

Aug. 28, 1951

R. A. DUNN ET AL
BALLOON TOY

2,565,679

Filed May 4, 1950

2 Sheets-Sheet 1

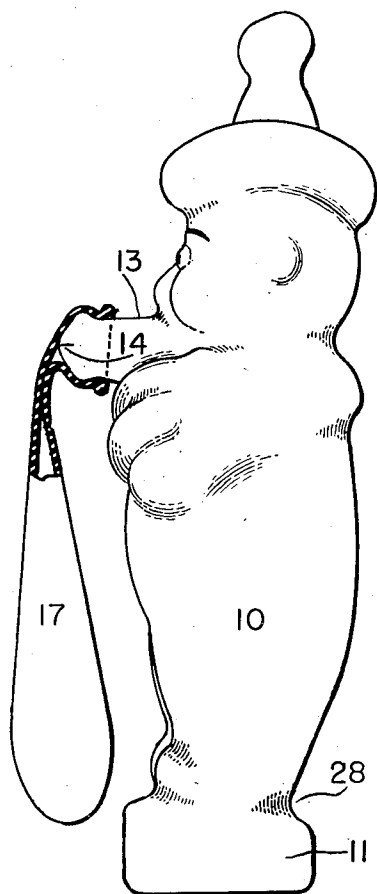


FIG. 1.

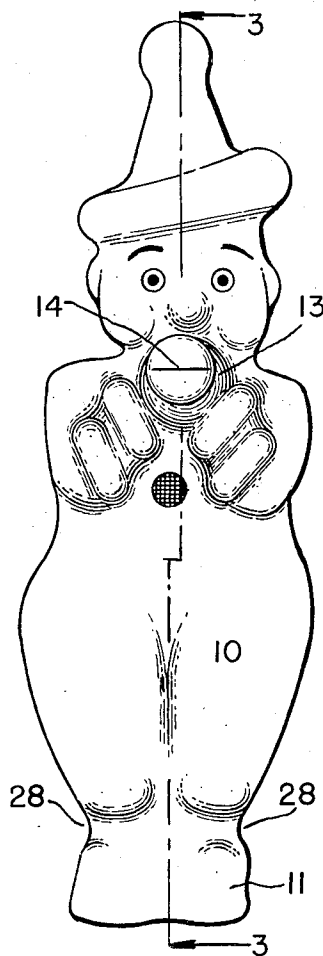


FIG. 2.

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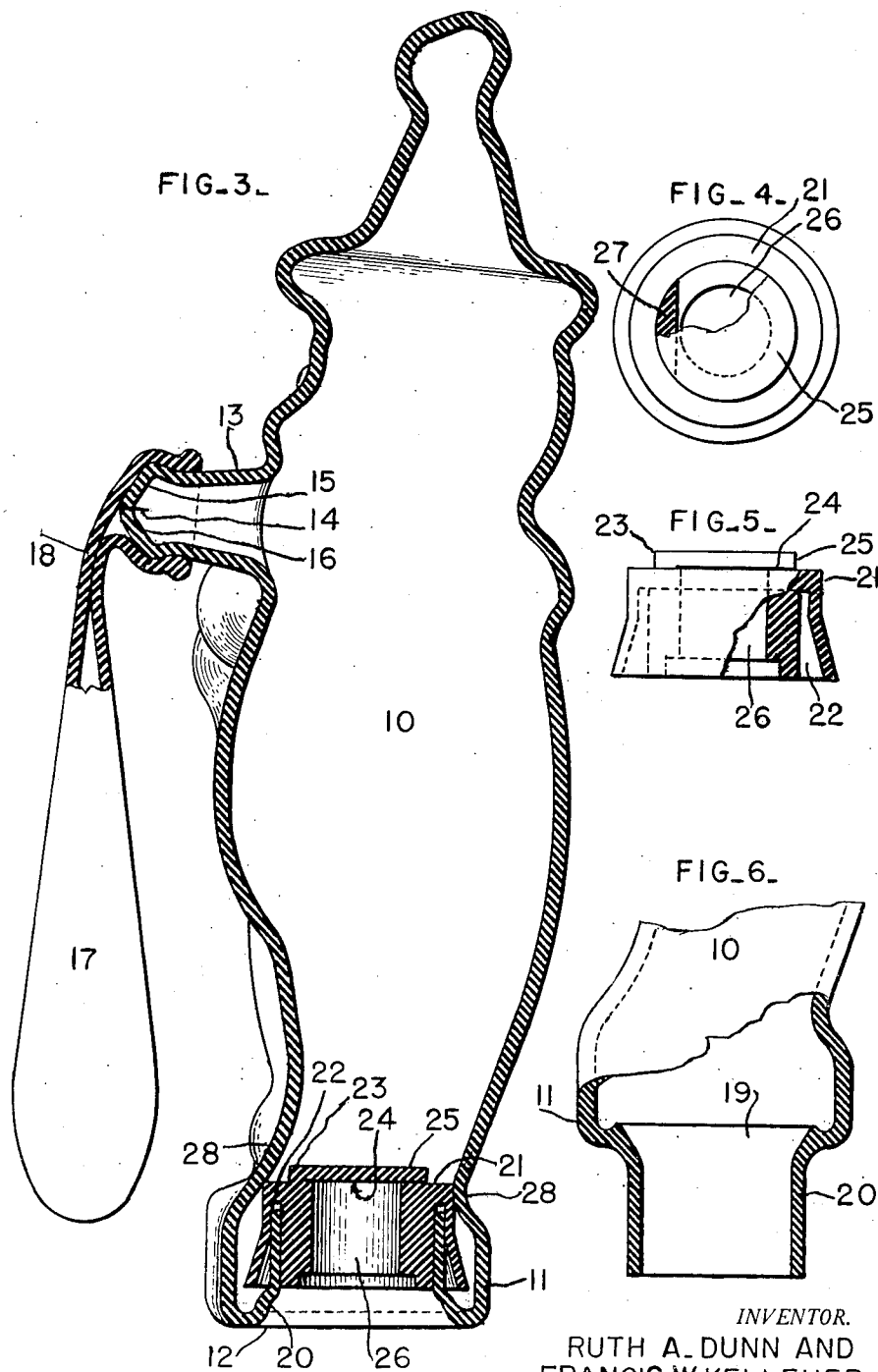
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UNITED STATES PATENT OFFICE

2,565,679

BALLOON TOY

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Application May 4, 1950, Serial No. 159,946

5 Claims. (Cl. 46—90)

1

This invention relates to toys of the class and type shown and described in the co-pending application for patent filed by Ruth A. Dunn, Serial No. 58,653 and it has for its object to simplify and otherwise improve the construction of toys of the class referred to.

A toy of the class described comprises a hollow compressible bulb having an exterior shape and appearance resembling that of an existing creature such as an animal, human being or the like, said bulb being provided with a valve-controlled air inlet and with a valve-controlled air outlet to which latter is coupled an expansible and contractible balloon of flexible sheet material, and operation of the bulb serving to pump air into the balloon to distend the latter where it is trapped and held by the valve-controlled outlet of the bulb with the balloon in distended condition.

It is an object of the present invention to provide a toy of the class described which will be devoid of metallic parts and which, preferably, can be produced in its entirety from rubber.

It is also an object of the invention to reduce to a minimum the number of parts essential to the production of a toy of the character described.

A further object of the invention is to provide for the ready and convenient deflation of the balloon without removal of the same from the bulb or from the means by which it is connected with the latter.

To these ends we have provided a toy of the class described which, in its preferred form, may be constructed and operated as set forth in the following description, the several features of the invention being particularly pointed out and defined in the claims at the close of the description.

In the accompanying drawings—

Figure 1 is a side elevation of a toy constructed in accordance with this invention.

Figure 2 is a front elevation of the bulb hereinafter described after removal of the balloon referred to later.

Figure 3 is a section on line 3—3 of Fig. 2 showing the balloon connected with the outlet of the bulb.

Figure 4 is a top plan view, partly in section, of the inlet valve plug hereinafter described.

Figure 5 is a side elevation, partly in section, of the valve plug shown in Fig. 4.

Figure 6 shows, partly in section, the lower end of the bulb before insertion therein of the inlet valve plug.

The illustrated embodiment of the invention comprises a hollow rubber bulb 10 which can be

2

compressed by hand pressure and which, when released, will return to its original shape. Exteriously the bulb 10 has the shape of an upstanding human figure or statuette provided at its lower end with a base or pedestal 11 having a flat bottom for supporting the figure in an upright position upon any suitable support.

At the mouth of the figure or statuette the bulb 10 is made with an outstanding tubular protuberance in the form of a nipple 13 shaped exteriorly to suggest a trumpet supported by the arms of the figure.

The outer end of the nipple 13 is normally closed by an outwardly convex end wall that is formed with a straight transverse slit 14 which provides a pair of normally closed together valve flaps 15 and 16. These valve flaps can open outwardly under the influence of air pressure from within the bulb 10 but, owing to the outwardly convex shape of end wall 15—16, they cannot open inwardly toward bulb 10 under influence of air pressure toward the latter.

The device is provided with a balloon 17 made of thin flexible and elastic sheet rubber and said balloon is made with a constricted tubular neck 18 that is telescopically fitted in stretched condition upon the outer end portion of the nipple 13.

As initially produced the bulb 10 is made at its lower end with an opening 19 as shown in Fig. 6 and this opening is surrounded by a tubular extension 20 into and through which a soft rubber valve plug 21 (Fig. 3) is forced until it is frictionally gripped and held within the lower end of the statuesque bulb 10, after which the tubular extension 20 is forced retrorsely and edgewise into pedestal 11 where its originally free end portion is wedged tightly into an annular groove or channel 22 formed in the lower portion or end of the valve plug 21 thus providing an air tight closure for the lower end of bulb 10 at that place.

At its upper end the valve plug 21 is made with an exteriorly circular boss 23 of smaller diameter than the body portion of the plug and which is slitted transversely in close proximity to, and parallel with the top of the body portion of the plug, as shown at 24 (Fig. 5), to provide an inwardly opening valve flap 25 which normally closes the inner end of an air inlet port 26 provided axially through plug 21. The slit 24 does not extend entirely across the boss 23 so that at one side thereof the valve flap 25 is integrally connected with the body of plug 21 as shown particularly at 27 in Fig. 4, thus providing for opening and closing movements of the valve flap on the connection 27 as on a hinge.

3

When the bulb 10 is manually compressed the pressure of the air within the same closes flap valve 25 tightly on its seat and opens the two valve flaps 15 and 16 of nipple 13 thereby effecting delivery of air under pressure into the balloon 17 which distends the same. When the bulb is relieved of the pressure of the hand and expands to its original size and shape the pressure of the air within the balloon holds the flap valves 15 and 16 of nipple 13 closed while the outside atmospheric air pressure forces air through port 26 and past flap valve 25 into the bulb 10.

To deflate the balloon the nipple 13 is compressed between the thumb and finger of one hand while the pedestal 11 is held compressed between the thumb and finger of the other hand. This opens both the inlet and outlet valves and permits air to escape from the balloon into the bulb and from the bulb into the outside atmosphere. Manual pressure upon the opposite sides of the nipple 13 in alinement with the slit 14 serves to separate the valve flaps 15 and 16, while manual pressure against opposite sides of pedestal 11 serves to unseat the flap valve 25. Thus it is possible for the child to repeatedly inflate and deflate the balloon without requiring removal of the balloon from the nipple.

The above described base construction of the toy has the advantage that when the bulb 10 is compressed the internal air pressure forces the tubular extension 20 against the inner wall of the groove 22 thereby effectually closing the joint between the two.

Immediately above the base portion 11 the bulb 10 is constricted as shown at 28 in the drawings and this constriction serves to limit the inward movement of the valve plug when it is being installed within the bulb, while the re-entrant extension 20, in addition to serving as a closure for the lower end of the bulb, also assists in holding the plug in place.

The above described toy, in its preferred form, includes but three parts, viz., a balloon; a bulb, and a valve plug and these parts are preferably assembled to provide an operable device without the use of cement or other adhesive.

What we claim is:

1. A toy of the class described comprising a hollow compressible bulb made from rubber and formed with a base portion to seat upon a support, the upper portion of said bulb being made with an integral outstanding nipple extension communicating at its inner end with the interior

4

of said bulb and having at its outer end an end wall that is made with a transverse slit providing the same with a pair of normally closed together outwardly-opening valve flaps; an air inlet port extending through said base portion; an inwardly opening check valve controlling said port, and an elastic rubber balloon having a constricted neck portion fitted in stretched condition upon the outer end portion of said nipple.

2. A toy of the class described according to claim 1 wherein the outer end portion of said nipple extension is transversely compressible and wherein manual transverse compression of said outer end portion opens said pair of valve flaps thereby to exhaust air from said balloon into said bulb.

3. A toy of the class described according to claim 1 wherein said base portion is transversely compressible and wherein manual transverse compression of said base portion opens the check valve that controls said inlet port thereby to exhaust air from the bulb through said port.

4. A toy of the class described according to claim 1 wherein said end wall of the nipple is outwardly convex.

5. A toy of the class described according to claim 1 wherein the bottom of said base portion of the bulb is made with an opening bordered by a re-entrant tubular extension; wherein said inlet-controlled check valve is an integral part of the inner end of a plug of compressible rubber forcibly fitted into position within said base portion and through which said inlet port is formed, said plug being made at its outer end with an annular channel that is occupied by the inner end portion of said tubular re-entrant extension.

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