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PATENTED OCT. 31, 1905.

A. E. THOMAS.

TONE SOFTENING DEVICE FOR GRAPHOPHONES AND LIKE TALKING MACHINES.

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Fig. 2.

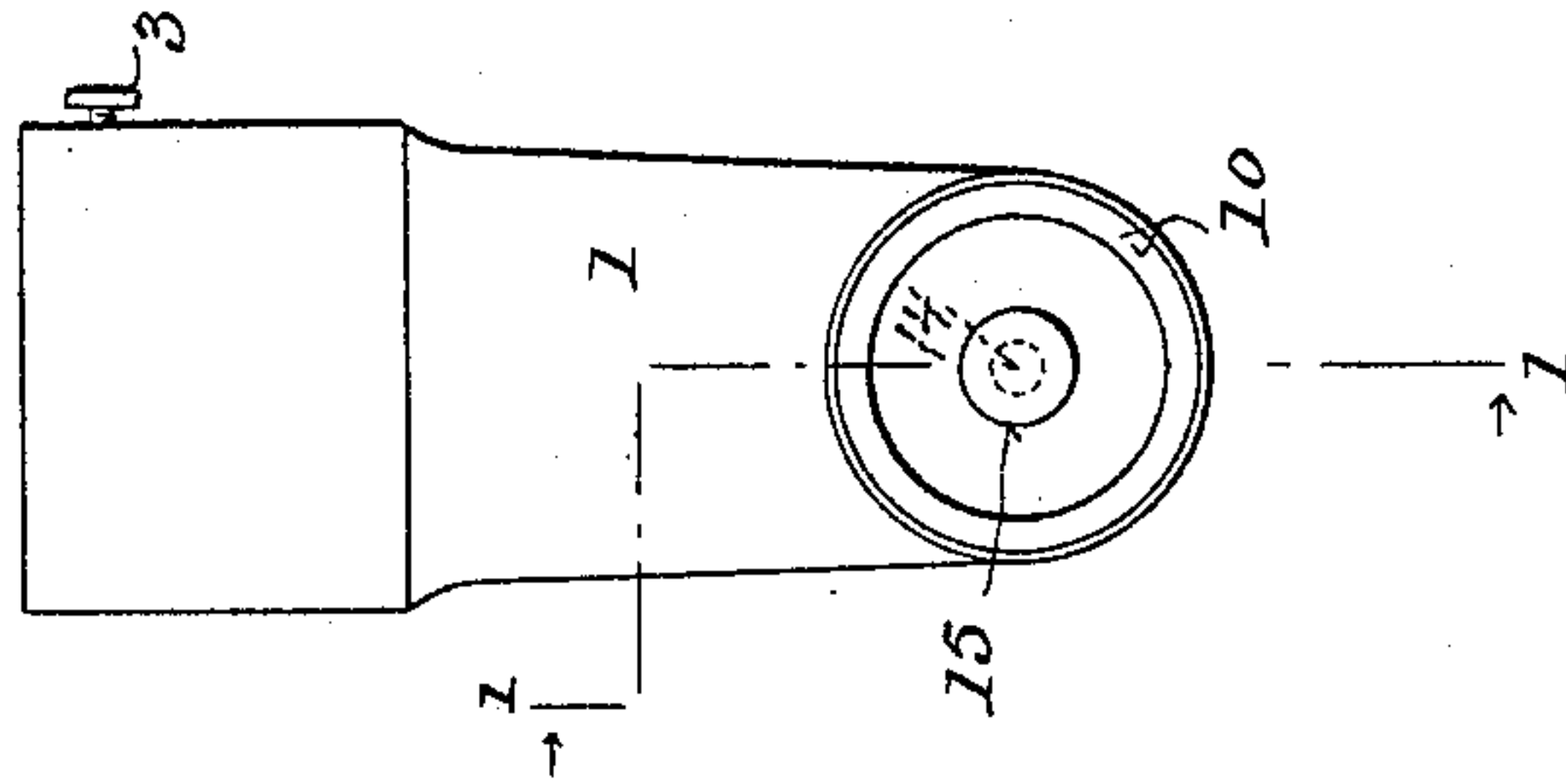
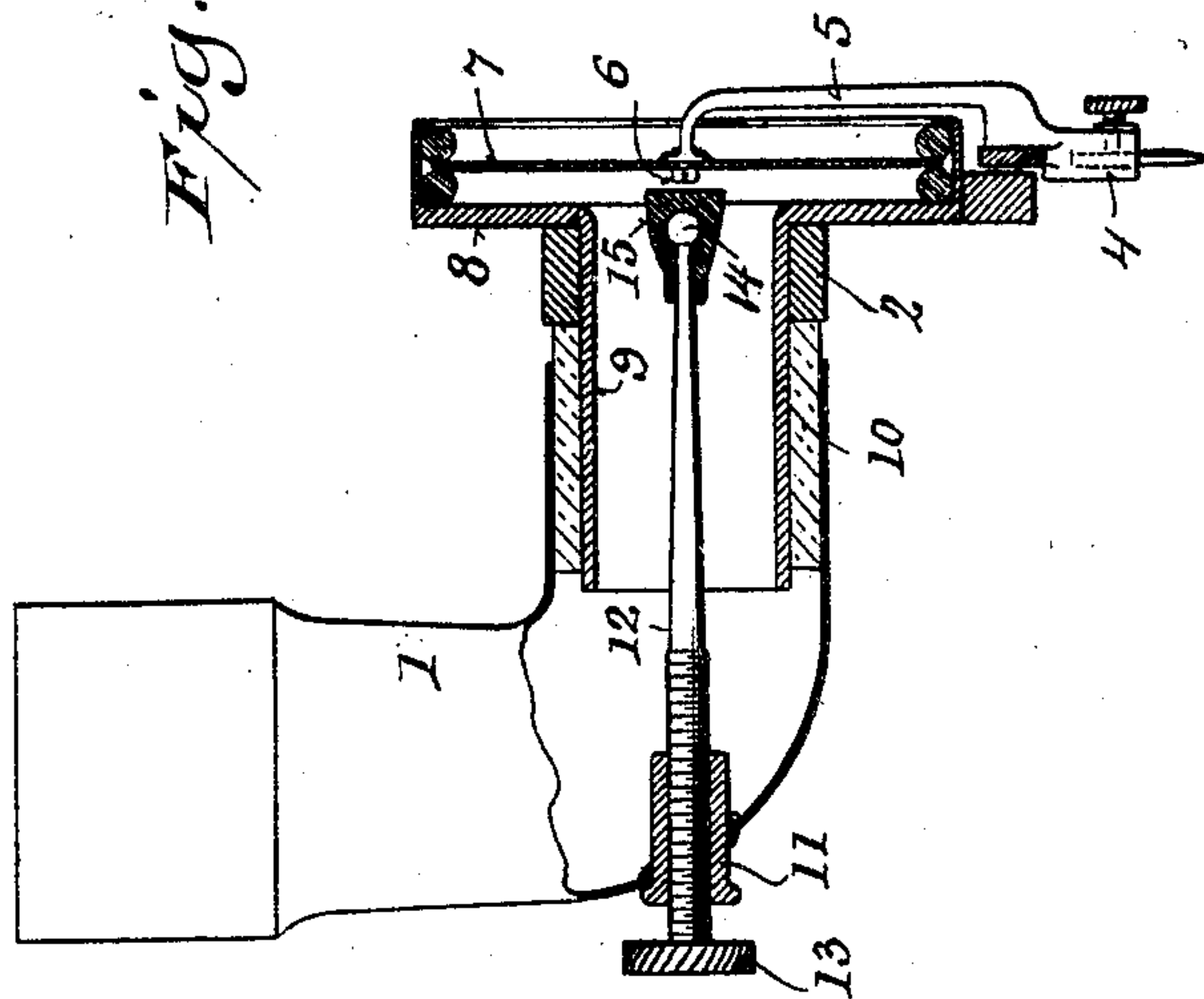


Fig. 1.



Witnesses
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UNITED STATES PATENT OFFICE.

ALFRED E. THOMAS, OF MILWAUKEE, WISCONSIN.

TONE-SOFTENING DEVICE FOR GRAPHOPHONES AND LIKE TALKING-MACHINES.

No. 803,028.

Specification of Letters Patent.

Patented Oct. 31, 1905.

Application filed March 13, 1905. Serial No. 249,695.

To all whom it may concern:

Be it known that I, ALFRED E. THOMAS, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Tone-Softening Devices for Graphophones and Like Talking-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has especial reference to devices for muffling or softening the tone of graphophones and like talking-machines; and it consists in certain peculiarities of construction and combination of parts, as will be fully set forth hereinafter in connection with the accompanying drawings, and subsequently claimed.

In the said drawings, Figure 1 is a view in elevation of a portion of a graphophone with my device applied thereto, partly in section on the line 1 1 of Fig. 2. Fig. 2 is an inner end view of the elbow or socket which receives the horn of the instrument with my device in place therein.

Referring by numerals to the said drawings, 1 represents the elbow-socket for the horn of the instrument, which in practice extends along and is supported by the arm or bar 2, (shown in section in Fig. 1,) both of which are of the ordinary construction, the horn being secured in the said socket by a set-screw 3. 4 designates the needle-holder, from which rises an arm 5, secured by screw 6 to the diaphragm 7, (usually of mica,) which receives and transmits the sound-vibrations. The diaphragm-case 8 terminates on the inner side in a metallic tube 9, which is slipped through a bore in the arm or bar 2 and then into a rubber tube 10 in the lower arm of the elbow-socket 1, all the foregoing being the old and well-known construction of devices of this class, with which the sound-vibrations are very loud and often harsh and to soften which is the object of my improvement, which will next be described.

11 designates a bearing inserted in the elbow-socket and formed with a longitudinal screw-threaded bore, through which is passed the shank 12, screw-threaded adjacent to its outer end for engagement with said threaded

bore in the bearing, the latter being of sufficient length to insure the proper centering of said shank, which preferably has a milled thumb-piece 13 at its outer end and a small knob 14 at its inner end, and over said knob a thimble of soft or crude rubber 15 is slipped, the said knob keeping the thimble in place.

When it is desired to soften or muffle the sound-vibrations, the shank 12 is screwed inward until the soft-rubber thimble 15 bears against the screw 6, and by a further turn of the said shank in the screw-threaded bearing 11 the said thimble will press against the diaphragm 7 and still further deaden the vibrations and soften the tone, and if a louder tone is at any time desired the shank 12 is turned in the reverse direction to wholly or partly withdraw the soft thimble 15 from contact with the screw 6 and diaphragm 7, so that this regulation of tone is at all times under the control of the operator, without stopping the instrument, by a simple turn of the thumb-piece 13 in the direction desired.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a graphophone or like talking-machine, the combination with the elbow-socket which receives the horn, and the diaphragm connected to said socket, of a screw-threaded bearing extending into said elbow-socket, a shank passed through said bearing, and a soft-rubber thimble on the inner end of said shank for contact with said diaphragm, at the desired times.

2. The combination with the horn-receiving elbow-socket, and the diaphragm of a graphophone or like talking-machine, of a screw-threaded bearing extending into the elbow-socket in line with the center of the diaphragm, a shank passed through said bearing, and screw-threaded adjacent to its outer end for engagement with the threads in said bearing, and having a knob or projection on its inner end, and a soft-rubber thimble fitted on said inner end of said shank for contact as desired, with said diaphragm, for softening or regulating the tone of the sound-vibrations thereof.

3. The combination with the horn-receiving elbow-socket and the diaphragm of a graphophone or like talking-machine, of a longitu-

dinally-movable shank extending through the lower arm of said elbow-socket, and bearing a soft-rubber thimble at its inner end for contact at desired times with the inner surface of
5 the said diaphragm for softening or regulating the tone of the sound-vibrations thereof.
In testimony that I claim the foregoing I

have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

ALFRED E. THOMAS.

Witnesses:

H. G. UNDERWOOD,
GEORGE FELBER.