T. H. MACDONALD.

BACK SPACER FOR DICTAPHONES.

APPLICATION FILED AUG. 29, 1911.

1,030,740.

Patented June 25, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

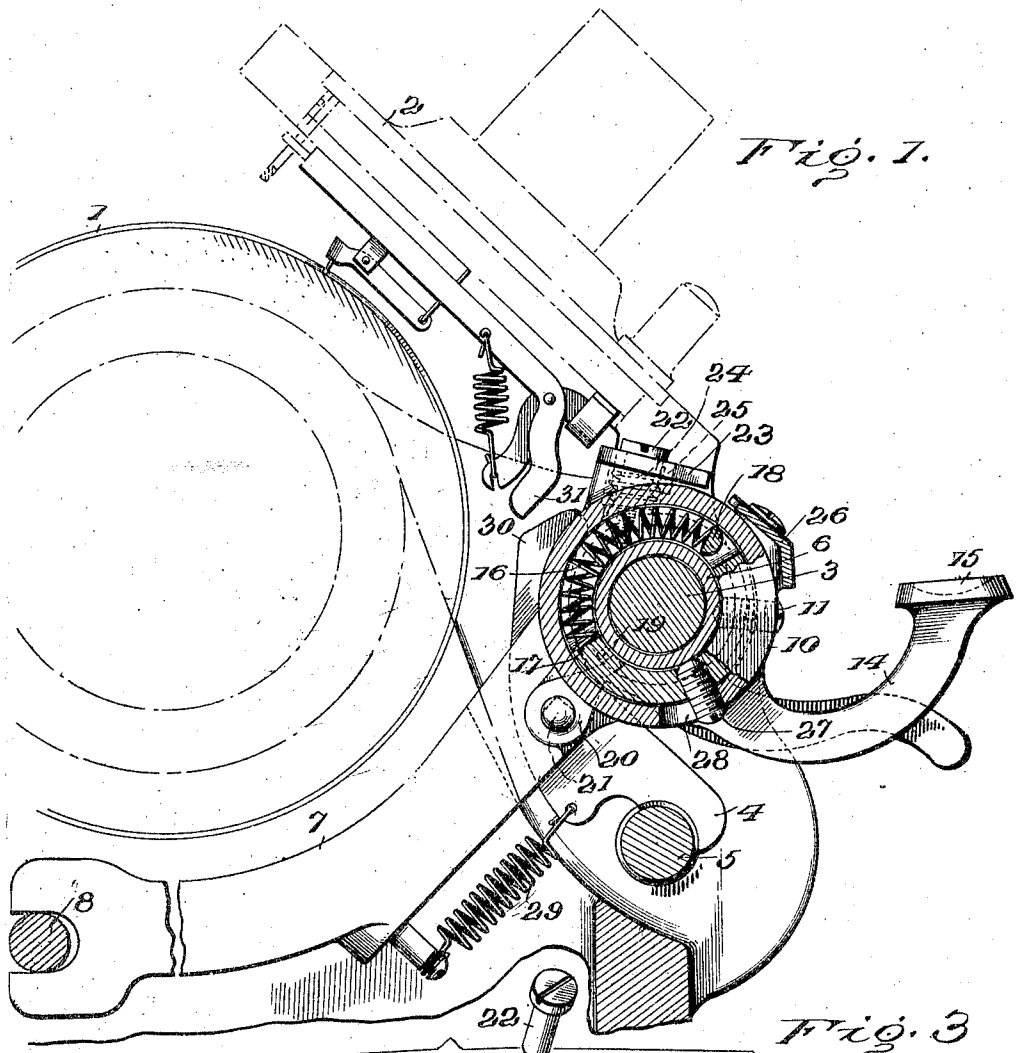
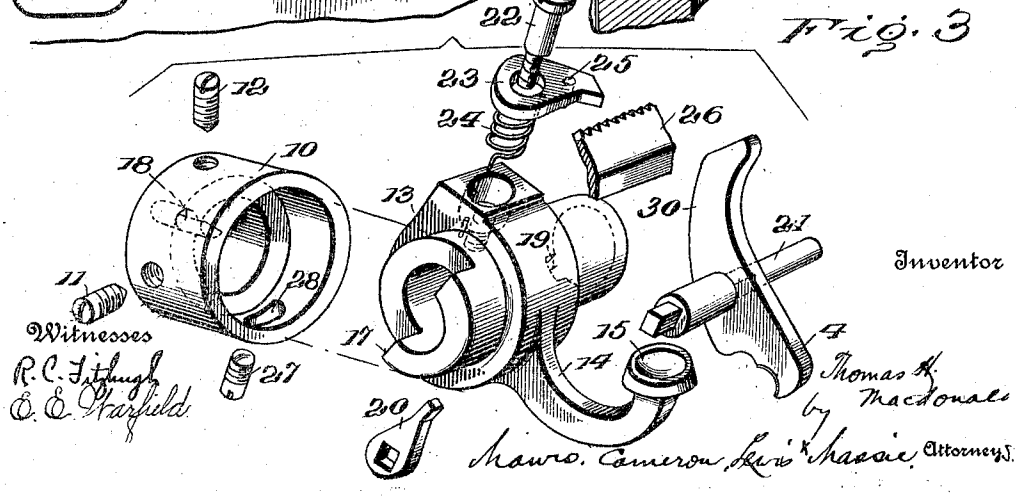


Fig. 3



Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

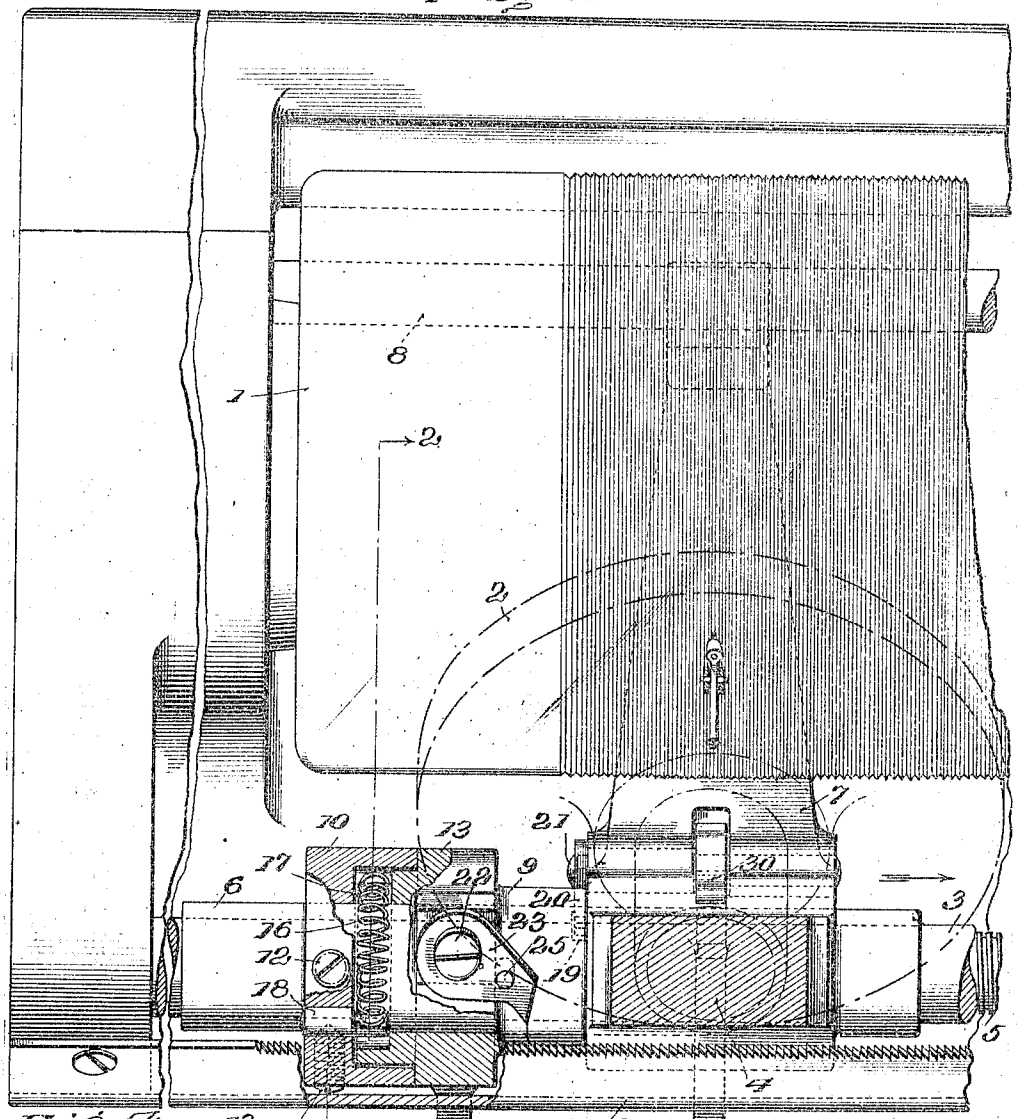
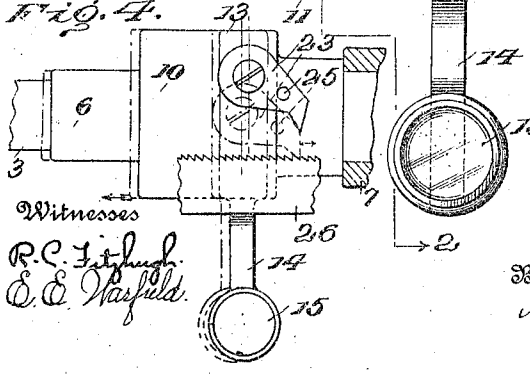


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

THOMAS H. MACDONALD, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO AMERICAN GRAPHOPHONE COMPANY, OF BRIDGEPORT, CONNECTICUT, A CORPORATION OF WEST VIRGINIA.

BACK-SPACER FOR DICTAPHONES.

1,030,740. Specification of Letters Patent. Patented June 25, 1912.

Application filed August 29, 1911. Serial No. 646,719.

To all whom it may concern:

Be it known that I, THOMAS H. MACDONALD, of Bridgeport, Connecticut, have invented a new and useful Improvement in Back-Spacers for Dictaphones, which invention is fully set forth in the following specification.

This invention relates to dictaphones, or that class of talking machines designed for taking dictation which is subsequently transcribed, and more particularly to the reproducing portion or element of the machine.

In machines of this character, it is desirable for the operator who is transcribing the record to repeat certain portions of the record, that is, to place the reproducer back for a short distance, in order that the last portion of the record reproduced may be repeated.

The particular object of the present invention is to provide a simple and efficient means for throwing the reproducer back for a short distance over the record; in other words, to back space the reproducer for the purpose of securing the repetition of the part of the record that has just been reproduced.

With this object in view, the invention consists in the construction, combination and arrangement of elements hereinafter more fully described, and then pointed out in the claims.

The inventive idea is capable of receiving a variety of mechanical expressions, one of which, for the purpose of illustrating the invention, is shown in the accompanying drawings, in which—

Figure 1 is an end elevation of a machine, with parts shown in section, taken on line 2—2, Fig. 2. Fig. 2 is a broken plan view thereof; Figs. 3 and 4 are broken details of portions of the back-spacing device.

Referring to the drawings, in which like reference numerals indicate like parts, 1 indicates the record carried on a suitable mandrel, and revolved by a suitable motor mounted in the framework of the machine, in the usual manner. 2 indicates the reproducer mounted on the usual or any suitable carriage, traveling on the slide rod 3 longitudinally past the record, being propelled by means of the feed nut 4 engaging the feed screw 5, which is propelled by the motor of the machine. The carriage is provided with the usual sleeve 6 embracing the slide rod 3, and with a downwardly depending guide arm 7 embracing the guide rod 8. All of the parts thus described are of the usual or any suitable construction, and do not form any specific part of the present invention, and therefore need not be more fully described.

Mounted to turn on the sleeve of the carriage 6, between a part of the carriage 9 and a collar 10, fixed on the sleeve 6 by means of two set screws 11 and 12, is a hub 13, having an outwardly projecting arm or lever 14, which is provided on its end with a button 15 to fit the finger of the operator. In a recess on the left hand end of the hub or sleeve 13 is a coiled spring 16, reacting between an abutment 17 on the hub or sleeve 13 and the squared end of a pin 18 projecting from the collar 10 (see Fig. 2). The hub or sleeve 13 is provided with a cut-out portion or slot 19, into which projects the end of a lever 20 rigidly secured to the feed nut shaft 21, which shaft is mounted to turn in suitable bearings in the frame, the shaft being squared to fit a square hole in the feed nut, as shown, in order to insure a positive motion or turning of the feed nut with the shaft.

Pivoted on a stud 22 on the sleeve or hub 13 is a pawl 23, to which is secured one end of a coiled spring 24, the other end of said spring being secured to a part of the hub or sleeve 13. The turning movement of the pawl 23 is limited in one direction by the stop pin 25 engaging a shoulder on the sleeve or hub 13.

Mounted on the framework of the machine is a ratchet rack 26, in position to be engaged by the nose of the pawl 23 when the operating lever 14 is depressed against the tension of the spring 16. A screw 27 is fast to the sleeve or hub 13, and projects outward through a slot 28 formed in the collar 10.

Operation: Assuming the parts to be in reproducing position, as shown in Fig. 1, when the operator desires to set back the reproducer point for the purpose of repeating a portion of the record, she presses the button 15 downward, thereby turning the hub or sleeve 13, and compressing the coiled spring 16. By reason of the engage-

ment of the lever 20 in the slot or opening 19 of the sleeve 13, the feed nut shaft 21 is turned, thereby lifting the feed nut 4 off of the feed screw 5 against the tension of spring 29, and at the same time causing the upwardly projecting arm 30 of the feed nut to engage the lever arm 31 on the reproducer, and lift it so as to remove the stylus point from contact with the record. The same downward depression of the button 15, with the consequent turning of the hub or sleeve 13, brings the pawl 23 into engagement with the ratchet rack 26, and the continued turning movement of the hub or sleeve 13 causes the pawl to act in the nature of a toggle, thereby forcing hub or sleeve 13, and with it the carriage of the machine, from right to left, as shown in full and dotted lines in Fig. 3, that is, for a slight distance, preferably about 1/32 of an inch, thereby giving the reproducer point the set-back desired to secure the proper repetition. If desired, the depressing action on the button 15 may be repeated several times to set the carriage back still farther. The turning movement of the sleeve or hub 13 on the carriage sleeve 6 is limited by the engagement of the screw-pin 27 in the slot 28, while the pawl 23 is always retained in its proper position by the torsion spring 24, which holds the stop pin 25 against the shoulder on the hub or sleeve 13.

What is claimed is:—

1. In a talking machine, the combination of a reproducer, a carriage therefor, a track or way for said carriage, a sleeve on said carriage, a collar on said sleeve, a hub mounted to turn on said sleeve and projecting into said collar, a lever attached to said hub to actuate the same, a toggle-pawl on said hub, and a rack on the frame of the machine in position to be engaged by said pawl when the hub is turned by the lever.

2. In a talking machine, the combination of a carriage way, a reproducer-carriage moving on said way, a carriage propelling nut and screw, a collar mounted on said carriage, a hub mounted to turn on said carriage and projecting into said collar, a lever for turning the hub in one direction, a spring for turning said hub in the other direction, a stop limiting the turning movement of the hub, a rack on said machine and a pawl on said hub engaging said rack when turned in one direction only.

3. In a talking machine, the combination of a reproducer, a carriage therefor, a track or way for said carriage, a sleeve on said carriage, a collar fixedly mounted on said sleeve, a hub mounted to turn on said sleeve and projecting into said collar, a spring interposed and reacting between said collar and hub, a lever attached to said hub to operate the same, a toggle-pawl on said hub, and a rack on the frame of the machine in position to be engaged by said pawl when the hub is turned by the lever.

4. In a talking machine, the combination of a reproducer, a carriage therefor, a track or way for said carriage, a sleeve on said carriage, a collar fixedly mounted on said sleeve, a hub mounted to turn on said sleeve and projecting into said collar, a compression spring interposed and reacting between said collar and hub, a lever attached to said hub to operate the same, a toggle-pawl on said hub, means for limiting the movement of said pawl, and a rack on the frame of the machine in position to be engaged by said pawl when the hub is turned by the lever.

5. In a talking machine, the combination of a reproducer, a carriage therefor, a track or way for said carriage, a feed screw, a sleeve on said carriage, a hub mounted to turn on said sleeve and provided with a slot, a lever attached to said hub to operate the same, a toggle-pawl on said hub, a rack on the frame of the machine in position to be engaged by said pawl when the hub is turned by the lever, an arm engaging the reproducer at one end and the feed screw at the other, a pivot for said arm, a lever mounted on said pivot and engaging said slot whereby depression of the lever attached to the hub removes the stylus from the record, disengages the arm from the feed screw and moves the carriage rearward.

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

THOMAS H. MACDONALD.

Witnesses:
MARGARET MURRAY,
SOPHIE B. MACDONALD.