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(54) **APPLICATOR DEVICE FOR SOLID COSMETIC PRODUCT, SYSTEM AND METHOD FOR USING A SYSTEM**

(57) The present invention relates to an applicator device for a solid cosmetic product, in the form of a bar (2), which comprises three components: an upper closing cover (3), which covers at the top the product bar (2) that protrudes from the upper portion (4a) of a main body (4); a main body (4) of variable planar and height configura-

tion that houses the product bar (2) therein; and a drive base (5) that is coupled by the lower portion (4b) of the main body (4) and is associated with controlled movement means to cause the product bar (2) to emerge from the upper portion (4a) of said main body.

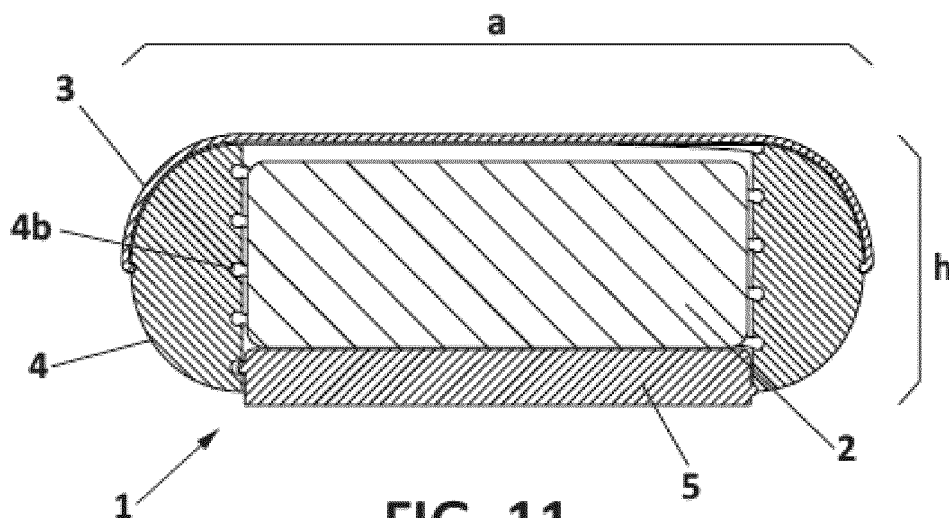


FIG. 11

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Description

OBJECT OF THE INVENTION

[0001] The present invention, an applicator device for solid cosmetic product, relates to a device intended to facilitate the application of a solid cosmetic product, such as a soap or shampoo in the form of a solid bar, formed by a structure comprising at least three parts that enables the solid bar to be extracted and applied without the user coming in contact with it, in addition to allowing, in a highly aesthetic format, a low manufacturing cost. Likewise, the invention relates to a system for applying a solid cosmetic product and a method for using said system.

[0002] The field of application of the present invention falls within the sector of the industry dedicated to the manufacture of applicator containers for cosmetic products, especially body cleansing products, such as soap or shampoo.

BACKGROUND OF THE INVENTION

[0003] Traditionally, solid soap bars or similar cosmetics, whether for hands or for shower, are usually sold without an applicator or, at most, incorporated in a box or soap dish. This causes the use thereof to always entail a cleaning problem, since the bar, when used, gradually breaks down and leaves a mark on the tiles of the wash-basin or bathtub that produces a dirty aesthetic effect.

[0004] Likewise, holding soap bars is difficult for the user because, due to the composition thereof, combined with water, they tend to slip and escape from the hands of said user, thus making the application thereof on the body difficult. Moreover, as the size of the bar decreases with use, the handling thereof is increasingly difficult.

[0005] The objective of the present invention is, therefore, to provide the market with a practical, comfortable and simple solution for said problem which, in addition to being applicable to face and hand or shower soaps, is also applicable to any other type of solid cosmetic or cosmetic bar.

DESCRIPTION OF THE INVENTION

[0006] The applicator device for solid cosmetic product, object of the invention, is, as mentioned, a device intended to facilitate the application of a solid cosmetic product, such as soap, shampoo or other that is presented in the form of a solid bar, making it possible to use as much of the amount of solid product as possible. The device is distinguished by being made up of a simple structure that mainly comprises three parts, enabling a low manufacturing cost as well as clean and practical means of using said type of products, enabling the cosmetic product or bar to be extracted or pushed in a controlled manner. Thus, the first object of the invention is an applicator device according to claim 1.

[0007] More specifically, the device comprises at least

the following components:

- a main body of variable plantar and height configuration, with at least one outer perimeter wall that determines an inner hollow wherein the bar is housed, and being open at the two ends thereof, by a first portion or upper portion and by a second portion or lower portion opposite the previous one, and
- a drive base that is coupled by the lower portion of the main body associated with controlled movement means enabling movement along the main body of the bar so that it emerges from the upper portion of said main body.

[0008] Preferably the device has an upper closing cover, which covers the upper portion of the main body, to protect the product contained therein, prevent the evaporation of the scent thereof, reduce contact with water when not in use, and be able to transport it without product losses.

[0009] The controlled movement means, in combination with the drive base, enable the product to emerge from the upper portion as it is being used. The controlled movement means can be different depending on the needs.

[0010] In a first variant embodiment, the controlled movement means are by means of pressure, so that by manually acting on said drive base the solid bar emerges. In this variant, the drive base is made up of a flat body that fits inside the outer walls of the main body, such that, when it is pushed by the lower portion of the main body, it displaces the same and, consequently, the product bar by pushing it and causing it to emerge through the opening of the upper portion. The bar rests on the surface of the drive base that is inserted inside the main body.

[0011] The controlled movement means comprise a grooved surface and guides inside the outer wall of the main body that fit into complementary recesses in the form of ribs arranged on the edge of the drive base. By means of this construction, it is possible to introduce the drive base into the main body in a staggered manner, since the positions of said drive base are delimited by the grooves arranged on the inside of the outer wall of the main body. To move from one groove to another it is necessary that the user pushes the drive base, thus controlling the position of the drive base and therefore the portion of the solid bar that emerges from the main body.

[0012] To secure the product bar on the drive base, it preferably comprises a flat and smooth inner surface, whereon the bar rests in the same way as the drive base, allowing a better use thereof, as well as refilling the product in a clean way and free of residue or debris. Subsequently, the main body of the device is placed on the bar, making the perimeter of said bar coincide with the perimeter of the inner hollow of said main body, in such a way that said bar fits and adjusts inside said hollow, next to the drive base. Once the bar and the drive base have

been fitted into the inner hollow of the central body of the device, the bar can be extracted by pushing on the lower surface of the drive base, opposite to the surface of said base whereon the bar rests. The lower surface of the drive base, accessible to the user, can have different reliefs to facilitate the mounting identification thereof, as well as include information that is relevant to the user.

[0013] In a second variant embodiment, the controlled movement means comprise a threaded edge arranged on the lateral surface of the drive base, having a flat circular body, and which fits, as a screw, in a thread provided to that effect inside the outer wall of the main body, also circular in configuration, thus enabling the movement of the drive base inside the main body when said base rotates. By actuating said base inside the main body by means of threading, the drive base rises inside the main body, pushing the product bar from the lower portion and causing it to emerge from the upper portion. The bar rests on the inner surface of the drive base that is inserted inside the main body. Thus, by means of the thread, it is possible to control the movement of the bar.

[0014] In order to manipulate the drive base and apply the torque thereto, the same comprises a handle on the outer surface of the base. Preferably, the handle is defined by a central projection between respective recesses.

[0015] It should be noted that, preferably, in both variants, wherein the drive base has controlled movement means by pressure or by threading, the device is mostly suitable for use with solid cosmetic products in the form of a bar, such as, for example, hand soap, shower soap or similar, to allow the user to operate the base by putting his or her hand inside, to push it in one case or to thread it in the other.

[0016] Furthermore, in the case of the variant with a pressure-driven base, the planar shape of the body of the device and, consequently, of the whole assembly may be any shape, for example, triangular, while, in the variant with a threading-driven base, logically, it must be of a circular planar shape or cross section.

[0017] The dimensions of the device allow it to be gripped by the hand of a medium-sized user, and there may be different dimensions adapted to different sizes of hands, for example, for adults and children. Likewise, the shape of the device is preferably ergonomic to facilitate the gripping thereof.

[0018] By means of the device object of the present invention, it is achieved that the solid cleaning product or bar:

- does not slip from the user's hand when applied to the body,
- more product is used since it is protected, preventing it from breaking down when in contact with water in wet environments, such as a shower or bathtub,
- it makes it possible to transport the solid product or bar as it is protected from the outside.

[0019] A second object of the invention is a system for applying a solid cosmetic product, according to claim 10, which comprises an applicator device as described above with a solid cosmetic product in the form of a bar supported on the drive base of the applicator device and located in the inner hollow of the main body of said device.

[0020] Likewise, a third object of the present invention, according to claim 11, is a method of using a system for applying a solid cosmetic product or bar, which comprises the following steps:

- a) Arrangement of the solid product on the drive base of the device,
- b) Arrangement of the inner hollow of the main body on the solid product,
- c) Introduction of the solid product into the hollow of the main body by pressing said main body on the solid product, and
- d) Movement of the drive base towards the inside of the hollow of the main body until the solid product emerges through the end of the main body opposite to that of the drive base for applying the solid product with one hand holding the device.

[0021] This movement is carried out in the first variant of the applicator device by pressing the drive base from the lower surface thereof and in the second variant by rotating the drive base so that it moves along the inner thread of the hollow main body.

[0022] After applying the solid product and to preserve said solid product, the following occurs:

- e) Placement of the upper closing cover on the solid product emerging from the main body, and f) Fitting of the cover on the outer edging of the main body.

[0023] Once the solid cosmetic product is placed inside the applicator device, it is already protected from the outside and can be transported without soiling. Likewise, once the solid cosmetic product bar introduced into the applicator device has been used up, it is possible to reuse said device by reintroducing a new solid cosmetic product bar.

DESCRIPTION OF THE DRAWINGS

[0024] To complement the description of the present invention and facilitate the understanding of the features of the invention, the present specification is accompanied by figures constituting an integral part of the same, by way of illustration and not limitation.

Figure number 1 shows a perspective view of an exemplary first variant embodiment of the applicator device for solid cosmetic product object of the invention, specifically an example of the variant thereof with a drive base operated by pressure, which has been represented in an exploded view, showing the different parts it comprises, including the product. Figure number 2 shows a perspective view of the

exemplary embodiment of the device of the invention shown in Figure 1, in this case represented once assembled.

Figure number 3 shows a cross-sectional view of the device shown in the preceding figures, according to the section A-A indicated in Figure 2.

Figures 4 and 5 show respective perspective views, upper and lower respectively, of the lower drive base of the device, showing the configuration and parts thereof.

Figure number 6 shows a perspective view of the main body of the device, presented with the parts that form it disassembled, making it possible to see the configuration thereof, in particular the central edging.

Figure number 7 shows a perspective view of an exemplary second variant embodiment of the applicator device for solid cosmetic product object of the invention, specifically an example of the variant thereof with a drive base operated by threading, which has been represented in an exploded view, showing the different parts it comprises, including the product.

Figures 8, 9 and 10 show respective perspective views of the exemplary embodiment of the device of the invention shown in Figure 7, represented once assembled and, respectively, with the cover, without the cover and from the lower portion thereof.

Figure 11 shows a cross-sectional view of the device shown in the preceding figures, according to the section B-B indicated in Figure 8.

Figure number 12 shows a perspective view of the lower portion of the drive base, showing the configuration and parts thereof.

PREFERRED EMBODIMENT OF THE INVENTION

[0025] In view of the aforementioned figures, two exemplary embodiments of the applicator device for solid cosmetic product object of the invention are described below.

[0026] The device (1) of the invention, intended to facilitate the use of a solid cosmetic product, such as soap, shampoo, deodorant or other that is presented in the form of a bar (2), basically comprises three components or parts:

- an upper closing cover (3), which covers at the top the product bar (2) that protrudes from the upper portion (4a) of the main body (4),
- a main body (4) of variable plantar and height configuration, which houses the product bar (2) therein, being hollow on the inside and open both at the upper portion (4a) and at the lower portion (4b) thereof, and
- a drive base (5) that is coupled by the lower portion (4b) to the main body (4) and is associated with controlled movement means to cause the product bar (2) to emerge from the upper portion (4a) of said

main body.

[0027] Said controlled movement means can be by means of pressure, or threading.

[0028] Considering Figures 1 to 6, in a first variant embodiment of the device (1) of the invention, wherein the drive base (5) is associated with controlled movement means that act by means of pressure. Said base (5) comprises a flat body that fits tightly between the inner walls of the main body (4), such that, when pushed from below, it moves through the main body (4) pushing the product bar (2) and causing it to emerge through the opening in the upper portion (4a). The base (5) has an inner surface, in contact with the bar, and an outer base, on which the corresponding pressure is applied by the user.

[0029] Preferably, to control and guide said movement of the base in the main body, the inner wall of the main body (4) has a grooved surface and guides (4c) in which complementary recesses (5a) in the form of ribs that are provided on the edge of the drive base (5) fit.

[0030] Furthermore, preferably, said drive base (5) has, on the perimeter of the inner surface thereof, as shown in Figure 4, a rim (5b) of deformable material that defines an inner area or surface (5c), preferably flat and smooth, whereon the bar rests, allowing a better use thereof, as well as refilling the product in a clean way and free of residues or debris. Subsequently, the main body (4) of the device (1) is placed on the bar (2), making the perimeter of said bar (2) coincide with the perimeter of the inner hollow of said main body (4), in such a way that said bar (2) fits and adjusts inside said hollow, next to the drive base (5). Once the bar (2) and the drive base (5) have been fitted into the inner hollow of the central body (4) of the device (1), the bar (2) can be extracted by pushing on the lower surface of the drive base (5), opposite to the inner surface (5c) of said base (5) whereon the bar (2) rests. The lower surface (5c) of the drive base (5), accessible to the user, can have different reliefs to facilitate the mounting identification thereof, as well as include information that is relevant to the user.

[0031] Looking at Figure 6, it can be seen how, in the preferred embodiment, the main body (4) of the device is composed of an upper casing (41) and a lower casing (42) between which an intermediate part of soft material that defines an edging (43) has been envisaged. This edging (43), in addition to being decorative, in turn serves as a pressure closing point for the upper closing cover (3). The lower casing (42) may have marks or references to distinguish the same from the upper casing (41) and to facilitate the subsequent mounting of the drive base (5) in the inner hollow of the main body (4) through said lower casing (42). It is also possible that the marks or references are arranged on the upper casing (41).

[0032] In this preferred embodiment, the device (1), according to this variant with a pressure-driven base (5), has a triangular plantar configuration or cross section, the body (4), with the bar (2), the base (5) and the cover (3) having the same plantar configuration, although this

is not a limitation as it can have any other plantar configuration or cross section. For example, the product bar (2) can have a volume of 79 ml and the entire device a height (h) of about 30 mm and a width (a) of about 45 mm. These dimensions may be altered depending on the dimensions of the bar (2), although preferably they should be ones that enable the device to be gripped with one hand. Likewise, the devices may have different dimensions depending on whether the use is intended for an adult or a child. Furthermore, the shape of the device is ergonomic to facilitate holding or gripping it.

[0033] In a second variant embodiment of the device (1), shown in Figures 7 to 12, the drive base (5) is associated with controlled movement means comprising operation means by threading. Said drive base (5) is made up of a substantially flat circular body that has, on the lateral surface thereof, a threaded edge (5d) that fits and threads, as a screw, into a thread (4d) provided to that effect in the inner wall of the main body (4), which in turn is also circular in configuration, as well as that of the bar (2) and the cover (3), such that, when the base (5) is threaded, it rises inside the main body (4) pushing the product bar (2) causing it to emerge through the upper portion (4a).

[0034] Preferably, to facilitate the grip of the user on the drive base (5) to perform said threading, on the outer or lower surface of the base (5), as can be seen in Figure 10 and Figure 12, a handle (5e) has been provided defined by a central projection between respective recesses (5f), although other types of handle can be used.

[0035] In one example of this variant embodiment, the product bar (2) has a volume of 79 ml and the whole has a height (h) of about 30 mm and a width (a) of about 56 mm. As in the previous example, these dimensions may be altered depending on the dimensions of the bar (2), although preferably they should be ones that enable the device to be gripped with one hand. Likewise, the devices may have different dimensions depending on whether the use is intended for an adult or a child. Furthermore, the shape of the device is ergonomic to facilitate holding or gripping it.

[0036] The set formed by the applicator device (1) and the solid cosmetic product or bar (2) forms a system for applying a solid cosmetic product, comprised by said device (1) and said bar (2), the bar (2) being supported on the drive base (5) and located in the inner hollow of the main body (4) of the applicator device.

[0037] To use the system for applying a solid cosmetic product, it is necessary to proceed with the following steps:

- a) Arrangement of the solid product (2) on the drive base (5),
- b) Arrangement of the inner hollow of the main body (4) on the solid product (2),
- c) Introduction of the solid product (2) into the hollow of the main body (4) by pressing said main body (4) on the solid product (2), and

d) Movement of the drive base (5) towards the inside of the hollow of the main body (4) until the solid product (2) emerges through the end of the main body (4) opposite to that of the drive base (5) for applying the solid product (2) with one hand holding the device.

[0038] This movement is carried out in the first variant of the applicator device (1) (Figs. 1 to 6) by pressing the drive base (5) from the lower surface thereof and in the second variant (Figs. 7 to 12) by rotating the drive base (5) so that it moves along the inner thread of the hollow main body.

[0039] Likewise, after applying the solid product (2) and to preserve said solid product (2), the following occurs:

- e) Placement of the upper closing cover (3) on the solid product (2) that emerges from the main body (4), and
- f) Fitting of the cover (3) on the outer edging (43) of the main body (4).

Claims

1. An applicator device for solid cosmetic product, which is presented in the form of a bar (2), **characterised in that** it comprises at least three components:
 - a main body (4) of variable plantar and height configuration, with at least one outer perimeter wall that determines an inner hollow, and being open at the two ends thereof, by a first portion or upper portion (4a) and by a second portion or lower portion (4b) opposite the previous one,
 - and, a drive base (5) that is coupled by the lower portion (4b) of the main body (4) associated with controlled movement means enabling movement along the main body of the bar so that it emerges through the upper portion (4a) of said main body.
2. The device according to claim 1, **characterised in that** the drive base (5) comprises a flat body that fits tightly inside the outer perimeter wall of the main body (4) moving inside the main body (4).
3. The device according to claim 2, **characterised in that** the controlled movement means comprise a grooved surface and guides (4c) inside the outer wall of the main body (4) that fit into complementary recesses (5a) in the form of ribs arranged on the edge of the drive base (5).
4. The device according to claim 2, **characterised in that** the drive base (5) comprises, on the perimeter

of the inner surface thereof, a rim (5b) of deformable material that defines an inner area (5c), base on which the bar rests, allowing a better use thereof, as well as refilling the product in a clean way and free of residues or debris.

5. The device according to any of the preceding claims, **characterised in that** it comprises an upper closing cover (3), which covers the upper portion (4a) of the main body (4). 5
6. The device according to any of the preceding claims, **characterised in that** the main body (4) comprises a first casing or upper casing (41) and a second casing or lower casing (42) between which an intermediate part with an edging (43) is arranged. 10
7. The device according to claim 1, **characterised in that** the controlled movement means comprise a threaded edge (5d) arranged on the lateral surface of the drive base (5), having a flat circular body, and which fits, as a screw, in a thread (4d) provided to that effect inside the outer wall of the main body (4), also circular in configuration, thus enabling the movement of the drive base (5) inside the main body (4) when said base (5) rotates. 15
8. The device according to claim 7, **characterised in that** the outer surface of the drive base (5) comprises a handle (5e). 20
9. The device according to claim 8, **characterised in that** the handle (5e) is defined by a central projection between respective recesses (5f). 25
10. A system for applying a solid cosmetic product, **characterised in that** it comprises: 30
 - an applicator device, according to any of claims 1 to 9, and 35
 - a solid cosmetic product in the form of a bar (2), supported on the drive base (5) and located in the inner hollow of the main body (4) of the applicator device. 40
11. A method for using a system for applying a solid cosmetic product according to claim 10, **characterised in that** it comprises the following steps: 45
 - a) Arrangement of the solid product (2) on the drive base (5), 50
 - b) Arrangement of the inner hollow of the main body (4) on the solid product (2),
 - c) Introduction of the solid product (2) into the hollow of the main body (4) by pressing said main body (4) on the solid product (2), and 55
 - d) Movement of the drive base (5) towards the inside of the hollow of the main body (4) until the

solid product (2) emerges through the end of the main body (4) opposite to that of the drive base (5) for applying the solid product (2) with one hand holding the device.

12. The method according to claim 11, **characterised in that** after applying the solid product (2) and to preserve said solid product (2), the following occurs:
 - e) Placement of the upper closing cover (3) on the solid product (2) that emerges from the main body (4), and
 - f) Fitting of the cover (3) on the outer edging (43) of the main body (4).

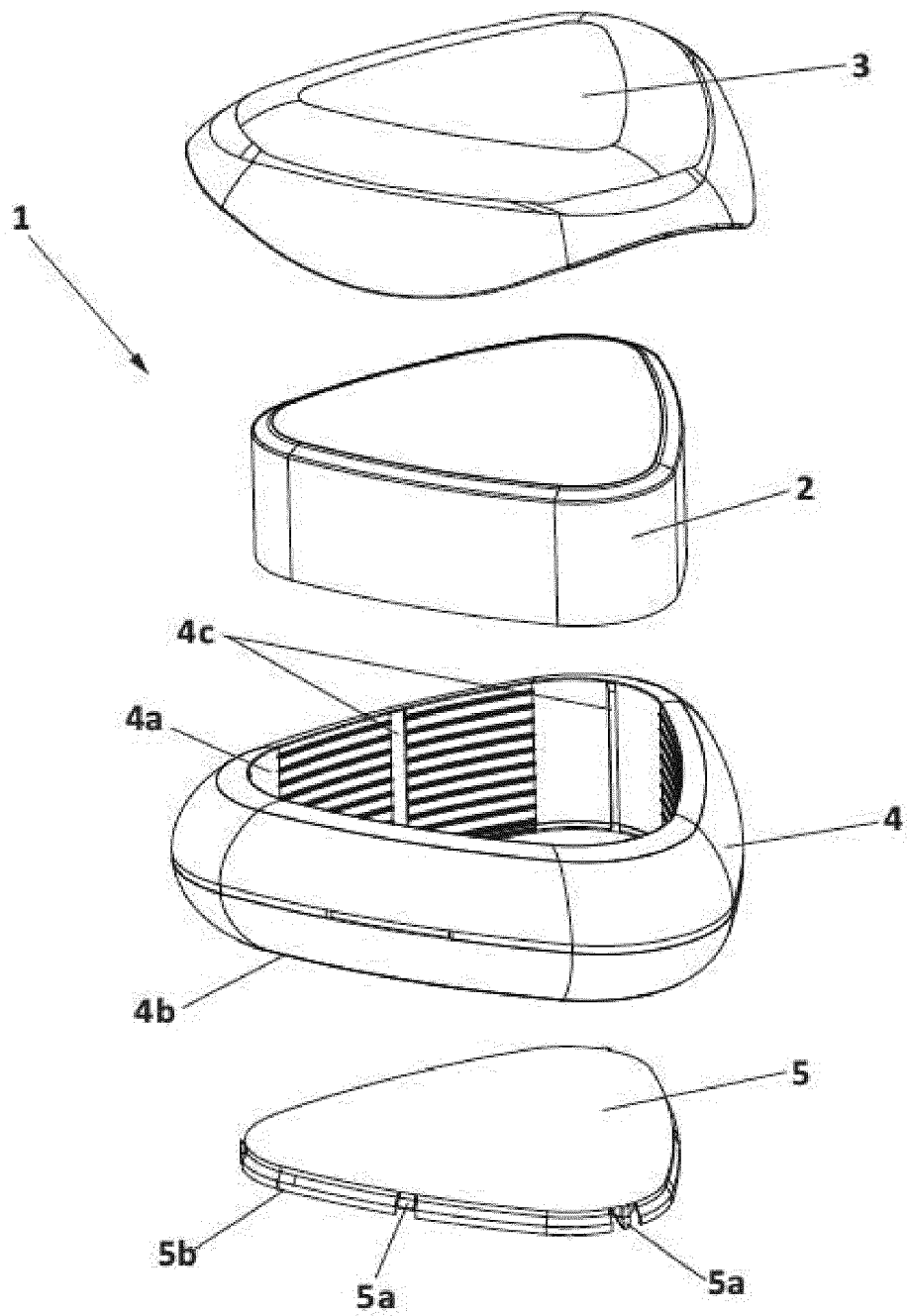


FIG. 1

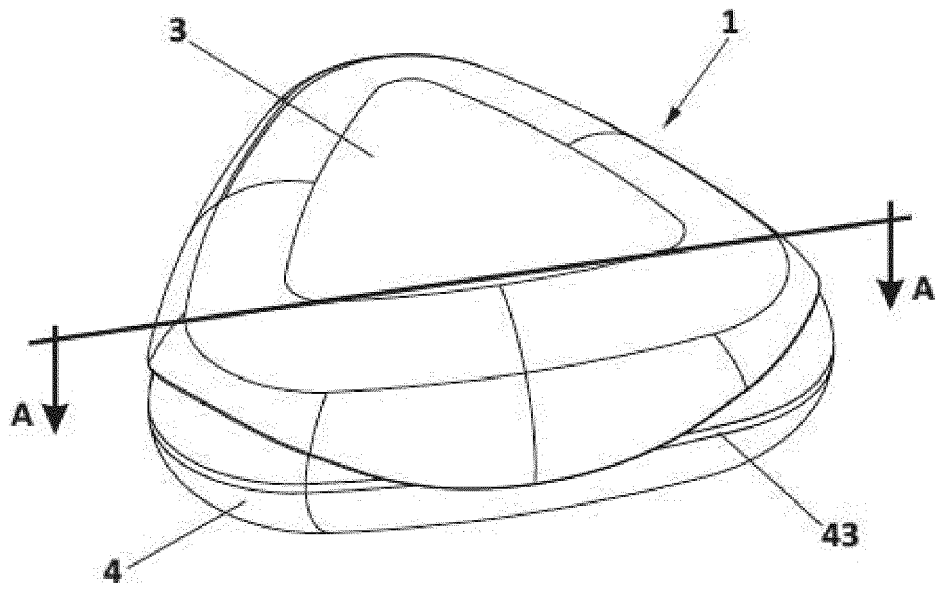


FIG. 2

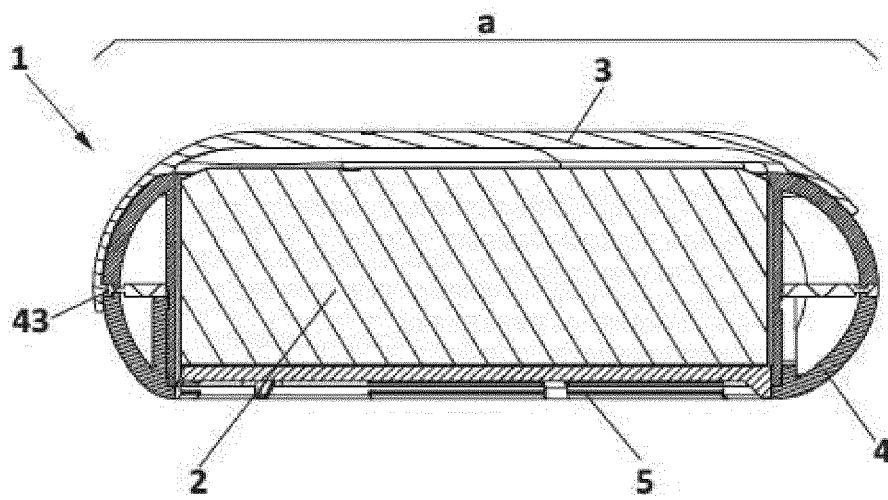


FIG. 3
A-A

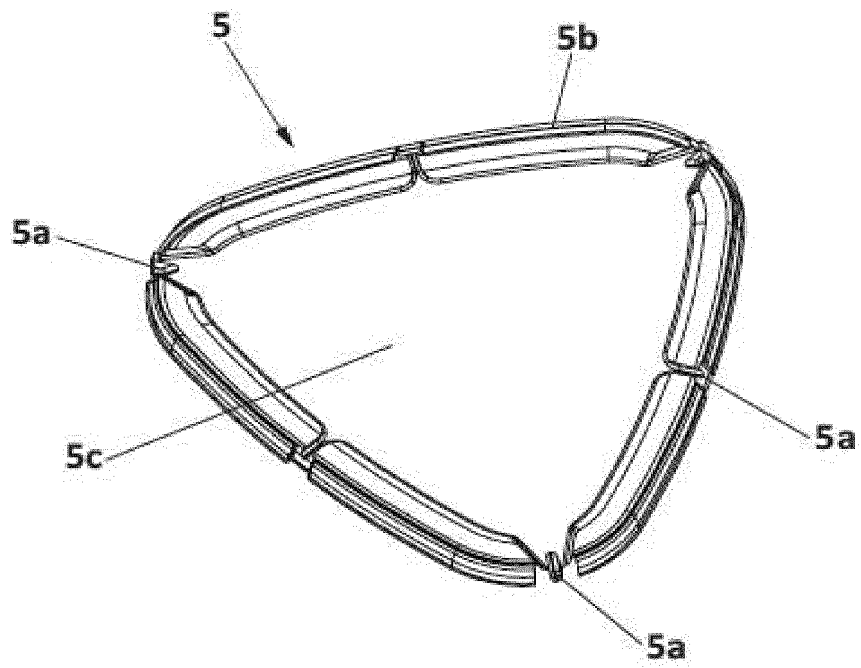


FIG. 4

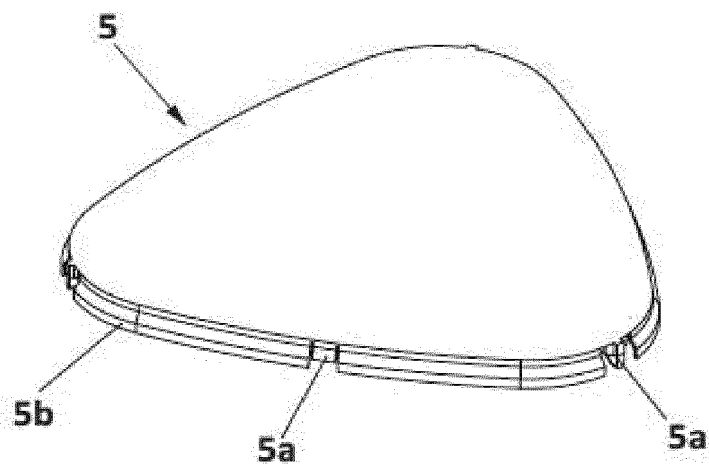


FIG. 5

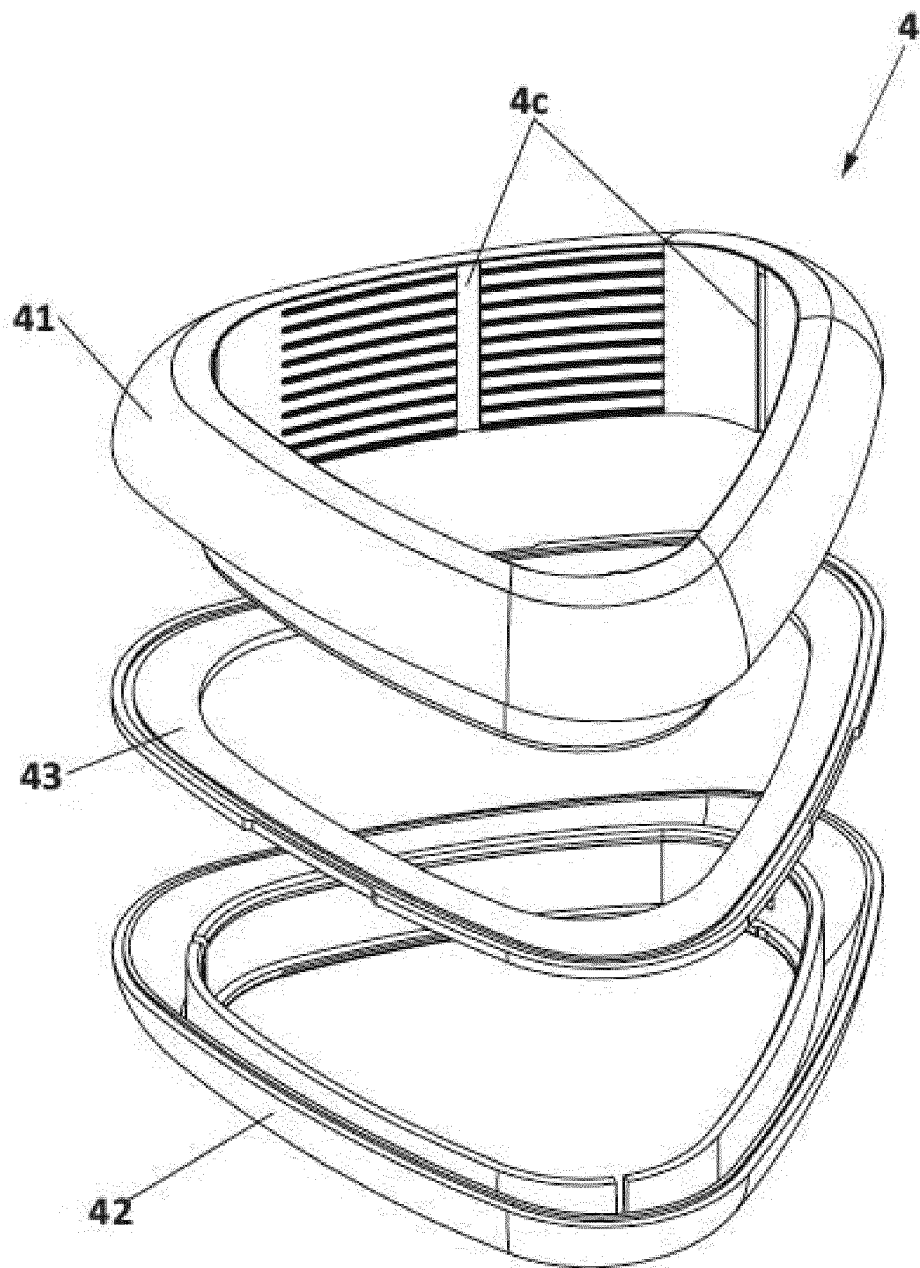


FIG. 6

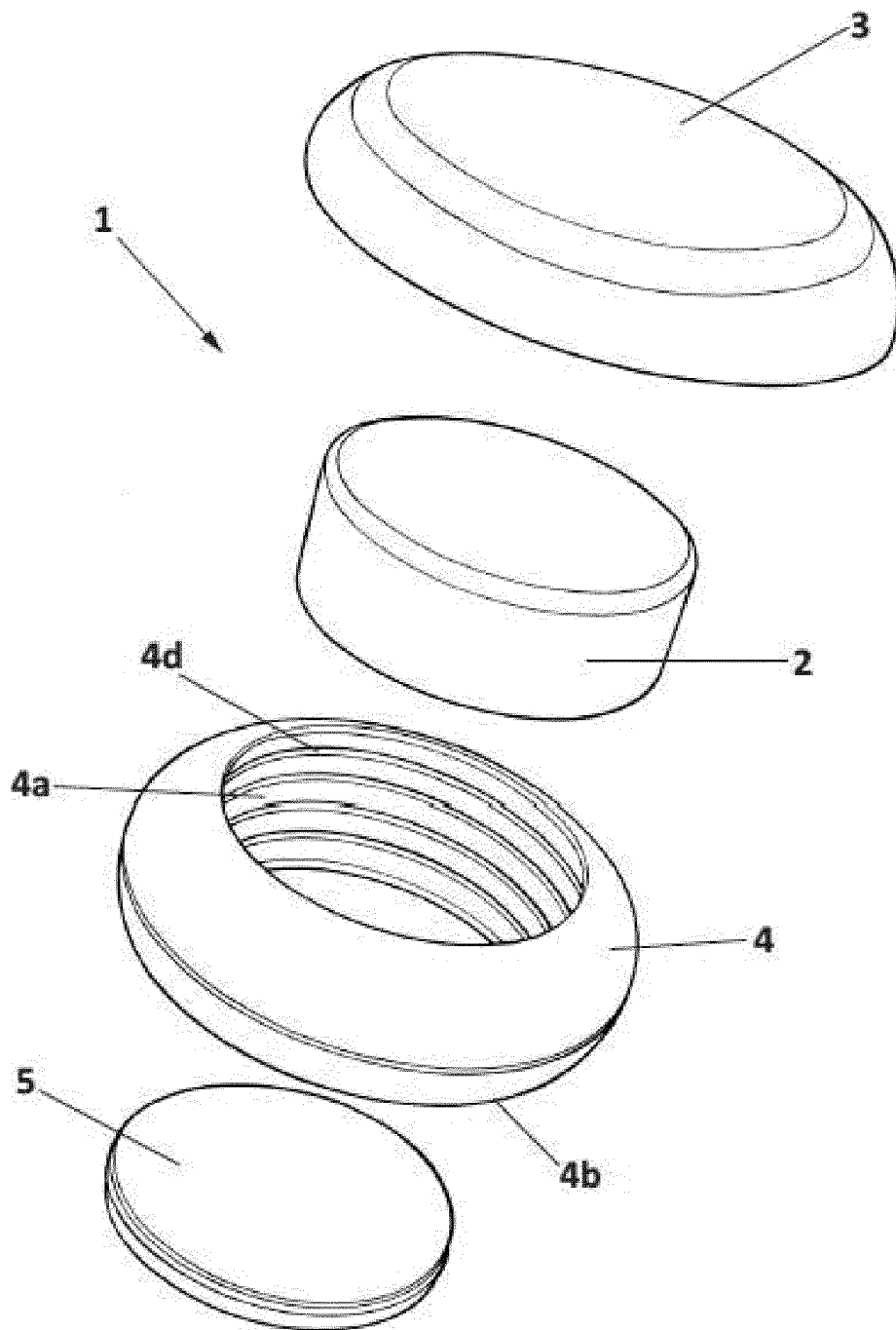


FIG. 7

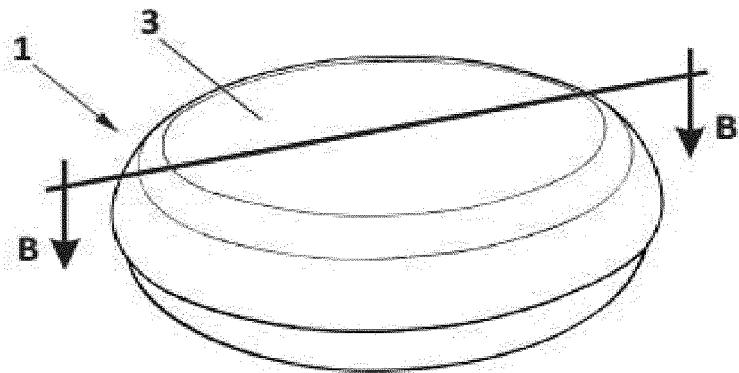


FIG. 8

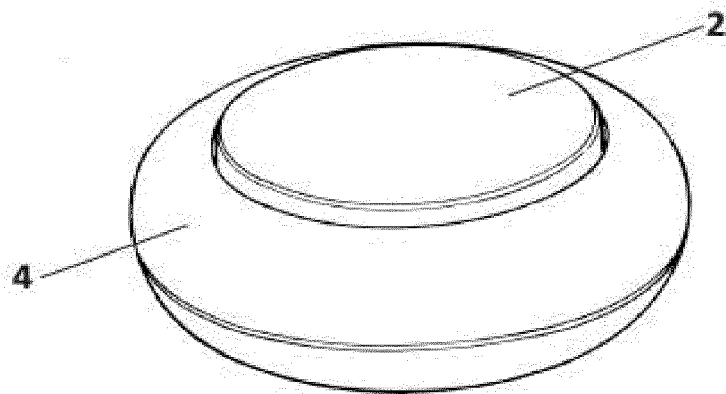


FIG. 9

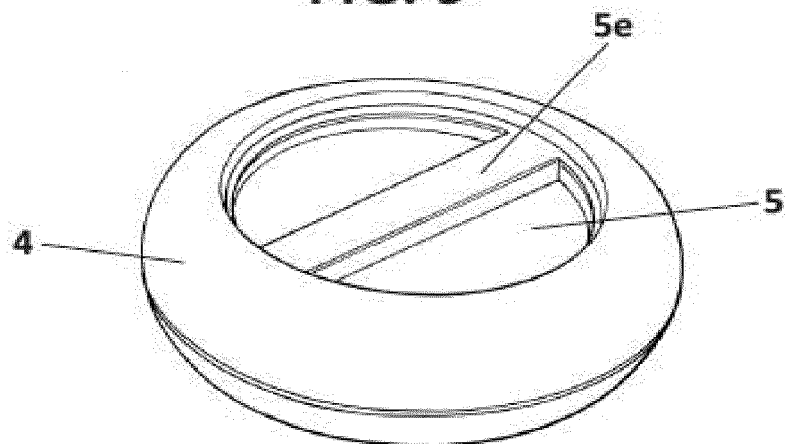
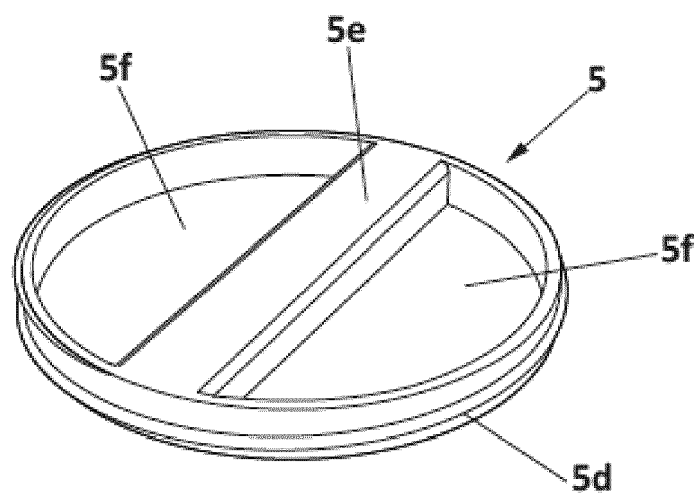
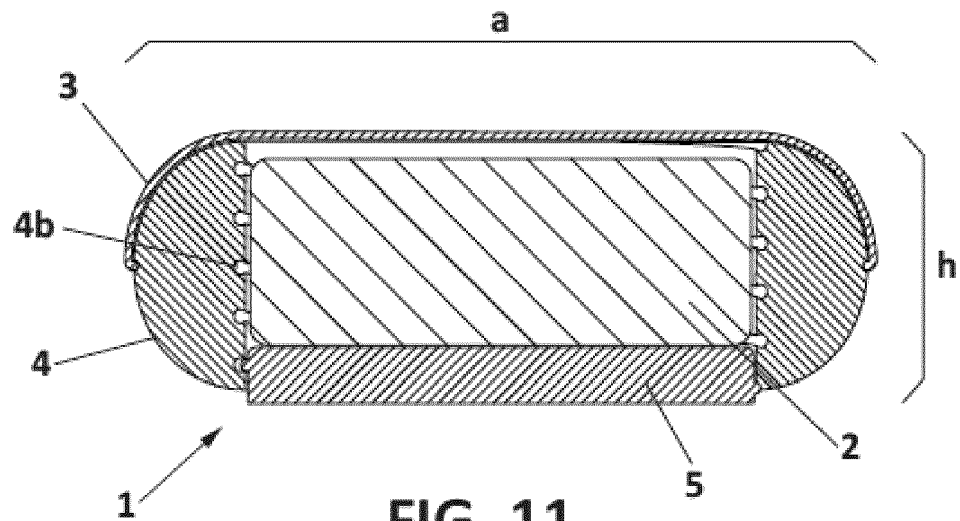


FIG. 10





EUROPEAN SEARCH REPORT

Application Number

EP 21 38 2814

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EPO FORM 1503 03.82 (P04C01)

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	CN 208 447 398 U (DONGGUAN SANXIA PRECISION TECH CO LTD) 1 February 2019 (2019-02-01) * figures 1-7 *	1-6, 8-12	INV. A47K5/05 A45D40/04 A47K5/03
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			TECHNICAL FIELDS SEARCHED (IPC)
			A47K A45F B65D A45D
1 The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 27 January 2022	Examiner Boyer, Olivier
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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