Aug. 12, 1930. B. C. KENYON 1,772,901

DISK RECORD HOLDER

Filed March 23, 1929 2 Sheets-Sheet 1

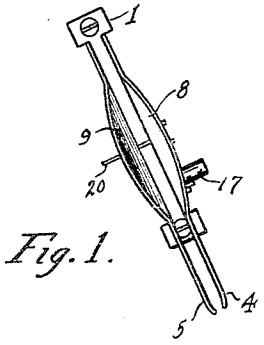


Fig. 1.

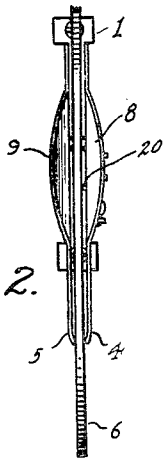


Fig. 2.

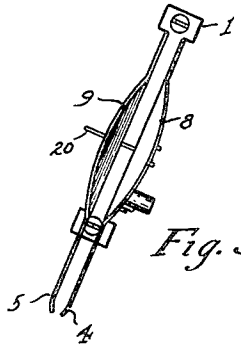


Fig. 3.

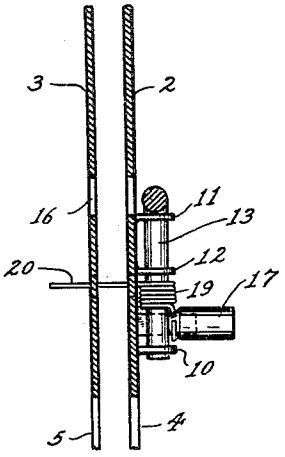


Fig. 5.

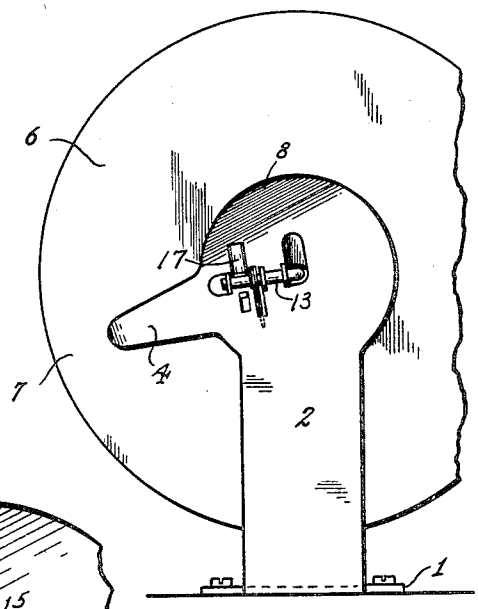


Fig. 4.

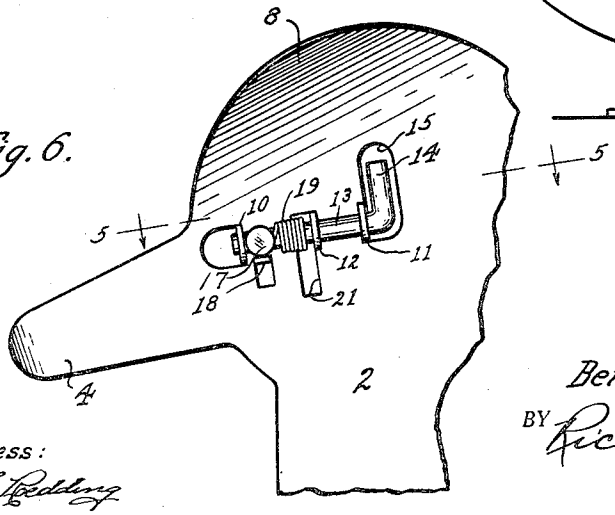


Fig. 6.

Witness:
A. E. Redding

INVENTOR.
Bertram C. Kenyon.
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Aug. 12, 1930. B. C. KENYON 1,772,901

DISK RECORD HOLDER

Filed March 23, 1929 2 Sheets-Sheet 2

Fig. 7.

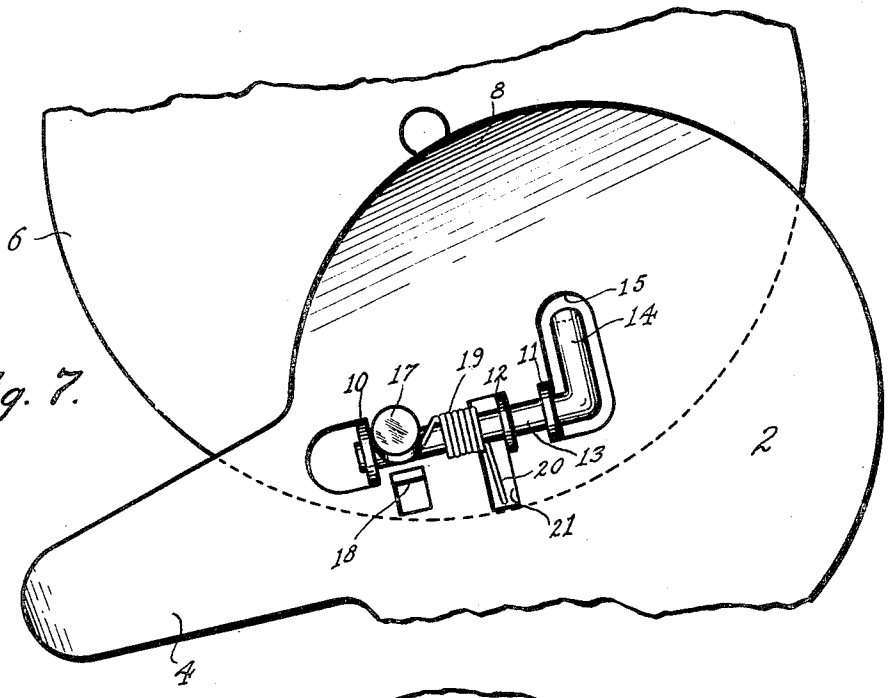
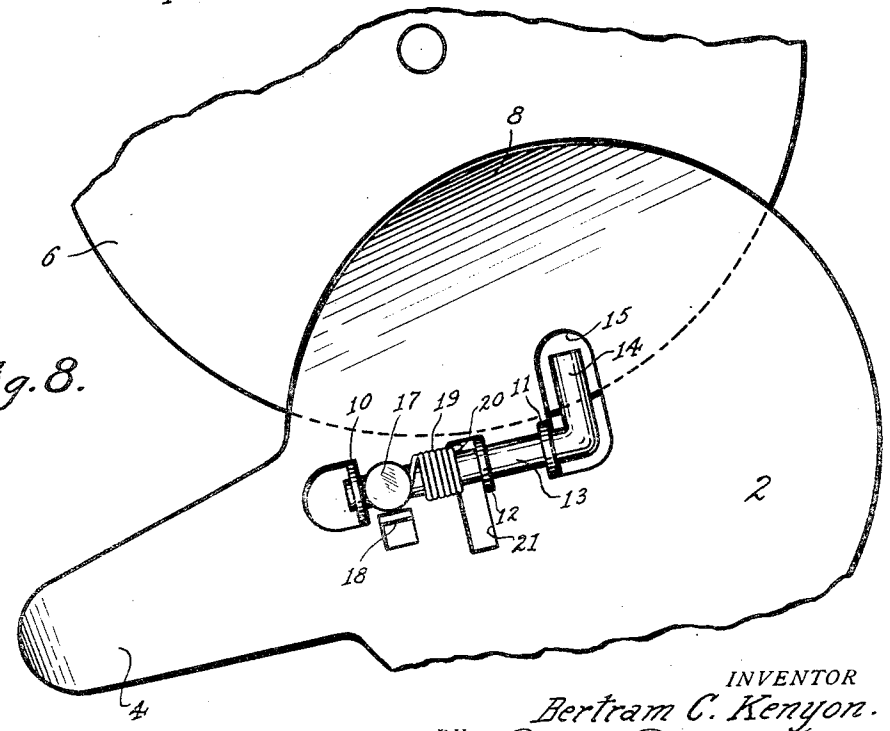


Fig. 8.



Witness:
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Patented Aug. 12, 1930 1,772,901

UNITED STATES PATENT OFFICE

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DISK-RECORD HOLDER

Application filed March 23, 1929. Serial No. 349,315.

This invention relates to a rack or support for phonograph records of the disk type.

The main objects of this invention are to provide a record support which will engage a disk type record at the center thereof; to provide a record holder which will support disk records of various diameters with the center hole of the different size records all held in the same relative position with respect to the record support; to provide an improved record support which is particularly adapted for use in automatic phonographs of the type in which transfer mechanism removes the record from the record rack and places it on a turntable having a center pin; to provide a record support which will permit the use of various size disk records without shifting or changing the distance between the record support and the phonograph turntable; and, to provide a simple and efficient record supporting rack of a unitary character, the body of which is made from a sheet metal stamping and which has a minimum of moving parts.

An illustrative embodiment of this invention is shown in the accompanying drawings, in which:

Figs. 1, 2 and 3 show in plan view three of my improved record supporting racks arranged radially with respect to a common center, such as the center pin of a phonograph turntable, a disk record being shown supported in one of the racks.

Fig. 4 is a view in side elevation of my improved record rack with the record supported thereby, the view being taken from the right side of Fig. 2.

Fig. 5 is a sectional view taken on the line 5—5 of Fig. 6.

Fig. 6 is an enlarged fragmentary detail view of the upper end of the rack showing the position of the parts when there is no record in the rack.

Fig. 7 is a view in side elevation of the upper end of a rack with a record partially removed therefrom.

Fig. 8 is a view of the same with the record still further removed from the rack.

In automatic phonographs which play a plurality of records either in succession or selectively, it is highly desirable to have an arrangement whereby records of both 10″ and 12″ size may be used. Also different makes of records vary slightly in diameter, some varying as much as a quarter of an inch from their supposed size. Regardless of the size of the record, each record has to be placed on the phonograph turntable with the center hole thereof in registry with the upstanding pin commonly present on turntables.

In the present invention the records in the record rack are supported from their centers and regardless of the size of the record, whether 10″ or 12″ and whether of this exact size or only approximately of such size, all records will have their centers in the same relative position, that is, all in alignment. If a plurality of these record holders are arranged in an arc, the center of which is the center pin of the phonograph turntable, the distances from the centers of all records of all sizes to the center pin of the phonograph turntable will be the same, and by providing suitable transfer mechanism such as the gripping jaws shown in the co-pending application of myself et al, Serial No. 205,921, filed July 15, 1927, I am able to transfer various different sized disk records to and from the turntable without at any time shifting or varying the distance between the record rack and said turntable.

In the construction shown in the drawings, each unit of the record rack comprises a strip of sheet metal bent upwardly into elongated U-shape from a base portion 1 upon which it is mounted. The arms of the U form supporting members 2 and 3 which are in spaced parallel relation so as to receive a disk record therebetween. The upper ends of the members 2 and 3 are provided with arms 4 and 5 which are adapted to yieldingly embrace opposite sides of a disk record 6 placed between the supporting members 2 and 3 and accurately position laterally, the edge portion 7 of said disk record so that, said edge or marginal portion being thus held in a vertical plane, it can be grasped and gripped by the jaws of a transfer mechanism of the type herein referred to. The upper ends of the supporting members 2 and 3 are in the form

of circular heads which are in spaced parallel relation to each other with the exception of the upper forward margins. These portions are bent or flared outwardly with respect to each other as shown at 8 and 9 for the purpose of guiding a record into position between the supporting members.

The supporting member 2 has lugs or ears 10, 11 and 12 struck out at right angles to the plane thereof which are in alignment and which have axially aligned apertures therein for journalling a rock shaft 13. One end of the rock shaft 13 is bent at right angles to form a transversely disposed finger 14 which is adapted to pass through a slot 15 in member 2 and a slot 16 in supporting member 3. The finger 14 thus passes into and through the space between the supporting members and is of such size that it will pass through the center hole in a standard disk record when said center hole comes in registry therewith for the purpose of supporting the record.

Means are provided for normally rocking or moving the finger 14 to a vertical position out of the space between the supporting members and comprise a counterweight 17 secured to the rock shaft 13 and normally supported on an outwardly extending shelf 18 formed by striking a portion of the member 2 outwardly at right angles to the plane thereof.

Means are provided for yieldingly rocking or moving the finger 14 into the path of travel of a record being placed in the rack and comprise a light or weak torsion spring 19 which surrounds and is carried on the rock shaft 13 between the lugs 10 and 12. One end of the spring 19 is curled around the tapered base of the counterweight 17 and the other end 20 thereof extends outwardly at right angles to the axis of the rock shaft 13 and is swingable into and out of the path of travel of a record being placed in the rack; that is, into and out of the space between the supporting members 2 and 3 through slots 21 in the supporting members 2 and 3.

In the operation of this record rack, as a record is slipped downwardly edgewise between the members 2 and 3, its edge will strike the arm 20 of the torsion spring 19 and rock the finger 14 inwardly through the slot 15 until its outer tip end strikes the face of the record at which time further downward movement of the record winds up the spring 19, placing it under tension. When the record has been lowered to a point where the center hole comes in registry with the outer end of the finger 14 which is yieldingly pushing against the face of the record, the finger 14 will enter said center hole by reason of the tension on the spring 19. Further downward movement of the record rotates the rock shaft 13 so that the finger 14 lies horizontally crosswise of the space between the supporting members with its outer end resting on the bottom of the slot 16 and thereby supports the record 6.

When a record is removed from the rack, initial upward movement will swing the finger 14 upwardly so as to cause the counterweight 17 to swing out and downwardly from a vertical position. As the record passes out from between the supporting members, the end 20 of spring 19 and the tip end of the finger 14 will both ride against the face of the record as shown in Fig. 7 of the drawings. As the lower edge of the record rises above the slots 21, the end 20 of the torsion spring will pass through said slots thereby relieving the tension of the spring and thus permitting the counterweight 17 to rotate downwardly on to its shelf 18 and thus bring the finger 14 to a vertical position as shown in Fig. 6.

As shown in Fig. 8, when a record is placed into the rack, the lower edge thereof passes by the finger 14 before it strikes the end 20 of spring 19 so that there is no liability of the finger 14 being rocked into the space between the supporting members before the record is in position to abut against its outer end.

Although but one specific embodiment of this invention has been herein shown and described, it will be understood that numerous details of the construction shown may be altered or omitted without departing from the spirit of this invention as defined by the following claims.

I claim:

1. A disk record rack comprising a supporting member, a rock shaft journalled on said member, a transversely disposed finger on said rock shaft adapted to move into and out of the path of travel of a record being placed in or removed from said rack, means for normally rocking said finger out of said path of travel and yielding means adapted to be engaged by a record being placed in said rack for moving said finger into said path of travel so as to engage said record by passing through the center hole thereof.

2. A disk record rack comprising a pair of supporting members in spaced relation to receive a record therebetween, a rock shaft journalled on one of said members, a transversely disposed finger on said shaft adapted to move into and out of the space between said members, means for normally rocking said finger out of said space and yielding means adapted to be engaged by a record placed in said rack for rocking said finger into said space to engage said record by passing through the center hole thereof.

3. A disk record rack comprising a pair of supporting members in spaced relation to receive a record therebetween, a rock shaft journalled on one of said members, a transversely disposed finger on said shaft adapted

to move into and out of the space between said members, a counterweight for normally rocking said finger out of said space and a torsion spring having one end swingable into and out of said space, said swingable end being positioned so as to be engaged by a record placed in said rack for rocking said finger into said space to engage said record by passing through the center hole thereof.

4. A disk record rack comprising a pair of supporting members in spaced relation to receive a record therebetween, means on said supporting members for engaging a disk record through the center hole thereof for supporting the same and arms on said supporting members for accurately positioning laterally one edge of said supported record.

5. A disk record rack comprising a sheet metal strip bent up in elongated U-shape to form a pair of supporting members spaced so as to receive a record therebetween and means on one of said members for engaging a disk record through the center hole thereof for supporting the same.

6. A disk record rack comprising a sheet metal strip bent up in elongated U-shape to form a pair of supporting members spaced so as to receive a record therebetween, means on one of said members for engaging a disk record through the center hole thereof for supporting the same and arms on the upper ends of said supporting members for accurately positioning laterally one edge of a record placed between said members.

7. A disk record rack comprising a sheet metal strip bent up in elongated U-shape to form a pair of supporting members spaced so as to receive a record therebetween, arms on the upper ends of said supporting members for accurately positioning laterally one edge of a record placed between said members, a rock shaft journalled on one of said members, a transversely disposed finger on said shaft adapted to move into and out of the space between said members through a slot in the member upon which said shaft is mounted, a counterweight on said shaft for normally rocking said finger out of said space and a torsion spring having one end secured to said rock shaft and its other end swingable into and out of said space through a slot in said member, said swingible end being positioned so as to be engaged by a record placed in said rack for yieldingly rocking said finger into said space to engage said record by passing through the center hole thereof when said center hole comes in registry with said finger.

In testimony whereof. I have hereunto set my hand at Orlando, Florida, this 12th day of March, 1929.

BERTRAM C. KENYON.