A. H. HAAG.

PHONOGRAPHIC DISK RECORD CABINET.

APPLICATION FILED APR. 22, 1915.

1,167,063.

Patented Jan. 4, 1916.

2 SHEETS—SHEET 1.

Fig. 1.

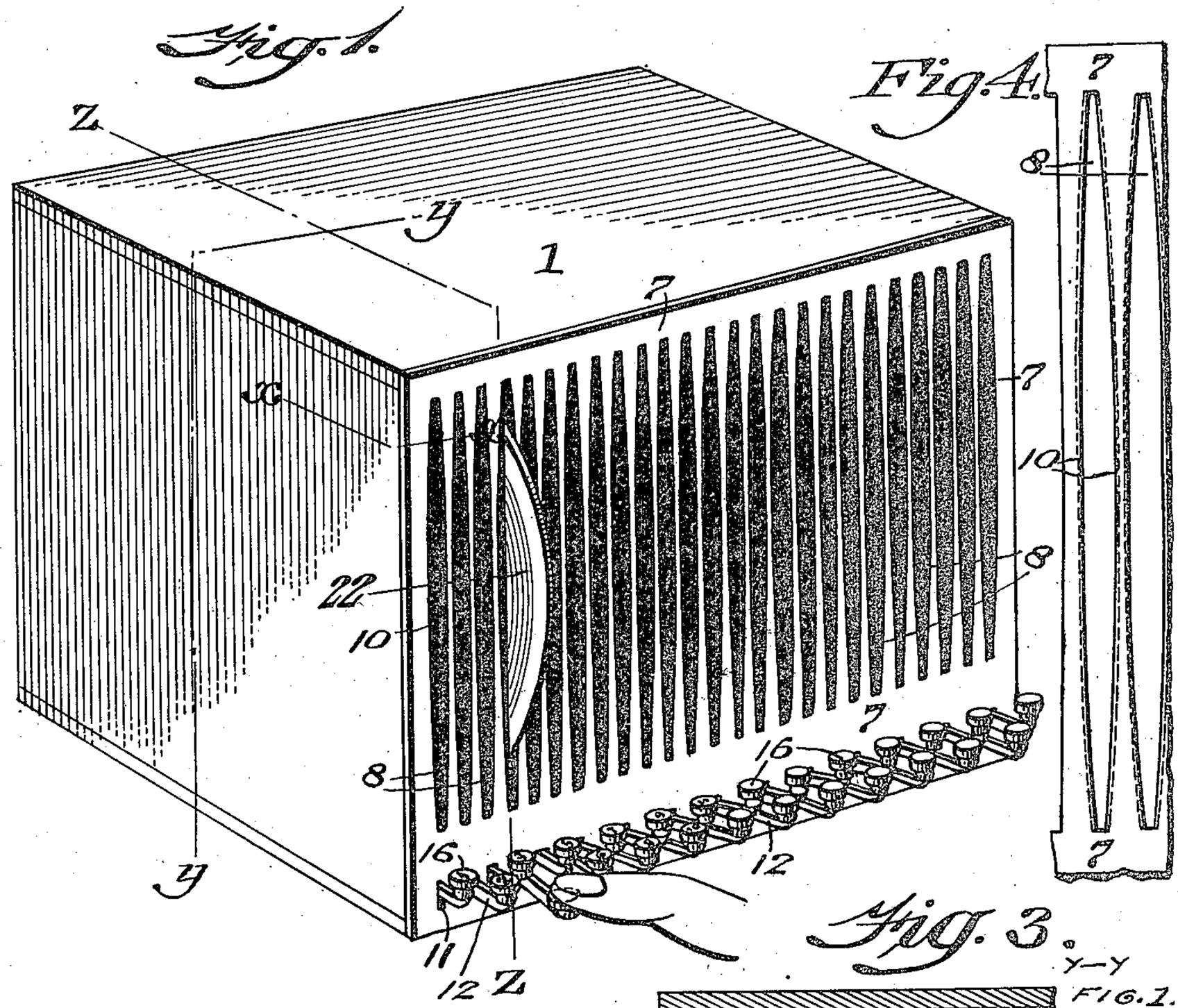


Fig. 4.

Fig. 2.
X—X FIG. 1

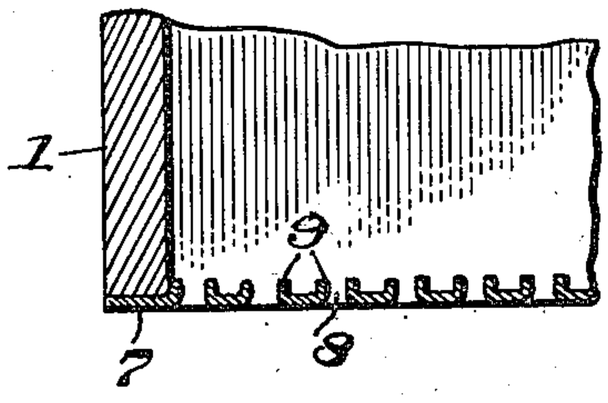
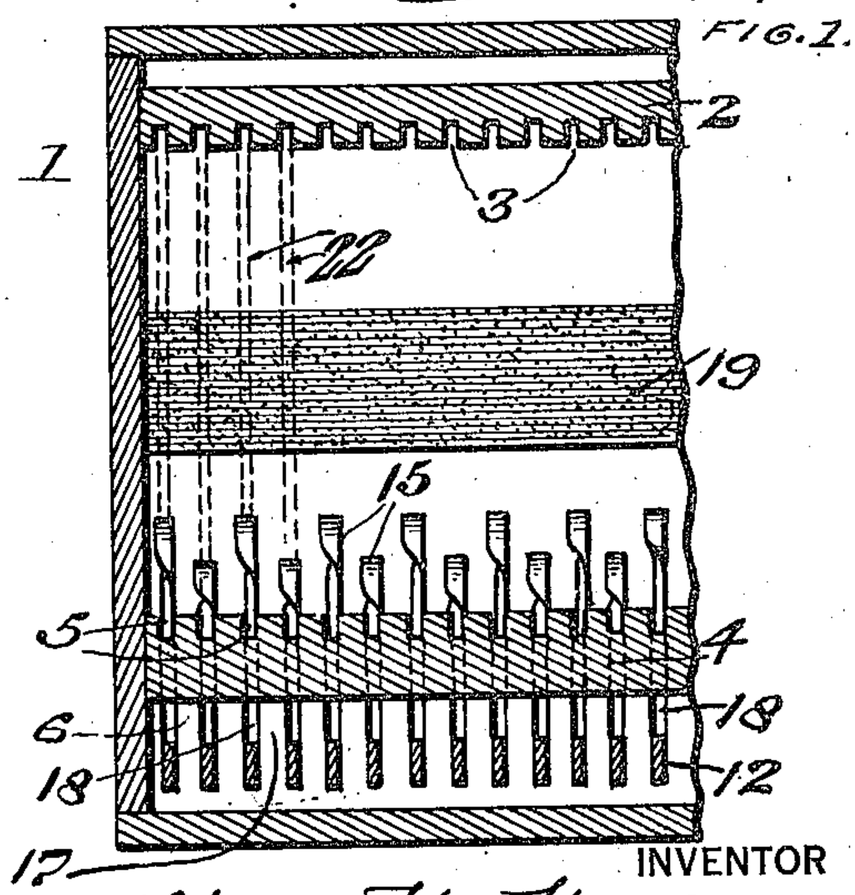


Fig. 3.
Y—Y FIG. 1.



WITNESSES

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2 SHEETS—SHEET 2.

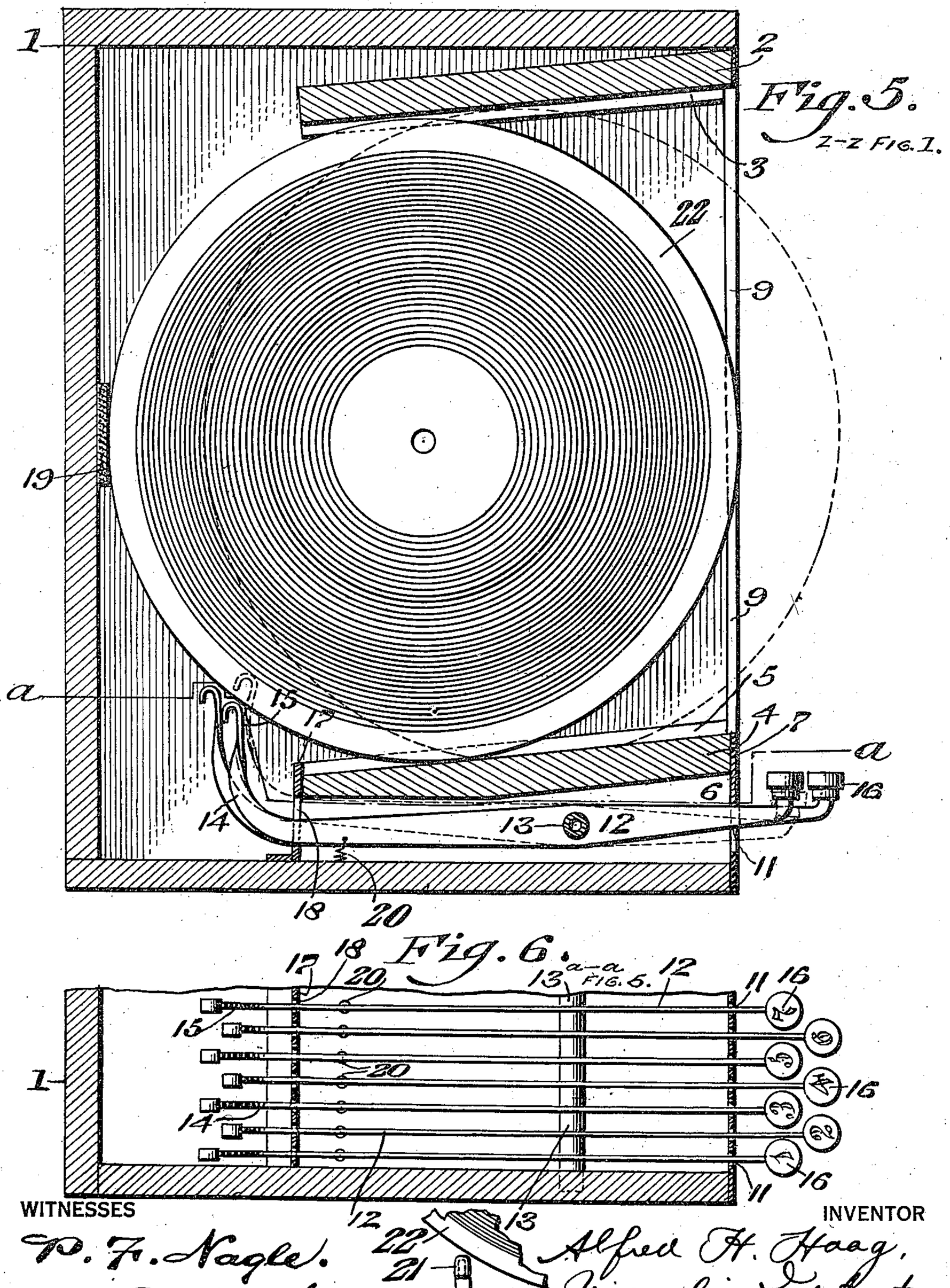

Fig. 5.

2-2 FIG. 1.

Fig. 6.

a-a FIG. 5.

Fig. 7.

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PHONOGRAPHIC-DISK-RECORD CABINET.

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To all whom it may concern:

Be it known that I, ALFRED H. HAAG, a citizen of the United States, residing at Newport News, county of Warwick, State of Virginia, have invented a new and useful Phonographic-Disk-Record Cabinet, of which the following is a specification.

My invention relates to a new and useful phonographic disk record cabinet and consists of a novel device or container for storing or housing disk records when the same are not in use and of novel ejector mechanism and its adjuncts which is simple in construction, efficient in operation and of durable construction.

It further consists of a novel front plate for the cabinet having a series of slots therein for the insertion or removal of the records and by means of which the latter are guided in their movement while their faces and the grooves therein are prevented from contact with the walls of the slots.

It further consists of other novel features of construction, all as will be hereinafter fully set forth.

For the purpose of illustrating my invention, I have shown in the accompanying drawings a preferred embodiment which is preferred by me, since the same will give in practice satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of these instrumentalities as herein shown and described.

Figure 1 is a perspective view of a cabinet embodying my invention. Fig. 2 is a sectional view on line *x*—*x*, Fig. 1. Fig. 3 is a sectional view on line *y*—*y*, Fig. 1. Fig. 4 is a front elevation of a portion of the front plate on an enlarged scale. Fig. 5 is a sectional view on line *z*—*z*, Fig. 1. Fig. 6 is a sectional view on line *a*—*a*, Fig. 5. Fig. 7 represents in detached position a side elevation of a modified construction which I may employ.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings:—1 designates a cabinet of any suitable size and shape which is provided at a suitable point with an upper, preferably inclined strip 2, having suitable grooves 3 therein forming the upper tracks and with a lower preferably inclined strip 4 having grooves 5 therein, which are in alinement with the grooves of the upper strip 2, forming the lower track. The strips or tracks are supported in any suitable or desired manner within the casing in the present instance being in suitable inclined position, so that when the record 22 is inserted in the cabinet it will at once roll into the desired position. The lower strip or track is spaced from the bottom of the casing in order to form a chamber 6 for the ejecting arms, as will be hereinafter described.

7 designates a front plate connected in any suitable manner with the casing 1 and which plate is preferably formed of sheet metal. A series of slots 8 are formed in the said front plate, which are adapted to aline with the upper and lower tracks in order to permit of the insertion and removal of the disk record. The edges of the metal at the slots are preferably bent inwardly to form stiffening flanges 9, as will be best understood from Fig. 2, and in order to provide a bearing surface as a guide for the record disks as they are inserted and removed, whereby no sharp edge of the metal contacts with the record or the grooves therein.

As will be noted, more particularly from Fig. 4, the distance between the walls of the slots at the center is greater than at the upper and lower portions, in order that these upper and lower portions will serve as guides for the records 22, whereby the face of the records and the grooves therein will be prevented from coming in contact with the walls of the slots, as will be evident. The walls of the slots 8 preferably converge from the center upwardly and downwardly so that the widest part 10 of said slots is at the center thereof. In the lower portion of the front plate 7 and at a point beneath the bottom tracks I provide a series of relatively short slots 11 through each of which extends an end of an ejector arm or lever 12. The arms 12 are fulcrumed or pivotally mounted within the casing upon a tube or rod 13, which extends laterally across the casing 1 in the chamber 6 and is situated out of alinement with the center of the records 22 when in their rearmost position in the tracks and I preferably locate the rod forwardly thereof, so that the inner end of each of the ejector levers 12 will be normally in lowered position and will return thereto after being actuated, by reason of its weight or the action of gravity.

Suitable spacing members may be mounted upon the tube or rod 13 intermediately of the ejector levers 12 in order to hold the same in proper spaced relation with respect to each other.

The inner terminal 14 of each arm or lever 12 is deflected upwardly and is normally juxtaposed to and in alinement with the edge of the record to be ejected, it being understood that there is an ejector arm or lever provided for each track or for each record.

As here shown, I have provided the end 14 of the arms 12 with a finger or engaging member 15, which may be suitably flattened or wider than the arms or levers 12 in order to suitably engage with the edge of the record. The ends of the ejector arm or lever which extends forwardly of the cabinet are provided with the finger pieces 16 for ease of actuation. Suitable means is provided for guiding the inner end of the arms or levers 12 and as here shown I provide a plate 17 mounted within the casing having a series of slots 18 alining with the smaller slots 11 of the front plate 7 and through each of said slots 18 the inner end of one of the arms or levers 12 moves and is guided.

The operation of the parts will be readily apparent. The records 22 having been inserted in the cabinet will automatically roll rearwardly and remain in their rearmost position, resting against a pad 19 carried by the rear wall of the cabinet 1, the ejector arm for each record being normally in the position seen in Fig. 5. When it is desired to remove a record, by pressing upon the finger-piece 16 the terminal end of the proper ejector arm carried thereby, will engage with the desired record and propel the same forwardly beyond the front plate 7 whereupon it can be grasped by the operator. Upon releasing the finger-piece 16 the ejector arm drops to its normal position by reason of its weight or the influence of gravity. The slots 8 and the front plates 7 guide the records during their insertion and removal, while the enlarged space between the walls of the slots at the center prevents the face of the record from being injured.

It will be apparent from the foregoing that my novel construction of disk record cabinet can be manufactured for the market in quantities very cheaply since the slots in the sheet metal front plate 7 can be readily punched therein by suitable machinery and the flanges 9 serve to reinforce and stiffen the walls of the slots, as is evident, so that the front plate 7 will be very rigid under all conditions and will not warp or change its shape. The ejector arms 12 can likewise be very cheaply manufactured out of sheet metal and since the same are preferably made throughout of one piece and the terminal or finger member 15 is integral therewith, the cost of production is greatly simplified, and it will be further apparent that I have entirely dispensed with springs, elbow levers, links and other similar mechanisms which are usually employed in devices of this character.

The finger pieces 16 are preferably arranged in staggered order, as will be apparent from Figs. 1 and 6, and can be provided with suitable insignia or numerals indicative of the record which it is desired to withdraw from the cabinet and the ejector arms 12 carrying said finger pieces are fulcrumed in position by merely slipping the tube or rod 13 through the same after said arms have been assembled in the chamber 6. By locating the pivotal point or fulcrum of said arms 12 to one side of the center of gravity, as will be understood in Figs. 5 and 6, it will be apparent that after a record has been ejected and the finger removed from the finger piece 16, the arm 12 will automatically drop into its normal position by reason of gravity, so that there is no necessity for the employment of springs, links or other extraneous devices, in order to restore the ejector arms to normal or operative position.

The body of the cabinet 1 can be made of any suitable material as can also the upper and lower strips 2 and 4 and it will of course be apparent that said strips and the top, sides and rear wall of the cabinet, as well as the front plate 7, can be held in assembled position by any suitable means, as will be apparent to those skilled in the art.

It will be apparent that the walls of the slots 8 instead of being curved, may be composed of upwardly diverging straight walls, and downwardly diverging straight walls, which may meet at about the center of the face plate 7, whereby said slots will be widest at about the middle of their length, and it will be apparent that if desired the slots may have parallel walls, without departing from the spirit of my invention, and the reinforcing or stiffening flanges 9 may be omitted, if desired, although in practice I prefer to employ the same.

It will be understood that the arms 12 are loosely mounted upon the rod or tube 13, so that they will rock freely thereon, so that the inner ends thereof will drop by the action of gravity, and if desired, said inner ends at about the point 14 may be weighted, or I may employ the spring or equivalent tension devices 20 to effect the restoration of the arms 12 to their lowest position, as will be understood from Fig. 5, the employment of such springs, however, being optional, as it will be evident that my device is effective and operative without such springs 20.

In the construction seen in Fig. 7, the

upper end of the terminal 14 may be reduced in size and have a rubber or other cap 21 thereon, if desired, to impact with the record or disk 22, whereby the latter can be readily propelled from the exterior of the casing.

It will be apparent that in practice I may, if desired, construct the upper and lower strips 2 and 4 of metal having the grooves 3 and 5 respectively therein formed as corrugations in the metal, which can be readily effected by rolling, pressing or any other suitable means, as will be apparent to those skilled in the art, and it will furthermore be apparent that if desired, the top, bottom, sides and rear wall of the cabinet can also be composed of thin sheet metal without departing from the spirit of my invention.

The holes in the arms 12 through which the tube or rod 13 passes, can obviously be punched therein simultaneously with the punching of said arms.

It will now be apparent that I have devised a novel and useful construction of a phonographic disk record cabinet which embodies the features of advantage enumerated as desirable in the statement of the invention and the above description, and while I have, in the present instance, shown and described a preferred embodiment thereof which will be found in practice to give satisfactory and reliable results, it is to be understood that the same is susceptible of modification in various particulars without departing from the spirit or scope of the invention or sacrificing any of its advantages.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A phonographic disk record cabinet, comprising a casing provided with tracks for the reception of the disk records, a front plate having slots in alinement with said tracks to permit the insertion and removal of the records and a plurality of one piece arms each of which is pivotally mounted in suitable relation to its superimposed track, with its fulcrum in advance of its center of gravity and the center of its record when the latter is in its rearmost position whereby each of said arms drops by gravity upon being released and each arm having one end projecting forwardly through its slot in said plate and its opposite inner terminal extended upwardly and juxtaposed to and in alinement with the record to be ejected.

2. A phonographic disk record cabinet, comprising a casing provided with upper and lower tracks for the reception of the disk records, a front plate provided with a series of slots, a plurality of arms each having an end projecting through one of said slots, a rod suitably supported upon a fulcrum within the casing beneath the lower tracks and in advance of its center of gravity and the center of the records and upon which fulcrum said arms are pivoted whereby said arms drop by gravity upon being released and a rear plate within the casing having a series of alining slots through each of which one of the arms extends and is guided, the inner terminal of each of said arms being deflected upwardly and juxtaposed to and in alinement with the record to be ejected.

3. A phonographic disk record cabinet, comprising a casing provided with a plurality of tracks for the reception of the disk records, a front plate having slots in alinement with said tracks, the edges of the metal at the slots being bent inwardly to form stiffening flanges, and the distance between the walls of the slots at their centers being greater than at the upper and lower portions, and means for ejecting a record from said tracks.

4. A phonographic disk record cabinet, comprising a casing provided with lower, inclined tracks for the reception of the disk records, and a plurality of unitary ejector levers, each of which is pivotally mounted below said tracks, and each of said levers having its fulcrum in advance of its center of gravity, whereby said ejector levers drop by gravity upon being released, and each of said levers having one end projecting forwardly from said casing for convenient manipulation and having its opposite inner rear terminal deflected toward and juxtaposed to the record to be ejected.

5. A phonographic disk record cabinet, comprising a casing provided with lower, inclined tracks for the reception of the disk records, and a plurality of unitary ejector levers, each of which is pivotally mounted below said tracks, and each of said levers having its fulcrum in advance of its center of gravity, whereby said ejector levers drop by gravity upon being released, and each of said levers having one end projecting forwardly from said casing for convenient manipulation and having its opposite inner rear terminal deflected toward and juxtaposed to the record to be ejected, the front portion of said casing being provided with a plurality of stationary slots which are in alinement with the record tracks, the distance between the walls of the slots at their centers being greater than at the upper and lower portions of said slots, whereby marring of the record grooves is prevented.

6. In a phonographic disk record cabinet, supporting and guiding means for closely related parallel disk records, and a plurality of unitary, independently operable, oscillatory levers, each of which is pivotally mounted below said supporting and guiding means, and each of said levers hav-

ing one end projecting from said cabinet for convenient manipulation and having its opposite rear terminal deflected toward and juxtaposed to the record to be ejected, said rear terminal being retained normally in depressed position and adapted to be elevated into contact with the juxtaposed record upon the depression of the outer end of said lever.

ALFRED H. HAAG.

Witnesses:
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H. S. FAIRBANKS.