P. WEBER.

PHONOGRAPH.

APPLICATION FILED APR. 2, 1909.

1,041,922. Patented Oct. 22, 1912.

Fig. 1

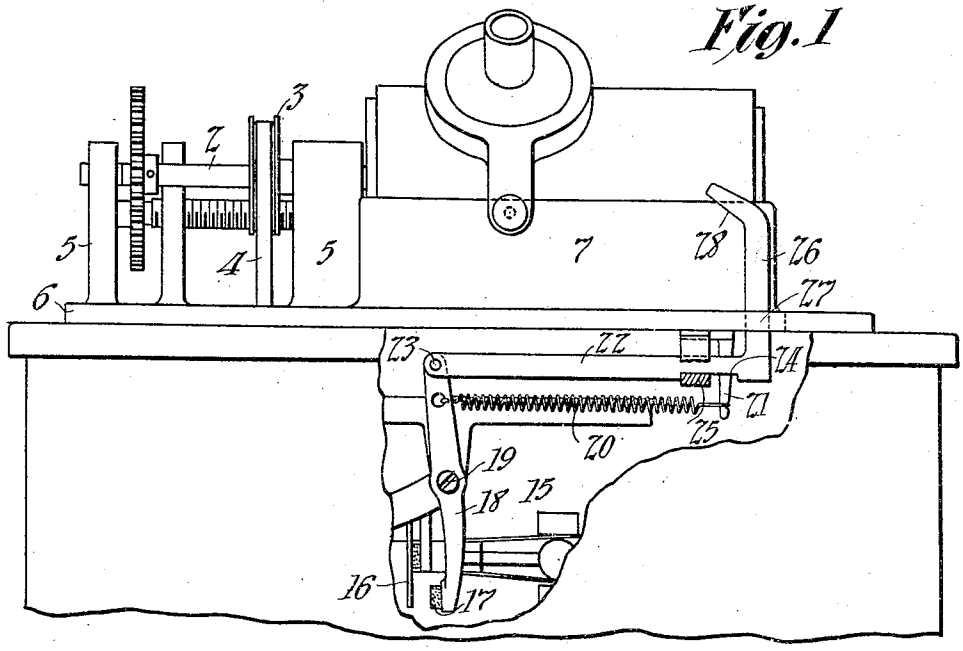
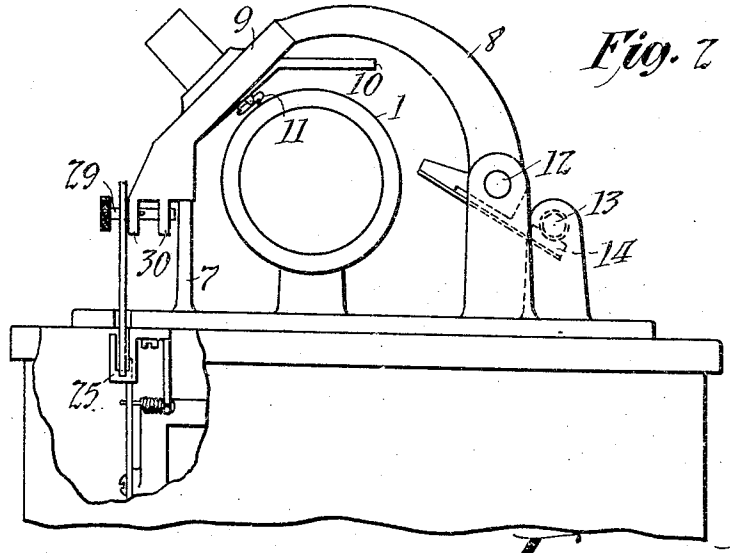


Fig. 2



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UNITED STATES PATENT OFFICE.

PETER WEBER, OF ORANGE, NEW JERSEY, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THOMAS A. EDISON, INCORPORATED, OF WEST ORANGE, NEW JERSEY, A CORPORATION OF NEW JERSEY.

PHONOGRAPH.

1,041,922. Specification of Letters Patent. Patented Oct. 22, 1912.

Application filed April 2, 1909. Serial No. 487,563.

To all whom it may concern:

Be it known that I, PETER WEBER, a citizen of the United States. and a resident of Orange, in the county of Essex and State of New Jersey, have made a certain new and useful Invention in Phonographs, of which the following is a description.

My invention relates to phonographs and similar talking machines in which provision is made for automatically stopping the rotation of the mandrel when the end of the record has been reached, and more particularly to instruments of this character in which a spring motor is used for furnishing the driving power.

My invention has for its object the application of such means to phonographs as now built and on the market, and also to simplify the structure and render the same more efficient.

My invention is an improvement over that shown in United States Patent No. 1,002,479, granted to Edward L. Aiken on September 5, 1911, one of the chief points of such improvement being the provision of contacting means carried by the movable carriage and a member attached to the brake device of such character that by the contacting of such members on the traveling carriage reaching the end of the record, the carriage will be held more firmly on its seat, with the surface of the arm of the carriage firmly contacting the top of the straight edge, and the stylus remaining in contact with the record. With the contour of the cam contact devices previously used, the tendency is for the traveling carriage to be lifted by the first contact of the contacting parts, the arm of the carriage riding up the cam surface, so that the feed nut may be disengaged from the feed screw before the stopping device has been fully applied, whereby the progression of the carriage will be immediately stopped, thus rendering the stopping device inoperative.

With the ends heretofore set forth in view, my invention consists in the features hereinafter set forth and claimed.

Reference is hereby made to the accompanying drawing, in which—

Figure 1 is a side elevation of a phonograph embodying my invention, the casing being partly broken away to disclose the braking device for the motor, and the governor. Fig. 2 is an end elevation of the same.

Referring to the drawings, the mandrel 1 mounted on the shaft 2 is driven by means of the belt wheel 3 which is rotated by a belt 4, the latter being driven from a motor not shown. The standards 5 carrying the necessary bearings rise from the bed plate 6, on which is also mounted the straight edge 7. The traveling carriage 8 is provided with sound box 9, floating weight 10 and stylus 11 in contact with the record on mandrel 1, the traveling carriage being slidably mounted on guide rod 12, and fed from feed screw 13 by feed nut 14, all of which is common.

The governor 15 of the motor is provided with a sliding regulator disk 16, with which the pad 17 of felt or other yielding material carried by the end of the lever 18 pivoted on the screw 19, is adapted to coöperate to regulate or stop the motor, as is well known. The spiral spring 20 is attached to the lever 18, the other end of the spring 20 being fastened to a lug 21 mounted on the under side of base plate 6, the spring 20 being under tension, so that when unrestrained it will cause the pad 17 to contact disk 16, thus stopping the motor. The end of the lever 18 distant from the pad 17 has connected thereto the horizontal rod 22, as by pin connection 23. On the under side of rod 22 is a notch 24 with which coöperates the lug 25, which is mounted on the under side of base plate 6, the said abutment and notch coöperating to latch the brake lever 18 in such a position that the pad 17 is out of contact with disk 16, thus allowing the motor to operate.

Secured to or preferably integral with the rod 22 is the vertical trip arm 26, which extends up through a slot 27 in bed plate 6 of the machine. Arm 26 is provided with a cam surface 28, which extends into the path of a member carried by the traveling carriage 8. In the preferred construction, the cam 28 is formed to extend forwardly into the path of some part carried by the carriage, that is, upwardly at an angle and toward the left, referring to Fig. 1. This part on the carriage is most conveniently the pin 29, which is slidably mounted in lugs 30 on the end of the overhanging arm of the traveling carriage 8, this pin being adapted

to form a convenient handle by which the stylus may be lifted from the record, whereupon the end of the pin may be slipped over the top of straight edge 7, forming a means for supporting the carriage 8 with the stylus 11 out of contact with the record surface while the record is being changed. It will be noted that the contour of the cam 28 is such as to hold the traveling carriage in position with the arm thereof slidably engaging the top of straight edge 7. It is evident that the same effect might be secured by placing the cam member on the traveling carriage, in which case the cam 28 could be horizontal or nearly so. This expedient would be a mere reversal of parts, and I have not deemed it necessary to illustrate the same, it being obvious that such a construction is within the scope of my invention as described, in which the effect of the contact described will be to lift the rod 22 out of contact with the abutment 25, thereby unlatching the rod 22 and allowing spring 20 to force pad 17 into contact with the disk 16, thus stopping the motor.

Having now described my invention, what I claim and desire to protect by Letters Patent of the United States is as follows:

1. In a phonograph, the combination with the governor disk, of a lever carrying a friction pad adapted to coact with said disk to control the same, a longitudinal rod attached to said lever and provided on its under side with a locking notch, an abutment adapted to coact with said notch to hold the rod in such position that the pad is out of contact with the disk, means tending to move said pad into engagement with said disk, a trip arm carried by said rod having a cam surface extending upwardly and laterally at an angle to the horizontal, a traveling carriage, and means carried thereby for contacting said cam surface to lift said arm to unlatch said rod, substantially as described.

2. In a phonograph, the combination with a motor brake of means tending to apply said brake, a longitudinal rod connected to said brake and having a locking notch on its under side, an abutment co-acting with said notch to latch said brake in "off" position, a traveling carriage, a member connected with said rod extending into the path of said carriage, and means carried by said carriage to contact said member to lift the same and unlatch said rod at a predetermined point, substantially as described.

3. In a phonograph, the combination with a motor brake of means tending to apply said brake, a longitudinal rod connected to said brake and having a locking notch on its under side, an abutment co-acting with said notch to latch said brake in "off" position, a traveling carriage, a pin carried by said carriage, and a member connected with said rod having a cam extending into the path of said pin, whereby said rod will be lifted out of contact with said abutment at a predetermined point, substantially as described.

4. In a phonograph, the combination with a traveling carriage carrying an arm provided with contacting means, of a motor brake, means tending to apply said brake, a rod pivotally connected to said brake, carrying projecting means adapted to be contacted by said contacting means, and being provided with latching means, an abutment with which said latching means coacts under the influence of gravity to latch said brake in "off" position, and a slideway for said traveling carriage arm, the conformations of said contacting means and projecting means being such that contact therebetween oscillates said rod about its pivot to unlatch the same and presses said arm more tightly upon said slideway, substantially as described.

5. In a phonograph, the combination with a motor brake, of means tending to apply said brake, a longitudinally movable rod connected to said brake and having a locking notch on its under side, a stationary abutment coacting with said notch to latch said brake in "off" position, a traveling carriage, a member connected with said rod extending into the path of said carriage, and means carried by said carriage to contact said member to lift the same and unlatch said rod at a predetermined point, substantially as described.

6. In a phonograph, the combination with a motor brake, of means tending to apply said brake, a longitudinally movable rod connected to said brake and having a locking notch on its under side, a stationary abutment coacting with said notch to latch said brake in "off" position, a traveling carriage, a pin carried by said carriage, and a member connected with said rod and having a cam extending into the path of said pin, whereby said rod will be lifted out of contact with said abutment at a predetermined point, substantially as described.

This specification signed and witnessed this 31st day of March 1909.

PETER WEBER.

Witnesses:
DYER SMITH,
JOHN M. CAUFIELD.

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