

T. KRAEMER.
SOUND BOX FOR TALKING MACHINES.
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912,857.

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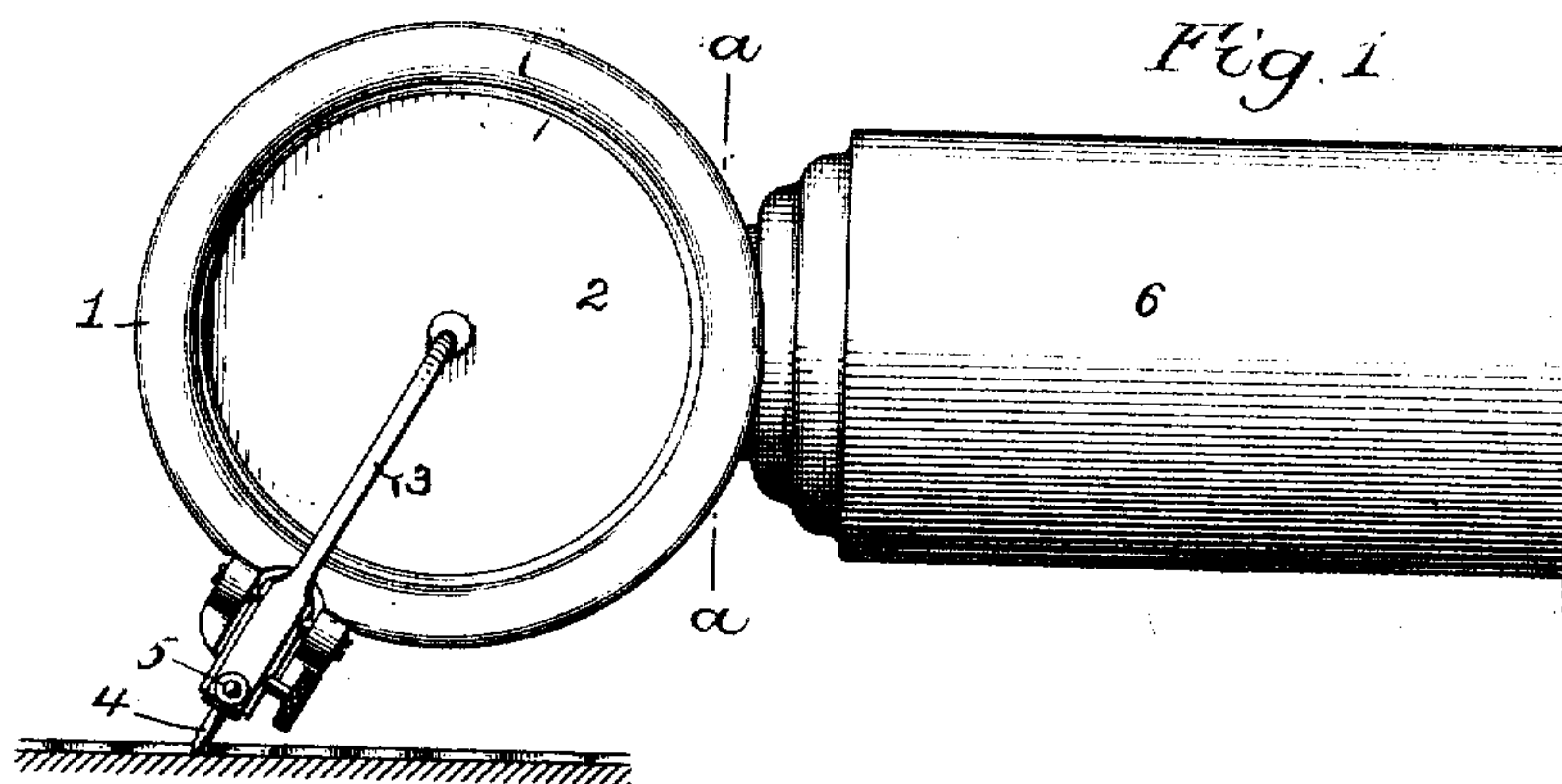


Fig. 1

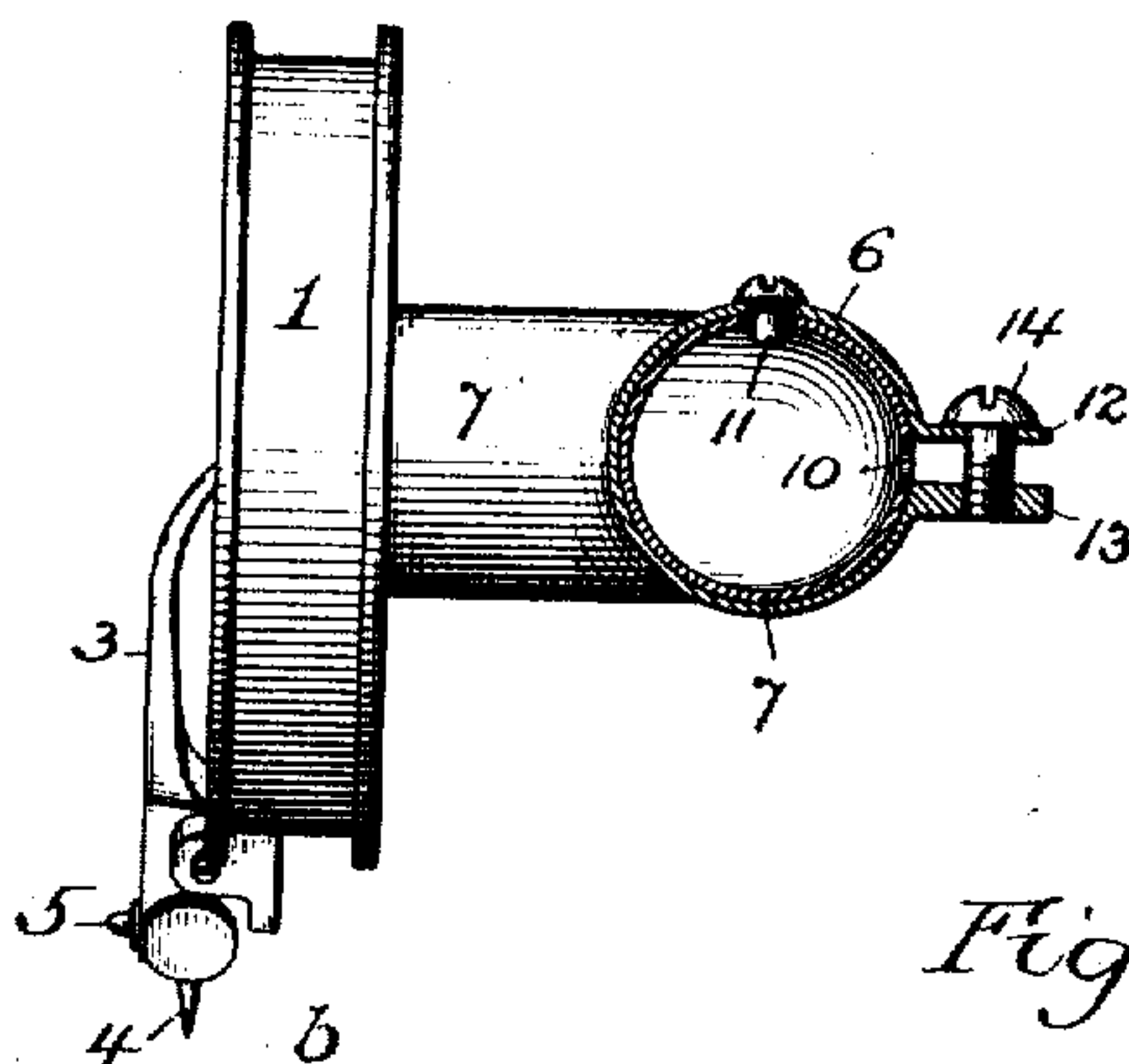


Fig. 2

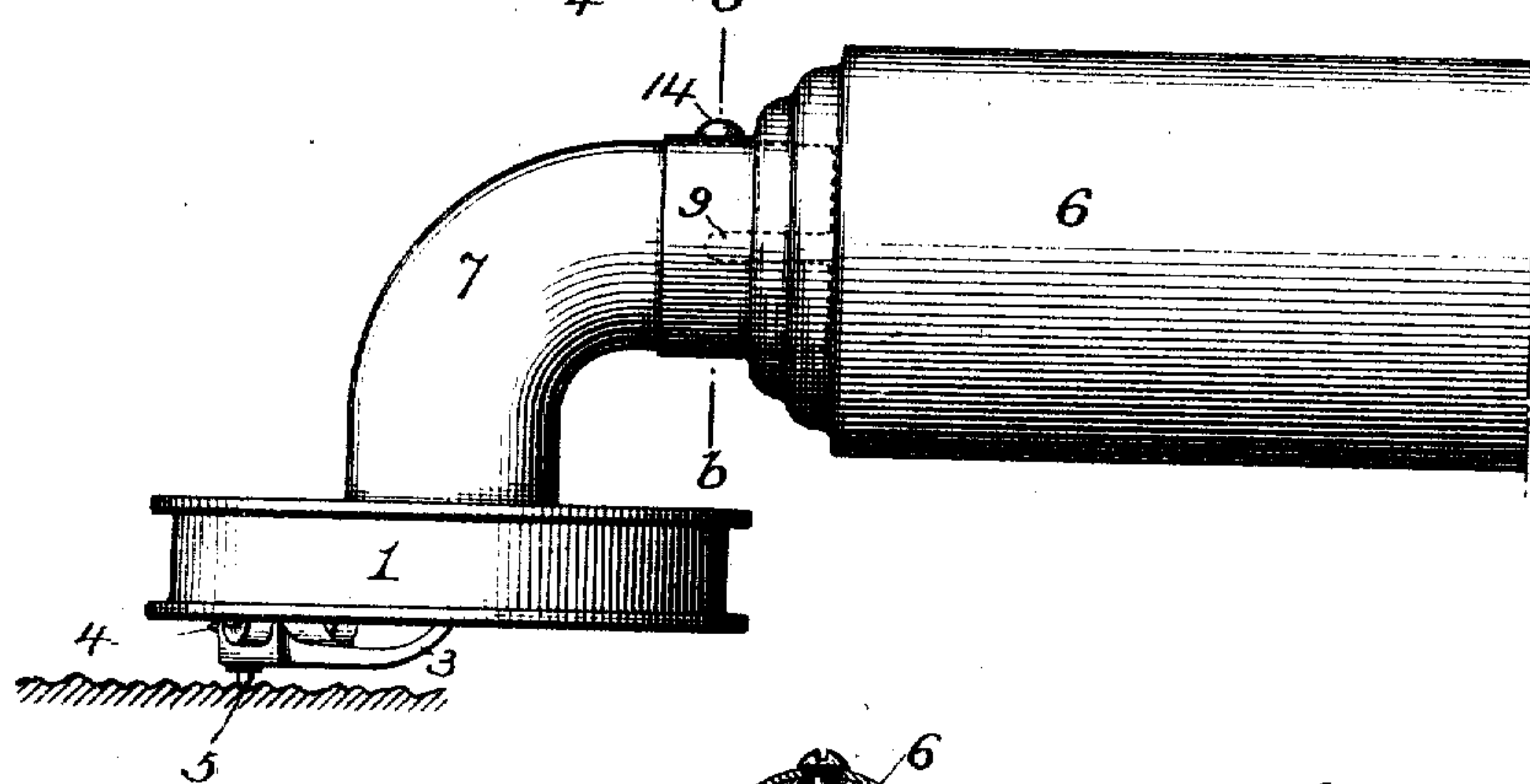


Fig. 3

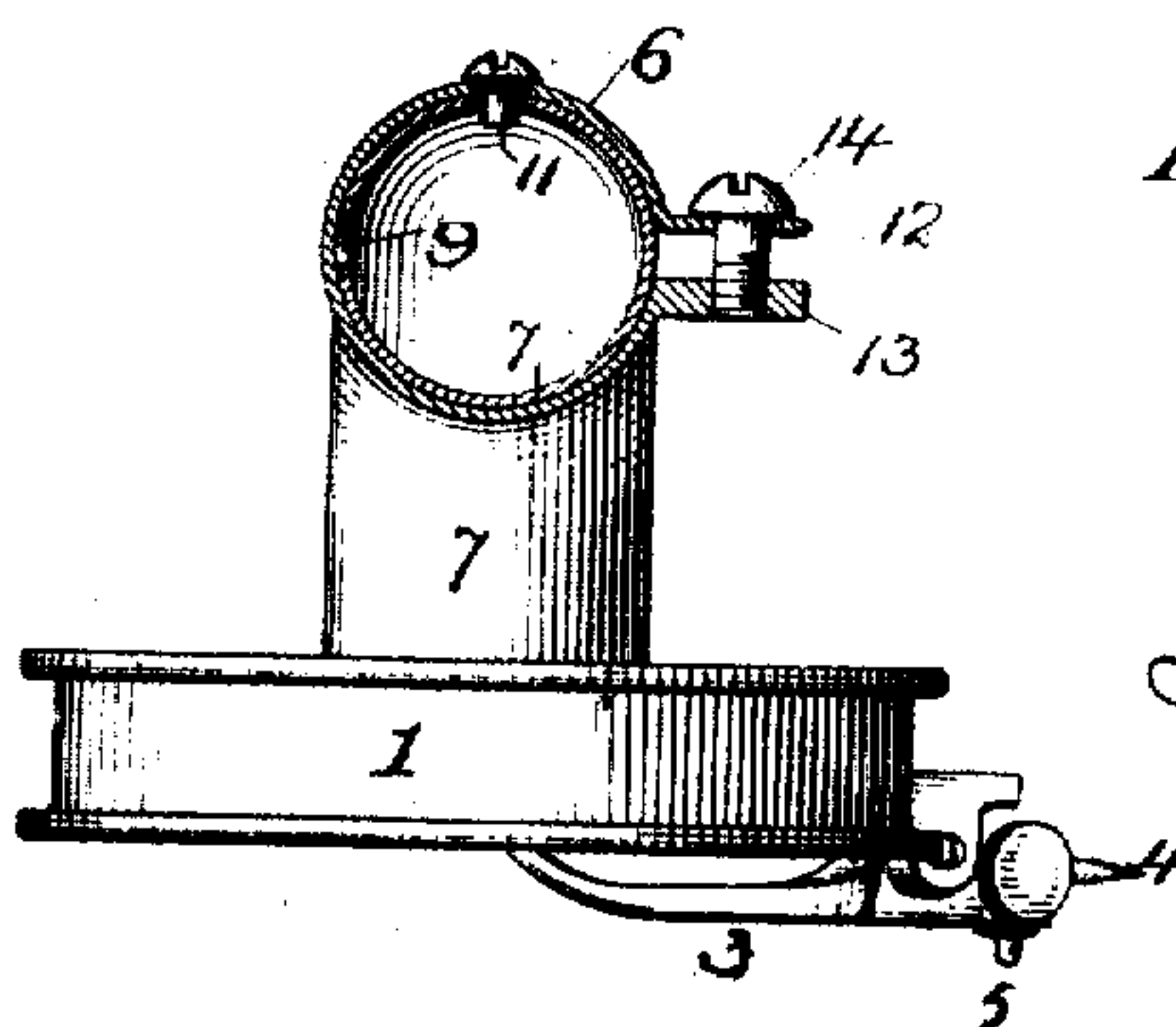


Fig. 4

Witnesses
Hamilton D. Turner
Kate A. Benda

Inventor
Thomas Kraemer
by his Attorneys
Smith & Frazier

UNITED STATES PATENT OFFICE.

THOMAS KRAEMER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HAWTHORNE & SHEBLE MANUFACTURING COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

SOUND-BOX FOR TALKING-MACHINES.

No. 912,857.

Specification of Letters Patent.

Patented Feb. 16, 1909.

Application filed August 5, 1907. Serial No. 387,193.

To all whom it may concern:

Be it known that I, THOMAS KRAEMER, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Sound-Boxes for Talking-Machines, of which the following is a specification.

The object of my invention is to so construct a sound box for talking machines that it can be used in connection with records either of the lateral-wave or hill-and-valley type. This object I attain in the manner hereinafter set forth, reference being had to the accompanying drawing, in which,

Figure 1 is a front elevation of a talking machine sound box and part of the hollow arm carrying the same, the sound box being adjusted for use in connection with a record of the lateral-wave type; Fig. 2 is a view, partly in elevation and partly in transverse vertical section, on the line *a—a*, Fig. 1; Fig. 3 is a view similar to Fig. 1, but showing the sound box adjusted for use in connection with a record of the hill-and-valley type, and Fig. 4 is a view, partly in elevation and partly in transverse section, on the line *b—b*, Fig. 3.

1 represents the casing of the sound box and 2 the diaphragm, which may be supported therein in any desired way, the stylus lever 3 bearing upon said diaphragm and being pivotally mounted upon the sound box casing so as to vibrate in a plane at a right angle to the plane of the diaphragm, constant contact of the inner end of the stylus lever with the diaphragm being maintained by securing these parts directly together.

One feature of my present invention consists in providing the stylus lever with two styluses 4 and 5, the stylus 4 projecting from the end of the lever so as to engage with a record having grooves of the lateral-wave type, as shown in Fig. 1, and the stylus 5 projecting from the back of the lever so as to engage with records having grooves of the hill-and-valley type, as shown in Fig. 3, whereby either type of record will cause vibration of the stylus lever in its proper plane of movement.

The stylus 4 may consist of the ordinary steel needle used in connection with the hard composition records usually employed in disk record talking machines, but as the stylus 5 may sometimes, if not usually, be employed in connection with cylindrical wax

records it is preferably composed of the conventional sapphire point commonly used in machines of that type, wherein the operating end is blunt or rounded.

The hollow arm of the talking machine is represented at 6, and in order to permit of the ready application of the sound box to said arm so that either stylus may be used, the tube 7 projecting from the back of the sound box is bent into elbow form, as shown in Fig. 3, one end portion of said tube engaging the end of the arm 6 and being adjustable to different positions therein, in order to permit the sound box to assume either the relation to the arm 6 shown in Figs. 1 and 2, for the use of the stylus 4, or the relation shown in Figs. 3 and 4, for the use of the stylus 5.

Preferably the elbow tube 7 of the sound box is of circular cross section, and that portion of the same which engages the end of the arm 6 has formed in it two slots 9 and 10 for the reception of a pin 11 carried by the arm 6, the slots being so disposed that when said pin engages the slot 9 the sound box will occupy the position shown in Figs. 1 and 2, and when it engages the slot 10 the sound box will occupy the position shown in Figs. 3 and 4, and will be locked in either position of adjustment.

In order to insure at all times a snug fit of the elbow pipe to the arm 6 the tubular end portion of said arm, which receives the end of the elbow pipe, is preferably split and provided with flanges 12 and 13, which are connected by a set screw 14, as shown in Figs. 3 and 4, whereby said split portion of the arm 6 can be caused to press upon the end of the elbow pipe 7 of the sound box with any desired degree of force.

I claim:—

1. A talking machine sound box having a diaphragm, and a pivoted stylus lever bearing on the diaphragm on one side of the fulcrum, and provided on the opposite side of said fulcrum with one stylus constructed for engagement with a record of the lateral-wave type and another stylus constructed for engaging a record of the hill-and-valley type, said latter stylus having a rounded operating end.

2. A talking machine sound box having a diaphragm, and a pivoted stylus lever bearing on the diaphragm on one side of the fulcrum and provided on the opposite side

said fulcrum with two styluses, one projecting in a plane parallel with the diaphragm and constructed for engaging a record of the lateral-wave type and the other projecting in a plane at a right angle to said diaphragm and constructed for engaging a record of the hill-and-valley type, said latter stylus having a rounded operating end.

3. A talking machine sound box having a diaphragm, and a pivoted stylus lever bearing on the diaphragm on one side of the fulcrum and provided on the opposite side of said fulcrum with one stylus projecting from the end of the stylus lever and constructed for engaging a record of the lateral-wave type, and another stylus projecting from the back of the lever and constructed for engaging a record of the hill-and-valley type, said latter stylus having a rounded operating end.

4. The combination of the hollow sound-box-carrying arm of a talking machine, with a sound box having a stylus lever provided with a plurality of styluses disposed at different angles, one constructed for engagement with a record of the lateral-wave type, and the other constructed for engagement with a record of the hill-and-valley type, said latter stylus having a rounded operating end, and means for adjustably mounting the

sound box on its carrying arm to accord with the different positions in which the stylus lever must be used.

5. The combination of the hollow sound-box-carrying arm of a talking machine with a sound box having a stylus lever susceptible of use in different positions, an elbow tube whereby said sound box is connected to its carrying arm, and means for securing said elbow tube to the carrying arm in different positions of adjustment.

6. The combination of the sound-box-carrying arm of a talking machine with a sound box having a stylus lever susceptible of use in different positions, and an elbow tube having a pair of slots, each adapted for the reception of a projection on the carrying arm.

7. The combination of a talking machine sound box having a stylus lever susceptible of use in different positions, a tube on said sound box, and a carrying arm having a clamping portion for engaging said tube.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

THOMAS KRAEMER.

Witnesses:

HAMILTON D. TURNER,
KATE A. BEADLE.