June 24, 1924. 1,498,621

R. L. GERDING

AUTOMATIC PHONOGRAPH

Filed Sept. 11, 1922 6 Sheets-Sheet 1

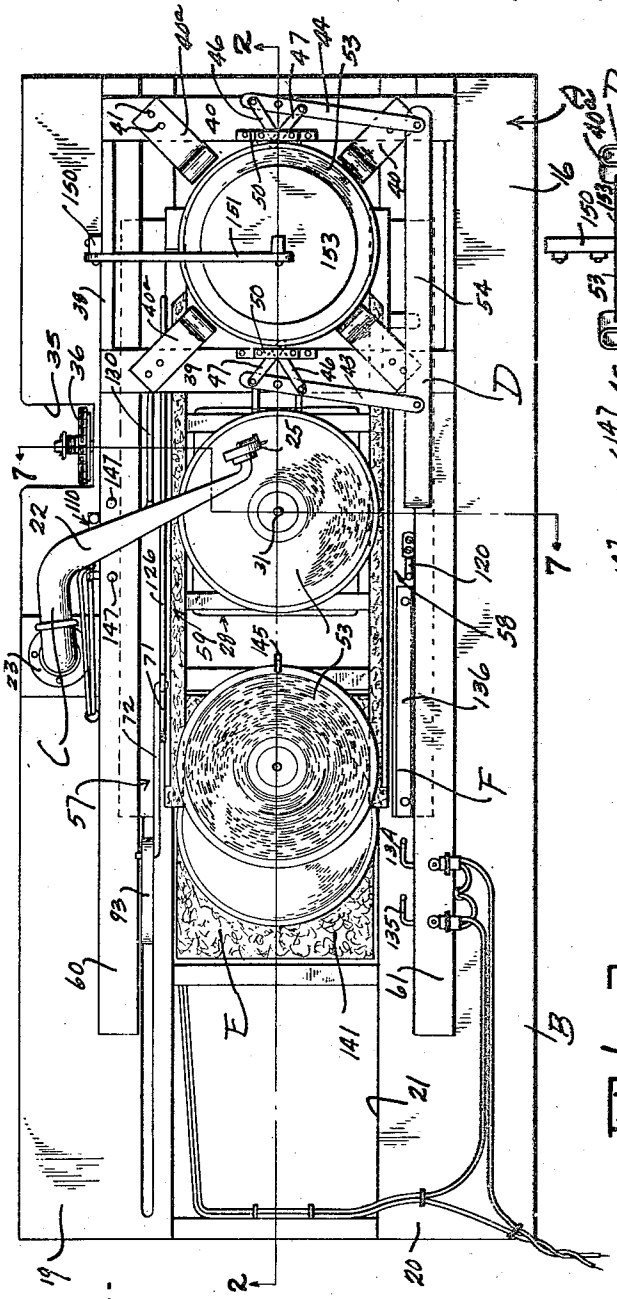


Fig. 1.

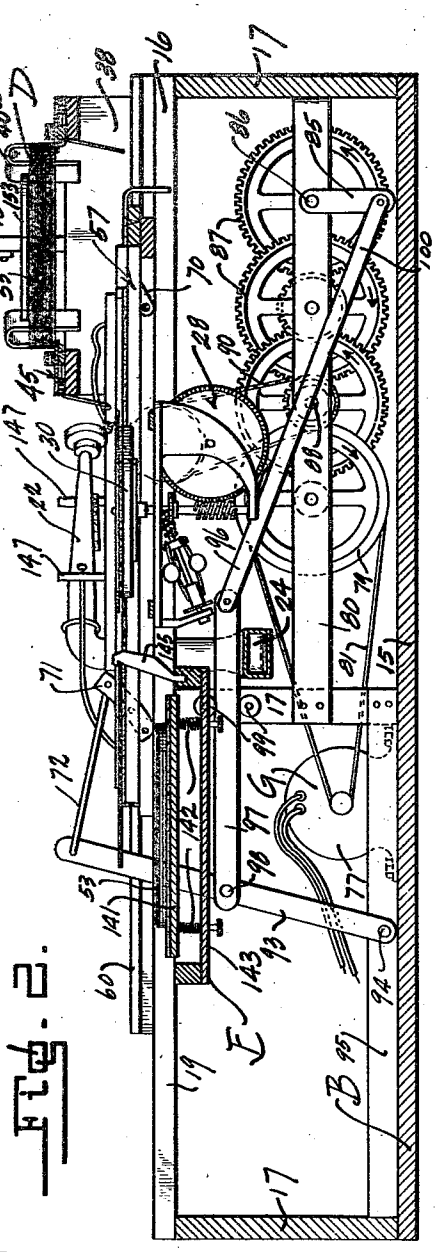


Fig. 2.

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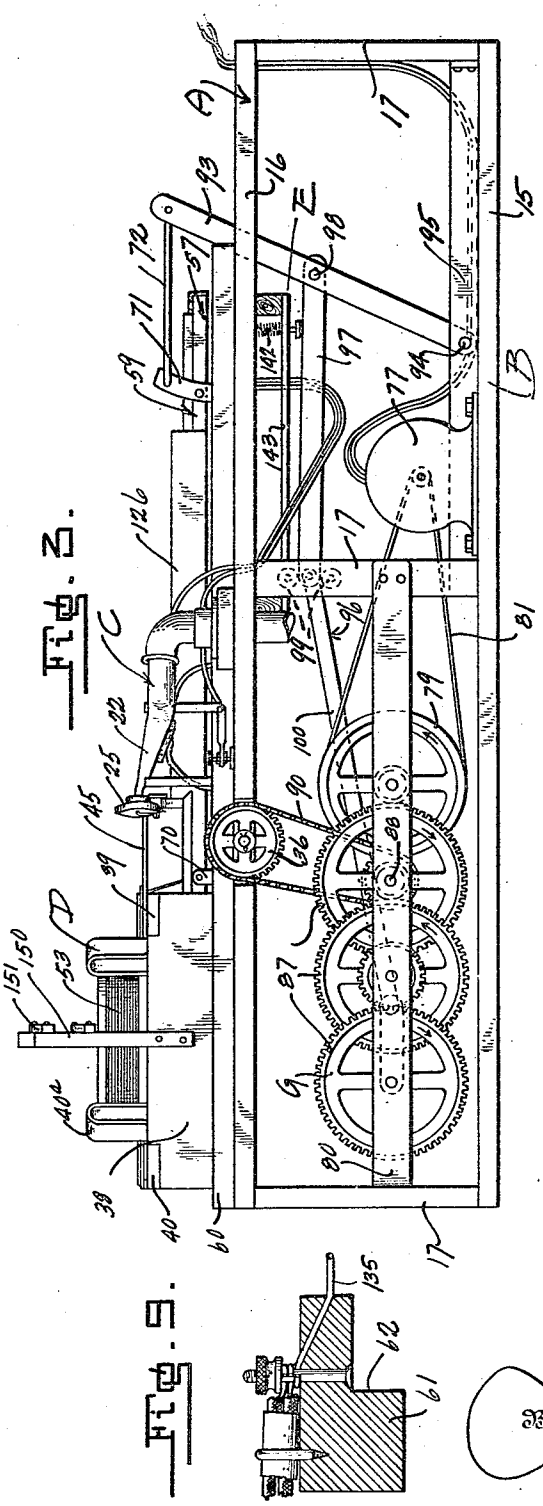


Fig. 2.

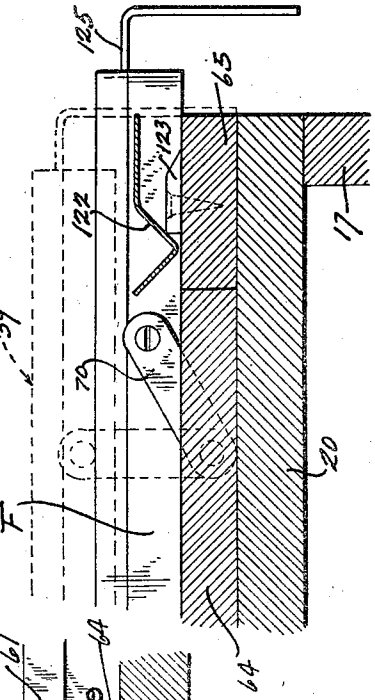


Fig. 11.

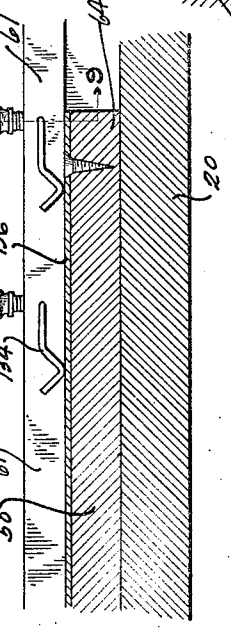


Fig. 10.

Fig. 9.

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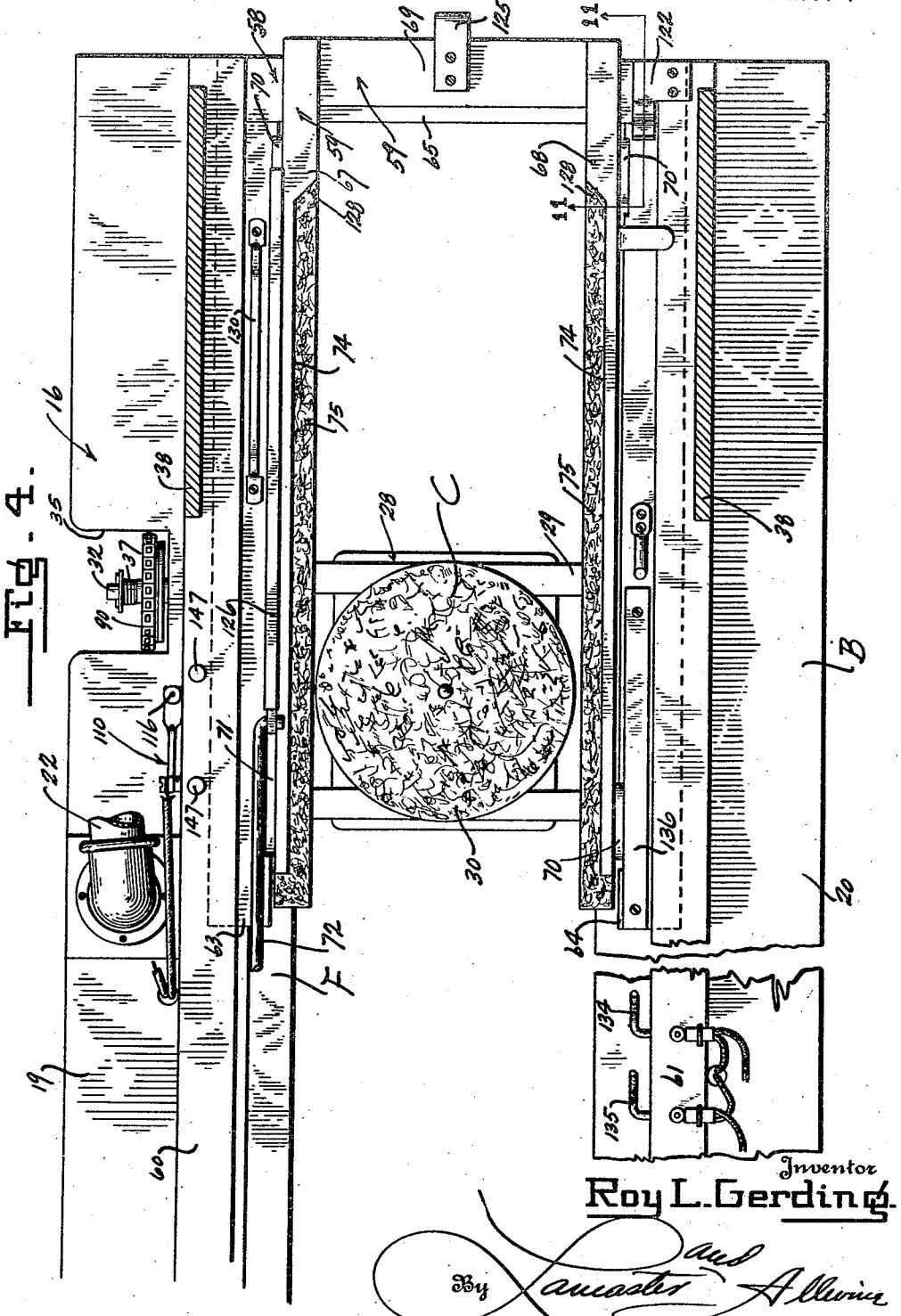
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Fig. 4.



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Fig. 5.

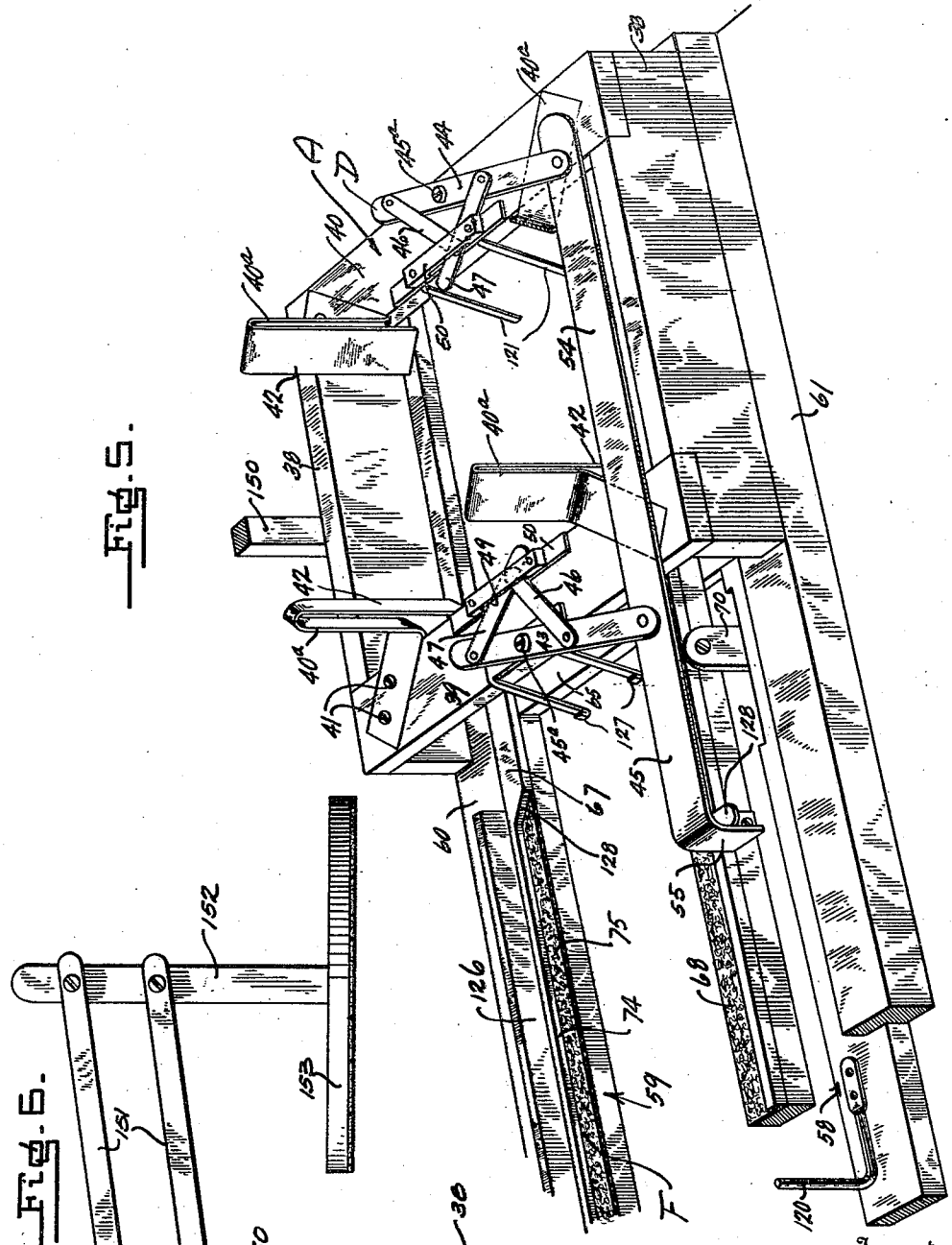


Fig. 6.

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AUTOMATIC PHONOGRAPH

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Fig. 7.

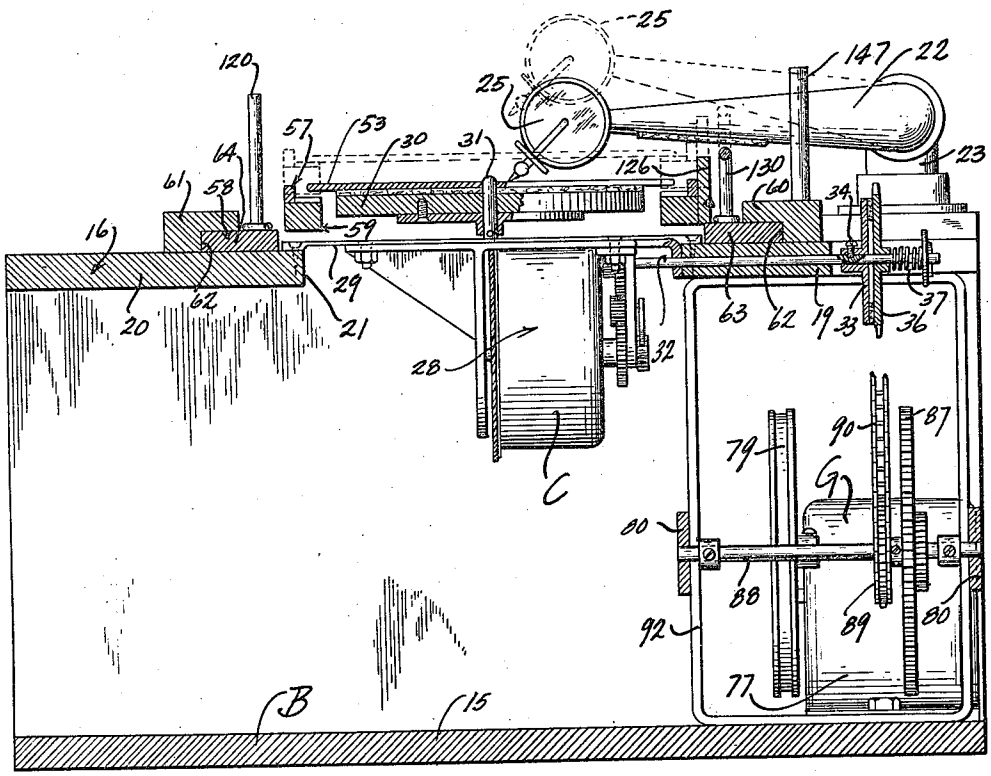
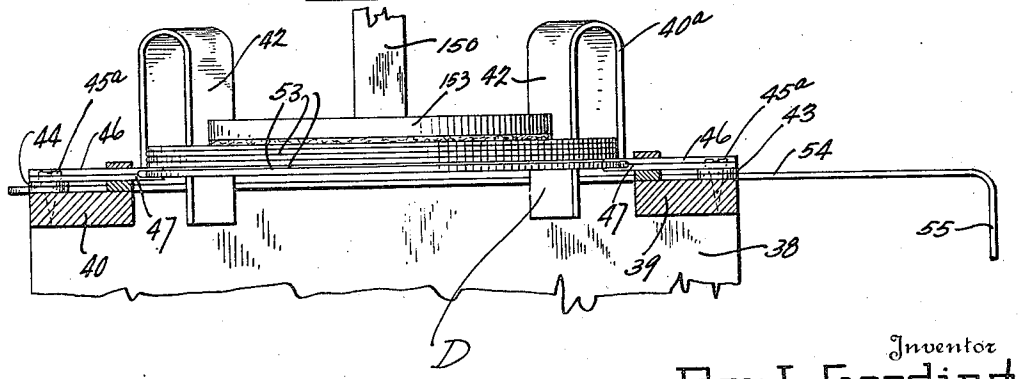


Fig. 8.



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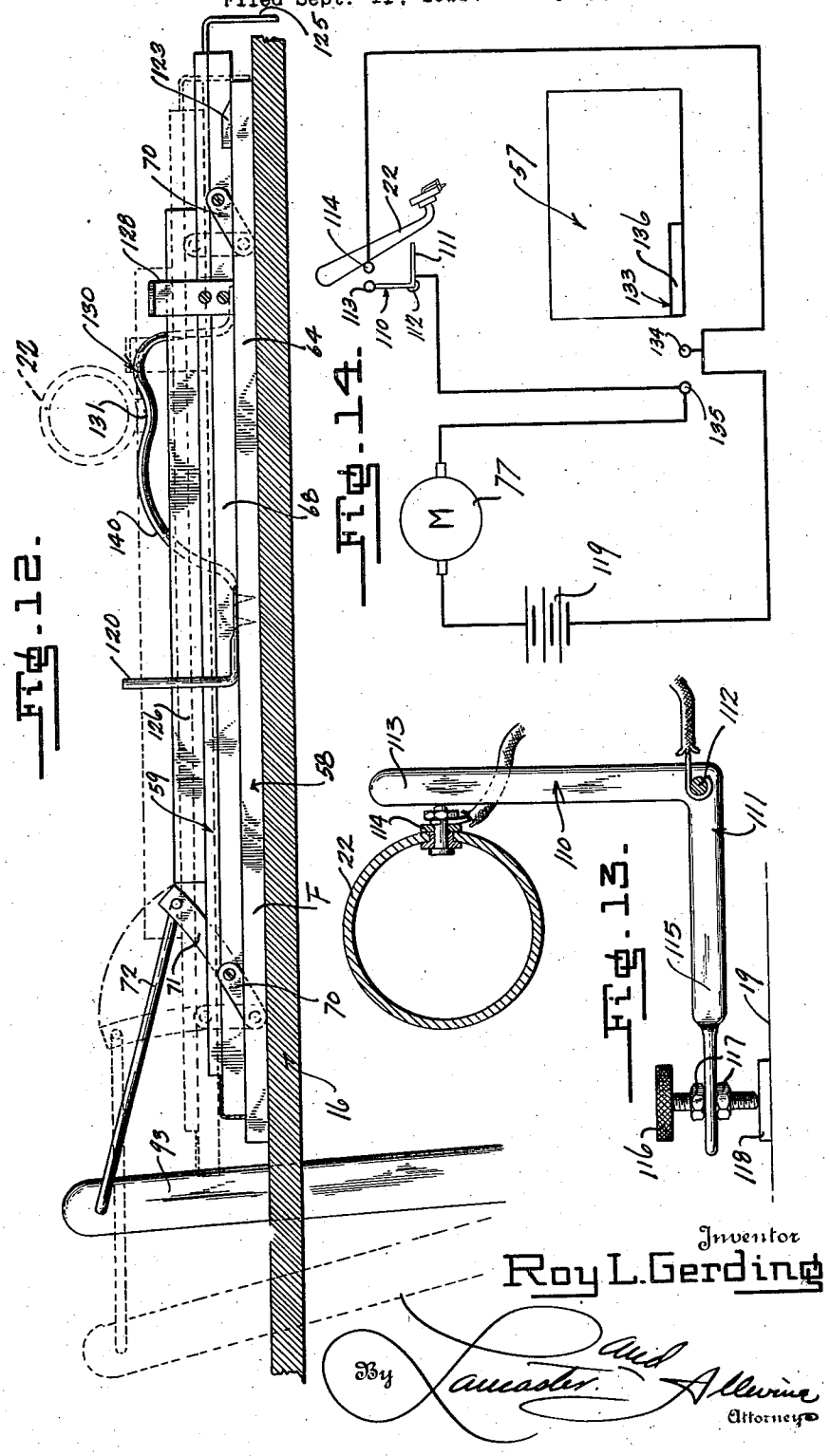
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Filed Sept. 11, 1922 6 Sheets-Sheet 6



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Patented June 24, 1924. 1,498,621

UNITED STATES PATENT OFFICE.

ROY LYNN GERDING, OF PHILADELPHIA, TENNESSEE.

AUTOMATIC PHONOGRAPH.

Application filed September 11, 1922. Serial No. 587,416.

To all whom it may concern:

Be it known that I, ROY L. GERDING, a citizen of the United States, residing at Philadelphia, in the county of Monroe and State of Tennessee, have invented certain new and useful Improvements in Automatic Phonographs, of which the following is a specification.

This invention relates to an improved automatic phonograph.

The primary object of this invention is the provision of a phonograph embodying means for automatically playing a plurality of records independent of manual aid.

A further object of this invention is the provision of a compactly arranged phonograph embodying a playing mechanism, means for automatically supplying phonograph records to the playing mechanism, and means for removing records after being played, the various parts of the automatic phonograph cooperating in such an effective manner that but a very short period will elapse between the playing of different selections.

A further object of the invention is the provision of a compactly arranged automatic phonograph which embodies a novel type of mechanism for individually dispensing the records from a supply container.

A further object of the invention is the provision of an improved transfer mechanism for automatic phonographs, which cooperates with record playing mechanism and record releasing mechanism in the automatic selection, playing, and disposal of records.

Other objects and advantages of this invention will be apparent during the course of the following detailed description.

In the drawings, wherein similar reference characters designate corresponding parts throughout the several views.

Figure 1 is a plan view of the improved phonograph showing the various details thereof in playing position.

Figure 2 is a longitudinal cross sectional view taken substantially on the line 2—2 of Figure 1.

Figure 3 is a side elevation of the improved phonograph showing the position of the various details thereof just prior to the placement of a new selection and reproducing means in cooperative playing relation.

Figure 4 is a fragmentary plan view, partly in section, showing the important details of this invention.

Figure 5 is a perspective view of an improved record supporting and release mechanism embodied in this invention.

Figure 6 is a side elevation of a follower member as utilized in connection with the apparatus illustrated in Figure 5.

Figure 7 is a transverse cross sectional view, taken substantially on the line 7—7 of Figure 1.

Figure 8 is a cross sectional view, taken transversely through important details of the record release mechanism, showing the manner in which the same are cooperatively arranged for supporting and dispensing records.

Figure 9 is a cross sectional view, taken substantially on the line 9—9 of Figure 10.

Figure 10 is a fragmentary view, partly in section, showing a type of switch structure embodied in this invention.

Figure 11 is a fragmentary view, partly in section, showing the manner in which a portion of a carriage mechanism utilized in this invention is maintained stationary, in order that another portion of said carriage mechanism may move.

Figure 12 is a fragmentary view, partly in cross section, showing cooperating details of an improved type of carriage mechanism utilized in this invention.

Figure 13 is a side elevation of a type of switch structure utilized in connection with the tone arm of the improved phonograph.

Figure 14 is a diagrammatic representation of an electric circuit embodied in the actuating mechanism of the improved automatic phonograph.

In the drawings, wherein for the purpose of illustration is shown but the preferred embodiment of the various details of this invention, the letter A designates the improved phonograph, which includes the supporting frame B; playing mechanism C; record supply and release arrangement D; means E for receiving played records; transfer mechanism F; and actuating means G for regulating certain details of the record playing mechanism C and transfer mecha-

nism F, whereby records may be successively dispensed from the supply arrangement D, and sent to the playing arrangement C, and to the means E.

The frame B may be of various constructions, and the improved phonograph may be built in cabinets of various period designs. However, it is preferred that the frame B include a supporting base 15 and a platform 16 supported upwardly of the base 15 by means of vertically disposed legs 17. The supporting platform 16 may comprise pieces 19 and 20, with a relatively wide space 21 therebetween, extending the length of the frame B, and in which space the various details of the playing, transfer, and actuating mechanisms cooperate.

Referring to the playing mechanism C the same includes a tone arm 22 which is oscillatively connected to a platform section 19 substantially midway of the ends thereof by a coupling 23. An amplifying horn 24 may extend below the supporting platform 16 and lead to any desired location. The free end of the tone arm 22, of course, carries the reproducing mechanism 25, which extends laterally of the frame B. The playing mechanism C furthermore includes the ordinary spring motor 28 which is supported as by brackets 29 in the space 21 between the supporting platform sections 19 and 20, to depend below the platform 16 so that a turn table 30 may be detachably mounted upon the rotating pin 31 of the spring motor 28. This turn table 30 extends just upwardly of the platform 16 above the space 21, and cooperates with the transfer mechanism F in a manner to be subsequently described. A winding shaft 32 of the spring motor 28 extends transversely through the platform section 19 and is provided adjacent its outer end with the friction wheel 33 which is keyed thereto as at 34. This wheel 33 operates within a recess 35 which is provided in the supporting platform 16. A sprocket wheel 36 is longitudinally slidable upon the winding shaft 19, being normally forced into frictional engagement with the shaft wheel 33 by the spiral spring 37. This sprocket wheel 36 cooperates with the actuating mechanism G, as will be subsequently described, in order that the spring of the motor 28 will be automatically wound.

Referring to the record supply and dispensing mechanism D, the same is carried by means of the supporting members 38 upon one end of the frame B. Cross pieces 39 and 40 are provided, extending transversely between the supporting members 38 and upon which the guide clips 40^a are mounted. Each clip includes a vertical leg 42, all of which are so arranged as to receive a plurality of disc records for maintaining them in a cylindrical superposed relation. The releasing mechanism 45 is cooperatively mounted upon the cross pieces 39 and 40 for retaining of the records in supported relation, so that the same may be successively dispensed, as will be hereinafter mentioned.

The releasing mechanism 45 includes a pair of levers 43 and 44, which are pivoted, as at 45^a intermediate their ends upon the cross pieces 39 and 40. Each of the levers 43 and 44 have arms 46 and 47 pivoted thereon, upon opposite sides of the lever pivots 45^a. The upper and lower arms 46 and 47 are pivoted upon their ends so that the free ends thereof extend outwardly for reciprocatory movement within passageways 49 defined by the guide straps, which are mounted upon the supporting cross pieces 39 and 40 adjacent the facing edges thereof, so that the free ends of said arms 46 and 47 may extend outwardly alternately from the straps 50 for cooperation in supporting and releasing of a plurality of records 53. The free ends of the levers 43 and 44 are oscillatively connected by means of an operating lever 54 for synchronous movement whereby the arms 46 and 47 may be synchronously operated. The outer free end 55 of the operating lever 54 is downturned for cooperation with certain details of the transfer arrangement F, in order to automatically release records, and as will be subsequently described.

Referring to the transfer arrangement F, the same principally comprises a carriage arrangement 57, which comprises a lower section 58 and an upper section 59. The lower section 58 is merely adapted for longitudinal sliding upon the frame platform 15, having trackways 60 and 61 mounted upon the platform sections 19 and 20 respectively, each of which provide an overhanging flange to form a pocket 62 in which the lower carriage section 58 is mounted for sliding. The lower carriage 58 includes the side pieces 63 and 64 which are respectively slidable in the pockets 62 of the trackways 60 and 61, said side strips or pieces 63 and 64 being connected at their forward ends by a cross piece 65.

The upper carriage section 59 is oscillatively connected to the lower carriage section 58 so that the same may be elevated and lowered in addition to the longitudinal movement of the same upon the frame B. This upper section 59 preferably includes the side rails 67 and 68 which are connected at their forward ends only by means of a cross bar 69, said cross bar 69 cooperating directly over the cross bar 65 of the lower carriage section 58. The side rails 67 and 68 are pivotally connected to the side rails 63 and 64 respectively of the lower carriage section 58 by links 70 and 71. Two of the links 70 are provided adjacent the cross pieces 65 and 69 for connecting said rails, while one link 70 is provided for connecting the rails 64 and 68 adjacent the free ends

thereof; the link 71 being a special type and pivotally connecting the rails 63 and 67 of the carriage sections adjacent their free ends. This link 71 is relatively longer than any of the links 70 and is provided with an aperture in the upper end thereof in which a connecting rod 72 of the actuating means G is pivotally connected, and which cooperates with the carriage 57 in a manner which will be subsequently described in detail. The tops of the upper carriage rails 67 and 68 are suitably recessed to provide the inwardly extending guide ways 74, which are provided with felt padding 75, and in which guide ways and upon which padding disc records are adapted for placement during translation of the carriage mechanism upon the frame B, for transferring them to the playing mechanism C, and depositing them on the means E for receiving played records.

Referring to the actuating means G, the same principally includes a motor 77 or similar driving member which may be conveniently mounted upon the floor or base 15 of the frame B. A pulley 79 is preferably rotatably carried by beams 80 attached to the legs 17 between the floor 15 and platform 16; this pulley 79 being driven by a belt 81 from the motor 77. In order that the speed ratio of the motor 77 may be conveniently reduced for operating the actuating crank 85, which is rotatably carried at one end upon the beams 80 by the shaft 86, a series of reduction gears 87 are provided, being driven by means of a pulley 79. These reduction gears 87 are compactly arranged upon the supporting beams 80. A shaft 88 of one of the reduction gears 87 is provided with an additional sprocket wheel 89 which is relatively small in diameter, and adapted for receiving a chain 90 which is in meshing relation with the sprocket wheel 36 of the spring motor 28, and whereby said motor 28 may be automatically wound for rotating the turn table 30. A suitable auxiliary frame 92 may be employed for properly supporting the shaft 88 and beams 80.

A relatively long operating lever 93 is pivotally connected, as at 94, to a bracket 95, carried just upwardly of the base 15. This operating lever 93 is pivotally connected upon its free swinging end to the end of the rod 72. A two piece pitman arrangement 96 connects the operating crank 85 to the operating lever 93 for movement of the latter. The pitman 96 includes a section 97 which is pivoted at one end 98 to the operating lever 93 substantially midway of its ends, this section 97 slidably operating in horizontal manner intermediate supporting guide rollers 99 which are carried by a leg 17 of the frame B. The other section 100 of the pitman arrangement 96 connects the other end of the pitman section 97 to the free swinging end of the main crank 85.

The cooperation of the various parts of this invention may best be understood by describing the cycle of operation. Assuming the lower arms 47 of the record supply and dispensing mechanism D to be inserted into the space between the cross pieces 39 and 40 and having a plurality of records 53 thereon and laterally maintained in proper superposed relation by the guide fingers 42. The various parts of the machine will remain inoperative, while one of the records 53 is supported upon the rotating turn-table 30 and has the reproducer 25 of the playing mechanism C disposed thereon for playing purposes. It is well understood that the tone arm 22 will move laterally toward the center of the record during playing of a selection. A novel type of adjustable switch 110 is employed for controlling the circuit of the operating motor 77. This switch 110 preferably includes a bell crank 111 which is pivoted as by a pin 112 to the trackway 60, so that a contact arm 113 of said bell crank 111 cooperates adjacent a contact clamp 114, the latter being mounted upon the tone arm 22. The other arm 115 of the bell crank 111 extends over the supporting platform member 19 and is provided with an adjustable screw 116 upon the free end; said set screw 116 embodying a pair of clamping nuts 117, whereby the former may engage a piece 118 carried by the supporting platform section 19, to define the distance which the tone arm 22 may swing before the contact member 114 will engage with the arm 113 of the bell crank 111.

Referring again to the operation of the improved automatic phonograph, as the tone arm 22 swings so that the selection on the record being played is finished, the contact 114 engages the arm 113 of the bell crank 111, thereby closing the circuit through an exciter 119 for operating the motor 77. Operation of the motor 77 will, of course, throw the train of speed reduction gears 87 into operation, so that the crank arm 85 slowly rotates for reciprocating the pitman 96 for oscillating the operating lever 93. As is illustrated in Figure 1 and the cross sectional view in Figure 2, the arrangement of the details of the phonograph A during the playing of the records and immediately upon the finishing of the playing of the same will be so positioned that the upper carriage section 59 will be in its lowermost position with respect to the lower carriage section 58, so that the upper carriage does not interfere with the playing of a record. However, upon closing of the adjustable switch, the crank 85 will rotate substantially in the direction indicated by the arrow in Figure 2 of the drawings, for one-

quarter of a turn and which pulls the operating lever 93 toward the forward end of the frame B, or more specifically toward the record supplying and dispensing mechanism D, and which, of course, moves the entire carriage arrangement 57 forward. During this forward movement, a pin 120 which is carried by the lower carriage section 58, and which is best illustrated in Figure 5 of the drawings, will move into engagement with the depending end 55 of the release mechanism operating lever 54. As the transfer carriage 57 moves forward, the operating lever 54 of said release mechanism will be moved so that the ends of the lower arms 47 will be withdrawn into the guide straps 50, and the free ends of the upper arms 46 will be extended for sliding beneath the next lowermost record 53, substantially as is illustrated in Figure 8 of the drawings. When the carriage 57 has reached its most forward position, the lower fingers 47 will be entirely withdrawn into the straps 50, whereby the lowermost record 53 may drop onto the felt strip 75 of the upper carriage 59. Dropping of the lowermost record upon the strip 75 is facilitated by the inclined resilient fingers 121, which are carried by the cross piece 40.

Immediately after the dropping of a record from the supply arrangement D, the carriage 57 has reached its most forward position and upon upward movement of the crank 85, the operating lever 93 will start rearwardly. In order to insure that the upper carriage section 55 will elevate during the starting of this rearward motion of the carriage mechanism 57, a spring finger 122 which is carried by one of the stationary trackways 61, will engage a stop member 123, supported upon the lower carriage section 58 and retain the lower carriage section in stationary position so that a rearward movement of the operating lever 93 will rock the connecting links 70 and 71 so that the upper carriage section 59 will be elevated, substantially as is illustrated in Figures 11 and 12 of the drawings, and in which views, the dotted lines designate the elevated positions of the upper carriage section 59. When the upper carriage section 59 has been properly elevated, a stop member 125 carried thereby, will engage the cross piece 65 of the lower carriage section 58, and whereby said upper and lower carriage sections will slide longitudinally rearwardly of the frame B within the trackways 60 and 61. The purpose of so elevating the upper carriage section 59 is to pick up the record 53 which has just been played from the turn table 30, substantially as is illustrated in the dotted lines in Figure 7 of the drawings. In addition, elevation of the upper carriage section 59 will also oscillate the tone arm 22 upwardly, by means of engagement of the same with an elevating strip 126 which is carried by a rail 67 of the upper carriage mechanism 59. This operation, of course, swings the tone arm 32 free of the record which has just been played, so that rearward movement of the carriage 57 may take place for moving the record which has been played out of proximity to the turntable 30.

The crank 85 during swinging thereof through its upper 180° of movement will rock the operating lever 93 rearwardly of the machine A for pulling the carriage mechanism 57 rearwardly with the upper carriage section 59 elevated. The unplayed selection which has just dropped from the record dispensing means D, is engaged by the guiding fingers 127, which are carried by the cross piece 39 of the arrangement D, so that said record, as the carriage 57 moves forwardly, will be properly positioned in the guide ways 75 of the upper carriage section 59 to engage the inclined ends 128 of the guide ways 74, by the drag of fingers 127 on the record, and in which position the record is properly disposed for travel of the carriage 57 rearwardly. During the rearward travel of the carriage 57, a finger or extension 128, which is attached to the upper carriage section 59, moves into engagement with the depending end 55 of the release lever operating member 54, substantially as is illustrated in Figure 5, and which moves the release mechanism so that the upstanding pin 120 may again operate the release mechanism upon forward movement of the carriage mechanism, as has heretobefore been specifically described. As the crank arm 85 descends from its horizontal position, the pitman 96 will be so drawn that the operating lever 93 will be rocked forwardly. The start of the forward movement of the lever 93 will merely oscillate the links 70 and 71 upon their pivots so that the upper carriage section 59 will be lowered, this movement being illustrated in full and dotted lines in Figure 12 of the drawings. During this lowering of the upper carriage section 59, the unplayed record will be lowered so that the aperture ordinarily found in the disc records will engage over the rotating pin 31 of the turn table 30, and the unplayed record will be disposed upon the top of the turn table 30 ready for a playing operation. The lowering of the upper carriage section 59, as has just been described does not, however, lower the tone arm 22, but the same engages upon a cam bracket 130 which is carried by the lower carriage 58. The upper carriage section having been lowered and the operating lever 93 moving forwardly, the tone arm 22 will engage in the recess 131 provided by the cam supporting bracket 30 so that said tone arm 32 will be swung into position directly over the starting groove of the record which

has just been deposited upon the turn table 30. Such movement of the tone arm 32 will, of course, open the switch 110. The motor 77 will not stop its operation immediately for the circuit therethrough has not been broken but is still effected by means of a switch arrangement 133 which is shunted in on the motor circuit, and includes a pair of spaced contact arms 134 and 135 which are resiliently supported by the trackway 61, as to be directly in the path of movement of the metal connecting strip 136 which is carried by the top of the lower carriage section rails 68, and substantially as is illustrated in Figures 4 and 10 of the drawings. The connecting strip 136, of course, bridges the spaced contact members 134 and 135, while the carriage mechanism 57 is moving forwardly. During this movement, the tone-arm 22 is supported upon the cam bracket 130. However, as the connecting strip 136 moves forwardly with the carriage 57, as to break its connection with the contact finger 135, the tone arm is lowered over the arcuate cam surface 140 of the bracket 130 so that the stylus of the tone arm 22 is lowered directly into the starting groove of the record disposed upon the turn table 30. Since the record upon the turn table 30 is rotating, playing of the selection upon the record will immediately commence.

Referring to the means E for receiving the played records, the same includes a platform 141 which is resiliently supported as by spiral springs 142 from a supporting arrangement 143 which is carried by the frame B. The platform 141 is, of course, rearwardly disposed upon the frame B, so that as the carriage mechanism 57 starts its forward movement, the upper carriage section 59 having been lowered, the record 53 which has just been played will be engaged by a retaining finger 145, so that as the carriage 57 moves forwardly the played record 53 is held stationary. When the carriage mechanism 57 has reached a predetermined position, the record held by the retaining finger 145 will be tipped onto the resiliently supported platform 141, and maintained thereon out of the way, so as not to interfere with movement of the carriage mechanism in any way. After the selection upon the record has been played, the adjustable switch 110 is closed, as hereinbefore described, and the transfer arrangement F is again placed in operation for completing the cycle of operation above described, and whereby a new record is disposed upon the turn table 30 and the played record automatically placed upon the resilient platform 141. The springs 142 supporting this platform are of such nature that the weight of records thereon will depress the platform in order that a plurality of records may be accommodated thereon without interfering with any action of the parts of the phonograph A. All of the selections in the supply mechanism D may be successively played, without manual interference whatsoever. The amplitude of movement of the tone arm 22 is defined by pins 147, which extend upwardly from the stationary track 60.

A follower mechanism may be employed in connection with the stack of records carried by the supply arrangement D, which embodies a supporting post 150 carried by one of the members 38. This post 150 is preferably provided with a pair of connecting links 151 upon the outer end of which a follower post 152 is pivotally connected, the post 152 preferably having a disc shaped member 153 supported thereon which is adapted for disposition upon the topmost record in the supply mechanism D, in order that said records may be successively dispensed by means of the releasing mechanism.

Due to the fact that records are not all of the same diameter, the switch 110 has been made adjustable so that the contact arm 113 and the contact point 114 may be relatively disposed according to the last playing groove in a record, so that said contacts will not close the switch 110 before the record has been played. However, should the switch 110 close before the selection has been played to a finish, the tone arm 22 will not be interfered with, and the playing of the selection may be completed, since the preliminary closing of the switch 110 merely results in the forward movement of the carriage mechanism 57 with the upper carriage section thereof in lowered position, as not to interfere in any manner whatsoever with the record being played.

The time consumed in removing a played record and placing an unplayed record upon the turn table 70 is relatively short, as can well be understood, since the entire cycle of operation is effected by rotation of the crank arm 85 through 360°.

From the foregoing description of this invention, it can be seen that a phonograph has been provided, which is truly automatic in operation, employing but a single motor in order to effect a winding of the turn table spring motor, as well as to effect operation of the transfer mechanism whereby a plurality of records may be successively played without manual interference whatsoever.

Various changes in the shape, size and arrangement of parts may, of course be made to the form of the invention herein shown and described, without departing from the spirit of the invention or the scope of the claims.

I claim:

1. An automatic phonograph comprising a supporting frame including trackways, a record supply arrangement including a mechanism for release of a record at a time,

a carriage mechanism including a lower section slidable on the trackways of said supporting frame, and an upper section connected to said lower section for elevation and lowering with respect thereto, motor controlled actuating means for reciprocation of the carriage over the supporting frame, playing mechanism including a swinging tone arm, and a turn table disposed on said supporting frame adjacent said carriage, a tone arm controlled switch for operating said motor, a carriage control switch for operating said motor, said tone arm switch adapted for closing when the tone arm swings to a predetermined position after playing of a record, whereby said carriage is reciprocated towards the record supply arrangement for tripping the release mechanism thereof, so that an unplayed record may be disposed upon the upper section of said carriage mechanism, means for holding the carriage lower section in its most advanced position until the actuating means moves the carriage away from the record supply arrangement and has elevated the upper section for lifting the tone arm from off of the played record and the played record off of the turn table, said carriage in its movement away from the record supply arrangement adapted to carry the played record away from and the unplayed record toward said turn table, said actuating means moving the carriage from its most advanced position toward the record supply arrangement and adapted to lower the upper section of the carriage and move the sections together for displacing the played record and placing the unplayed record on the turn table and swinging said tone arm to playing position with the record on the turn table, said tone arm and carriage control switch remaining open until the tone arm switch closes after playing of the selection upon the unplayed record for operating said motor actuating mechanism.

2. An automatic phonograph comprising a supporting frame, a record supply arrangement, playing means embodying a tone arm swingably connected on the supporting frame, a motor, and a turntable, a carriage embodying a lower section reciprocable over the supporting frame, and an upper section operably connected to the lower section for lowering and elevating with respect thereto; a cam bracket movable with the carriage for cooperation with the tone arm in lifting and lowering of the same; and actuating means for reciprocating said carriage whereby the upper and lower sections may cooperate in placing and removal of the record with respect to the record supply arrangement and turn table.

3. An automatic phonograph comprising a supporting arrangement, a record supply arrangement, a playing mechanism, a resiliently mounted platform, a stationary record displacing pin, and transfer mechanism actuable for carrying records from the supply arrangement to the playing mechanism, said record displacing pin adapted for displacing records during movement of the transfer mechanism for removing them from said transfer mechanism and placing them upon said resiliently supported platform.

4. An automatic phonograph comprising a supporting frame, a record supply arrangement, a playing mechanism, a resiliently supported record receiving platform, a displacing pin rigid with said supporting frame, a carriage mechanism embodying a slidably mounted lower section and an upper section oscillatively carried by said lower section for elevation and lowering with respect thereto, and actuating means for said carriage mechanism adapted to elevate said upper carriage section to permit carrying of a played record upwardly over said displacing pin and permit lowering of the upper section whereby upon return sliding of the carriage said displacing pin will engage said played record for removing the same from the carriage mechanism for placement upon said platform.

5. A record release mechanism for automatic phonographs comprising a supporting frame defining a record opening, guide straps, levers pivotally mounted intermediate their ends on said supporting frame on opposite sides of the record opening defined thereby, upper and lower arms connected to each of said levers upon opposite sides of the pivot points of each of said levers extending through the guide straps into the opening of said supporting frame, and an operating lever connecting said first mentioned levers for synchronous movement whereby the upper and lower arms of said levers may be alternately extended and removed with respect to the opening of said supporting frame, said arms adapted to support a plurality of records so that the lowermost record may be fed through the supporting frame opening when the lower arms are withdrawn, said upper arms being adapted to extend into the opening for the supporting of the remainder of said records.

6. In an automatically operated phonograph the combination of a supporting frame, a transfer mechanism including a lower section slidable on the frame and an upper section movably connected to the lower section and adapted to be elevated with respect thereto, a turn table, playing mechanism, actuating means, and a retaining finger adapted to engage records on the transfer mechanism for holding a record as the upper section is lowered, whereby when the transfer mechanism moves away from said retaining finger the record will be held by

said finger to displace it from said transfer mechanism.

7. In an automatically operated phonograph the combination of a supporting frame, a turn table, a tone arm swingably mounted upon the supporting frame, a transfer mechanism slidable along the frame, actuating means for moving the transfer mechanism, and a cam shaped member carried by the transfer mechanism adapted to engage and support the tone arm in resting relation thereon for lifting it off a record on the turn table during a predetermined movement of the transfer mechanism.

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