B. W. KING.

EJECTING RECORD HOLDER.

APPLICATION FILED NOV. 29, 1915.

**1,291,924.**

Patented Jan. 21, 1919.

2 SHEETS—SHEET 1.

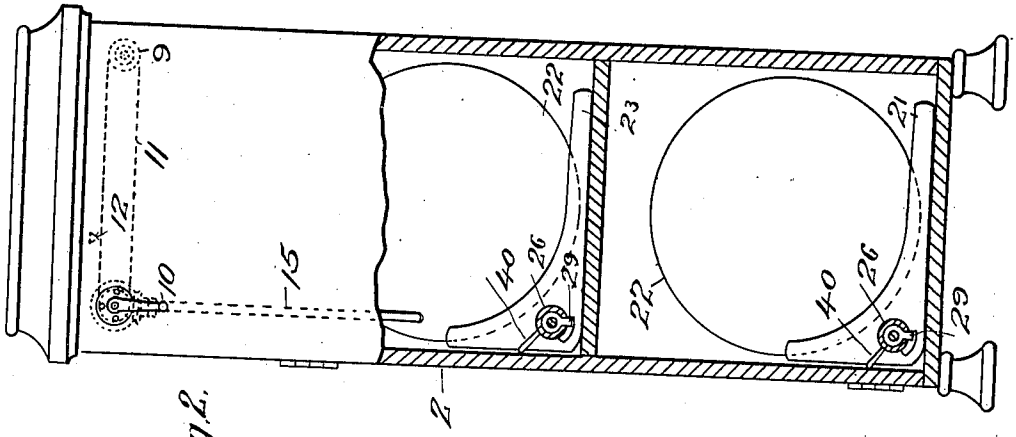



Fig. 2.

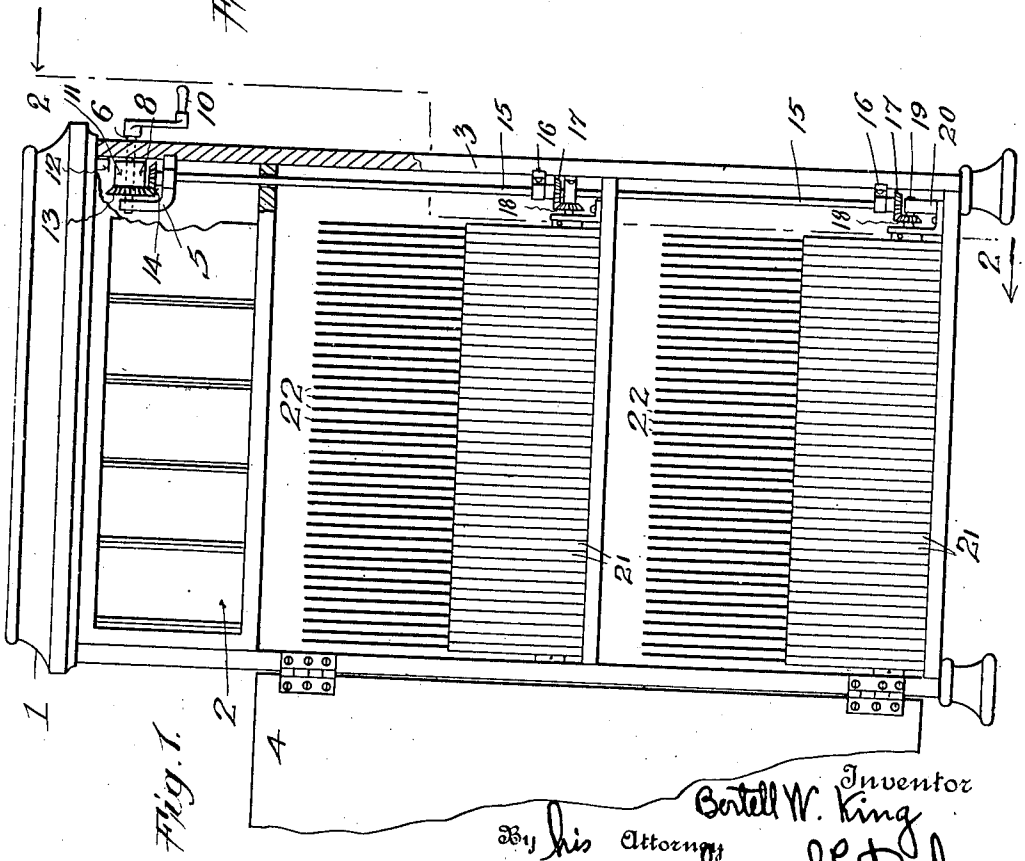



Fig. 1.

Inventor
Bertell W. King
By his Attorney
Samuel E. Darby

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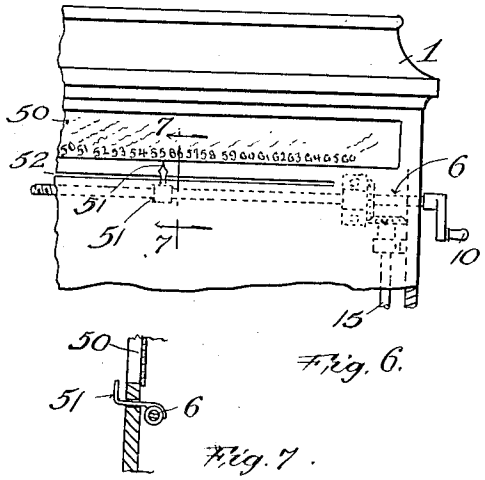



Fig. 6.




Fig. 7.

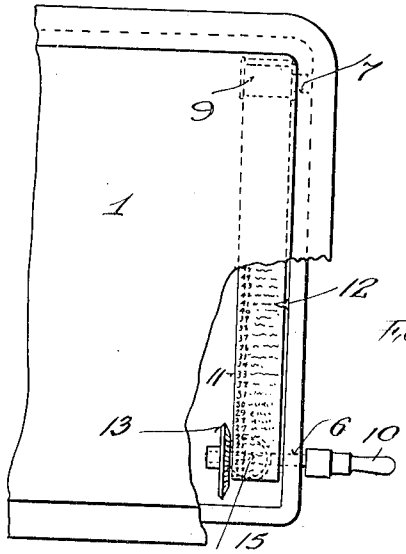



Fig. 5.

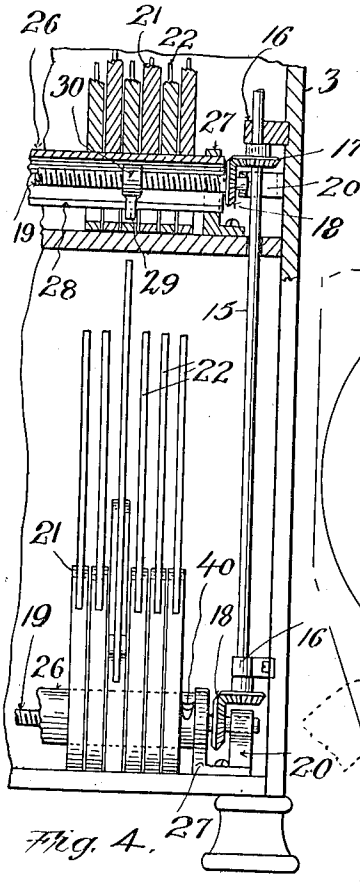



Fig. 4.

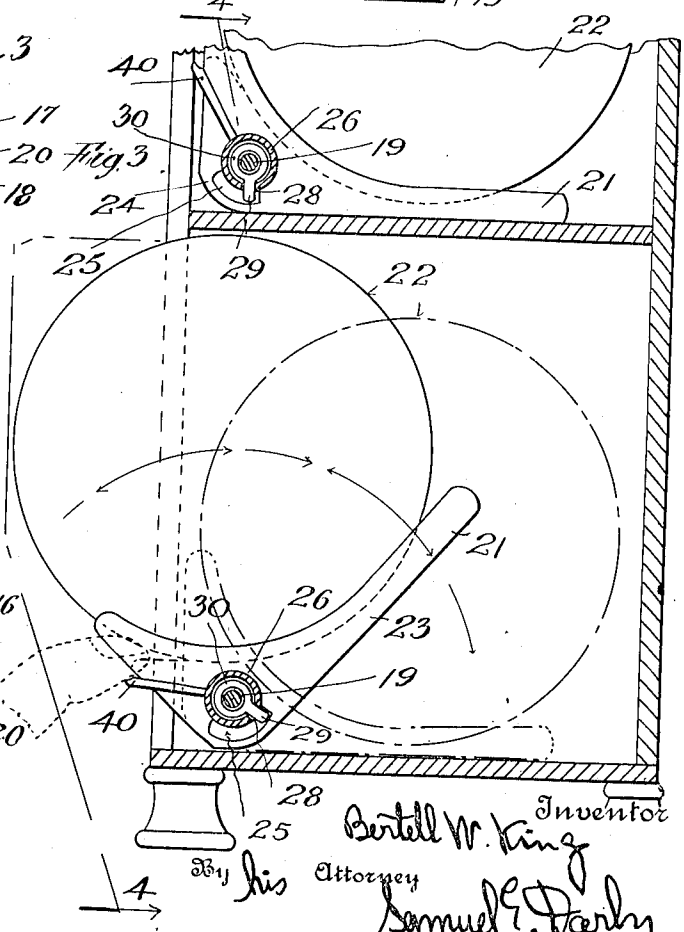



Fig. 3.

Inventor

Bertell W. King

By his Attorney

Samuel E. Darby

# UNITED STATES PATENT OFFICE.

BERTELL W. KING, OF NEW YORK, N. Y.

## EJECTING RECORD-HOLDER.

1,291,924. Specification of Letters Patent. Patented Jan. 21, 1919.

Application filed November 29, 1915. Serial No. 64,153.

*To all whom it may concern:*

Be it known that I, BERTELL W. KING, a citizen of the United States, and residing in the city of New York, county of Kings, and State of New York, have made a certain new and useful Invention in Ejecting Record-Holders, of which the following is a specification.

This invention relates to ejecting record holders.

The object of the invention is to provide an ejecting record holder which is simple of construction, efficient in operation, and economical of manufacture.

A further object of the invention is to provide an apparatus of the class described, which is especially adapted for use in connection with records for phonographs, Victrolas, and the like.

A further object of the invention is to provide means which are simple and efficient, for automatically selecting a particular one of a great number of indistinguishable, closely arranged elements, and also to provide simple and efficient means for displacing the selected element.

Further objects of the invention will appear more fully hereinafter.

The invention consists in the construction, combination, location, and relative arrangement of parts, all as will be more fully hereinafter set forth, as shown in the accompanying drawing, and finally pointed out in the appended claims.

For purposes of illustrating my invention I have shown the same as applied to a well known type of cabinet phonograph or Victrola, but it will be understood that my invention, in its broad scope, as defined in the claims, is not to be limited or restricted to this specific application thereof.

Referring to the drawing;—

Figure 1 is a front view, partly in section, of a Victrola, or phonograph cabinet, embodying my invention, the door thereof being open.

Fig. 2 is a side view of the same partly in section, taken on the line 2—2 Fig. 1, and looking in the direction of the arrows.

Fig. 3 is a similar view slightly enlarged, showing one form of displacing apparatus embodying my invention.

Fig. 4 is a view in section taken on the line 4—4, Fig. 3, and looking in the direction of the arrows.

Fig. 5 is a partly broken top plan view of a cabinet, embodying my invention.

Fig. 6 is a view in front elevation of a cabinet embodying a modified form of my invention.

Fig. 7 is a view in section taken on the line 7—7 Fig. 6, and looking in the direction of the arrows.

The same part is designated by the same reference numeral wherever it occurs throughout the several views.

It is among the special purposes of my present invention to provide a movable index and to associate to move coincidently therewith, a suitable displacing member or indicating member to designate the element which it is desired to locate in accordance with the location of the index. As I have hereinbefore pointed out, though my invention is not to be limited or restricted to the specific application thereof, for illustrative purposes, I have shown the same as applied to any well known type of Victrola or graphophone record cabinet wherein the Victrola or graphophone records are stored or filed.

It is well known that such records are titled on their respective faces, and for this reason to locate the particular record desired, it is necessary to pull out each record from its receptacle in the cabinet, until the desired record is located, thereby causing unnecessary handling of the records, and, due to their fragility often results in injury or the destruction of the same. At present it is also common to deposit the records in envelops or books, the envelop or book page bearing a number, and to keep a note book or card index of the numbers of the respective envelops or book pages. It is evident that this system requires a great deal of time and bookkeeping, and requires materials that must be frequently replaced. To dispense with these methods of indexing the records, and to provide a cheap, efficient and automatic indexing system, my invention is especially directed.

In the drawings, I show the usual Victrola or graphophone record cabinet comprising what is known as the top or cover, the machine portion 2 and the cabinet portion 3, provided with a door or doors 4. Mounted in suitable brackets 5, are shafts 6 and 7, on which are mounted rollers 8 and 9, the roller 8 being keyed or otherwise se-

cured to shaft 6, while roller 9 is mounted to freely rotate on shaft 7. Shaft 6 extends through the side of the Victrola body, and is provided with any suitable means for rotating the same, such for instance as the handle 10 secured thereto. Passing over the rollers 8 and 9, to be driven by roller 8, in any suitable manner, such, for instance, as by friction therewith, is an endless belt 11, the face of which may be numbered, lettered or otherwise graduated. The belt may be of any suitable material and of any suitable construction. I prefer to number the belt in successively equal spaces, and allow a space opposite each number for the name of the correspondingly numbered record receptacle, to be hereinafter described. Any suitable fixed index or indicator may be employed, such for instance, as the arrow 12, suitably secured to the body of the machine and so positioned with respect to the belt that the same will pass immediately thereunder. It will be observed that by rotating the handle 10, the belt 11 will pass in either direction with respect to the fixed arrow 12 in accordance with the direction of rotation of the handle 10.

Mounted on the shaft 6, to rotate therewith is a gear wheel, preferably beveled, as shown at 13, which meshes with a gear wheel 14 which is mounted on a vertical shaft 15, which in turn is supported in brackets 5, 16, as shown. Also mounted on shaft 15 is gear wheel 17 which meshes with and rotates a gear wheel 18 mounted on a horizontal worm shaft 19 journaled in suitable bearing brackets 20.

In the cabinet portion of the machine are arranged in parallel relation, the plurality of receptacles 21 for the records 22, there being one receptacle for each record. The receptacles 21 may be of any suitable shape or material. I prefer however, to provide the same with a suitable groove to allow the record to stand vertically therein as indicated in dotted lines. The receptacles are provided with an extending flat leg 23 which enables the same to rest in a vertical position, and a rounded butt or nose portion 24, to enable the same to be rocked or tilted on the supporting cylinder.

Each of the receptacles is provided with a circular hole therethrough which is provided with a flared or extended portion indicated at 25, the purpose of which will be more fully hereinafter set forth. Passing transversely across the cabinet, through the holes of the respective receptacles, is a cylinder 26, suitably journaled in brackets 27. The cylinder 26 is provided with a slot 28 at its bottom extending throughout its length. The worm shaft 19 is carried in its bearings 20, as hereinbefore described, and extends transversely across the machine inside of the cylinder 26, as shown.

Mounted on the worm shaft 19, and depending therefrom, to move over the threads of the shaft when the shaft is rotated, is a "traveler" 30 provided with a downwardly projecting lug 29, which extends through the slot 28 of the cylinder 26, and, when the "traveler" is moved by the rotation of the worm shaft 19, the lug 29 extends into and passes through the flared holes 25 of the respective receptacles.

It will be understood that the receptacles are numbered according to the respective numbers appearing on the face of the belt 11, and are located, relative to each other with respect thereto. The operation of the apparatus, as will be seen, is comparatively simple. Assuming that record #41 is the record that is desired, or that the name of the record that is desired is same where, say at point 41, on the belt 11, the belt is turned, by means of the handle 10, until the name of the record that is desired, or the number, say 41, appears opposite to the fixed arrow 12. The rotation of the shaft 6, by means of the handle 10, causes the gear wheel 13 to rotate, which in turn drives the gear 14 and consequently the shaft 15 and the gear 17 mounted thereon, thereby driving the gear 18 and the worm shaft 19, causing the "traveler" to move in one direction or the other, until the shaft 6 is at rest. Assuming that the arrow points at number 41 on the belt, the traveler will be at rest opposite to the receptacle corresponding to the number 41. Therefore, by revolving or twisting the cylinder 26 counter clockwise, the lug 29 of the traveler 30, will come in contact with the end of the flared portion 25 of the hole through the receptacle, and thus displace forwardly the desired record as shown in Figs. 3 and 4.

Any suitable means may be employed for twisting or turning the cylinder 26. I show one simple arrangement but to which my invention, in its broad scope, is not to be limited or restricted, wherein a handle or lever 40, is welded or otherwise secured to the cylinder 26, so that by pressure, such for instance, as by a finger thereon, the cylinder will be turned, as indicated in dotted lines, Fig. 3.

If desired, and as shown, the records and receptacles may be arranged in a plurality of tiers, each tier being provided with a displacing arrangement as described, and operated by the common shaft 15.

In Figs. 6 and 7, I have shown a modified construction embodying my invention, wherein in place of using a movable index and stationary indicator, I employ a stationary index and movable indicator. In this construction, the index numbers or the names of the records are arranged on a stationary plate or card as indicated at 50, and in this instance the shaft 6 is a transversely

extending worm shaft similar to shaft 19, hereinbefore described. Mounted on the worm shaft 6 to move therealong, on rotation thereof, is a traveler 51. I prefer to locate the index card 50 on the exterior of the cabinet, and to slit the body portion of the cabinet as at 52, for a portion of the traveler 51 to pass freely along the index card on the exterior of the cabinet, as clearly shown, allowing the shaft and its associated gear wheels hereinbefore described, to be completely concealed within the cabinet.

It will be readily understood that the worm shaft 19 may be what is termed a "two-way" shaft, *i. e.*, the same may have oppositely running threads so that when the traveler reaches one end of the shaft, it will engage the oppositely running threads thereof and return over the length of the shaft without necessitating the reversal of rotation of the shaft 19. Such an arrangement, as will be readily understood, enables the positive travel of the index belt at all times in one direction.

Where tiers of records are employed, the index belt may be graduated so that point 41, for example, is divided into two divisions 41 and $41^a$, it being understood that 41 designates the upper tier and $41^a$ the lower.

While I have shown and described specific arrangements for accomplishing the purposes of my invention, it will be understood that many changes in detail will readily occur to those skilled in the art without departing from the broad scope of my invention as defined in the claims.

Having now set forth the object and nature of my invention, and having described specific structures embodying the principles thereof, what I claim as new and useful and of my own invention, and desire to secure by Letters Patent, is,

1. In an apparatus of the class described, a plurality of receptacles arranged in parallel relation with each other, a revoluble cylinder and a shaft extending through all of said receptacles, and means mounted on said shaft and within said cylinder to extend therefrom, for displacing any particular receptacle upon the revoluble movement of said cylinder.

2. In an apparatus of the class described, a plurality of receptacles arranged in parallel relation with each other, a cylinder and a shaft extending through all of said receptacles, a traveler mounted on said shaft within said cylinder and provided with an actuating lug, and means to rotate said shaft.

3. In an apparatus of the class described, a plurality of receptacles arranged in parallel relation with each other and each provided with a rounded opening with a flared portion therethrough, a worm shaft extending through the openings of said receptacles, a traveler mounted on said shaft and adapted to travel therealong when said shaft is rotated, and provided with a lug to extend into and travel through the flared portion of said receptacle openings, a cylinder passing through said receptacle openings and surrounding said shaft and traveler, and provided with a slot through which said lug extends, the edges of said slot being adapted to engage said lug, means for rotating said shaft, and means for rocking said cylinder.

4. In an apparatus of the class described, a graduated index, a plurality of receptacles arranged in relative order with respect to the graduations on said index, a traveler adapted to pass through said receptacles, means to move said index relative to a fixed point, said means operating to move said traveler a correspondingly proportionate distance through said receptacles.

5. In an apparatus of the class described, a graduated index, a plurality of receptacles arranged in relative order with respect to the graduations on said index, a two way worm shaft passing through said receptacles, a traveler mounted on said shaft to travel therealong upon the rotation thereof, means to move said index, and means operated by the movement of said index for rotating said shaft.

6. In an apparatus of the class described, a graduated index, a plurality of receptacles arranged in relative order with respect to the graduations on said index, a two way worm shaft passing through said receptacles, a traveler mounted on said shaft to travel therealong upon the rotation thereof, means to move said index and means operated by the movement of said index for rotating said shaft, a slotted cylinder inclosing said shaft, said traveler being provided with an extension projecting through said slot, and means for rocking said cylinder to coincidently rock said traveler to displace one of said receptacles.

In testimony whereof I have hereunto set my hand on this 20th day of November, A. D., 1915.

BERTELL W. KING.