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(54) Dispenser for granular or powdered food products, for example grated cheese

(57) This invention relates to a dispenser of granular or powdered food products, such as grated cheese and the like food products in loose form. The dispenser (1) comprises a tray-type container (2), closed at the top with a sheet cover (3) of a synthetic material heat-sealed around the tray rim, at least one side wall (4) of the tray being formed with a discharge port (5); a tear-off label (6) being arranged to cover the port (5).

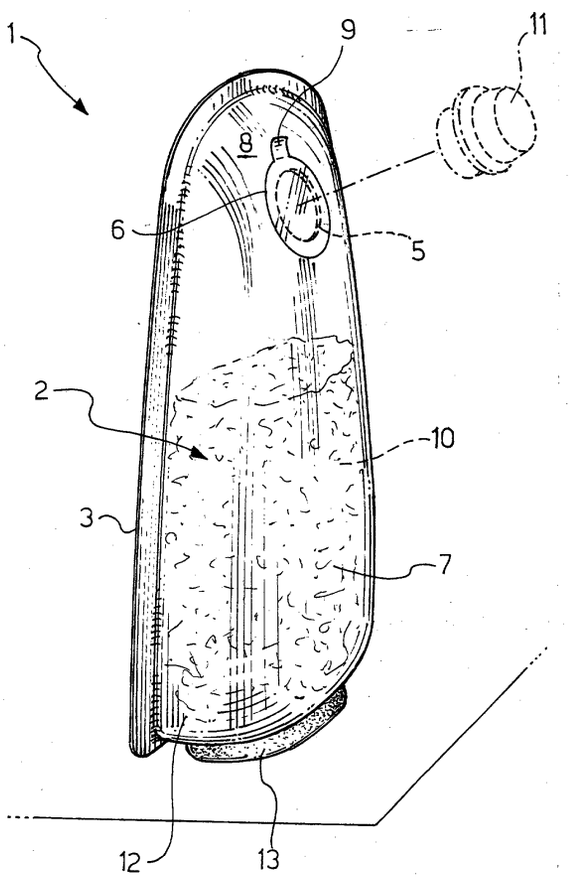

FIG. 3

EP 1 234 782 A1

Description

Field of Application

[0001] The invention relates, particularly but not exclusively, to a dispenser for granular or powdered food products, such as grated cheese and the like food products in loose form.

[0002] The invention relates, particularly but not exclusively, to the packaging, the long-term preservation and the dispensing of such dairy products as grated cheese, and this description covers this field of application for convenience of illustration only.

Prior Art

[0003] Already for some years, there has been growing acceptance by the consumer public of certain food products which, despite their perishable nature, can be bought at the food store in an as-fresh condition by virtue of the products having been packaged under an inert medium and/or stored at a low temperature, e.g. at +4°C.

[0004] A typical example may be that of freshly made "pasta", regarded nowadays as a product with a medium shelf-life to be kept in the cooled counters of food stores.

[0005] Packaging techniques have been developed which represent useful contributions towards preserving the organoleptic characteristics of food products, and which suit different sorts of perishable products and consumption styles. For dairy products, such as e.g. aged cheese, a packaging technique has long been in use, whereby cheese cuts are vacuum packaged under a transparent film envelope, the film being wrapped around the product and heat sealed in the process of drawing the vacuum. Further as relates to aged cheese, consumers appear to welcome pre-grated cheese, which are customarily sold in pliant bag packages.

[0006] Another way of storing grated cheese in a durable manner is to pack it into tray-type containers of a thermoformed plastics material, which containers are closed at the top with a sheet cover heat sealed all around the container rim. Although advantageous on several counts, such containers are of limited serviceability for, once opened for consumption, they cannot be re-sealed to ensure a good preservation of the product, so that the latter has to be consumed within a comparatively short period of time.

[0007] In this context, there also exists a growing demand from consumers for containers that can also serve as dispensers of a loose product packaged therein.

[0008] For this purpose, the prior art provides rigid containers of a generally cylindrical shape, which mount sophisticated dispensing and re-sealing structures effective to preserve, within limits, the organoleptic characteristics of the product and at the same time ensure that it can be conveniently dispensed.

[0009] These dispensing containers have major limitations in their high cost, due to the complicated construction of their dispenser part, and in their unsuitability to provide disposable packages, a form that is looked upon favorably by both consumers and store operators.

[0010] A cheaper alternative is disclosed in Italian Utility Model Patent No. RE95U000016, which provides a cup-shaped container that is closed at the top with a sheet cover heat-sealed to the cup rim, the container having an aperture at its bottom for dispensing its contents.

[0011] The last-mentioned solution is quite inexpensive, but has failed to attract commercial interest due to an important flaw in its design. The downward tapering shape of the cup combines with the weight of its contents to funnel and crowd the granular particles toward the cup bottom. Thus, the particles becomes tightly packed and cannot be dispensed through the bottom opening any more. This effect is enhanced in the case of products with a high moisture content, such as grated cheese.

[0012] The technical problem underlying this invention is that of providing a dispenser for loose food products, in particular granular or powdered products such as grated cheese, with appropriate structural and functional features to allow a long-term preservation of the food products therein contained, as well as to facilitate dispensing in precise amounts, thereby to overcome the drawbacks outlined with reference to the prior art.

Summary of the Invention

[0013] The principle upon which the solution proposed in the present invention is founded is that of providing a dispenser in the form of a tray-type container having at least one side wall formed with a discharge port that is normally closed by a tear-off label.

[0014] Based on this principle, the technical problem is solved by a dispenser as previously indicated and defined in the characterizing part of Claims 1 foll..

[0015] The features and advantages of a dispenser according to the invention will be apparent from the following description of an embodiment thereof, given by way of non-limitative example with reference to the accompanying drawings.

Brief Description of the Drawings

[0016] In the drawings:

Figure 1 is a schematic perspective view of a dispenser of loose food products according to the invention;

Figure 2 is a schematic perspective view of a second embodiment of the inventive dispenser;

Figure 3 is a schematic perspective view of a preferred embodiment of the inventive dispenser;

Figure 4 is a schematic perspective view of a modified embodiment of the inventive dispenser;

Figure 5 is a schematic side view of the dispenser shown in Figure 2; and

Figure 6 is a schematic side view of the dispenser shown in Figure 3.

Detailed Description

[0017] With reference to the drawing views, a dispenser of granular or powdered food products, such as grated cheese or the like loose food products, according to this invention, is shown at 1 in schematic form and is adapted to conserve food products durably therein.

[0018] The dispenser 1 also serves as a container for the food product, a granular type of food product being generally shown at 10. This dispenser is also suitable for long-term storage of the products therein in the cooled counters of food stores.

[0019] Advantageously in this invention, the dispenser 1 comprises a tray-type container 2, which is closed at the top with a sheet cover 3 of a synthetic material heat-sealed all around the tray rim.

[0020] The container 2 is preferably made of a thermoformed synthetic plastics material for food applications. The product 10 is contained and preserved in the dispenser 1 under an inert atmosphere, preferably nitrogen gas.

[0021] In a preferred embodiment, the container 2 is thermoformed from a multi-layer sheet of a transparent synthetic material. More particularly, the multi-layer sheet comprises: an outward layer of polystyrene, polyolefin, or polyester resins; an intermediate barrier layer, e.g. ethylvinyl alcohol; and an inward layer of weldable polyesters.

[0022] The intermediate layer is substantially air-impervious and exerts an antagonist activity towards oxygen. Thus, the intermediate layer serves an anti-ageing function that contributes to a proper and durable product preservation.

[0023] Sheet 3 also has a multi-layered structure and includes an oxygen-antagonist intermediate layer.

[0024] The tray-type container has a shallow elongate shape, with a length dimension L greater than the width N, and a depth H being ¼ to ½ the length L.

[0025] Preferably, the depth H of the tray-type container is less than one-third its length L.

[0026] Advantageously, at least one side wall 4 of the tray is formed with a discharge port 5 through which the loose granular product can flow out in use of the dispenser by a consumer of the product. In such a way, the granular product is not crammed against the discharge port 5 by gravity, and the flaking off and delivery of the grated cheese is facilitated.

[0027] The port 5 is circular and has a diameter of 14 to 22 mm, preferably of 16 mm.

[0028] A label 6 is applied originally over the port 5 to keep the dispenser 1 sealed throughout its shelf life, and is adapted to be torn off by the consumer. The label 6 also includes a barrier layer of the same type as that provided in the structure of the container 2.

[0029] The label 6 is of a self-sticking type with an adhesive-free tab 9 providing a grip for tearing off the label. Alternatively, the label 6 could be heat sealed.

[0030] The dispenser 1 is also provided with a stopper 11 for quick application to the port 5 to close it again after use. If desired, the stopper 11 may be perforated and include a snap-on cap.

[0031] In a second embodiment, shown particularly in Figure 2, the dispenser 1 has a side wall 4' set at an angle β of inclination to the container bottom 7. This dispenser also has a flat side wall portion 4" set at a smaller angle α of inclination to the tray bottom 7 than angle β. The discharge port 5 for the product is provided in the flat portion 4", so as to further facilitate the flaking off and delivery of the granular product in use of the dispenser.

[0032] In the dispenser of this invention, the side walls actually define a funnel-shaped section in the tray, but the discharge port 5 is formed laterally in said funnel-shaped section, i.e. through a side wall rather than the bottom as in the state of the art.

[0033] In this way, the product aggregation and packing at the tray bottom, which made its issuing out of conventional dispensers practically impossible, is avoided.

[0034] In the dispenser of this invention, the port formed in a side wall has proved effective to promote the flaking off and the regular delivery of the product as required.

[0035] Of course, the port 5 in the wall 4" would also be covered with a self-sticking or heat-sealed label adapted to be torn off.

[0036] In a preferred embodiment, shown in Figure 3, the tray container of the dispenser 1 is boat-shaped.

[0037] Advantageously, the discharge port 5 for the product is provided in the pointed forward end of the boat shape.

[0038] Here too, the port 5 is covered with a label 6, and a stopper 11 for re-closing the container is provided for quick application to the port 5.

[0039] In this particular embodiment, a side wall 12 of the tray-type container 2, located opposite from the side wall 4 with the port 5, advantageously extends almost square to the container bottom 7. This allows the dispenser 1 to stand upright on said wall 12.

[0040] Alternatively, a pad 13, located at the container bottom 7, may be associated with the wall 12 of the tray-type container 2 opposite from the side wall 4. The pad 13 has preferably an adhesive-coated surface for quick attachment to the side wall 12 of the dispenser 1, and is useful to prop up the dispenser 1, such that the latter can rest upright on the top edge of the wall 12 and the pad 13.

[0041] Another embodiment of the dispenser 1 ac-

cording to the invention will now be described briefly with reference to Figure 4.

[0042] In this embodiment, the dispenser 1 is cup-shaped as at 16, and the port 5 is provided in a flat portion 14 of the cup side wall close to the cup bottom 15.

[0043] Here again, the cup-shaped container is made from a thermoformed transparent multi-layer sheet, and closed at the top with a sheet cover 3 of a synthetic material, which is heat-sealed around the cup rim.

[0044] In addition, the port 5 is covered with the tear-off label 6, which label will then leave the place to the stopper 11 for re-closing the dispenser.

[0045] The dispenser of this invention does solve the technical problem, and affords advantageous features, foremost among which is that it doubles as a container for the long-term storage of food products under an inert atmosphere, and as a uniquely serviceable dispenser.

[0046] In fact, the grated product is allowed to run out smoothly and controllably, and even in the event of a product with a high moisture content tending to aggregate into lumps, a gentle shaking of the dispenser is enough to restore the product to its loose granular form for an efficient delivery.

[0047] In all conditions of use, the product will always be discharged through one side, and will not crowd toward the discharge port under its own weight, as is instead the case with conventional dispensers.

[0048] All of the above-described embodiments of the container according to the invention are suitable for a very large volume production and for being filled and sealed by means of currently available automatic filling apparatus.

[0049] Furthermore, the dispenser of this invention allows the food products packaged in it to be preserved and used for a relatively long time after the package is unsealed.

Claims

1. A dispenser (1) for granular or powdered food products (10), such as grated cheese and the like food products in loose form, **characterized in that** it comprises a tray-type container (2), closed at the top with a sheet cover (3) of a synthetic material heat-sealed around the tray rim, at least one side wall (4) of the tray being provided with a discharge port (5), and a tear-off label (6) being arranged to cover the port (5).

2. A dispenser according to Claim 1, **characterized in that** said side wall (4) includes a flat portion (4") lying at a smaller angle to the tray bottom (7), and **in that** said port (5) is provided in said portion (4").

3. A dispenser according to Claim 1, **characterized in that** said tray-type container (2) includes a barrier layer antagonizing penetration of oxygen into the container.

4. A dispenser according to Claim 1, **characterized in that** said tray-type container (2) is boat-shaped.

5. A dispenser according to Claim 4, **characterized in that** said port (5) is provided in the pointed forward portion (8) of the boat-shaped container.

6. A dispenser according to Claim 1, **characterized in that** said label (6) is self-sticking and it has a multi-layered structure incorporating an antagonist barrier layer.

7. A dispenser according to Claim 1, **characterized in that** said label (6) is heat sealed and it has a multi-layered structure incorporating a barrier layer.

8. A dispenser according to Claim 1, **characterized in that** said self-sticking label includes an adhesive-free gripping tab (9).

9. A dispenser according to Claim 1, **characterized in that** it includes a stopper (11) for re-closing it, which is adapted for quick application to said port (5).

10. A dispenser according to Claim 1, **characterized in that** one wall (12) of the tray-type container (2) lying opposite from said side wall (4) extends almost square to the container bottom (7), such that the container can be made to stand upright on said one wall (12).

11. A dispenser according to Claim 1, **characterized in that** one wall (12) of the tray-type container (2) lying opposite from said side wall (4) is associated with a pad (13) placed at the container bottom (7) such that the container can be made to stand upright on said pad (12).

12. A dispenser according to Claim 1, **characterized in that** said port (5) is a circular port of a diameter in the 14 to 21 mm range.

13. A dispenser according to Claim 1, **characterized in that** the height of the tray-type container (2) is less than one-half the length thereof.

14. A dispenser according to Claim 1, **characterized in that** the height of the tray-type container (2) is less than one-third the length thereof.

15. A dispenser according to Claim 1, **characterized in that** said tray has a flat elongate shape.

16. A dispenser (1) for granular or powdered food products (10), such as grated cheese and the like food products in loose form, **characterized in that** said

container is a cup type (16), and that said port is provided in one side wall (14) near the cup bottom (15), a tear-off label (6) being arranged to cover the port (5).

17. A dispenser according to Claim 16, **characterized in that** said label (6) is self-sticking and it has a multi-layered structure incorporating an antagonist barrier layer.

18. A dispenser according to Claim 16, **characterized in that** said label (6) is heat sealed and it has a multi-layered structure incorporating an antagonist barrier layer.

19. A dispenser according to Claim 16, **characterized in that** said self-sticking label includes an adhesive-free gripping tab (9).

20. A dispenser according to Claim 16, **characterized in that** it includes a stopper (11) for re-closing it, which is adapted for quick application to said port (5).

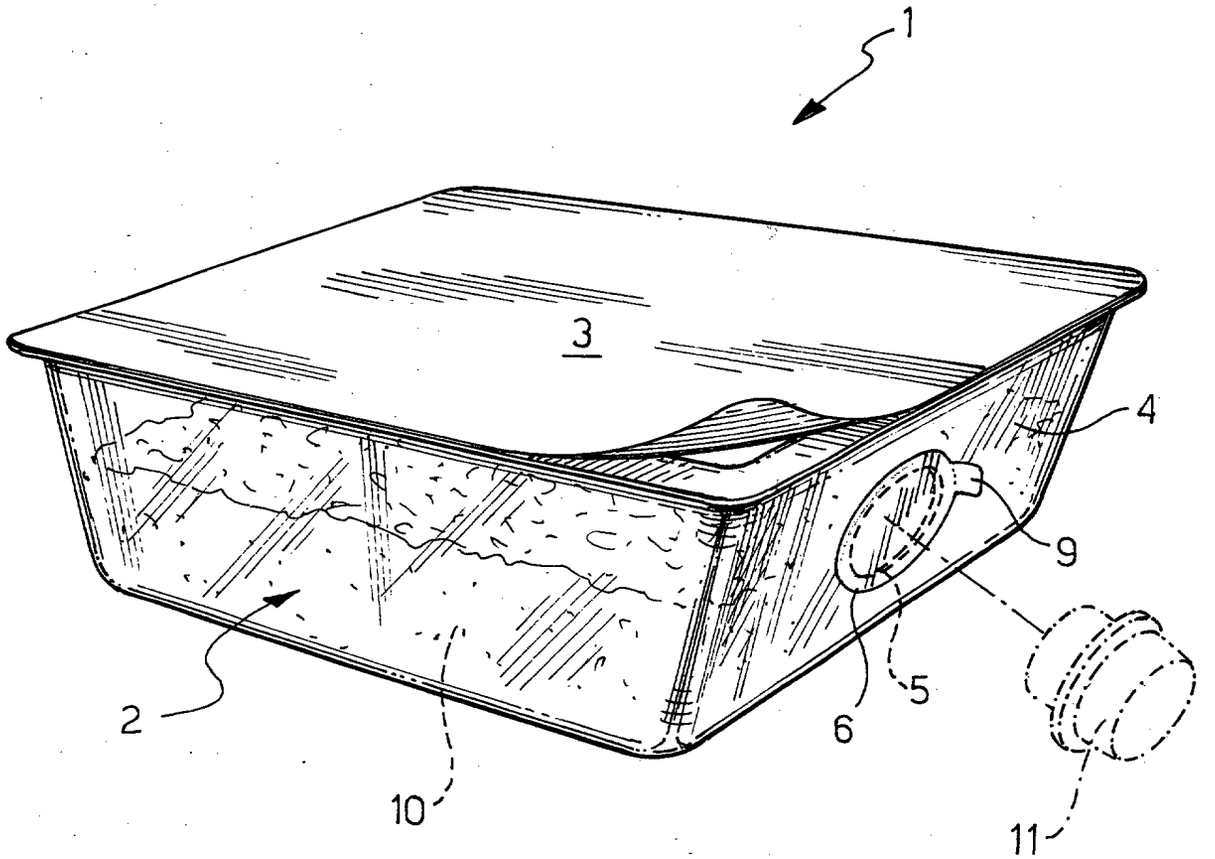

FIG. 1

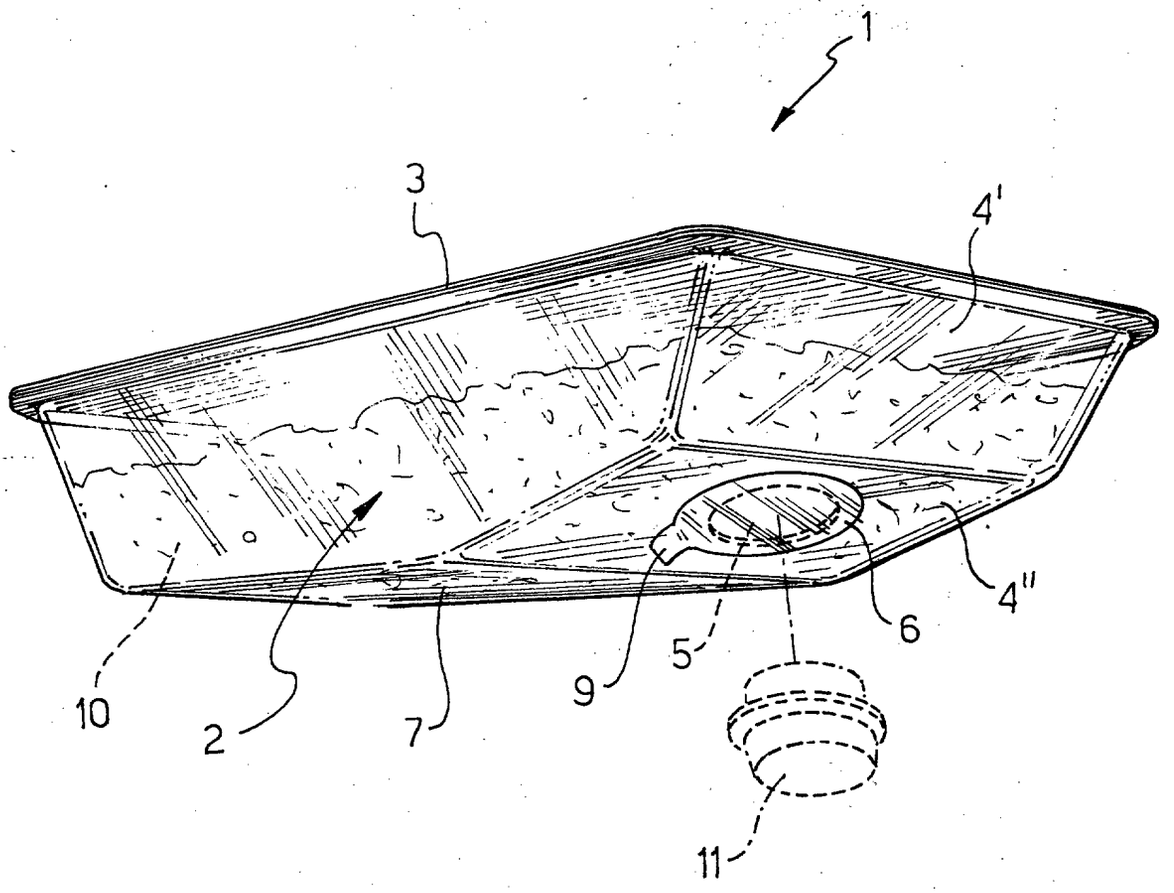

FIG. 2

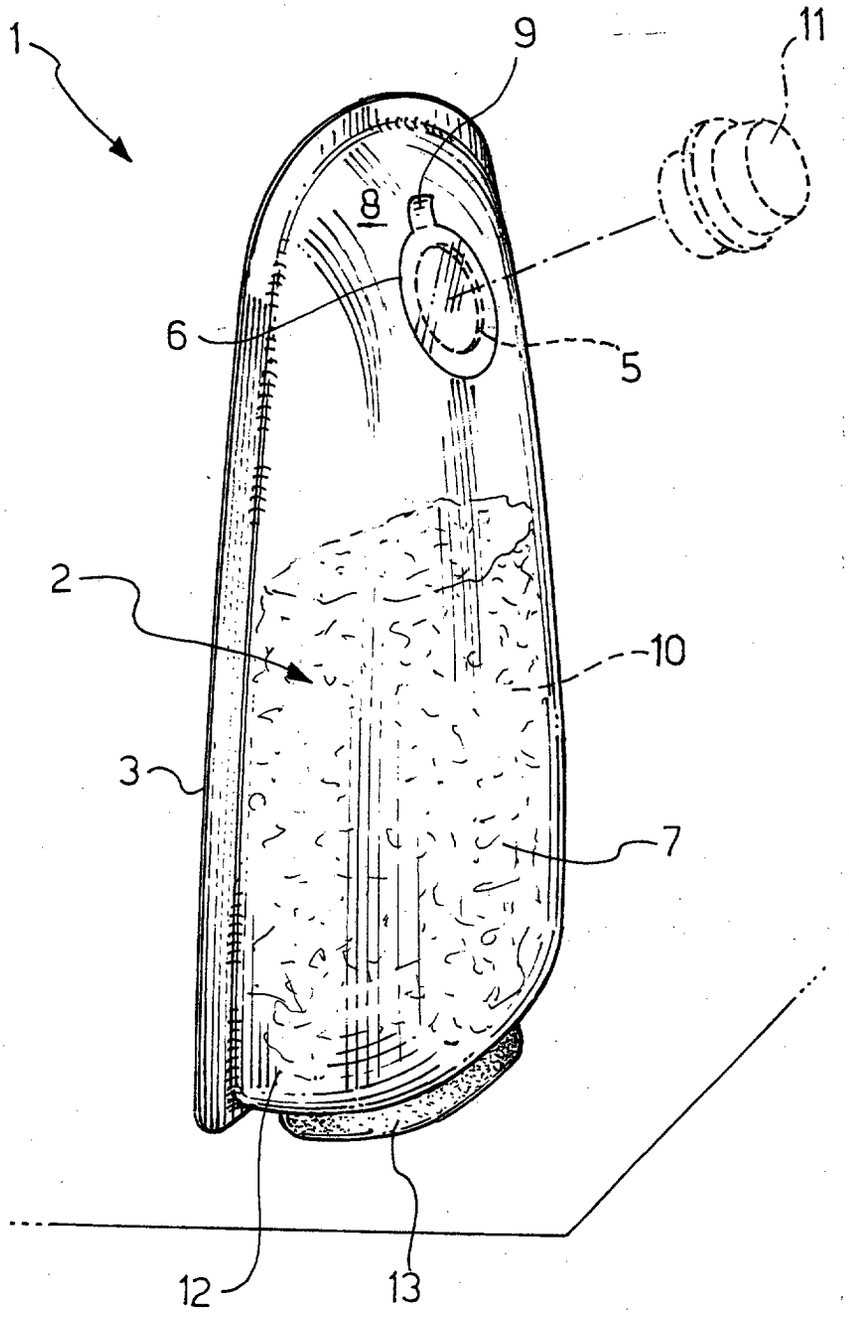

FIG. 3

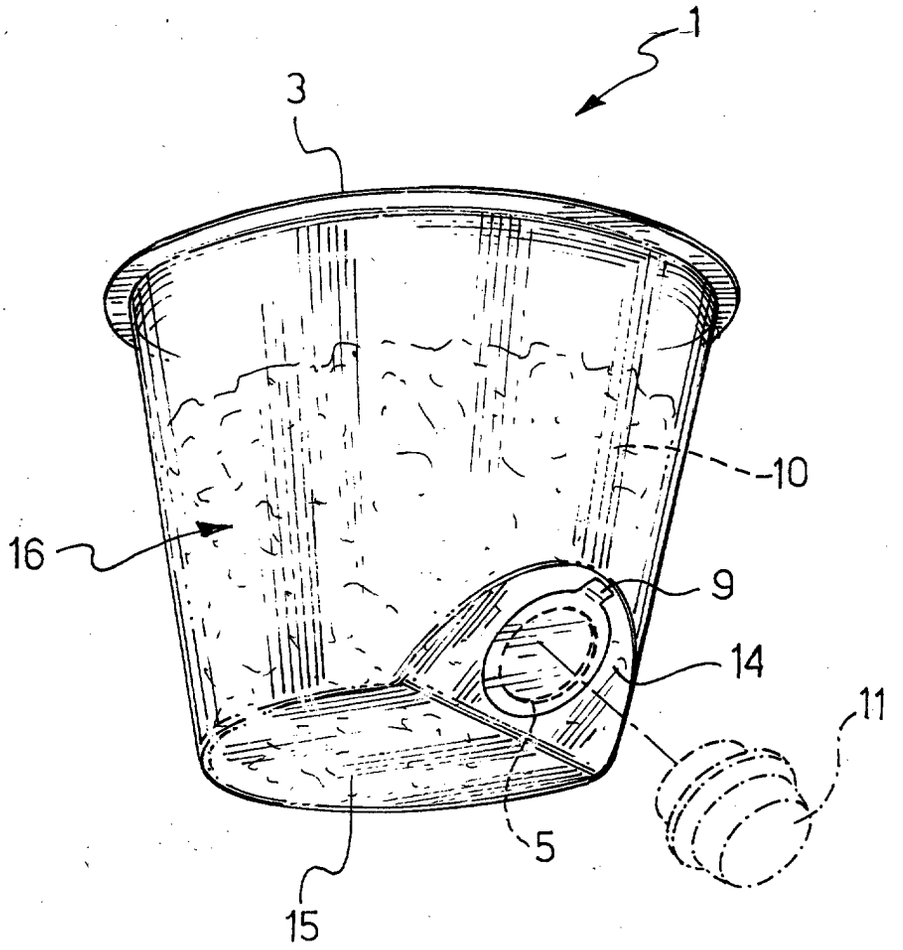

FIG. 4

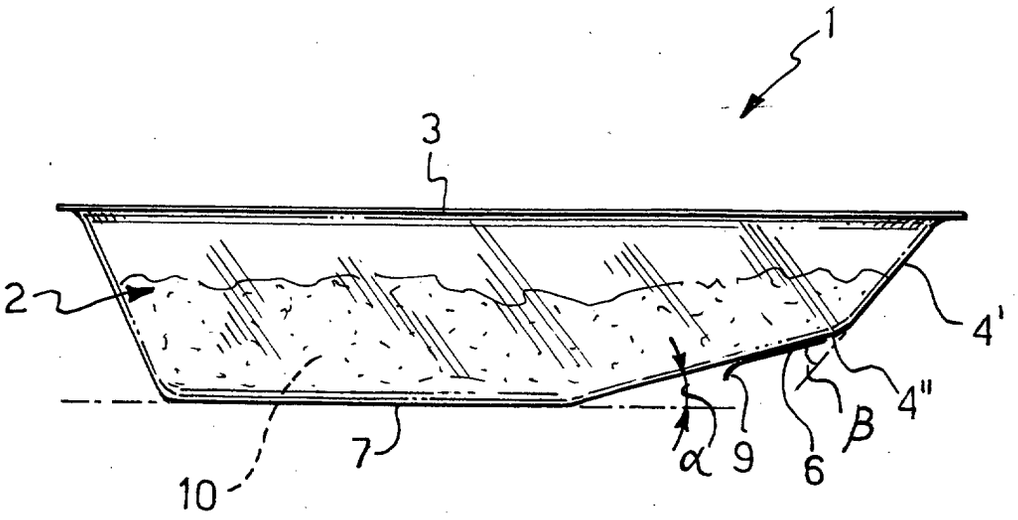

FIG. 5

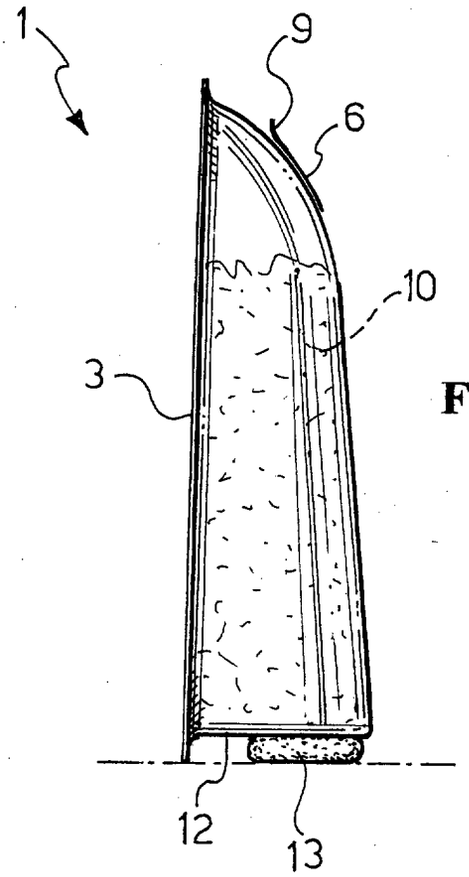

FIG. 6

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EUROPEAN SEARCH REPORT

Application Number
EP 01 83 0118

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	22 August 2001	Berrington, N

CATEGORY OF CITED DOCUMENTS

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Application Number
EP 01 83 0118

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
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The present search report has been drawn up for all claims

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