

D. HOLDEN.
 PHONOGRAPH REPRODUCER.
 APPLICATION FILED JULY 10, 1908.

904,959.

Patented, Nov. 24, 1908.

Fig. 1

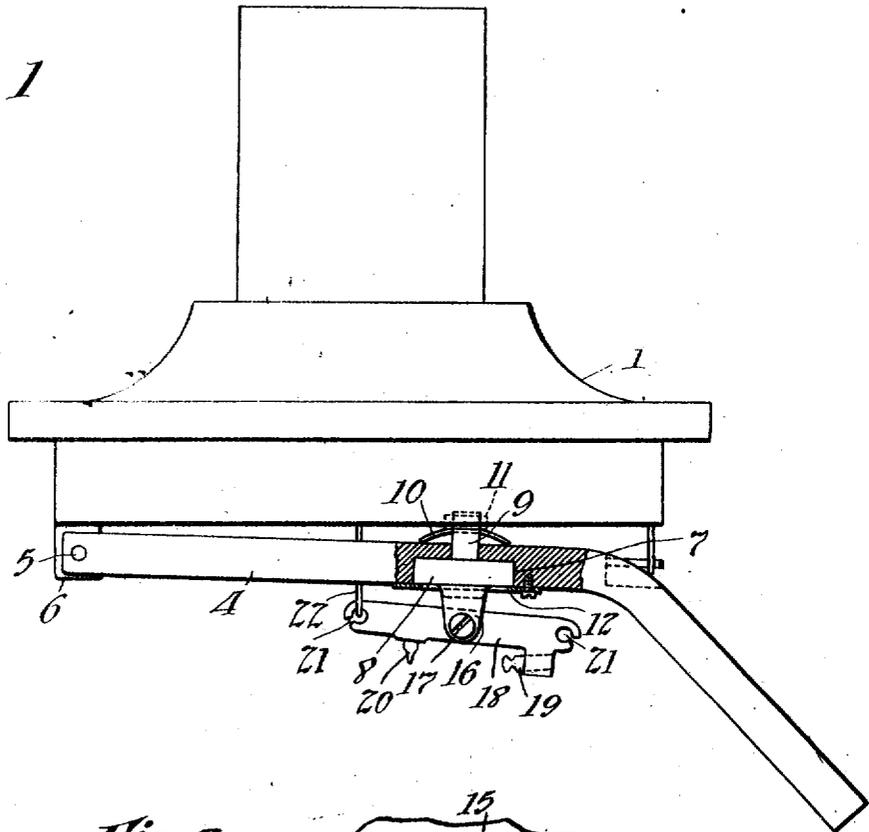
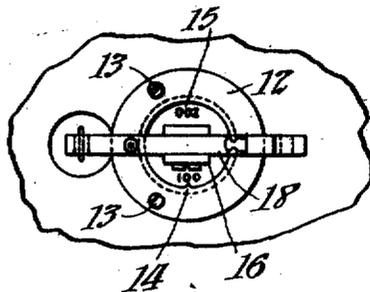


Fig. 2



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UNITED STATES PATENT OFFICE.

DELOS HOLDEN, OF UPPER MONTCLAIR, NEW JERSEY, ASSIGNOR TO NEW JERSEY PATENT COMPANY, OF WEST ORANGE, NEW JERSEY, A CORPORATION OF NEW JERSEY.

PHONOGRAPH-REPRODUCER.

No. 904,959.

Specification of Letters Patent.

Patented Nov. 24, 1908.

Application filed July 10, 1908. Serial No. 442,978.

To all whom it may concern:

Be it known that I, DELOS HOLDEN, a citizen of the United States, and a resident of Upper Montclair, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Phonograph-Reproducers, of which the following is a description.

My invention relates to phonograph reproducers which are provided with a pair of reproducing styluses adapted to track records of different pitch, as, for example, records of one-hundred and two-hundred threads per inch respectively, said styluses being mounted in a support which may be moved or shifted so as to bring either of said styluses into and out of operative position with respect to the record surface as desired. Such a reproducer is disclosed and broadly claimed in an application filed by Peter Weber, March 26, 1908, Serial No. 423,383, wherein it is proposed to mount styluses of this character upon separate levers which are separately pivoted to a support which is rotatably mounted upon the floating weight of the reproducer.

According to the present invention, only one stylus lever is used, and the same is pivoted on a horizontal axis to a fulcrum which latter is pivoted on a vertical axis to the floating weight and both styluses are carried by said lever, being preferably mounted on points at opposite sides of the fulcrum and equidistant therefrom.

In order that the invention may be more fully understood, reference is hereby made to the accompanying drawing of which Figure 1 is a side elevation, partly in section, of a phonograph reproducer constructed in accordance with my invention, and Fig. 2 is a bottom plan view of the stylus-lever, fulcrumal support therefor and adjacent portion of the floating weight.

The reproducer shown comprises the usual sound box body 1 within which the diaphragm is clamped, the floating weight 4 being pivoted at 5 to the block 6 carried by the body 1, and movable on a vertical axis with respect thereto. The weight 4 is formed with a recess 7, and within the same is a circular block 8 having an integral stud 9 surrounding which is a spring washer 10 adapted to be compressed by the nut 11, threaded

on said stud so as to draw said block 8 into frictional engagement with the floating weight, said block being retained in position by an annular plate 12 secured by screws 13 threaded in the floating weight. The plate 12 is formed with an index finger 14 adapted to cooperate with indicating numerals 15 applied to the block 8, to designate which of the styluses is in operative position with respect to the record surface, or in other words whether the reproducer is in adjustment for operating upon records having one hundred or two hundred threads per inch.

There is a pair of lugs 16 depending from the block 8 which receive the horizontal screw 17 upon which the stylus lever 18 is pivotally mounted. The said lever is provided with a stylus 19 suitable for operating upon records having one hundred threads per inch and a stylus 20 suitable for operating upon records having two hundred threads per inch, said styluses being on opposite sides of the axis or fulcrum of the said lever and equidistant therefrom. Each end of the lever 18 is formed with a notched opening 21 adapted to receive the eye formed in the end of the link 22, the upper end of which is connected to the diaphragm.

In the position shown in the drawing, the stylus 19 is in proper position for operating upon a phonograph record. In order to bring the stylus 20 into operative position, the end of the link 22 is removed from the notch 21 of the lever 18, and the block 8 is rotated through an angle of 180°, bringing the other notch 21 into proximity to the link 22, which is then engaged with the same. In this position the indicating numerals 200 will be opposite the pointer 14.

Having now described my invention what I claim is:

1. In a phonograph reproducer, the combination of the diaphragm and floating weight, a fulcrum pivoted to said weight, a lever pivoted to said fulcrum, a pair of styluses carried by said lever and means for interchangeably connecting said lever with said diaphragm at points at opposite sides of its pivot or fulcrum, substantially as set forth.

2. In a phonograph reproducer, the combination of the floating weight, the fulcrum pivoted to said weight, and a stylus lever

provided with a pair of styluses and pivoted to said fulcrum at a point between the styluses, substantially as set forth.

5 3. In a phonograph reproducer, the combination of the floating weight, fulcrum carried by said weight, and stylus lever provided with a pair of styluses and pivoted to said fulcrum at a point between the styluses, said fulcrum being rotatably mounted upon
10 said weight and frictionally held thereto, substantially as set forth.

4. In a phonograph reproducer, the combination of the floating weight, fulcrum pivoted to said weight, stylus lever provided
15 with a pair of styluses, and pivoted to said fulcrum at a point between the styluses, and

indicating means for designating both operative positions of said stylus lever, substantially as set forth.

5. In a phonograph reproducer, the combination of the floating weight, the fulcrum pivoted to said weight, and a stylus lever provided with a pair of styluses pivoted to said fulcrum at a point substantially in a line with the axis upon which said fulcrum
20 turns, substantially as set forth.

This specification signed and witnessed
25 this 8th day of July 1908.

DELOS HOLDEN.

Witnesses:

FRANK D. LEWIS,

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