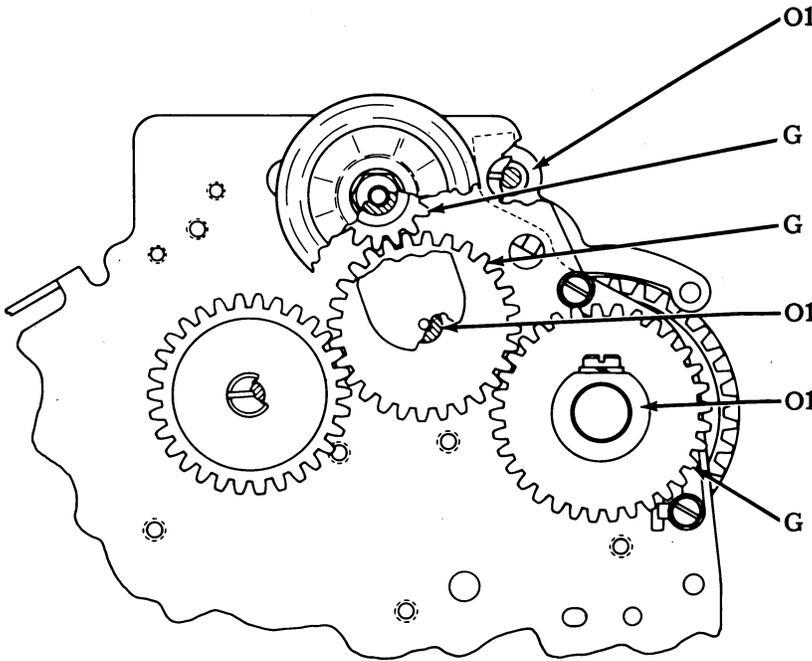


(Left Side View)

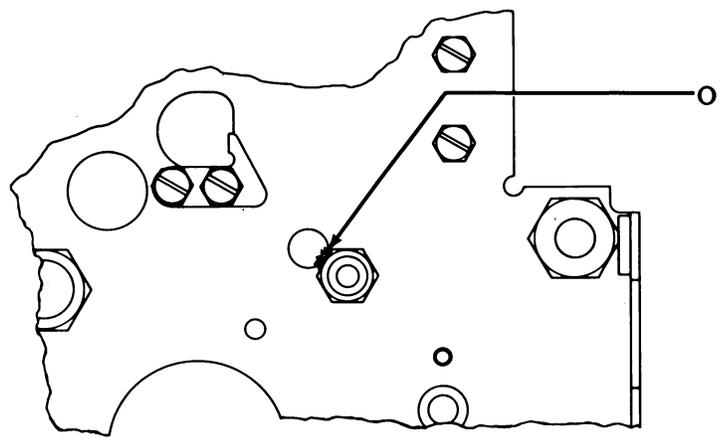
Thick Coat on
Teeth, Engaging
Surfaces, and
Bearings

Lower Rack
Guidearm,
Pinion, and
Drive Shaft
Bearings

2.38 Line Feed Gears

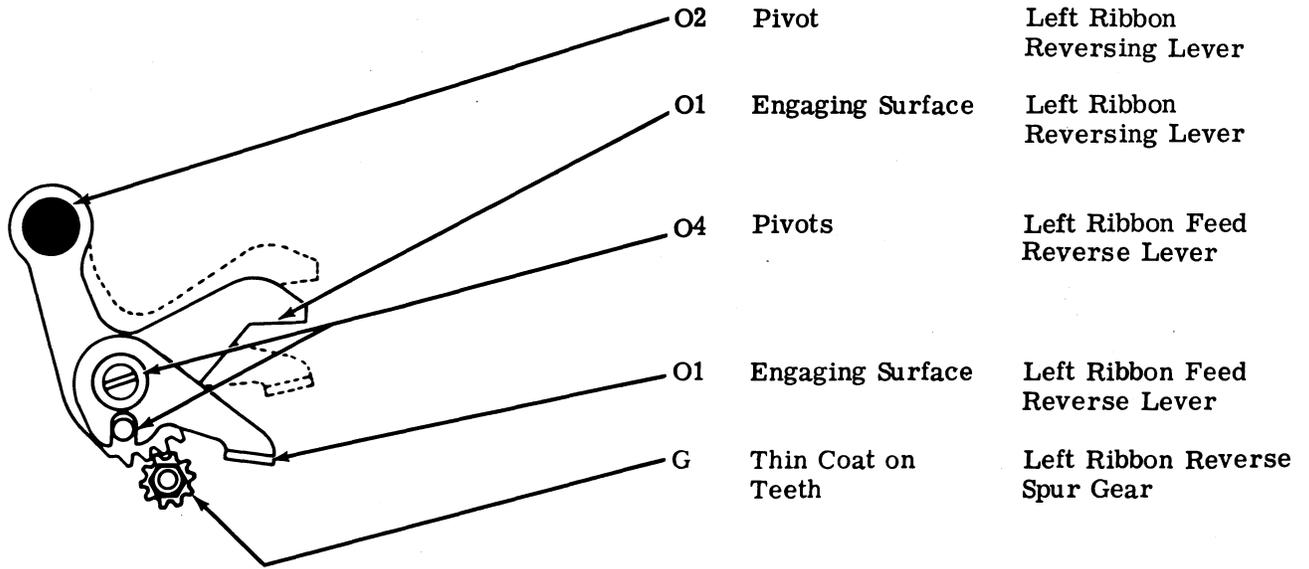


- | | | |
|----|----------------------------|--------------------|
| O1 | Bearing Surface | Platen Detent Bail |
| G | Thin Coat on Teeth | Handwheel Gear |
| G | Thin Coat on Teeth | Idler Gear |
| O1 | Bearing Surface | Idler Gear |
| O1 | Bearing Surface (2 Places) | Platen Gear |
| G | Thin Coat on Teeth | Platen Gear |

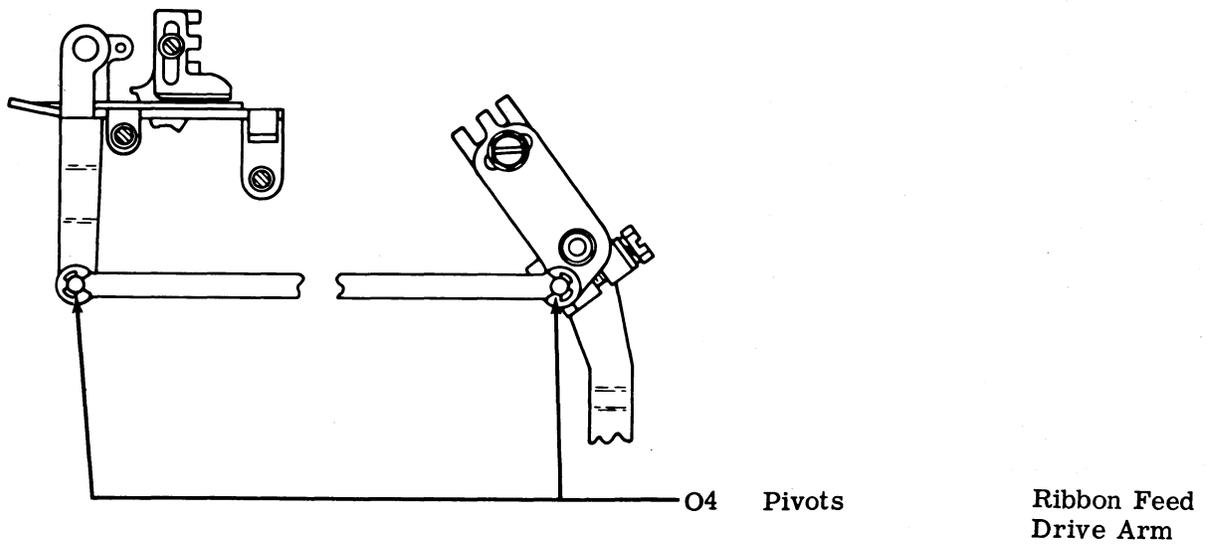


- | | | |
|---|---------------|-------------------------|
| O | Saturate Wick | Line Feed Bar Eccentric |
|---|---------------|-------------------------|

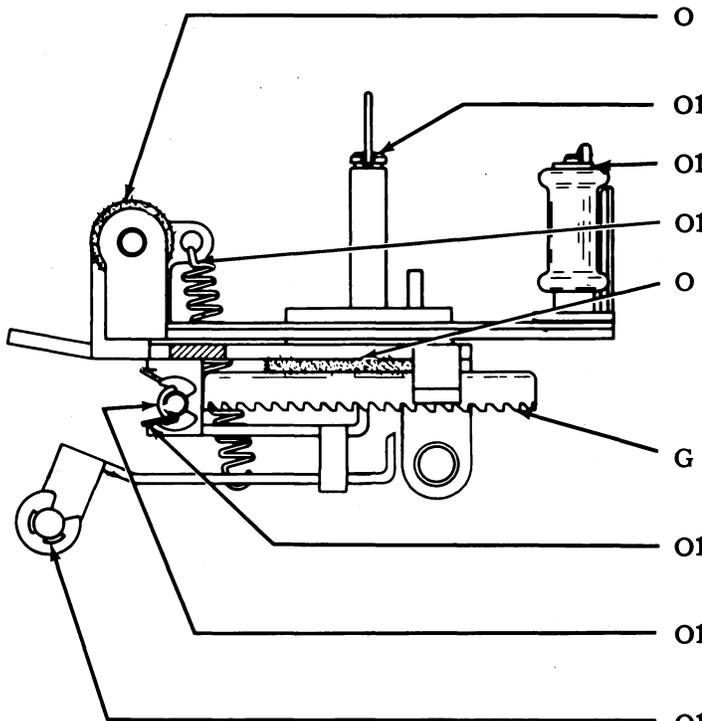
2.39 Ribbon Reverse



2.40 Ribbon Feed Drive Arm

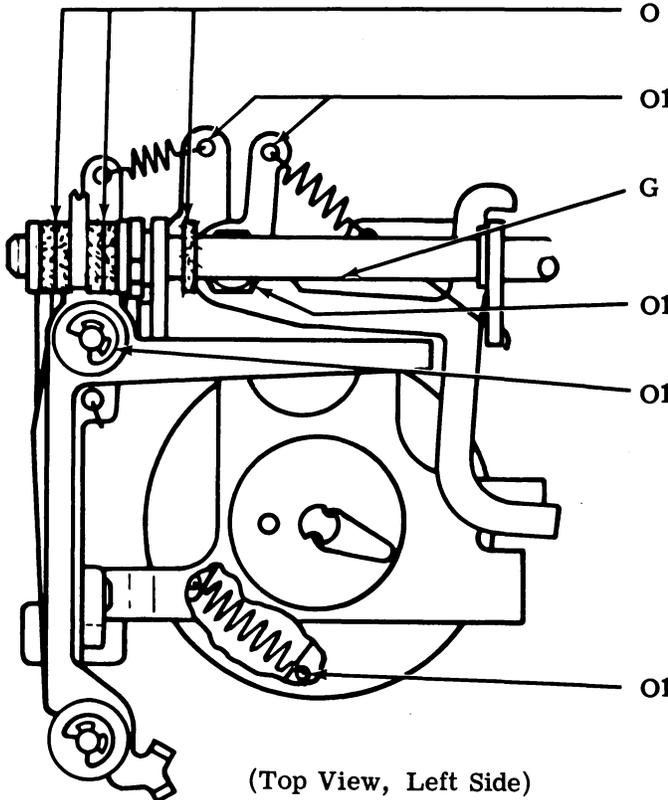


2.41 Ribbon Feed Bracket and Ratchet



(Left Side View)

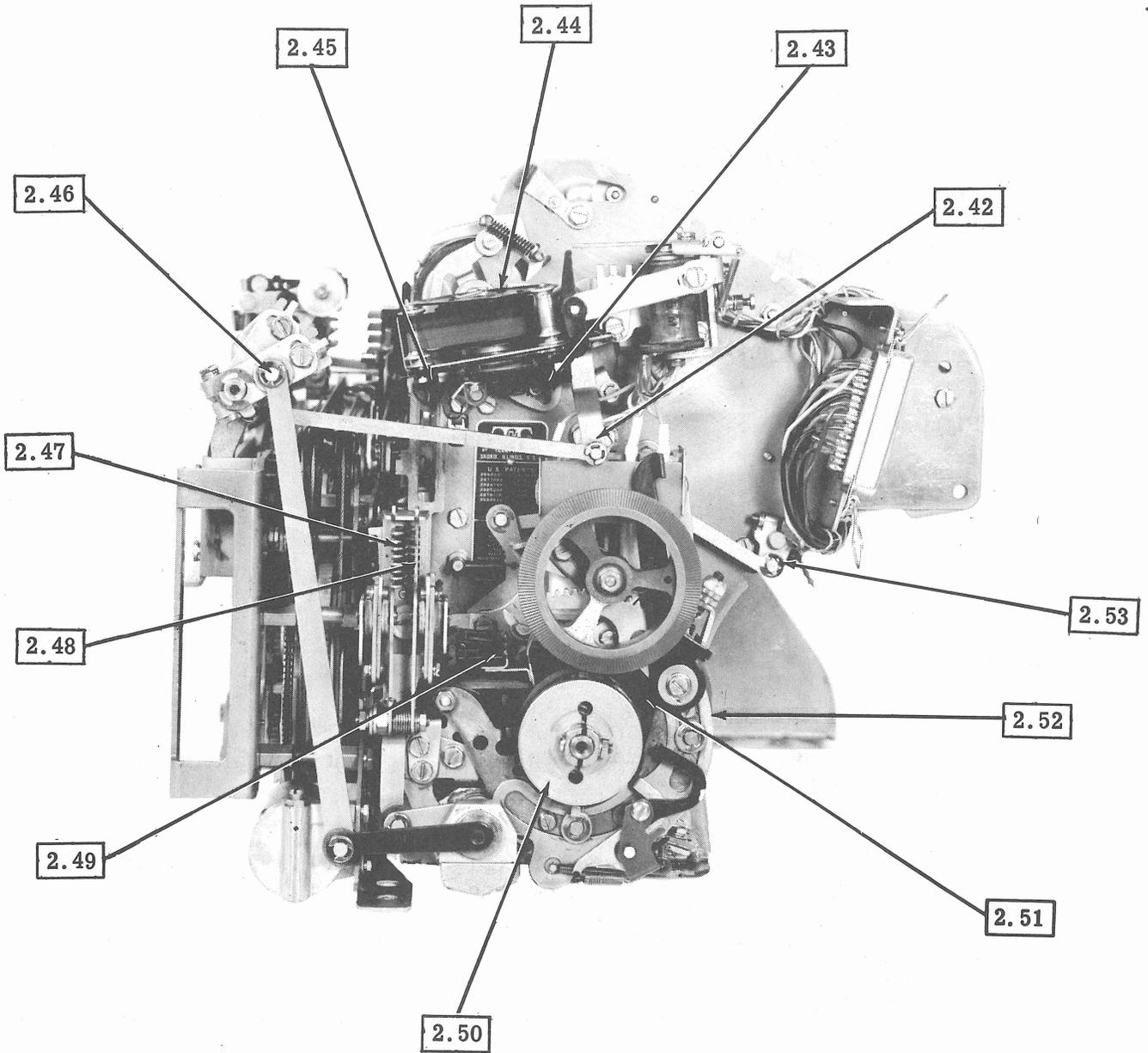
- | | | |
|----|-----------------------|----------------------|
| O | Saturate Felt Washers | Bracket Shaft |
| O1 | Engaging Surface | Ribbon Spool Shaft |
| O1 | Bearing Surface | Rollers |
| O1 | Hooks (Each End) | Spring |
| O | Saturate Felt Washer | Ratchet Wheel |
| G | Thin Coat on Teeth | Ratchet Wheel |
| O1 | Hooks (Each End) | Spring |
| O1 | Pivot | Ratchet Detent Lever |
| O1 | Pivot | Ratchet Feed Lever |



(Top View, Left Side)

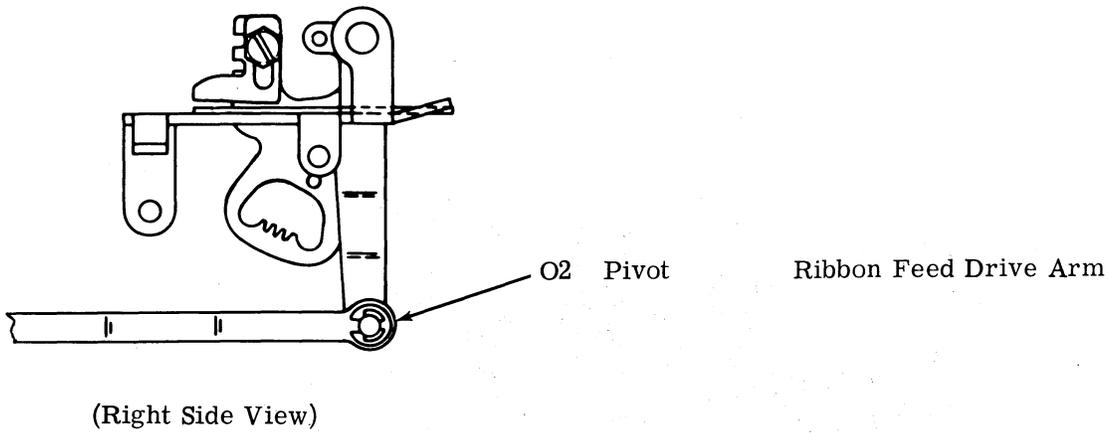
- | | | |
|----|-----------------------|------------------------|
| O | Saturate Felt Washers | Bracket Shaft |
| O1 | Hooks (Each End) | Spring |
| G | Surface | Bracket Shaft |
| O1 | Pivot | Ribbon Reversing Lever |
| O1 | Pivot | Ribbon Guide Lever |
| O1 | Hooks (Each End) | Spring |

LUBRICATION AREAS — RIGHT SIDE

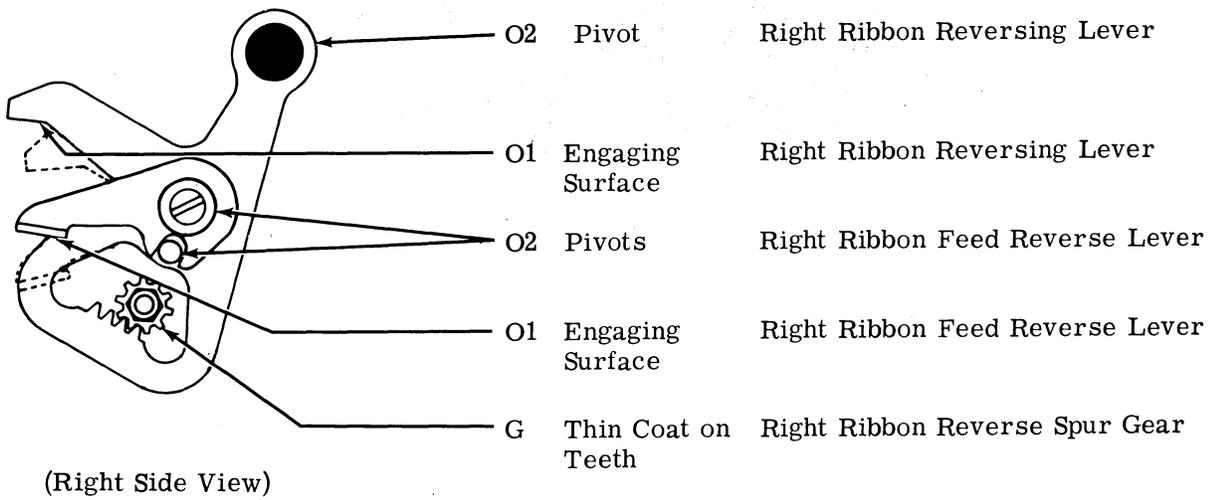


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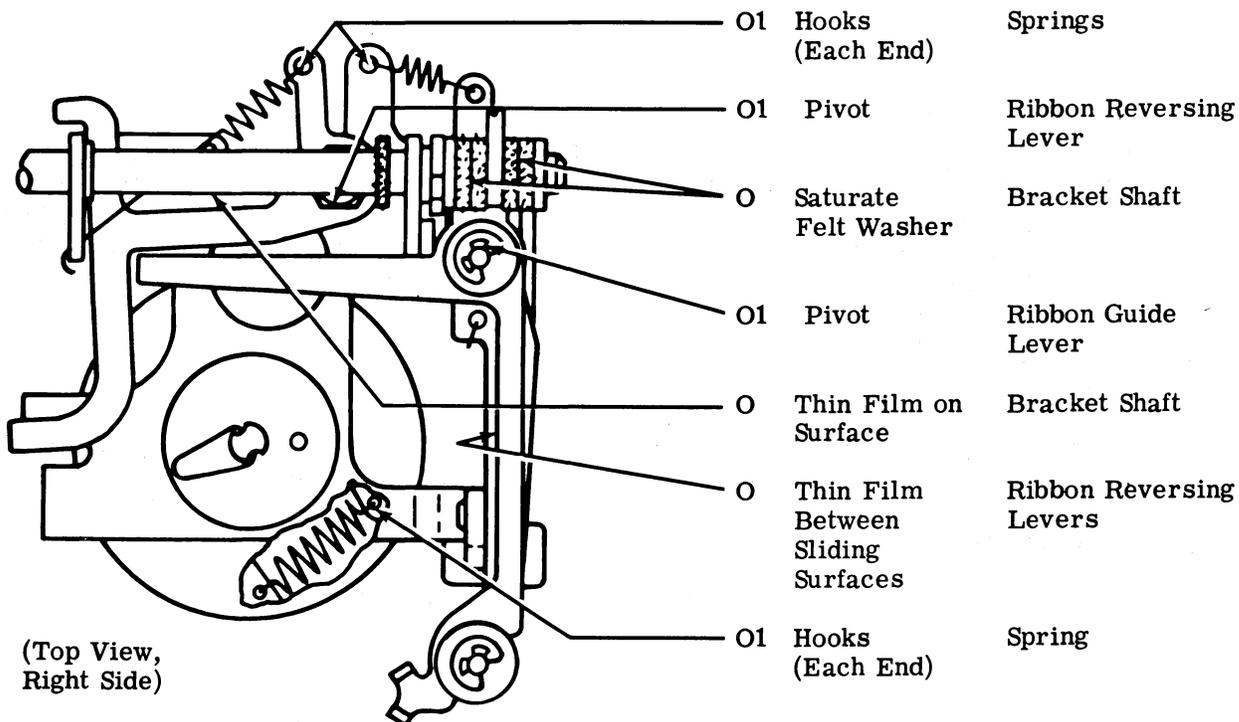
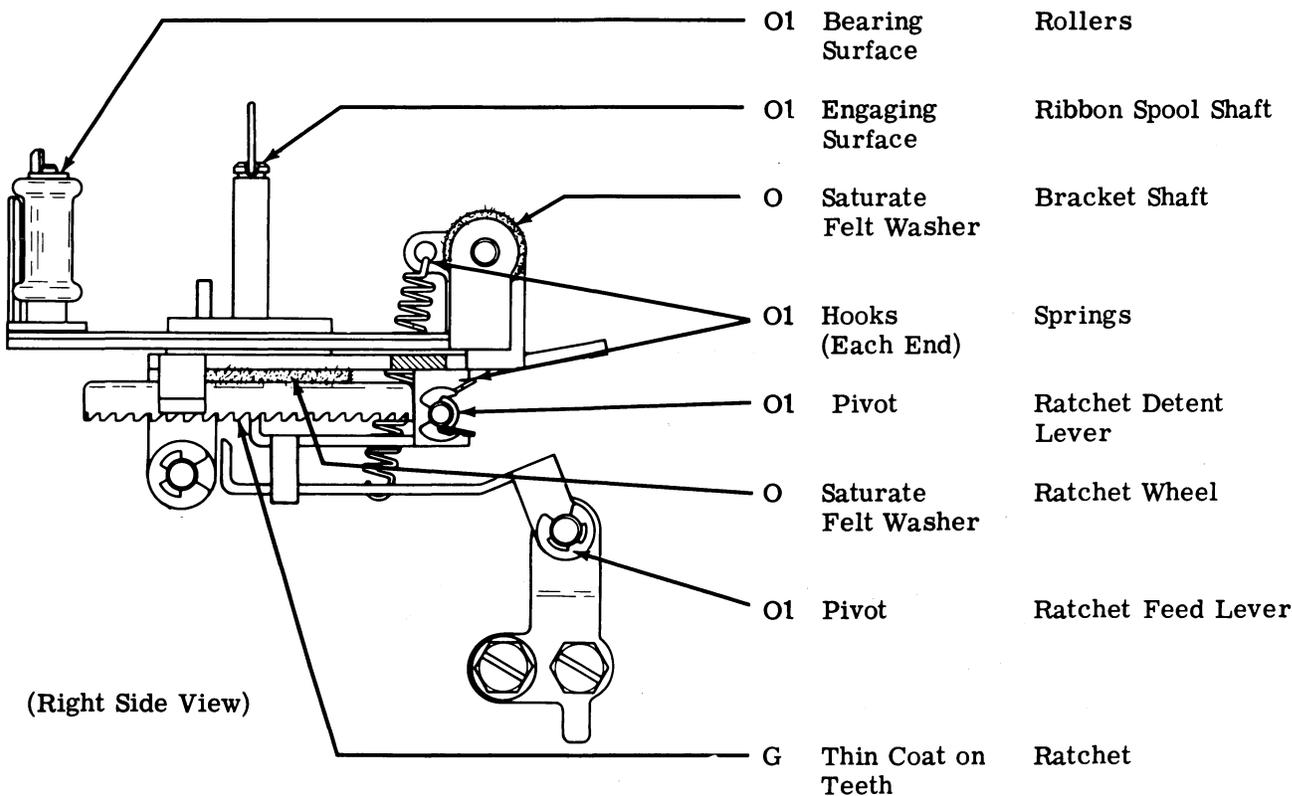
2.42 Ribbon Feed Drive Arm



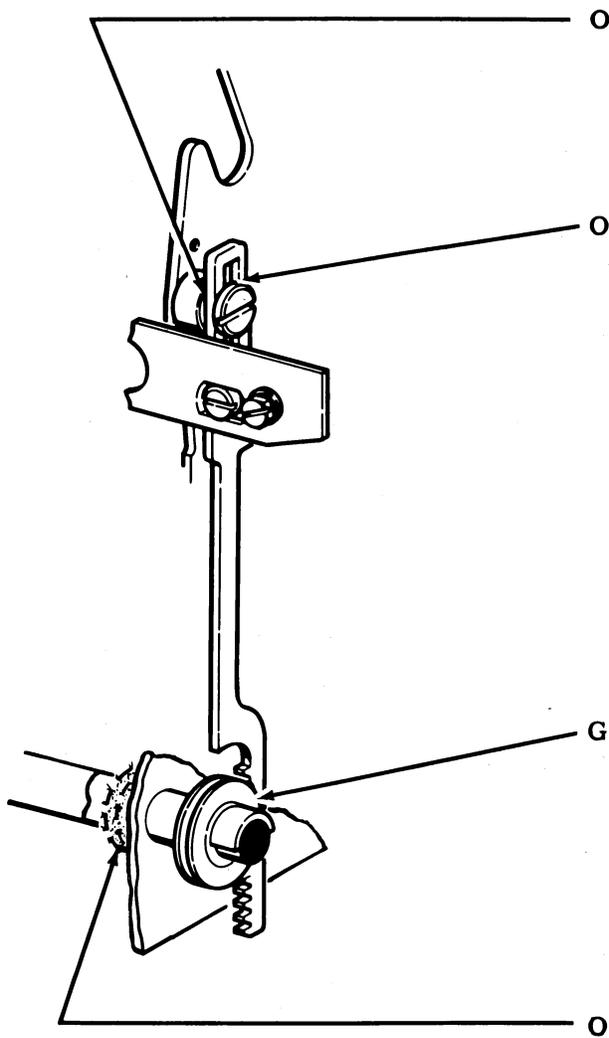
2.43 Ribbon Reverse



2.44 Ribbon Feed Bracket and Ratchet (continued)



2.45 Vertical Positioning Rack



(Right Front View)

Saturate
Felt Washer

Spacer

Thin Film on
Engaging
Surfaces

Upper Rack
Guide

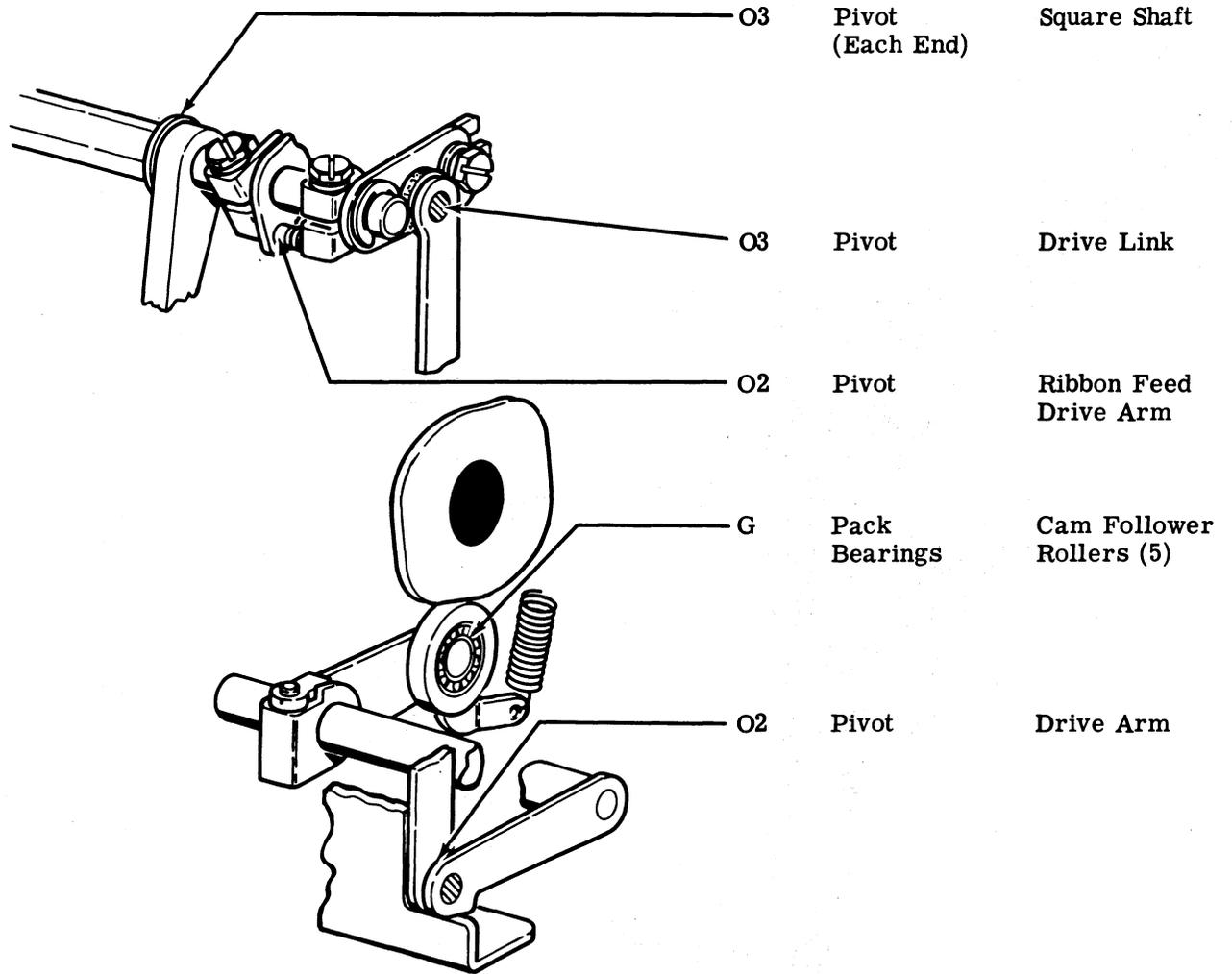
Thick Coat on
Teeth,
Engaging
Surfaces,
Bearings

Lower Rack
Guide Arm,
Pinion, Drive
Shaft Bearings

Saturate
Felt Washer

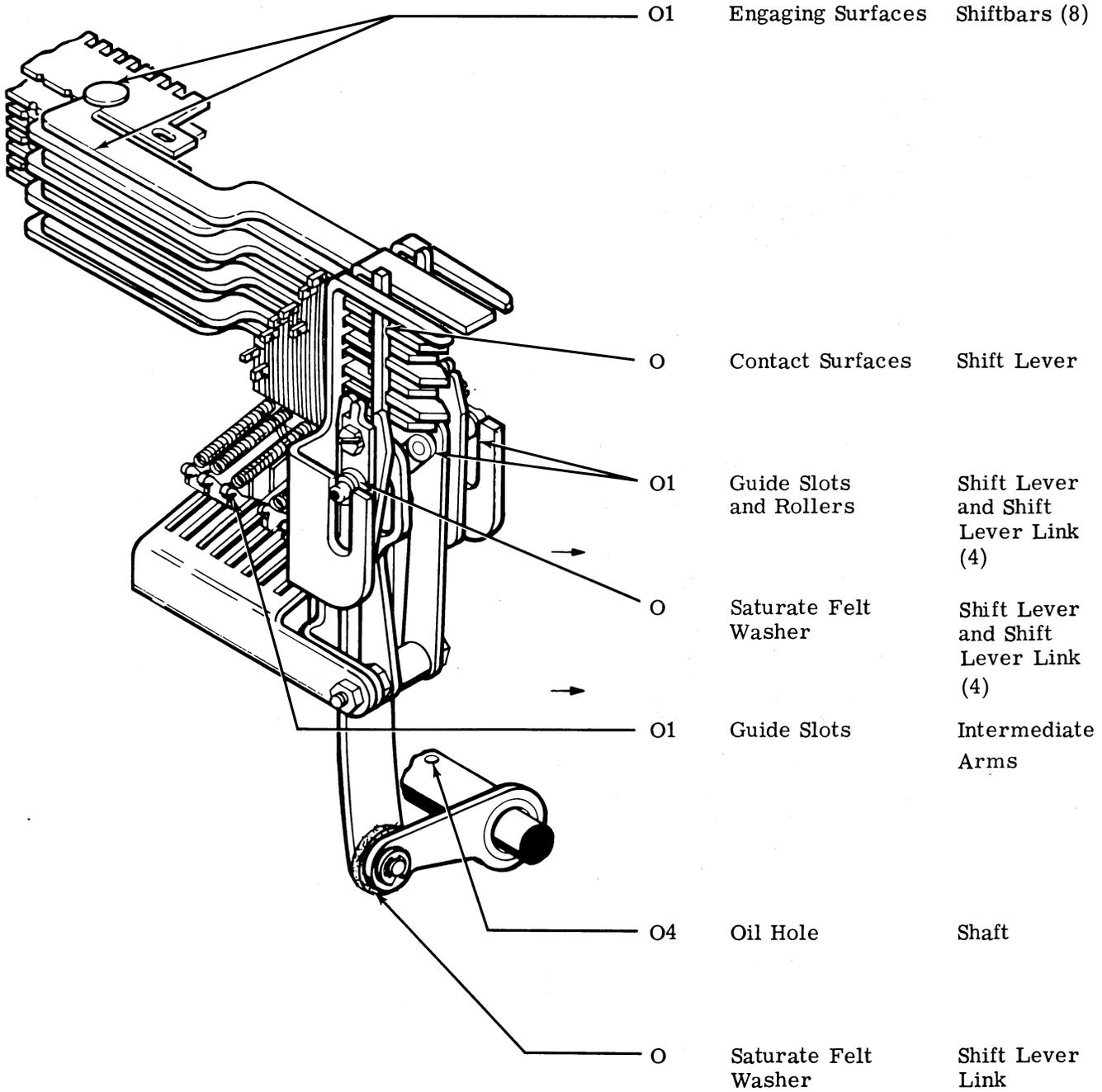
Drive Shaft

2.46 Printing Drive Arm and Link



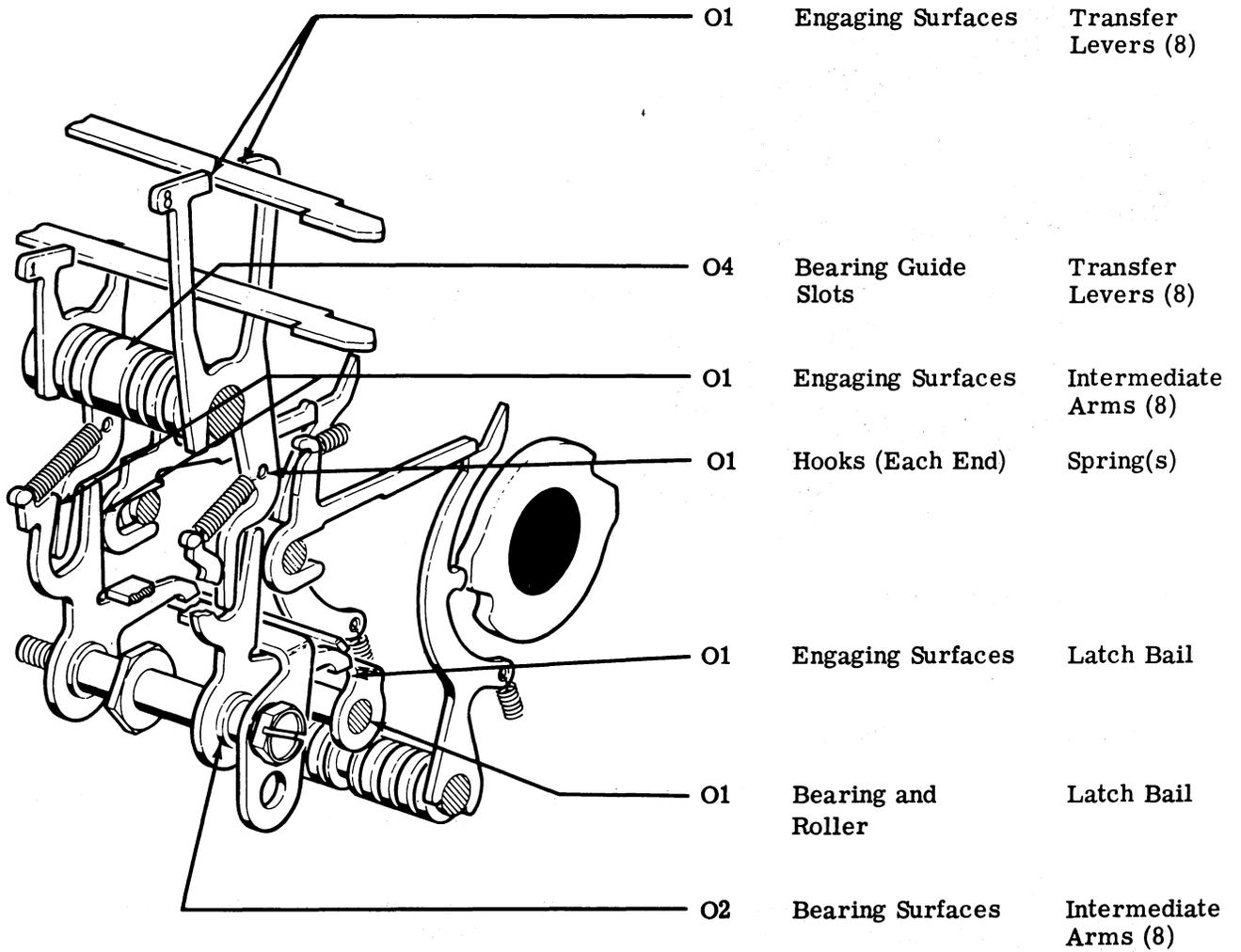
(Right Front View)

2.47 Shiftbars and Shift Levers



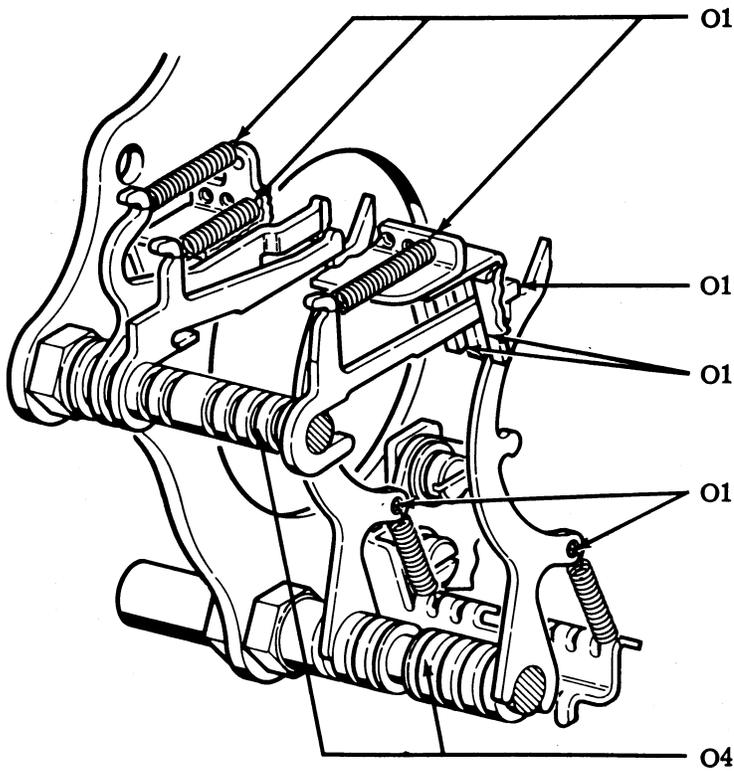
(Right Front View)

2.48 Transfer Levers



(Right Front View)

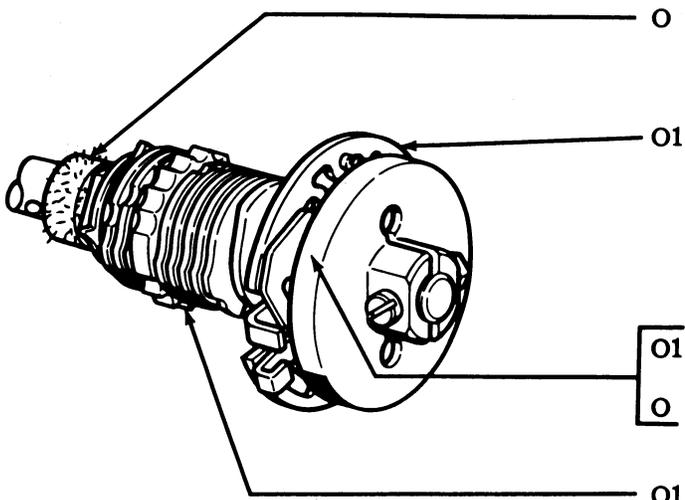
2.49 Selector Levers



(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) |
| O4 | Bearing
Guide Slots | Push and Selector
Levers Guide
Bearings |

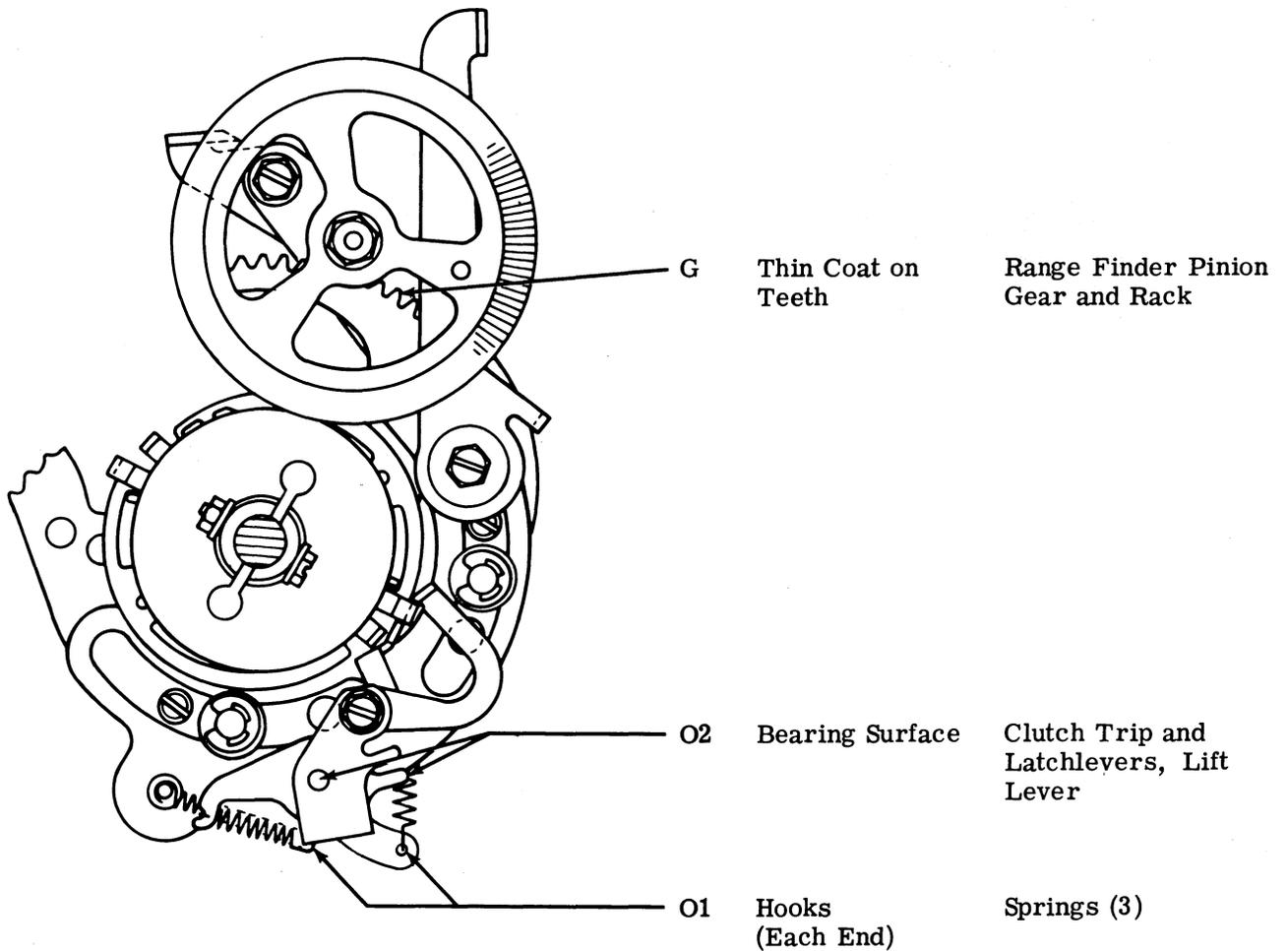
2.50 Selector Cams and Clutch



(Right Front View)

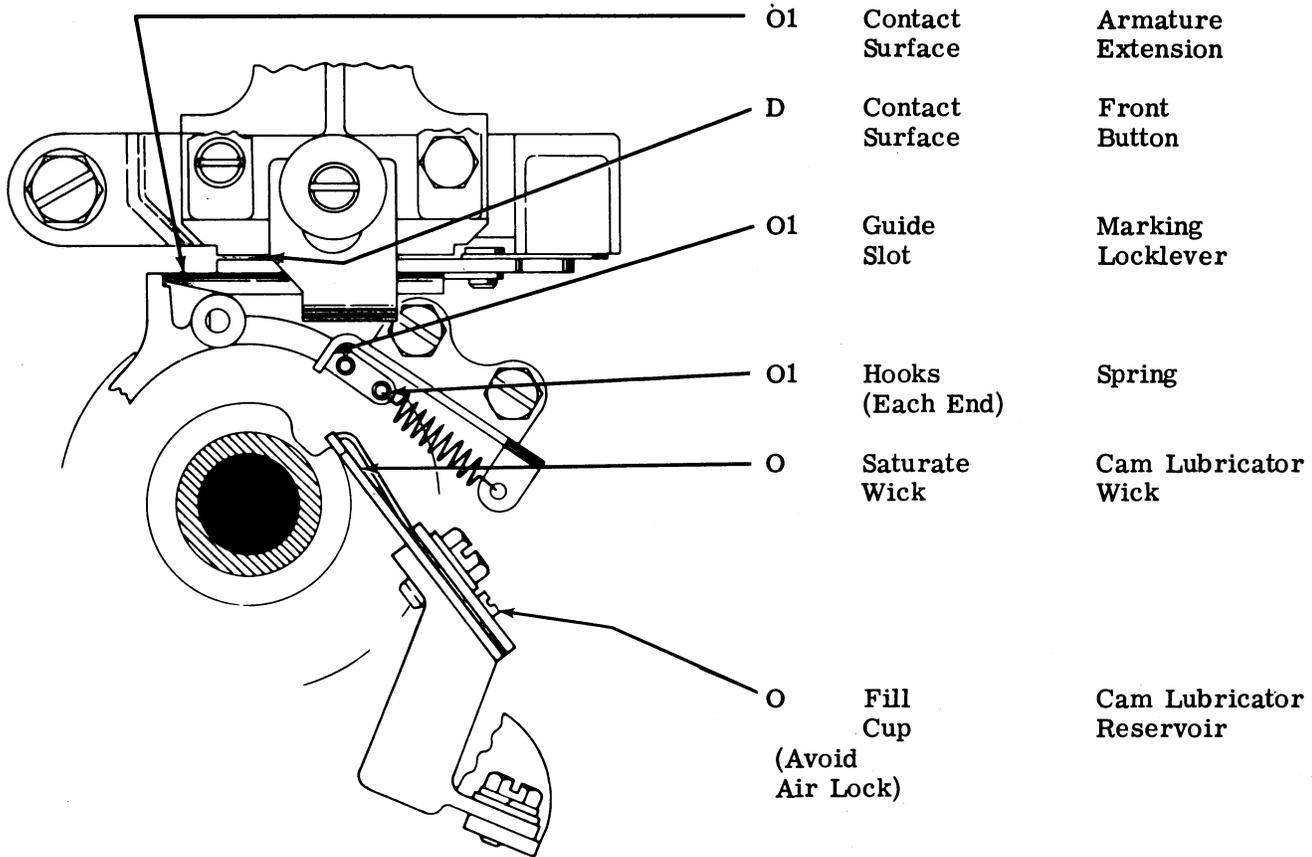
- | | | |
|----|----------------------------------|-------------------|
| O | Saturate
Felt Washer | Selector Camshaft |
| O1 | Camming
Surface | Clutch Disc |
| O1 | Internal
Mechanism | Selector Clutch |
| O | Saturate
Felt Wick | |
| O1 | Camming
Surface
(Each Cam) | Selector Cams |

2.51 Selector Range Finder and Levers



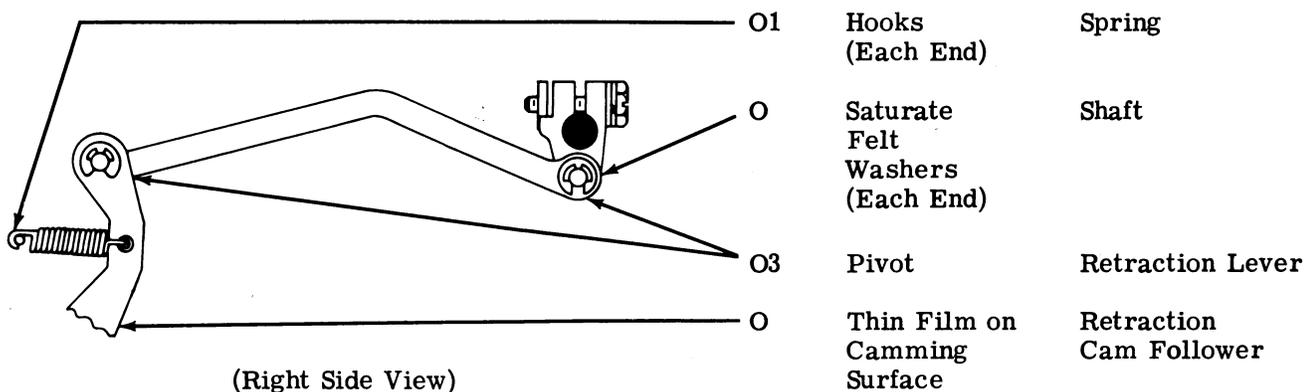
(Right Side View)

2.52 Selector Cam Lubricator and Marking Locklever



(Right Side View)

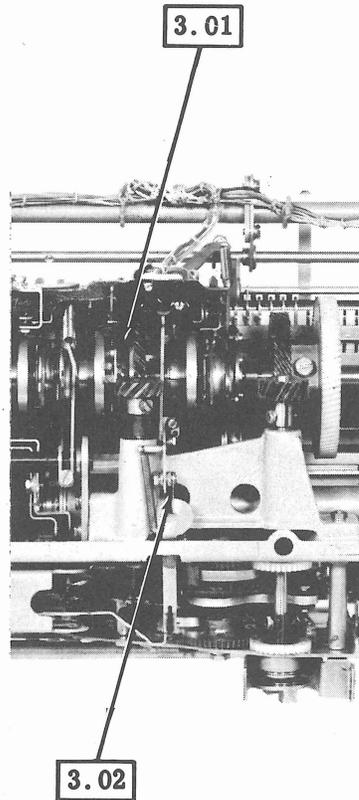
2.53 Retraction Lever



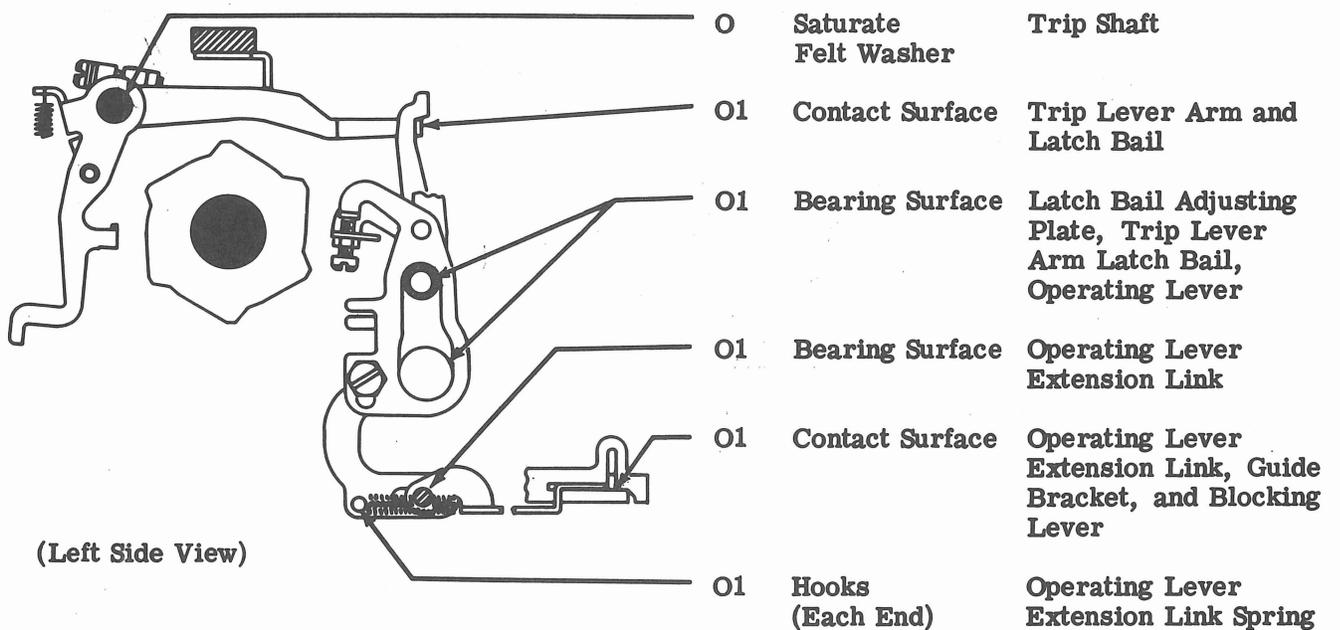
(Right Side View)

3. VARIABLE FEATURES

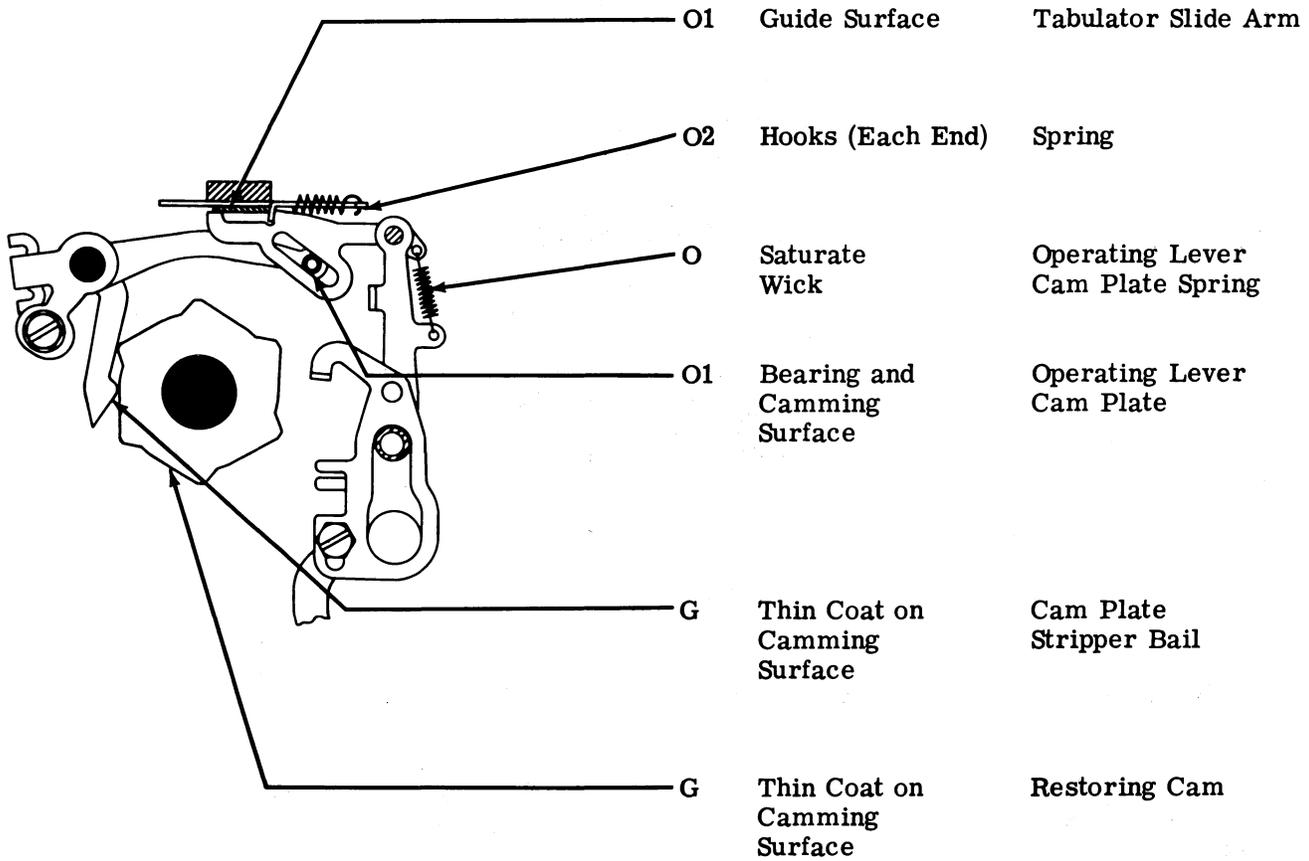
LUBRICATION AREAS — BOTTOM



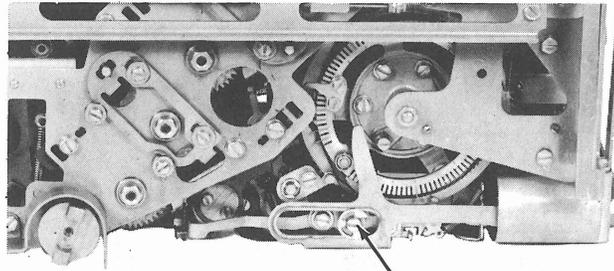
3.01 Horizontal Tabulator Cam and Levers



3.02 Horizontal Tabulator Cam and Levers (continued)

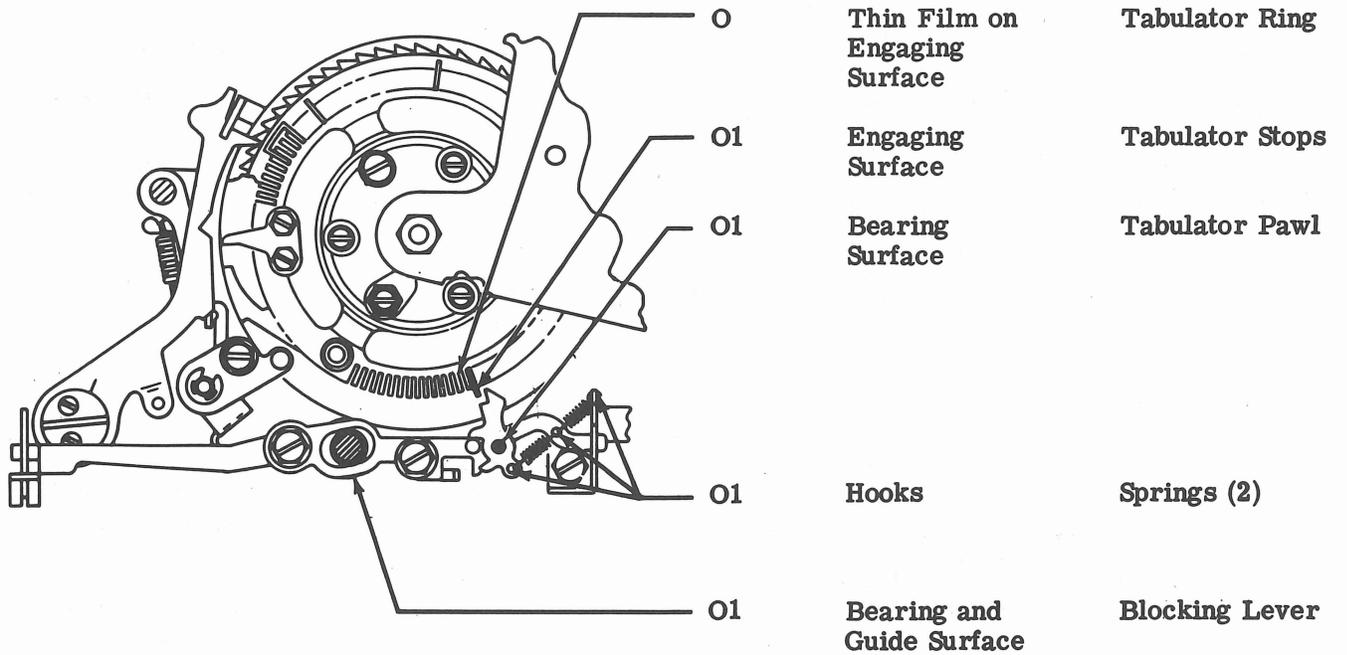


LUBRICATION AREA — FRONT



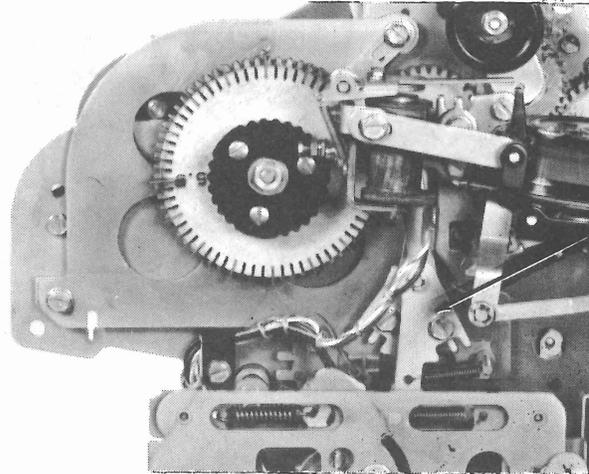
3.03

3.03 Horizontal Tabulator Stops and Pawl



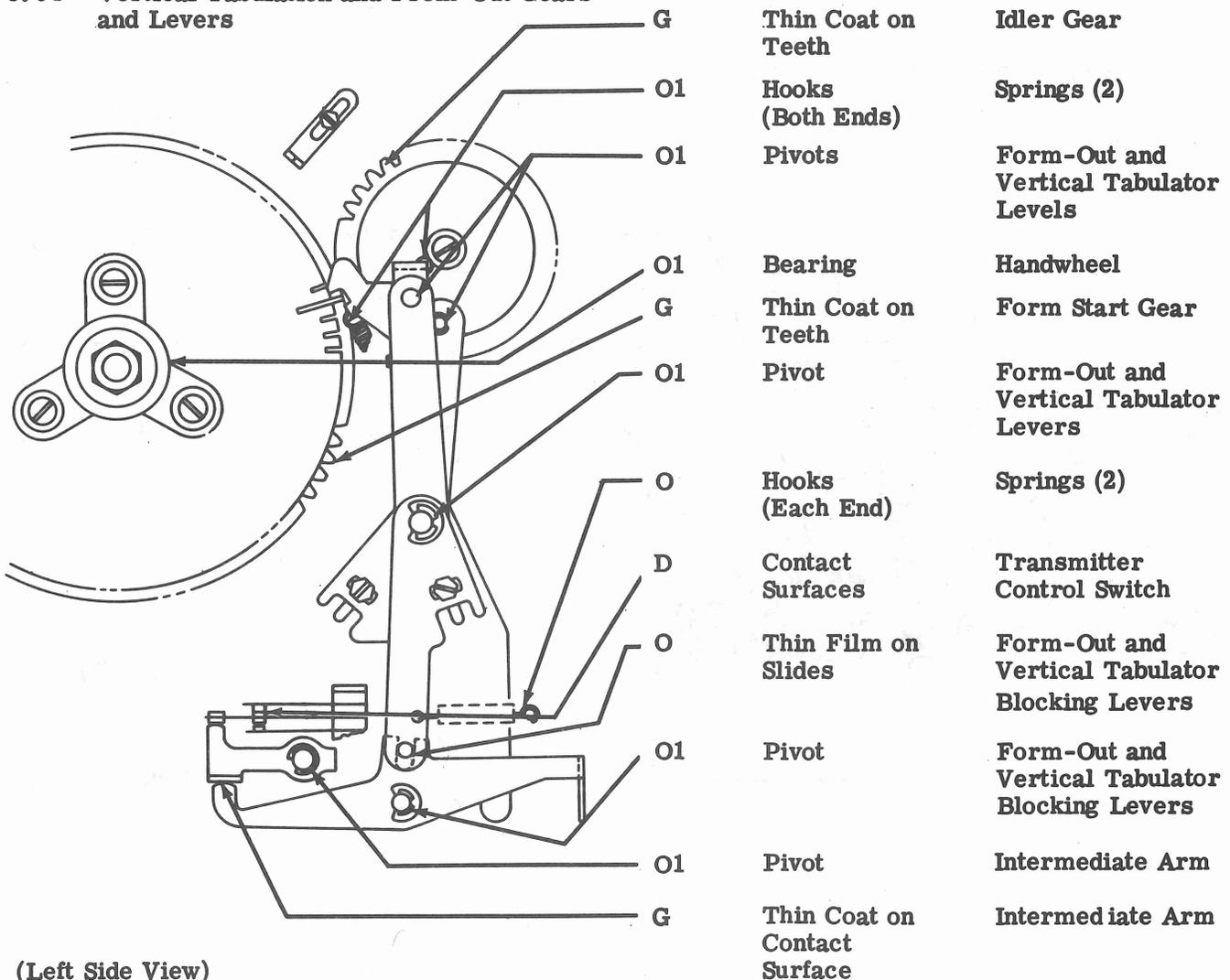
(Front View)

LUBRICATION AREA — LEFT SIDE



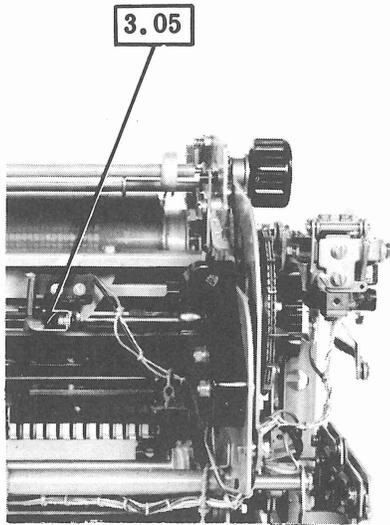
3.04

3.04 Vertical Tabulation and Form-Out Gears and Levers

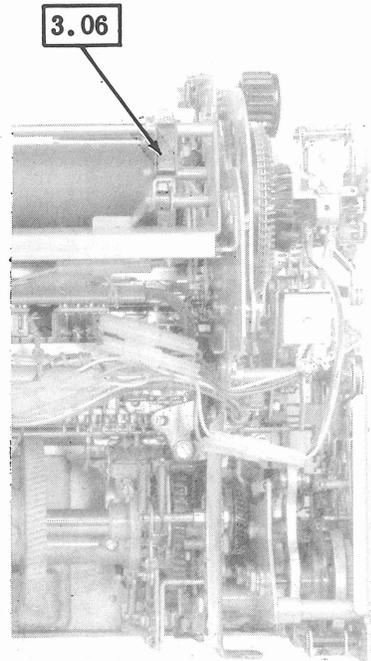


(Left Side View)

LUBRICATION AREAS — REAR

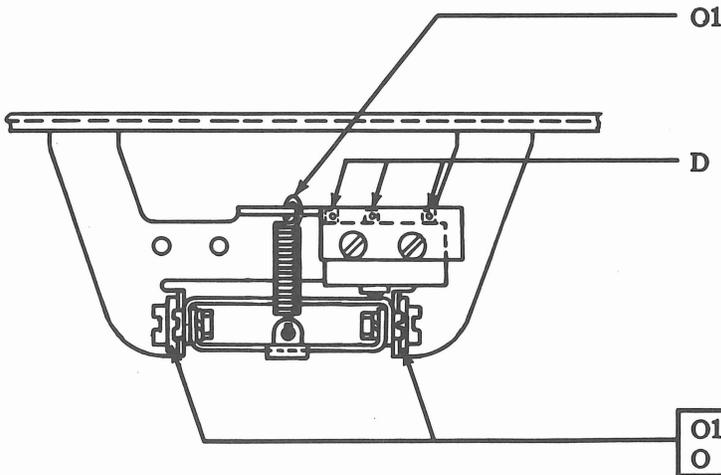


(Friction Feed)



(Sprocket Feed)

3.05 Low Paper Switch (Friction Feed)



(Rear View)

- | | | |
|---------|-----------------------------------|--------------------|
| O1 | Hooks (Each End) | Spring |
| D | Contacts | Terminals |
| O1
O | Pivots
Saturate
Felt Washer | Paper-Out
Lever |

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3.06 Paper-Out Alarm Switch (Sprocket Feed)

