

No. 773,290.

PATENTED OCT. 25, 1904.

E. R. JOHNSON & W. C. MOORE.
TALKING MACHINE.

APPLICATION FILED DEC. 24, 1902.

NO MODEL.

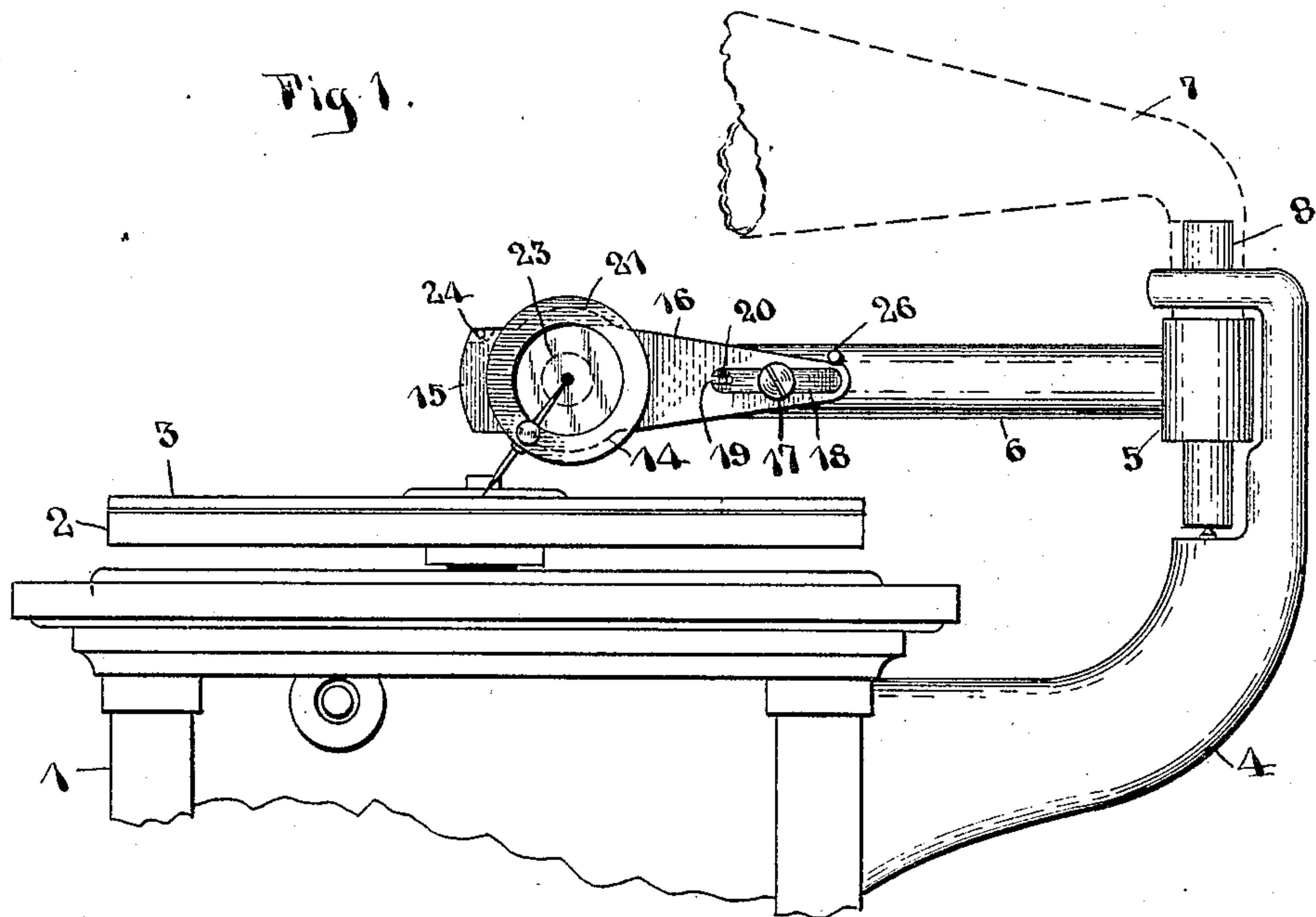


Fig 2.

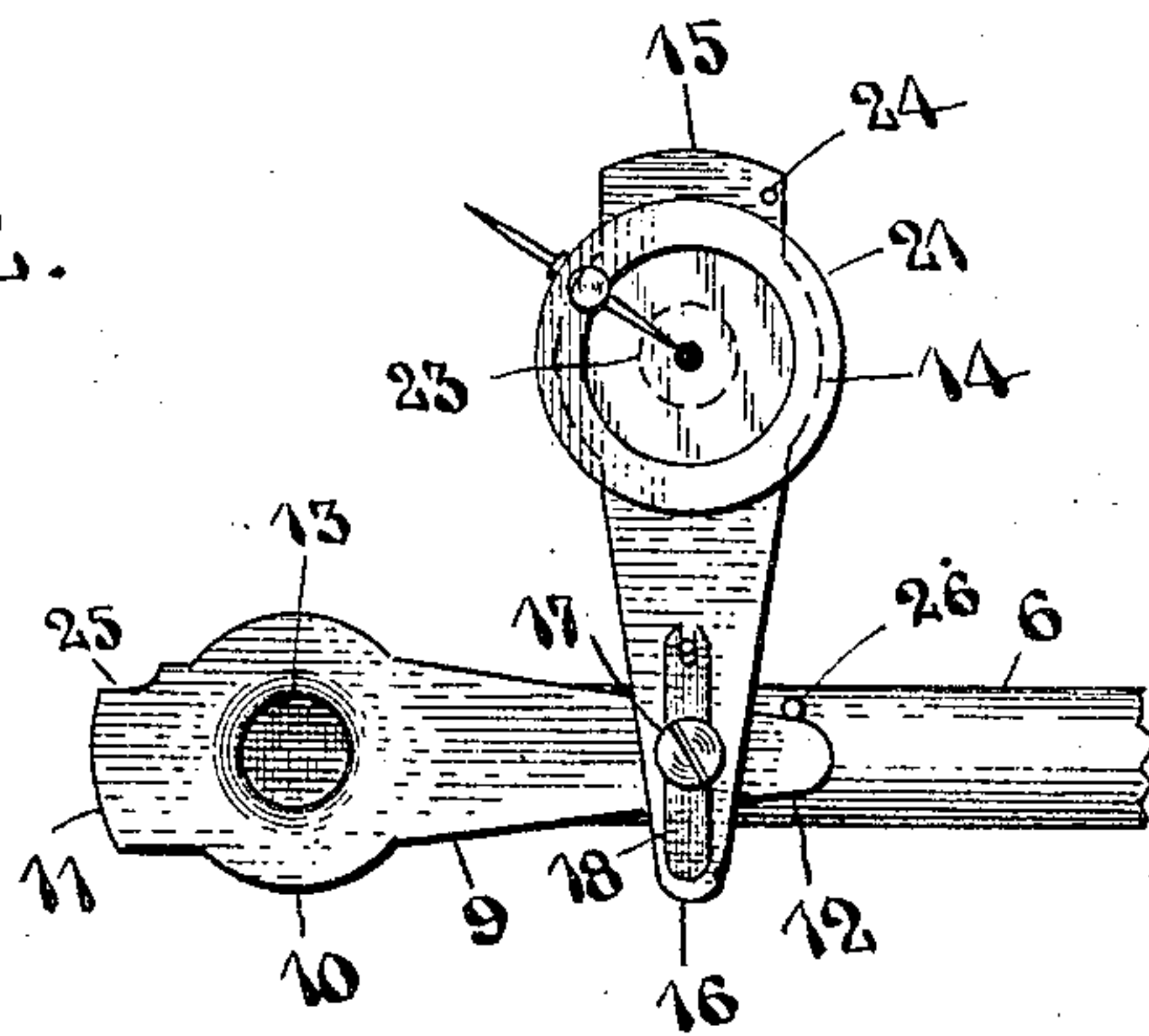
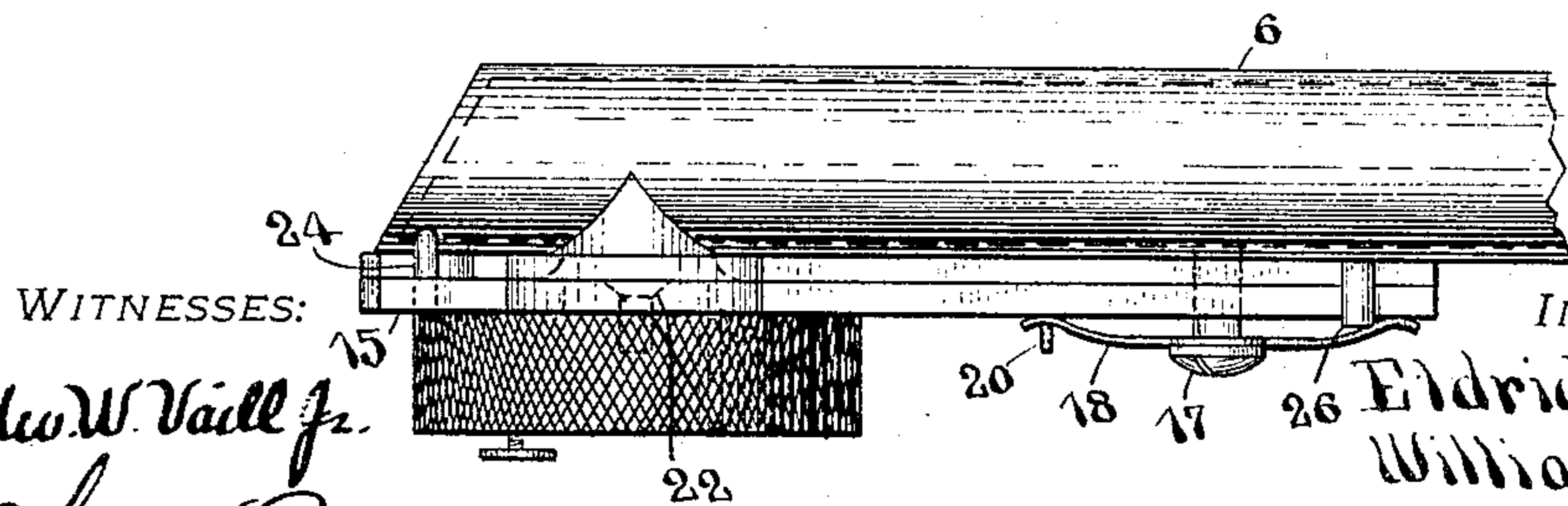


Fig 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ELDRIDGE R. JOHNSON AND WILLIAM C. MOORE, OF PHILADELPHIA,
PENNSYLVANIA, ASSIGNORS TO VICTOR TALKING MACHINE COMPANY,
A CORPORATION OF NEW JERSEY.

TALKING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 773,290, dated October 25, 1904.

Application filed December 24, 1902. Serial No. 136,512. (No model.)

To all whom it may concern:

Be it known that we, ELDRIDGE R. JOHNSON and WILLIAM C. MOORE, citizens of the United States, and both residents of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Talking-Machines, of which the following is a full, clear, and complete disclosure.

The object of our invention is the production of an improved connection between the sound-box and the hollow arm of that type of talking-machines known as the "hollow-arm" type. This connection between the sound-box and the hollow arm as attained by our improvement permits a free vertical movement of the sound-box in relation to the record, so that the stylus may follow any unevenness in the record or any inaccurate mounting thereof, and at the same time provides a sound-tight joint between said sound-box and hollow arm, so that sound-waves do not escape at undesirable points, and so lessen the efficiency of the operation of the machine.

Broadly, our invention consists in providing parts upon the hollow arm and upon the sound-box having smooth surfaces of the same form and means for forcing said surfaces in yielding contact with each other.

For a full, clear, and exact description of our invention reference may be had to the following specification and to the accompanying drawings, in which—

Figure 1 is a side elevation of the essential parts of a talking-machine having our improvement in use in connection therewith. Fig. 2 is an elevation of the end of the hollow arm and its attached parts, showing the sound-box in its raised position for inserting or removing a needle from the stylus-bar; and Fig. 3 is a plan view of the end of the hollow arm and its attached parts, the sound-box being in its operative position.

1 indicates the usual motor-casing; 2, the turn-table, which is adapted to be revolved by the motor within the casing 1, and 3 is a sound-record mounted upon the turn-table. A bracket or arm 4 extends from one side of the casing 1 and is curved upwardly to form

a bearing for the hub 5 of the hollow horizontally-swinging arm 6 and also to form a support for the usual amplifying-horn 7. A short tube 8 is fixed in the upper portion of the arm 5 and forms a firm connection between the amplifying-horn 7 and the hub 5. Said hub 5 is hollow and has communication with the hollow arm 6 and with the amplifying-horn 7 through the short tube 8.

Adjacent the hollow arm 6 and upon one side thereof is fixed the elongated plate 9. This plate consists of a main disk portion 10, having extensions 11 and 12 at opposite sides thereof. Said plate 9 is preferably arranged in a vertical position upon the hollow arm and has an opening 13 communicating with the interior thereof. A plate 14, similar to the plate 9 and having corresponding extensions 15 and 16, is pivoted, by means of a screw 17, so as to have sliding contact with the plate 9 and in a parallel vertical plane. Between the head of the screw 17 and the plate 14 is inserted a bow-spring 18, which has sufficient elastic force to keep the plate 14 in yielding but sliding contact with the plate 9, so that the weight of the sound-box and its supporting-plate will keep the needle of the stylus-bar within the groove of the sound-record. A slot 19 is provided in one end of said spring 18, and a pin 20, fixed to the plate 14, enters said slot 19 and holds said spring 18 from movement in relation to the plate 14.

The sound-box 21 is mounted upon the disk portion of the plate 14 and is attached thereto in any suitable manner, such as by screws 22. An opening 23 communicates with the interior of the sound-box and the opening 13 in the plate 9. The edge of the opening 13 is slightly rounded, so that when the opening 23 does not exactly register therewith the sound-waves will be simply deflected into the hollow arm 6 without being hindered in their passage. The extension 15 carries a pin 24, which is adapted to rest upon the extension 11 when the sound-box is in its normal or operative position, a notch 25 being provided in the extension 11 to accommodate the said pin 24. A pin or stop 26 is also provided adjacent the

end of the extension 12 to form a limit to the motion of the plate 14 should the same be carried beyond its vertical position. (Shown in Fig. 2.)

5 It will be seen that our invention provides an extremely efficient and simple means for forming a sound-tight sliding connection between the sound-box support and the end of the hollow arm, there being no delicate or
10 complicated parts to become out of adjustment, the parts being self-adjusting, with no liability of the same being hindered in their movements by reason of unequal expansion, clogging, or other causes.

15 Our improvement is not limited to use with sound-reproducing machines, but may be readily adapted to sound-recording machines with no substantial change in its essential features, and other changes may be made in form and
20 arrangement of parts without departing from the spirit or scope of our invention.

Having thus described our invention, what we claim, and desire to protect by Letters Patent of the United States, is—

25 1. In a talking-machine, a hollow arm limited to swing only in a plane parallel with the record-support, and having a smooth unob-

structed surface at right angles to said record-support, a sound-box, a pivoted support for the sound-box also having a smooth, unob- 30
structed surface corresponding to the surface adjacent the end of the arm, and means for holding said parts in yielding sliding contact, so that said sound-box may be inverted on its
35 pivot.

2. In a talking-machine, a hollow arm limited to swing only in a plane parallel to the record-support, and having a smooth, unob-
structed surface at right angles to said record-support, a sound-box, a pivoted support for 40
the sound-box also having a smooth, unobstructed surface corresponding to the surface adjacent the end of the arm, and a bow-spring carried by the pivot of said support for hold-
ing said parts in yielding sliding contact, so 45
that said sound-box may be inverted on its pivot.

In witness whereof we have hereunto set our hands this 17th day of December, A. D. 1902.

ELDRIDGE R. JOHNSON.

WILLIAM C. MOORE.

Witnesses:

JNO. T. CROSS,

JOHN F. GRADY.