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PATENTED SEPT. 1, 1908.

W. J. PATTERSON.
SOUND BOX FOR TALKING MACHINES.
APPLICATION FILED NOV. 23, 1907.

Fig. 1.

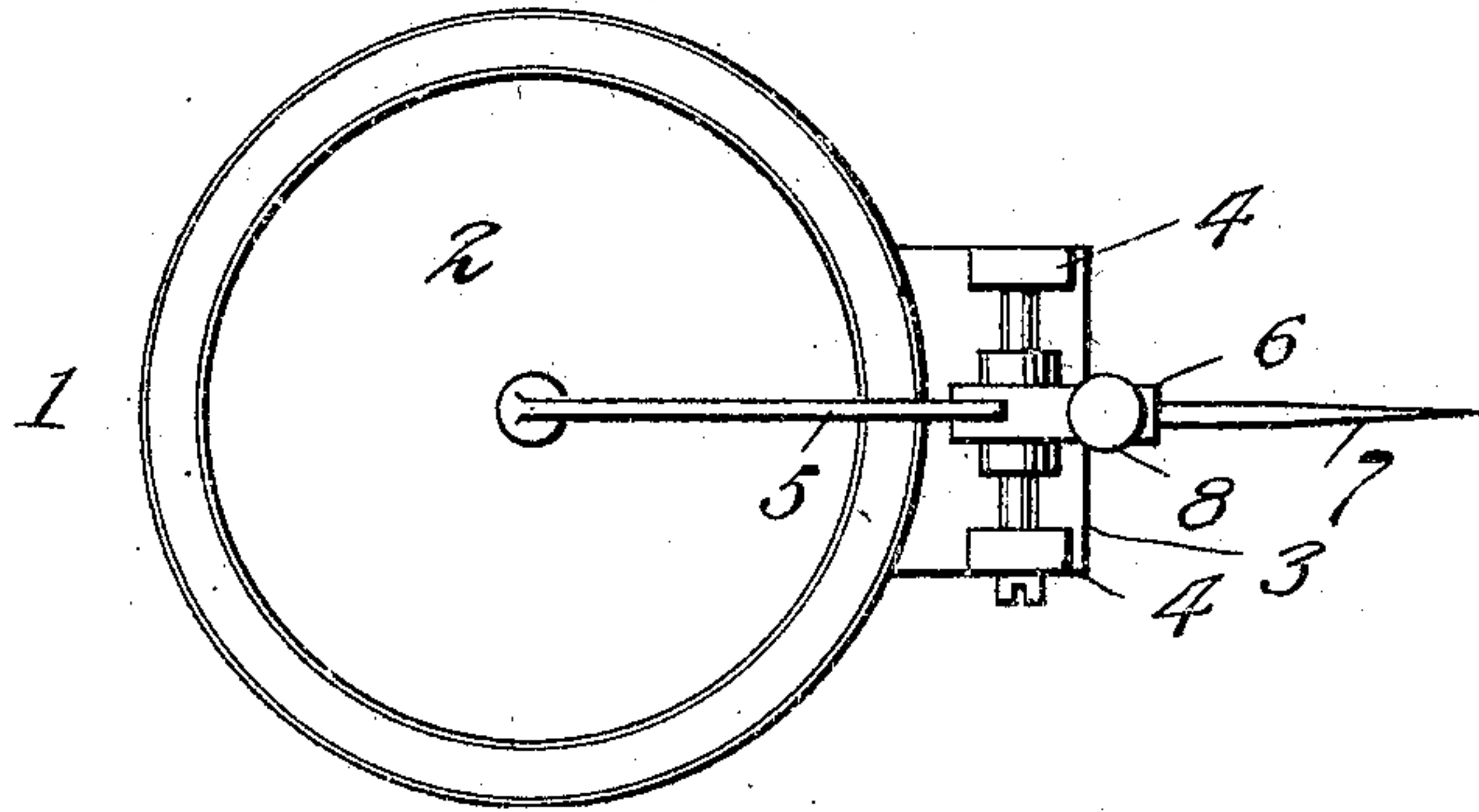


Fig. 2.

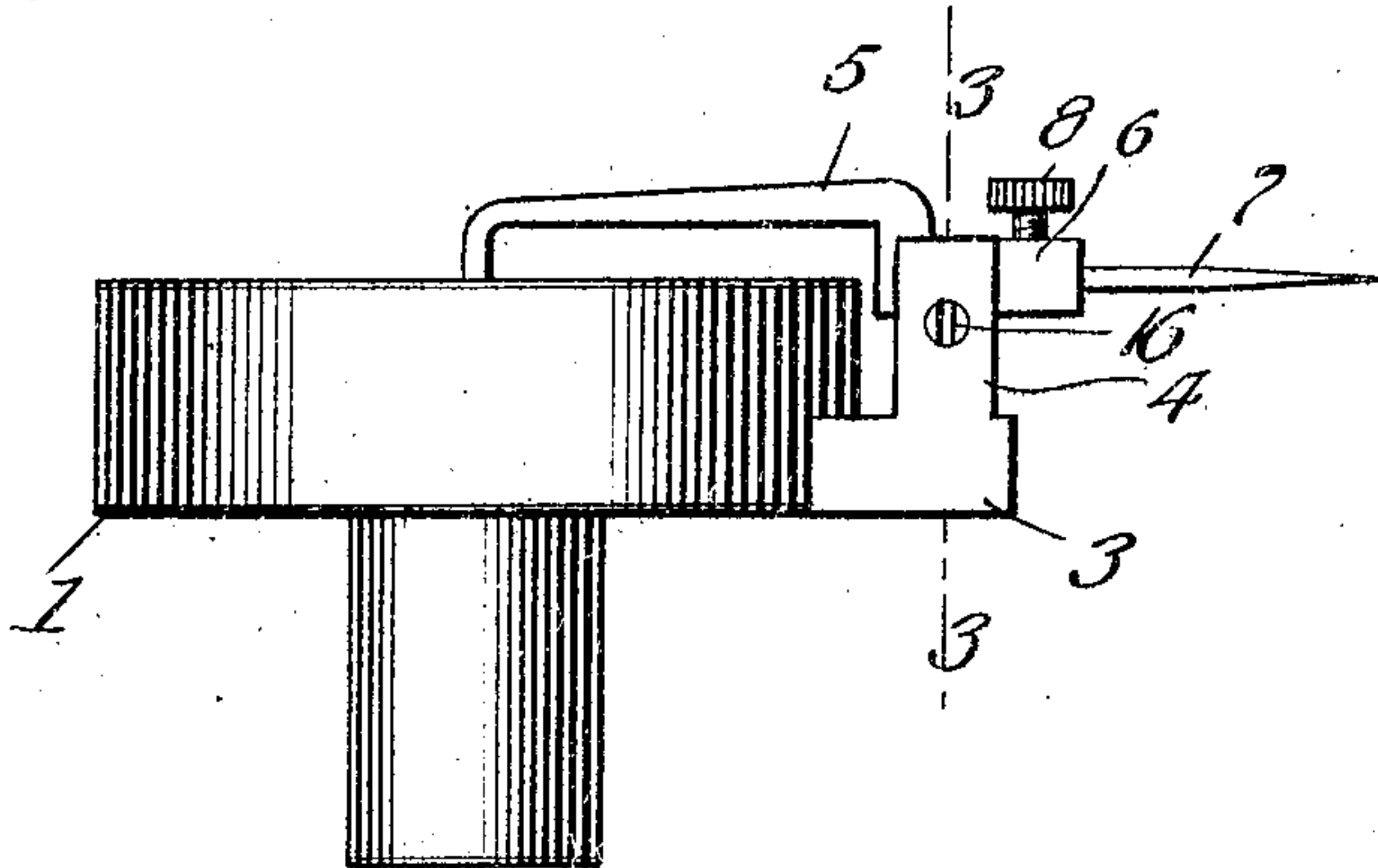
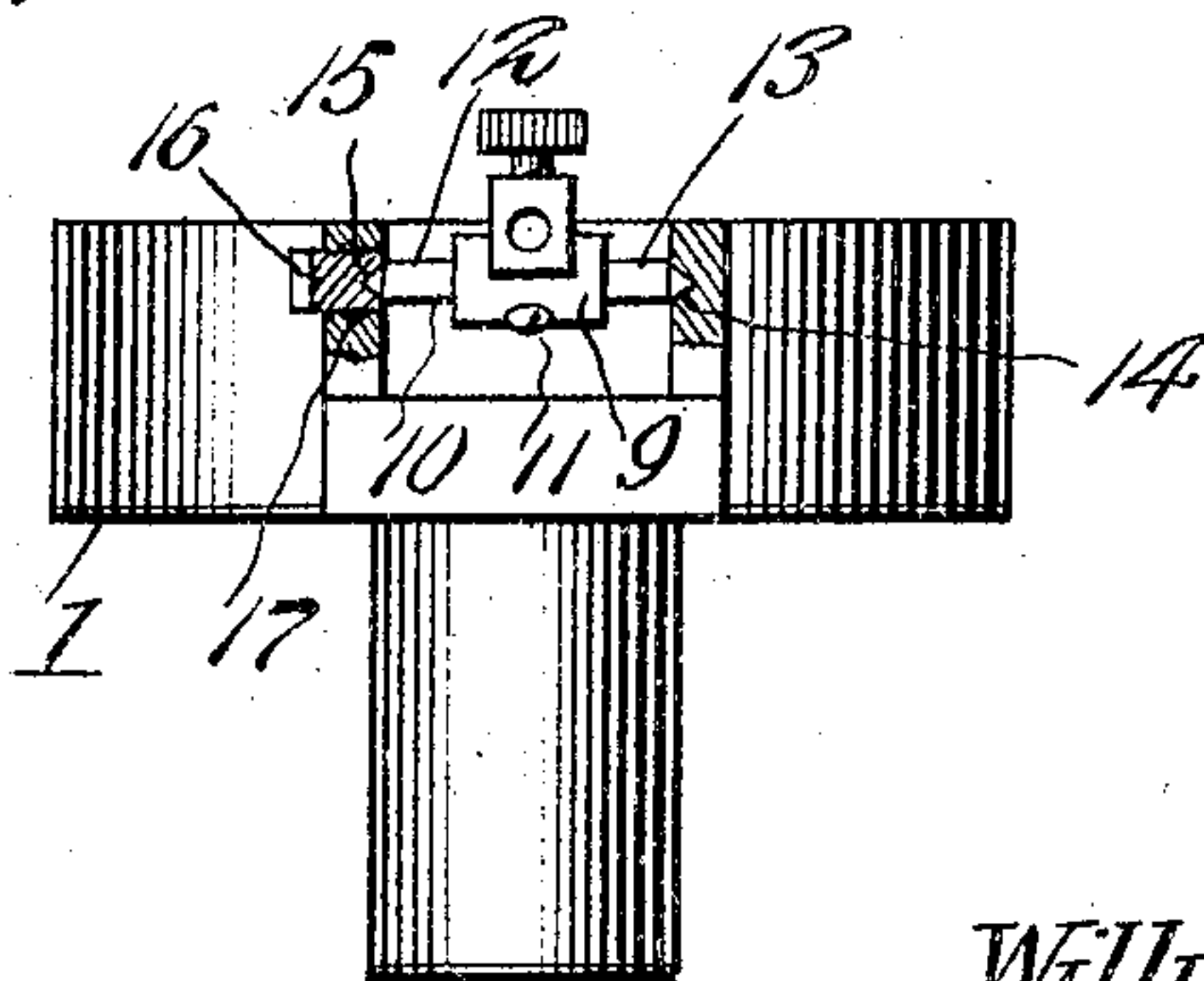


Fig. 3.



Witnesses

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WILLIAM J. PATTERSON, OF COLORADO SPRINGS, COLORADO.

SOUND-BOX FOR TALKING-MACHINES.

No. 897,774.

Specification of Letters Patent.

Patented Sept. 1, 1908.

Application filed November 23, 1907. Serial No. 403,559.

To all whom it may concern:

Be it known that I, WILLIAM J. PATTERSON, a citizen of the United States, residing at Colorado Springs, in the county of El Paso and State of Colorado, have invented new and useful Improvements in Sound-Boxes for Talking-Machines, of which the following is a specification.

This invention relates to improvements in sound-boxes for talking machines, and particularly to improved means for pivotally mounting the stylus-carrying bar or lever upon the box, the object of the invention being to provide a novel means for mounting the bar by which a free and easy vibratory action thereof under the pressure of the stylus is permitted and a delicate and sensitive transmission of the movements of the needle to the diaphragm insured.

A further object is to provide a construction of mounting for the bar or lever by which the ready application and removal of the bar is permitted, and by which the pivot bearing may be quickly and conveniently adjusted to compensate for wear.

The invention consists of the features of construction, combination and arrangement of parts hereinafter fully described and claimed, reference being had to the accompanying drawing, in which:—

Figure 1 is a front or face view of a sound-box embodying my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a sectional elevation on line 3—3 of Fig. 1.

Referring to the drawing, the numeral 1 designates a sound-box which may be of conventional or any preferred form, and constructed of any suitable material, and 2 denotes the diaphragm mounted therein.

Disposed upon one side of the sound-box is a laterally extending block or bracket 3 provided with a pair of spaced flanges or ears 4 disposed at right angles thereto in parallel relation to each other and projecting slightly beyond the front of the box. This block or bracket is designed to pivotally support the stylus-carrying bar or lever 5, which is connected at its inner end in the usual or any preferred manner with the diaphragm 2, and carries at its outer end a socket piece 6 to receive the stylus or needle 7 which is adapted to be clamped therein by a set screw 8. The socket piece 6 is formed or provided upon its under or rear side with a boss or supporting portion 9 having a transverse opening for the passage of a pivot pin or

shaft 10 removably secured thereto by a fastening screw or other suitable fastening 11. The ends of this pin, which extend laterally beyond the opposite sides of the boss, form trunnions or pivot members 12 and 13 journaled in the ears 4 to permit pivotal play of the lever. By this construction the pin or shaft when worn may be disconnected and a new one substituted therefor.

The extremities of the trunnions or pivot pins 12 and 13 are tapered or made of conical form, and the conical end of the pin 13 fits within a correspondingly shaped bearing recess 14 formed in one of the ears 4, while the conical end of the other bearing pin 12 fits within a similar bearing recess 15 in a bearing bushing 16 removably mounted upon the other ear 4. As shown, the said bushing is in the form of a screw plug, having a nicked outer end or head by which it may be adjusted by a screw driver or other tool, and said bushing fits within a screw-threaded receiving opening 17 in the ear. By this construction it will be observed that the bearings may be relatively adjusted by turning the screw to a greater or less extent in and out to secure a fine fit, thus adapting the arm or lever to be mounted for an extremely sensitive vibratory action.

In applying or removing the stylus-carrying bar from the bracket, which in effect forms a supporting yoke, the bushing or screw 16 is turned out to a sufficient extent to permit the pin 12 to move into the opening 17 far enough to disconnect the pin 13 from the recess 14, or to admit of its application within said recess, the opening 17 being of sufficient diameter to allow the pivot-carrying end of the stylus-bar to be tilted or disposed at an angle in the space between the ears, by which the pivot pins may be readily engaged with and disengaged from the bearings for the convenient application and removal of the bar. In the application of the bar, after the pin 13 is fitted in position, the bushing 13 is screwed in until it receives and bears with the desired pressure against the end of the pin 12, and it will be apparent that the degree of pressure may be varied to a nicety, to allow the pivot members to swing with the proper freedom and without undue looseness. It will thus be understood that the needle carrier and the parts thereof are bodily applicable to and removable from the bearing ears, so that a new needle bar and pivot shaft may be applied whenever occasion requires.

Upon loosening the screw 11 and removing the bushing 16, the shaft 13 is removable longitudinally through the opening 17, and a new shaft may be applied in like manner, thus facilitating the operation of applying a new shaft when the one in use has become worn.

It will be seen that the described construction of parts by which the lever or bar is pivotally mounted upon the sound-box not only allows the bar to be expeditiously applied and removed, but adapts the bar to swing with the required degree of freeness and the bearings to be adjusted to compensate for wear.

Having thus fully described the invention, what is claimed as new is:—

A sound-box provided at one side with a lateral bracket having spaced bearing ears extending at right angles therefrom parallel with said side and terminating adjacent the front of the box, one of said ears having directly formed therein a conical bearing recess and the other having formed therein a screw-threaded opening, an adjustable bearing bushing inserted in said opening and having

a niched outer end and formed with a conical bearing recess in its inner end, a stylus-carrying bar provided on its rear side with a boss projecting between the ears and having a transverse opening, a shaft extending through said opening and beyond the sides of the boss and having conical ends journaled in the respective bearing recesses, and a fastening detachably securing the shaft to the boss, the said bar being adapted for tilting movement in the space between the ears when the bushing is turned outward to a prescribed extent to permit of the insertion and withdrawal of said conical ends of the shaft within and from said bearing recesses, whereby the bar and parts as a whole may be bodily applied and removed, said shaft also being insertible and withdrawable longitudinally through the bearing opening when the bushing is removed.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM J. PATTERSON.

Witnesses:

HOWARD MARSHALL DODD

WILLIAM JOSEPH PATTERSON, Jr.