



(51) International Patent Classification:

B65D 5/30 (2006.01) *B65D 75/38* (2006.01)
A21C 15/00 (2006.01) *B65D 83/00* (2006.01)
A23G 3/28 (2006.01) *B65D 75/58* (2006.01)
B65D 30/28 (2006.01)

(21) International Application Number:

PCT/IB2021/051605

(22) International Filing Date:

26 February 2021 (26.02.2021)

(25) Filing Language:

Italian

(26) Publication Language:

English

(30) Priority Data:

10202000004096 27 February 2020 (27.02.2020) IT

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(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

(54) Title: A CONTAINER FOR CONTAINING AND DISPENSING SEMI-LIQUID SUBSTANCES AND KIT COMPRISING SAID CONTAINER

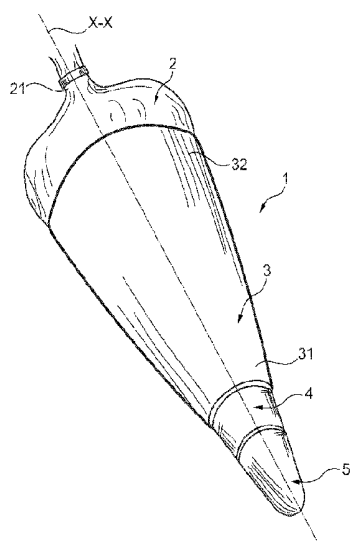


Fig. 1

(57) Abstract: A container (1) for containing and dispensing semi-liquid substances comprising: a bag-like body (2) made of a compostable biodegradable material and configured to contain a semi-liquid substance, said bag-like body (2) has a dispensing portion (23) that can be pierced to define a dispensing opening; a support body (3) made of a compostable biodegradable material and whose stiffness is greater than the stiffness of the bag-like body (2), said support body (3) is located outside said bag-like body (2) and is coupled to said bag-like body (2) so as to at least partially cover it; the bag-like body (2) and the support body (3) are able to be pressed to dispense the semi-liquid substance through the dispensing opening.

Declarations under Rule 4.17:

- *of inventorship (Rule 4.17(iv))*

Published:

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*
- *in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE*

Title “A container for containing and dispensing semi-liquid substances and kit comprising said container”

DESCRIPTION

Field of the invention

5 The present invention relates to a container for containing and dispensing semi-liquid substances and a kit comprising such container. This container is namely used in the cosmetic field for containing and dispensing, for example, cosmetic products.

Background art

10 A container for containing and dispensing cosmetic products is known in the art. This container comprises a container body configured to contain a semi-liquid substance and having an opening that can be reversibly closed by a cap. After removing the cap that covers the opening and pressing the container body, the semi-liquid substance contained therein may be dispensed through the opening.

15 The container of the prior art is entirely made of polymeric material. Polymeric materials exhibit high compatibility with the chemical composition of the cosmetic products, and are thus able to preserve the cream in the container for a long time. A disposable bag-type container is also known in the art for dispensing pastry creams to garnish and decorate cakes or the like. Such bag-type containers are commonly known as pastry bags. Namely,
20 these bag-type containers comprise a containing portion configured to contain the cream, a fill opening through which the cream is introduced into the containing portion, and a pierceable dispensing portion to form a dispensing opening. In the prior art, such bag-type containers are made of polymeric material or biodegradable material.

 Once the containing portion has been filled with the cream and the dispensing
25 opening has been formed, the containing portion may be pressed to dispense the cream

therein through the dispensing opening.

A further example of a container for dispensing semi-liquid substances is disclosed in US2017/113845A9. Namely, US2017/113845A9 discloses a container comprising a bag-like body, made of plastic or aluminum film.

5

Problem of the prior art

Once all the cosmetic cream in the prior art polymeric container has been used, this container is not easily disposable. Polymeric materials are known to be hardly recyclable and, in addition, separate waste collection is not always adequately carried out to afford
10 total recycling of polymeric materials. As a result, most of prior art containers, when all the cream therein has been used, are carried to landfills and incinerators, which entails a considerable negative impact on the environment.

On the other hand, the bag-type container of the prior art can be only used for dispensing the cream and not for preserving the cream therein. That is, the dispensing
15 opening cannot be stably closed once a supply of cream has been introduced in its containing portion, and must be fully dispensed through the dispensing opening.

In addition, due to the reduced thickness of the walls of the containing portion of the bag-type container, such bag-type container is often difficult to handle, resulting in a difficult and uneven dispensing of cream through the dispensing opening. Therefore, such
20 bag container is inadequate for use in the field of cosmetic products.

Summary of the invention

Here, the technical purpose of the present invention is to provide a container for containing and dispensing semi-liquid substances and a kit comprising such container that
25 can overcome the drawbacks of the prior art.

In particular, an object of the present invention is to provide a container for containing and dispensing semi-liquid substances that do not impact the environment once the semi-liquid substance contained therein has been used.

Furthermore, an object of the present invention is to provide a user-friendly
5 container that can adequately preserve a semi-liquid substance, and ensure that it keeps its organoleptic characteristics and its physico-chemical stability.

Finally, an object of the present invention is to provide a kit comprising such container for containing and dispensing semi-liquid substances.

The aforementioned technical purpose and objects are substantially fulfilled by a
10 container for containing and dispensing semi-liquid substances that comprises the technical features as disclosed in one or more of the appended claims and by a kit comprising the technical features as disclosed in one or more of the appended claims.

Advantages of the Invention

15 A preferred embodiment of the invention can provide a container for containing and dispensing semi-liquid substances that is entirely recyclable by separate collection as organic waste.

The preferred embodiment of the invention can also provide a container that can preserve a semi-liquid substance and is easy to handle by a user.

20

BRIEF DESCRIPTION OF THE DRAWINGS

Further features and advantages of the present invention will result more clearly from the illustrative, non-limiting description of a preferred, non-exclusive embodiment of a container for containing and dispensing semi-liquid substances and a kit comprising such
25 container as shown in the annexed drawings, in which:

- Figure 1 is a perspective view of the container of the present invention;
- Figure 2 is an exploded perspective view of the container of Figure 1;
- Figure 3 is a perspective view of an alternative embodiment of the container of Figure 1;
- Figure 4 is a perspective view of a detail of the container of Figure 3;
- 5 - Figure 5 is a perspective view of a component of the kit of the present invention;
- Figure 6 is a view of the blank of the component of Figure 5.

DETAILED DESCRIPTION

Particularly referring to the accompanying drawings, numeral 1 designates a container for containing and dispensing semi-liquid substances, in particular viscous
10 substances. This container 1 comprises a bag-like body 2 made of biodegradable material that can be compostable and configured to contain a semi-liquid substance. For example, such a bag-like body 2 is configured to contain a cosmetic cream.

Preferably, the bag-like body 2 is formed from a film of biodegradable compostable material.

15 The bag-like body 2 has a dispensing portion 23 that can be pierced to define a dispensing opening. For example, such dispensing portion 23 can be pierced by a piercing tool such as a pointed and/or sharp element. Before piercing the dispensing portion 23, the bag-like body 2 is closed, thus allowing the semi-liquid substance in the bag-like body 2 to be preserved. At first use or during manufacture, the dispensing portion 23 is pierced using
20 a piercing tool to define the dispensing opening, from which the semi-liquid substance can be dispensed.

In addition, the container 1 comprises a support body 3 made of a compostable biodegradable material whose stiffness is greater than the stiffness of the bag-like body 2. This support body 3 is located outside the bag-like body 2 and is coupled to such bag-like
25 body 2 to at least partially cover it. In other words, this bag-like body 2 is placed inside the

support body 3. Advantageously, the support body 3 acts to stiffen such bag-like body 2, thus affording greater stability of the container 1.

The bag-like body 2 and the support body 3 are able to be pressed to dispense the semi-liquid substance through the dispensing opening. In other words, during use, the user
5 exerts a pressure on the support body 3, and therefore on the bag-like body 2 contained therein, to cause the semi-liquid substance in the bag-like body 2 to flow out of the dispensing opening.

It should be also noted that the bag-like body 2 and the support body 3 are entirely made of a compostable biodegradable material. As a result, once all the semi-liquid
10 substance in the bag-like body 2 has been used, the container 1 can be entirely recycled by separate collection as organic waste. Advantageously, the container 1 does not adversely affect the environment.

According to a preferred embodiment of the invention, the bag-like body 2 extends in a longitudinal direction of development X-X and comprises a closure portion 21 located
15 on the side opposite to the dispensing portion 23 in the longitudinal direction of development X-X. The semi-liquid substance is introduced into the bag-like body 2 through a fill opening (not shown in the accompanying figures) of the bag-like body 2 located at the closure portion 21. Preferably, after introducing the semi-liquid substance into the bag-like body 2, the closing portion 21 is heat-sealed to irreversibly close the fill
20 opening. As a result, the semi-liquid substance in the bag-like body 2 is preserved until the delivery opening is defined.

Still according to the preferred embodiment of the invention, the bag-like body 2 comprises a containing portion 22 interposed between the closing portion 21 and the dispensing portion 23 and containing the semi-liquid substance.

25 According to a preferred aspect, the support body 3 entirely covers the containing

portion 22 of the bag-like body 2. In other words, the support body 3 is located outside the containing portion 22 of the bag-like body 2 and is coupled to such bag-like body 2 to entirely cover the containing portion 22 of the bag-like body 2. Advantageously, the support body 3 acts to stiffen the containing portion 22 of the bag-like body 2, thus imparting greater stability to such containing portion 22.

According to the preferred embodiment of the invention, the support body 3 extends between a lower portion 31 and an opposite upper portion 32 in the longitudinal direction of development X-X. In addition, the support body 3 comprises a through cavity 33, which extends between the lower portion 31 and the upper portion 32 and is delimited by an inner wall 34 of the support body 3. In other words, the through cavity 33 extends between a lower opening 35 located at the lower portion 31 and an upper opening 36 located at the upper portion 32 along the longitudinal direction of development X-X.

Preferably, as shown in Figures 1 and 2, the support body 3 has a frustoconical shape. Alternatively, as shown in Figure 3, the support body 3 has a frustopyramidal shape.

The containing portion 22 is coupled to the inner wall 34 of the support body 3 such that the dispensing portion 23 of the bag-like body 2 will be located at the lower portion 31 of the support body 3. In other words, the bag-like body 2 is arranged inside the through cavity 33 with the dispensing portion 23 located at the lower opening 35 of the through cavity 33. Then, the dispensing portion 23 can be accessed through the lower opening 35 of the through cavity 33. Preferably, the dispensing portion 23 protrudes out of the lower opening 35 of the through cavity 33.

Preferably, the containing portion 22 of the bag-like body 2 is coupled to the inner wall 34 of the support body 3 by means of adhesive material.

According to the preferred embodiment of the invention, the container 1 comprises a dispenser 4 that is coupled to the lower portion 31 of the support body 3. This dispenser

4 is coupled to the lower portion 31 of the support body 3 so as to close the lower opening 35 of the through cavity 33.

This dispenser 4 comprises at least one opening 41 for the semi-liquid in the bag-like body 2 to be dispensed through such opening 41. Therefore, the opening 41 of the dispenser 4 is in fluid communication with the dispensing opening of the bag-like body 2. During use, the user presses the support body 3 and the bag-like body 2, thereby causing the semi-liquid substance in the bag-like body 2 to flow out through the dispensing opening of the bag-like body 2 and then through the opening 41 of the dispenser 4.

Preferably, the dispenser 4 is coupled to the lower portion 31 of the support body 3 by heat-sealing. Alternatively, the dispenser 4 is screwed to the lower portion 31 of the support body 3.

It should be noted that in the embodiment in which the dispenser 4 is heat-sealed to the lower portion 31, the dispensing portion 23 of the bag-like body 2 can be pierced by introducing the piercing tool through the opening 41 of the dispenser 4.

More preferably, the dispenser 4 comprises a plurality of openings 41.

It should be further noted that in the embodiment in which the support body 3 has a frustoconical shape, the dispenser 4 also has a frustoconical shape. On the other hand, in the embodiment in which the support body 3 has a frustopyramidal shape, the dispenser 4 also has a frustopyramidal shape. In other words, the dispenser 4 has the same shape as the support body 3 for easier coupling to such support body 3.

In addition, the container 1 comprises a cap 5 for reversibly closing the opening 41 of the dispenser 4. This cap 5 can be reversibly coupled to the dispenser 4 to cover the opening 41 of the dispenser 4.

Preferably, the bag-like body 2 is made of a compostable biopolymer. More preferably, this compostable biopolymer has oxygen barrier properties. Therefore, the

compostable biopolymer can effectively preserve the semi-liquid substance contained in the bag-like body 2.

Still preferably, the support body 3 is made of a compostable biodegradable paper. This compostable biodegradable paper has a basis weight of 80 g/cm². Advantageously, 5 the support body 3 made of compostable biodegradable paper facilitates handling of the container 1 by a user. In other words, the support body 3 made of compostable biodegradable paper enhances the grip on the container 1 by a user.

Also, an object of the present invention is a kit for containing semi-liquid substances. This kit comprises a container 1 as described above in any of its embodiments.

10 In addition, the kit comprises a package 6 comprising an inner cavity 61 that can be reversibly closed. The container 1 is adapted to be accommodated in such inner cavity 61. Therefore, the package 6 affords easy transport of the container 1 and arrangement of such container 1 in shelves. Thus, once the container 1 has been introduced into the inner cavity 61, the inner cavity 61 is closed and the package 6 can be easily transported, while also 15 avoiding any impact and damage on the container 1.

Preferably, the package 6 is made of a recyclable material, e.g. recyclable paper or plastic.

It should be noted that both the biodegradable compostable paper that can be used to form the support body 3 and the recyclable paper that can be used to form the package 20 6 can be made are certified with the Forest Stewardship Council (FSC).

According to the preferred embodiment, the package 6 extends between a base 62 and an opposite top 63 in a further longitudinal direction of development X'- X'. The inner cavity 61 extends between the base 62 and an upper opening 64 located at the top 63. The package 6 further comprises a plurality of folding flaps 66 arranged at the top 63. Such 25 folding flaps 66 are adapted to be placed one on top of another, and locked in overlapped

relationship to reversibly close the upper opening 64 of the package 6 and therefore the inner cavity 61.

It shall be noted that the container 1 can be introduced into the inner cavity 61 of the package 6 so that the longitudinal direction of development X-X coincides with the additional longitudinal direction of development X'-X'. That in, the package 6 comprises a seat located in the inner cavity 61 at the base 62. The lower portion 31 of the support body 3 can be stably accommodated inside this seat. In the embodiment in which the container 1 comprises the dispenser 4, said dispenser 4 can be also stably accommodated inside the seat.

According to an alternative embodiment of the package 6, the package 6 has a support opening 67 interposed between the base 62 and the top 63 of the package 6. This support opening 67 allows access to the inner cavity 61 of the package 6. Preferably, such support opening 67 is delimited by a wedge-shaped peripheral edge.

It shall be noted that, if the package 6 has the support opening 67, the container 1 can be introduced into the cavity 61 of the package 6 such that the lower portion 31 of the support body 3 is at least partly accommodated inside the support opening 67. In the embodiment in which the container 1 comprises the dispenser 4 and the cap 5, the dispenser 4 and the cap 5 can be also stably accommodated at least partially inside the support opening 67 of the package 6. In other words, if the package 6 has a support opening 67, when the container 1 is accommodated inside the cavity 61 of the package 6, the lower portion 31 of the support body 3 and/or the dispenser 4 and/or the cap 5 protrude at least partially out of the package 6 through the support opening 67.

Preferably, the package 6 has a parallelepiped shape. More preferably, the package 6 is formed from a single blank 7, as shown in Figure 6. This blank 7 has a plurality of fold lines 71 and a first bonding portion 72 and a second bonding portion (not shown in the

accompanying drawings). The package is defined by folding the blank at the fold lines 71 and bonding the first bonding portion 72 to the second bonding portion. It shall be also noted that, by folding the folding lines 71, the seat of the package 6 is also defined.

CLAIMS

1. A container (1) for containing and dispensing semi-liquid substances, comprising:
- 5 - a bag-like body (2) made of a compostable biodegradable material and configured to contain a semi-liquid substance, said bag-like body (2) having a dispensing portion (23) adapted to be pierced to define a dispensing opening;
- characterized in that** it comprises
- a support body (3) made of a compostable biodegradable material and whose stiffness is
- 10 greater than the stiffness of the bag-like body (2), said support body (3) being arranged outside said bag-like body (2) and being coupled to said bag-like body (2) such that it at least partially covers it, the bag-like body (2) and the support body (3) being compressible to dispense the semi-liquid substance through the dispensing opening.
- 15 2. A container as claimed in claim 1, wherein said bag-like body (2) extends in a longitudinal direction of development (X-X) and comprises:
- a closure portion (21) located on the side opposite to the dispensing portion (23) in the longitudinal direction of development (X-X);
- a containing portion (22) interposed between the closure portion (21) and the dispensing
- 20 portion (23) and containing the semi-liquid substance.
3. A container (1) as claimed in claim 2, wherein the support body (3) entirely covers the containing portion (22) of the bag-like body (2).
- 25 4. A container (1) as claimed in claim 2 or 3, wherein:
- said support body (3) extends between a lower portion (31) and an opposite upper portion

(32) in the longitudinal direction of development (X-X),

- said support body (3) comprises a through cavity (33), which extends between the lower portion (31) and the upper portion (32) and is delimited by an inner wall (34) of the support body (3);

- 5 - the containing portion (22) is coupled to the inner wall (34) of the support body (3) such that the dispensing portion (23) of the bag-like body (2) will be located at the lower portion (31) of the support body (3).

5. A container (1) as claimed in claim 4, wherein the containing portion (22) of the bag-like body (2) is coupled to the inner wall (34) of the support body (3) by means of adhesive material.

6. A container (1) as claimed in claim 4 or 5, comprising a dispenser (4) coupled to the lower portion (31) of the support body (3), said dispenser (4) comprising at least one opening (41), allowing the semi-liquid substance contained in the bag-like body (2) to be dispensed through said opening (41).

7. A container (1) as claimed in claim 6, wherein the dispenser (4) is coupled to the lower portion (31) of the support body (3) by heat sealing.

20

8. A container (1) as claimed in any of claims 1 to 7, wherein the support body (3) has a frustoconical shape.

9. A container (1) as claimed in any of claims 1 to 7, wherein the support body (3) has a frustopyramidal shape.

25

10. A container (1) as claimed in any of claims 1 to 9, wherein:

- the bag-like body (2) is made of a compostable biopolymer; and
- the support body (3) is made of a compostable biodegradable paper.

5

11. A container (1) as claimed in any of claims 1 to 10, wherein the bag-like body (2) is configured to contain a cosmetic cream.

12. A kit for containing semi-liquid substances comprising:

- 10
- a container (1) as claimed in any of claims 1 to 11;
 - a package (6) comprising a reversibly closable inner cavity (61), the container (1) being adapted to be accommodated in said inner cavity (61).

13. A kit as claimed in claim 12, wherein said package (6) is made of a recyclable material.

15

14. A kit as claimed in claim 12 or 13, wherein the package (6) extends between a base (62) and an opposite top (63), the inner cavity (61) extending between the base (62) and an upper opening (64) located at the top (63), the package (6) comprising a seat located in the inner cavity (61) at the base (62), a lower portion (31) of the support body (3) being adapted

20 to be stably accommodated in said seat.

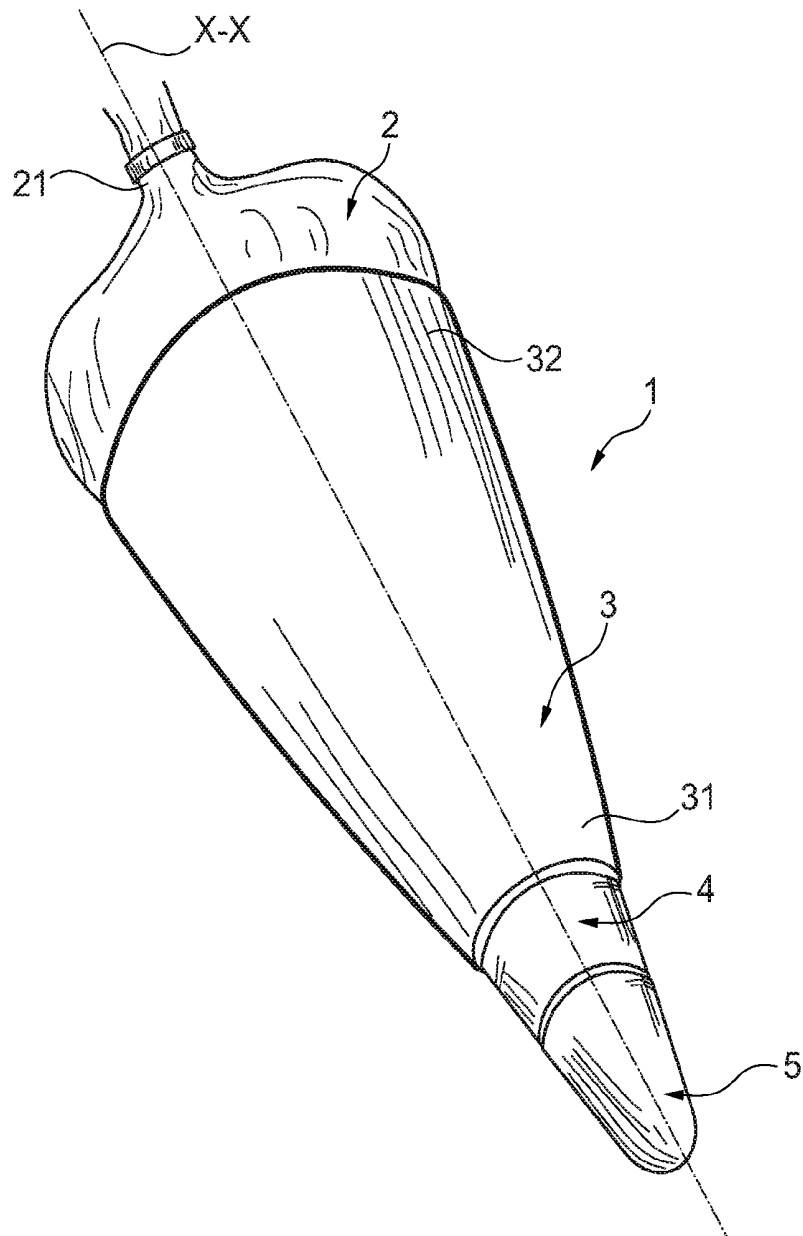


Fig. 1

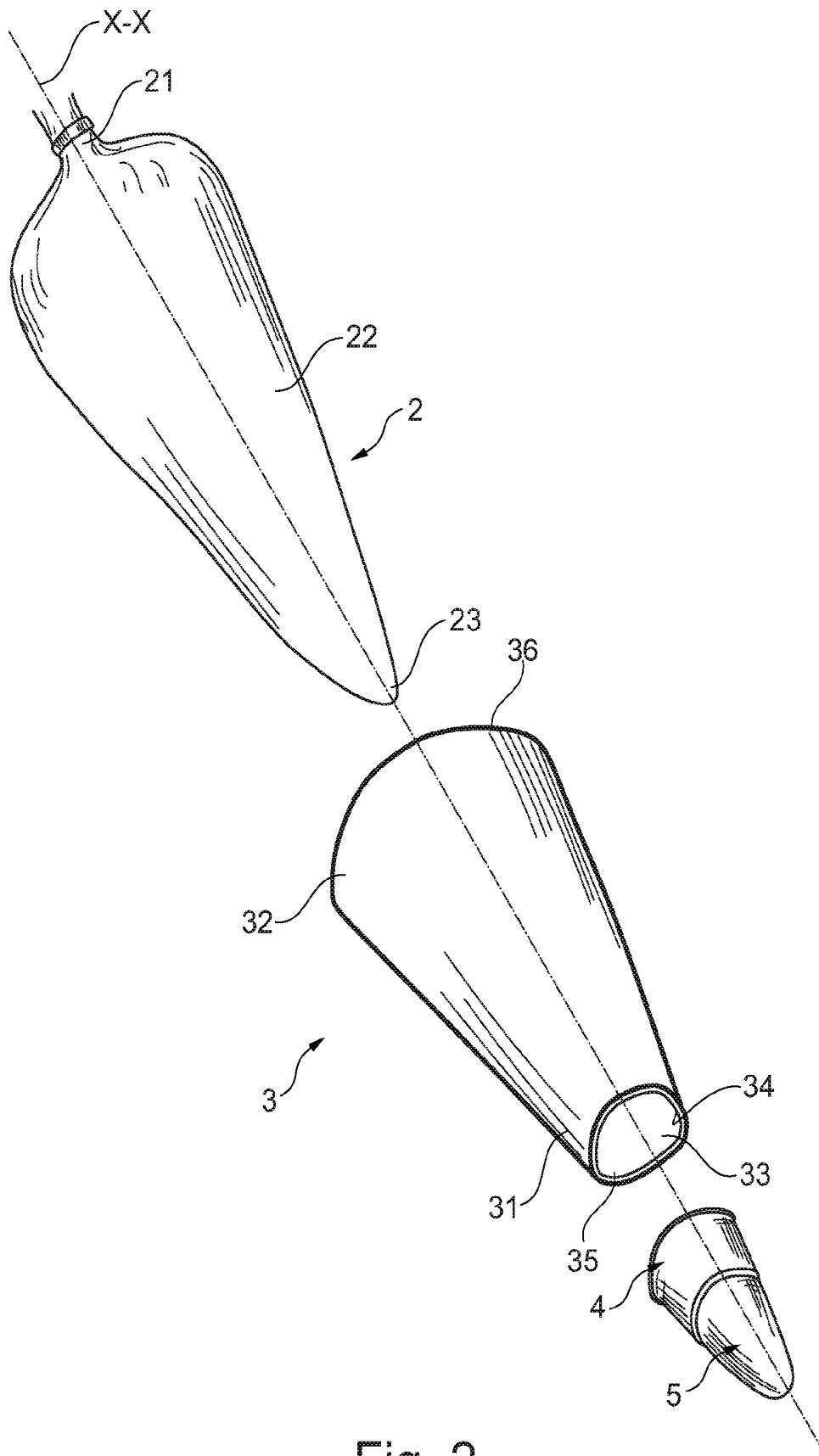


Fig. 2

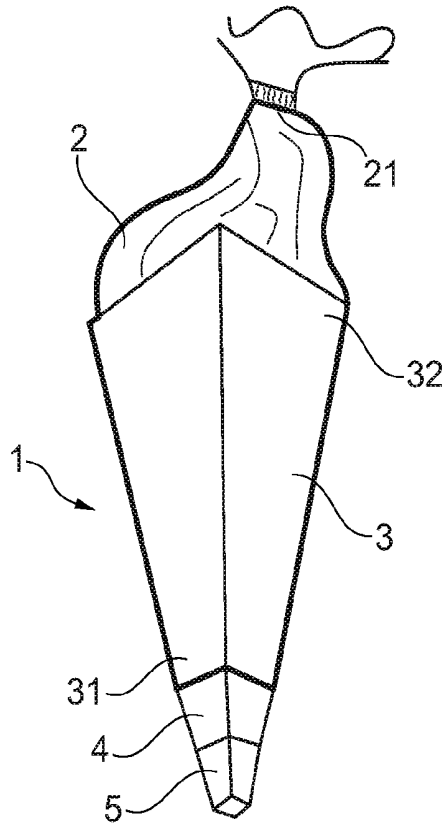


Fig. 3

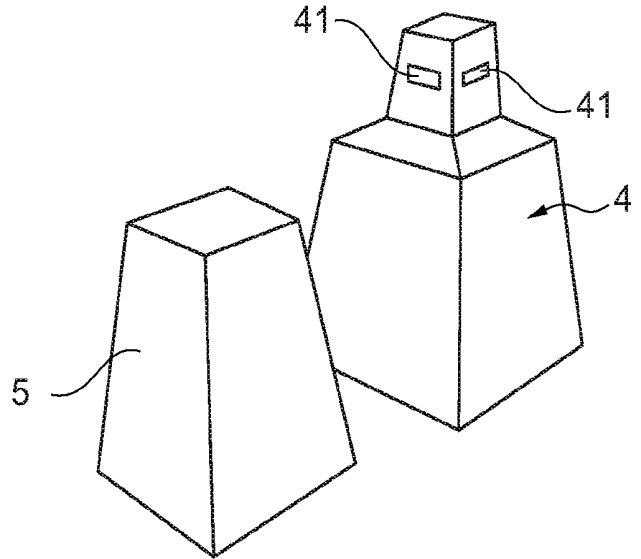


Fig. 4

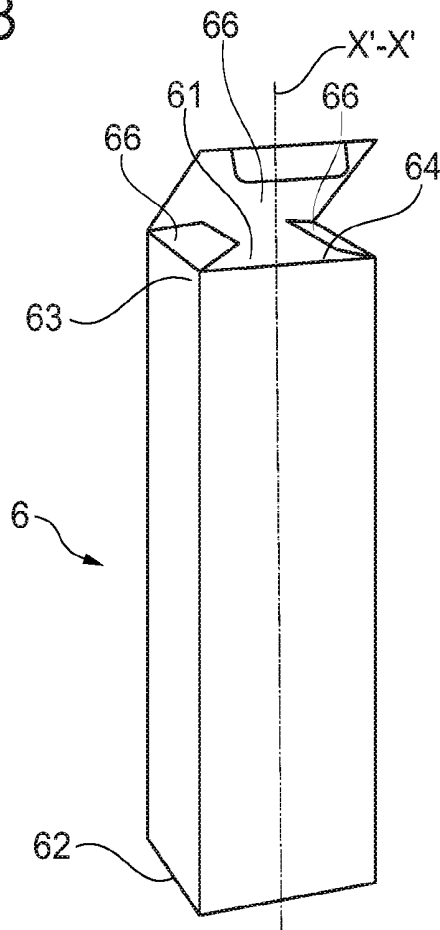


Fig. 5

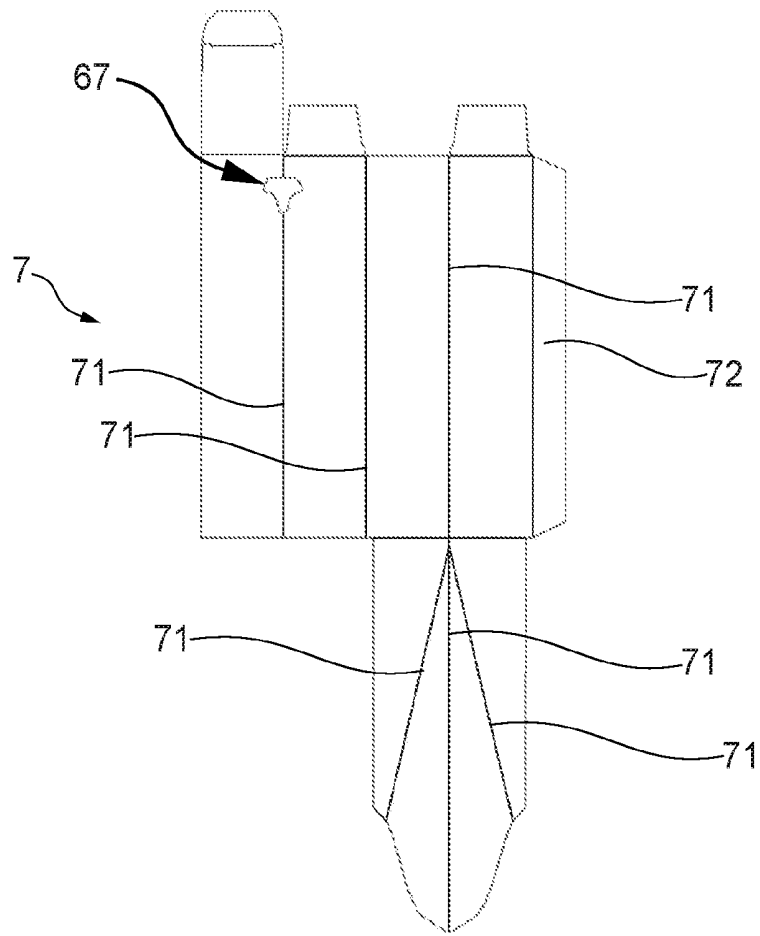


Fig. 6

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2021/051605

A. CLASSIFICATION OF SUBJECT MATTER
 INV. B65D5/50 A21C15/00 A23G3/28 B65D30/28 B65D75/38
 B65D83/00 B65D75/58
 ADD.
 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)
 B65D A23P F26B A21C A23G

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)
 EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Y	US 8 201 709 B1 (NAMIGATA HIROSHI [US] ET AL) 19 June 2012 (2012-06-19) figures 1-6 -----	3,6,8
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Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents :

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Date of the actual completion of the international search 14 June 2021	Date of mailing of the international search report 29/06/2021
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Jervelund, Niels
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INTERNATIONAL SEARCH REPORT

International application No

PCT/IB2021/051605

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Information on patent family members

International application No

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