

J. W. NELSON.
 AUTOMATIC OUT-OFF FOR TALKING MACHINES.
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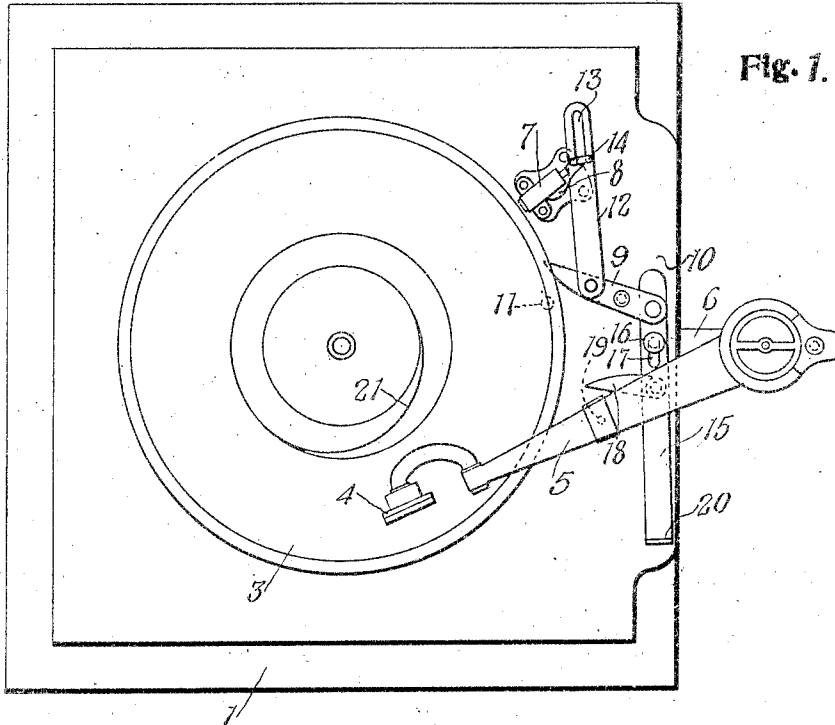
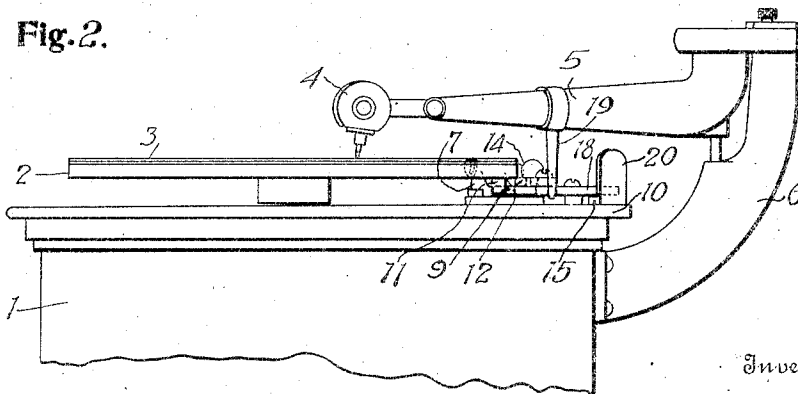


Fig. 1.

Fig. 2.



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AUTOMATIC CUT-OFF FOR TALKING-MACHINES.

1,021,109.

Specification of Letters Patent Patented Mar. 26, 1912.

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To all whom it may concern:

Be it known that I, JAMES W. NELSON, a citizen of the United States, residing at Marion, in the county of Marion and State of Ohio, have invented certain new and useful Improvements in Automatic Cut-Offs for Talking-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to automatic cut-offs for talking machines and the object of the invention is to provide a brake-operating mechanism which will be positive in all its actions, thereby insuring its proper operation and the stopping of the record at the proper time.

It is a further object to provide such a device which will be very simple in its construction and operation and which can be manufactured at a low cost.

In the accompanying drawings, Figure 1 is a top, plan view of a talking machine equipped with my invention; and Fig. 2 is a side elevation of the same.

In these drawings I have illustrated one embodiment of the invention and have shown the same as applied to a talking machine of a well known character and comprising a motor casing 1 upon which is mounted a rotatable support, such as a turntable 2, which carries the record 3, which, in this type of machine, is in the form of a disk. The sound reproducing device 4 is supported above and adjacent to the turntable and the record carried thereby by means of an arm 5 which is pivotally supported on a bracket 6 secured to one side of the motor casing or supporting frame 1. As the sound reproducing device 4 travels inward along the spiral groove constituting the record the arm 5 will move about its pivotal center, and, in carrying out my invention, I utilize this swinging movement of the arm to impart movement to the brake-actuating mechanism. Any suitable type of stop may be employed, and, in the present instance, I have shown the same as comprising the usual brake 7 which is supported on the motor casing and has a friction plunger to engage the edge of the turntable and check the movement of the latter. This brake is controlled by means of a lever 8 which, in the ordinary operation of the device, is controlled by hand. In the present instance I have provided a brake-actuating member

which is operatively connected with the brake 7 through the medium of the lever 8 and is adapted to be engaged by a part carried by the turntable. The brake-actuating member is normally supported out of the path of the part carried by the turntable but is moved into the path of such part by the movement of the arm 5 as the reproducer 4 travels over the record. The construction of the several parts of the mechanism for accomplishing this result may take various forms but, in the present instance, the brake-operating member comprises a lever 9 pivotally mounted on a suitable support, such as an extension 10, secured to the motor casing adjacent to the bracket 6 carrying the arm 5. One end of the lever 9 is arranged normally at a point adjacent to the edge of the turntable but out of the path of the part carried thereby. This part, in the present instance, comprises a pin 11 depending from the lower side thereof. The actuating member or lever 9 is operatively connected with the brake by means of a rod 12 loosely connected to the lever 8. The loose connection between the rod 12 and the lever 8 permits the actuating member to be moved into the path of the pin 11 before the operative connection between the rod and the lever is established.

The connection between the rod and the lever may be of any suitable character but, in the present instance, the rod is provided with a longitudinal slot 13 adapted to extend about the lug 14 usually found on the lever of a brake of this character, thereby enabling the device to be attached to the ordinary brake without modification of the latter. The connection between the actuating member 9 and the arm 5 preferably comprises a movable member or bar 15 slidably mounted on the extension 10, preferably by means of a pin 16 extending through a slot 17 formed in the bar. This bar is connected to the lever 9 on that side of its pivotal center opposite the point of connection of the rod 12 and is provided with a laterally extending lug 18 which is arranged in the path of a finger 19 depending from the arm 5.

As the reproducing device 4 approaches the end of the record the movement of the arm 5 about its pivotal center will cause the finger 19 to engage the lug 18 and move the bar 15 longitudinally. This movement of

the bar causes the actuating member 9 to swing about its pivotal center to bring the inner end thereof into the path of the pin 10 carried by the turntable. This pin engaging the end of the actuating member causes the brake 7 to be actuated and the movement of the turntable and record checked. The brake, as above stated, is a friction brake and the checking of the turntable is gradual and not instantaneous. This gradual stopping of the turntable is permitted by allowing the actuating member 9 to move about its pivotal center a distance sufficient to carry the inner end of the same again out of the path of the pin 11. The bar 15 may be manipulated by hand to restore the actuating member 9 to its normal position and release the brake 7, thereby again permitting the turntable to rotate. To this end the bar 15 is preferably provided with a finger piece or lug 20 arranged on the side of the arm 5, and the horn which is connected therewith, opposite the brake and within convenient reach of the operator. In order to impart the necessary movement to the bar 15 and actuating member 9 quickly when the end of the record has been reached I have here shown the record as provided with a groove 21 extending inward from the end of the record and described about a center other than the center of the record, thus causing the reproducing device and the arm to be carried inward quickly when the end of the record has been reached.

It will be apparent from the foregoing description and the accompanying drawings that my device, while of exceeding simplicity and comprising a very few parts, is positively actuated throughout its movement and will operate with a high degree of efficiency. The actual movement is imparted to the brake lever positively by means of the pin on the turntable engaging the brake-actuating member 9 and this brake-actuating member is positively moved by the arm 5 to carry the same into position to be engaged by the pin on the turntable.

While I have herein shown and described one form of my invention it will be understood that this form has been chosen for the purpose of illustration only and that I do not wish to be limited to the details of construction shown and described, for obvious modifications will occur to a person skilled in the art.

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

1. In a device of the character described, the combination, with a movable support for a record, a device to control the movement of said support, and a sound-reproducing device supported adjacent to said record-support and movable relatively thereto, of an

actuating member operatively connected to said controlling device, a part carried by said record-support to engage said actuating member, a movable member connected with said actuating member, and a device positively actuated by the movement of said reproducing device to impart movement to said movable member and move said actuating member into a position to be engaged by said part on said record-support.

2. In a device of the character described, the combination, with a turntable having a projection, a brake to control the movement of said turntable, a sound-reproducing device, and a movable arm to support said device adjacent to said turntable, of an actuating member supported normally out of the path of the projection on said turntable, and means positively actuated by the movement of said arm to move said actuating member into the path of said projection.

3. In a device of the character described, the combination, with a turntable having a projection, a brake to control the movement of said turntable, a sound-reproducing device, and a movable arm to support said device adjacent to said turntable, of a brake-actuating member pivotally supported with one end adjacent to said turntable but normally out of the path of said projection, and means positively actuated by the movement of said arm to move said actuating member about its pivotal center and into the path of said projection.

4. In a device of the character described, the combination, with a turntable having a projection, a brake to control the movement of said turntable, a sound-reproducing device, and a movable arm to support said device adjacent to said turntable, of a brake-actuating member supported normally out of the path of the projection on said turntable, a movable bar operatively connected with said actuating member, and a part carried by said arm to positively actuate said bar and move said brake-actuating member into the path of said projection.

5. In a device of the character described, the combination, with a turntable having a projection, a brake to control the movement of said turntable, a sound-reproducing device, and a movable arm to support said device adjacent to said turntable, of a brake-actuating member pivotally supported with one end adjacent to said turntable but normally out of the path of said projection, a longitudinally movable bar connected with said actuating member, a lug projecting from said bar, and a finger carried by said arm and arranged to engage said lug to move said actuating member into the path of the projection on said turntable.

6. In a device of the character described, the combination, with a turntable having a projection, a brake to control the movement

of said turntable, a sound-reproducing device, and a movable arm to support said device adjacent to said turntable, of a brake-actuating member pivotally supported with
5 one end adjacent to said turntable but normally out of the path of said projection, a longitudinally movable bar connected with said actuating member, a lug projecting from said bar, a finger carried by said arm
10 and arranged to engage said lug to move said actuating member into the path of the projection on said turntable, and a finger piece on said bar to return said actuating member to its normal position.

15 7. In a device of the character described, the combination, with a turntable having a projection, a brake to control the movement of said turntable, a sound-reproducing device, and a movable arm to support said device
20 vice adjacent to said turntable, of an actu-

ating member pivotally mounted adjacent to said turntable and having its inner end normally out of the path of the projection thereon, a rod connected at one end to said actuating member and loosely connected at
25 its other end with said brake, a slidable bar connected with said actuating member on that side of its pivotal center opposite the point of connection with its rod, a lug carried by said slidable bar, and a finger carried
30 by said arm and adapted to engage said lug to move said actuating member about its pivotal center.

In testimony whereof, I affix my signature in presence of two witnesses.

JAMES W. NELSON.

Witnesses:

McCLAIRe DARMODY,
CHARLES L. JUSTICE.