Oct. 15, 1940. A. J. MARQUIS 2,218,044

TALKING DOLL

Filed March 24, 1939

Fig. 1.

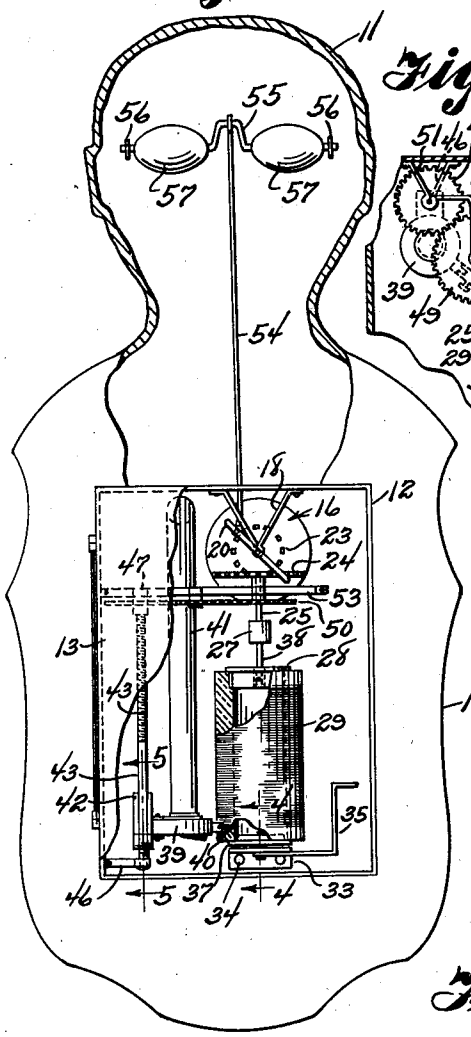


Fig. 6.

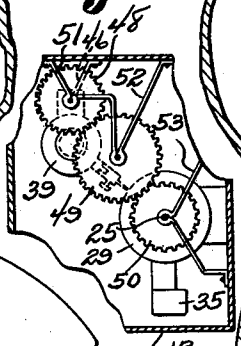


Fig. 2.

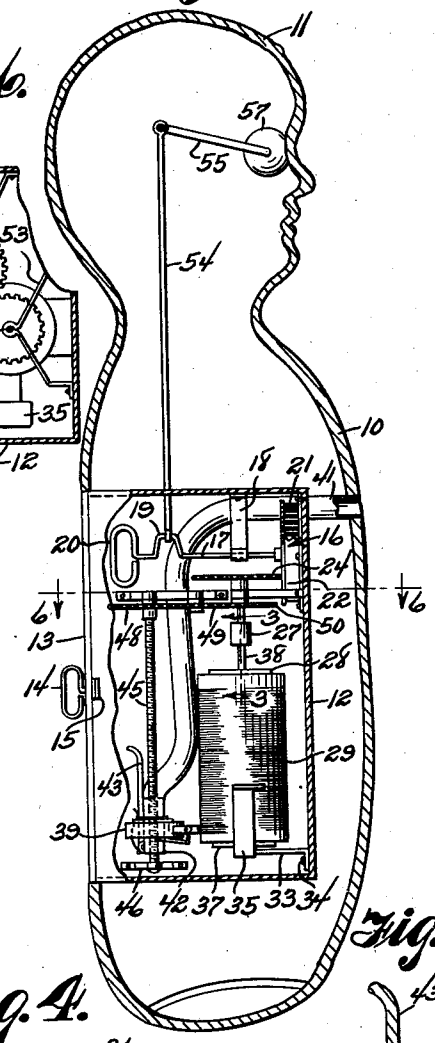


Fig. 5.

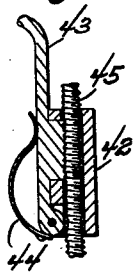


Fig. 4.

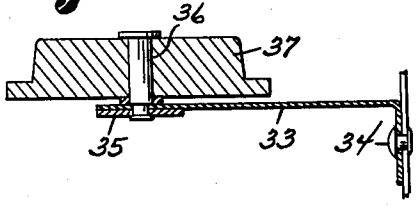
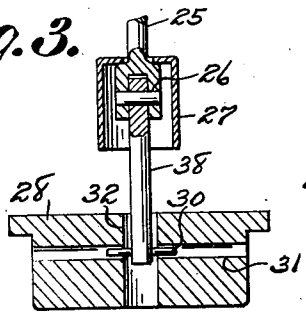


Fig. 3.



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Patented Oct. 15, 1940 2,218,044

UNITED STATES PATENT OFFICE

2,218,044

TALKING DOLL

Albert J. Marquis, Niagara Falls, N. Y.

Application March 24, 1939, Serial No. 264,014

1 Claim. (Cl. 274—17)

This invention relates to talking dolls and has for an object to produce a simplified form of phonograph to produce the sounds uttered by the doll.

A further object is to provide a device of this character having a coil spring for the motive power, to actuate a record cylinder and simultaneously move the eyes of the doll.

A further object is to provide a device of this character in which the sound effects picked up by the transmitter are sent through a sound tube to the doll's chest to closely imitate a human being.

A further object is to provide a talking doll which will be formed of a few strong simple and durable parts, which will be inexpensive to manufacture, and which will not easily get out of order.

With the above and other objects in view the invention consists of certain novel details of construction and combinations of parts hereinafter fully described and claimed, it being understood that various modifications may be resorted to within the scope of the appended claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawing forming part of this specification:

Figure 1 is a rear elevation of a doll's torso and head with portions broken away, to expose the mechanism for producing the sound effects and moving the eyes.

Figure 2 is a longitudinal sectional view of the doll shown in Figure 1 with portions broken away.

Figure 3 is an enlarged detail sectional view taken on the line 3—3 of Figure 2 showing the hinge of the record cylinder shaft.

Figure 4 is an enlarged detail sectional view taken on the line 4—4 of Figure 1 showing the resilient bracket and loose flanged head forming a bottom support for the record cylinder.

Figure 5 is an enlarged detail sectional view taken on the line 5—5 of Figure 1 showing the traveling nut and feed screw for the transmitter.

Figure 6 is a cross sectional view taken on the line 6—6 of Figure 2 and showing the gear train.

Referring now to the drawing in which like characters of reference designate similar parts in the various views, the talking doll includes a hollow body 10 and head 11. Within the hollow body is disposed a casing 12 having a hinged door 13 exposed through the back of the body and provided with a latch 14 which engages a keeper 15 within the casing for holding the door closed.

A spring motor 16 is secured to the inner side of the front wall of the casing near the top thereof, the power shaft 17 of the motor being supported through the medium of a bearing bracket 18 secured to the top wall of the casing and being provided with a crank 19 and terminating in a key 20 for winding up the spring 21 of the motor.

A drive wheel 22 is mounted on the shaft, the wheel being formed with a circular series of stop openings 23, best shown in Figure 1, adapted to be engaged by a sprocket wheel 24 and adapted to drive the sprocket wheel.

The sprocket wheel is mounted on the upper end of a shaft 25 formed with a hinge joint 26 intermediate its ends. The joint is covered by a flanged sleeve 27 for holding the two hinged sections of the shaft in aligned relation.

The lower end of the shaft is provided with a flanged head 28 adapted to receive the upper end of a vertically disposed phonograph record cylinder 29. The head is secured to the shaft through the medium of a pin 30 passed endwise through a transverse opening 31 in the head and engaged through the shaft to extend on opposite sides of the wall 32 of an axial opening in the head, as best shown in Figure 3.

The lower end of the record cylinder 29 is supported through the medium of a resilient angular bracket 33 which is riveted as shown at 34 or otherwise secured at one end to a rigid arm 35 which is connected to the wall of the casing in any preferred manner. At the free end the resilient bracket is equipped with a loosely mounted pin 36 which extends axially through a flanged head 37 and secures the head to the bracket.

When it is desired to change the bracket cylinder, the sleeve 27 is slid up to uncover the hinge joint 26 of the shaft 25. Then the resilient bracket arm 33 is forced downwardly and the hinged lower portion 38 of the shaft 25, carrying the head 28, is swung to one side whereupon the record cylinder is released and a new record cylinder may be placed on the bottom head 37 and the operations reversed to secure the record cylinder in operative position.

A sound box or reproducer 39 of conventional construction carries a needle 40 which engages the record cylinder 29. A flexible tube 41, formed of rubber or other suitable material, extends from the reproducer and opens through the chest of the doll, from which the sound effects are emitted.

The reproducer is secured to a traveling nut 42, best shown in Figure 5, which has a hinged por-

tion 43 and a spring 44 bearing upon the hinge portion to releasably clamp the nut to a worm 45. The worm is journaled at the bottom in a bearing bracket 46 and at the top is journaled in a bracket 47.

As best shown in Figure 6 the worm is driven through the medium of a gear train comprising a plurality of gears 48, 49, and 50 carried by respective bracket arms 51, 52 and 53, the initial gear 50 of the gear train being secured to the shaft 25 for driving the gear train and the worm.

As the reproducer travels longitudinally of the record cylinder 29 the flexible tube 41 will become deformed to permit of such travel and will return to initial position when the reproducer is moved to its starting point by opening the hinge portion 43 of the nut 42 and sliding the nut to its starting point.

The beforementioned crank 19 of the spring motor shaft 17, is equipped with a pitman 54 the upper end of which engages a crank shaft 55 which is journaled in bearings 56 carried by the head 11 of the doll. Eyes 57 are secured to the crank shaft in any preferred manner. When the spring 21 unwinds to actuate the record cylinder and worm the shaft 17 will be rotated by the spring to rock the eyes 57.

Since the operation of the device has been described as the description of the parts progressed it is thought that the operation of the device will be fully understood without further explanation.

What is claimed is:

In a phonograph, a frame, a spring motor mounted on the frame, a shaft driven by the motor, a shaft geared to the motor shaft, the second named shaft being formed of sections hinged together, a sleeve housing the hinge of the sections for holding the sections in aligned relation, a head loose on the free end of the second named shaft, a resilient bracket mounted on the frame, a head loose on the resilient bracket, a phonograph record cylinder clamped between said heads to be rotated by the shaft, a worm geared to the second named shaft to be driven thereby, a traveling nut on the worm, a reproducer carried by the nut having a needle to engage the record cylinder, and a sound tube extending from the reproducer.

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