

- [54] ANIMATION DEVICE FOR A FIGURE TOY

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- [52] **U.S. Cl.**..... **46/116, 46/135 A**

- [51] **Int. Cl.**..... **A63h 3/24, A63h 5/00**

- [58] **Field of Search** 46/116, 117, 135 A, 141

- [56]
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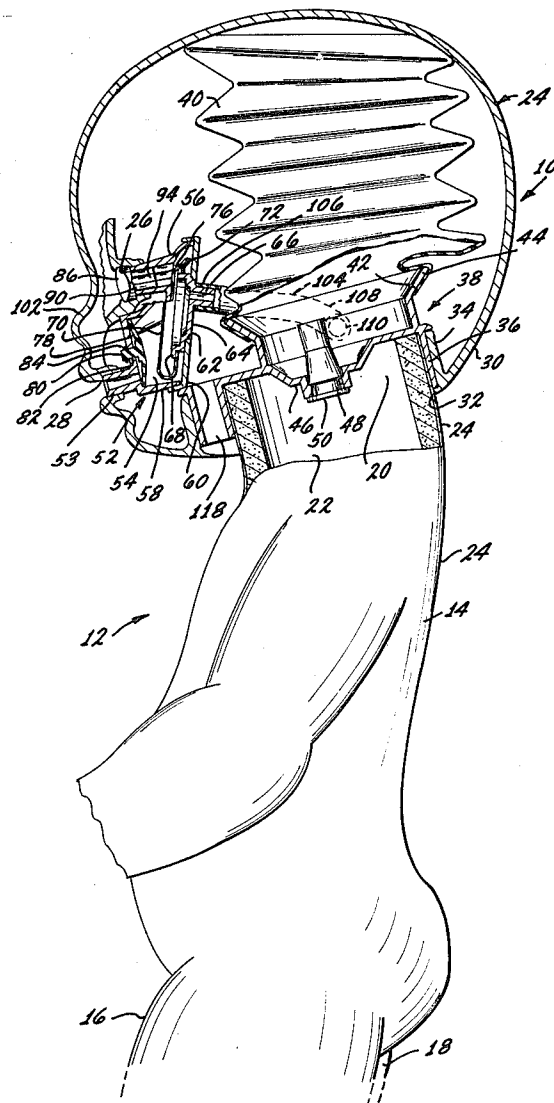
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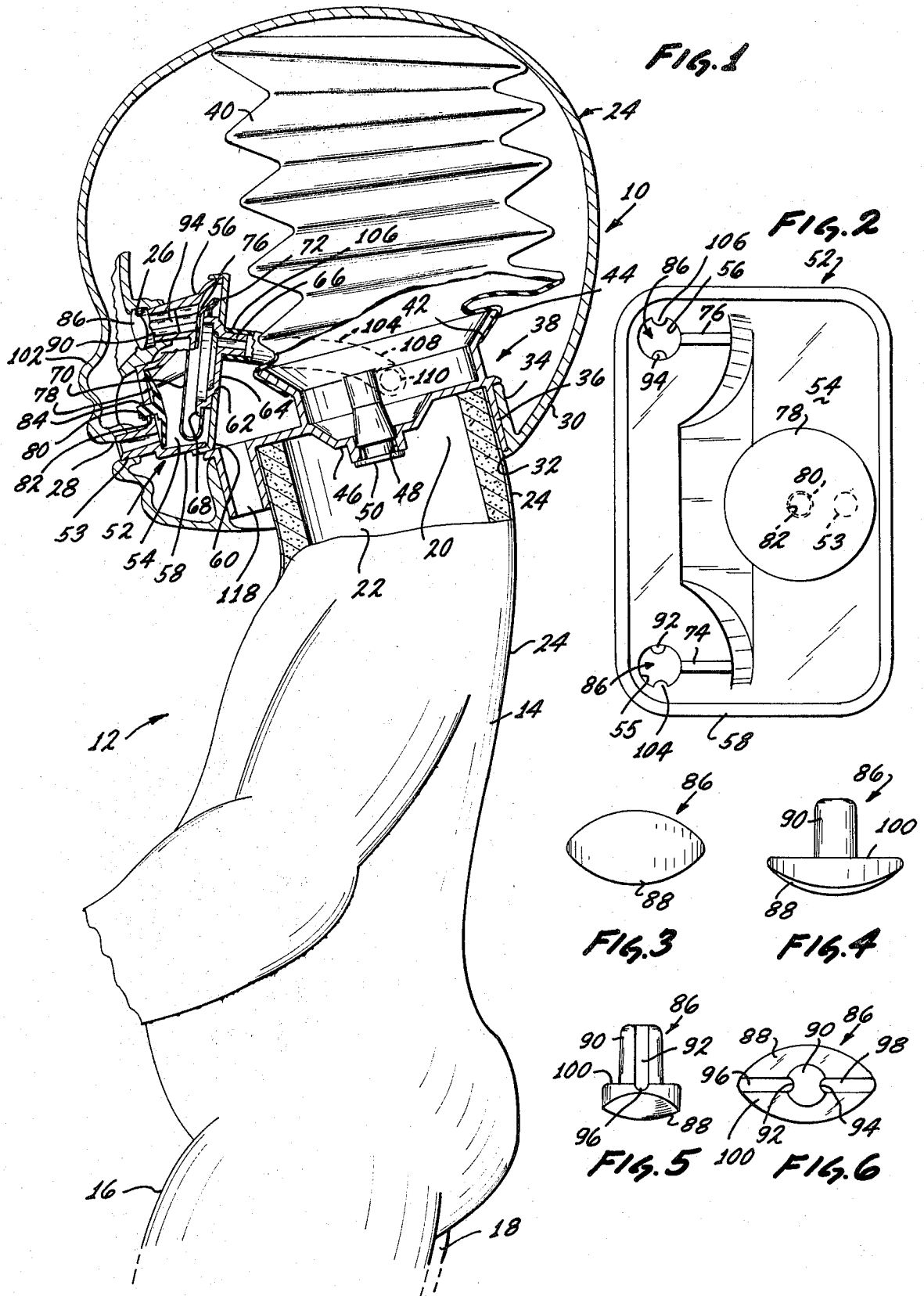
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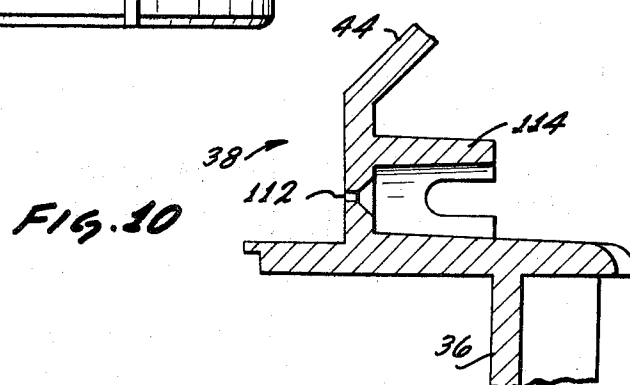
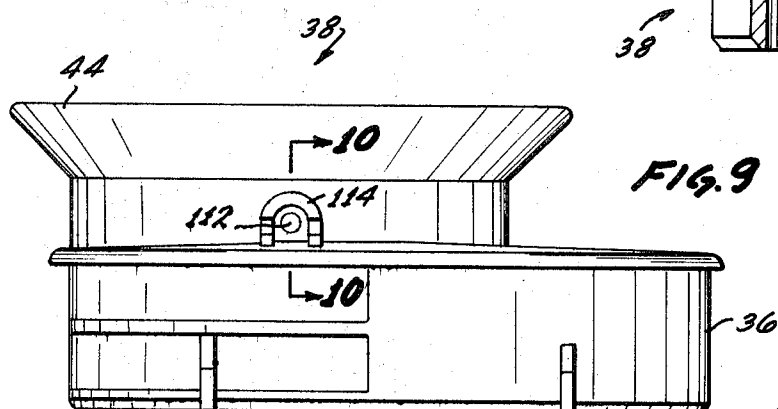
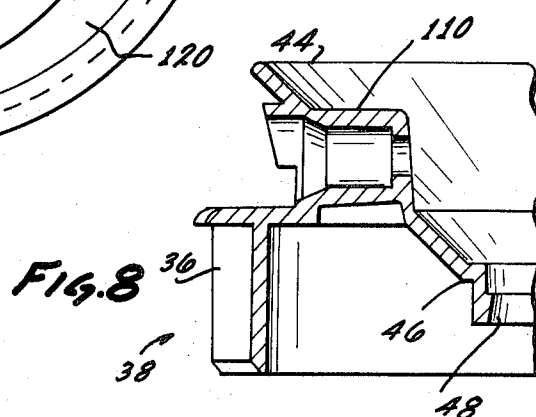
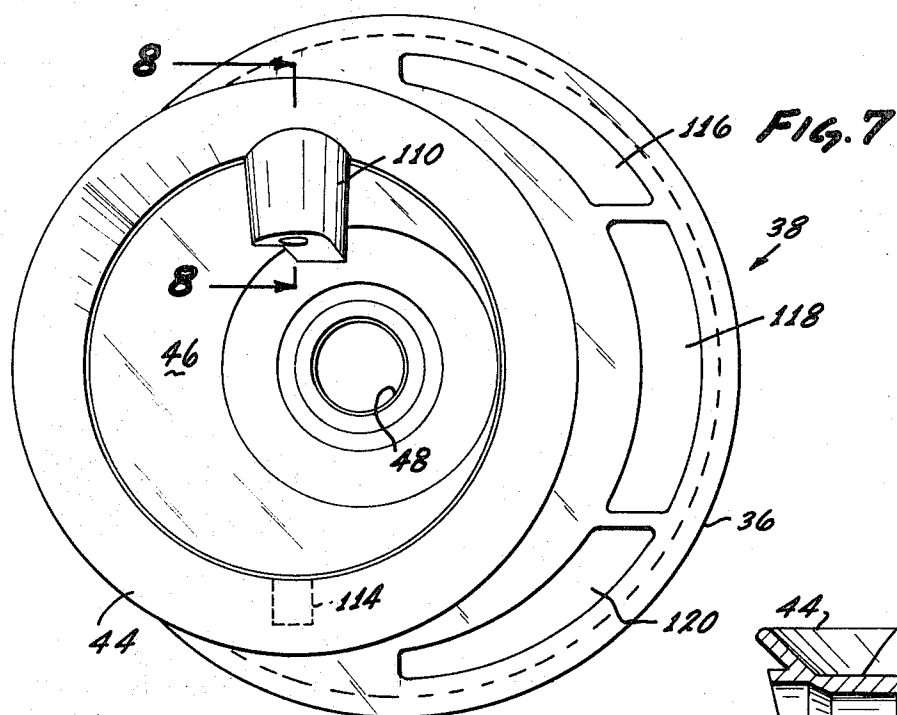
- [57]
- ABSTRACT**

Tearing reservoir is pressurized by inflatable sack connected to a bellows mounted in figure toy head and receiving air from water-impervious, hollow torso in fluid communication with bellows through a neck plug connected to the bellows and the torso in such a manner that water entering head when figure toy is immersed will not pass into torso. A reed-type noise maker may be mounted in the neck plug.

6 Claims, 10 Drawing Figures







ANIMATION DEVICE FOR A FIGURE TOY

BACKGROUND OF THE INVENTION

The background of the invention will be set forth in two parts.

1. Field of the Invention

The present invention pertains generally to the field of animated figure toys and more particularly to a new and useful tearing mechanism and sound device in combination with a figure toy.

2. Description of the Prior Art

The prior art known to applicant is listed by way of illustration, but not of limitation, in separate communication to the United States Patent Office.

The present invention exemplifies improvements over this prior art.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a new and useful animating device for figure toys.

Another object of the present invention is to provide an improved tearing mechanism for a figure toy including a closed air system and an inflatable sack which pressurizes a tearing reservoir.

According to the present invention, a new and useful animation means is provided in combination with a figure toy having a torso defining a water-impervious, compressible air chamber. The torso includes a neck opening to which a hollow head is connected by air pump means forming a watertight seal between the head and the torso. This air pump means includes a bellows which is sealed to a neck plug which, in turn, is sealed to the neck opening.

A first conduit means places the air pump means in fluid communication with the torso so that the bellows may be expanded by squeezing the torso. A second conduit means connects the air pump means to an inflatable sack in a tearing reservoir for pressurizing water contained therein.

A third conduit means connects the reservoir to ducts provided in a pair of eyes mounted in the figure toy head.

A reed-type noise maker may be mounted in the first conduit means for actuation by air passing from the torso to the bellows or, conversely, from the bellows to the torso.

The reservoir may be filled through an inlet mounted in the mouth of the figure toy and controlled by a flap-per valve.

The features of the present invention which are believed to be novel are set forth with particularity in the appended claims. The present invention, both as to its organization and manner of operation, together with further objects and advantages thereof, may best be understood by reference to the following description, taken in connection with the accompanying drawings in which like reference characters refer to like elements in the several views.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a vertical, cross-sectional view of a figure toy animating means constituting a presently preferred embodiment of the invention;

FIG. 2 is an enlarged, rear-elevational view of a reservoir forming part of the animation means of FIG. 1,

with the rear cover removed to show internal construction;

FIG. 3 is a front elevational view of an eye member used in the figure toy of FIG. 1;

FIG. 4 is a top plan view of the eye member shown in FIG. 3;

FIG. 5 is a side-elevational view of the eye member of FIG. 3;

FIG. 6 is a rear-elevational view of the eye member of FIG. 3;

FIG. 7 is an enlarged, top-plan view of a neck plug forming part of the animation means of FIG. 1;

FIG. 8 is a partial, cross-sectional view taken along line 8-8 of FIG. 7;

FIG. 9 is a rear elevational view of the neck plug of FIG. 7; and

FIG. 10 is a partial, cross-sectional view taken along line 10-10 of FIG. 9.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring again to the drawings, and more particularly to FIG. 1, an animating means constituting a presently preferred embodiment of the invention, generally designated 10, is shown in combination with a figure toy 12 having a torso 14 including a pair of legs 16, 18, a neck opening 20 and an internal chamber 22. Torso 14 is covered with a water-impervious skin 24 and is compressible so that air in chamber 22 may be forced through neck opening 20 by squeezing torso 14.

Figure toy 12 also includes a hollow head 24 having a pair of eye openings, like the one shown at 26, a mouth opening 28, an encompassing side wall 30 and an open bottom 32. An upstanding flange 34 circumscribes open bottom 32 for connecting head 24 to a depending flange 36 on a neck plug assembly 38 forming part of an air pump means including a thin, latex bellows 40 having an open bottom 42 sealed to a fus-toconical flange 44 on neck plug 38. Neck plug 38 includes a bottom wall 46 provided with an inlet 48 comprising a first conduit means placing bellows 40 in fluid communication with chamber 22. A reed-type noise maker 50 may be placed in inlet 48 for emitting a sound when air passes from chamber 22 to bellows 40 or, conversely, from bellows 40 to chamber 22.

Referring now to FIGS. 1-6, animating means 10 includes a unitary tearing reservoir 52 having a water chamber 54, a water inlet 53, which is mounted in mouth opening 28, a pair of water outlets 55, 56, which are mounted in a pair of eye openings, like the one shown at 26 for outlet 56, and an encompassing side wall 58 forming an opening which is closed by a cover member 60 secured to side wall 58 by sonic welding, or the like. Cover 60 includes an aperture 62 closed by a suitable fitting 64 having an inlet 66, on one side of cover 60 outside of chamber 54 and an annular flange 68, on the other side of cover 60 in chamber 54 (as shown in FIG. 1). An inflatable sack 70 is affixed. Sack 70 is of a generally rectangular shape and includes an upper edge 72 extending to positions behind outlets 55, 56 which are prevented from being sealed by upper edge 72 by small gusset plates 74, 76 formed integrally with reservoir 52 adjacent outlets 55, 56, respectively.

Flow of water through inlet 53 is controlled by a flap-per valve 78 having a stem 80 passing through a small aperture 82 provided in reservoir 52 adjacent inlet 53.

Stem 80 is retained in position in aperture 82 by an annular flange 84 carried by stem 80.

Animating means 10 also includes a pair of eyes, like the one shown at 86, each of which includes an elliptical body portion 88 and a stem 90. Each stem 90 is provided with a pair of channels 92, 94 communicating with similar channel 96, 98 provided in the rear face 100 of body portion 88. A single set of channels 92, 96 or 94, 98 will be employed as water ducts for each water outlet 55, 56 and are provided in eyes 86 in pairs as herein shown to eliminate the necessity of distinguishing between right hand and left hand eyes during the assembly of animating means 10. The channel which becomes functional is the one located adjacent nose 102 on head 24 and the other channel is sealed by an associated one of the ribs 104, 106 provided in water outlets 55, 56, respectively. Since face 100 of body portion 88 is adhesively secured in opening 26, the channel 96, 98 which becomes functional will form a closed duct causing water flowing from the applicable outlet 55, 56 to flow against nose 102.

Referring now to FIGS. 7-10, inflatable sack 70 is connected to bellows 40 by a conduit 104 comprising a second conduit means, having a first end 106 connected to inlet 66 on fitting 64 and a second end 108 connected to an inlet-outlet fitting 110 on neck plug 38. A vent 112 is also provided on neck plug 38 for preventing excessive pressure from building up in bellows 40. A cage 114 is provided around vent 122 to prevent bellows 40 from closing vent 112.

Neck plug 38 is also provided with a plurality of arcuate openings 116, 118 and 120 through which sound from noise maker 50 will pass from head 24 after first passing through the thin side wall of bellows 40.

The operation of animating means 10 will now be described in connection with FIG. 1. Reservoir 52 may be filled with water by causing water to flow through inlet 53 unseating flapper valve 78 which will automatically be seated again by water pressure in chamber 54. Torso 14 may then be squeezed to compress the air in chamber 22 causing it to flow through noise maker 50 into bellow 40 and through conduit 104 into inflatable sack 70 causing it to become inflated and pressurize the water in chamber 54 which then flows through outlets 55, 56 and an associated one of the channels 92, 94, 96, and 98 into engagement with nose 102 from whence the water flows down along the edge of nose 102 in simulation of tears issuing from eyes 86.

When torso 14 is released, air stored in sack 70 and bellows 40 will flow through noise maker 50 and back into chamber 22.

The watertight connection between neck plug 38, bellows 40 and neck opening 20 make it possible to immerse figure toy 12 in water without getting water into air chamber 22.

While the particular animating means herein shown and described in detail is fully capable of attaining the objects and providing the advantages hereinbefore stated, it is to be understood that it is merely illustrative of the presently preferred embodiment of the invention

and that no limitations are intended to the details of construction or design herein shown other than as defined in the appended claims, which form a part of this disclosure.

Whenever the term "means" is employed in these claims, this term is to be interpreted as defining the corresponding structure illustrated and described in this specification or the equivalent of the same.

What is claimed is:

1. In combination with a figure toy having a hollow head and a torso, said torso defining a water-impervious, compressible air chamber and having a neck opening, animating means comprising:

air pump means connecting said head to said neck opening in water-tight relationship with said torso;

first conduit means placing said air pump means in fluid communication with said torso;

a water reservoir mounted in said figure toy;

air-inflatable pressurizing means mounted in said reservoir for pressurizing water stored therein; and

second conduit means connecting said pressurizing means to said air pump means for supplying compressed air thereto, whereby said reservoir may be pressurized by compressing said torso.

2. A combination as stated in claim 1 including a pair of eyes in said figure toy and duct means connecting said reservoir to said eyes.

3. A combination as stated in claim 2 wherein said eyes include body portions, stems and channels formed in said stems and body portions for forming said ducts.

4. A combination as stated in claim 1 wherein said first conduit means includes a reed-type noise maker.

5. A combination as stated in claim 1 wherein said air pump means comprises a neck plug mounted in said neck opening and a bellows connected to said neck plug, said first conduit means being mounted in said neck plug.

6. In combination with a figure toy having a hollow head and a torso, said torso defining a water-impervious, compressible air chamber and having a neck opening, animating means comprising:

air pump means connecting said head to said neck opening in water-tight relationship with said torso;

first conduit means placing said air pump means in fluid communication with said torso;

a pair of eye members mounted in said head;

a water reservoir mounted in said figure toy;

duct means placing said water reservoir in fluid communication with said eye member;

air-inflatable pressurizing means mounted in said reservoir for pressurizing water stored therein; and

second conduit means connecting said pressurizing means to said air pump means for supplying compressed air thereto, whereby said reservoir may be pressurized by compressing said torso.

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