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GRAPHOPHONE ATTACHMENT.

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1,067,933.

Patented July 22, 1913.

Fig. 1

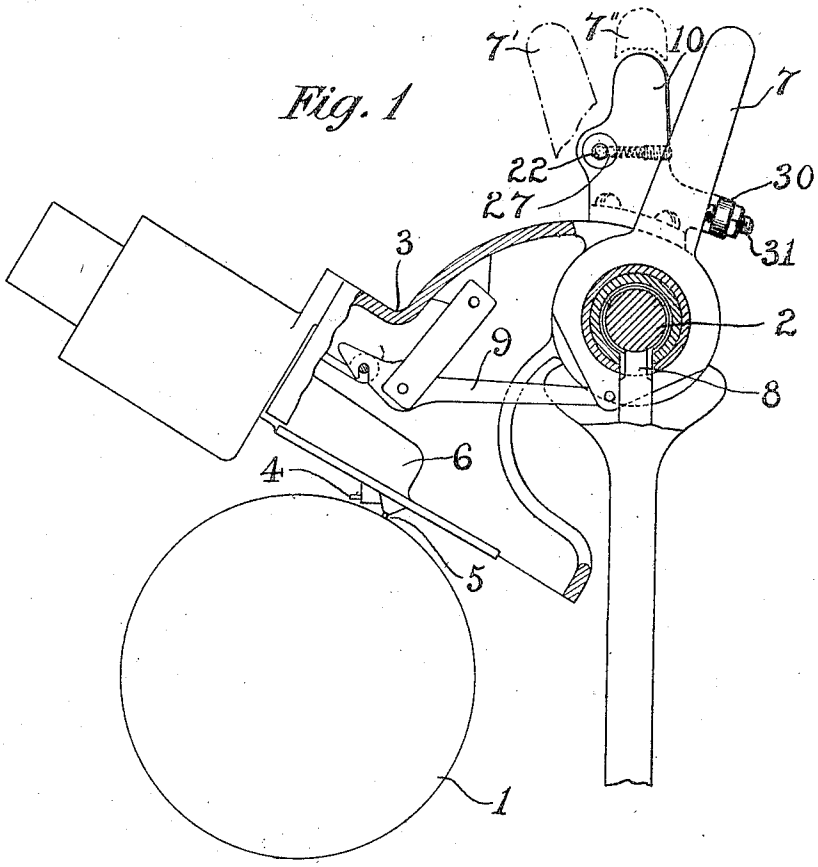


Fig. 2

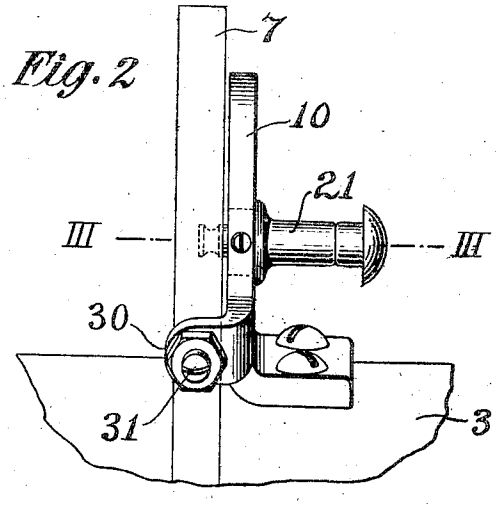
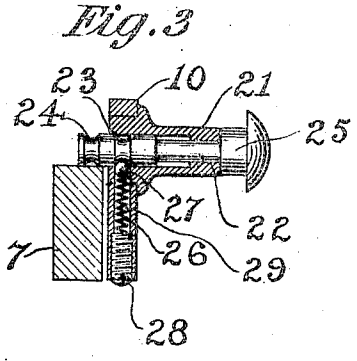


Fig. 3



Witnesses:

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UNITED STATES PATENT OFFICE.

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GRAPHOPHONE ATTACHMENT.

1,067,933. Specification of Letters Patent. Patented July 22, 1913.

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To all whom it may concern:

Be it known that I, THOMAS H. MACDONALD, a citizen of the United States, and a resident of Bridgeport, Connecticut, (whose post-office address is care of American Graphophone Company, Bridgeport, Connecticut,) have invented a new and useful Improvement in Graphophone Attachments, which improvement is fully set forth in the following specification.

My invention relates to graphophones or other talking-machines of the type intended for dictation as well as for reproducing, particularly machines of the type where there is a single diaphragm which carries both the recording-stylus and the reproducing-stylus, with means for throwing either stylus into engagement to the exclusion of the other. In using such machines, it is usual to have one machine for the person who does the dictating upon the blank cylinder, and another machine for the operator who transcribes the dictation from the recorded cylinder. In the use of the latter machine, there is liability to throw the recording-stylus into engagement, by mistake, when one desires to listen to reproduction, with the result that the recording-stylus will shave off and obliterate the record upon the cylinder.

The object of the present invention is to provide means for preventing such unintentional use of the recording-stylus. My invention, then, may be described as a recording eliminator for dictation graphophones.

My invention consists broadly of means for eliminating, at will, the possibility of using the recording-device.

My invention further consists of the particular construction and arrangement of the various features hereinafter set forth and claimed.

My invention will be best understood by reference to the annexed drawings, which illustrate a preferred embodiment thereof, as applied to the particular talking-machine known as the "Dictaphone",—though it will be understood that my invention is applicable to other types of talking-machines equipped with the two styluses.

In the drawings, Figure 1 is a side view, partly broken away, illustrating a talking-machine equipped with my invention; Fig. 2, is a detail, on a larger scale, viewed from the rear (right hand) of Fig. 1; and Fig. 3 is a horizontal section through the line III—III of Fig. 2.

Referring to the drawings, 1 represents the mandrel with its cylindrical sound-record or "blank", as the case may be.

2 is the feed-screw.

3 is the casing of the carriage.

4 is the recording-stylus, and 5 is the reproducing-stylus, both carried by the same diaphragm in the head 6,—the reproducing-stylus being shown in Fig. 1 as in operative engagement.

7 is the operating-lever, which serves not only to engage and disengage the partial feed-nut from the feed-screw, but also to disengage the reproducing-stylus and engage the recording-stylus (and vice versa) by means of the link 9, and other connections.

10 is the upright centering-arm carried by the carriage 3, for indicating the proper positions of adjustment of the controlling-lever 7. To cause the reproducing-stylus 5 to be in engagement, the lever 7 is pushed backward into the position shown in full lines in Fig. 1; to cause the recording-stylus 4 to operate (while disengaging the reproducer) the lever 7 is pulled to the extreme limit forward, into the position shown in dotted lines 7′; while the intermediate position 7″ of the lever disengages both styluses from the cylinder 1. All this is well known, and forms no part of my invention, which consists of providing means to prevent the lever 7 being thrown into the position indicated at 7′, such means being capable of embodiment in various forms.

As a preferred embodiment of the elimination-device, or means, which constitute my present invention, I provide on the bracket-arm 10 a bolt or plunger, or other similar device, adapted to be moved into the path of the lever 7, to prevent putting the latter into position 7′ (for operating the recording-stylus), with means for locking said bolt or shifting-device in its operative, and also in its inoperative, position.

More specifically, an arm 21, having a counter-sunk bore and a transverse aperture communicating therewith, extends laterally from the centering-arm 10, and carries the shifting bolt and means for locking the same in its two positions of adjustment. The shifting bolt comprises the stem 22

(which lies snugly within the smaller portion of the bore of the arm), the enlarged portion containing the two annular grooves 23 and 24, and the enlarged head 25 which is secured (by screwing or otherwise) upon the opposite end of the bolt. The transverse aperture in the arm (referred to as communicating with its bore) is a continuation of a transverse bore 26 passing horizontally through the arm 10 from front to rear. At the forward or inner end of this bore 26, is the hardened steel ball 27, adapted to engage either of the two grooves 23 and 24; and in the outer end of the bore is the screw 28; while the tension spring 29 is interposed between the face of the screw and the ball aforesaid.

30 indicates a lug extending rearwardly from the arm 10, and flanged to lie in the path of the lever 7; and 31 is a set screw carried by this flange, as an adjustable stop to limit the backward travel of the lever.

In the position indicated in Fig. 3, the head 25 of the sliding bolt 22 has been shoved down to its limit, and the spring 29 forces ball 27 into the inner groove 23, thereby locking the bolt in its protruded position. In this adjustment, the end of the bolt extends into the path of the lever 7 (as indicated in dotted lines in Fig. 2); and the lever 7 cannot be brought forward into the recording-position 7′ (of Fig. 1). Under this adjustment, the talking-machine can be used for reproducing alone, and cannot be used for recording. In order to restore the latter function, the head 25 of the sliding bolt is drawn out (the sloping walls of the groove 23 forcing ball 27 rearward against the tension of spring 29) until the groove 24 comes opposite the ball, whereupon the spring forces the latter forward into groove 24,—and the bolt is thereby locked in its retracted position. In this latter position, lever 7 can swing into all its positions, and the machine is capable of recording as well as of reproducing.

It is readily understood that the elimination-device might be carried upon the lever 7, so as to protrude into the path of the stationary arm 10; or it might be located between any two relatively movable parts which are shifted in changing from reproducing-position (or from neutral position) into the recording-position. Further, other shifting devices might be employed in place of the specific sliding bolt; other means might be utilized for holding the bolt in its two positions of adjustment,—in fact, the ball and spring might be omitted altogether, and friction alone relied on to hold the shifting device in proper position. And other changes and transpositions will occur to persons skilled in this art.

Having thus described my invention, I claim:

1. In a talking machine, the combination of two styles on a single diaphragm, and a record tablet, with shifting mechanism for throwing either style at will into operation, and adjustable means for preventing at will the movement of one of the styles into operative position while leaving the other free to be thrown into and out of operative position.

2. In a talking machine, the combination of a recording-style, a reproducing style, and a record tablet, with mechanism shifting either style into operative position or both styles into inoperative position, and means adjustable at will to prevent the recording style being thrown into operative position, while leaving the reproducing style free to be thrown into and out of operative position.

3. In a talking machine, the combination of a recording and a reproducing style on a single diaphragm, and a record tablet, with shifting mechanism for throwing either style at will into operation, a shifting lever for operating said mechanism which in one position throws the reproducing style into and the recording style out of operation, in another position throws the reproducing style out of and the recording style into operation, and in an intermediate position throws both styles out of operation, and means operated at will to limit the throw of said lever between the operative position of the reproducing style and the said intermediate position, whereby the reproducing style is free to be thrown into and out of operative position and the recording style is prevented from being thrown into operative position.

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

THOMAS H. MACDONALD.

Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."