



RCA VICTOR

RP-190 Series

45 R.P.M. Automatic Record Changer

CAUTION

1. Avoid handling the pickup arm when the mechanism is in cycle.
2. Do not use force to release a jam.
3. Do not try to remove the records on the turntable if the turntable is stopped in cycle.
4. If the separator knives protrude from the center post when the mechanism is out of cycle, push the "start-reject" knob to reject and the condition should be corrected automatically.

MODEL IDENTIFICATION

- RP190-1 Uses pickup Stock No. 75476.
 RP190-2 Same as RP190-1, except use pickup Stock No. 75575.
 RP190-3 Same as RP190-1, except use 85 volt motor Stock No. 75937.
 RP190-4 Same as RP190-1, except "ON-OFF" switch; however, they are physically interchangeable.

LUBRICATION

A light machine oil (SAE No. 10) should be used to oil the bearings of the drive motor.

On all bearing surfaces, excepting the motor bearings, Houghton STA-PUT No. 320, or equivalent, should be used. On all other sliding surfaces, STA-PUT No. 512, or equivalent, is recommended.

(Do not oil or grease record separator shelves.)

It is important that the drive motor spindle and the rubber tire on the idler wheel be kept clean and free from oil or grease, dirt, or any foreign material at all times. Carbon tetrachloride or naphtha is satisfactory for cleaning these parts.

AUTOMATIC OPERATION

1. Place a stack of records over the center post, with the desired selections upward, the last record to be played on top.
2. Push the "start-reject" knob to "start" (forward) and release. The mechanism will automatically play in sequence one side of each record stacked on the separator shelves.
3. To reject a record being played, push the "start-reject" knob.
4. At conclusion of playing and as the last record is being repeated, lift the pickup arm and place on its rest. Turn off the power to the drive motor by pushing back on control knob.
5. Remove the stack of records by lifting them straight up.

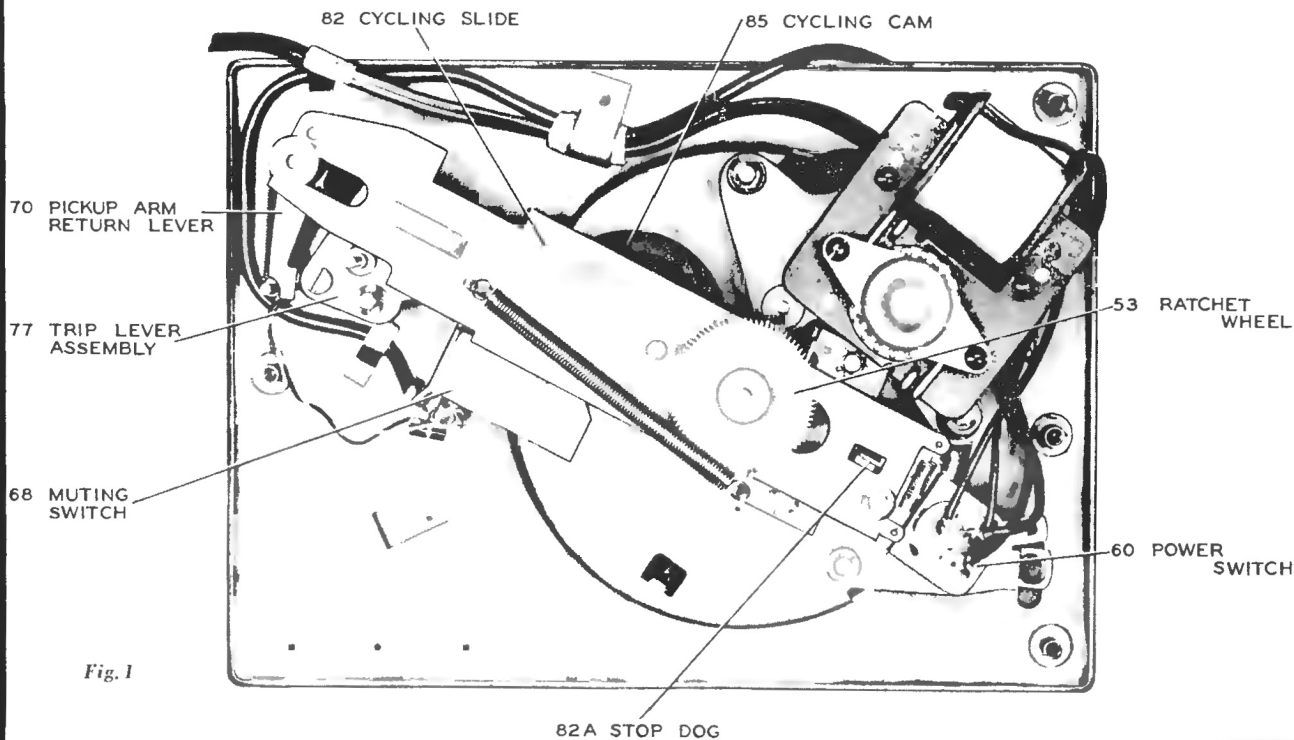


Fig. 1

Trip Lever (77)

The trip lever is mounted on the bottom end of the pickup arm vertical pivot shaft. The function is to transfer the movement of the pickup arm to parts of the operating mechanism below the motor board. The end of the trip lever contacts stud on cycling cam thereby starts tripping action.

Pickup Arm Return Lever (70)

The function of the pickup arm return lever is to provide a force necessary to push the pickup into landing position. The end of the pickup arm return lever is curved so as to provide a stop for trip lever. This stop determines landing position of the pickup.

Function of Principal Parts

Reject Lever (22)

The function of the reject lever is to transfer the action of the control knob to the cycling cam thereby starting a change cycle.

Muting Switch (68)

The function of the muting switch is to short the pickup leads to prevent amplifying of mechanical noise, of the mechanism during change cycle.

Cycling Cam (85)

The cycling cam is mounted on the cycling slide. The function of the cam is to transfer the rotary motion of the turntable shaft into sliding motion of the cycling slide.

Stop Dog (82A)

The stop dog is mounted on the end of cycling slide. The function of the stop dog is to engage the ratchet wheel on the separator shaft and prevent it from rotating, at the exact moment during change cycle.

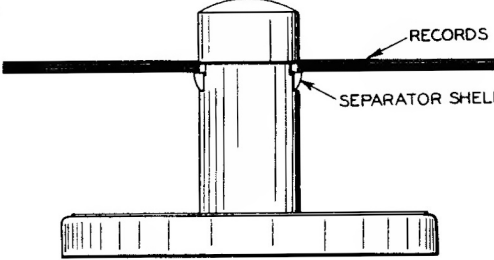
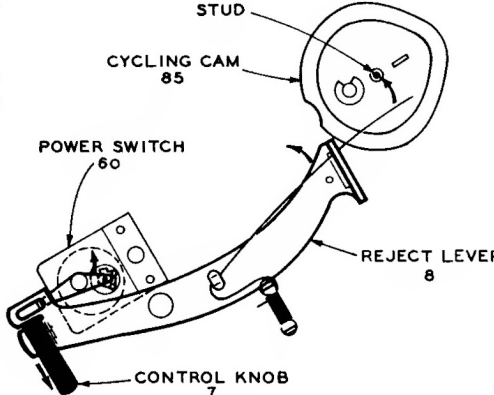
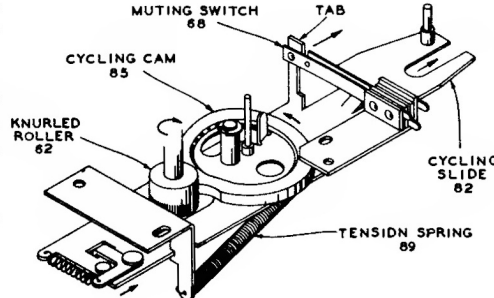
Ratchet Wheel (53)

The function of the ratchet wheel located on the end of the separator shaft is to keep the separator shaft stationary at the proper time, so as to actuate the separator mechanism inside the centerpost.

Cycling Slide (82)

The cycling slide is the main connecting medium between the various moving parts.

Cycle of Operation

FUNCTION	EXPLANATION
Place a stack of records over centerpost.	<ol style="list-style-type: none"> 1. Records rest on separator shelves protruding from either side of the centerpost.  <p style="text-align: center;">Fig. 3</p>
Push control knob to reject.	<ol style="list-style-type: none"> 1. The control first actuates the power switch applying power to the drive motor. This starts the turntable rotating. 2. Further movement of the control knob actuates the reject lever assembly (8) which contacts the stud mounted on the eccentric cycling cam and moves it slightly.  <p style="text-align: center;">Fig. 4</p>
Cycling starts.	<ol style="list-style-type: none"> 1. The slight movement of the eccentric cycling cam (85) is sufficient for engagement with the rotating knurled roller (62) mounted on turntable shaft. 2. The eccentric cycling cam which is mounted on the cycling slide (82) pushes the slide in the direction of the pickup arm pivot. In so doing tension is increased on the slide return spring (89). 3. The tab on the cycling slide moves back permitting muting switch to close.  <p style="text-align: center;">Fig. 5</p>

Cycle of Operation—Continued

RP-190 Series

Pickup raises from the rest.

1. As the cycling slide continues to move in the direction of the pickup arm pivot the small incline pressed in the slide causes the elevating rod (74) to lift the pickup arm from the rest.
2. The raised pickup arm moves inward slightly from the inward force of the pickup arm return lever (70), until the stud on the trip lever (77) assembly comes against edge of the cycling slide.
3. The cycling slide continues to move further, which pushes the trip lever back. The eccentric landing adjustment stud (79) contacts and pushes the pickup arm return lever (70) against the tension of the return spring (69).

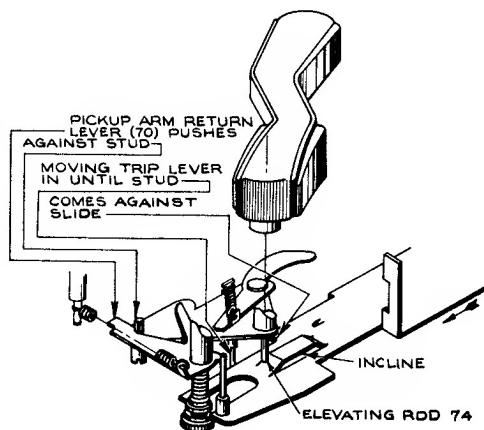


Fig. 7

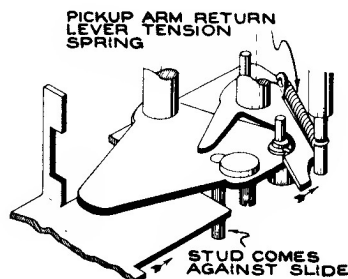


Fig. 6

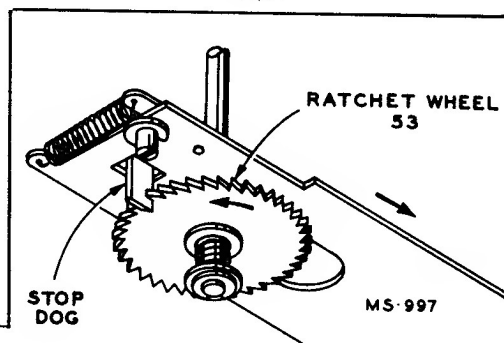


Fig. 8

Separator knives separate the lower record from the stack and the lower record drops to the turntable.

1. As the cycling slide reaches the limit in its movement in the direction of the pickup arm pivot, the stop dog mounted on the slide engages the rotating ratchet wheel (53).
2. The ratchet wheel and separator shaft (6) then remains stationary and the turntable continues to rotate.
3. The separator shelves and knives are coupled together in such a manner that the flattened end of the separator shaft pushes the knives out, which in turn pulls the opposite shelves in.
4. As the shelves recede, the separator knives mounted above the shelves move out and separate the lower record of the stack and support the remaining records while the lower record drops to the turntable.

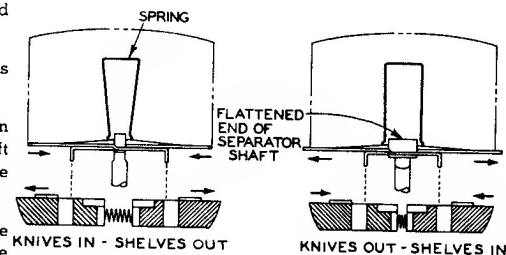


Fig. 9

Pickup moves in for landing.

1. The cycling slide moves away from the pickup arm pivot, due to the force produced by the tension spring (89) keeping the eccentric cycling cam against the rotating knurled roller (62). The knurled roller at this time is returning to the smaller diameter of the cam.
2. The stud on trip lever assembly follows the slide due to the force produced by the action of the pickup arm return lever.
3. After the slide has moved back a short distance the stud on the trip lever assembly no longer follows the slide since the landing adjustment stud comes against the curved stop on the end of the pickup arm return lever. At this moment the pickup is directly above the point of landing.
4. As the cycling slide completes the return movement the elevating rod slides down the incline which lowers the stylus on the record.

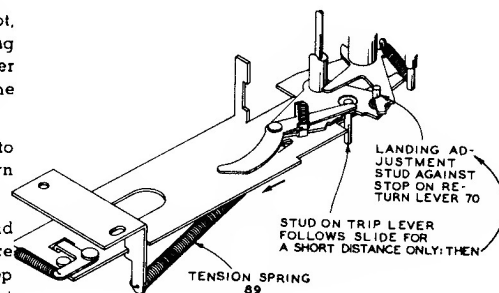


Fig. 10

Cycle completed and the record plays.

1. The tab on the cycling slide contacts and opens the muting switch.
2. The stud on the cycling slide pushes pickup arm return lever back to permit free motion of the pickup arm.
3. The change cycle is completed as the cycling slide comes against the stop bracket, at which time the knurled roller rotates in the cut away section of the cam.
4. As the record plays and the pickup arm moves inward.
5. When the stylus reaches the end of the selection the end of the trip lever contacts the stud on the cycling cam, and pushes it slightly.
6. The slight movement of the cycling cam causes engagement with the rotating knurled roller, thereby starting a change cycle.
7. The mechanism repeats the preceding sequence of operations until the last record of the stack has dropped and has been played. This selection will be repeated until the pickup is lifted and placed on the rest.

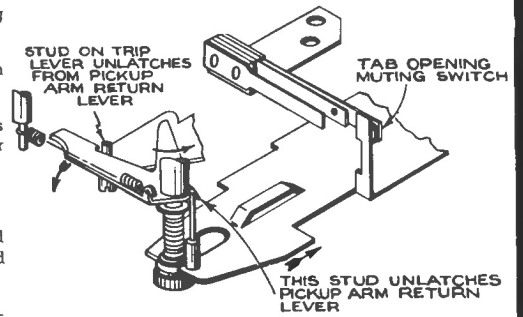


Fig. 11

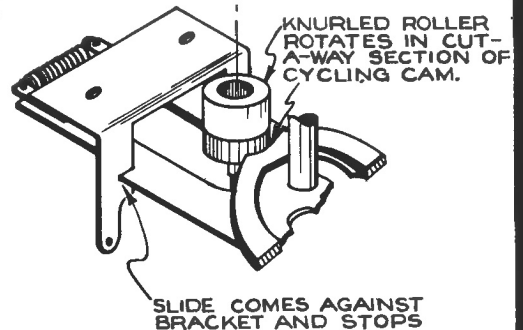


Fig. 12

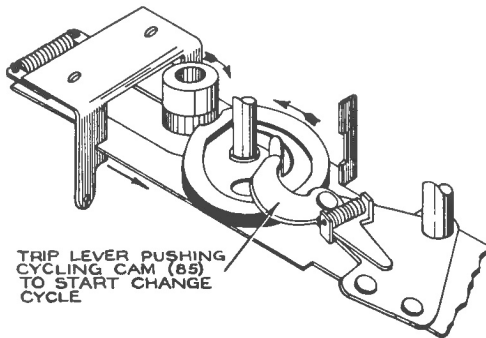


Fig. 13

DO YOU KNOW?

IF THIS SPRING IS LOOSE OR MISSING, PICKUP WILL NOT LAND PROPERLY

IF THERE IS A BIND IN THIS PIVOT, MECHANISM MAY NOT TRIP



Fig. 16

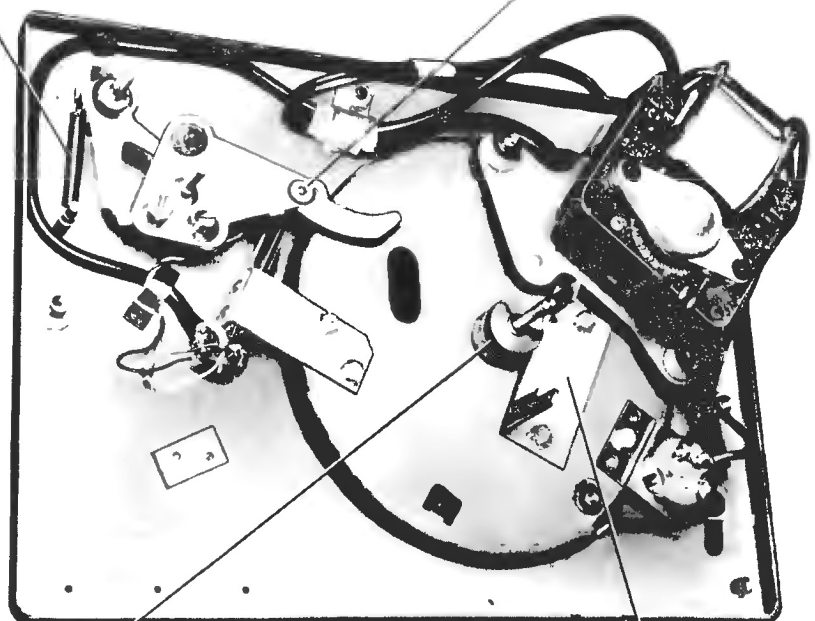


Fig. 14

IF THIS KNURLED ROLLER IS LOOSE, MECHANISM MAY FAIL TO COMPLETE CYCLE

IF THIS BRACKET IS IMPROPERLY ADJUSTED, THE CYCLING SLIDE MAY BIND OR CONTINUOUS TRIPPING MAY RESULT

REJECT CONTROL FAILS TO OPERATE

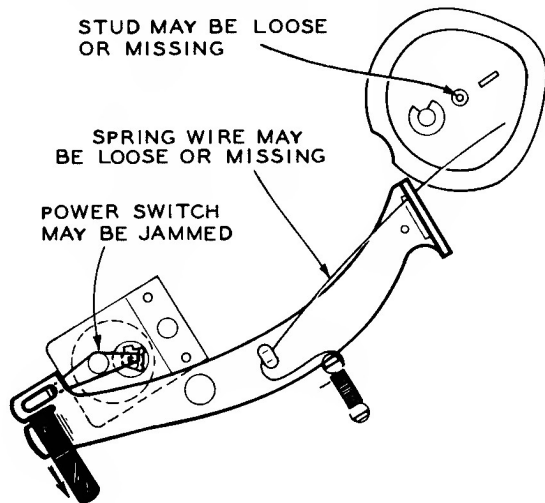


Fig. 17

RECORD STRIKES PICKUP ARM WHEN DROPPING

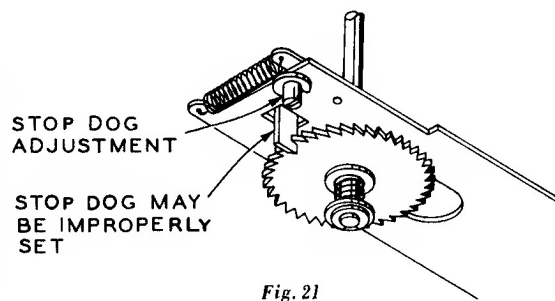
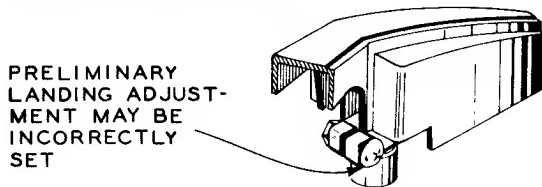


Fig. 21

PREMATURE TRIPPING

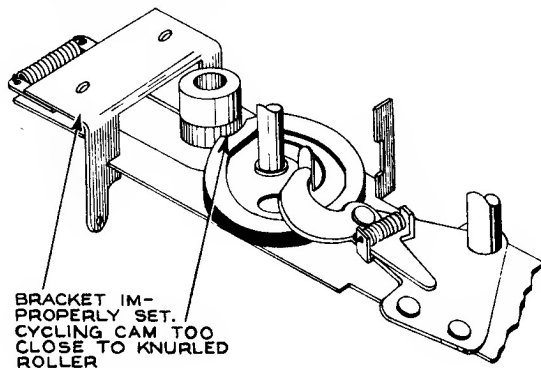


Fig. 30

MECHANISM FAILS TO SEPARATE RECORDS PROPERLY

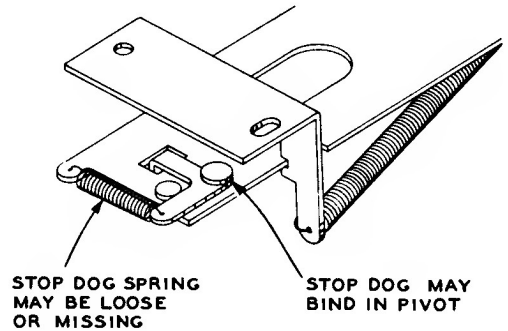


Fig. 18

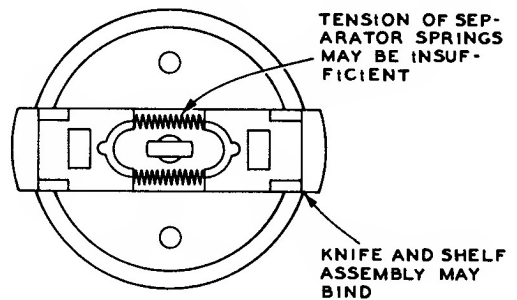


Fig. 19

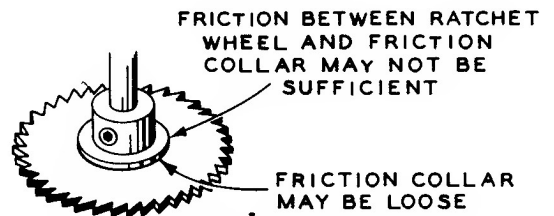


Fig. 20

PICKUP SKIPS GROOVES

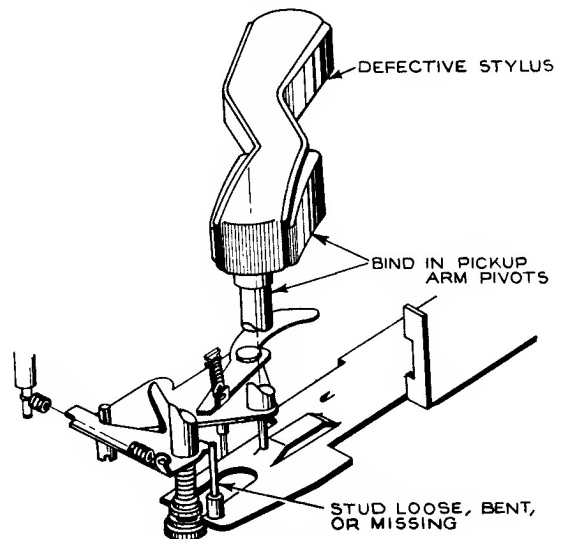


Fig. 25

PICKUP FAILS TO LAND PROPERLY

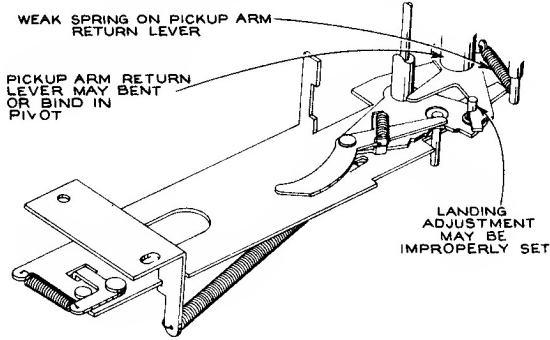


Fig. 22

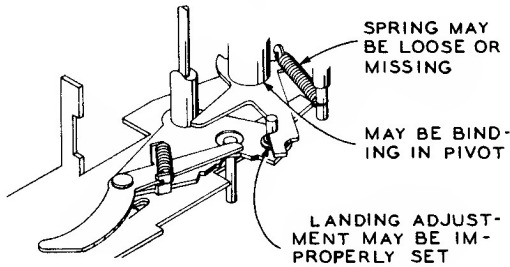


Fig. 23

CONTINUOUS TRIPPING

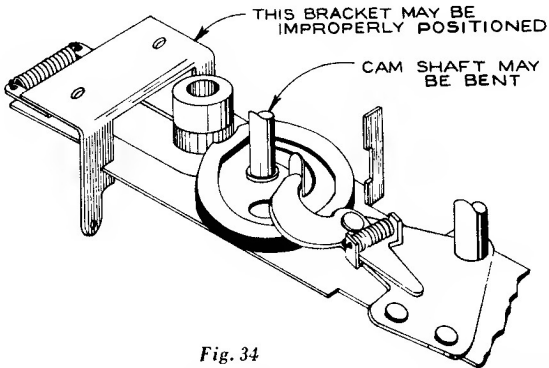


Fig. 34

MECHANISM FAILS TO TRIP

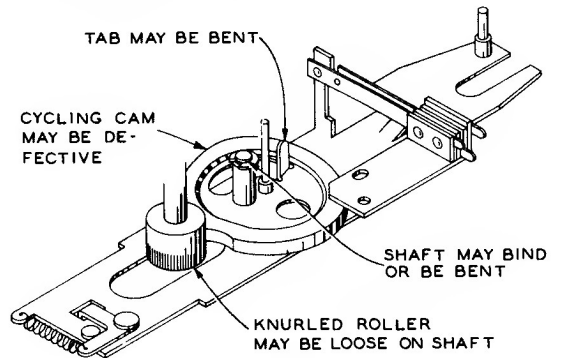


Fig. 26

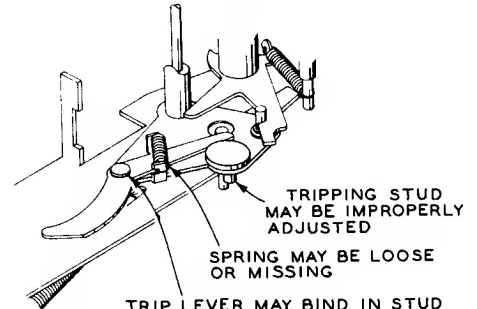


Fig. 27

MECHANISM FAILS TO COMPLETE CYCLE

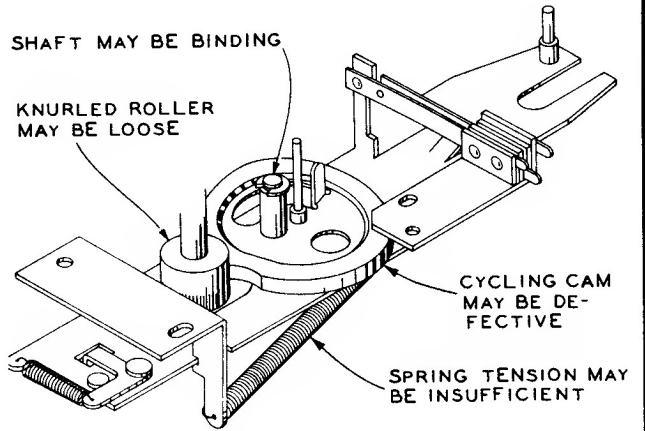


Fig. 35

ADJUSTMENTS

LANDING

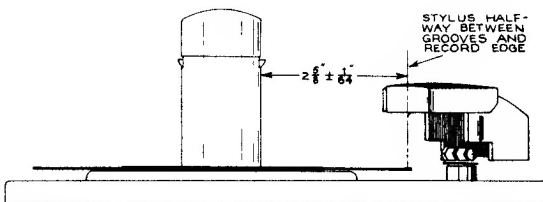


Fig. 36

TRIPPING

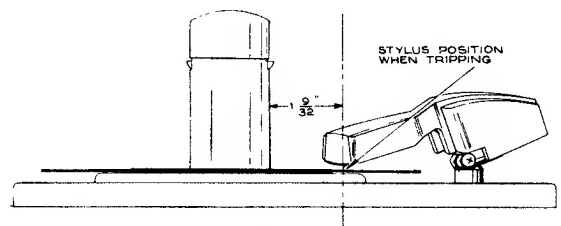


Fig. 37

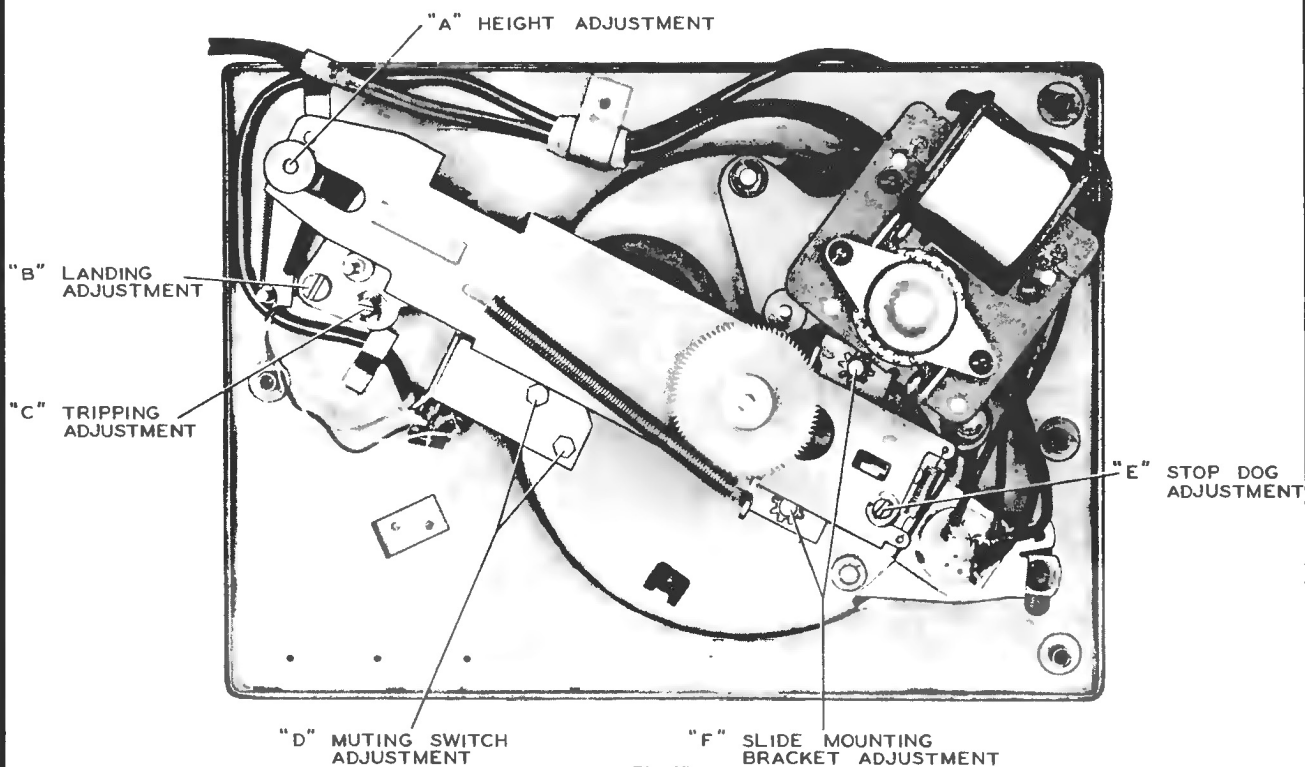


Fig. 38

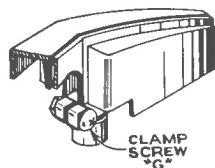


Fig. 39

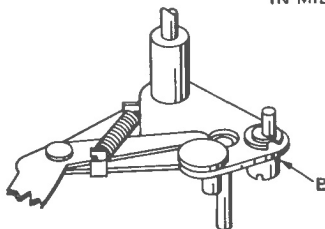


Fig. 40

LANDING ADJ
ECCENTRIC STUD
IN MID POSITION

POSITION OF LANDING ADJ
ECCENTRIC STUD FOR PICKUP
FURTHERST —

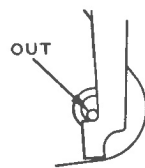
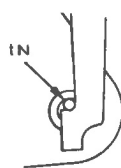


Fig. 41

Adjustments

Pickup Landing Adjustment:

Under ordinary conditions the landing adjustment is a screwdriver adjustment as shown. The adjustment of eccentric landing adjustment stud (B) gives approximately a $\frac{1}{4}$ " movement. (See Figs. 38, 40.)

If, however, the pickup arm has been removed it is first necessary to make an approximate landing adjustment as follows:

1. With the mechanism out of cycle and the clamp screw (G) (Fig. 39) loose, place pickup arm on the rest and tighten clamp screw enough to prevent the clamp from slipping on the shaft.
2. Set the landing adjustment stud (B) as shown (mid-adjustment). (See Figs. 40, 41.)
3. With the power removed, push reject control to reject. Rotate turntable by hand in the correct direction until the pickup is about ready to land.
4. Loosen clamp screw (G) and move pickup arm so the stylus is approximately $2\frac{3}{8}$ " from side of centerpost. Tighten clamp screw. (See Figs. 36, 39.)
5. Exact landing adjustment can now be made by a screwdriver on stud (B). (See Fig. 38.)

Pickup Height Adjustment (See Fig. 38):

Adjust knurled nut (A) until the distance (during change cycle) between the top of the turntable and the stylus point is approximately $1\frac{1}{8}$ ".

NOTE: If unable to adjust for sufficient height, it may be necessary to cut a few turns from the compression spring to allow more space on the shaft.

Tripping Adjustment (See Figs. 37, 38):

Adjust the eccentric tripping stud (C) until the mechanism trips when the stylus is $1\frac{9}{32}$ " from the side of the centerpost.

Mounting Bracket Adjustment (See Fig. 38):

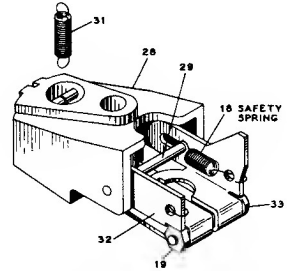
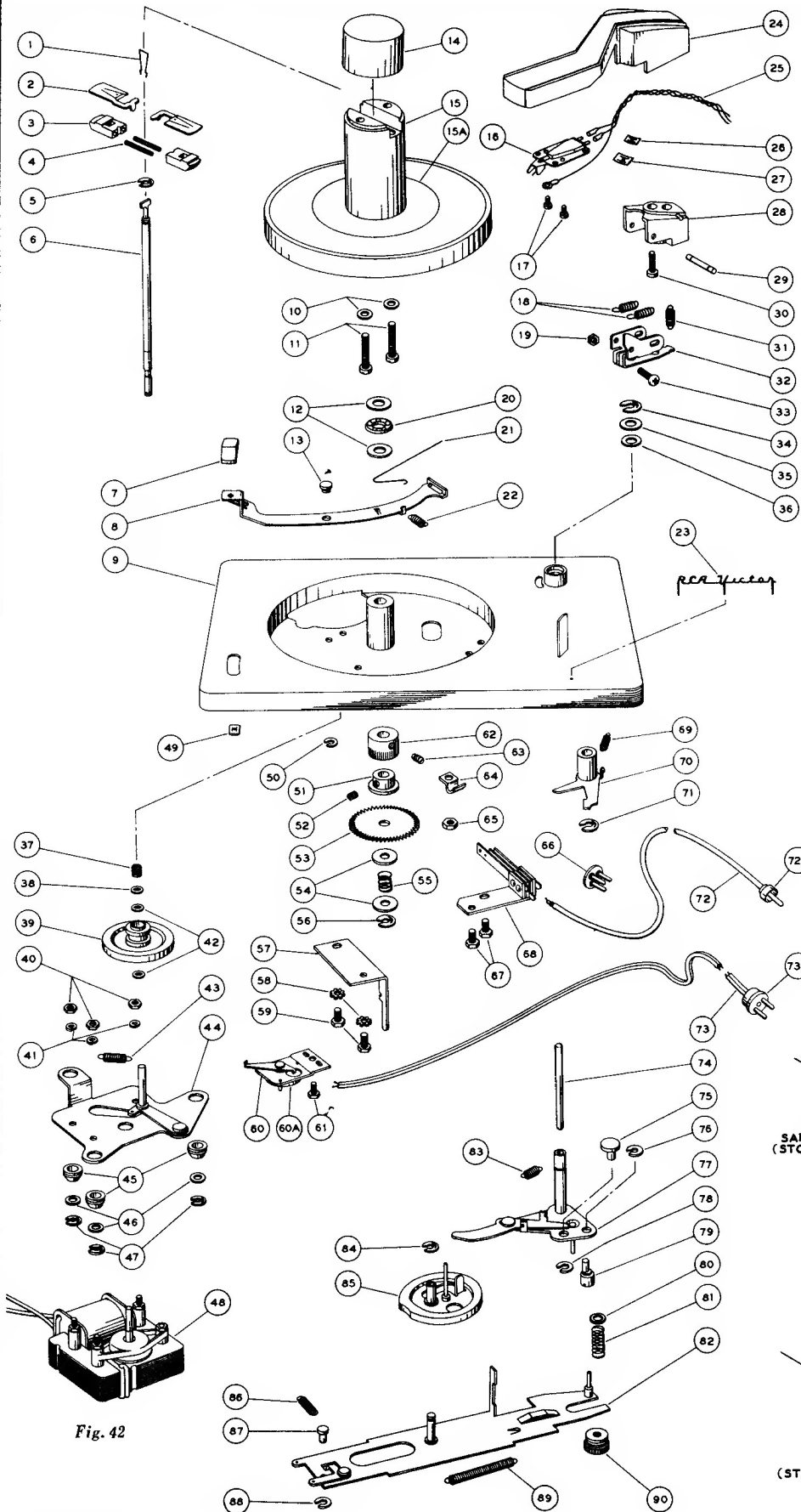
Loosen the two screws (F) and move the bracket so it is as near perpendicular to the slide as possible. Move back or forward until the cut away section of the cycling cam clears the knurled roller approximately $1/16$ ". Tighten screws.

Muting Switch Adjustment (See Fig. 38):

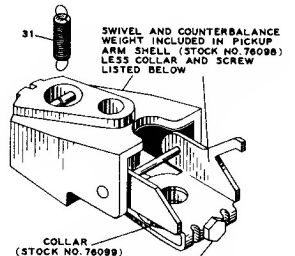
Loosen the two screws (D) and adjust the position of the switch so the contacts are approximately $1/32$ to $1/16$ inches apart when the mechanism is out of cycle. If the mounting screws do not give sufficient adjustment, bend tab on slide slightly.

Stop Dog Adjustment (See Fig. 38):

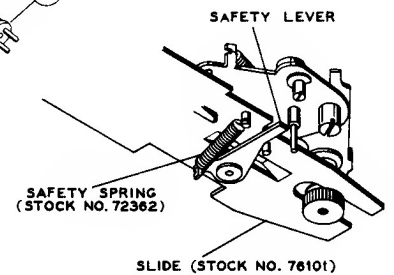
Turn the eccentric screw (E) until the record drops turntable without striking the pickup arm.



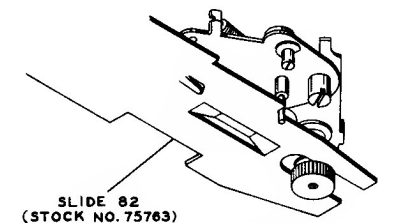
Original counterbalance and swivel assembly



New counterbalance and swivel assembly part of pickup arm



New cycling slide



Original cycling slide

Fig. 42