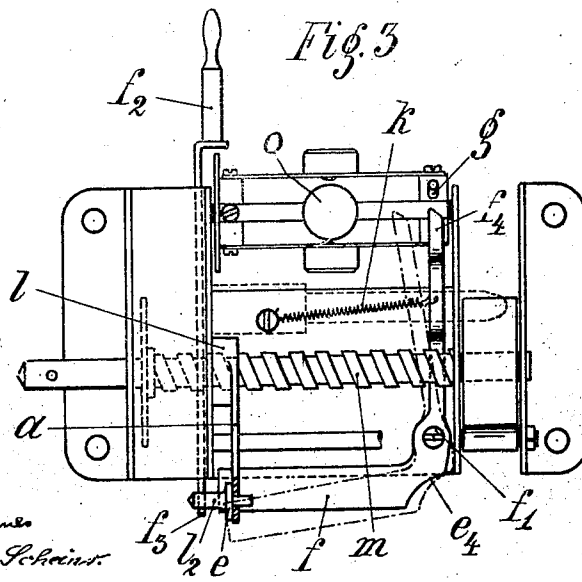
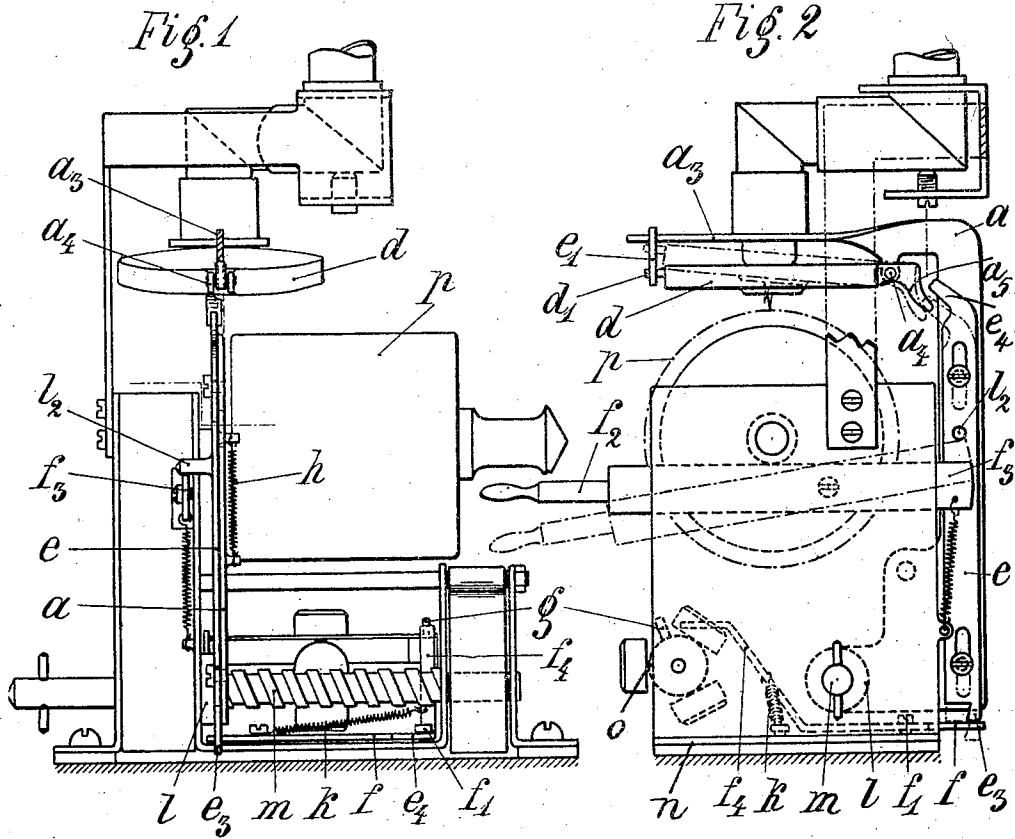


M. O. ARNOLD.
TALKING MACHINE.
APPLICATION FILED NOV. 4, 1909.

969,239.

Patented Sept. 6, 1910.



Witnesses
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UNITED STATES PATENT OFFICE.

MAX OSCAR ARNOLD, OF NEUSTADT, NEAR COBURG, GERMANY.

TALKING-MACHINE.

969,239.

Specification of Letters Patent. Patented Sept. 6, 1910.

Application filed November 4, 1909. Serial No. 526,319.

To all whom it may concern:

Be it known that I, MAX OSCAR ARNOLD, a subject of the German Emperor, and residing at Neustadt, near Coburg, Germany, have invented certain new and useful Improvements in Talking-Machines, of which the following is a specification.

The present invention has reference to improvements in talking machines, and relates more especially to that class of talking machines, known as phonographs, in which the recorder and reproducer travel longitudinally of the revolving cylindrical record, and my invention more particularly has for its object certain improvements in this type of machine, which render it readily adaptable to be arranged within a relatively small space, as for instance within the body of a doll or the like. The construction is simple, of small dimensions, light of weight, yet strong and not liable to become disordered or broken. The reproducer is limited in its lateral displacements, so that onesided overbalancing of the containing body is obviated, which in the constructions now in use is apt to cause toppling over of the doll, upon the recorder reaching one of its end positions. And lastly, I provide means whereby the main spring cannot wholly run down or be over-wound, so that the reproducer travels with a constant velocity, thereby assuring correct and even reproduction of the phonogram.

In order to make the invention more readily understood, I will now describe it with reference to the accompanying sheet of drawings, in which—

Figure 1 represents a rear view of a machine embodying the essential parts of my invention; Fig. 2 shows a side elevation, and Fig. 3 a horizontal section, just above the driving spindle.

The reproducer box d travels horizontally above and longitudinally along the cylinder record p , which is rotated in well known manner by a clock work, not specially shown in the drawing. The reproducer is pivoted to the angle piece or carrier a , a^2 , which by means of the threaded sleeve l on its lower extremity is traveled along the correspondingly threaded spindle m . This latter, at the same time, is used for winding up the main spring of the clock work. The reproducer is pivoted at a^1 to the arm a^3 of the angle and its up and down movement is limited by a pin d^1 cooperating with a guide

yoke e^1 depending from the arm a^3 . On the arm a the slotted slide e is vertically displaceable and influenced by a draw spring h (Fig. 1), the slide ordinarily with its upper curved-out end e^4 depressing the shorter lever arm a^5 of the reproducer and supporting it in the position shown in dotted lines in Fig. 2, slightly above the record.

On the bottom plate n there is pivoted at f^1 a bell crank lever f , f^4 which ordinarily is retained in the dotted line position (Fig. 3) by means of a spring k . A recess e^4 serves to receive the beveled tooth e^3 of the slide e upon the work having run down. In this position the arm f^4 of the bell crank lever lies sidewise of a pin g secured to the horizontally disposed regulator o . If now the clock work is wound up by turning the screw spindle m , which causes the reproducer d with its carrier a and slide e to travel from the right-hand toward the left-hand end position, the tooth e^3 of slide e swings the lever f inwardly, bringing its arm f^4 in the plane of rotation of the regulator stop pin g , with the effect of arresting the regulator and consequently the whole clock work during the winding-up operation. Upon the reproducer and slide e arriving at the left side, a pin l^2 of the slide extends just above a double-armed, spring influenced starting lever f^2 , f^3 .

If now, for starting the mechanism, the lever end f^2 is depressed, its inner end f^3 will lift the pin l^2 , raising accordingly the slide e above the bell crank lever f (Fig. 2). The reproducer is let down onto the record, lever f is swung into the dotted line position (Fig. 3) by spring k , its arm f^4 freeing the regulator, and the slide e rests with its tooth e^3 upon the lever f . The work running down, the tooth e^3 slides along the lever until, upon the reproducer having reached its end position, it drops into the cut-out portion e^4 by the action of the draw spring h , lifting thereby the reproducer off the record. The recess e^4 and the tooth e^3 are so profiled, that the slide e slips off only at the end of the reproduction.

With the exception of part of the spindle m and the free end of the starting lever, all parts in this construction are so crowded and their weight distribution is such, that the apparatus is especially adapted to be inserted into dolls, imitation animals, and the like. The frame plates limiting the lateral displacement of the threaded sleeve

on the spindle, overwinding or complete running down of the main spring is effectively prevented.

What I claim and desire to secure by Letters Patent is:—

In a talking machine with cylindrical record, a bell crank lever, a clock work, a regulator thereon, a stop pin on said regulator, periodically cooperating with said bell crank lever, an angular carrier, a reproducer pivoted thereto, a spring influenced slide on said carrier, cooperating above with said reproducer and below with said bell crank lever, the latter serving to alternately hold

said slide in the raised and lowered position respectively, means for raising said slide, and means for traveling said carrier from one end position into the other with raised reproducer and back again with the reproducer in contact with the record, substantially as and for the purpose set forth. 15 20

In testimony whereof I affix my signature in presence of two witnesses.

MAX OSCAR ARNOLD.

Witnesses:

O. FLINZE,
C. WAGNER.