Feb. 15, 1966 E. D. HARROWE 3,234,685

INFLATABLE SELF-MOUNTING TOY

Filed April 2, 1964

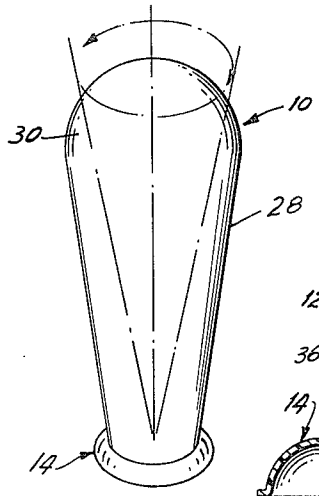


FIG. 1

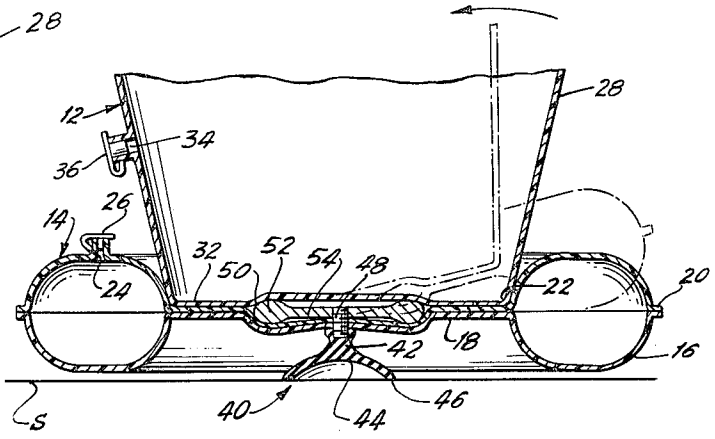
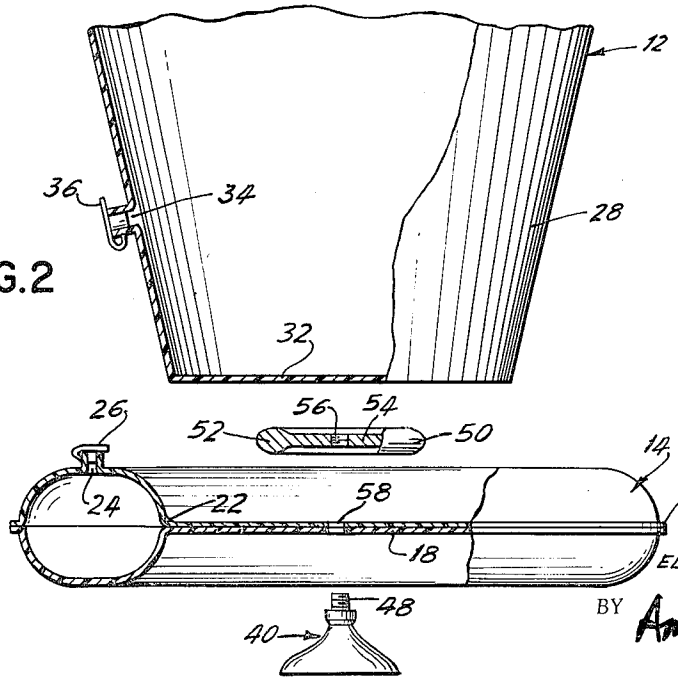


FIG. 3

FIG. 2



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United States Patent Office 3,234,685 Patented Feb. 15, 1966

3,234,685

INFLATABLE SELF-MOUNTING TOY

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Filed Apr. 2, 1964, Ser. No. 356,827
6 Claims. (Cl. 46—88)

The present invention relates generally to inflatable toys and specifically to in inflatable toy having attachment means at its base to orient and maintain the toy in an upright position upon a flat surface such as a floor.

With the advent of mass production techniques for the utilization of sheet plastic material, such as the well-known polyvinyl materials, there have been produced a larger variety of inflatable toys. Among the more popular of these toys are items which have become generally known as "bop-bags." Bop-bags are inflated, elongated toys which generally have a relatively broad, weighted base and which taper upwardly toward a reduced diameter top. Because if the extremely low center of gravity created in such toys, the bop-bag may be pushed over and it will, due to its own weight distribution, spring back to an upright position. Although these devices have been relatively successful, they have certain undesirable features. The weight which provides the significant functional features of these toys creates problems in manufacture, shipment and storage. It is necessary to provide a relatively strong pouch within the bop-bag in order to contain the weighted material; the weighted material itself contributes significantly to the cost of manufacture of the finished toy; and the weighted material substantially increases shipment and inventory costs. Furthermore, in many instances, the degree of movement permitted by the weighted bop-bag design is greater than that desired.

Accordingly, it is an object of the present invention to provide an inflated toy design obviating one or more of the aforementioed disadvantages. Specifically, it is an object of the present invention to provide a light weight toy which will maintain itself in a substantially upright position on a floor or other flat surface.

It is further within the contemplation of the present invention to provide an inflatable bop-bag type of toy having a suction cup attachment at its lower end for securement to a flat surface such as a floor.

It is still a further object of the present invention to provide an inflatable toy of inexpensive cost which provides a high degree of play value.

In accordance with one illustrative embodiment of the present invention there is provided an inflatable toy which is adapted to flexibly maintain itself in an upright position on a flat surface such as a floor. The toy comprises an elongated hollow body formed of a skin of non-porous flexible material. The body has an inflation opening formed therein and an inflation valve is provided for the entry and exit of air. A base member is secured to the lower portions of the body and comprises an inflatable, hollow closed loop formed of non-porous flexible material which also has an inflation opening and an inflation valve. A suction cup is secured to the inflatable toy and has a downwardly facing concave suction surface which terminates in a suction edge adapted to be engaged against a flat surface such as the floor. The suction edge extends slightly below the bottom of the base of the inflatable toy such that upon downward pressure applied to the toy, the suction cup will engage the flat surface for securement of the toy to the surface. The flexible nature of the materials of the toy will allow the toy to tilt to the side in response to the application of a sidewardly directed force, but then to spring back into its position perpendicular to the flat surface when that force is removed.

The above brief description, as well as further objects, features and advantages of the present invention, will be best appreciated by reference to the following detailed description, of one presently preferred embodiment, when taken in conjunction with the accompanying drawings wherein:

FIG. 1 is a perspective view of an inflatable toy embodying aspects of the present invention, diagrammatically illustrating the movement of the toy with respect to the flat surface to which the toy is fixed.

FIG. 2 is an exploded and partially sectional view of the various elements which are combined to form the construction according to the present invention; and

FIG. 3 is a partial sectional view of the lower portion of the toy showing the toy in its normal upright position and, in dotted line configuration, showing the position of the various structures when the toy is tilted from its normal upright position.

Referring now specifically to the drowings, there is shown an inflatable toy, generally designated by the numeral **10**. The toy **10** includes a body portion **12** and a base portion **14**. In the illustrative embodiment depicted herein, the base portion **14** is comprised of an annular hollow loop **16** having a central web **18** joining and closing the loop **16**. The material of the loop **16** and the web **18** may be conveniently formed of sheet plastic material such as polyvinyl. The seam **20** at the external circumference of the base member **14** and the seam **22** at the internal circumference of the loop **16** may be formed by heat sealing according to conventional technology. An inflation opening **24** is provided at any convenient location on the loop **16** and a sealable inflation valve **26** is engaged with the opening **24** to provide means to inflate the loop **16** and then, after inflation, to make same airtight.

The body portion **12** of the toy **10** may be constructed with a generally conical body wall **28** which terminates at its upper edge in a spherical top portion **30** and at its lower edge in a bottom wall **32**. All of the various segments of the body portion **12** may similarly be formed of a material such as polyvinyl and the various seams may be heat sealed as recited above with respect to the base **14**. A body inflation opening **34** is formed at a convenient point within the wall of the body **12** and an inflation valve **36** is engaged with the body **12** at that point as is conventionally known.

In accordance with the present invention, the inflatable toy including the body **12** and base **14** is further provided with a suction cup generally designated by the numeral **40**. As shown in FIG. 3, the suction cup **40** is secured at the bottom of the toy **10** and along its vertical axis. The suction cup **40** has a mounting portion **42** along its axis and is formed with a concave suction surface **44** of generally spherical configuration which terminates at a suction edge **46**. The suction edge **46** is in a plane substantially transverse to the central axis of the suction cup **40** and the central vertical axis of the toy **10**. The suction cup **40** is physically secured to the remainder of the toy **10** by means of a threaded shank or stud **48** and a mounting wheel **50**. The threaded stud **48** is secured to the body portion **42** of the suction cup **40** and extends upwardly therefrom along the axis of the suction cup. As may be seen by comparing FIGS. 2 and 3, the mounting wheel **50** has an annular portion **52** and a central web **54**. The mounting wheel **50** is sandwiched between the bottom wall **32** of the body portion **12** and the central web **18** of the base portion **14** and is positioned directly along the central axis of both. A threaded opening **56** is formed centrally of the mounting wheel **50** and a corresponding opening **58** is

formed in the central web **18** of the base **14**. The stud **48** is then received through the opening **58** and is rigidly secured to the mounting wheel **50** and the threaded opening **56**. Accordingly, the suction cup **40** is thus secured to the mounting wheel **50** which in turn is rigidly secured to the toy **10** at the joinder of the body **12** and base portion **14**.

As may be seen in FIG. 3, the suction edge **46** of the suction cup **40** extends slightly below the lowermost portion of the base **14** of the toy **10**. Accordingly, when the toy **10** is placed upon a flat surface, such as the surface S in FIG. 3, the first portion of the toy **10** to contact that surface is the suction edge **46** of the suction cup **40**. As the suction cup **40** is deformed, as by pressing downwardly on the toy **10**, the volume defined by the suction surface **44** and the flat surface S will be decreased. The release of downward force on the toy **10** will cause a corresponding decrease in pressure within the suction cup **40** due to the resilient and flexible nature of the material used to form the suction cup **40**. The base **14** contacts the surface S along a band-like supporting surface at the bottom of the base **14**.

When the toy **10** is secured to a flat surface, such as the floor S, and is pushed sidewardly, the entire construction is somewhat deformed by the resulting tipping action. One side of the base **14** may be raised from the floor while the opposite side is pressed downwardly against the floor. This relative movement is indicated by the arrow in FIG. 3 and one possible position of the various elements is shown by the dotted line configuration in that figure. In FIG. 1, there is diagrammatically illustrated the permissible extent of movement of the central axis of the toy **10**. Specifically, the toy **10** may be moved or pushed through a series of movements inclining the body **12** of the toy **10** outwardly from the normal vertical axis. Because the toy **10** is fixed to the floor S at the center of the base **14**, upon the application of sideward force the toy will deform but, upon release of that force, the toy will spring back to its normal upright position.

It will be appreciated that the toy **10** according to the present invention may be used in the manner of any of the bop-type inflatable devices now on the market and may be used in a number of ways in which current bop-bags are not capable of performing. The inflatable toy according to the present invention may be positioned not only perpendicular to a floor, but may be secured to a wall or other vertical surface or even secured to the ceiling of a room.

It will be appreciated that the present invention provides an inflatable toy having a high order of play value. Furthermore, it will be appreciated by those skilled in the art that the device in accordance with the present invention may be manufactured at an unusually low per unit cost and that it may be easily fabricated in accordance with well-known manufacturing processes.

Although only one embodiment of the present invention has been disclosed herein, it will be appreciated that a number of design changes may be made departing in various degrees from the specific toy illustrated herein, without departing from the spirit and scope of applicant's invention.

Accordingly, the following claims should be construed broadly in a manner consistent with the spirit and scope of the invention.

What I claim is:

1. An inflatable toy adapted to maintain itself in an upright position on a flat surface comprising a hollow inflatable body formed of a non-porous flexible material, said body having a base portion forming a generally annular supporting surface positioned to contact a flat surface upon which the toy is placed, and a flexible suction cup secured to said body within said annular supporting surface of said base portion, said suction cup having a downwardly-facing concave suction surface terminating in a suction edge, said suction cup being engageable with said flat surface for resiliently maintaining said toy in an upright position on said flat surface.

2. An inflatable toy adapted to maintain itself in an upright position on a flat surface comprising a hollow body formed of a non-porous flexible material, said body having a base portion having a continuous band-like supporting surface at the lower end of said toy positioned to contact a flat surface upon which the toy is placed, and a flexible suction cup, securement means attaching said suction cup within said supporting surface of said base portion, said suction cup having a downwardly-facing concave suction surface terminating in a suction edge, said suction edge extending downwardly of said supporting surface of said base portion for suctional engagement with a flat surface for maintaining said toy in an upright position on said flat surface.

3. An inflatable toy adapted to maintain itself in an upright position on a flat surface comprising an elongated hollow body including a skin of non-porous, flexible material, an inflation opening formed in said material, and a sealable inflation valve at said inflation opening, a base member including a hollow, closed loop formed of a non-porous material and secured to the bottom of said body and forming a base therefor, and a suction cup secured to the bottom of said toy having a suction surface adapted to engage a flat surface upon which said toy is placed.

4. An inflatable toy adapted to maintain itself in an upright position on a flat surface comprising an elongated hollow body including a skin of non-porous, flexible material, an inflation opening formed in said material, and a sealable inflation valve at said inflation opening, a base member including a hollow, closed loop formed of a non-porous material and secured to the bottom of said body and forming a base therefor, said closed loop having a base inflation opening formed therein, a sealable base inflation valve at said base inflation opening, and a suction cup secured to the bottom of said toy having a suction surface adapted to engage a flat surface upon which said toy is placed.

5. An inflatable toy adapted to maintain itself in an upright position on a flat surface comprising an elongated hollow body including a skin of non-porous, flexible material, an inflation opening formed in said material, and a sealable inflation valve at said inflation opening, a base member including a hollow, closed loop formed of a non-porous material and secured to the bottom of said body forming a base therefor, a suction cup, and securement means attaching said suction cup to the bottom of said toy at the center of said base portion, said suction cup having a suction surface adapted to engage a flat surface upon which said toy is placed for resiliently maintaining said toy in an upright position on said surface.

6. An inflatable toy adapted to maintain itself in an upright position on a flat surface comprising an elongated hollow body including a skin of non-porous, flexible material, an inflation opening formed in said material, and a sealable inflation valve at said inflation opening, a base member including a hollow, closed loop formed of a non-porous material and secured to the bottom of said body forming a base therefor, a suction cup, securement means attaching said suction cup to the bottom of said toy at the center of said base portion, said suction cup having a downwardly-facing suction surface extending below the lowermost point of said base portion for engagement with the flat surface upon which said toy is placed for resiliently maintaining said toy in an upright position on said surface.

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