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(72) Inventor: **MEDINA ANGUIANO, Luis Jalisco (MX)**

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(74) Representative: **ZBM Patents Zea, Barlocchi & Markvardsen Plaza Catalunya, 1 ES-08002 Barcelona (ES)**

(71) Applicant: **Cigarsolo, S.a. De Cv. Zapopan Jalisco (MX)**

(54) **INFLATION KIT**

(57) Inflation kit, especially for inflating balloons, balls and the like, **characterized in that** it comprises: two opposing hollow interlocking bodies, one having at least one inlet for air coming from the outside and the other body having at least one outlet for air coming from

the internal cavity defined by the two bodies; an extractable bellows inside the internal cavity defined by the two bodies, through which air can flow from the air inlet to the air outlet; a valve that can be coupled to the air outlet of one of the bodies; and lastly a deflated inflatable element housed inside the cavity defined by the two bodies.

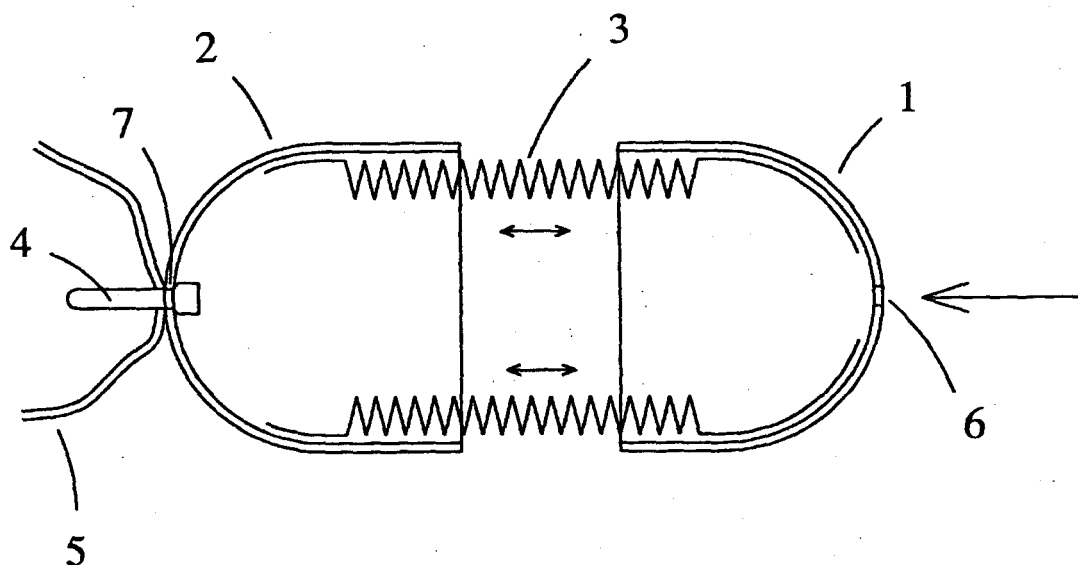


FIG.2

Description

OBJECT OF THE INVENTION

[0001] The present Utility Model application intends to register an inflation kit, especially for the inflation of balloons, balls and the like.

[0002] More specifically, the kit allows the inflation of inflatable products that may be part of the kit itself, thus resulting in a significant reduction of the storage and transportation volumes of the products to be inflated.

INVENTION BACKGROUND

[0003] In the current market vending machines of gift products or surprise goods, such as toys, miniature dolls, small balls, etc. are well known.

[0004] In general, products sold in this kind of vending machines are arranged inside a spherical container. Essentially, containers comprises two casings facing each other, as capsules, which define an internal storage volume and that are coupled together by a simple closure of immediate and easy opening.

[0005] Particularly, when the product to be sold is an inflatable element such as a balloon or a ball, said element should be packed already inflated, and for this reason the volumes of the product to be stored and transported, that is to say the spherical container, are considerable.

[0006] In order that the spherical container does not reach high volumes, the inflatable product must have small dimensions, and this limits the sale of products with this method.

[0007] On the other hand, it is well known that inflatable products commercialized in an inflated state need a large space to be stored or transported, since the volume that each product occupies is significant.

[0008] Furthermore, in case a consumer wants to buy one or several deflated balls, he would have the drawback of not being able to do it directly with the retailer.

INVENTION DESCRIPTION

[0009] The inflation kit which is the object of the present application solves the drawbacks mentioned above, and provides also other additional advantages that will be evident from the following description.

[0010] To this end and more particularly, said kit comprises two internally hollow bodies facing each other and couplable together, one of the bodies being provided with at least one air inlet for air coming from the outside, and the other body being provided with at least one air outlet for air from the internal cavity defined by the two bodies; it comprises an extractable bellows, arranged in the internal cavity defined by the two bodies, through which air can flow from the air inlet to the air outlet; and it comprises a valve that can be coupled to the air outlet of one of the bodies.

[0011] In such a way that in a use condition the kit forms a conventional inflation device, such as a hand pump.

[0012] Additionally, the kit may comprise an inflatable element, such as a balloon, ball or the like, that may be arranged deflated in the internal cavity defined by two bodies.

[0013] In accordance with the above mentioned characteristics, the two couplable bodies have an essentially hemispheric shape. In this way, the whole of the kit in non-operative condition adopts a general spherical form, suitable for being use in vending machines.

[0014] One of the hemispheres has an end portion with a diameter that is larger than that of the end portion of the other hemisphere, so that the coupling between both bodies provides a simple closure that makes it easy to open the kit.

[0015] The air intake of one of the bodies consists preferably of one intake hole formed centered with respect to the central axis of the hemisphere, while the air outlet consist of an outlet hole arranged centered with respect to the central axis of the hemisphere.

[0016] The above mentioned air outlet has fixing means for coupling the valve.

[0017] According to other feature of the invention, the bellows, which consists preferably of a tubular element, is adjustable inside the two hemispherical-shaped bodies. In fact, the ends of the bellows extend matching the internal outline of the two bodies to constitute a firmer structure.

[0018] Additionally, all the kit components (the two bodies, the bellows, the valve and the inflatable element) are made of plastic material.

[0019] Advantageously, and thanks to the characteristics of the described invention, an inflation kit for balloons, balls and the like is obtained having reduced dimensions, that allows to inflate an inflatable element which may be contained or not in the kit itself.

[0020] According to the foregoing, the distribution of balloons, balls and the like in a deflated state results in a significant reduction of the volume occupied by this kind of products in an inflated state, during both storing and transportation.

[0021] On the other hand, the kit is ideal in a second use as a product to be offered in vending machines distributing gift products or similar products.

[0022] Indeed, its configuration in a non-use condition, essentially spherical, allows the kit to be included in the range of products to be offered in vending machines, since the assembly may reach small volumes, in spite that the element to be inflated contained therein reaches large dimensions after inflation.

[0023] To complete the following description and in order to help understanding better its characteristics, attached to the present specification it is a set of drawings which, by way of non-limiting illustration, show the more significant details of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0024]

Figure 1 is a view in elevation of the kit according to the present invention, in a non-use condition.

Figure 2 is a view in elevation of the kit represented in figure 1, in a use condition.

DESCRIPTION OF A PREFERRED EMBODIMENT

[0025] In view of the above mentioned figures and according to the reference numbers employed, a preferred but not limiting embodiment of the invention can be observed, consisting of an inflation kit for inflating balloons, balls and the like.

[0026] As shown in Figure 1, in a non-use condition the kit comprises two bodies (1 and 2), internally hollow, facing each other and coupled together, one of the bodies (1) being provided with an air inlet (6) for air coming from the outside, and the other body (2) being provided with an air outlet (7) for air coming from the internal cavity defined by both bodies (1 and 2); an extractable bellows (3) arranged inside the internal cavity defined by both bodies (1 and 2); an inflatable element (5) arranged inside the internal cavity defined by the two bodies (1 and 2), and a valve (4) that can be coupled to the air outlet of one of the bodies (7) arranged in the internal cavity defined by both bodies (1 and 2).

[0027] Particularly, both bodies (1 and 2) show an essentially hemispherical shape and their coupling is produced by a difference of diameters of the end portions of both hemispheres, since one of the hemispheres has an end portion of a diameter higher than that of the end portion of the other hemisphere.

[0028] Figure 2 shows the invention kit in a use condition. For this purpose, after taking apart the bodies (1 and 2), the valve (4) and the inflatable element (5) are removed.

[0029] The bellows (3), of tubular configuration, fits internally with each of the bodies (1 and 2), forming a conventional inflating device, such as a hand pump.

[0030] The valve (4) is coupled to the air outlet (7) of one of the bodies (2), and said valve (4) is inserted in an inflating hole of the inflatable element (5).

[0031] By compression and expansion movements, and by virtue of an inlet hole formed centered with respect to the hemisphere axis, the inflatable element will be inflated (5).

[0032] Details, forms, dimension and other accessory elements, as well as the materials used in manufacturing the kit of the invention may be replaced with others that are technically equivalent and which don't depart from the essential character of the invention and the scope defined by the appended claims.

Claims

1. Inflation kit, especially for inflating balloons, balls and the like, **characterized in that** it comprises two internally hollow bodies (1 and 2) facing each other and couplable together, one of the bodies (1) being provided with at least one air inlet (6) for air coming from the outside and the other body (2) being provided with at least one air outlet (7) for air coming from the internal cavity defined by the two bodies (1 and 2), an extractable bellows (3) arranged inside the internal cavity defined by the two bodies (1 and 2) through which air can flow from the air inlet (6) to the air outlet (7); and a valve (4) that can be coupled to the air outlet (7) of one of the bodies (2).
2. Inflation kit according to claim 1, **characterized in that** the bodies have a hemispherical shape.
3. Inflation kit according to claim 2, **characterized in that** one of the hemispheres has an end portion having a diameter that is larger than that of the end portion of the other hemisphere
4. Inflation kit according to claim 2, **characterized in that** at least one air inlet (6), for air coming from outside, of one of the bodies (6) is arranged centered with respect to the central axis of the hemisphere.
5. Inflation kit according to claim 2, **characterized in that** at least the air outlet (7) of one of the bodies (2) is arranged centered with respect to the central axis of the hemisphere.
6. Inflation kit according to claim 1, **characterized in that** the bellows (3) is adjustable inside the two bodies (1 and 2).
7. Inflation kit according to claim 1, **characterized in that** the bellows (3) consists of a tubular element.
8. Inflation kit according to claims 1 and 7, **characterized in that** the ends of the bellows (3) extend matching the internal outline of the bodies (1 and 2).
9. Inflation kit according to claim 1, **characterized in that** it comprises an inflatable element (5).
10. Inflation kit according to claim 9, **characterized in that** the inflatable element (5) is arranged inside the cavity defined by the two bodies (1 and 2).
11. Inflation kit according to claim 1, **characterized in that** it is made of plastic material.

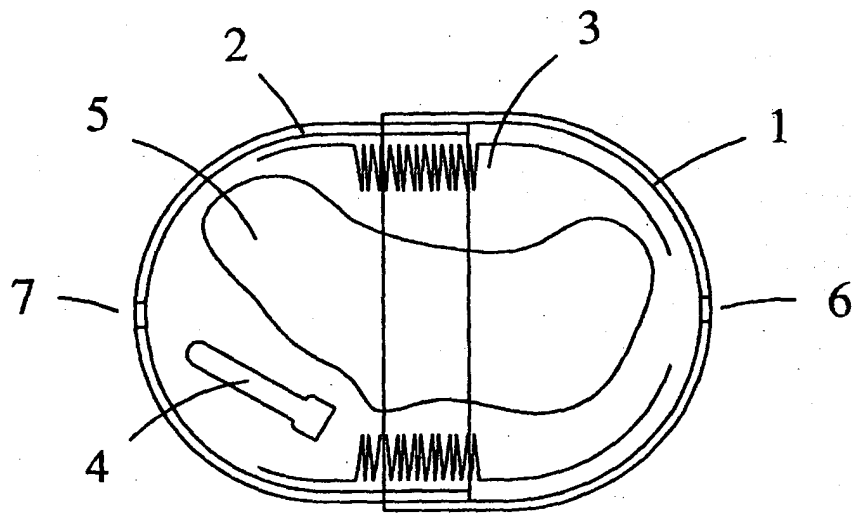


FIG. 1

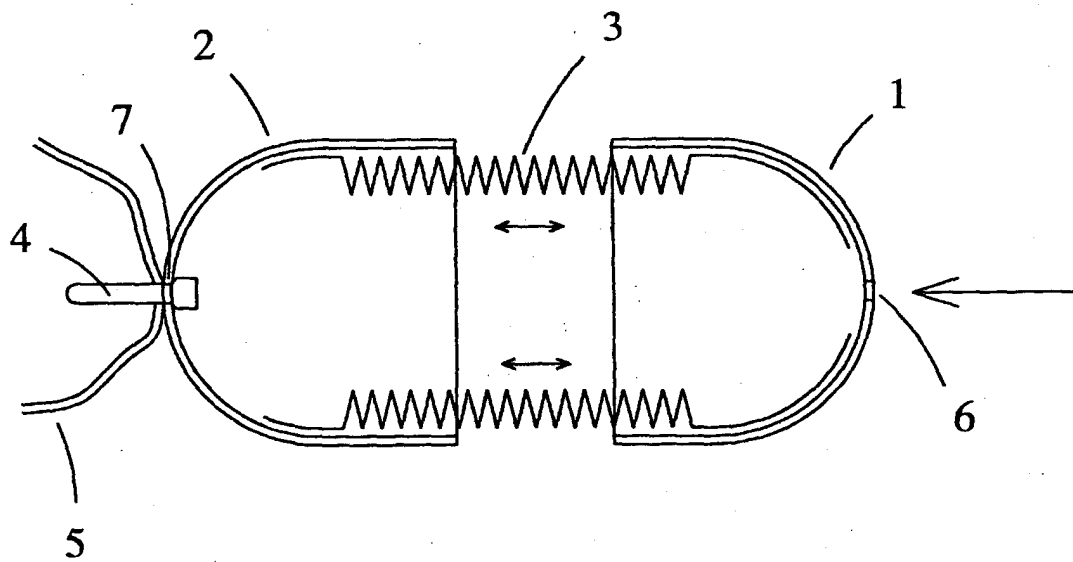


FIG. 2

INTERNATIONAL SEARCH REPORT

International application No.
PCT/ MX 2010/000053

A. CLASSIFICATION OF SUBJECT MATTER

see extra sheet

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A63H, A63B, B65D, F04B33/+

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

INVENES, EPODOC, WPI

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	FR 1204272 A (RACINE GERARD) 25.01.1960, the whole document.	1-11
A	GB 936605 A (METAL BOX CO LTD) 11.09.1963, the whole document.	1-11
A	WO 2008095352 A1 (LIU ZHIMING) 14.08.2008, abstract; figures	1-11
A	US 6113366 A (HOBSON et al.) 05.09.2000, column 1, line 27 - column 2, line 10; figures	1-11
A	US 3561579 A (ALLISON et al.) 09.02.1971, column 1, line 40 - column 4, line 34; figures	9-11

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

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"O" document referring to an oral disclosure use, exhibition, or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other documents, such combination being obvious to a person skilled in the art

"&"

document member of the same patent family

Date of the actual completion of the international search

08.September.2010 (08.09.2010)

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Name and mailing address of the ISA/
O.E.P.M.

Paseo de la Castellana, 75 28071 Madrid, España.

Facsimile No. 34 91 3495304

Authorized officer

Belda Soriano, Leopoldo

Telephone No. +34913495585

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/ MX 2010/000053

Patent document cited in the search report	Publication date	Patent family member(s)	Publication date
FR 1204272 A	25.01.1960	NONE	-----
GB 936605 A	11.09.1963	NONE	-----
WO 2008095352 A	14.08.2008	CN 101012822 A CN 100547241 C	08.08.2007 07.10.2009
US 6113366 A	05.09.2000	NONE	-----
US 3561579 A	09.02.1971	NONE	-----

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