L. MORONEY.

ATTACHMENT FOR TALKING MACHINES.

APPLICATION FILED FEB. 6, 1917.

1,247,441.

Patented Nov. 20, 1917.

3 SHEETS—SHEET 1.

Fig. 1.

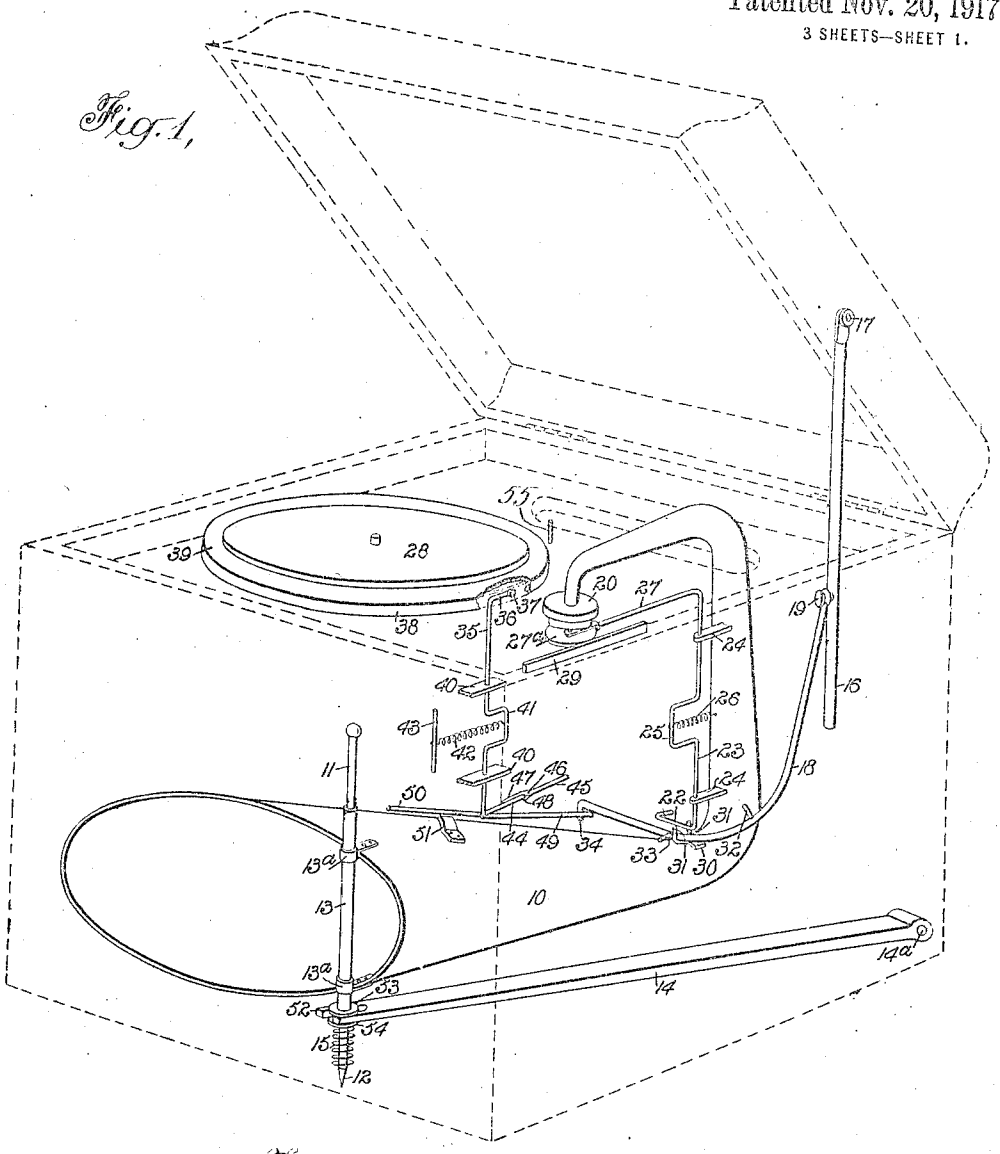
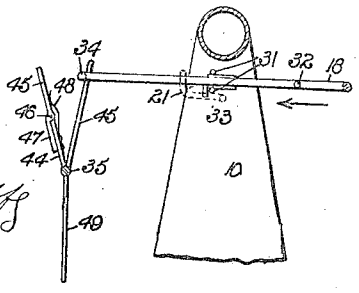


Fig. 2.



WITNESSES

L. Hauerstein

L. L. McAuliffe

INVENTOR

Lester Moroney

BY Munn & Co

ATTORNEYS.

L. MORONEY.

ATTACHMENT FOR TALKING MACHINES.

APPLICATION FILED FEB. 6, 1917.

1,247,441.

Patented Nov. 20, 1917.

3 SHEETS—SHEET 2.

Fig. 3.

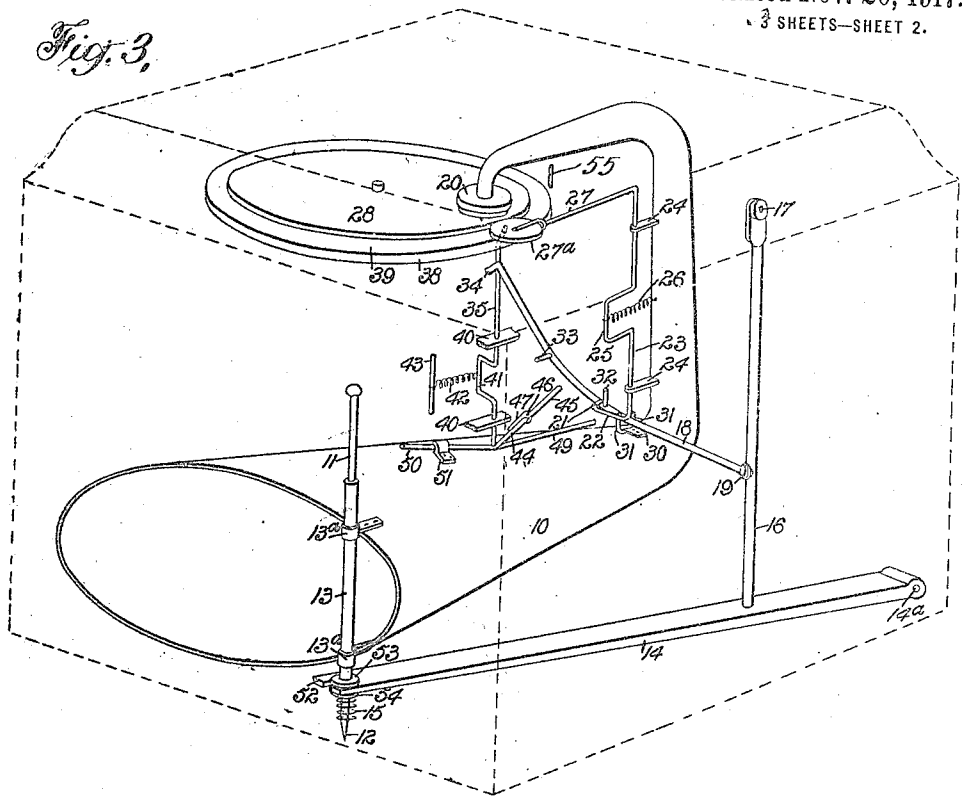


Fig. 4.

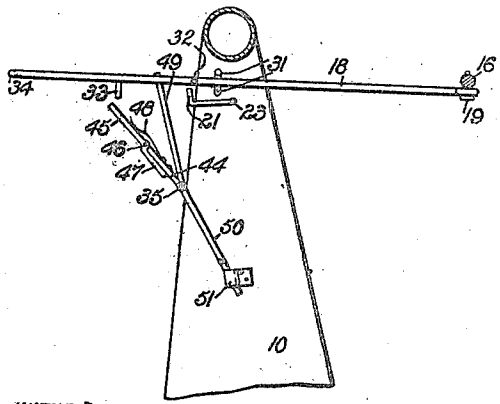
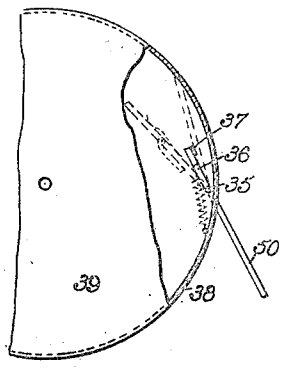


Fig. 5.



WITNESSES

L. Hanerstein

INVENTOR

Lester Moroney

BY Munn & Co.

ATTORNEYS

L. MORONEY.

ATTACHMENT FOR TALKING MACHINES.

APPLICATION FILED FEB. 6, 1917.

1,247,441.

Patented Nov. 20, 1917.

3 SHEETS—SHEET 3.

Fig. 6,

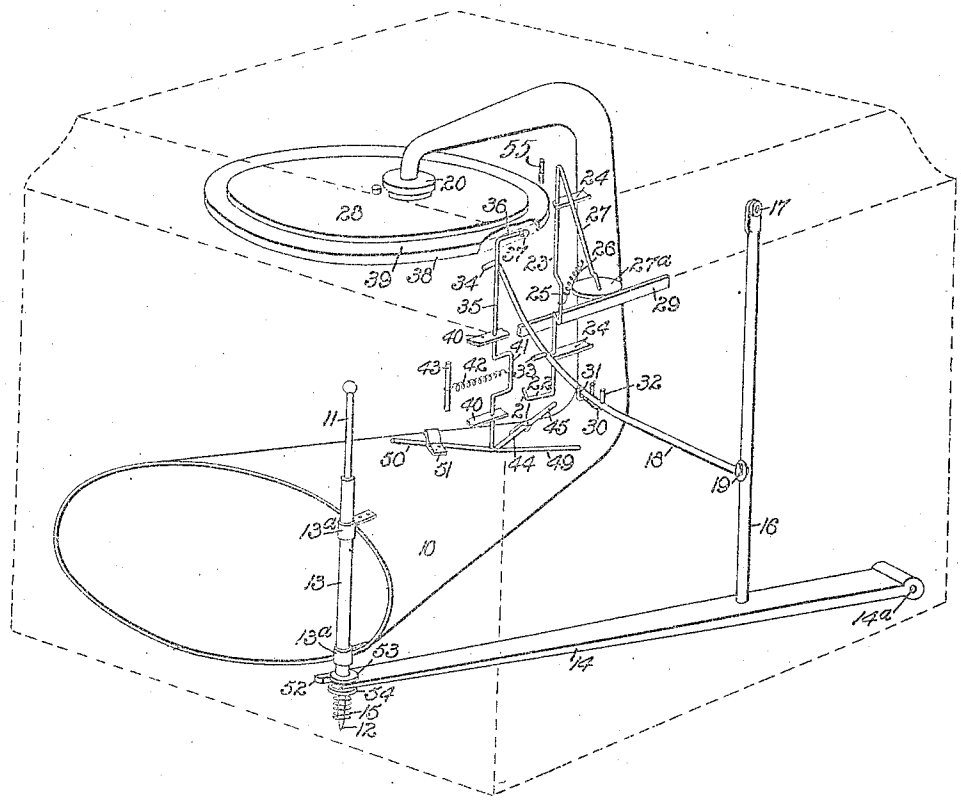
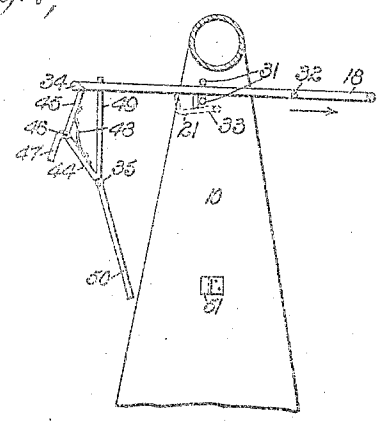


Fig. 7,



WITNESSES

L. Haverstein

J. L. McCuliffe

INVENTOR

Lester Moroney

BY Munn & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

LESTER MORONEY, OF MANHATTAN BEACH, OREGON.

ATTACHMENT FOR TALKING-MACHINES.

1,247,441. Specification of Letters Patent. Patented Nov. 20, 1917.

Application filed February 6, 1917. Serial No. 146,908.

To all whom it may concern:

Be it known that I, LESTER MORONEY, a citizen of the United States, and a resident of Manhattan Beach, in the county of Tillamook and State of Oregon, have invented a new and Improved Attachment for Talking-Machines, of which the following is a full, clear, and exact description.

My invention relates to a means adapted to be attached to a talking machine of the Edison type, whereby to cause the raising and lowering of the cover to perform various detail operations now required to be performed manually and which usually are found more or less irksome. The invention provides a means whereby the horn is automatically swung to bring the sound box over the record and then lowered, the operations being performed in proper sequence by the lowering of the cover, and the reverse operations taking place by the raising of the cover. The attachment includes means to automatically stop and release the turntable with the swinging of the horn, and a means automatically adjustable to the size of the record to govern the movement of the horn-actuating means.

The invention will be particularly explained in the specific description following.

Reference is to be had to the accompanying drawings forming a part of this specification in which similar reference characters indicate corresponding parts in all the views.

Figure 1 is a perspective view of my attachment and indicating the cabinet of the talking machine in dotted lines, the view showing the position of the parts when the cover is in the raised position;

Fig. 2 is a fragmentary plan view to be hereinafter referred to;

Fig. 3 is a view similar to Fig. 1 with the cabinet cover lowered, certain trip elements being indicated in the positions they assume just as the cover reaches its lowermost position before the final movement of the said trip devices;

Figs. 4 and 7 are views similar to Fig. 2 but showing the parts in different positions;

Fig. 5 is a fragmentary plan view with parts broken away and in section, the view being given to show the relation of the brake device to the depending brake flange of the turntable.

Fig. 6 is a perspective view similar to Figs. 1 and 3 with the parts in the position after the sound box has moved to the center of the record and which results in the automatic stop being brought against the turntable.

In carrying out my invention in accordance with the illustrated example, it is to be understood that the cabinet, the horn, the turntable, the motor, etc., may be those of the Edison machine or any machine of similar construction. The horn 10 as illustrated corresponds in general with the Edison horn. The same is mounted to turn in the present instance on a vertical pin 11 having a pointed lower end 12 to secure it to the cabinet. On the pin 11 is a sleeve 13 which is secured to the horn by bearing brackets 13^a having eyes embracing the said sleeve.

The numeral 14 indicates a bar pivoted at one end as at 14^a on the bottom of the cabinet and is normally sustained at its opposite end by a spring 15 on the pin 11 beneath said bar. The presser rod 16 is pivoted at its upper end to the cabinet cover as at 17 and is adapted to depress the bar 14. In connection with the presser rod 16 I provide means to swing the horn 10 prior to the depression of the bar 15. Said means may consist as shown of a lateral curved arm 18 pivoted at one end as at 19 to the rod 16 and adapted to engage a trip associated with the horn whereby to swing the latter with the pin 11 as an axis so that the sound box 20 will be disposed over the turntable.

The trip member 21 on the horn to be engaged by the arm 18 is so mounted in position as to conform to records of different diameters for which purpose said trip is in the form of a laterally bent terminal of an arm 22 which itself is at right angles or approximately so to a vertical shaft 23 adapted to turn in bearings 24 on the upright portion of the horn 10. The shaft 23 is formed with a cranked portion 25 to which one end of a retractile spring 26 is secured, the opposite end of said spring being secured to the horn 10. On the upper end of the shaft 23 is a lateral arm 27 adapted to bear by its outer end against the edge of a record 28 when the latter is in position on the turntable. Preferably, the outer end of the arm 27 carries an idler 27^a to reduce friction on the record. The numeral 29 indicates a track in the interior of the cabinet at the top against which the roller 27^a comes to a bearing in the outer position thereof.

By the described construction the lower-

ing of the cover of the cabinet from the raised position, Fig. 1, will carry the presser rod 16 downwardly toward the bearing 14. At the same time the curved arm 18 will be moved toward the horn. Said arm 18 has movement between guide pins 31 on a plate 30 secured to the horn 10 and the arm 18 carries a trip pin 32 adapted to engage the trip member 21 on the horn. The initial lowering of the cover causes no movement of the horn 10. Upon the continued lowering of the cover and the continued lateral movement of the curved arm 18, the trip 32 by engagement with the trip 21 will swing the horn on the standard 11 until the sound box 20 is positioned above the record 28. In the further lowering of the cover, the downward movement of the presser rod 16 will cause the latter to engage the bar 14 as indicated in Figs. 3 and 6, finally, depressing the said bar against the action of the spring 15 and thus permitting the horn and the sleeve 13 to lower by gravity, thereby lowering the sound box onto the record, thus putting the machine in operation in the usual manner. The movement of the horn toward the record will have brought the roller 27^a against the periphery of the record and the continued relative movement of the horn toward the record and over the same will have given a relative rearward turn to the shaft 23 so that the trip 32 will finally pass the trip 21. The turning of the shaft 23 places the spring 26 under tension, thereby creating torque in the said shaft so that when the crank 25 is swung sufficiently for the spring 26 to re-act, said spring will throw the shaft to carry the arm 27 and roller 27^a away from the record and into contact with the track 29 as in Figs. 1 and 6. It is to be understood that the position of the roller 27^a in Fig. 3 is momentary and that as a matter of fact the final closing of the cabinet will have brought the crank 25 to a position for the spring 26 to re-act and bring the roller 27^a against the rail 29 as the cover reaches the closed position. The horn with the sound box is given a return movement by the raising of the cover by reason of a second trip 33 on the arm 18 engaging one of the pins 31 on the horn, thereby restoring the described parts to the positions shown in Fig. 1.

It is to be understood that the shaft 23 and spring 26 are normally in unstable equilibrium and the relative positions of the member 22 and the adjacent pin 31 are such that the shaft 23 may turn only in one direction to disturb the equilibrium and permit the spring 26 to act. Thus, there can be no turning of the shaft 23 under the action of the spring 26 in a direction toward the turntable.

The means for controlling the stop or brake is also actuated by the movement of the arm 18 upon the lowering of the cabinet cover for which purpose the said arm 18 has a depending trip member 34 at the free end thereof which is caused to turn an upright shaft 35 having at its upper end a lateral arm 36 formed with a head or other suitable bearing member 37 adapted to bear against the depending flange 38 of the turntable 39 upon the turning of the said stop shaft 35. The said shaft turns in bearings 40 on the cabinet and it is formed with a cranked portion 41 to which one end of a retractile spring 42 is secured, the opposite end of the spring being secured to any fixed element 43 on the cabinet.

The means to turn the stop shaft 35 by the trip 34 is as follows: On the lower end of said shaft 35 is a lateral trip arm 44, the outer end 45 of which is pivoted as at 46 so that said end may yield in one direction. Movement in the opposite direction is prevented by the member 47 bearing against the relatively fixed portions of the stop arm 44 and the spring 48 tends to normally maintain the pivoted end 45 in alinement with the fixed member.

By the described arrangement as the trip 34 engages the member 45, the shaft 35 will be turned to throw the bearing member 37 away from the flange 38 of the turntable, thereby permitting the latter to turn. As the shaft 35 is turned to remove the stop from the turntable, the spring 42 will be placed under tension until the cranked portion 41 is brought to a position to permit the re-action of the said spring to so turn the shaft 35 as to maintain the stop away from the turntable. In the return movement of the arm 18, the trip 34 will engage a second lateral trip arm 49 on the shaft 35, thereby turning said shaft in a direction to cause the bearing member 37 to approach the flange 38 of the turntable and at the same time cause the spring 42 to be again placed under tension until the cranked portion is brought to a position to permit a re-action of said spring to positively throw the shaft 35 so as to bring the bearing member 37 against the flange 38. In order that when the sound box 20 reaches the center of the record, the stop will automatically be applied to arrest the movement of the turntable independently of the raising of the cabinet cover, a third arm 50 may be provided on the shaft 35 as shown; said arm is adapted to be engaged by a trip member 51 rigid with the horn 10 and so positioned that the arm 50 will be engaged thereby to turn the shaft 35 for putting the spring 42 under tension and applying the stop when the sound box has reached its inner position relatively to the record.

Comparing Figs. 2, 4 and 7, it will be clear that a movement of the arm 18 to the left as indicated by the arrow Fig. 2, due to the closing of the cover, will cause the

trip 34 to engage the trip arm 44, 45, thereby turning the shaft 35 until the spring 42 has finally thrown the shaft to bring the several trips to the position shown in Fig. 4. In this movement of the arm 13, the yielding end 45 of the trip 44 will be rigid and the raising of the cover, if the trip 44, 45 remains in the position shown in Fig. 4, will simply cause the trip 33 to engage a pin 31 and return the horn to the original position and cause the trip 34 to engage the trip arm 49 for restoring the stop shaft 35. If, however, the automatic trip elements 50, 51 are employed and have given a return rocking movement to the shaft 35, the trip 44, 45 will have been brought into the return path of the trip 34 in which case the element 45 will yield as indicated in Fig. 7 to permit the trip 34 to pass the said element 45.

The numeral 52 indicates the forked end of the bar 14, the members of the fork passing each side of the standard 11 between an upper collar or shoulder 53 on the lower end of the sleeve 13, and a lower shoulder or collar 54 on the standard 11 above the spring 15.

I provide a vertical pin 55 in the cabinet adjacent to the edge of the turntable and so located that when the machine is closed for the last time and there is no record on the turntable, the said pin 55 will engage the arm 27 to give the necessary rearward movement thereof relatively to the horn to place the spring 26 under tension and permit the spring by its re-action to turn the shaft 23 and return the arm 27 thereof to the rail 29 in the same manner as this operation is performed by the engagement of the element 27^a with a record on the turntable.

It will be clear from the foregoing that my attachment performs automatically the swinging of the horn and sound box by the opening and closing of the cabinet cover without the irksome manual operations, ordinarily required, and at the same time the stop or brake is automatically released and applied.

I wish to state in conclusion that although the illustrated example constitutes a practical embodiment of my invention, I do not limit myself strictly to the mechanical details herein illustrated since manifestly the same can be considerably varied without departure from the spirit of the invention as defined in the appended claims.

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

1. An attachment for talking machines, including horn-controlling means, and operating means therefor operable by the cabinet cover.

2. An attachment for talking machines, comprising means operable by the cover of the machine to shift the horn of the machine laterally and cause vertical movement thereof to and from the operative position.

3. In an attachment for talking machines, means to mount the horn to swing and to have vertical movement, means to sustain the horn against vertical movement, and means attachable to the cover of the machine and adapted to swing the horn on its pivot and control the horn-sustaining means to cause vertical movement of the horn.

4. In an attachment for talking machines, means to mount the horn for lateral swinging movement and for bodily vertical movement, and means operable by the cover of the machine to swing the horn and then cause vertical movement thereof by the closing of the cover and cause vertical movement and swinging of the horn in sequence by the raising of the cover.

5. An attachment for talking machines comprising horn-controlling means operable by the cabinet cover and including co-acting trip elements applicable respectively to the horn and to the cover, and means dependent on the size of the record and engageable with the latter to vary the position of the trip element associated with the horn.

6. An attachment for talking machines, including horn-controlling means, stop means for the turntable of the machine, and means operable by the raising and lowering of the cover of the machine to actuate the first two-mentioned means.

7. In an attachment for talking machines of the type having a horn mounted to swing laterally and to rise and fall; means to effect the swinging and vertical movements of the horn, said means including a rock shaft, means to mount said shaft on the horn to move therewith toward and from the turntable of the machine, a trip member on the shaft, a lateral arm on said shaft adapted to engage the periphery of any record on the turntable whereby to position the said trip member according to the size of the record, an actuating element attachable to the cover of the machine to be raised and lowered therewith, trip means controlled by said actuating element to engage the trip member of the rock shaft, to swing the horn, and means controlled by said actuating element and controlling the vertical movement of the horn.

8. In an attachment for talking machines of the type having a horn mounted to swing laterally and to rise and fall; a rock shaft, means to mount said shaft on the horn to move bodily with the latter toward or from the turntable of the machine, a trip member on said shaft, an arm on the shaft adapted to engage any record on the turntable to position the trip member according to the size of the record, trip means to engage the trip member on the shaft to swing the horn, a spring adapted to be placed under tension

by the rocking of the said shaft in a direction away from the turntable by contact of the shaft arm with a record, the spring being adapted by its re-action to cause a further turning movement of the shaft after a given movement thereof, whereby to swing the shaft arm entirely away from the record, means operable by the raising and lowering of the cover to actuate the last-mentioned trip means, and means controlled by the said actuating means and controlling the vertical movement of the horn.

9. In an attachment for talking machines, having a horn mounted to swing laterally and to rise and fall; means controlled by the raising and lowering of the cover of the machine to swing the horn and cause vertical movements thereof, and stop means for the turntable of the machine, said last-mentioned means being controlled by the raising and lowering of the said cover.

10. In an attachment for talking machines having a horn mounted to swing laterally and to rise and fall; means controlled by the raising and lowering of the cover of the machine to swing the horn and cause vertical movements thereof, a shaft, and stop means on said shaft to arrest or permit the movement of the turntable, a spring adapted to be placed under tension by a given turning movement of the shaft in either direction and adapted by its re-action to throw the shaft in a direction to cause the said stop to release or engage the turntable, and trip means controlled by the raising and lowering of the cover of the machine to rock said shaft in opposite directions.

11. In an attachment for talking machines having a horn mounted to swing laterally and to rise and fall; means controlled by the raising and lowering of the cover of the machine to swing the horn and cause vertical movements thereof, a shaft, and stop means on said shaft to arrest or permit the movement of the turntable, a spring adapted to be placed under tension by a given turning movement of the shaft in either direction and adapted by its re-action to throw the shaft in a direction to cause the said stop to release or engage the turntable, and trip means controlled by the raising and lowering of the cover of the machine to rock said shaft in opposite directions; together with means to automatically turn said shaft by the swinging movement of the horn to automatically apply the said stop for arresting the movement of the turntable.

12. In an attachment for talking machines having a horn adapted to swing laterally and to be raised and lowered, a standard adapted to be positioned in the machine in the cabinet thereof, means to mount the horn on the said standard for swinging and vertical movements, a depressible bar pivoted at one end and adapted at its other end to sustain the horn in raised position, a spring normally tending to raise the said depressible bar, and means operable by the raising and lowering of the cover of the machine to swing said horn and to engage and disengage the depressible bar for causing vertical movement of the horn.

LESTER MORONEY.