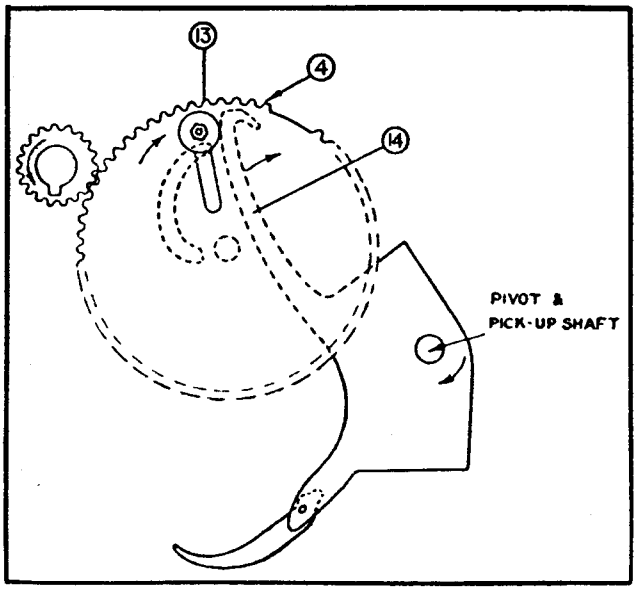

Fig. 6

shown dotted in Figs. 6 and 7, and is, therefore, made ready to play a 10 in. record. As the pick-up is lowered on to a 12 in. record an arm attached to lever 8 (Fig. 4) pushes the 12 in. stop back to the 10 in. position and the mechanism is set to the normal working position.

After the last record has been dropped, the overarm which normally rests on the top record, takes up the position on the spindle which was occupied by the last record. When the last record has been played, the dropping mechanism operates (see under "The Record Selecting Mechanism") and allows the overarm to drop down, the vertical shaft of which then drops down to position 17 (Fig. 7) and prevents plate 9 from moving. The pick-up is thus held over its rest whilst the cam 13 slides up the face of lever 15. When the time comes to lower the pick-up, it is therefore lowered on to its rest and operates the switch (see "The Starting Switch") and switches off the motor.

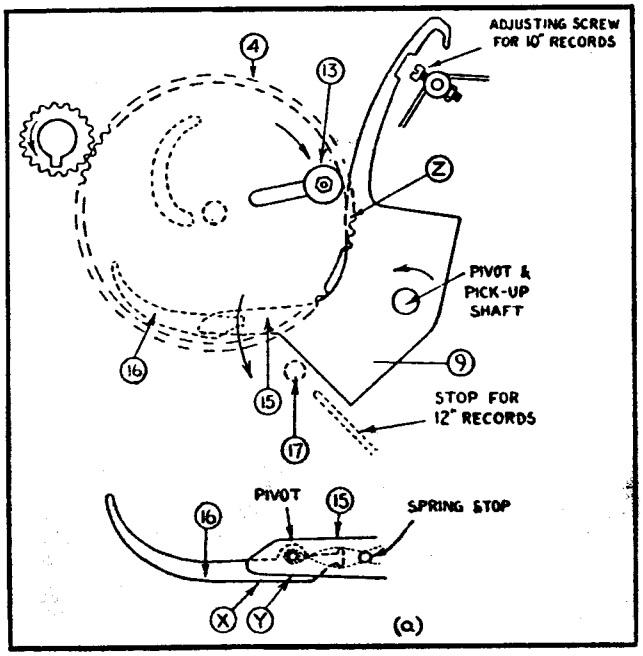

Fig. 7

(c) The Record Selecting Mechanism.

Refer to Fig. 8.

The mechanism used to drop the records on to the turntable is very similar in principle to that used to raise and lower the pick-up. In this case, stud 18 (Fig. 8) is used in conjunction with cam 19 and plate 20. The stud 18 is fixed to the plate 20 and is held under the influence of the spring against the edge of the cam 19. When the wheel 4 has made about half a turn (having been started into motion as described earlier) the stud 18 slides down the flattened portion of the cam 19 and causes the plate 20 to move in the direction of the arrow. The bottom end of the record spindle 21 is resting in the small rectangular hole in the plate 20 and is also therefore caused to move in the direction of the arrow and this allows one record to drop.

The action of the spindle is indicated in (a) and (b) of Fig. 8, where (a) represents the normal position and (b) the position at which the record drops. Having dropped the record, the stud 18 climbs up the edge of the cam 19 and returns the plate 20 and the record spindle to their normal positions.

When the "repeat" button is pressed, the lever 22 is pushed into the recess in plate 20 and thus prevents the spring from moving the plate under the action of stud 18 and cam 19. This prevents the next record from dropping. A small stud on wheel 4 knocks the lever 22 out of position after the "holding off" action has been completed.

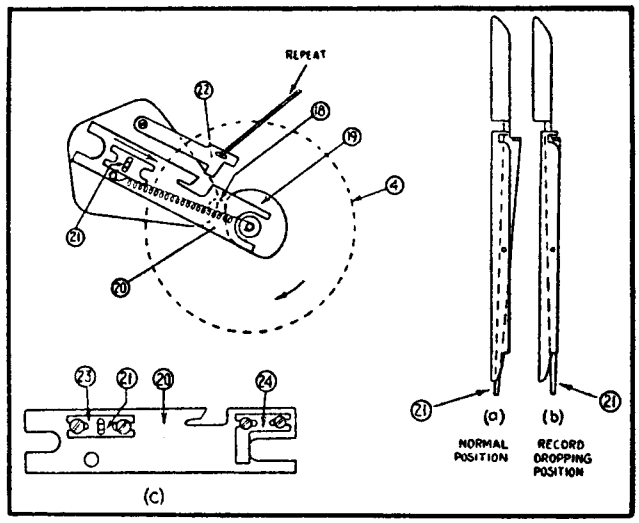

Fig. 8

ACTION WHEN CONTROL LEVER IS PUT TO STOP.

When the control lever is put to "stop," it positions a strip underneath the starting switch, such that when lever 14 (Fig. 6) carries the pick-up arm over toward its rest at the completion of playing of the record, it is held fast and prevented from making further movement. The action then is the same as at the completion of playing of the last record in the stack, and the pick-up arm lowers to its rest and switches off the motor.

THE TONE ARM.

Refer to Fig. 9.

The pick-up is a crystal unit and uses a sapphire needle (type 2945). This needle has a flat on its shank and thus locates in the same position each time it is fitted to the pick-up. The needle also pushes into the mounting and is held tight.

There is an adjustment on the tone arm which controls the effective weight of the arm on the record. The end of the screw A bears upon the tip of the spring C. The spring tension can be increased by unscrewing screw D, which is accessible through a hole in the spring. This will reduce the weight of the pick-up on the record. (The spring should be adjusted to give a weight of 25 gms. and 35 gms. on the first and last records respectively.)