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DRIVING ATTACHMENT FOR TALKING MACHINES.

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1,271,590. Patented July 9, 1918.

Fig. 1.

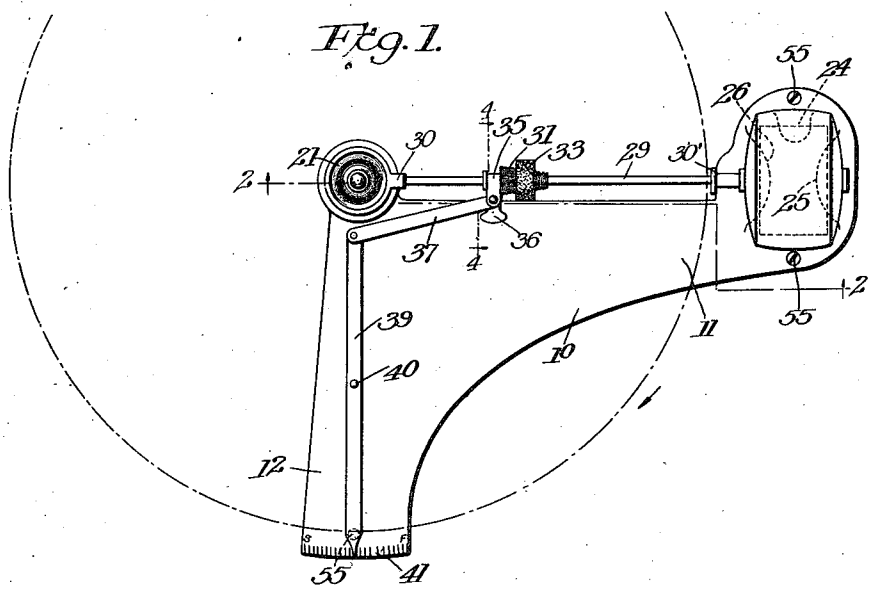


Fig. 4.

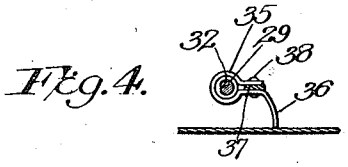


Fig. 2.

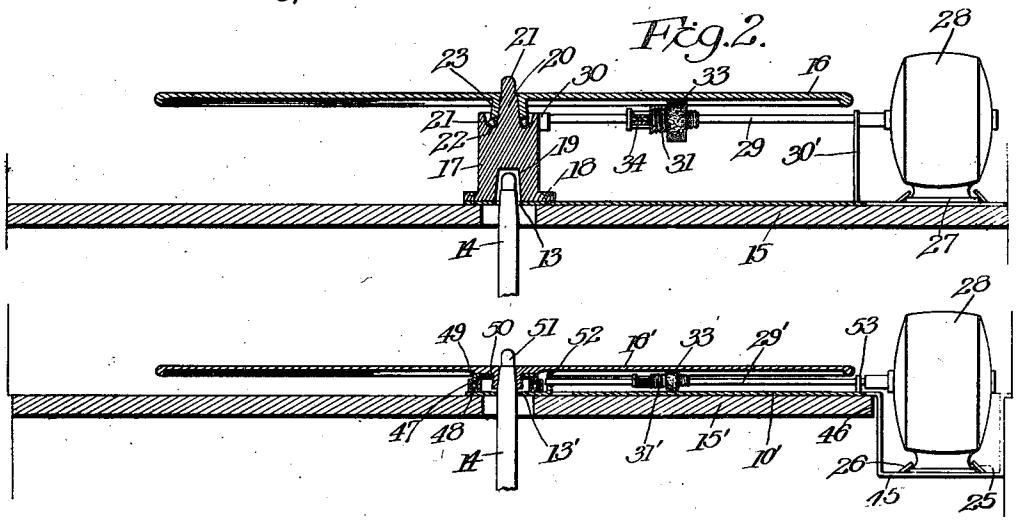


Fig. 3.

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DRIVING ATTACHMENT FOR TALKING-MACHINES.

1,271,590. Specification of Letters Patent. Patented July 9, 1918.

Application filed August 1, 1917. Serial No. 183,909.

To all whom it may concern:

Be it known that I, EDEN G. LEFEVER, a citizen of the United States, residing at Boyertown, Berks county, State of Pennsylvania, have invented certain new and useful Improvements in Driving Attachments for Talking-Machines, of which the following is a specification.

This invention relates to a driving attachment for talking machines and more particularly to a self-contained device which may be easily applied to present machines. The objects of the invention are to provide a simple attachment for driving talking machines which can be manufactured at a small cost and can be applied to present machines without making any substantial changes therein. Other objects will be apparent from the description taken in connection with the drawings, in which,

Figure 1 is a fragmentary plan view of the top of a talking machine showing the attachment, the turn-table being shown in dotted lines;

Fig. 2 is a sectional elevation taken substantially on the line 2—2 of Fig. 1;

Fig. 3 is a view similar to Fig. 2 showing another form of the invention;

Fig. 4 is a sectional elevation taken substantially on the line 4—4 of Fig. 1.

Referring to Fig. 1, it will be noticed that the different parts of the driving attachment are mounted on a plate 10 which may be of any desired outline, but preferably is of the shape shown in this figure, that is, it consists substantially of two arms 11 and 12 arranged at right angles to each other. At the corner formed by the outside meeting edges of the two arms the plate is formed with an opening 13 which is adapted to take over the top of the usual spindle or center pin 14 of the talking machine. As the space between the stationary top table 15 and the turn-table 16 of most machines is not sufficient for my driving attachment, it is necessary to provide means for mounting the turn-table at a higher elevation above the stationary table 15. For this purpose, a bearing block 17 is secured to the plate around the opening 13 by any desired means, such as the rivets 18. The bottom of this block is formed with a central recess 19 adapted to receive the top of the spindle 14. The top of the block is provided with a central substantially frusto-conical projection 20, which is adapted to extend into the conical bore of the turn-table 16. Around the base of this projection 20 the block is formed with a raceway 21 which is provided with the balls 22 which by engagement with the lower edge of the hub 23 of the turn-table are adapted to form an anti-friction means for rotatably supporting the latter. The top of the projection 20 is provided with the usual centering pin 21 which is adapted to position the record disks on the turn-table in the usual manner.

The end of the arm 11 of the plate projects radially outside of the periphery of the turn-table and may be formed with three tabs 24, 25 and 26 which are struck up from the said plate, these tabs being arranged to receive between them the base 27 of an electric motor 28, to thereby secure the motor to the plate. Arranged in a radial direction with respect to the bearing 17 is a shaft 29 which at one end is connected to the motor 28 and at the other end as at 30 is supported on the bearing block 17. At the end near the motor the shaft may be supported in a bearing formed in an upright 30′ which may be struck up from the plate 10. A substantially frusto-conical member 31 formed with exterior threads is mounted on the shaft 29 to rotate therewith and slide therealong. The construction for accomplishing this may be of any of the usual types, but I have shown one side of the shaft 29 slabbed off to provide a flat surface 32, the bore of the member 31 being provided with a similar surface. Thus the member 31 is constrained to rotate with the shaft 29 but may slide therealong. A rubber ring 33 is mounted on the member 31. As the outer surface of this ring wears the diameter may be increased and made of the desired size by screwing up the ring 33 on the conical member 31. This will expand the ring so that it will be returned to its original diameter. The member 31 at one end is formed with a channel 34 in which is mounted an actuating ring 35. This ring is shown in side elevation in Fig. 4 and it will be observed that it consists of a strip or bar that is bent to form a ring portion which is arranged in the groove 34 and has an arm or foot 36 which is adapted to bear and slide on the plate 10, to thereby prevent rotation of the ring 35 due to the friction between it and the member 31. The arm 36 is spaced from the other end of the ring 35 and one end of the link 37 is pivoted on a pin 38 and mounted between

said arm and end. A lever 39 is pivoted as at 40 on the plate 10 and has one end shaped to form a pointer and movable over a scale 41 at the periphery of the arm 12 and just outside of the turn-table 16. The opposite end of this lever 39 is pivotally connected with the link 37, the arrangement of the parts being such that when the outer end of lever 39 is moved the friction roller will be caused to slide on the shaft 29 to thereby vary the speed of rotation of the turn-table 16. It is thus apparent that the parts just described constitute a means for controlling the angular velocity of the turn-table.

Fig. 3 illustrates another form of the invention in which the turn-table is not moved to a new position above its normal position but remains on the spindle 14 of the machine. In order to arrange the parts in this manner it is necessary to form the plate 10′, which is similar to the plate 10 in the other form, with a depressed portion 45 which provides a mounting for the motor 28. The depressed portion 45 may be formed with tabs 25 and 26 as in the other form, but the arrangement is such that the shaft 29 may be arranged in the space between the stationary table 15′ and the turn-table 16′. In mounting this plate 10′ on the machine it is therefore necessary to cut out a portion of the stationary table 15′ to provide an opening 46 for the depressed portion 45 of the plate. This depression is just deep enough so that the axis of the motor will aline with the axis of the shaft 29. Around the opening 13′ of the plate a raceway 47 is mounted and carries a series of balls 48 on which the ring 49 bears, the latter member being adapted to support the table 16′ so that its hub 50 occupies the usual position on the top of the spindle 14. The centering pin 51 at the top of the spindle projects above the turn-table in the usual manner. If desired, the plate may have a portion bent up to form a bearing 52 for the inner end of the shaft 29′ and likewise another portion may be bent up to form a bearing 53 for the said shaft at a point adjacent to the motor. Mounted on the shaft 29′ is the conical member 31′ with the rubber ring 33′ of the same construction as described in connection with the other form of the invention and adapted to be moved along the shaft in the same manner.

It will be apparent from the description and drawings that in order to install the attachment illustrated in Figs. 1, 2 and 4, it is only necessary to lift off the turn-table 16 and fasten the plate 10 which carries the attachment to the stationary table 15 by any securing means, such as the screws 55. To install the form illustrated by Fig. 3 it is necessary to remove the turn-table and cut the opening 46 in the stationary table 15′ and then the plate with the attachment may be placed in position and the turn-table remounted on the spindle 14. It is therefore obvious that I have provided a very simple driving attachment for talking machines which can be applied very easily and quickly to present machines and is so simple that it can be manufactured very cheaply. Although specific forms of the invention have been described it is obvious that many of the details may be varied without departing from the spirit of the invention.

Having thus described the invention, what is claimed and desired to be secured by Letters Patent is:

1. A self-contained driving attachment for talking machines comprising a plate formed with an opening adapted to take over the center pin of a talking machine, a motor carried by said plate, means for driving the turn-table from the motor, and means mounted on the plate for controlling the angular velocity of the turn-table.

2. A self-contained driving attachment for talking machines comprising a plate formed with an opening adapted to take over the center pin of a talking machine, said plate also having a bearing for the turn-table, a motor, connections between the motor and turn-table for driving the latter, and means for controlling the angular velocity of the turn-table.

3. A self-contained driving attachment for talking machines comprising a plate formed with an opening adapted to take over the center pin of a talking machine, said plate also having a bearing for the turn-table, a motor, connections between the motor and turn-table for driving the latter, said connections including a shaft extending radially from said bearing and carrying a friction roller.

4. A self-contained driving attachment for talking machines comprising a plate formed with an opening adapted to take over the center pin of a talking machine, said plate also having a bearing for the turn-table, a motor, connections between the motor and turn-table for driving the latter, said connections including a shaft extending radially from said bearing and carrying a friction roller splined thereto for rotation therewith and sliding movement thereon.

5. A self-contained driving attachment for talking machines comprising a plate formed with an opening adapted to take over the center pin of a talking machine, said plate also having a bearing for the turn-table, a motor, connections between the motor and turn-table for driving the latter, said connections including a shaft extending radially from said bearing and carrying a friction roller splined thereto for rotation therewith and sliding movement thereon, and means for sliding the roller along the shaft.

6. A self-contained driving attachment for talking machines comprising a plate formed with an opening adapted to take over the center pin of a talking machine, said plate also having a bearing for the turn-table, a motor, connections between the motor and turn-table for driving the latter, said connections including a shaft extending radially from said bearing and having one end mounted thereon, and means for controlling the angular velocity of the turn-table.

7. A self-contained driving attachment for talking machines comprising a plate formed with an opening adapted to take over the center pin of a talking machine, said plate also having a bearing for the turn-table, a motor, connections between the motor and turn-table for driving the latter, said connections including a shaft extending radially from said bearing and carrying a friction roller, said roller consisting of a frusto-conical member exteriorly threaded and a rubber ring thereon.

In testimony whereof I affix my signature.

EDEN G. LEFEVER.