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K. E. YUNGSTROM

1,453,966

REPEATING MECHANISM FOR PHONOGRAPHS

Filed April 15, 1922

Fig. 1.

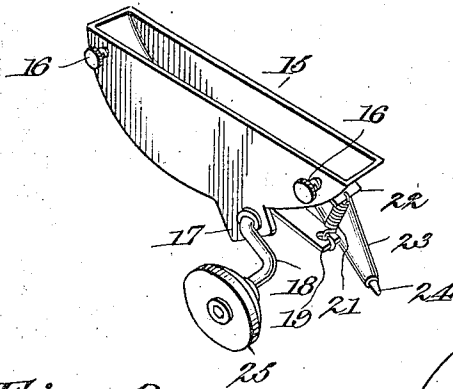


Fig. 5.

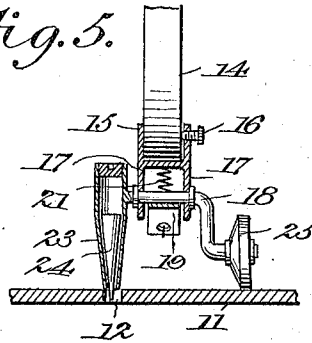


Fig. 3.

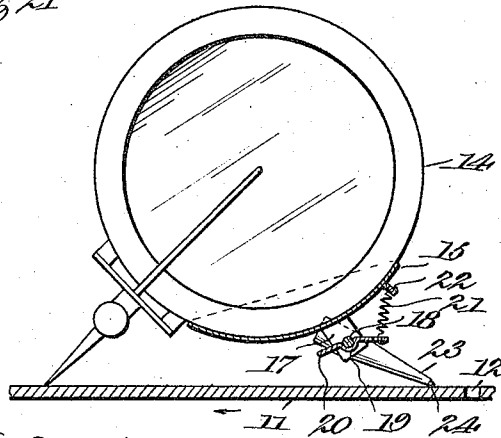


Fig. 2.

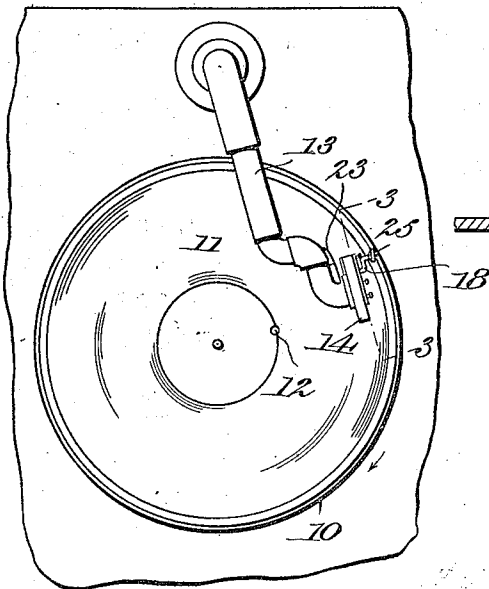
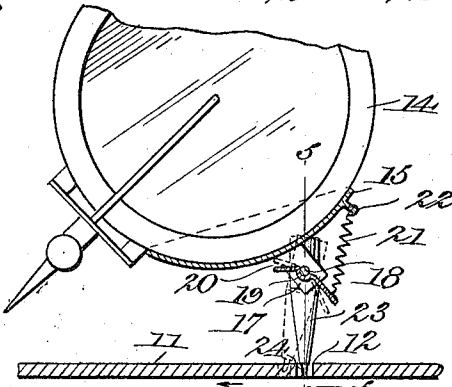


Fig. 4.



Knut E. Yungstrom.
INVENTOR

BY Victor J. Enns
ATTORNEY

WITNESS:

Frederic W. Ely

UNITED STATES PATENT OFFICE.

KNUT EMIL YUNGSTROM, OF WHITE PLAINS, NEW YORK.

REPEATING MECHANISM FOR PHONOGRAPHS.

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To all whom it may concern:

Be it known that I, KNUT EMIL YUNGSTROM, a citizen of Sweden, residing at White Plains, in the county of Westchester and State of New York, have invented new and useful Improvements in Repeating Mechanism for Phonographs, of which the following is a specification.

This invention relates to repeating mechanism for phonographs, and the principal object is to provide a record actuated means for effecting automatic repeating of a phonograph record.

Another object is to provide a device which shall be simple of construction, cheap to manufacture, and highly efficient for the purpose for which it is designed.

With these and other objects in view, the invention resides in certain novel construction and combination and arrangement of parts, the essential features of which are hereinafter fully described, are particularly pointed out in the appended claims, and are illustrated in the accompanying drawing, in which:—

Figure 1 is a perspective view of the device per se.

Figure 2 is a top plan view showing my invention as applied to the sound box of a phonograph.

Figure 3 is an enlarged sectional view showing parts in normal position.

Figure 4 is a view similar to Figure 3 showing the parts in operative position.

Figure 5 is a sectional view on the line 5—5 of Figure 4.

Like characters of reference refer to like parts in all views.

Referring to the drawing in detail, 10 represents a turn table and 11 a record of an ordinary phonograph. The record is preferably provided with an aperture 12 near its center for a purpose which will presently be described. The tone arm is shown at 13 and the sound box at 14.

The device itself comprises a housing 15 in the form of a segment of a cylinder, which is secured to the sound box 14 by set screws 16. The housing 15 is extended into a pair of ears 17 in which is mounted a small crank shaft 18. Secured to the shaft 18 between the ears 17 is a member 19 one end of which at 20 forms a stop for preventing over rotation of the shaft in one direction. The other end of member 19 is connected by a spring 21 with a lug 22

mounted on the housing 15, said spring tending normally to hold the parts in the position shown in Figure 3.

Secured to the inner end of the shaft 18 is a conical shaped container 23 the lower end of which is apertured to permit a conical peg 24 to move freely into and out of the conical container 23. The purpose of making members 23 and 24 conical in shape is so that while the peg may be extruded to the desired extent it will not be permitted to entirely drop out of member 23, and the conical formation of the parts tends to permit a freer movement of the pin in its container.

Mounted on the opposite end of the shaft 18 is a roller 25 preferably of rubber so as not to scratch the record in running over it. The end of the shaft which supports the roller is bent at a slight angle so that when the roller rests on the record it will be arranged diagonally of the grooves.

The operation of the device is as follows:—

When the record is first started all of the parts are in the position shown in Figure 2. As the sound box travels across the record the pin 24 finally drops into the aperture 12 and as the disk rotates, the pin 24 and container 23 rotate the shaft 18 so as to bring the roller 25 into contact with the record. The edge of the aperture now forces the pin 24 up in its container and as the record rotates the grooves operating against the roller 25 drive the sound box back toward the beginning of the record. When the roller 25 drops off the edge of the record, the needle again comes into contact therewith, and the spring 21 draws the parts back again into normal position. It is to be understood that when the roller 25 is in contact with the disk, the needle of the phonograph is thereby raised out of contact.

While I have described what I deem to be the most desirable embodiment of my invention, it is obvious that many of the details may be varied without in any way departing from the spirit of my invention, and I therefore do not limit myself to the exact details of construction herein set forth nor to anything less than the whole of my invention limited only by the appended claims.

What is claimed as new is:—

1. A device of the class described comprising attaching means for securing the device to a sound box, a rocker shaft support-

ed thereby, means on one end of said shaft for tilting the same, and means on the other end of said shaft adapted to co-act with the grooves of a record disk as and for the purpose specified.

2. A device of the class described comprising in combination with the sound box, a phonograph, a housing adapted to be secured thereto, an apertured record, a shaft mounted on said housing and rotatable by said record by its aperture, a roller on said shaft and movable thereby into contact with said record, and a spring for returning said shaft to normal position.

3. In combination with a sound box of a phonograph, a record disk having an aperture therein, a device comprising attaching means therefor, a shaft carried thereby, means on one end of said shaft adapted to co-act with the aperture in said record disk after the record has been played, and means on the other end of said shaft engageable with the grooves of said record disk as and for the purpose specified.

4. In combination with a sound box of a phonograph, a record disk having an aperture therein, a device comprising attaching means therefor, a shaft carried thereby, means on one end of said shaft adapted to

co-act with the aperture in said record disk after the record has been played, and means on the other end of said shaft engageable with the grooves of said record disk, and means correlated with said shaft for returning the same to its normal position as and for the purpose specified.

5. In a mechanism for elevating a sound box so as to position the stylus above and out of contact with a record tablet, a member having means for connection with the sound box, said means supporting the member for tilting movement with respect to the record tablet and adapted to drag upon the surface of the tablet when the stylus is in sound producing position, whereby to permit said member to be brought into engagement with a stop means on the tablet, whereby to tilt the member and lift the sound box with respect to the record and to dispose the stylus out of contact therewith, and means carried by the member for returning the sound box to a starting position after engagement of the member with said stop means.

In testimony whereof I have affixed my signature.

KNUT EMIL YUNGSTROM.