

L. A. BROWN.
 PHONOGRAPH.
 APPLICATION FILED APR. 2, 1909.

1,036,440.

Patented Aug. 20, 1912.

Fig. 1

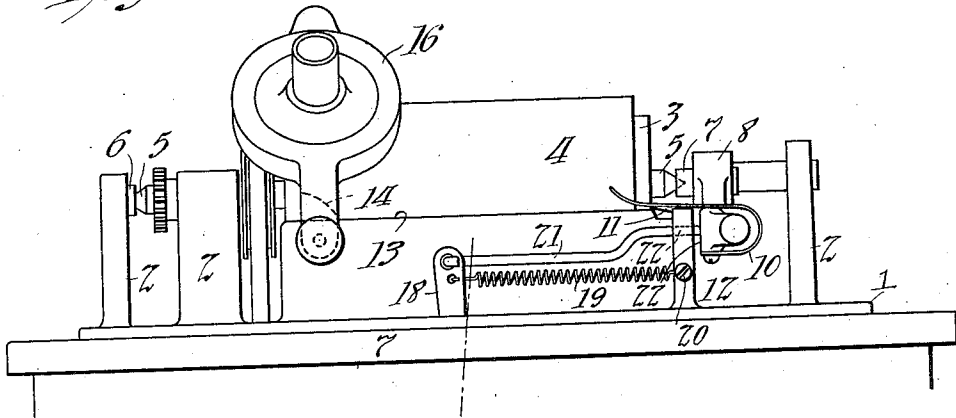


Fig. 2

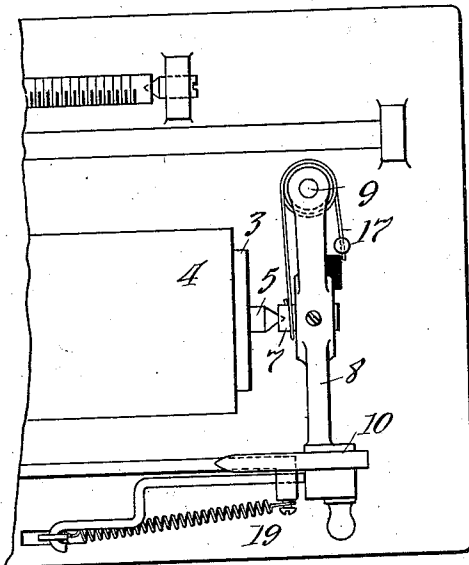


Fig. 3

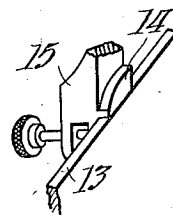
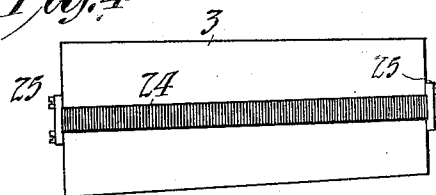


Fig. 4



Witnesses:

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Inventor:
Leslie A. Brown
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Att.

UNITED STATES PATENT OFFICE.

LESLIE A. BROWN, OF BEDFORD, INDIANA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO
THOMAS A. EDISON, INCORPORATED, OF WEST ORANGE, NEW JERSEY, A CORPORATION OF NEW JERSEY.

PHONOGRAPH.

1,036,440.

Specification of Letters Patent. Patented Aug. 20, 1912.

Application filed April 2, 1909. Serial No. 487,534.

To all whom it may concern:

Be it known that I, LESLIE A. BROWN, a citizen of the United States, and a resident of Bedford, in the county of Lawrence and State of Indiana, have made a certain new and useful Invention in Phonographs, of which the following is a description.

This invention relates to phonographs of the type in which a traveling carriage carrying a reproducer stylus is fed axially past a rotating record cylinder, and the object of my invention is chiefly to provide efficient means whereby the phonograph may be started and stopped automatically.

In my preferred construction, the operating mechanism of the phonograph is stopped by the action of the traveling carriage in unlatching the end gate of the machine when the end of the record is reached, or at some other desired predetermined point, the machine being automatically started when the end gate is closed, which would in practice, of course, be after a new record has been inserted on the mandrel.

More broadly, my invention comprises efficient means for starting and stopping the operating mechanism of the phonograph without regard to the end gate.

My invention also comprises means for preventing slipping of the record when in place upon the mandrel.

Other objects are the provision of improved details of construction and combinations of elements as described and claimed in the following specification and claims.

Attention is hereby directed to the accompanying drawings, forming part of this specification, and in which—

Figure 1 represents a side elevation of a phonograph equipped with my invention; Fig. 2 is a plan view of one end of the phonograph showing my improved starting and stopping means; Fig. 3 is a detail view showing the tripping means carried by the traveling carriage; and Fig. 4 is a view of the rotating mandrel showing my improved anti-slipping device attached thereto.

The same reference characters will be used to denote corresponding parts in the various views.

Referring to the drawings, the standards 2 rising from the bed-plate 1 carry bearings for the rotating mandrel and other rotating parts. The rotating mandrel 3 carrying record 4 is mounted as by centers 5 in bear-

ing 6 at the left hand end of the machine as viewed in Fig. 1, and in bearing 7 carried by end gate 8 at the right hand end of the machine. End gate 8 is pivoted or hinged at 9 and carries the spring latch 10, which is adapted to latch the end gate in closed position, spring 10 carrying a lug 11, which is adapted to co-act with the top of post 12 formed on the end of straight edge 13. The end of spring 10 extends above the top of straight edge 13 into the path of the cam-shaped lug 14 carried by the arm 15 of traveling carriage 16 and riding on top of the straight edge 13. This cam 14 rides under the end of spring latch 10 when the reproducer stylus reaches the end of the record to lift the lug 11 of the latch out of contact with the top of post 12. Thereupon end gate 8 is immediately thrown open by a spring 17, which is coiled around the pivotal stud 9 of the end gate, one end of the same being secured to the end gate so that the said spring constantly tends to force the end gate to an open position.

The starting lever 18 has connected thereto the spiral spring 19, the other end of which is secured as by the screw 20 to the post 12. Also secured to the starting lever 18 is the rod or link 21, the opposite end of which extends through the hole or passageway 22 in the post 12, which guides the rod 21, the end of the said rod contacting the surface 23 of the end gate when the latter is latched in closed position. The rod 21 is of such a length that when the end gate is closed and the end of rod 21 is in contact therewith, as shown in Fig. 1 of the drawings, the starting lever 18 will be forced to its operating position, the motor then being allowed to rotate the mandrel and feed the traveling carriage axially of the same. Also, by this movement of the starting lever 18 to running position, the spring 19 will be put under tension. When the traveling carriage 16 reaches the end of the record, the lug 14 will trip the latch 10, whereupon the end gate will fly open, the rod 21 will slip through the passageway 22 in the post 12 and the spring 19 will draw the starting lever 18 to the right, stopping the machine. When a new record has been placed upon the mandrel, or when it is desired to again start the machine the end gate 8 will be closed, the surface 23 of the same forcing the rod 21 to the left, as shown

in Fig. 1 of the drawings, and again starting the motor.

My invention also comprises an anti-slipping device, as stated. This consists of a narrow strip of silk or other ribbon 24, which is secured firmly to the mandrel 3 longitudinally of the same as by means of small brass clamps 25 which are secured to the two ends of the mandrel as by screws. The provision of the silk or other friction surface on the metal mandrel prevents all possibility of the slipping of records while the machine is in operation.

It is, of course, obvious that various changes may be made in the details of my invention without departing from the spirit thereof; and I wish, therefore, not to be limited to the exact structure shown and described.

What I claim as new and desire to protect by Letters Patent of the United States is as follows:—

1. In a phonograph, the combination with the starting lever and the reproducer carriage, of a hinged gate, means for latching the gate closed, means for automatically opening the gate when the carriage reaches the end of the record, and connections for actuating the starting lever with the closing and opening of the gate, substantially as described.

2. In a phonograph, the combination with the starting lever and the reproducer carriage, of a hinged gate, means for latching the gate closed, means carried by the carriage for automatically opening the gate at a predetermined point in the travel of the carriage, and means connected with the starting lever for actuating the said lever in one direction or the other, operated by the closing and opening of said gate, substantially as described.

3. In a phonograph, the combination with the starting lever and the reproducer carriage, of a stationary member, a hinged gate and means for latching the same in closed position, a spring connecting the starting lever with the stationary member, a rod connected to the said lever and abutting the gate when closed, the rod being of such length as to force the lever to running position and tension the said spring when so abutting the gate, and means carried by the carriage for unlatching the gate, substantially as described.

4. In a phonograph, the combination with the reproducer carriage, of a hinged gate, means for latching the gate closed, means tending to open the gate, and means carried by the carriage for automatically releasing said latching means to permit said second named means to open the gate, substantially as described.

5. In a phonograph, the combination with the starting member and the reproducer carriage, of a stationary member, a stylus member, a hinged gate, means for latching the same in closed position, and means tending to open the same, yielding means connecting the starting member with the stationary member, a rod connected to said starting member, the said rod being movable by said gate to force the lever to running position and to tension said yielding means, and means carried by the carriage for unlatching the gate to permit the same to be opened by said second named means, substantially as described.

This specification signed and witnessed this 29th day of March, 1909.

LESLIE A. BROWN.

Witnesses:

F. T. SHERWOOD,
N. E. CLARK.