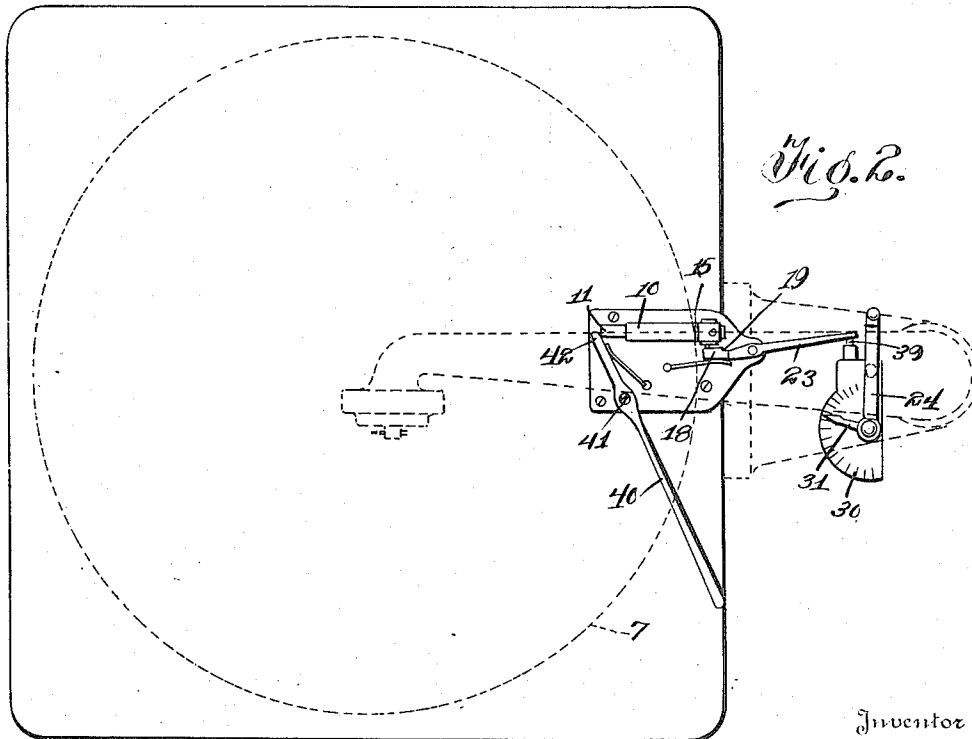
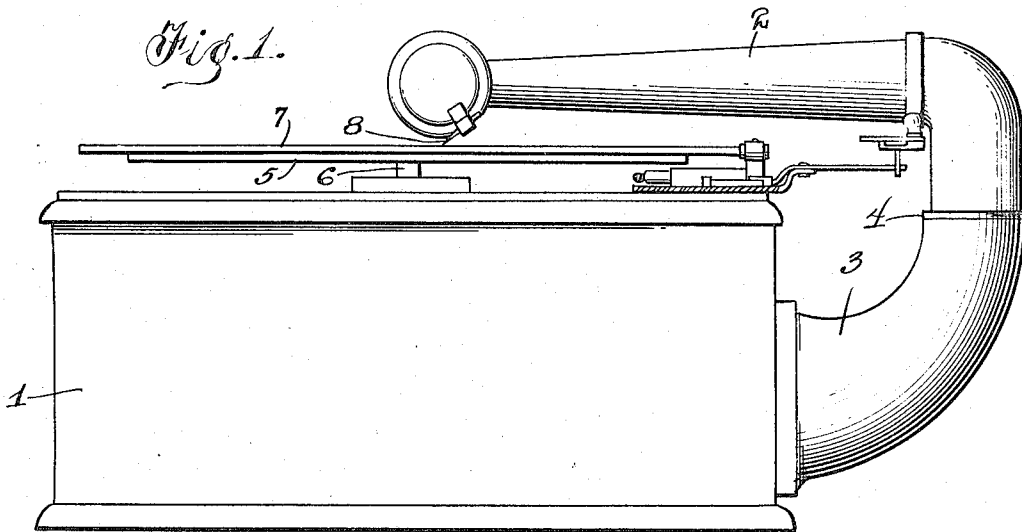


C. HARRISON.
BRAKE MECHANISM FOR TALKING MACHINES.
APPLICATION FILED FEB. 12, 1914.

1,148,512.

Patented Aug. 3, 1915.
2 SHEETS—SHEET 1.



Inventor

Witnesses
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By

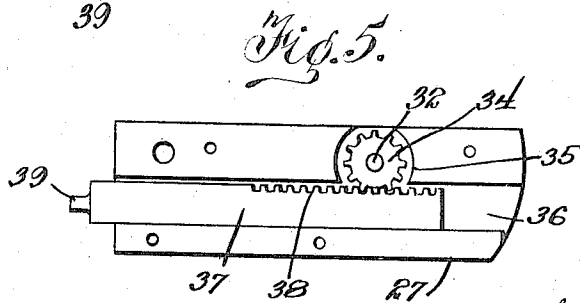
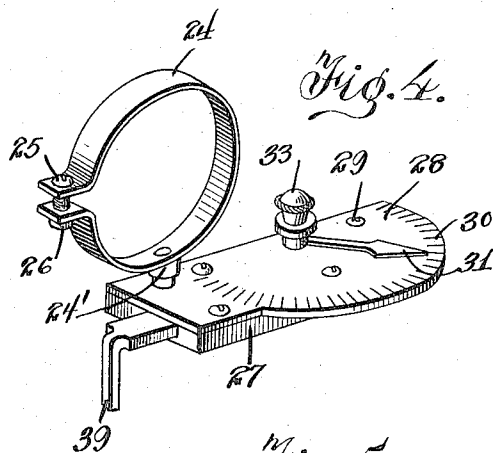
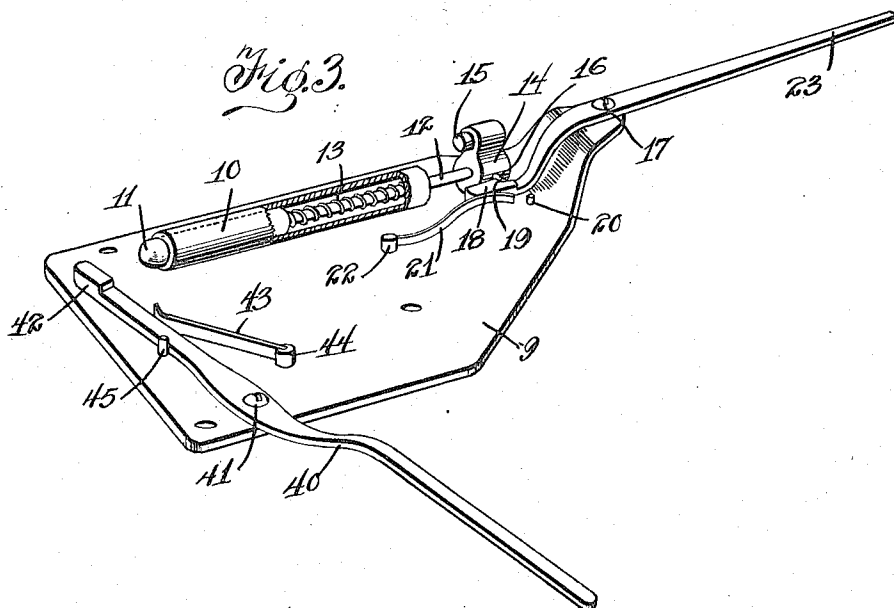
Charles Harrison,
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UNITED STATES PATENT OFFICE.

CHARLES HARRISON, OF RENO, NEVADA, ASSIGNOR OF ONE-THIRD TO PETER SLAUGH, OF RENO, NEVADA.

BRAKE MECHANISM FOR TALKING-MACHINES.

1,148,512.

Specification of Letters Patent.

Patented Aug. 3, 1915.

Application filed February 12, 1914. Serial No. 818,365.

To all whom it may concern:

Be it known that I, CHARLES HARRISON, a citizen of the United States, residing at Reno, in the county of Washoe and State of Nevada, have invented certain new and useful Improvements in Brake Mechanism for Talking-Machines, of which the following is a specification.

The object of this invention is to provide a brake or stop mechanism for talking machines which is designed to arrest rotation of the record structure, comprising the record and its carrier, when the record has been reproduced or completed so as to avoid scratching the record by the needle or stylus.

A further object of the invention is to provide a spring-controlled stop adapted for engagement with the record structure, preferably the record itself, which is adapted to be held in an inoperative position by a trip device, the latter lying in operative relation with means carried by the stylus arm for actuation of the stop under its spring.

Other features and objects of the invention will be more fully described in connection with the accompanying drawings and will be more particularly pointed out and ascertained in and by the appended claims.

In the drawings:—Figure 1 is a view in side elevation, partly in section, of a brake or stop mechanism embodying one form of my invention. Fig. 2 is a plan view thereof with the stylus-carrying arm shown in dotted lines. Fig. 3 is a perspective view of trip mechanism which is mounted upon the box or base of the talking machine, also showing a part of the stop in section and a part in elevation. Fig. 4 is a perspective view of the trip-actuating means carried by the stylus arm. Fig. 5 is a top plan view of the structure shown in Fig. 4 with a portion thereof omitted.

Like characters of reference designate similar parts throughout the different figures of the drawings.

In the form shown I have illustrated the device of my invention as applied to a disk type of talking machine in which the casing is designated at 1 and the tubular stylus-carrying arm at 2. The stylus-carrying arm is rotatably supported by a tubular arm 3 which delivers to the casing 1, the point of support being indicated at 4. Revolvably mounted upon the casing 1 is a record carrier 5, of the disk type, which is mounted

upon a carrier spindle 6 adapted to be propelled or rotated by a clock-work or other mechanism in the casing 1, and not herein shown. A disk record 7 is shown mounted upon the carrier 5 for engagement by a stylus 8 carried by arm 2.

The foregoing mechanism is a typical form of talking machine which I have selected to illustrate the application of the device of my invention thereto.

A base plate 9 is mounted on the top of casing 1, beneath the disk carrier 5, and I dispose on the base plate 9 a stop mechanism for engagement with the disk structure, preferably the record disk itself, to arrest rotation thereof.

As illustrated, my improved stop mechanism comprises a cylinder 10, which may be rigidly mounted on the base plate 9 and which is provided with a plunger piston 11, non-rotatably mounted therein and adapted to project from one end thereof as clearly shown in Fig. 3. This piston plunger 11 is provided with a reduced rod 12 which projects through one end of the cylinder and between the plunger and one end of the cylinder I dispose a spring 13 which is preferably of the coil type and which embraces the rod 12 to normally force the piston plunger 11 to the left of Fig. 3 into an operative position. The rod 12 carries a stop head 14 on which I may dispose a yielding abutment, of rubber or the like as indicated at 15, for engagement with the record disk.

The stop head 14 comprises one member of a trip device and is provided with a trip portion in the form of a pin 16 which projects therefrom as shown in Fig. 3. The other member of the trip device is in the form of a trip lever pivoted to the base plate 9 at 17 and having a trip portion 18 provided with a shoulder 19, for engagement with said trip pin 16. A stop 20 limits movement of the trip arm or end of the lever 18 away from the trip pin 16 and a spring 21, mounted at 22, normally holds the trip end 18 into operative range with the trip pin 16. The lever is provided with an actuating end 23 which lies in the path of mechanism which I will now describe.

The actuating means on the stylus carrier for operating the end 23 of the lever includes, in the construction shown, a band 24 adapted to embrace the arm 2 and be frictionally held thereon in clamped rela-

tion with respect thereto, by a screw and bolt 25 and 26, respectively. The band or strap 24 supports a trip device actuator which may comprise a casing 27 provided with a removable top 28. The removable top is shown secured to the casing 27 by screws 29 and the top is provided with graduations 30 abreast of which an index 31 is movable. The index 31 is mounted upon an arbor 32 and the arbor 32 is provided with a thumb grip 33 whereby the index 31 may be set to any desired position. The arbor 32 carries a pinion 34 which is disposed in a recess 35 in the casing 27, and the latter is also longitudinally grooved, as indicated at 36 to receive a rack bar 37 which is longitudinally movable therein. The rack bar 37 is provided with teeth 38 adapted to mesh with the teeth of pinion 34. On one end of the rack bar 37 a depending projection 39 is formed for engagement with the actuating end 23 of the trip lever.

It will be seen that the rack bar 37 can be advanced or retracted in the slot 36, upon movement of the index 31, so as to advance or retard the time of engagement of the projection 39 with the end 23 of the trip lever, in accordance with the diameter of the disk or in accordance with the length of record thereon.

I provide means for setting the mechanism to permit of operation of the record structure, and as shown, said means includes a lever 40, which is pivoted at 41 to the base plate 9 and which is provided with an end 42 for engagement with the piston plunger 11 to force the same into the position shown in Fig. 3, from the position shown in Fig. 2. A spring 43, mounted at 44, engages the lever 40 and normally urges the same against a stop 45 to limit movement thereof when free.

The shoulder 19 serves to engage the trip pin 16 of the head 14 in a manner to hold the trip head 14 in the position shown in Fig. 3, against the action of spring 13. After the lever 40 is actuated to move the parts from the position shown in Fig. 2 to the position shown in Fig. 3, the trip device holds the head 14 until the projection 39 engages the end 23 of the trip lever. This moves the trip lever against the action of spring 21 and releases the pin 16 so that the spring 13 will be free to shift the head 14 and its abutment 15 against the disk structure and arrest rotation thereof. The widest possible range of adjustment is afforded both by reason of the fact that the rack 37 is adjustable by the spindle 32, and by reason of the fact that the trip-actuating device as a whole, is adjustable longitudinally on the stylus arm 2 toward and away from the pivot 17, and with respect to the axis about which the arm 2 rotates, thereby serving to further increase range of adjustment.

It is believed that the device of my invention will be clearly understood from the foregoing description, and while I have herein shown and described one specific form of my invention, I do not wish to be limited thereto except for such limitations as the claims may import.

I claim:—

1. In a brake or stop mechanism, a traveling element pivotally hinged at its one end to be capable of swinging movement, a rotating structure mounted adjacent said element, a spring-controlled stop for engagement with said rotating structure to arrest rotation thereof, a trip device for holding said stop in an inoperative position, tripping means carried by said traveling element to engage with and trip said holding device, and adjusting means comprising a rack and pinion to be actuated to adjust said trip means to the proper operative relation.

2. In a brake or stop mechanism, a traveling element movable about a fixed axis at one end thereof, a rotating structure, a spring controlled stop for engagement with said structure to arrest rotation thereof, a trip device for holding said stop in an inoperative position, tripping means carried by said traveling element to engage with and trip said holding device to permit movement of the stop to the operative relation, adjusting means comprising a rack and pinion to be actuated to adjust said trip means, and a gage by which said last means may be adjusted to fit the requirements of use.

3. In a brake or stop mechanism for talking machines including a movable arm, and a rotatable structure, a spring-controlled stop for engagement with said structure to arrest rotation thereof, a trip device for holding said stop in an inoperative position, and means carried by said arm for actuating said trip device and comprising a casing, a trip actuating rack longitudinally slidable in said casing, a pinion in said casing for adjusting said rack, and an index device connected with said pinion to set the rack, said casing having a graduated portion to indicate the set position of said index device.

4. In a brake or stop mechanism for talking machines including a movable arm, and a rotary structure, a spring-controlled stop for engagement with said structure to arrest rotation thereof, a trip device for holding said stop in an inoperative position, and means carried by said arm for actuating said trip device and including a casing having a graduated portion, an index movable abreast of said graduated portion, and gear means operated by adjustment of the index for engaging said trip device.

5. In a brake or stop mechanism for talking machines including a movable arm, and

a rotating structure, a spring-controlled stop for engagement with said structure to arrest rotation thereof, a trip device for holding said stop in an inoperative position, and means carried by said arm for actuating said trip device and comprising a casing having a graduated portion, an index movable abreast of said graduated portion, and rack and pinion means operable by movement of said index to various set positions to place a stop in the path of the trip device to actuate the same and to permit adjustment of the stop to the proper predetermined relation by movement of the index and adjustment of the same with respect to the graduated portion.

6. In a brake or stop mechanism for talking machines including a movable arm mounted to be capable of swinging movement about a fixed axis, and a rotating structure, a spring controlled stop for engagement with said structure to arrest rotation thereof, a trip device for holding said stop in an inoperative position, and means for engaging said trip device including a band adjustable on said arm toward or from its axis, a casing carried by said band and provided with a graduated portion, an index movable on said casing abreast of the graduated portion, and trip-engaging means operable by movement of said index to various set positions.

7. In a brake or stop mechanism for talking machines, a rotary structure, a guide and a spring-controlled stop device slidable

with respect to said guide into arresting engagement with said structure and provided with a trip portion, a trip lever having a trip shoulder for engagement with said trip portion to hold said stop device in an inoperative position, a carrying arm, means carried by said arm for engagement with said lever to release said stop device, and means comprising a rack and pinion for adjusting said engaging means to the proper operative relation.

8. In a brake or stop mechanism for talking machines including a carrying arm and a rotary structure, a spring-controlled stop device movable into arresting engagement with said structure and provided with a trip portion, a pivotally mounted trip lever having a trip shoulder for engagement with said trip portion to hold the stop device in an inoperative position, a lever for moving said device into an inoperative position and into engagement with said trip lever, means carried by said carrying arm for operating said trip lever, means comprising a rack and pinion for setting said trip lever operating means in the proper operative relation, and a gage to show the adjustment of said operating means.

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

CHARLES HARRISON.

Witnesses:

H. W. DUVAL,
S. W. CLEGG.

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