

No. 850,883.

PATENTED APR. 16. 1907.

E. D. GLEASON.
SOUND BOX.

APPLICATION FILED FEB. 8, 1907.

Fig. 1.

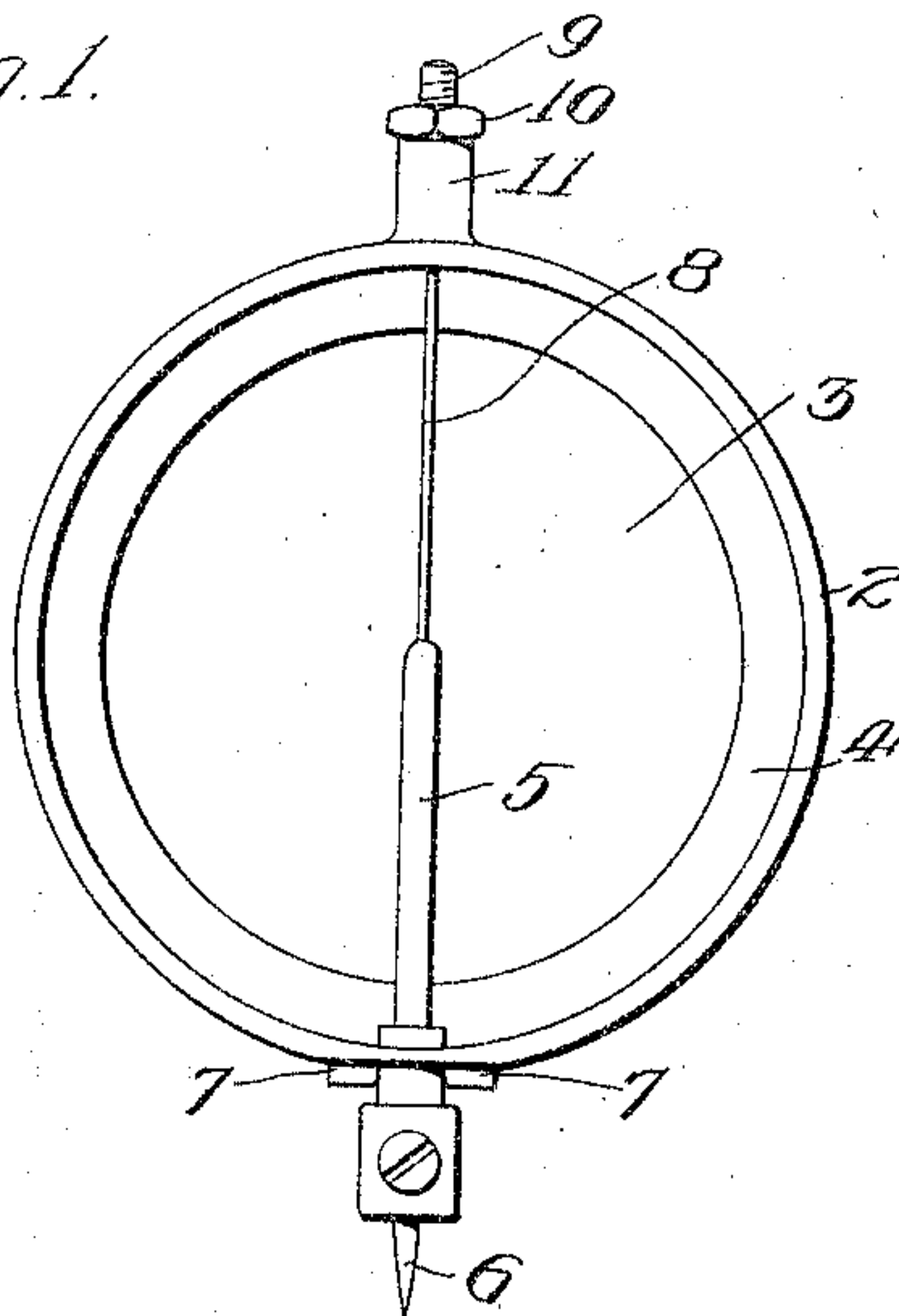
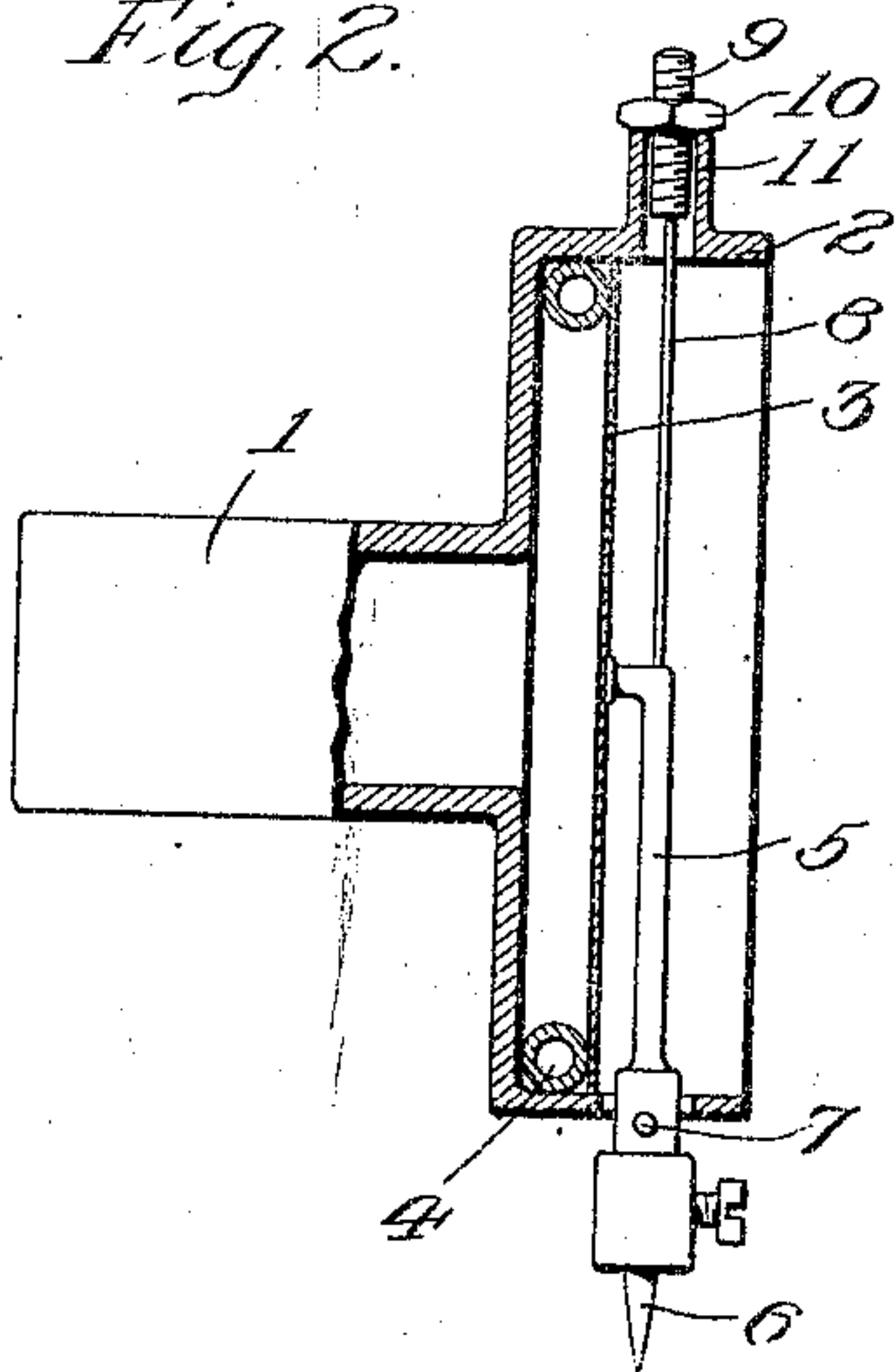


Fig. 2.



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SOUND-BOX.

No. 850,883.

Specification of Letters Patent.

Patented April 16, 1907.

Original application filed July 26, 1902, Serial No. 117,134. Divided and this application filed February 8, 1907. Serial No. 356,319.

To all whom it may concern:

Be it known that I, EDWARD D. GLEASON, a citizen of the United States, and a resident of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Sound-Boxes, of which the following is a full, clear, and complete disclosure, this application being a division of my application for patent filed July 26, 1902, Serial No. 117,134.

My invention relates to sound-boxes, more particularly to that class of the same in which the stylus is tensioned on its bearings.

The object of my invention is to provide the stylus-lever with an elastic connection or mounting whereby a certain amount of tension will always be imparted to the diaphragm, and better results in reproduction will be attained than when such elastic connection or mounting is not provided.

In the accompanying drawings, Figure 1 is a front view of my sound-box, and Fig. 2 is a sectional view of the same.

The sound-box has a tubular stem 1 with an enlarged or cup-shaped end 2, containing the diaphragm 3, the latter being mounted in this portion of the sound-box in any available manner. Seated in the cup-shaped portion 2 is an internal annular elastic ring 4, which forms a circumferential bearing for the diaphragm 3. The stylus-lever 5 projects through an opening on one side of the cup-shaped portion 2 of the sound-box casing and is provided with a detachable stylus 6. Projecting from opposite sides of said stylus-lever and bearing against a flattened portion on the outside of the case are trunnions 7 7. The said trunnions form an antifriction bearing or fulcrum upon which the stylus-lever can oscillate under action of the undulatory groove of the sound-record upon the stylus 6. A spring 8 is connected with the inner end of the stylus-lever and to that portion of the diaphragm-casing opposite the portion through which the stylus-lever projects. At the connection between the diaphragm-casing and the spring is a threaded rod 9, engaged by a nut 10, the latter bearing upon the outer end of the tubular stud or the boss 11 on the diaphragm-casing, so as to provide for imparting any desired degree of tension to the spring 8 and likewise to the bearing upon which the stylus-bar oscillates.

Having now described my invention, what

I desire to claim and protect by Letters Patent is—

1. In a reproducer, a fulcrumed stylus-bar, a spring engaging said bar for exerting pressure to tension the bearing of said bar, said spring also engaging stationary means on the reproducer to one and the same side of the bearing as the engagement between said spring and bar, the points of engagement between the spring and said bar, between said spring and said stationary means, and the fulcrum-point, being substantially in longitudinal alinement.

2. In a reproducer, a stylus-bar fulcrumed on an antifriction-bearing, and a spring engaging said bar for exerting pressure to tension said bearing in a plane of the axis of oscillation thereof, said spring also engaging stationary means on another part of reproducer to one and the same side of said bearing as the engagement between said spring and bar.

3. In a sound recording and reproducing machine, the combination with a sound-box casing of a diaphragm, a stylus-bar having a transverse bearing, and an elastic and adjustable suspension engaging said stylus-bar in the rear only of said bearing, to hold said bearing in position.

4. In a sound recording and reproducing machine, the combination with a sound-box casing of a stylus-bar having a transverse bearing, a suspension engaging said stylus-bar in the rear only of said bearing, to hold the latter in position, and means adjustably securing said suspension.

5. In a sound recording and reproducing machine, the combination with a sound-box casing of a diaphragm, a stylus-bar mounted on an axial bearing in such a manner as to hold the said bar in contact with the sound-box and against longitudinal movement in one direction, a suspension attached to said stylus-bar and passing diametrically through the sound-box to the opposite side thereof, the said suspension exerting a pressure to hold said bearing under tension against the sound-box casing, and means for adjustably securing said suspension in position.

6. In a sound recording and reproducing machine, the combination with a sound-box casing of a diaphragm, a stylus-bar having an axial bearing on the sound-box casing, to hold the stylus-bar against longitudinal

movement in one direction, a suspension-wire
attached to said bar, the said wire exerting a
pressure to hold said bearing under tension
against the sound-box casing, and an adjust-
5 ing-nut for securing the wire at the opposite
side of said sound-box.

7. In a sound recording and reproducing
machine, the combination with a sound-box
casing of a diaphragm, a stylus-bar having
10 an antifriction-bearing against said casing
to hold the stylus-bar against longitudinal
movement in one direction, a suspension-

wire attached to the said stylus-bar, said
wire tensioning said bearing against said
casing, and means at the opposite side of the 15
casing for adjustably supporting said wire.

In testimony whereof I have hereunto set
my hand this 7th day of February, A. D.
1907.

EDWARD D. GLEASON.

Witnesses:

HARRY COBB KENNEDY,
ALEXANDER PARK.