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April 27, 1926. 1,582,778

G. H. PARSONS

DOLL

Filed Nov. 6, 1924

Fig. 1.

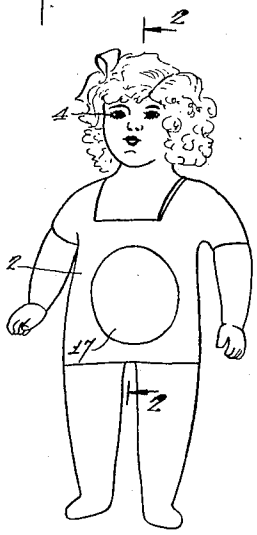


Fig. 2.

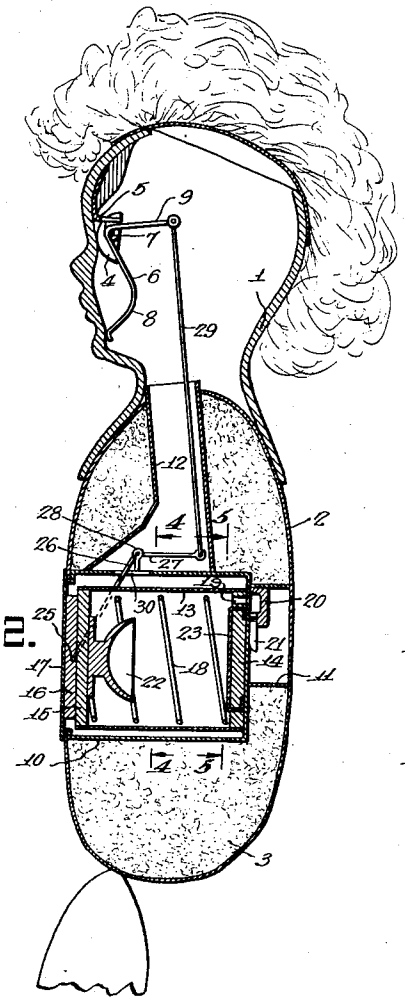


Fig. 3.

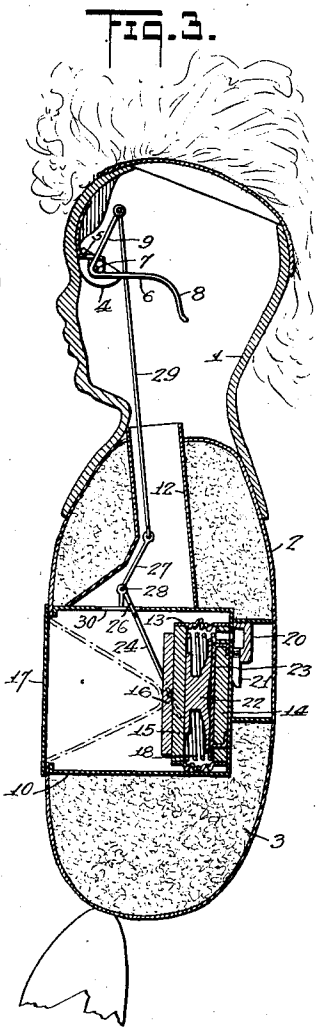


Fig. 4.

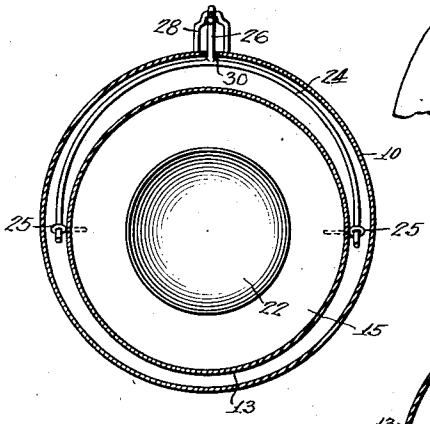
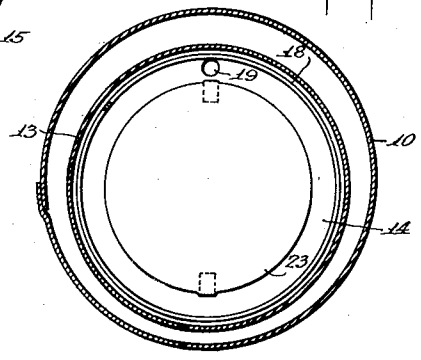


Fig. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

GEORGE HARRY PARSONS, OF NEW YORK, N. Y., ASSIGNOR TO AVERILL MFG. CO., OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

DOLL.

Application filed November 6, 1924. Serial No. 748,200.

To all whom it may concern:

Be it known that I, GEORGE H. PARSONS, a citizen of the United States, and a resident of the city of New York, borough of the Bronx, in the county of Bronx and State of New York, have invented a new and Improved Doll, of which the following is a full, clear, and exact description.

This invention relates to dolls but the mechanism is also adapted for use in connection with toys representing living figures of animals and the like, and it is to be understood that I use this term "doll" in its broadest possible sense, and for convenience of description I shall hereinafter refer to the device as a doll.

An object of the invention is to provide a doll or other analogous toy with novel and positive means whereby the eyes of said doll may be made to close by pressure being brought to bear on some portion of the body thereof, thus causing the eyes to close and remain closed as in sleep for a period of time suitable for play purposes, and at the expiration of such time the eyes will automatically open with the simultaneous production of sound appropriate to the doll or other toy.

A further object is to provide a simple, positive and inexpensive mechanism that in operation in a doll simulates the natural cycle of being put to sleep, remaining asleep for a period of time, and then awaking with a cry.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts which will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings—

Figure 1 is a perspective view of a doll embodying my invention;

Figure 2 is an enlarged view in longitudinal section on the line 2—2 of Figure 1;

Figure 3 is a view similar to Figure 2 showing the position of parts when the doll is represented as being asleep;

Figure 4 is an exaggerated view in section on the line 4—4 of Figure 2;

Figure 5 is an exaggerated view in section on the line 5—5 of Figure 2.

1 represents the head and 2 the body of a doll. The head is hollow and is preferably of material usually employed for the purpose so that it is rigid, while the body 2 is preferably of flexible material containing stuffing or padding 3 as is customary.

In the head 1 eyes 4 are mounted on a bracket 5 so that they may turn or pivot so as to give the impression of opening and closing. These eyes 4, as are customary, are fixed to move together so that both eyes will move simultaneously.

6 represents a member which in effect constitutes a bell crank lever, the angle of which being secured to a connecting rod 7 which constitutes the axis of the mounting of the eyes. One member 8 of this lever 6 is adapted to engage against the inner wall of the face of the doll to limit the turning movement of the eyes while the other member of said lever constitutes a crank arm 9 which is pivotally connected to an operating rod 29 for moving the eyes, as will more fully hereinafter appear.

Within the body 2 I locate a box or casing 10 having an extension 11 at its rear end extending to the back of the doll and closed by the casing of the body. I also provide above the box or casing 10 a tubular casing 12 which projects through the upper portion of the body casing, and in the body around the parts above stated a suitable packing 3 is located to fill out the body to fill out the body to the proper size and shape.

Within the box or casing 10 a bellows 13 is mounted, one end disk 14 of this bellows being secured to the inner end of the box or casing 10 and the other end disk 15 of the bellows having a plate 16 fixed thereto and secured to a flexible sheet 17, preferably of rubber. This sheet 17 is of a size to entirely cover the forward end of the box or casing 10 and is secured to the body by an adhesive or other suitable means. A coil spring 18 located within the bellows normally holds the same expanded and returns it to expanded position.

The inner end of the box 10 and the disk 14 are made with an air port 19 communicating with a hollow reed support 20, and this support 20 has a reed 21 located in the air passage from the bellows. This reed 21 is so positioned that it sounds only when air is sucked into the bellows and permits a free discharge of air from the bellows when the latter is contracted. It is to be understood that the material constitut-

ing the casing of the body is sufficiently porous to allow a free circulation of air therethrough to permit proper operation of the device.

A suction cup 22, preferably of rubber, is fixed to the inner face of the forward disk 15 and is adapted to engage a metal plate 23 fixed to the face of the rear disk 14, when the bellows is sufficiently contracted, as illustrated most clearly in Figure 3. It is to be understood that this friction cup when in engagement with the plate 23 is expanded and will hold by suction for a short period of time, or, in other words, until the air seeps into the cup to break the contact and release the same and allow the spring 18 to expand the bellows.

A bail 24 is located between the casing 10 and the bellows 13 and is connected at its ends to opposite sides of the bellows by means of pins 25, the outer ends of which constitute eyes to receive the ends of the bail and compel the ends of the bail to move with the bellows and have a sufficient movement at the point of connection to allow of varying the positions.

This bail 24 at its intermediate portion is fixed to the short arm 26 of a bell crank lever 27, said lever being mounted at its angle in a suitable bracket 28 fixed to the box 10 and said box is provided with a slot 30 through which the short arm 26 is freely movable. The longer end of the bell crank lever 27 is connected to the end of rod 29 so that when the bellows is caused to move, the eyes are caused to move, as will now be described.

The operation is as follows: When the bellows is compressed by pressure on the flexible sheet 17, the movement thereof through the medium of the bail 24, lever 25, rod 29 and lever 9 will cause the eyes to move to closed position. At the same time air will be forced out of the bellows. When pressure on the bellows is relieved, the spring 18 will expand the bellows causing the eyes to open, and at the same time by reason of the suction of air into the bellows through the reed 21 will cause an appropriate sound to be made, as, for example, a sound simulating the crying of a baby. When it is desired to put the doll to sleep the bellows is compressed sufficiently to cause the suction cup 22 to be expanded or flattened against the metal plate 23 so that the suction cup will return the bellows to contracted position and the eyes in closed position. This position will be maintained for a desired length of time but eventually, of course, the air will break the vacuum of the cup, the bellows will expand, the eyes will open and the doll will cry. Hence it will be noted that with my improved doll the eyes can be closed and the doll caused to cry whenever desired without any period of holding the eyes closed unless the bellows is sufficiently contracted to cause the suction cup to engage the plate 23 and hold the bellows contracted. In a toy of this kind the doll may be put to sleep and its awakening and crying will be entirely automatic.

Various slight changes and alterations might be made in the general form of the parts described without departing from my invention, and hence I do not limit myself to the precise details set forth but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of the appended claims.

I claim:

1. The combination of a doll having movable eyes, a spring, means operatively connecting the spring and the eyes whereby the spring tends to move the eyes to open position, a movable member adapted to contract the spring and move the eyes to closed position, and a suction cup adapted to hold said member against movement with the spring contracted for a period of time when said suction cup releases the member and the spring functions to cause the eyes to open.

2. The combination with a doll having movable eyes, a lever fixed to move with the eyes, a spring enclosed bellows within the body of the doll, a bell crank lever operatively connected to the bellows, a rod connecting the bell crank lever with the firstmentioned lever, a suction cup connected to one end of the bellows and adapted to engage a plate at the other end of the bellows for holding the bellows contracted for a period of time, and a sounding device operatively connected to the air passage of the bellows.

3. The combination with a doll having movable eyes, a casing inserted within the body of the doll, a flexible and elastic sheet secured to the body and constituting a closure for the casing, a bellows in the casing contracted by pressure on the flexible elastic sheet, means connected to the bellows for moving the eyes of the doll, a sounding device operated by the bellows, and a suction cup within the bellows adapted to hold the latter contracted for a predetermined period.

GEORGE HARRY PARSONS.