R. S. IRVINE.

WINDER FOR PHONOGRAPHS.

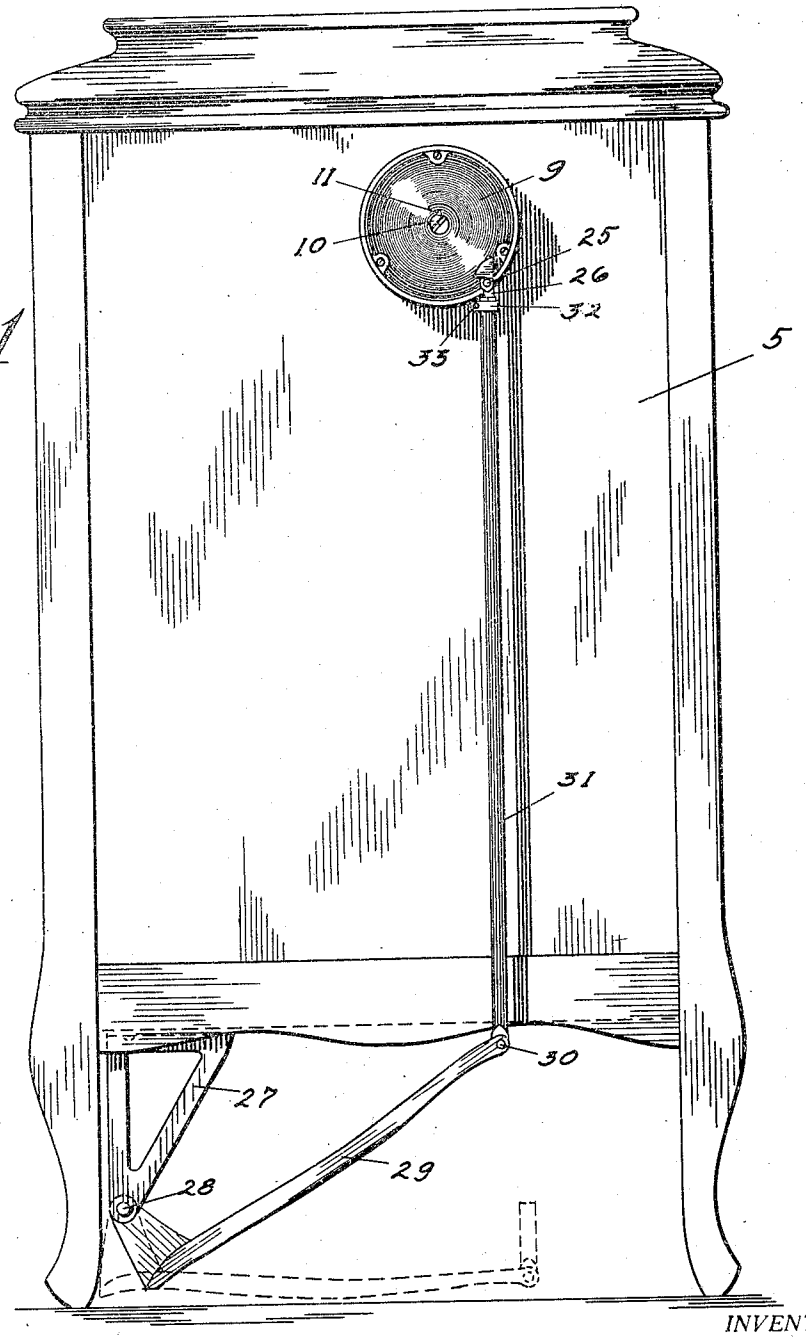
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1,236,176.

Patented Aug. 7, 1917.

3 SHEETS—SHEET 1.

Fig.1



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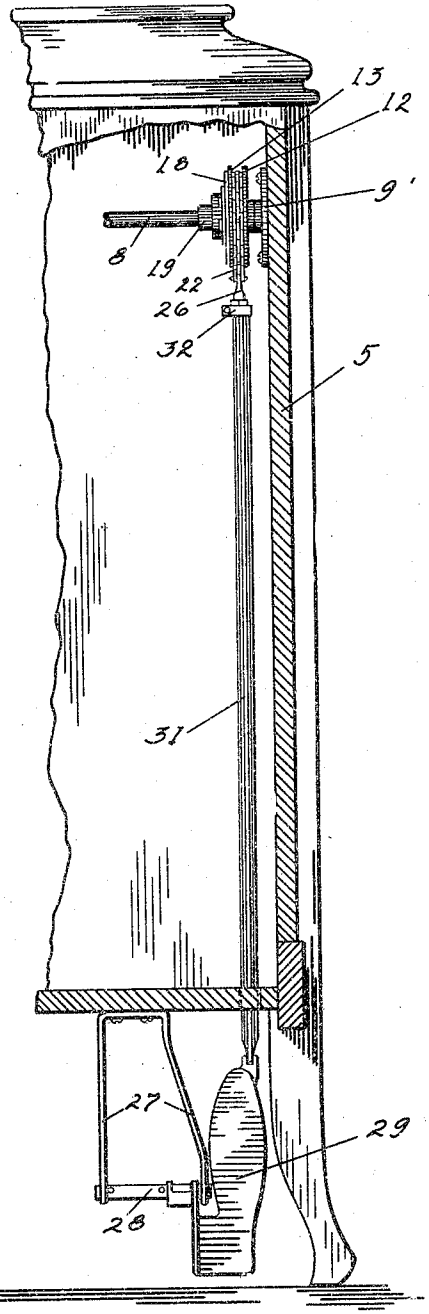
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3 SHEETS—SHEET 2.

Fig. 2



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3 SHEETS—SHEET 3.

Fig. 3

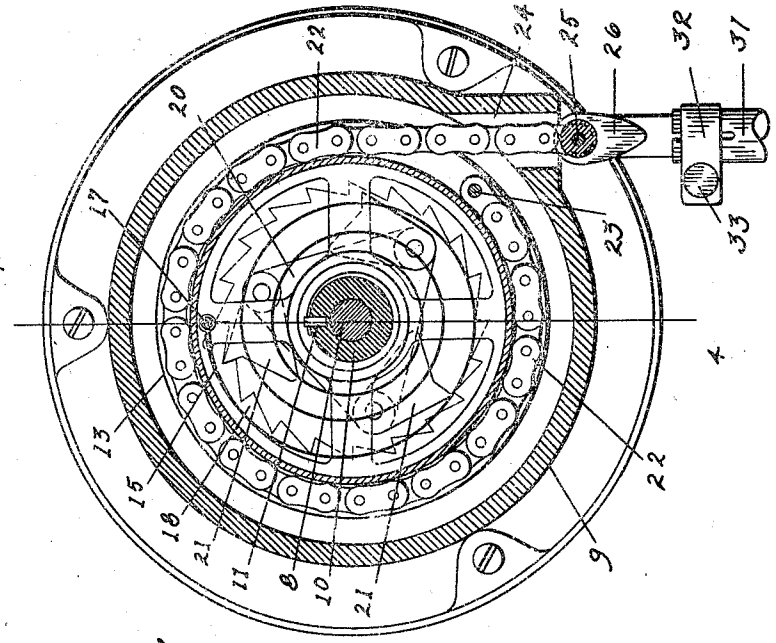
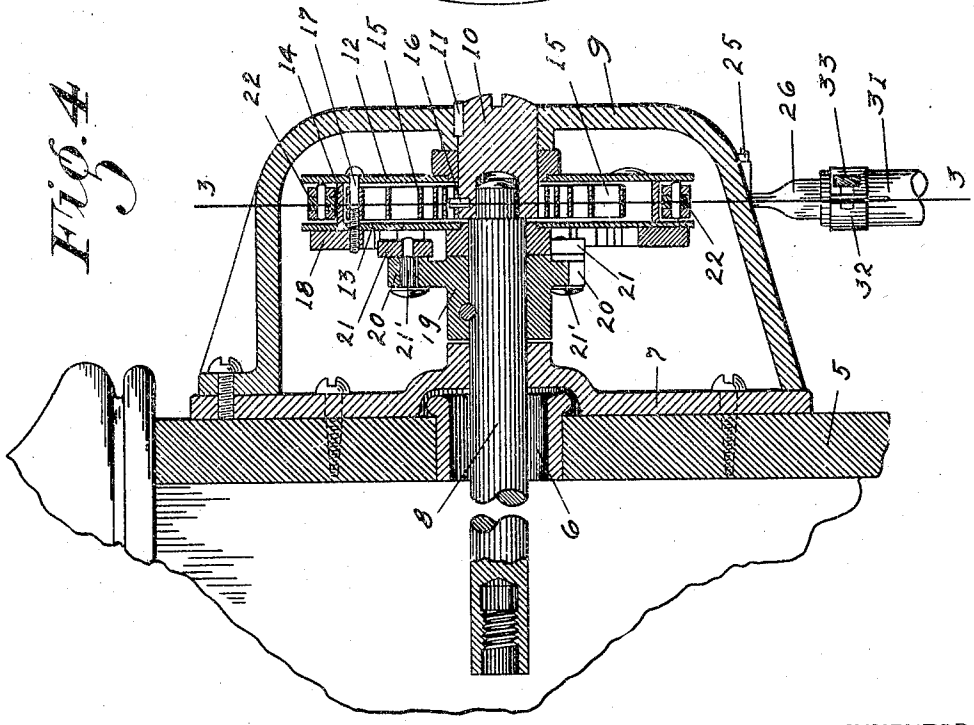


Fig. 4



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UNITED STATES PATENT OFFICE.

RICHARD S. IRVINE, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO EILERS MUSIC COMPANY, OF SAN FRANCISCO, CALIFORNIA, A CORPORATION.

WINDER FOR PHONOGRAPHS.

1,236,176. Specification of Letters Patent. Patented Aug. 7, 1917.

Application filed October 23, 1916. Serial No. 127,242.

To all whom it may concern:

Be it known that I, RICHARD S. IRVINE, a citizen of the United States, residing at San Francisco, in the county of San Francisco, State of California, have invented certain new and useful Improvements in Winders for Phonographs; and I do declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this application.

This invention relates to improvements in winders for phonographs and my improved structure is designed to supplement the hand winding cranks now commonly in use on all phonographs.

A further object of the invention is to produce a structure which can be applied both to the present already constructed phonographs as well as to those to be constructed in the future. Also the invention is designed for application to the various different types now in common use.

A still further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purposes for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings similar characters of reference indicate corresponding parts in the several views.

Figure 1 is a front elevation of the winding device assembled on the outside of the cabinet of a phonograph.

Fig. 2 is a side elevation showing the winder installed within the cabinet of a phonograph.

Fig. 3 is a front elevation of the winding mechanism in section on line 3—3 of Fig. 4.

Fig. 4 is a side elevation on line 4—4 of Fig. 3.

Referring now more particularly to the characters of reference on the drawings, the numeral 5 indicates the cabinet of a phonograph in the wall of which is provided an opening 6 through which the ordinary winding crank rod is to be inserted. Over the opening 6 is placed a plate 7 supporting a shaft 8 formed at its inner end to fit the winding stem of the phonograph motor. Fitted to the outside of the plate 7 is a cover casing 9. Within an opening in the casing 9 is secured a cylindrical plug 10 secured to the casing by a key 11 and orificed at its inner end to form a bearing for the end of the rod 8. Journaled on the plug 10 is a disk 12 and on the rod 8 is journaled a disk 13.

Between the disks 12 and 13 and secured to each is a cylindrical bushing 14, which, taken together, form a sheave. Between the disks 12 and 13 and within the bushing 14 is placed a flat coil spring 15 having its inner end secured to a pin 16 in the plug 10 and its outer end threaded on a screw 17 supported by the disks 12 and 13. Secured to the outside of the disk 13 is an internal ratchet plate 18. Keyed to the rod 8 is a hub provided with arms 20 on each of which is pivoted a weighted pawl 21 on pins 21′ and adapted to engage the teeth of the ratchet 18.

On the rim of the bushing 14 rests a chain 22 or other suitable flexible member having one of its ends secured by the pin 23 in the disks 12 and 13. This chain extends around the bushing 14 and its other end is passed through an opening 24 in the casing 9 where it is secured by a pin 25 to a rod 26. Fitted to the under side of the cabinet 5 is a supporting frame 27 carrying at its lower end a rod 28 which pivotally supports the foot pedal 29 pivoted by the pin 30 to the lower end of the tube 31. The tube 31 telescopes over the rod 26 and is adjustably secured thereto by a clamp 32 provided with a thumb nut 33.

When the pedal 29 is depressed, the chain unwinding from the sheave rotates the ratchet 18, which, through the pawls 21, rotates the winding rod 8. When the pressure of the foot is relieved, the spring 15 rotates the sheave and rewinds the chain 22 thereon lifting the pedal 29. This operation is repeated until the motor is sufficiently wound.

Figs. 1, 3 and 4 show particularly the structure as it would be applied to the winding cranks of phonographs already constructed. If my improved winding means were to be constructed in conjunction with machines to be made in the future, it would be built directly as a part of the machine as shown in Fig. 2.

From the foregoing description it will be readily seen that I have produced such a de-

vice as substantially fulfils the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention as defined by the appended claims.

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

1. The combination with a phonograph having a winding shaft and an opening through which the winding shaft projects, of a plate surrounding the opening and forming a bearing for the winding shaft, a casing attached to the plate and provided with an opening, a plug removably keyed in the opening and orificed to form a bearing for the winding shaft, a foot pedal, and means disposed within the casing and connected with the winding shaft and with the pedal whereby with the motion of the pedal rotary motion may be imparted to the winding shaft.

2. The combination with a phonograph having a winding shaft and an opening through which the winding shaft projects, of a plate surrounding the opening and forming a bearing for the winding shaft, a casing attached to the plate and provided with an opening, a plug removably keyed in the opening and orificed to form a bearing for the winding shaft, a foot pedal, means disposed within the casing and connected with the winding shaft and with the pedal whereby with the motion of the pedal rotary motion may be imparted to the winding shaft, such means comprising a sheave rotatably mounted adjacent said plug, a spring within the sheave and arranged to maintain its normal position, a chain wrapped around the sheave and connected with the foot pedal whereby the operation of the foot pedal will rotate the sheave, an internal ratchet rack on the sheave, and dogs connected with the winding shaft and engaging the ratchet rack whereby with the movement of the sheave in a forwardly direction, the winding shaft will be rotated in a forward direction.

3. A winding attachment for phonographs comprising an independent casing arranged to be attached to the outside of the phonograph casing, an independent shaft journaled within the casing and adapted to connect with the winding stem of the phonograph, and a power means for turning the shaft.

In testimony whereof I affix my signature.

RICHARD S. IRVINE.