(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 1 842 793 A1

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
10.10.2007 Bulletin 2007/41

(51) Int Cl.:
B65D 77/24 *(2006.01)* ***B65D 77/30*** *(2006.01)*

(21) Application number: **06007024.0**

(22) Date of filing: **03.04.2006**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR
Designated Extension States:
AL BA HR MK YU

(71) Applicant: **Nestec S.A.**
1800 Vevey (CH)

(72) Inventors:
- **Hahl, Michael Dietmar**
  3007 Bern (CH)
- **Fink, Reinhold**
  3672 Oberdiessbach (CH)
- **Manser, Daniel Roland**
  3700 Spiez (CH)
- **Pramono, Putut**
  3510 Konolfingen (CH)

(54) A container assembly comprising a dosing tool

(57) The present invention relates to a container assembly (1) for a flowable food product (2), comprising a container (3) with a container body (4), a container body opening (5), a cover (6) for closing said body, and at least one measuring tool (7) for dosing said product (2), said tool (7) being disposed together with said flowable product into the container body (4), characterized in that said container assembly (1) further comprises a package (8) disposed within the container body (4) and said package (8) enclosing said measuring tool (7), and at least one gas.

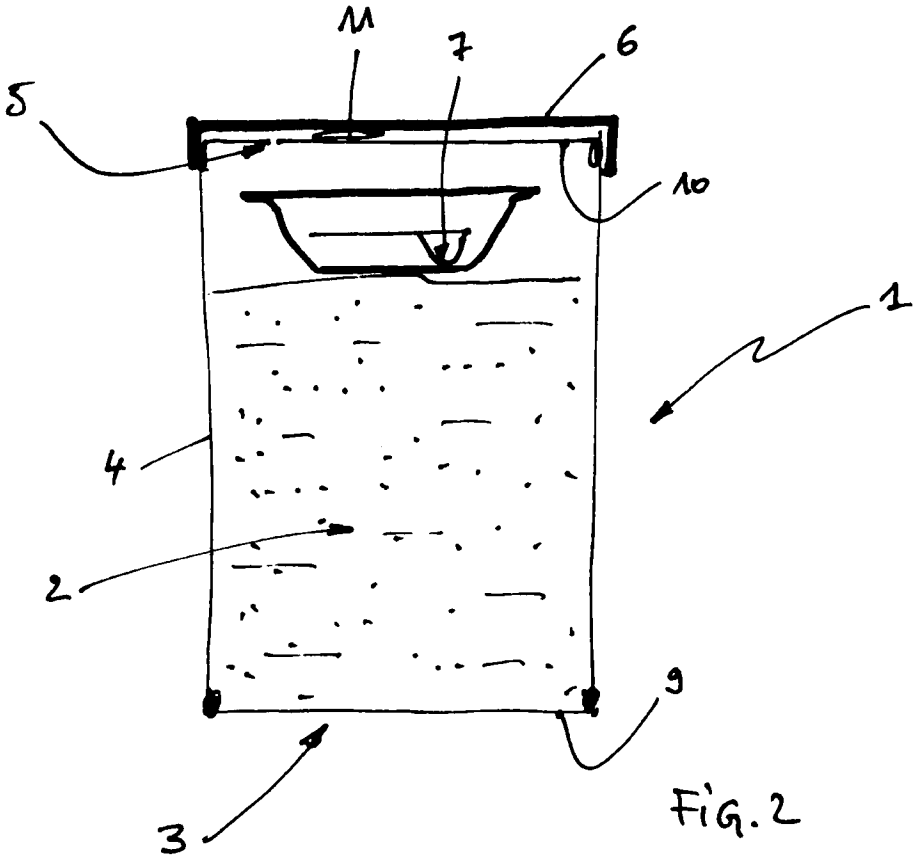


FIG. 2

EP 1 842 793 A1

Description

[0001] The present invention relates to a container assembly for a flowable food product, that comprises a measuring tool for dosing the product contained into the container.

[0002] Metallic cans - hereinafter referred to as "cans" - are used for various packaging purposes. One of them is storage and delivery of infant formula powders. The reason for using metallic cans is their low cost, and hygienic properties, as well as their high level of barrier properties against humidity and oxygen. Such barrier properties are highly appreciated when the contents is moisture and oxygen sensitive, like it is the case for infant formula powders for example.

[0003] Such flowable products, like powders for example, are usually packed in a can, which is closed by a lid that is seamed onto the top edges of the can, in a hygienic manner. Such infant formula powders need to be used with a dosing spoon or other similar measuring tool, which is usually packed into the can for convenience, so that when the consumer needs to measure a dose of the product, it is easy to use the spoon provided.

[0004] However, in the existing cans, the spoon is located into the can, that is to say, into the powder. So at least at first use, the consumer has to dig into the powder and search for the spoon that is hidden inside the product.

[0005] This brings at least two disadvantages: firstly, the consumer hands are covered with powder which is clearly undesirable, and secondly by putting hands that are not sterile into the powder, the consumer increases the risk of hygienic problems and bacteria growth into the powder, which is obviously clearly undesirable.

[0006] Therefore, a need exists for a container assembly that can be used to pack a flowable food product, such as an infant formula powder, as well as a measuring tool, for example a scoop or a spoon, while avoiding the problems described hereinbefore.

[0007] The present invention addresses the need set out above with a container assembly for a flowable food product, comprising a container with a container body, a container body opening, a cover for closing said body, and at least one measuring tool for dosing said product, said tool being disposed together with said flowable product into the container body, characterized in that said container assembly further comprises a package disposed within the container body and said package enclosing said measuring tool, and at least one gas.

[0008] Surprisingly and after tests that were performed, it was found that due to the Archimedus principle, the closed package filled with gas and the measuring tool floats on the top of the powder, and does not sink into said powder, even after the container is shaken for a long time, or vibrates in transportation-like conditions. Therefore, after opening the container, the package containing the measuring tool is readily available to the consumer, on top of the product, which clearly solves the classic problems known with these types of containers, as described hereabove.

[0009] Preferably, the package for enclosing said measuring tool is a blister package made out of thermoplatic film.

[0010] More preferably, said blister pack comprises a cup portion with a frusto-conical cross-section, closed at its top large opening end by a sealed film.

[0011] Such an inverted frusto-conical shape improves the floatability of the blister on the top of the flowable product.

[0012] In one embodiment of the invention, the measuring tool is a dosing spoon.

[0013] Furthermore, the present invention is preferably meant when said flowable food product is an infant powdered milk.

[0014] In a highly preferred version of the invention, the gas used in the package is a neutral gas. Even more preferably the gas pressure is superior to the atmospheric pressure, thereby resulting in a inflated pack. Moreover, the contents of the package is preferably substantially aseptic.

[0015] Preferably, the package comprises a precut notch forming an easy-opening system.

[0016] Additional features and advantages of the present invention are described in, and will be apparent from, the description of the presently preferred embodiments which are set out below with reference to the drawings in which:

Figure 1 is an enlarged schematic perspective view of a package for enclosing a measuring tool, in a container assembly according to the invention;

Figure 2 is an enlarged schematic cut profile view of a container assembly as per the invention.

[0017] The present invention concerns a container assembly 1 for packing flowable products, particularly a powder for infant nutrition 2.

[0018] The container assembly 1 according to the present invention comprises a container 3 with a container body 4. Said container body has a body opening 5. The container further comprises a cover like a plastic lid 6, for closing said body 4 in a removable/reclosable manner.

[0019] Further, the container assembly 1 comprises one measuring tool 7 for dosing the powder 2, said tool 7 being disposed together with said flowable product 2 into the container body 4.

[0020] According to the invention, the container assembly 1 further comprises a package 8 disposed within the container body 4, said package 8 enclosing the measuring tool 7 and a gas.

[0021] As shown in figure 1, the package 8 is a blister package made out of thermoplatic film.

[0022] Said blister pack 8 comprises a cup portion 8a with a frusto-conical cross-section, closed at its top large opening end by a peelable sealed film 8b.

[0023] As can be seen in figure 1, the measuring tool

7 that is disposed inside the blister pack 8 is a dosing spoon, that is required for dosing a predetermined quantity of the milk powder 2, which is an infant powdered milk.

[0024] Also enclosed inside the blister package 8 is a neutral gas, which is filled together with the dosing spoon 7 at the time the blister pack is formed, under aseptic conditions.

[0025] As shown in figure 2, the container 3 is more particularly a can which comprises a bottom end 9 that is seamed onto lower edges of the can body 4, and a top end 10 that is seamed onto the top edges of the can body 4.

[0026] The said top end 10 is provided with opening means 11 for allowing opening of said can 3. Said opening means is a ring which cooperates with a precut (not shown) in the top end of the container, which allows for easy opening by the consumer who can pull the riing to peel off and open the top end of the can.

[0027] When the consumer first wants to dispense the milk powder 2 from the container assembly, he/she removes the plastic lid 6 that covers the top end 10 of the can 4. Then, he/she removes the top end 10 of the can by pulling the easy-opening ring 11, which gives access to the interior of the can 4.

[0028] There, the consumer has access to the blister pack 8 that is disposed on top of the milk powder 2. The consumer removes the blister pack 8 from the interior of the can, and opens said blister 8 to have access to the dosing spoon 7 which is inside.

[0029] Then, the consumer can use the dosing spoon 7 to dose the powder 2, and then replace the spoon inside, or outside the container, and reclose the container with the plastic lid.

[0030] Due to the blister pack that is closed and also due to the gas that is enclosed therein together with the dosing spoon, the blister pack remains on top of the powder according to Archimedus's principle, whathever the vibrations or shaking of the can.

[0031] It should be understood that various changes and modifications to the presently preferred embodiments described herein will be apparent to those skilled in the art. Such changes and modifications can be made without departing from the spirit and scope of the present invention and without diminishing its attendant advantages. It is therefore intended that such changes and modifications be covered by the appended claims.

Claims

1. A container assembly (1) for a flowable food product (2), comprising a container (3) with a container body (4), a container body opening (5), a cover (6) for closing said body, and at least one measuring tool (7) for dosing said product (2), said tool (7) being disposed together with said flowable product into the container body (4), **characterized in that** said container assembly (1) further comprises a package (8) disposed within the container body (4) and said package (8) enclosing said measuring tool (7), and at least one gas.

2. A container assembly (1) according to claim 1, wherein said package (8) for enclosing said measuring tool (7) is a blister package made out of thermoplatic film.

3. A container assembly (1) according to claim 2, wherein said blister pack (8) comprises a cup portion (8a) with a frusto-conical cross-section, closed at its top large opening end by a sealed film (8b).

4. A container assembly (1) according to any of the preceding claims, wherein said measuring tool (7) is a dosing spoon.

5. A container asssembly (1) according to any of the preceding claims, wherein said flowable food product (2) is an infant powdered milk.

6. A container assembly (1) according to any of the preceding claims, wherein said gas is a neutral gas enclosed in said package (8) at a pressure superior to the atmospheric pressure, and wherein the contents of the package (8) is substantially aseptic.

7. A container assembly (1) according to any of the preceding claims, wherein said package (8) comprises a precut notch forming an easy-opening system.

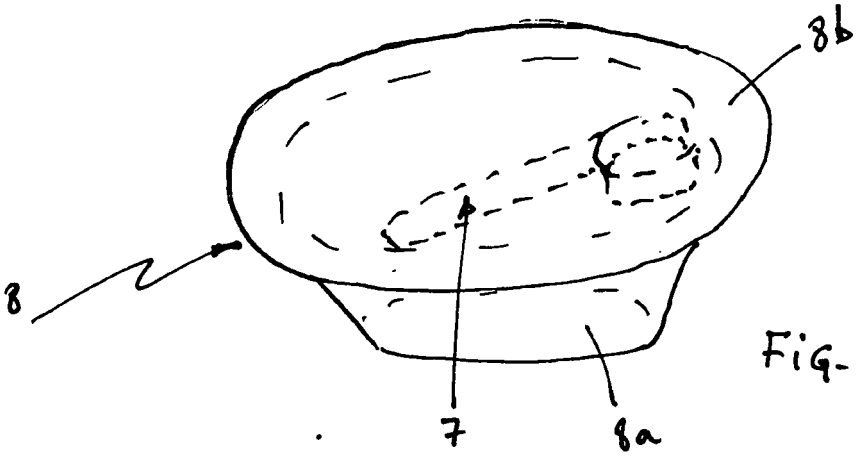


FIG. 1

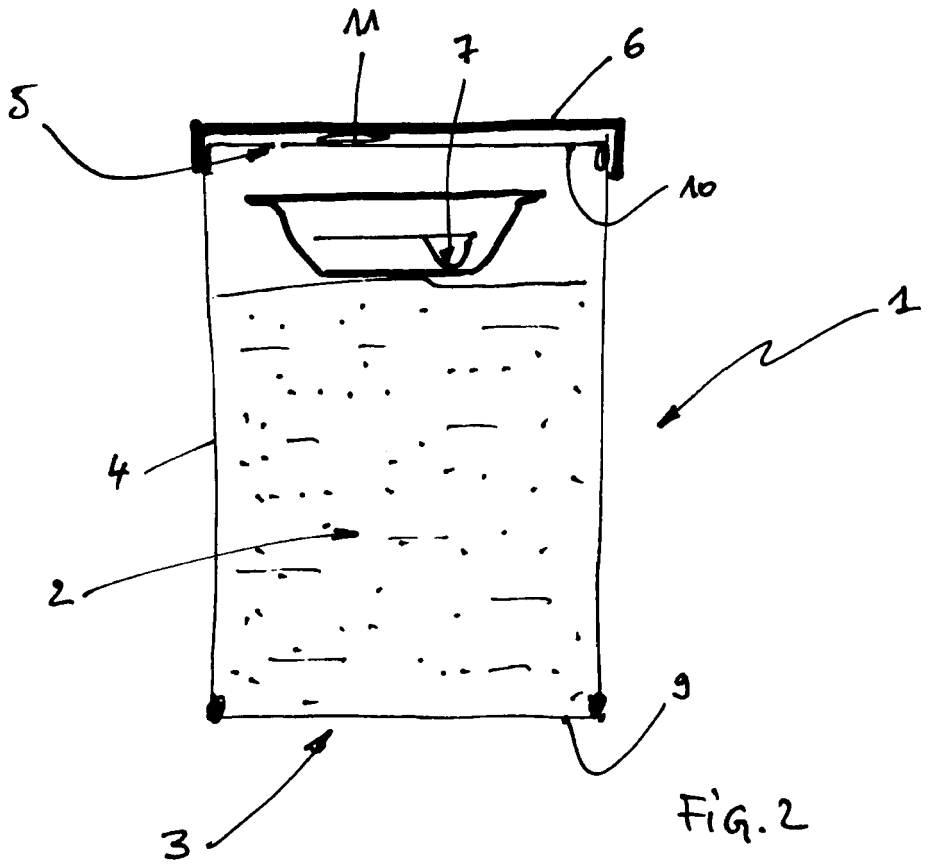


FIG. 2

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 06 00 7024

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	WO 01/04007 A (COMPAK CORPORATION; JOHNSON, JIMMIE, L; BOWEN, RON; SILVER, DAVID) 18 January 2001 (2001-01-18) * figures 1,2 *	1-5,7	INV. B65D77/24 B65D77/30
Y	US 5 220 909 A (PICKARD ET AL) 22 June 1993 (1993-06-22) * figure 1 *	1-5,7	
Y	US 3 618 751 A (ERNEST J. RICH) 9 November 1971 (1971-11-09) * figures 1,2 *	2,3	
Y	WO 98/46494 A (GOGLIO, LUIGI) 22 October 1998 (1998-10-22) * page 1, lines 4,5 *	5	
Y	BE 1 001 119 A7 (INTERNATIONAL PRODUCT DEVELOPMENTS LIMITED) 18 July 1989 (1989-07-18) * figure 2 *	7	
			TECHNICAL FIELDS SEARCHED (IPC)
A	US 6 099 875 A (KRAUSE ET AL) 8 August 2000 (2000-08-08) * figure 1 *	1-7	B65D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	28 July 2006	Jervelund, N

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 06 00 7024

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

28-07-2006

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0104007 A	18-01-2001	NONE	
US 5220909 A	22-06-1993	NONE	
US 3618751 A	09-11-1971	DE 2101477 A1	26-08-1971
WO 9846494 A	22-10-1998	AU 6616798 A	11-11-1998
		IT MI970261 U1	12-10-1998
BE 1001119 A7	18-07-1989	IE 890422 L	10-08-1990
US 6099875 A	08-08-2000	NONE	

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82