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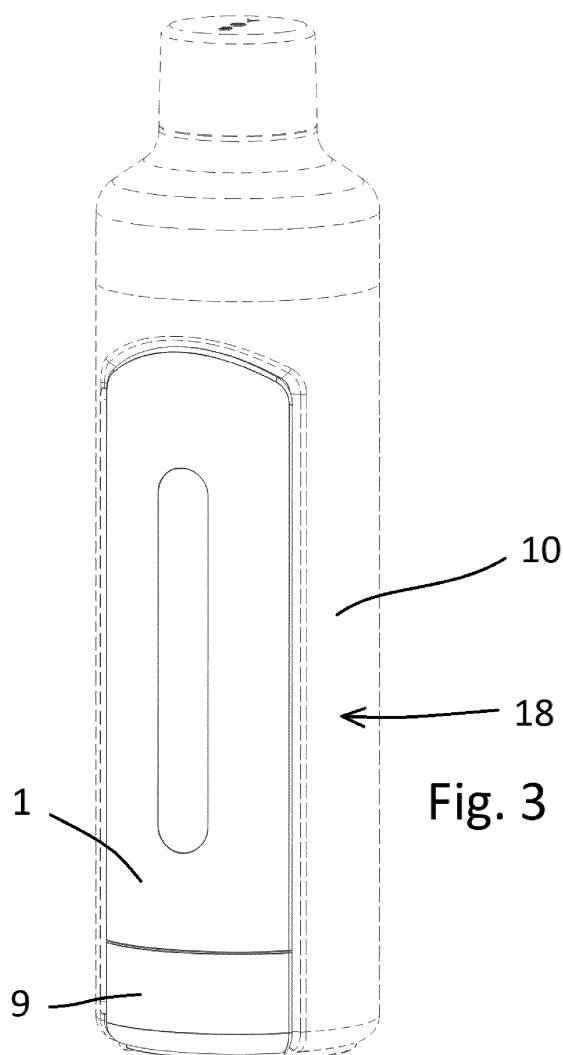
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(54) **A CONTAINER FOR TABLETS, A COMBINATION THEREOF WITH A LID AND A KIT OF PARTS**

(57) The invention relates to a container for holding a fluid material, for example tablets or a powder material, comprising a body with an opening at an end thereof, characterized in that the opening is closed off with a removable seal. The invention also relates to a combination of the container with a lid. Furthermore, the invention relates to a kit of parts composed of the container and additional elements, like a lid for coupling the combination of container and lid to a receptacle or for closing the opening in the container, optionally with the product in the container.



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Description

[0001] The present invention relates to a container for holding a fluid material, for example tablets or a powder material, comprising a body with an opening according to the preamble of claim 1. The invention also relates to a combination of the container with a lid. Furthermore, the invention relates to a kit of parts composed of the container and additional elements, like a lid for coupling the combination of container and lid to a receptacle or for closing the opening in the container, optionally with the product in the container.

[0002] It is known in the art to store a product in a container. When storing tablets or a similar fluid material, they are protected against the environment, to prevent physical and chemical damage. Especially when storing health products, medicines and vitamin pills such protection is of high importance.

[0003] Such known container is manufactured from plastic or glass and is provided with a cap, usually a screw cap, to enable easy access to the contents. It thus provides a proper protection to the contents.

[0004] A disadvantage of this known container is that it has a substantial size that is determined by the size of the cap, usually a screw cap. So as to obtain a maximum strength against physical forces both the cap and the container have a cylindrical profile. As a consequence, the thickness of the container is quite large. The cylindrical shape also prevents easy stowing away the container.

[0005] The invention aims at providing an improved container of the kind mentioned in the preamble.

[0006] The invention further aims at providing a container that can be easily coupled to another object.

[0007] In addition, the invention aims to provide a combination of the container and a lid.

[0008] According to the invention, it is also aimed to provide a kit of parts, with the container according to the invention and a lid, and optionally a receptacle for coupling to the container.

[0009] So as to obtain at least one of the above mentioned aims, the invention provides a container as mentioned in claim 1. This container has the advantage that its shape can be made independent of a screw cap for closing of the container's opening. A manufacturer thus has the opportunity to make the size and shape of the container dependent on client requests, for example for easily stowing away the container or coupling the container to another item.

[0010] As a consequence, the size of the container can be made independent of the size and profile of the cap. Such synergistic effect is an advantageous effect.

[0011] The invention therefore relates to a container for holding fluid material, for example tablets or powder, comprising a body and an opening at an end thereof, characterized in that the opening is closed off with a removable seal. The seal, for example a heat seal, can have any desired shape and dimension. The manufacturer thus has a large degree of freedom in designing

both the container, the opening and the seal.

[0012] An optimum applicability is obtained when the container has a thickness of maximally 32 mm, preferably maximally 30 mm, more preferably maximally 28 mm, still more preferably maximally 25 mm. This allows the container to be stowed away easily in virtually any bag or pocket and even allows the container to be sent by regular mail.

[0013] It is preferred that the seal is connected to an edge surrounding the opening, a substantial part of the seal protruding outside the edge for maximally 2 mm, preferably maximally 1 mm and a smaller part of the seal protruding outside the edge for more than 2 mm. As a consequence, the dimension of the container remains small, whereas a user can easily peel off the seal by gripping the smaller part of the seal protruding outside the edge for more than 2 mm.

[0014] The container is preferably coupled to a receptacle for optimum stowing of the container. In this respect, the container preferably comprises at an end opposite the opening a cam for insertion in a recess provided in a receiving receptacle for mutually coupling the container and the receptacle. The receptacle may be a reusable liquid bottle, for example a water bottle, with a recess in its side wall, fitting the container according to the invention. An optimum receipt of the container is obtained when part of the side wall of the container fits in and against the recess whereas another part of the container's side wall, that is directed away from the container, has a shape that mimics the shape of the receptacle. For example, if the receptacle is a cylindrical bottle with a determined radius, the part of the container's side wall, that is directed away from the container, has a similar (fictitious) radius. The container thus exactly fits in the recess in the receptacle's side wall.

[0015] A preferred embodiment is obtained when the container is manufactured from a biodegradable material, for example poly lactic acid. This allows a user to discard of the container after its use with vegetable waste.

[0016] If the container is to be reused, for example using refills, it is preferred that the container stays intact over a prolonged time. In that circumstance, it is preferred that the container is manufactured from a reusable material, for example polypropylene.

[0017] Analogous to the preferred embodiment of the container described above, it may be preferably that the seal is manufactured from a biodegradable material, providing the same advantage.

[0018] According to another embodiment, the present invention relates to a combination of the container according to the invention and a lid, wherein the container and the lid are embodied for covering the container's opening by the lid, with the proviso that the lid is not a screw cap. This allows a manufacturer to shape the container and lid with a huge degree of freedom in its design.

[0019] Preferably, in the combination according to the invention, wherein the container and the lid are embodied for coupling the container to a receptacle, the lid com-

prises a coupling means for detachably coupling the lid and the receptacle. This provides the advantage that the container can always be coupled to, for example a water bottle, allowing a user to swallow the product in the container, for example a medicine, with some water. Other products that should be swallowed with water, for example drugs and vitamin pills, can be easily and repeatedly consumed with water whereas the user will never lose the product.

[0020] An advantageous way to couple the lid and the container to the receptacle is obtained when the container comprises the cam at the end away from the opening and wherein the lid, covering the opening, comprises the coupling means for detachably coupling the lid and the receptacle. The coupling means may for example, and preferably, comprise a magnet or a ferromagnetic material. The receptacle then comprises at the point of contact a ferromagnetic material or a magnet, respectively. Both may be provided with a magnet, but in that case it must be ensured that the magnet poles do not repel each other.

[0021] A further preferred embodiment, wherein an optimum coupling is obtained, consists of a combination as mentioned above, further comprising the receptacle, wherein the receptacle comprises the recess for receiving the cam provided on the container for mutually coupling the container and the receptacle, wherein the receptacle furthermore comprises a magnet for mutual coupling to the lid's magnet or ferromagnetic material.

[0022] Accordingly, the present invention also relates to a kit of parts for holding a product, comprising the container according to the invention and as described in claim 1, with the product, and a lid for covering the opening in the container. Such kit provides a user the advantage that he can easily carry his product, for example a drug, a medicine, a vitamin pill or the like, with him.

[0023] A further preferred embodiment is obtained by such kit of parts, comprising the container as mentioned above with the product, and a lid substantially as mentioned in the combination in accordance with the present invention without a magnet or a ferromagnetic material. Such allows a manufacturer to manufacture a more simple and cheaper product whereas a user still has the advantage that he can carry along a preferred container. The advantage of such lid without a coupling means is that the user has a cheap lid at his disposal that turns the combination of container and lid from an embodiment that is specifically made for use with a receptacle into an embodiment that can be easily applied for general use and containing the product, for example tablets. A lid for general use may be made from a biodegradable material as well, just like the container as mentioned above, for example poly lactic acid. This allows a user to discard of the lid after its use with vegetable waste. On the contrary, the lid comprising the coupling means, for example a magnet of a ferromagnetic material, is preferably made from a durable material, like a polypropylene or another plastic.

[0024] A still more preferred embodiment is obtained

with a kit of parts for holding a product according to the invention, further comprising the receptacle. A user then has the advantage that he can always swallow the product with water. Such is especially advantageous when the user suffers from a disease with which one regularly has to take a medicine.

[0025] Finally, the invention relates to a kit of parts as mentioned above, wherein the receptacle comprises a recess for receiving the cam at an end part of the container, wherein the receptacle further comprises a magnet at a position remote from said recess and wherein the lid comprises a cooperating magnet or a ferromagnetic material for mutually coupling the lid and the receptacle. This allows one to easily but safely couple the container and the lid to a receptacle, still allowing the user to remove the container with the lid from the receptacle and taking a medicine or any other product contained in the container.

[0026] Hereafter, the invention will be further described by means of a drawing. The drawing shows in:

Fig. 1 a perspective view of a container according to the invention,

Fig. 2 a perspective view of a receptacle for use in the invention,

Fig. 3 a combination of a container and a receptacle according to the invention, and

Fig. 4 a perspective view of a lid for covering an opening in the container according to the invention.

[0027] The same and similar parts and features have been denoted by the same reference numerals in the figures. However, for ease of understanding the figures, not all parts that are required for a practical embodiment have been shown in the figures.

[0028] Fig. 1 shows a perspective view of a container 1 according to the invention. The container 1 has an elongate shape wherein an opening 2 is provided at a first end 3 thereof. A surrounding wall 4 extends between first end 3 and a second end 5. At second end 5 a cam 6 is provided, extending substantially in the elongate direction.

[0029] Near opening 2 the outer surface of the wall 4 is provided with a shoulder 7, such that the outer diameter of the container 1 near an edge 8 defining the opening 2, is smaller than the diameter at the part towards the second end 5. This allows a cap 9 to be placed on the container 1, covering the opening 2 and part of the wall 4 near the opening 2.

[0030] Fig. 2 shows a receptacle 10 with a recess 11 that is embodied and shaped for receiving the container 1 according to the invention. The shape of the recess 11 is substantially equal to the part of the container 1 that contacts said recess 11.

[0031] The lid 9 is positioned near the bottom 12 of the receptacle 10. As a consequence, the cam 6 can be placed in a cavity in the recess 11. The container is not shown in Fig. 2, but will be placed in the recess extending

from the bottom 12, between the lid and the end part 13..

[0032] In Fig. 3 a combination of the container 1 and the lid 9 is shown, placed in the recess 11 of the receptacle 10.

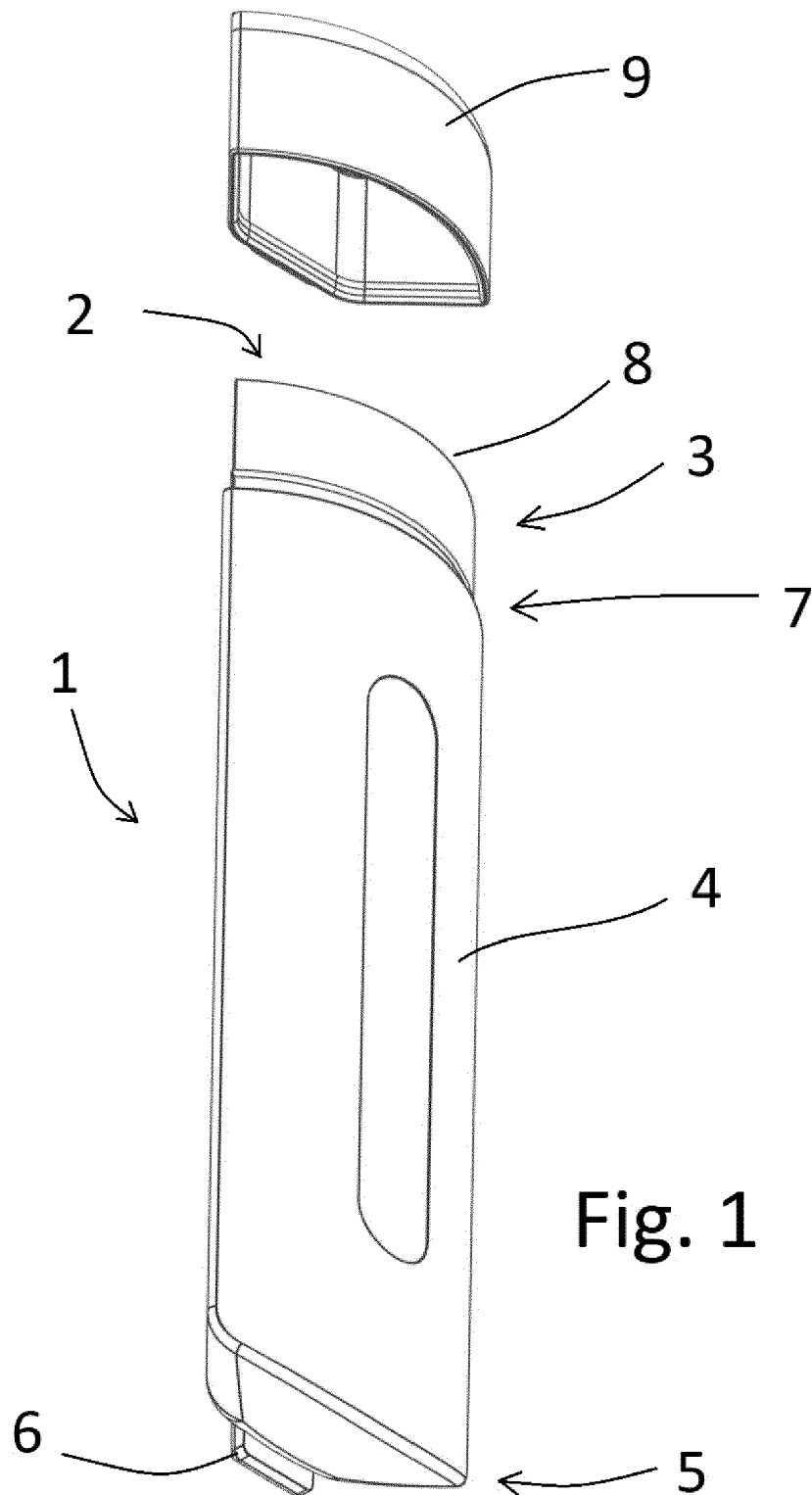
[0033] Fig. 4 finally shows the lid 9, comprising a coupling means 14 for coupling the lid to the receptacle. The coupling means 14 is placed at a straight wall part 15 that contacts straight wall part 16 of the receptacle, whereas circular wall part 17 has a same radius or curvature as the circular wall part 18 of the receptacle 10.

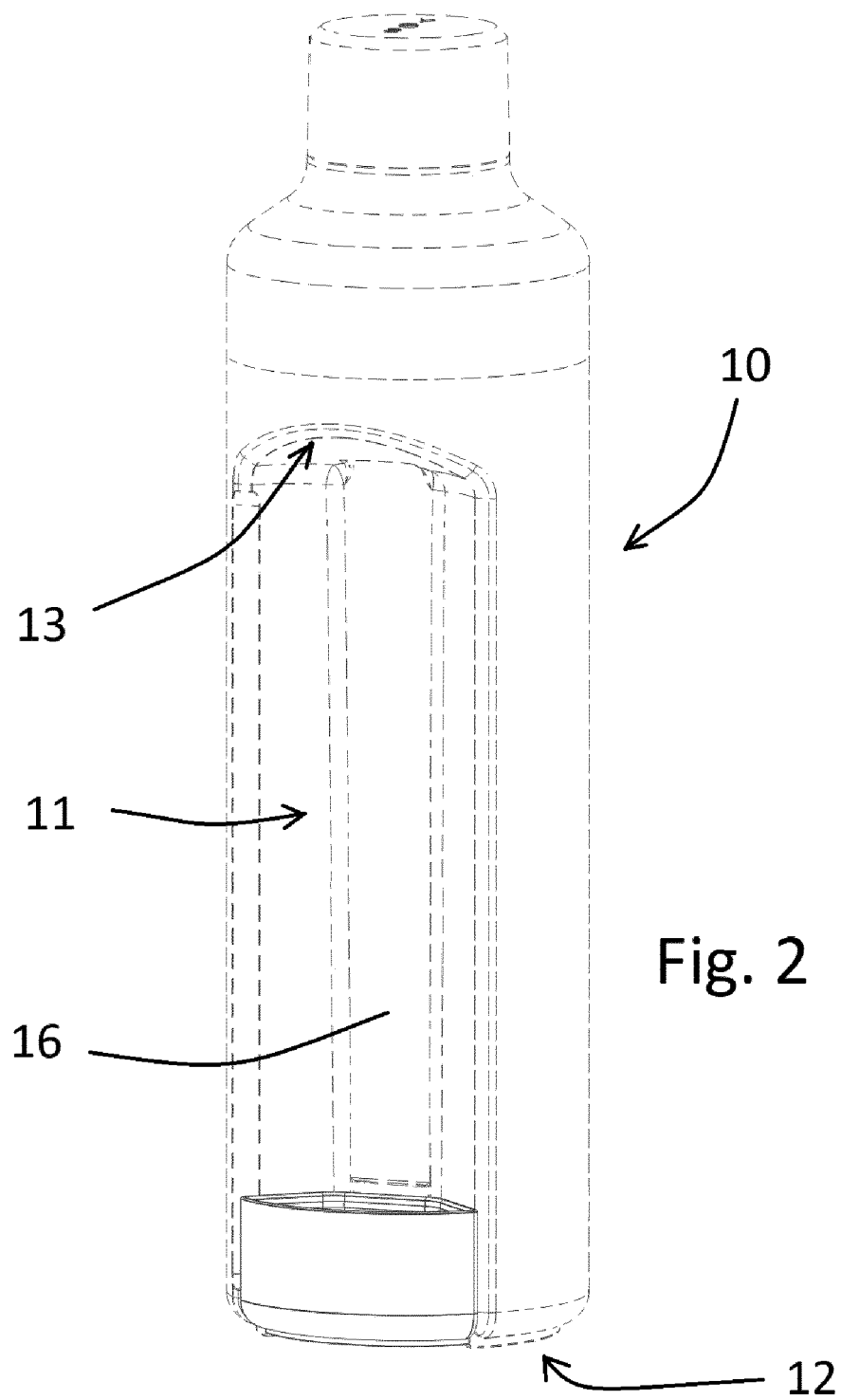
[0034] The invention is not limited to the embodiments as mentioned above and as shown in the drawings. The invention is limited by the claims only.

[0035] The invention also relates to all combinations of features described here independently of each other.

Claims

1. A container for holding fluid material, for example tablets or powder, comprising a body and an opening at an end thereof, **characterized in that** the opening is closed off with a removable seal. 20
2. A container according to claim 1, wherein the container has a thickness of maximally 32 mm, preferably maximally 30 mm, more preferably maximally 28 mm, still more preferably maximally 25 mm. 25
3. A container according to claim 1 or 2, wherein the seal is connected to an edge surrounding the opening, a substantial part of the seal protruding outside the edge for maximally 2 mm, preferably maximally 1 mm and wherein a smaller part of the seal protrudes outside the edge for more than 2 mm. 30
4. A container according to claim 1, wherein the container comprises at an end opposite the opening a cam for insertion in a recess provided in a receiving receptacle for mutually coupling the container and the receptacle. 35
5. A container according to any of the preceding claims, wherein the container is manufactured from a biodegradable material, for example poly lactic acid. 40
6. A container according to claim 5, wherein the container is manufactured from a reusable material, for example polypropylene. 45
7. A container according to any of the preceding claims, wherein the seal is manufactured from a biodegradable material. 50
8. A combination of the container according to claim 1 and a lid, wherein the container and the lid are embodied for covering the container's opening by the lid, with the proviso that the lid is not a screw cap. 55
9. A combination of the container and the lid according to claim 8, wherein the container and the lid are embodied for coupling the container to a receptacle, wherein the lid comprises a coupling means for detachably coupling the lid and the receptacle. 5
10. A combination according to claim 9, wherein the coupling means for detachably coupling the lid and the receptacle comprises a magnet or a ferromagnetic material. 10
11. A combination according to any of claims 8-10, further comprising the receptacle, wherein the receptacle comprises the recess for receiving the cam provided on the container for mutually coupling the container and the receptacle, wherein the receptacle furthermore comprises a magnet for mutual coupling to the lid's magnet or ferromagnetic material. 15
12. A kit of parts for holding a product, comprising the container according to claim 1 with the product, and a lid as mentioned in claim 8. 20
13. A kit of parts for holding a product, comprising the container according to claim 1 with the product, and a lid substantially as mentioned in claim 8 without a magnet or a ferromagnetic material. 25
14. A kit of parts for holding a product according to claim 12, further comprising the receptacle. 30
15. A kit of parts according to claim 14, wherein the receptacle comprises a recess for receiving the cam at an end part of the container, wherein the receptacle further comprises a magnet at a position remote from said recess and wherein the lid comprises a cooperating magnet or a ferromagnetic material for mutually coupling the lid and the receptacle. 35





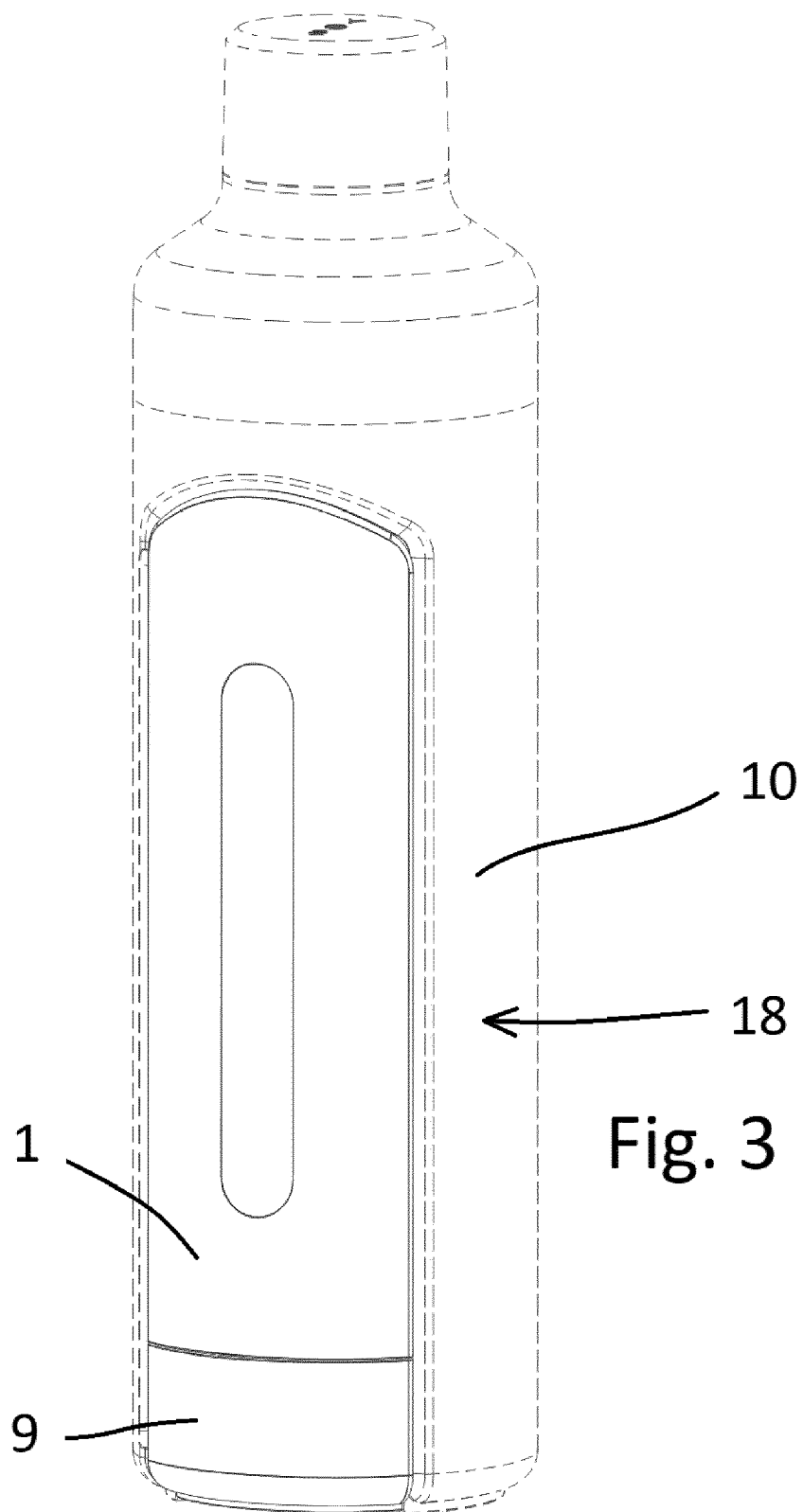


Fig. 3

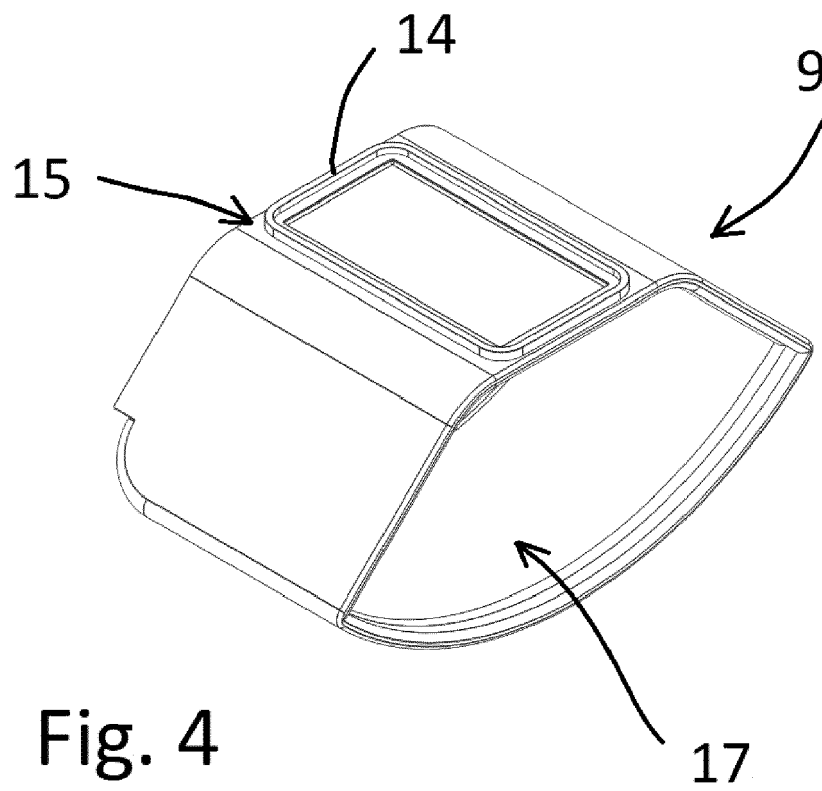


Fig. 4



EUROPEAN SEARCH REPORT

Application Number
EP 20 16 2557

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EPO FORM 1503 03.82 (P04C01)

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X A	US 2019/224077 A1 (STEIN JOSHUA D [US] ET AL) 25 July 2019 (2019-07-25) * figures 7-12 * * paragraph [0076] - paragraph [0080] * * paragraph [0087] - paragraph [0097] *	1-3,5-9, 12-14, 10,11,15	INV. A61J1/14 A61J1/16 B65D21/02
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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 15 October 2020	Examiner Koszewski, Adam
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	

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

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5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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