Feb. 26, 1924. 1,485,137

C. A. HUNTER

TALKING DOLL

Filed Dec. 6, 1922 3 Sheets-Sheet 1



Fig. 2

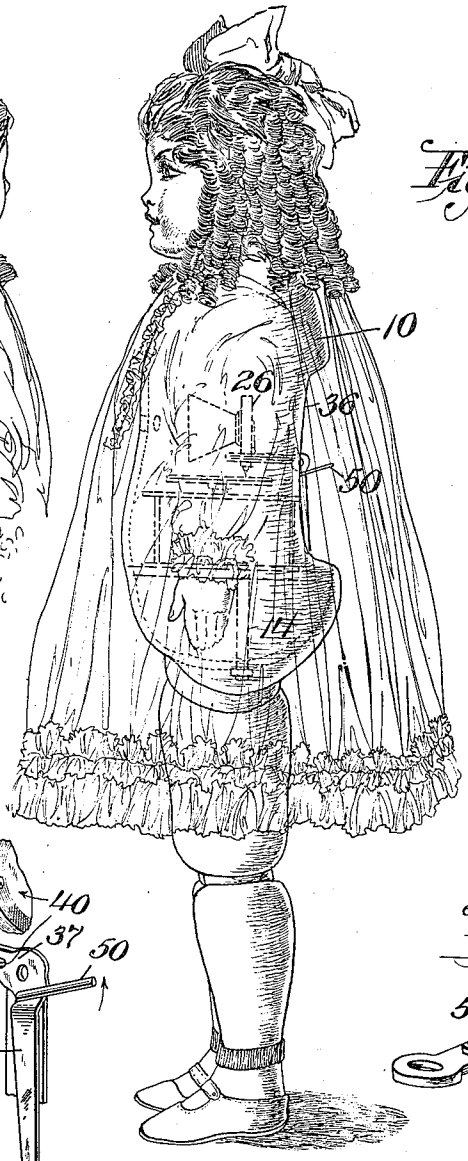


Fig. 1

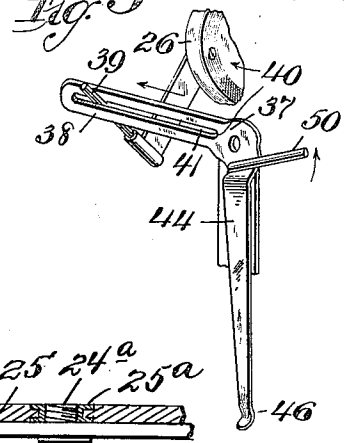


Fig. 3

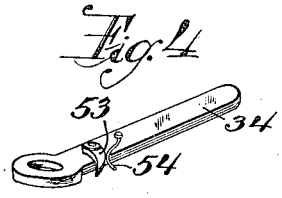


Fig. 4

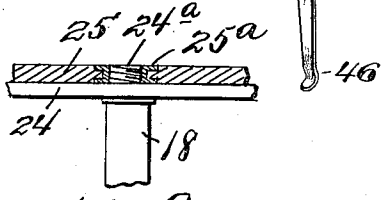


Fig. 9

INVENTOR
Charles A. Hunter.
BY
Mc H Campfield.
ATTORNEY.

Feb. 26, 1924. 1,485,137

C. A. HUNTER

TALKING DOLL

Filed Dec. 6, 1922 3 Sheets-Sheet 2

Fig. 5

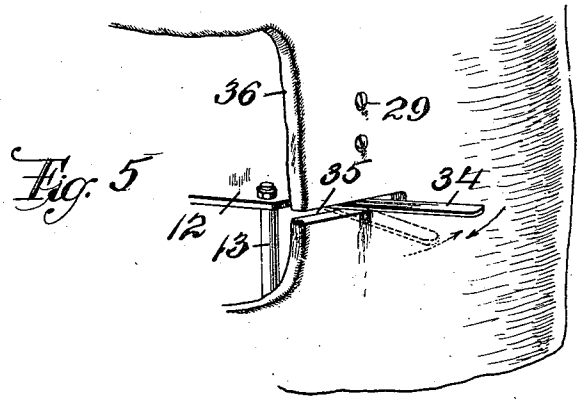
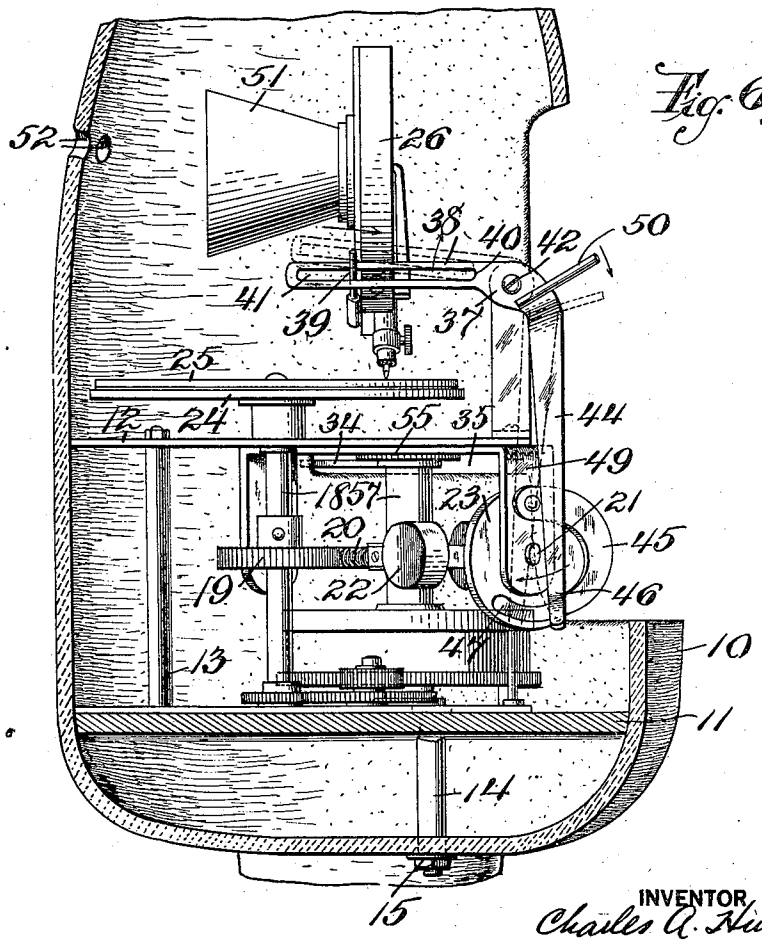


Fig. 6



INVENTOR
Charles A. Hunter.
BY
Wm. H. Campfield.
ATTORNEY.

Feb. 26, 1924. 1,485,137

C. A. HUNTER

TALKING DOLL

Filed Dec. 6, 1922 3 Sheets-Sheet 3

Fig. 7

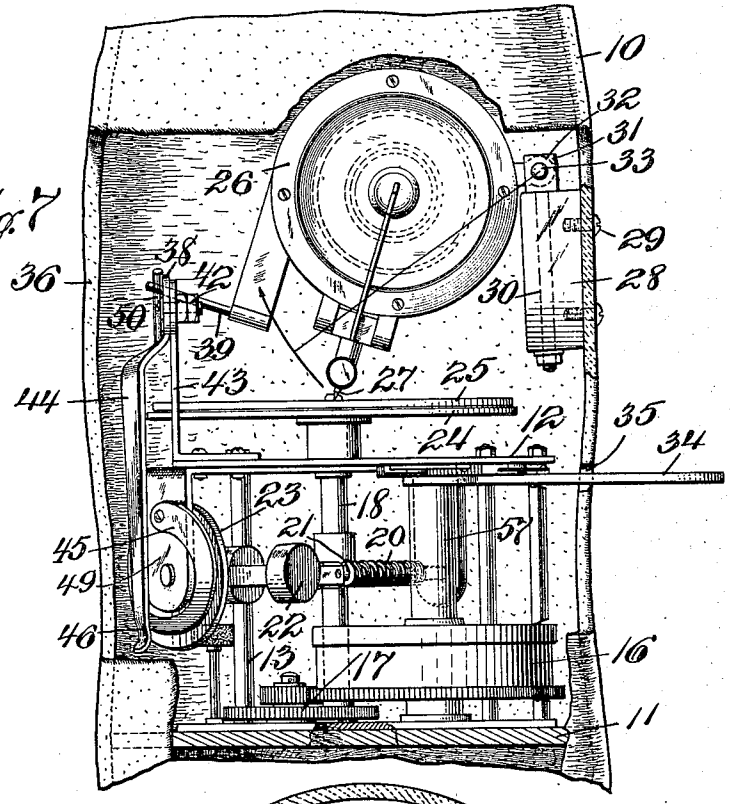
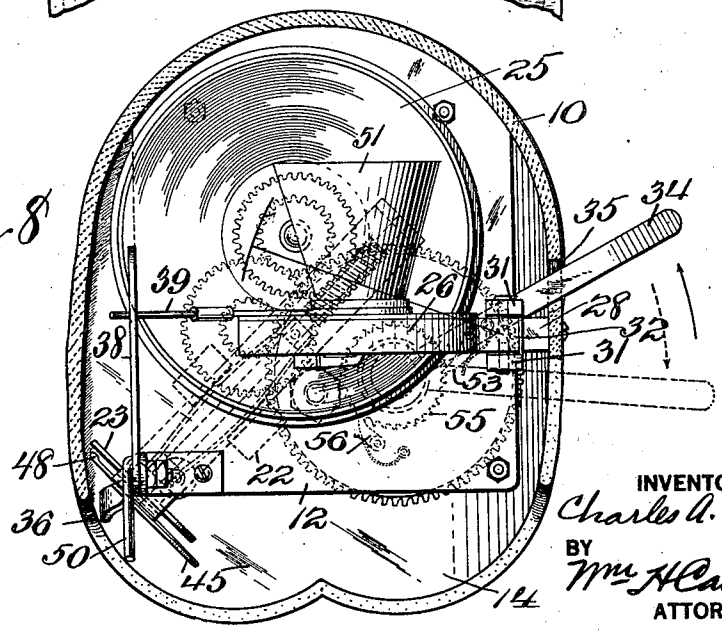


Fig. 8



INVENTOR
Charles A. Hunter
BY
Mrs. H. Campfield.
ATTORNEY

Patented Feb. 26, 1924. 1,485,137

UNITED STATES PATENT OFFICE.

CHARLES A. HUNTER, OF FAR HILLS, NEW JERSEY.

TALKING DOLL.

Application filed December 6, 1922. Serial No. 605,224.

To all whom it may concern:

Be it known that I, CHARLES A. HUNTER, a citizen of Great Britain, and a resident of Far Hills, county of Somerset, and State of New Jersey, have invented certain new and useful Improvements in Talking Dolls, of which the following is a specification.

This invention relates to a phonograph for a talking doll and is adapted to provide one which is capable of emitting a song, a recitation or other sounds for a considerable length of time, making it possible to repeat nursery rhymes or short songs and other appropriate compositions, the mechanism for operating and winding the phonograph portion of the device being extremely simple and disposed so as to not become easily disarranged, so that careless handling by children will not tend to damage or interfere with the successful operation of the phonograph.

The invention has for its object to provide a disc record phonograph for the body portion of a doll, and to provide said phonograph with a reproducer which, in turn, is operated by a repeating or returning mechanism which, when operated, at once returns the reproducer to its initial starting point and at the same time operates a brake on the phonograph so that when the reproducer is not being used the motor is shut off.

The invention also comprises certain details of construction to be hereinafter more fully described and finally embodied in the claim.

The invention is illustrated in the accompanying drawings, in which Figure 1 is a side view of a doll, this figure illustrating in dotted outline the relation of the parts of the device, and Figure 2 is a perspective view of the doll taken from the other side relative to Figure 1, the dress being removed to show the winding lever. Figure 3 is a detail perspective of one form of lever used in the manipulation of the reproducer and of the brake. Figure 4 is a detail perspective of the winding lever. Figure 5 is a detail perspective showing the winding lever projecting from the body portion of the doll. Figure 6 is a side view of the phonograph part of the doll situated in the body portion, the body portion being shown in section. Figure 7 is a back view of the body portion, illustrating the motor within said body portion. Figure 8 is a top view of the phonograph with the body portion shown in section, and Figure 9 is a detail showing a means for securing the record in place.

The doll comprises a body portion 10 made of any suitable material and acts as a support for the frame of the motor, said motor frame comprising a bottom plate 11 and a top plate 12 which are connected and also held in their spaced relation by suitable posts such as 13, and the motor itself is preferably supported on a main post 14 fastened at the bottom of the body portion by suitable means, such as the nut 15. The frame of the motor conforms generally to the form of the body portion and there is no particular tilting strain on the post 14. The bottom plate 11 of the motor frame fits tightly within the converging lower part of the body portion 10, as will be seen from Figure 6, and when the nut 15 is screwed up tight this bottom plate is wedged inside of the body portion.

Within the motor frame is a suitable motor, and I show one embracing a spring barrel 16 in which the usual spring is placed, and suitable gearing 17 transmits the power to the shaft 18 which has a worm gear 19 in mesh with the worm 20, which worm 20 is on the governor shaft 21, which is provided with any of the usual forms of governor 22, on the end of which is a suitable braking disc 23. The shaft 18 is the shaft on the top of which the table or support 24 is placed, this table 24 being the support for the disc record 25.

Above the motor frame and the disc record is mounted a suitable reproducer 26 of any usual form with the stylus 27 on the lower end of it. This reproducer can swing both horizontally and vertically, and the preferred way of mounting it is to fasten a block 28 on the inside of the body portion by suitable means, such as the screws 29, and in this block 28 is a rotatable stem 30 which has ears 31 on the top of it. Between these ears is hinged an eye 32 which can be pivoted, as by the pin 33, this latter hinged connection permitting the reproducer to swing vertically, and the stem 30 permitting it to swing horizontally.

The motor is wound from the winding lever 34 which is arranged so that it projects out through a suitable point in the body portion, and I show in the drawing a slot 35 arranged in one side of the body portion, this slot being long enough to permit the necessary oscillation of the winding lever 34,

and to permit easy installation and removal of the motor and its winding lever, if necessary, I prefer to extend the slot 35 to the edge of the opening 36 in the back of the doll.

The reproducer traverses the record by reason of the spiral sound groove in the upper face of the disc record, and when it arrives at the end of the record, this end usually being toward the center of the record, it is raised and returned to its initial starting position so that the record can be repeated.

I prefer to form a single means for doing this, this means being manually operable and being also preferably disposed so that it can operate the brake when the return of the reproducer takes place. The means for manipulating the reproducer and also the brake, as shown in the drawing, comprises a right-angled lever 37, one arm 38 of which receives the pin 39, which pin 39 is fastened to the reproducer and is supported by the arm 38 when the arm 38 is raised. The arm 38 is normally horizontal, and when it is raised it forms an incline down which the pin 39 of the reproducer slides until it is stopped by an abutment, which in the drawing is indicated at 40, this being the end of the slot 41 in which the pin 39 is shown as sliding.

The right-angled lever is pivoted, as at 42, to the post 43. The other arm 44 of the lever is adapted to engage the spring 45 which is usually curled so as to be normally out of contact with the braking disc 23, but which is forced in contact therewith when the end 46 of the arm 44 engages the end 47 of the spring 45 and forces the end 48 of the spring against the braking disc. This spring is usually supported, as indicated, by the arm 49.

For manipulating the lever a small finger-piece or handle 50 can be provided which is long enough to be easily grasped and felt through the clothing of the doll, but does not project far enough to make it likely to accidentally operate the reproducer.

When the lever 37 is swung upward to the dotted position shown in Figure 6, and the reproducer slides back to its initial starting position, the reproducer is held in this raised position by reason of the friction of the end of the arm 44 on the spring 45, thus preventing the reproducer from dropping down by its own weight, and it is necessary to manually operate the handle 50 to push the lever over to release the brake and to lower the reproducer to its playing position.

The reproducer is usually supplied with a short horn or megaphone 51, and in front of it I usually provide the body portion with openings 52 to permit the easy escape of sound.

The winding of the device is easy on account of the simple oscillation of the winding lever 34, this lever having a pawl 53 held in position by a small spring 54 against the ratchet 55, shown in dotted outline in Figure 8, this ratchet 55 being prevented from turning by a fixed pawl 56 so that the rotation of the shaft 57 of the motor is in only one direction.

In order to secure the record in position so that it continually lies flat and does not become loosened through use, I prefer to arrange on the end of the shaft 18 and above the table 24 a stud 24^a which is screw-threaded, and the record 25 has a sleeve 25^a in it, which sleeve is screw-threaded, these screw-threads being in reverse direction relative to that of rotation; for instance, if the record turns to the right, the screw-thread is a left-handed screw-thread so that the drag on the record will have a tendency to continuously tighten it up on the stud 24^a.

It will be evident that slight changes may be made in the arrangement and proportion of the parts without departing from the scope of the invention.

I claim:

A phonograph comprising a motor frame, a motor in the frame, said motor including a brake, a record support above the frame, a reproducer mounted in the body portion so as to swing horizontally and vertically, a right-angled lever pivoted at the juncture of its arms, a pin on the reproducer engaging one of said arms and adapted to be raised thereby and to descend by gravity along said arm so as to be returned to its initial starting position, the other of said arms being disposed so as to engage the brake to stop the motor when such return of the reproducer takes place.

In testimony that I claim the foregoing, I have hereto set my hand, this 27th day of November, 1922.

CHAS. A. HUNTER.