

M. A. POSSONS.
TALKING MACHINE.
APPLICATION FILED OCT. 7, 1909.

1,069,464.

Patented Aug. 5, 1913

2 SHEETS-SHEET 1.

Fig. 1.

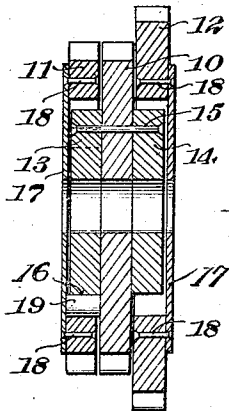
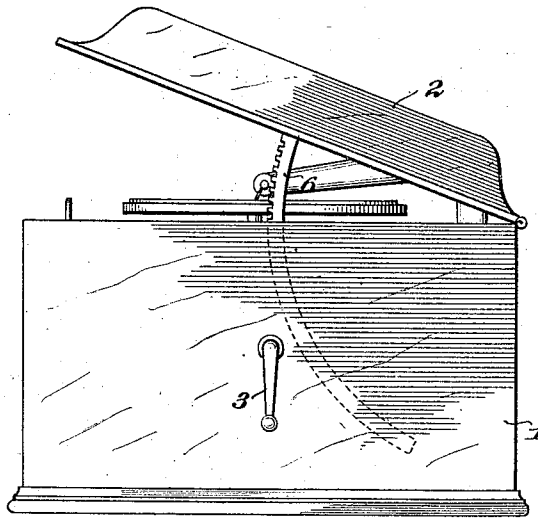


Fig. 4.

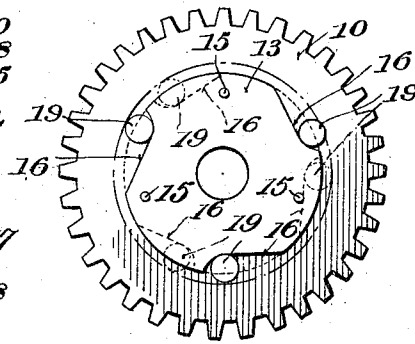


Fig. 5.

Witnesses

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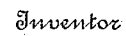
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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TALKING-MACHINE.

Specification of Letters Patent.

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1,069,464.

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To all whom it may concern:

Be it known that I, MINARD A. POSSONS, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Talking-Machines, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in talking machines.

The object of my invention is to provide a winding device for talking machines of the character that have a cover to let down over the record while playing, and the raising and lowering of the cover winds the talking machine so that when the cover is raised and a new record placed thereon and the cover lowered the talking machine has been sufficiently wound to play the record.

Another object of my invention is to provide a winding device of this character which can be readily attached to any well-known talking machine and at the same time allowing of the usual crank winding thereof.

In the accompanying drawing: Figure 1 is a side elevation of a talking machine showing my device applied thereto. Fig. 2 is a vertical sectional view of Fig. 1. Fig. 3 is a transverse sectional view of Fig. 2. Fig. 4 is an enlarged plan view of the gearing showing the gear case removed. Fig. 5 is an enlarged plan view of the ratchet gears for winding the talking machine on both the upward and downward movement of the cover.

Referring now to the drawings, 1 represents the body of a talking machine which is provided with a cover 2, to inclose the record and the reproducer and arm when the machine is in operation, and whereby the record is protected while playing and thus saving the record against scratches caused by striking the reproducer or its arm. In such machines the cover is raised when a new record is placed on the machine and it is the intention of my invention to wind the machine by the raising and lowering of the cover. The body 1 and cover 2, forming a motor and record receiving member case. Machines of this character are driven by a spring and said spring wound by the crank 3. The crank being threaded upon the spring drum shaft 4 so that it will tighten when winding the machine, but can be removed or unscrewed by turning it backward.

My device, as heretofore stated, is constructed to be applied to the ordinary machine and will not have to abandon any part thereof, nor no new parts will be required except what is absolutely necessary for winding the machine.

My improved device is wholly inclosed in a casing 5, which is readily secured to the inside of the body 1 of the talking machine adjacent the drum-shaft 4 and crank-shaft 3, in any desired manner. The cover 2 has rigidly secured thereto the downwardly extending segmental rack 6, which extends through the housing 5, and operates a train of gear for rotating the shaft 4, which will be hereinafter more fully described.

The housing 5 is provided with a transverse longitudinal shaft 7, upon which is mounted a gear wheel 8, which is, at all times in mesh with the segmental rack 6, and whereby the gear 8 is driven in one direction by the upward movement of the rack 6, and in the reverse direction upon the downward movement of the rack. The casing 5 on the inside of the gear 8 is provided with a transverse horizontal shaft 9, which is free to rotate in the frame and upon which is loosely mounted a gear 10, which is at all times in gear with the gear 8, whereby the direction of rotation of said gear is reversed by the gear 8 as heretofore described. Loosely mounted upon the shaft 9, on each side of the gear 10 is a gear 11 and 12. The center gear 10 on each side is provided with plates 13 and 14 held upon the gear by rivets 15, the two plates being held by the same rivets. The outer edge of the plates 13 and 14 are provided with tapering cutaway portions 16. The cut away portions of one plate tapering in one direction, while those of the other plate taper in the opposite direction. The gears 11 and 12 are of rim-like form having secured to their outer faces the plates 17 by means of rivets 18. The central openings of said gears 11 and 12 are slightly larger than the plates 13 and 14 and the said plates fitting in said openings. Within the tapering cutaway portions 16, which are arranged at equal distances around the periphery of the plates are steel rollers 19. These rollers when in the deep portion of the tapering cutaway portions allow the free rotation of the gear, but when caused to travel toward the shallow end, the gear is locked to the plate or to the central gear 10. These cutaway por-

tions of one plate tapering in opposite direction to those of the other plate it will be seen that when the gear 10 is rotated in one direction the gear 11 is locked thereto, and when rotated in the opposite direction, the gear 12 is locked thereto. The rollers 19 are held against inward movement by the gear 10 and against outward movement by the plates 17.

The gear 12 is slightly larger in diameter than the gear 11, and meshes with an idle gear 21, mounted in the casing. The idle gear 21 meshes with the large gear 22, mounted upon the shaft 23 carried by the frame 5, and said gear 22 meshing with the gear 24 loosely mounted upon the shaft 4 of the spring drum. The gear 11 is smaller in diameter than the gear 12, and meshes directly with the gear 22. The gear 24 being loose upon the shaft 4, it will be seen that the said shaft can be rotated by the crank 3, as heretofore described without operating the train of gearing.

In order to lock the gear 24 to the shaft 4, or crank 3, I provide a sleeve 25, which is slidable upon the shaft 4 or crank 3. Surrounding the sleeve is a plate 26, secured to the outer face of the body 1, and surrounding the sleeve on the inside of the plate 26 is a coil spring 27, the outer end of which bears against the plate and the inner end secured to the sleeve and normally holding the sleeve in an inward position. The inner end of the sleeve is provided with notches 28, into which extend the lugs 29 carried by the gear 24, whereby the gear is locked to the sleeve. The sleeve is held upon the shaft 4 by means of a pin 30, working in a bayonet-slot 31 in the sleeve. When the pin is in the position shown in the drawings, the gear 24 is locked in the shaft 4 through the medium of the sleeve 25. Drawing the sleeve outwardly against the tension of the spring and turning it locks the sleeve in its outward position and uncouples the sleeve 25 from the gear 24.

In devices of this character, as heretofore stated, a cover protects the record while playing, and whenever a new record is placed on the machine the cover is raised and lowered. When the cover is raised the rack 6 rotates the gear 8, and this gear in turn rotates the central gear 10 in the reverse direction. The rotation of this gear 10 in this direction by means of the rollers and tapering slots locks the lower or inner gear 11 to the gear 10, so that they rotate in the same direction. This gear 11 meshes with the large gear 22 and rotates the same in the opposite direction. This gear 22 meshes with the gear 24, which when locked to the shaft 4, winds the spring of the machine. A new record is then placed upon the machine. The downward movement of the rack in closing the cover rotates the gear

8 in the opposite direction; this rotates the gear 10 in the opposite direction and by the clutch mechanism the gear 10 is disconnected from the gear 11 and connected to the gear 12. This gear 12 meshes with an idle gear 21, which meshes with the gear 22, which meshes with the gear 24, whereby said gear through the medium of the idle gear 24 is rotated in the same direction upon both the upward and downward movement of the rack.

By locking the sleeve 25 in the outward position, as heretofore described, the gear 24 is disconnected from the shaft 4 and the shaft may be rotated by the crank 3, independent of the rack and its operating mechanism. While I have shown and described this specific means of operating the spring-drum shaft, it will be understood that the same can be vastly varied without departing from my invention.

I claim—

1. The combination with a talking machine cabinet having a motor therein, of a record holding member and a reproducer carried by the cabinet, a cover closing the cabinet for inclosing the record holding member and the reproducer, a winding crank carried by the motor, means operated by the movement of the cover for winding the crank and means for disconnecting said winding means from the crank.

2. The combination with a talking machine cabinet having a motor therein, of a record holding member and a reproducer carried by the cabinet, a cover closing the cabinet for inclosing the record holding member and the reproducer, a winding crank for the motor, means operated by the cover for rotating the winding crank during both the upward and downward movement thereof, and means for disconnecting the cover operating means from the crank, whereby the motor may be wound by the crank.

3. The combination with a talking machine cabinet having a motor therein, of a record holding member and a reproducer carried by the cabinet, a hinged cover closing the cabinet for inclosing the record holding member and the reproducer, a usual winding shaft carried by the motor, a gear loosely mounted upon the winding shaft, a clutch mechanism carried by the shaft and held in engagement with the gear by a spring, a bayonet slot connection between the clutch and the shaft for holding the clutch mechanism against rotation on the shaft and locking it in its outward position out of engagement with the gear, a train of gearing meshing with the said loose gear, and a rack carried by the cover for operating the train of gearing.

4. The combination with a talking machine cabinet having a motor therein, of a record holding member and a reproducer

carried by the cabinet, a hinged cover closing the cabinet for inclosing the record holding member and the reproducer, a crank for winding the motor, a loose gear carried by the crank, a clutch mechanism for locking the gear to the crank, a gear meshing with said loose gear, a train of gearing meshing with the last mentioned gear, and a segmental rack carried by the cover and adapted to operate said train of gearing, substantially as shown and described.

5. The combination with a talking machine cabinet having a motor therein, of a record holding member and a reproducer carried by the cabinet, a hinged cover closing the cabinet for inclosing the record holding member and the reproducer, a crank for winding the motor, a segmental rack carried by the cover and extending downwardly, a gear carried by the cabinet and meshing with said rack, a large gear meshing with the first mentioned gear, plates secured to both sides of said large gear and having tapering recesses in their outer edges, said recesses of one plate tapering in opposite direction to that of the other plate, rollers in said recesses, a gear surrounding each plate and adapted to be locked thereto by the rotation of the large gear in different directions, and a train of gearing meshing with the outside gears and adapted to rotate the crank in the same direction by the upward and downward movement of the cover.

6. The combination with a talking machine cabinet having a motor therein, of a record holding member and a reproducer

carried by the cabinet, a hinged cover closing the cabinet for inclosing the record holding member and the reproducer, a winding crank connected to the motor, a segmental rack carried by the cover, a gear carried by the cabinet and meshing with the said segmental rack, an intermediate gear meshing with the first mentioned gear, a gear on each side of the intermediate gear and of different diameters, means for coupling the larger gear to the intermediate gear when revolving in one direction, and the smaller gear to the intermediate gear when revolving in the opposite direction, an idle gear meshing with the larger gear beside the intermediate gear, a gear meshing with the smaller gear beside the intermediate gear and the idle gear, and a gear carried by the winding crank and meshing with the last mentioned gear, whereby the rack revolves the motor shaft in the same direction on the upward and downward movement.

7. In a talking machine, the combination with a motor and talking machine cabinet, of a motor within the cabinet, two winding mechanisms for the motor, one operative independently of the other, the cabinet having a movable portion operatively connected with one of the winding mechanisms and a handle operatively connected to the other winding mechanism.

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

MINARD ARTHUR POSSONS.

Witnesses:

EDWARD A. SCHNEIDER,
FRED. T. BATCHELOR.