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(54) **REFILLABLE DISPENSER FOR SEMILIQUID OR PASTE-LIKE PRODUCTS**

(57) A refillable dispenser (1) for pasty or semi-liquid products comprising a container (2) having a cavity (20) configured to receive a cartridge (4) containing a pasty or semi-liquid product, the container (2) extending between a first end (21) having a mouth (23) configured to allow the outflow of the pasty or semi-liquid product from the cartridge (4), and a second end (22) that is designed to be opened to allow removal and/or insertion of the cartridge (4).

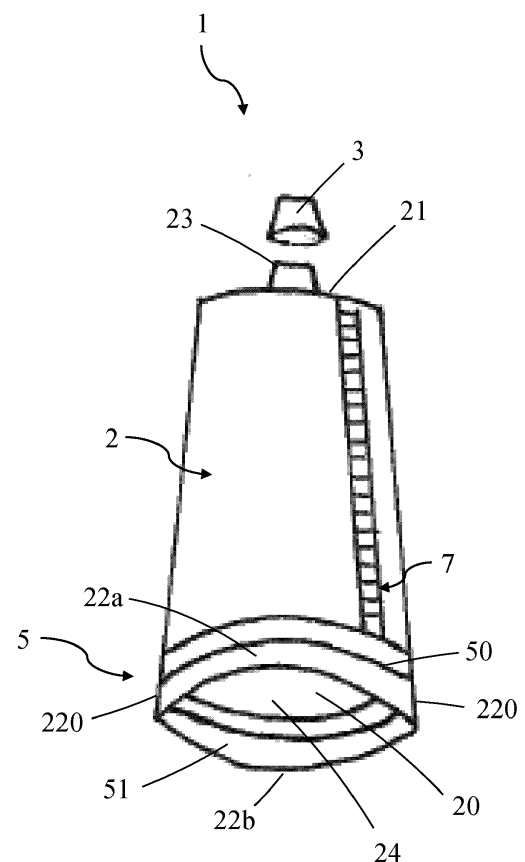


Fig. 2

Description

Technical field

[0001] The present invention relates to a refillable dispenser for pasty or semi-liquid products. The refillable dispenser of the present invention is used in the field of packaging of pasty or semi-liquid products, namely toothpaste or alternatively food sauces, glues, detergents or the like.

Background art

[0002] Containers for pasty products, such as toothpaste, food sauces or glues, are known in the art.

[0003] These containers are typically in tube form and extend between a first end having a mouth configured to allow the outflow of the pasty product, and a second closed end.

[0004] Prior art containers further comprise a cap for closing the mouth to prevent accidental spillage of the dispenser contents.

[0005] Typically, these tubes are made of an easily deformable plastic material, for the user to be able to eject their contents by simply squeezing the tube.

[0006] Inconveniently, prior art containers for pasty products are disposable, i.e. are discarded and replaced when empty. In particular, these prior art containers are typically made of plastic materials that cannot be easily recycled, whereby their use involves a significant environmental impact and a waste of raw materials.

Object of the Invention

[0007] Therefore, the technical purpose of the present invention is to provide a refillable dispenser for pasty or semi-liquid products that can obviate the aforementioned prior art drawbacks.

[0008] In particular, an object of the present invention is to provide a refillable dispenser for pasty or semi-liquid products that is eco-friendly, i.e. not harmful to the environment.

[0009] Also, an object of the present invention is to provide a refillable dispenser that simplifies the industrial production process, thereby reducing the end-user price of the product price.

SUMMARY OF THE INVENTION

[0010] The aforementioned technical purpose and objects are substantially fulfilled by a refillable dispenser for pasty or semi-liquid products which obviates the aforementioned prior art drawbacks.

[0011] In particular, the refillable dispenser for pasty or semi-liquid products of the present invention comprises a container having a cavity adapted to receive a cartridge containing a pasty or semi-liquid product, such as toothpaste.

[0012] The container extends between a first end having a mouth configured to allow the outflow of the pasty or semi-liquid product, and a second openable end.

[0013] Advantageously, the second openable end allows replacement of the cartridge. In detail, once the user has emptied the contents of the cartridge inserted in the container, he/she may replace it by pulling it out of the cavity and inserting a new one through the second openable end.

[0014] Also, advantageously, since the cartridge of the refillable dispenser of the present invention is made of a light and soft material it may be formed from recyclable and/or compostable material, therefore the material of the cartridge can be recovered and reused to manufacture new products.

[0015] Advantageously, the refillable dispenser object of the present invention is eco-friendly because it is refillable multiple times with the recyclable cartridge.

LIST OF DRAWINGS

[0016] 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 refillable dispenser for pasty or semi-liquid products as shown in the annexed drawings, in which:

- Figure 1 shows a front view of a first embodiment of a refillable dispenser for pasty or semi-liquid products of the present invention;
- Figure 2 shows a bottom perspective view of the refillable dispenser for pasty or semi-liquid products of Figure 1;
- Figure 3 shows a front view of a cartridge of the refillable dispenser for pasty or semi-liquid products of Figure 1;
- Figure 4 shows a perspective view of a first detail of the refillable dispenser for pasty or semi-liquid products of Figure 1;
- Figure 5 shows a front view of a second detail of the refillable dispenser for pasty or semi-liquid products of Figure 1;
- Figure 6 shows a lateral view of a third detail of the refillable dispenser for pasty or semi-liquid products of Figure 1;
- Figure 7 shows a top view of a second embodiment of the refillable dispenser for pasty or semi-liquid products of the present invention;
- Figure 8 shows a lateral view of the refillable dispenser for pasty or semi-liquid products of Figure 7.

DETAILED DESCRIPTION

[0017] Even when not expressly stated, the individual features as described with reference to the particular embodiments shall be intended as auxiliary to and/or interchangeable with other features described with reference to other exemplary embodiments.

[0018] With reference to the accompanying figures, the present invention relates to a refillable dispenser 1 for pasty or semi-liquid products, in particular for toothpaste.

[0019] As used herein, pasty or semi-liquid products refer to any substance having a semisolid or semi-liquid consistency such as creams, gels, cosmetic products, detergents, food sauces and glues.

[0020] A first embodiment of the present invention particularly relates to a refillable travel dispenser 1, i.e. a refillable dispenser 1 configured to be easily transported and stored for example in a vanity case or a bag.

[0021] A second embodiment of the present invention relates to a refillable bench dispenser 1, i.e. a refillable dispenser 1 configured to stand on a flat surface, such as the surface of a sink or a bench.

[0022] Particularly referring to Figures 1, 2, 7 and 8, the refillable dispenser 1 of the present invention comprises a container 2 extending between a first end and a second end 21, 22 aligned along a longitudinal direction X-X.

[0023] In the first embodiment the container 2 is deformable and is preferably made of flexible plastic material, such as plastic or high-density polyethylene laminates.

[0024] In the first embodiment, the first and second ends 21, 22 are aligned along the longitudinal direction when the container 2 is not deformed.

[0025] The container 2 has a cavity 20 configured to receive a cartridge 4 containing a given amount of pasty or semi-liquid product. Further details about the cartridge 4 will be provided hereinbelow.

[0026] Preferably, the cavity 20 extends in the longitudinal direction X-X from the first end 21 to the second end 22.

[0027] Preferably, in the first embodiment, the container 2 is a tube having an enclosure made of flexible plastic material, which extends in the longitudinal direction X-X between the first and second ends 21, 22.

[0028] The first end 21 has a mouth 23 configured to allow the outflow of the pasty or semi-liquid product contained in the cartridge 4. More in detail, the mouth 21 comprises a through hole which extends through the mouth 23 to provide fluid communication of the cavity 20 with the outside.

[0029] Preferably, the mouth 23 and the through hole extend from the first end 21 along the longitudinal direction X-X in a direction away from the second end 22.

[0030] The mouth 23 of the first end 21 is configured to be associated with an opening 40 of the cartridge 4, to allow the outflow of the product in the cartridge 4 when pressure is applied on the container 2. In other words, the through hole of the mouth 23 is configured to be connected in fluid communication with the interior of the cartridge 4 via the opening 40.

[0031] In operation, a user applies a pressure on the container 2 which deforms and hence pushes the product in the cartridge 4 out through the mouth 23.

[0032] The refillable dispenser comprises a cap 3

adapted to be reversibly coupled with the mouth 23 to close it. More in detail, as the cap 3 is coupled with the mouth 23, it closes the through hole that allows the outflow of the product in the cartridge 4. The reversible coupling between the cap 3 and the mouth 23 may be provided, for example, by means of a threaded connection, a bayonet connection, or any other type of known reversible mechanical connection.

[0033] The second end 22 of the container 2 is adapted to be opened to allow removal and/or introduction of the cartridge 4 from/into the cavity 20. In other words, the second end 22 is configured to allow replacement of the cartridge 4 once its contents have been completely emptied.

[0034] In the first embodiment as shown in Figures 1 and 2, the second end 22 comprises a first edge and a second edge 22a, 22b, which are opposite and movable relative to each other to open and close the second end 22 of the container 2.

[0035] The edges 22a, 22b extend transverse, preferably perpendicular, to the longitudinal direction X-X, and are connected to each other at their terminations 220, as shown in Figure 2.

[0036] In addition, the edges 22a, 22b are adapted to be reversibly fixed against each other. In practice, when the second end 22 is closed, the first and second edges 22a, 22b abut each other to close, and when the second end 22 is open, the first and second edges 22a, 22b are spaced apart and only connected at their terminations 220.

[0037] More in detail, when the second end 22 is open, the first and second edges 22a, 22b are spaced apart to define a refill opening 24 which is designed to provide communication between the cavity 20 and the outside. The refill opening 24, and the first and second edges 22a, 22b are suitably sized to allow insertion and/or removal of the cartridge 4 into/from the cavity 20.

[0038] Preferably, the refillable dispenser 1 comprises a closure device 5 configured to seal the second end 22 of the container 2 and keep it closed.

[0039] Referring to Figure 2, the closure device is integrated in the second end 22 of the container. More in detail, the closure device 5 comprises a groove 50 extending along the first edge 22a of the second end 22, and a projection 51 facing the groove 50 and extending along the second edge 22b of the second end 22.

[0040] Preferably, the groove 50 and the projection 51 extend transverse to the longitudinal direction X-X to thereby connect the ends 220 of the edges 22a, 22b. More preferably, the groove 50 and the projection 51 extend perpendicular to the longitudinal direction X-X.

[0041] The groove 50 and the projection 51 are configured to be reversibly coupled to allow the second end 22 of the container 2 to be opened and closed.

[0042] The second end 22 is closed when the projection 51 is received within the groove 50 to form an interference fit, and is open when the projection 51 and the groove 50 are spaced apart.

[0043] In order to open the second end 22, the user must separate the edges 22a, 22b by exerting a pulling force thereon to remove the projection 51 from the groove 50. Likewise, in order to close the second end 22, the user must press one edge against the other 22a, 22b to accommodate the projection 51 in the groove 50.

[0044] Alternatively, referring to Figure 4, the closure device 5 is a device configured to be placed at the second end 22 to keep it closed.

[0045] More in detail, as shown in Figure 4, the closure device 5 comprises a pair of opposable pressing surfaces 52 which can be commuted between a first closed configuration in which the pressing surfaces 52 are close together and press the edges 22a, 22b of the second end 22 against each other, and an open configuration in which the pressing surfaces 52 are spaced apart.

[0046] Preferably, the closure device 5 comprises a hinge 53 for pivotally constraining the pressing surfaces 52 about a hinge pivot axis C-C, as shown in Figure 4. As the pressing surfaces 52 rotate relative to each other about the hinge pivot axis C-C they are commuted between the closed and open configurations.

[0047] Furthermore, preferably, still with reference to Figure 4, the closure device 5 comprises a closing mechanism 54 which is configured to keep the pressing surfaces 52 close together in the closed configuration.

[0048] Preferably, the closure device 5 also has a safety function, in that, if the cartridge 4 is punctured or broken, it prevents its contents from escaping from the second end 22 of the container 2. In other words, the closure device 5 is equipped with means adapted to close the second end 22 of the container 2 in a fluid-tight manner to prevent the contents of the cartridge 4 from escaping whenever the latter is accidentally broken.

[0049] Preferably, the refillable dispenser 1 comprises a squeezing device 6 which is configured to assist the user to eject the pasty or semi-liquid product from the cartridge 4 by keeping it under pressure.

[0050] In the first embodiment, the squeezing device 6 can be applied between the first and second ends 21, 22 of the container 2 and is configured to slide, as the product is being used, from the second end to the first end 22, 21. More in detail, as the squeezing device 6 sliding from the second end to the first end 22, 21, it deforms the container 2 and causes the product contained in the cartridge 4 to flow out of the mouth 23.

[0051] In the first embodiment of Figure 5, the squeezing device 6 comprises a C-shaped main body 60 specially sized to compress the container 2 on opposite sides, thereby deforming it.

[0052] Advantageously, the squeezing device 6 facilitates the user to deform/squeeze the container 2 of the refillable dispenser 1 to extract the pasty or semi-liquid product from the cartridge 4.

[0053] Preferably, the refillable dispenser 1 comprises a lock system 7, which is adapted to prevent the squeezing device 6 from moving from the first end to the second end 21, 22, when the squeezing device 6 is applied be-

tween the first and second ends 21, 22 of the container 2.

[0054] More in detail, in the first embodiment of Figures 1 and 2, the lock system 7 comprises a textured guide 71 extending outside the container 2 between the first and second ends 21, 22 along the longitudinal direction X-X.

[0055] In addition, the lock system 7 comprises a slider 72 configured to slide in the textured guide 71 from the second end to the first end 22, 21. As shown in Figure 5, the slider 72 is placed on the main body 60 of the squeezing device 6, so that when the squeezing device 6 moves from the second end to the first end 21, 22 of the container 2, the slider 72 will slide in the textured guide 71 and prevent any back movement of the squeezing device 6.

[0056] Referring to Figure 6, the slider 72 and the textured guide 71 has each a plurality of complementary shaped teeth which ensures a one-way relative movement thereof, here coinciding with that the direction from the second end to the first end 22, 21.

[0057] The second embodiment of Figures 7, 8 is similar to the first embodiment of Figures 1 and 2, but with a rigid container 2.

[0058] More in detail, the container 2 of the second embodiment comprises a pair of half-shells 25 that are designed to be coupled together to define the cavity 20 that is adapted to contain the cartridge 4.

[0059] The half-shells 25 are movable to commute the refillable dispenser 1 between a use configuration in which the half-shells 25 abut against each and define the cavity 20, and a refill configuration in which the half-shells 25 are spaced apart to allow the user to access the cavity 20, e.g. to replace the cartridge 4 or clean it.

[0060] Preferably, the container 2 comprises a plurality of hinges 26 which are adapted to pivotally constrain the half-shells 25 about an axis of rotation R-R. As the half-shells 25 respectively pivot about the axis of rotation R-R, they commute the refillable dispenser 2 between the use configuration and the refill configuration. The use configuration is shown in Figure 8, whereas the refill configuration is shown in Figure 7.

[0061] In the second embodiment, the squeezing device is configured to deform the cartridge 4 so that the product contained therein will flow through the opening 40 of the cartridge 4 and out of the mouth 23.

[0062] More in detail, the squeezing device is mechanically operable by means of a manual pressure mechanism 62 located on a half-shell 25, otherwise, in alternative embodiments, it is driven with the same principle by an electric motor that can be actuated by means of a push-button 61 located on the container 2.

[0063] Referring to Figure 8, if the refillable dispenser 1 is configured to dispense toothpaste, then the container 2 may comprise, at the mouth 23, a support surface 27 for supporting a toothbrush 100.

[0064] Furthermore, the present invention relates to a kit comprising a refillable dispenser 1 for pasty or semi-liquid products as discussed above, and a cartridge 4

containing the pasty or semi-liquid product.

[0065] More in detail, the cartridge 4 is configured to reversibly fit into the cavity 20 of the container 2 through the second openable end 22. Even more in detail, in the first embodiment, the cartridge can be inserted and removed into/from the cavity 20 of the container 2 through the refill opening 24 defined by the first and second edges 22a, 22b of the second end 22 when they are spaced apart.

[0066] The cartridge 4 is deformable and has a pocket 41 adapted to receive the pasty or semi-liquid product, and is preferably made of a flexible plastic material.

[0067] The cartridge 4 has a bottom 42 that closes the bottom of the pocket 41. In the first embodiment, the bottom 42 is configured to be locked between the first edge and the second edge 22a, 22b of the second end 22, when the cartridge 4 is fitted in the cavity 20 and the second end (22) is closed.

[0068] In the second embodiment, the bottom 42 is configured to be locked between the first edge and second edge 22a, 22b of the second end 22, when the cartridge 4 is fitted in the cavity 20 and the second end 22 is closed as the half-shells 25 are coupled together.

[0069] The bottom 42 of the cartridge 4 may be formed, for example, by heat-sealing.

[0070] The cartridge 4 also has a top 43 comprising an opening 40 configured to cause the contents of the pocket 41 to flow out of the cartridge 4. As mentioned above, the opening 40 of the cartridge 4 is configured to be associated with the mouth 23 of the container when the cartridge 4 is fitted in the cavity 20.

[0071] The opening 40 is closed by a removable tab 44 configured to prevent the pasty or semi-liquid product from flowing out of the pocket 41 before insertion into the cavity 20.

[0072] The removable tab 44 must be removed manually by the user before fitting the cartridge into the cavity 20 of the container 2.

[0073] Preferably, the cartridge 4 is made of a recyclable material such as polyethylene films and/or biodegradable and compostable films according to the product contained therein, for environment protection.

Claims

1. A refillable dispenser (1) for pasty or semi-liquid products, comprising:

- a container (2) having a cavity (20), the container (2) extending between a first end and a second end (21, 22), the first end (21) having a mouth (23) configured to allow the outflow of a pasty or semi-liquid product,
- a cap (3) adapted to be reversibly coupled to the mouth (23) to close it;

characterized in that:

- the cavity (20) is configured to receive a cartridge (4) containing the pasty or semi-liquid product;
- the mouth (23) is adapted to be associated with an opening (40) of said cartridge (4) and is configured to allow the outflow of the pasty or semi-liquid product from the cartridge (4) when a pressure is applied to the container (2);
- the second end (22) of the container (2) is adapted to be opened to allow removal and/or introduction of the cartridge (4).

2. A refillable dispenser (1) as claimed in claim 2, wherein the container (2) is deformable.

3. A refillable dispenser (1) as claimed in claim 1 or 2, wherein the second end (22) comprises a first edge and a second edge (22a, 22b) which are opposite and movable relative to each other to open and close the second end (22) of the container (2), the edges (22a, 22b) being adapted to be reversibly fixed to each other.

4. A refillable dispenser (1) as claimed in any of the preceding claims, comprising a closure device (5) configured to keep the second end (22) of the container (2) closed.

5. A refillable dispenser (1) as claimed in the preceding claim, wherein the closure device (5) comprises:

- a groove (50) extending along the first edge (22a) of the second end (22);
- a projection (51) extending along the second edge (22b) of the second end (22), the projection (51) facing the groove (50);

the groove (50) and the projection (51) being adapted to be reversibly coupled to allow the second end (22) of the container (2) to be opened and closed.

6. A refillable dispenser (1) as claimed in claim 4 wherein the closure device (5) comprises a pair of opposable pressing surfaces (52) which can be commuted between a closed configuration in which the pressing surfaces (52) are close together and press the edges (22a, 22b) of the second end (22) against each other, and an open configuration in which the pressing surfaces (52) are spaced apart.

7. A refillable dispenser (1) as claimed in any of the preceding claims comprising a squeezing device (6) adapted to be applied between the first and second ends (21, 22) of the container (2), the squeezing device (6) being configured to slide from the second end to the first end (22, 21) to cause the pasty or semi-liquid product of the cartridge (4) to come out of the mouth (23).

8. A refillable dispenser (1) as claimed in the preceding claim comprising a lock system (7), which is adapted to prevent the squeezing device (6) from moving from the first end to the second end (21, 22) when the squeezing device (6) is applied between the first and second ends (21, 22) of the container (2). 5
9. A refillable dispenser (1) as claimed in any of the preceding claims, wherein the container 2 comprises a pair of half-shells (25) which are adapted to be coupled to define the cavity (20), the half-shells (25) being movable relative to each other to commute the refillable dispenser 1 between a use configuration in which the half-shells (25) abut against each other and define the cavity (20) and a refill configuration in which the half-shells (25) are spaced apart to allow access to the cavity (20). 10 15
10. A kit comprising a refillable dispenser (1) for pasty or semi-liquid products as claimed in any of the preceding claims, and a cartridge (4) adapted to be reversibly fitted into the cavity (20) of the container (2) via the second openable end (22), the cartridge (4) being deformable and having a pocket (41) for receiving the pasty or semi-liquid product. 20 25
11. A kit as claimed in claim 10, wherein the cartridge (3) comprises:
- a bottom (42) adapted to be locked between the first and second edges (22a, 22b) of the second end (22) when the cartridge (4) is fitted in the cavity (20) and the second end (22) is closed; 30
 - a top (43) having an opening (40) closed by a removable tab (44). 35
12. A kit as claimed in claim 11, wherein the cartridge (4) is made of a recyclable and/or compostable material. 40

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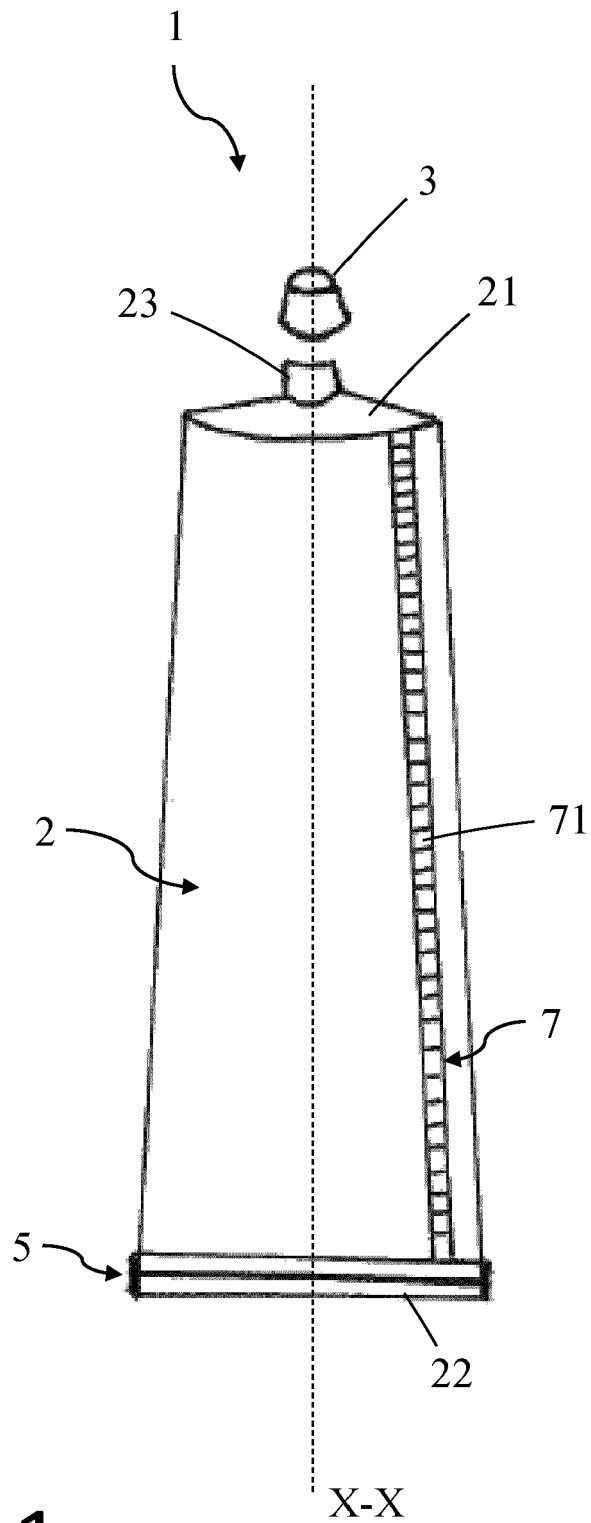


Fig. 1

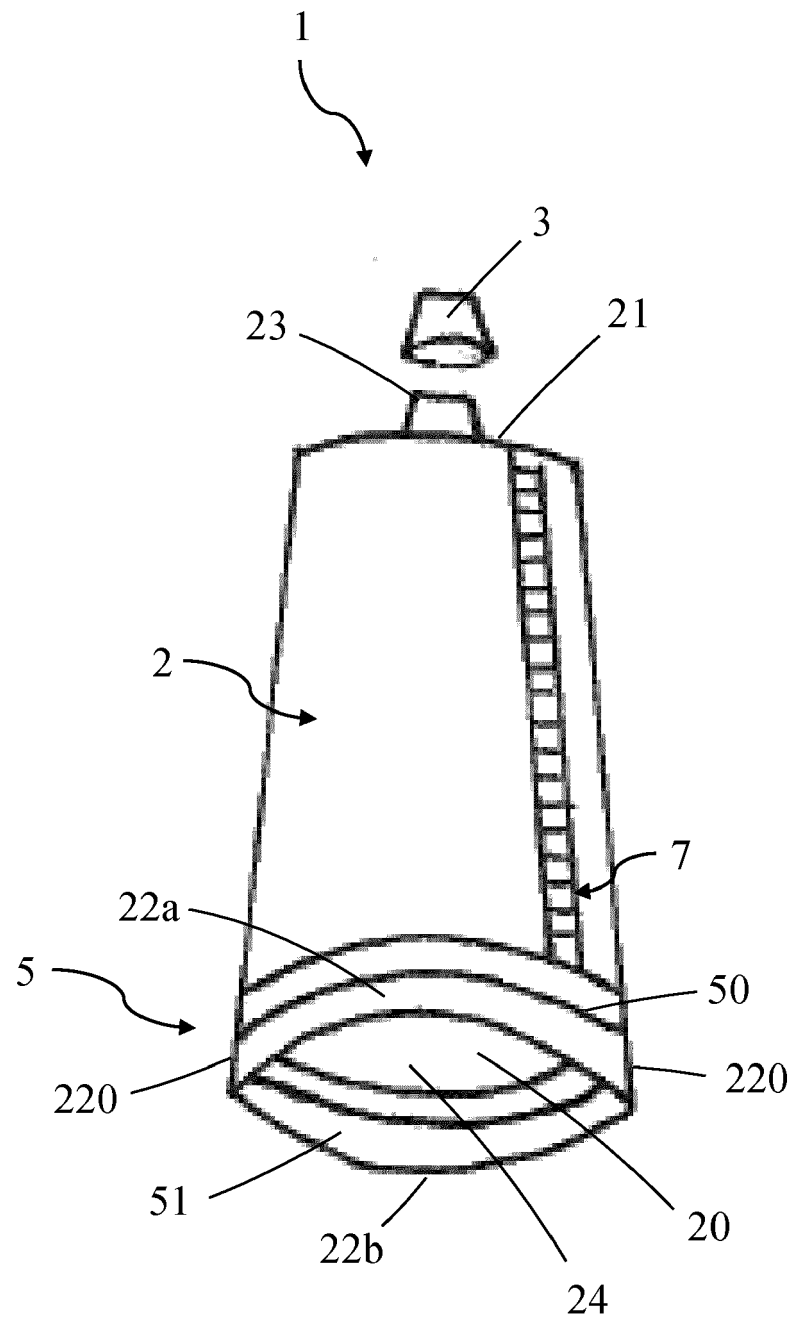


Fig. 2

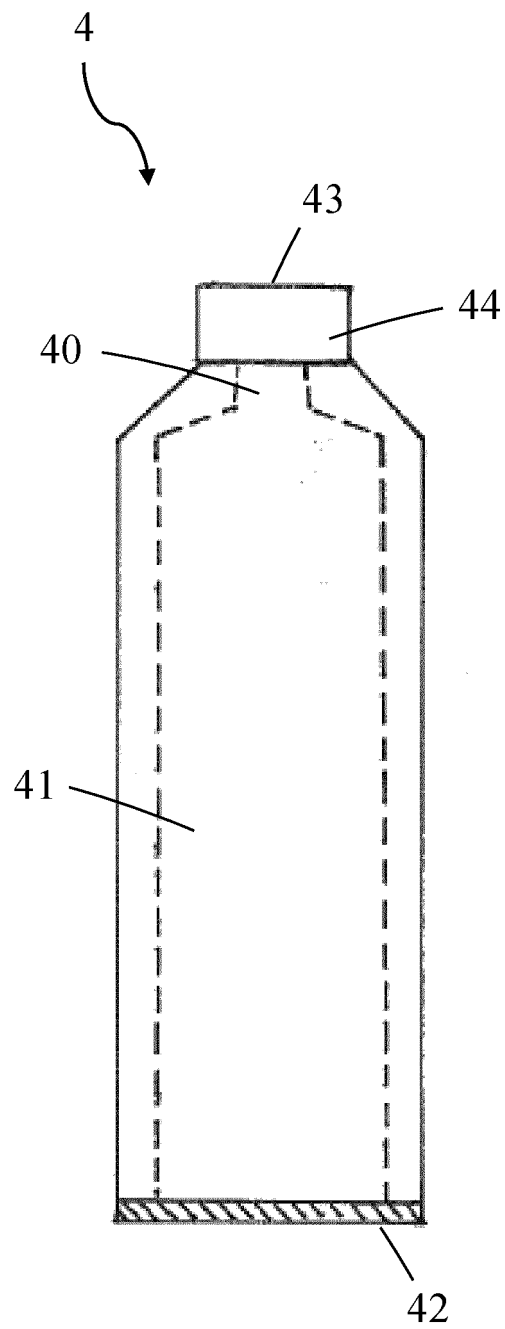


Fig. 3

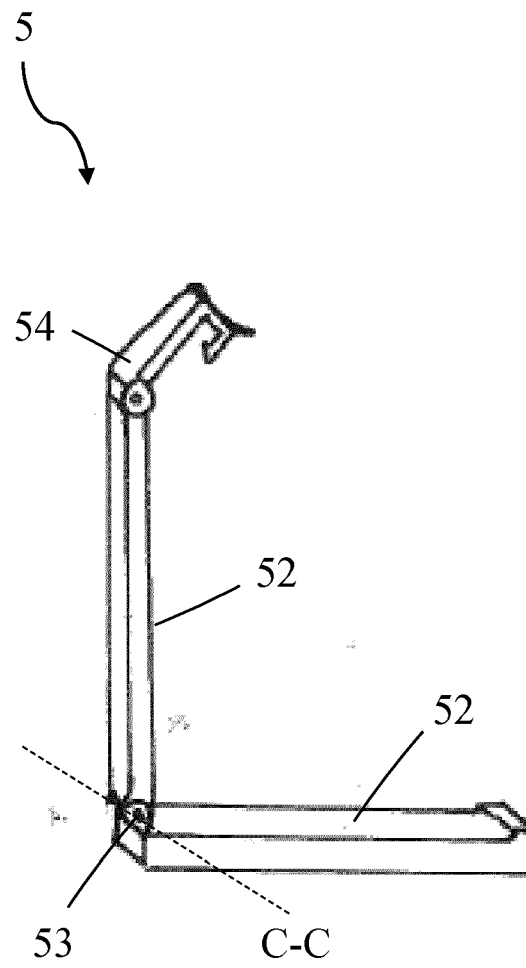


Fig. 4

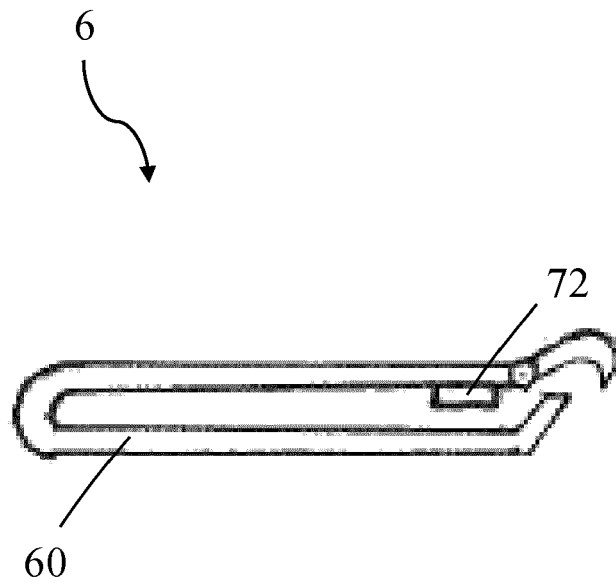


Fig. 5

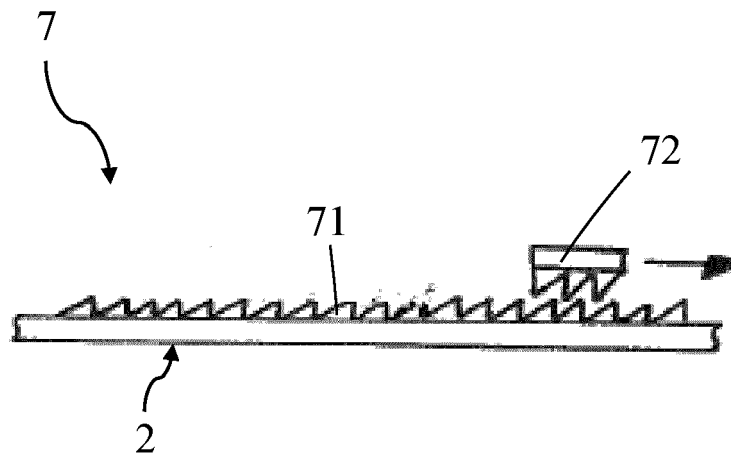


Fig. 6

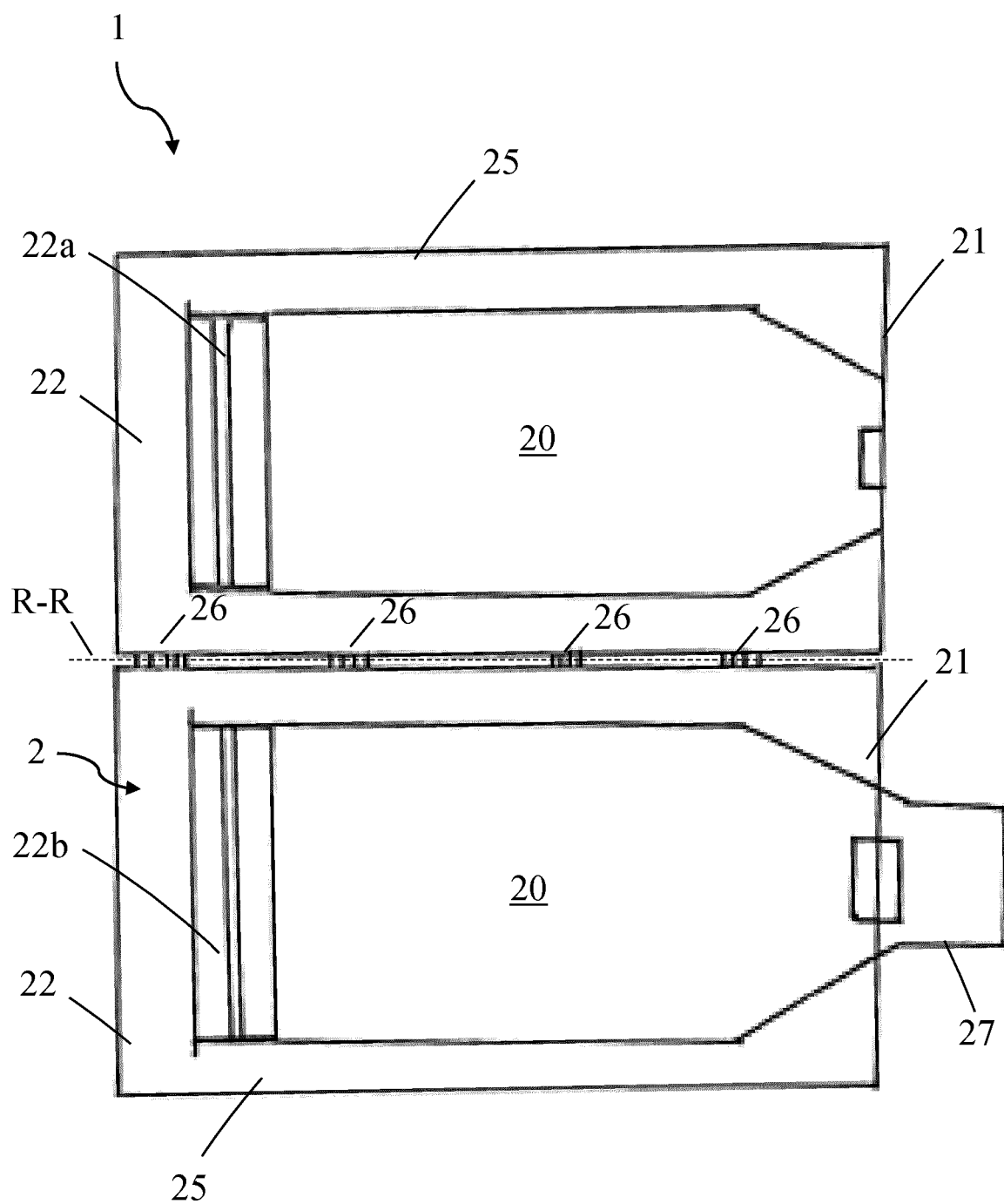


Fig. 7

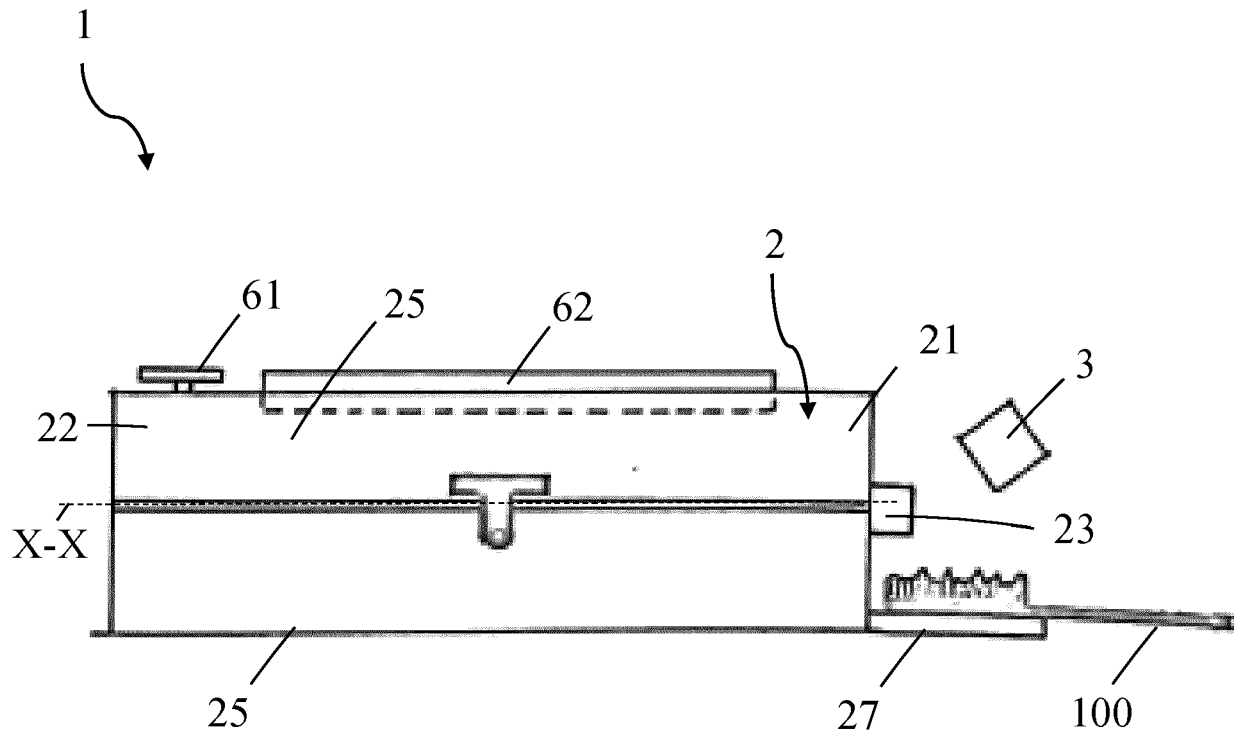


Fig. 8



EUROPEAN SEARCH REPORT

 Application Number
EP 21 15 3071

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	DE 29 09 181 A1 (JANIK JIRI) 11 September 1980 (1980-09-11) * page 1; figures *	1-4,6-8, 10-12	INV. B65D35/14
X	US 2010/072224 A1 (HA MINNA [US]) 25 March 2010 (2010-03-25) * paragraphs [0013], [0045] - [0048], [0069] *	1-8, 10-12	
X	CN 87 203 577 U (LIU YAMIN) 16 March 1988 (1988-03-16) * paragraphs [0001], [0005], [0008], [0009]; figures *	1,3,4, 7-12	
X	US 4 445 609 A (BENARROUCH JACQUES [FR]) 1 May 1984 (1984-05-01) * column 1, lines 25-37 * * column 2, lines 38-68 * * figures 6-9 *	1-6	
X	JP S55 129643 U (UNKNOWN) 12 September 1980 (1980-09-12) * paragraph [0002]; figures *	1-4,6, 10-12	TECHNICAL FIELDS SEARCHED (IPC) B65D
X	US 2 608 320 A (HARRISON JR JOSEPH R) 26 August 1952 (1952-08-26) * column 1, lines 45-53 * * column 2, lines 2-11, 38-49 * * figures *	1,9-11	
A	US 2018/155090 A1 (KLEYMAN GENNADY I [US] ET AL) 7 June 2018 (2018-06-07) * paragraphs [0016], [0018], [0019], [0042], [0043], [0046]; figures 2-5 *	7,8	
A	US 2010/279040 A1 (WEST ELLERY [US] ET AL) 4 November 2010 (2010-11-04) * the whole document *	12	
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 8 July 2021	Examiner Urbahn, Stephanie
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	

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 21 15 3071

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 2909181 A1	11-09-1980	NONE	
US 2010072224 A1	25-03-2010	EP 2349859 A2 US 2010072224 A1 WO 2010036728 A2	03-08-2011 25-03-2010 01-04-2010
CN 87203577 U	16-03-1988	NONE	
US 4445609 A	01-05-1984	NONE	
JP S55129643 U	12-09-1980	NONE	
US 2608320 A	26-08-1952	NONE	
US 2018155090 A1	07-06-2018	US 2018155090 A1 US 2020102123 A1	07-06-2018 02-04-2020
US 2010279040 A1	04-11-2010	NONE	

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