My invention relates to cabinets for containing phonograph disc records and comprises means to operate a movable element, containing a list of record titles, in order to locate for visual inspection a selected title, means to move an ejector into position to eject selected records, manually operable means to simultaneously operate both the movable element and the ejector so as to automatically move the ejector into position to eject the selected record, and manually operable means to operate the positioned ejector.

A preferred embodiment of the invention is shown in the accompanying drawings, in which—

Fig. 1 is a perspective view of the cabinet with records installed therein.

Fig. 2 is a perspective view of mechanism for effecting the series of operations above described.

Fig. 3 is a detail view of a modified record ejector.

Fig. 4 is a detail view of a modified means controlling the return of the record ejecting means to normal position.

Fig. 5 is a detail sectional view through a corner of the cabinet on the line 5—5 of Fig. 3, with the records removed for clearness.

The cabinet may be of ordinary construction with only such modification as may be required to adapt it to operate the mechanism embodying my invention. It may be divided into upper and lower compartments divided by a partition constituting a floor on which such mechanism is mounted. The records are supported in the usual manner on rods which may be supported in sockets in members 20 connected to the inner faces of the sides of the cabinet. The sides of the cabinet may be provided with conventional members such as 22 between the members 20 and having spaced slots for positioning the records at predetermined positions, while extensions of such members may be formed on the lower portions of the inner faces of the covers 13 to increase the length of the slots, as shown in Figs. 3, 4, and 5, or any other well known supporting and spacing means may be provided.

A screw-threaded shaft 30 supported by and turnable in bearings 32 has an extension 34, which, through bevel gears 36 and 37, shaft 38, and bevel gears 40 and 41, all within the cabinet, is in driving connection with a shaft extending through the casing carrying a knob 42 outside of the casing.

On the screw 30 having therein a slot through which extends a longitudinally extending rod 44, forming one side of a rectangular shaped frame 46, which is pivotally supported at opposite ends on angle bars 48. Turning of knob 42 rotates the screw 30, and the nut 34 thereon, being prevented from turning by the rod 44, is fed along the shaft 30.

Bevel gear 36 meshes with a bevel gear 47 on a shaft carrying a roller or pulley 50, around which and three other rollers or pulleys 52, 54, and 56, extends an endless belt 58.

On this endless belt are printed or otherwise applied the titles of the various records arranged in the same order in which the records are arranged in the cabinet. In the turning of the knob 42 the belt 58 moves so as to successively expose to view, through the opening 60 in the cabinet, the titles of the records. When the belt is moved to bring any title thereon into alignment with the opening 60, the nut 34 is moved to a position beneath the corresponding record.

The nut 34 has in its upper end a recess containing a vertically slidable record ejector 62, which rests on the rod 44. The slide ejector 62 aligns with and just clears the lower edge of any record which overlies the nut 34. Extending upward from one arm of the pivoted frame 46 is a rod 64 carrying at its upper end a push button 66 in alignment with a hole in the cabinet.

After the knob 42 is turned into position to expose to view a given title, thereby moving the slide 62 into register with the corresponding record, the push button 66 is pressed down, thereby by swinging the frame 46 on its axis, and lifting the rod 44 of the frame, which in turn lifts the ejecting slide 62, thereby lifting the selected record to such height above the other records as enables the selected record to be withdrawn from the rack by hand. When the record is returned to the rack and is moved down into horizontal alignment with the other records, it will depress the slide 62, swinging back the frame 46, and lifting the push button 66, to its normal position.

It is preferable, however, to swing the frame 46 back to normal position by means of a light spring 70, which will so function as soon as the pressure on the push button is released. Thereby it is insured that the slide 62, in its movement along the screw 30, will clear the lower edges of the records in the cabinet under which the slide moves. With this arrangement, however, the rod 44 should extend through a hole in the slide 62. Instead of returning the swinging frame 46 to normal position by means of a spring 70, a spring may be applied to the push button 66, as, for example, a coil spring 72 may surround the rod 44 and be confined between the push button and an angle bar 74 secured to the frame of the cabinet.
In Fig. 3 is shown a modification wherein the rod extends under the slide 2, which is normally held down, in position to clear the records, by means of springs 17 secured at their upper ends to the slide 2 and at their lower ends to the nut n. As soon as a record is withdrawn and the push button y released, the springs 17 depress the slide and return the swinging frame m to normal position. Without returning the withdrawn record, the knob k may then be turned to position the nut n and slide w for the withdrawal of any one of the other records.

All of the actuating mechanism, within the cut away portion of the knob k and push button y which is exposed through an opening in the cabinet to permit the button to be pushed from the exterior thereof.

Slidable inside the opposing longitudinally extending walls of the cabinet are boards 18 which may be withdrawn and utilized as covers for the cabinet.

The invention, of course, applicable to the selection of records other than phonograph records.

What I claim and desire to protect by Letters Patent is:

1. A disc record selecting and ejecting device comprising a cabinet having means therein to support and position records arranged in a given order, a driving pulley and a series of idle pulleys, an endless belt engaging said pulleys and adapted to contain a list of record titles in an order corresponding to the arrangement of records in the cabinet, the cabinet having an opening, a screw threaded shaft, a nut thereon movable along the shaft in its rotation, mechanism adapted to rotate the shaft and simultaneously turn the driving pulley to move the belt so as to bring any given title thereon into alignment with said opening, a record ejector carried by the nut and adapted to be moved in the movement of the nut into alignment with a record corresponding to the title visible through said opening, a push button, and means operable by the push button to actuate the positioned ejector.

2. A disc record selecting and ejecting device comprising a cabinet having means therein to support and position records arranged in a given order, a traveling element adapted to contain a list of record titles in an order corresponding to the arrangement of records in the cabinet, a screw threaded shaft, a nut thereon movable along the shaft in its rotation, mechanism adapted to rotate the shaft, other mechanism adapted to move the traveling element so as to selectively position any given title thereon, manually operable means connected with and adapted to simultaneously operate both mechanisms, a record ejector slidable in the nut and adapted to be moved in the movement of the nut into alignment with a record corresponding to the selected title, a swingable frame comprising a rod extending through a slot in the nut and engaging the ejector and adapted in the swinging movement of said frame to be moved in said slot to thereby move the ejector to effect ejection of the selected record, and a push button adapted to swing said frame into position to so actuate said rod.

3. A disc record selecting and ejecting device comprising a cabinet having means therein to support and position records arranged in a given order, a driving pulley and a series of idle pulleys, an endless belt engaging said pulleys and adapted to contain a list of record titles in an order corresponding to the arrangement of records in the cabinet, the cabinet having an opening through which the titles on the belt may be observed, a screw threaded shaft, a nut thereon, a pivoted frame including a rod extending through a slot in the nut whereby in the rotation of the shaft the nut moves along the shaft, the swinging frame of said shaft, gearing between the manually turnable shaft and said driving pulley, gearing between the manually turnable shaft and said screw threaded shaft, whereby the driving pulley and the screw threaded shaft operates simultaneously, a record ejector slidable in the nut and adapted to be moved in the movement of the nut into alignment with a record corresponding to the selected title, said rod engaging said ejector and adapted in the swinging movement of said frame to be moved in said slot to thereby move the ejector to effect ejection of the selected record, and manually operable means adapted to swing said frame.

4. A disc record selecting and ejecting device comprising a cabinet having means therein to support and position records arranged in a given order, a traveling element adapted to contain a list of record titles in an order corresponding to the arrangement of records in the cabinet, a record ejector, mechanism operable to move said traveling element, mechanism operable to move said ejector into alignment with any one of the records dependent upon the position to which the traveling element has been moved, hand operable means connected with, and adapted to simultaneously operate, said mechanisms, a push button and mechanism operated thereby adapted to actuate the positioned ejector to eject the record alignment with any one of the said mechanisms being enclosed in the cabinet, said cabinet containing three openings across one of which the traveling element is movable to allow observation of the titles thereon, the turnable member extending through another said opening, and the push button being operable through the remaining opening.

5. A disc record selecting and ejecting device comprising a cabinet having means therein to support and position records arranged in a given order, a traveling element adapted to contain a list of record titles in an order corresponding to the arrangement of records in the cabinet, a screw threaded shaft, a nut thereon movable along the shaft in its rotation, manually operable mechanism adapted to rotate the shaft and simultaneously move the traveling element so as to selectively position any given title thereon, a record ejector slidable in the nut and adapted to be moved in the movement of the nut into alignment with a record corresponding to the selected title, a rod extending through a slot in the nut and engaging the ejector, a push button, mechanism between the push button and said ejector adapted to connect the ejector in the manual movement of the push button to move the rod and thereby move the ejector to effect ejection of the selected record, and spring means adapted to hold the ejector from moving into ejecting position except when positively actuated so as to return the ejector to normal position when the push button is released.

6. A disc record selecting and ejecting device comprising a cabinet having means therein to support and position records arranged in a given order, a driving pulley and a series of idle pulleys, an endless belt engaging said pulleys and adapted to contain a list of record titles in an
order corresponding to the arrangement of records in the cabinet, the cabinet having an opening, a record ejector, mechanism adapted to turn the driving pulley to move said belt into position to expose to observation through said opening any selected title thereon, mechanism adapted to move the ejector into alignment with a record corresponding to the selected title, manually operable means connected with and adapted to simultaneously operate both mechanisms, a push button, and means operable by the push button to actuate the positioned ejector.

PAUL E. WILLIAMS.