

# GARRARD RC70 AUTO-CHANGER

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Fig. 4.—Details of the pick-up control gear, centre spindle and record platform

neath, unscrew the nuts on the three suspension screws, which secure the motor to the unit plate. Before drawing the motor away from the unit plate, note the sequence of steel and rubber washers on each suspension screw.

**Pick-up Dropping Position.** The pick-up arm has been finely adjusted so that the needle comes on to 10-in. records in a 9½-in. diameter circle and 12-in. records in a 11½-in. diameter circle. Should the position require adjustment, the pick-up adjusting screw—accessible through a hole in the unit plate (A and 129)—should be turned with the changer in its start position, that is, with the pick-up arm on its rest. A quarter of a turn in either direction gives maximum adjustment.

Should pick-up arm have been forced out of position and the adjustment provided by the screw be insufficient, operate the changer and allow it to switch off automatically, when the pick-up arm will be locked on or near the rest. Loosen the hexagonal headed screw 200 (do not attempt to turn the nut)—when the pick-up arm will be free, place arm centrally on rest and retighten the screw. Pick-up should now be in the correct position and any fine adjustment can be made with pick-up adjusting screw.

**Pick-up Height** can be adjusted by loosening the nut securing the eccentric 191 and adjusting the eccentric pivot with screwdriver in slot at back. Finally, retighten locking nut.

**Caution.** When making adjustments to the pick-up arm it should never be forced into position. If the turntable is turned by hand it should not be turned backward.

If the pick-up does not run into the record grooves after alighting on the record edge, see that the record changer is level by placing a spirit level on a record on the turntable. Make sure that the flexible wire leading to the pick-up is not twisted or held in such a manner as to prevent the free movement of the pick-up arm; also see that the associated levers are free.

**Auto-trip Mechanism** is set to operate when the needle reaches a 1½-in. radius, or if it oscillates in an eccentric groove. Occasionally records having a smaller or larger radius at the end of the playing grooves are encountered. If it is desired to adjust the mechanism to take these exceptional records the screw B, visible through hole in unit plate, should be adjusted.

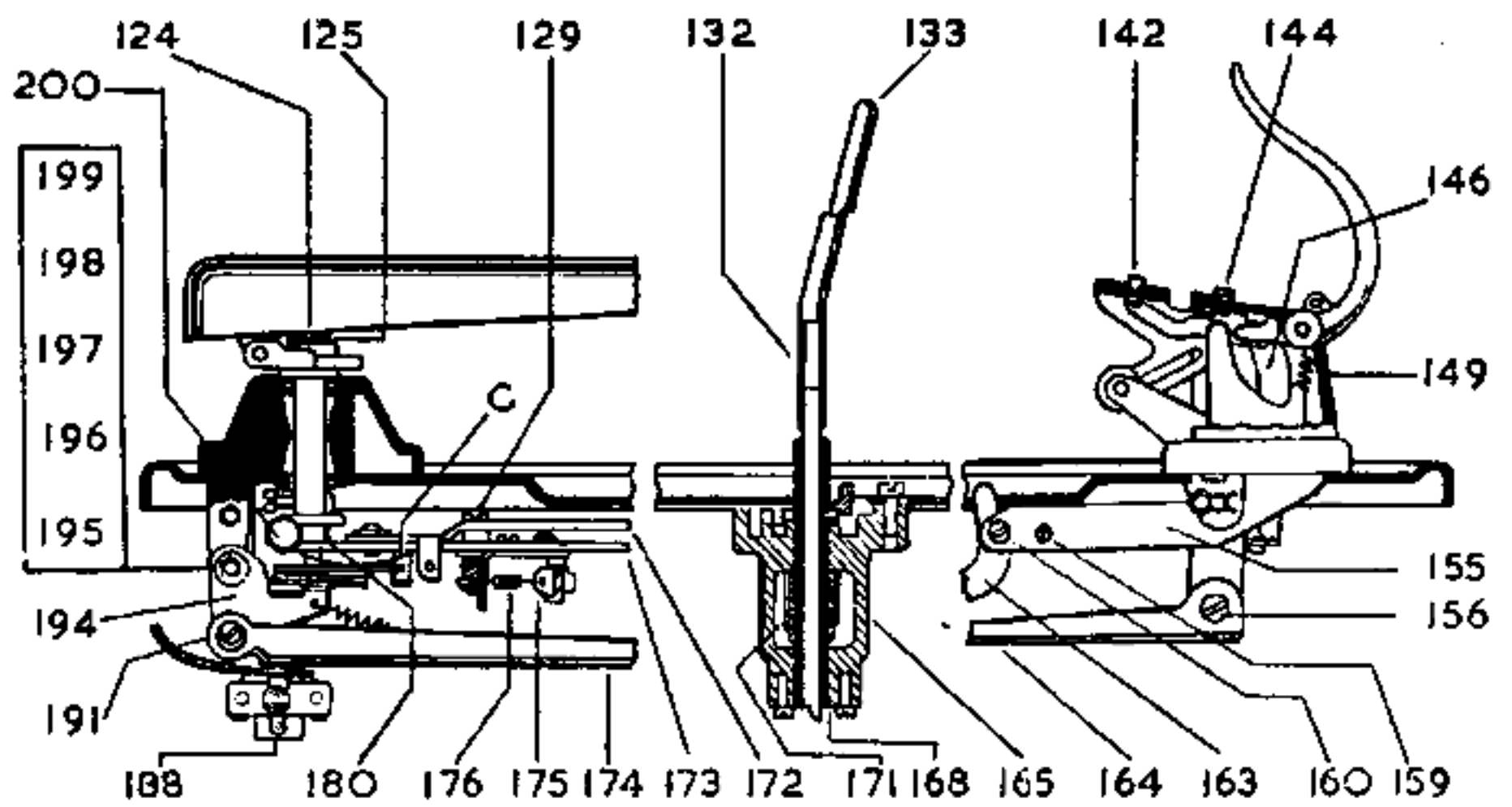
To make the trip operate earlier for larger radius records loosen the screw, and holding pick-up arm steady, move screw in slot a shade towards turntable. The screw should be moved a barely visible amount at each adjustment.

If an early model in which the pawl plate 111 is missing and the pawl pivot is attached directly to the pick-up lever 173 has a tendency to trip prematurely on records that are eccentric (swingers), carefully polish corner of impulse lever 43 that engages on catch in trip lever 106 and strengthen slightly spring 105. Also stretch pawl spring 176 to weaken it.

**Record Platform Adjustment.** To set the platform, the nut 156 locking the eccentric should be loosened, and with mechanism set for 12-in. records pick-up arm in the playing position, and the largest 12-in. record available loaded on platform, turn the "eccentric adjustment" until there is a gap of not more than ¼ in. between the edge of the record and the front edge of the platform pawl. Finally, retighten the locking nut 156.

**Auto Stop at End of Last Record.** When the last record on the platform drops on to the turntable it allows the record clip to fall and this unlocks the auto stop, which should switch off the motor at the end of the record. If, when the last record has been played, the record clip has fallen and the mechanism does not automatically stop, the following procedure should be carried out.

Locate swing lever 42 and knock-off extension 163. Note that in the upper edge of the knock-off extension there is a step. With the record clip lowered and the needle removed from the pick-up head, start the changer



with a hand on the turntable and slow it down to the slowest possible speed at which the mechanism will operate. Move the control lever to the "Reject" position. Swing lever 42 should now move outwards until it engages step on knock-off extension, and should remain engaged until record changer switches off. If swing lever does not engage step but passes over it, proceed as at (a) to correct. If it engages in step, set as at (b).

(a) Load two records on platform spindle in the usual way. Lower record clip and start changer. First record will now drop on to turntable, leaving one remaining on the platform. Again, with the hand operating as a brake to slow down turntable, move control lever to "Reject" position. The tip of the step on knock-off extension should now clear the surface of the swing lever in its outward movement by 1/64 in. If this dimension is incorrect, stop the changer when the swing lever is directly over step in knock-off extension. Knock-off extension is attached to knock-off lever 163 by rivet 159 and adjusting screw 160. Loosen the screw to adjust height of the extension until 1/64 in. clearance is obtained, then retighten screw. Finally, re-check changer with record clip lowered to ensure that swing lever engages step. Should auto top fail to operate, set as at (b) below.

(b) Loosen screws 89 and bring the two parts of the trip link 90 together to shorten slightly the effective length and retighten the screws. Check and repeat adjustment if necessary until changer operates correctly.

**Pick-up slides across 10-in record and rejects without playing.** This is due to the gap between swing lever and catch on knock-off extension being set too fine and the adjustment described at (a) above should be carried out.

**Pick-up commences at varying distances.** The fault can be due to two causes. Firstly, ascertain that the spring marked C is present in the changer. If spring is present the fault is probably due to pick-up arm lifting too high when it returns to the rest after playing a record, and to check this stop the motor when pick-up arm is halfway back towards the rest after 10 records have been played. In this position, with a ⅝-in. long needle in the pick-up, the tip of the needle should be just clearing the surface of top record.

If clearance is greater, it indicates the mechanism is lifting arm too high, and to correct it, loosen locking nut on back of eccentric pin 191 and turn pin by means of slot in the end opposite to nut until pick-up is at the correct height, then retighten nut.

If the spring mentioned above is not fitted it may be obtained from the Garrard Service and Spares factory.

**Pick-up alights on record and immediately rises again, unit drops next record and repeats the process through all records on platform without playing any.** When unit is in playing position, i.e. the needle being on the record, there should be a slight amount of play in lever 164 discernible as a movement between pin 49 and end of slot in lever 164. If no movement is present, slightly adjust eccentric pin 156 to produce it.

There should be a clearance between the end of reject lever 82 and trip lever 106. If not, gently bend reject lever 82 slightly away from trip lever 106.

Occasionally, due to either spring 105 being weak, or to trip lever 106 being sluggish on its pivot the impulse lever 43 does not engage catch inside trip lever, but moves back in to give the pin on the cam the impulse to recommence the changing cycle, in which case free trip lever and strengthen spring as necessary.