Title: VESSEL FOR PASTE AND CREAM PRODUCTS, SUCH AS COSMETIC, PHARMACEUTICAL PRODUCTS AND THE LIKE

Abstract: The present invention relates to a vessel for paste and cream products in general, such as cosmetic, pharmaceutical products and the like, comprising a vessel outer body (1), defining a chamber (2) for holding the product to be delivered, the chamber being closed, on one side, by a ceiling (3) having a delivering hole (4) and, on the other side, by an ejecting piston (10) coupled to the outer body. Closure means for removably closing the product delivery hole being moreover provided.
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.
VEssel for paste and cream products, such as cosmetic, pharmaceutical products and the like

BACKGROUND OF THE INVENTION

The present invention relates to a vessel for paste and cream products in general, such as cosmetic, pharmaceutical products and the like.

As is known, for delivering cream products are conventionally used vessels in the form of a tube, made by a lot of different making methods, said vessels allowing the product to be delivered by pressing or squeezing, and having, usually, the drawback that they does not allow a full delivery of the product held therein to be carried out.

Other prior solutions provide to use a rigid vessel, in which a pressure ejector is included, allowing the product to be properly delivered.

However, such an approach requires a comparatively high effort for delivering the product. Because of the above mentioned reason, this solution has not been found as satisfactory by the user.

Moreover, all the above mentioned prior solutions, have the further drawback that they do not provide a proper thermal protection to the product, which, in a lot of cases, can be negatively affected by a high temperature change.
SUMMARY OF THE INVENTION

Accordingly, the aim of the present invention is to overcome the above mentioned drawbacks, by providing a vessel for paste and cream products in general, such as cosmetic, pharmaceutical products and the like, allowing to thermally preserving the product held therein, thereby preventing said product from being negatively affected.

Within the scope of the above mentioned aim, a main object of the present invention is to provide such a vessel allowing to deliver the paste or cream product without requiring any large effort, while allowing the product to be fully used or exhausted.

Another object of the present invention is to provide such a vessel including a product delivery hole which is properly protected thereby preventing the product from stagnating in contact with air.

Yet another object of the present invention is to provide such a vessel for paste product in general, such as cosmetic, pharmaceutical products and the like, which, owing to its specifically designed construction is very reliable and safe in operation.

According to one aspect of the present invention, the above mentioned aim and objects, as well as yet other objects, which will become more apparent hereinafter, are achieved by a vessel for paste products in general, such as cosmetic, pharmaceutical products, and the like, in cream form,
characterized in that said vessel comprises a vessel outer body defining a chamber for holding the product to be delivered therein, said chamber being closed, on a side, by a ceiling having a product delivery hole and, on another side, by an ejecting piston, coupled to said vessel outer body, closure means for removably closing said product delivery hole being moreover provided.

BRIEF DESCRIPTION OF THE DRAWINGS

Further characteristics and advantages of the present invention will become more apparent hereinafter from the following detailed disclosure of a preferred, though not exclusive, embodiment of a vessel for paste products in general, such as cosmetic, pharmaceutical and the like products in cream form, which is illustrated, by way of an indicative, but not limitative, example in the accompanying drawings, where:

Figure 1 is an exploded perspective view of the vessel according to the present invention;

Figure 2 is a further perspective view illustrating the ejecting piston included in the vessel according to the invention;

Figure 3 illustrates the outer body of the vessel, as diametrically cross-sectioned;

Figure 4 illustrates a further diametrical cross-section view of the vessel according to the invention; and

Figure 5 illustrates a partially cross-sectioned view of the vessel according to the
invention, in an open position thereof.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

With reference to the number references of the above mentioned figures, the vessel for paste products in general, such as cosmetic, pharmaceutical and the like products, according to the present invention, comprises a vessel outer body, generally indicated by the reference number 1, which defines an inner chamber 2 provided for holding therein the product to be delivered, said chamber being closed, at the top thereof, by a ceiling 3, provided with a central delivery hole 4 which, advantageously, has a substantially frustum of cone configuration.

At the bottom portion of said chamber an ejecting piston, generally indicated by the reference number 10 is provided, said ejecting piston being coupled to the vessel outer body 1, as it will become more apparent hereinafter.

The outer body 1 is provided with an outer mantle 6, which practically defines a gap 7 encompassing the chamber 2 and providing a thermal barrier.

Moreover, the outer mantle or shell 6 comprises, toward the open portion thereof, an inner thread 20, therewith engages an outer thread 21, formed on a bottom lip 22 of the ejecting piston.

The latter is provided, at the top thereof, with a bottom element 23 encompassed by a sealing gasket 24, operating on the side walls of the chamber 2, thereby providing a tight closure of said chamber.
Moreover, a cross wall 25 is provided, which constitutes a handle element allowing to operate or drive the ejecting piston.

The ejecting piston, in particular, is caused to rotate so as to be gradually introduced into the chamber 2, while ejecting the product held in said chamber through the hole 4.

The delivery hole 4, in particular, can be advantageously closed by removable closure means, comprising a lug 30, formed on a closure cover element 31.

Said closure cover 31 can be mounted above the ceiling 3 and comprises a gripping projection or lug 32, diametrically arranged with respect to the pivot region 33, and at a nail recess 34 defined on the outer surface of the vessel outer body.

Accordingly, with the cover element 31 in a closure condition, the lug or projection 30 will be engaged in the frustum of cone shaped hole 4, thereby providing a perfect tight closure, and preventing the product to be delivered from contacting air.

Another important aspect of the present invention is that the mentioned gap 7 provides a thermal barrier, allowing the product to be perfectly preserved.

From the above disclosure it should be apparent that the invention fully achieves the intended aim and objects.

In particular, the vessel according to the present invention, in addition to providing a perfect preserving of the product, can be used in a very simple and easy manner, since the delivery of the
product can be simply obtained by turning the ejecting piston, by exploiting the diametrical wall 25, with a consequent introduction of said ejecting piston into the chamber 2.

The invention, as disclosed, is susceptible to several modifications and variations, all of which will come within the scope of the invention.

Moreover, all the constructional details can be replaced by other technically equivalent elements.

In practicing the invention, the used materials, as well as the contingent size and shapes can be any, depending on requirements.
CLAIMS

1. A vessel for paste and cream products in general, such as cosmetic, pharmaceutical products and the like, characterized in that said vessel comprises a vessel outer body, defining a chamber for holding therein the product to be delivered, said chamber being closed, on a side, by a ceiling having a product delivery hole and, on the another side, by a product ejecting piston coupled to said vessel outer body, and that closure means for removably closing said product delivery hole are moreover provided.

2. A vessel for paste and cream products in general, according to the preceding claim, characterized in that said vessel outer body defines an outer mantle which form a gap in cooperation with the chamber delimiting wall.

3. A vessel for paste and cream products in general, according to the preceding claims, characterized in that said vessel comprises, at the open end portion of said mantle, an inner thread which can be engaged with an outer thread formed on a lip of the product ejecting piston.

4. A vessel for paste and cream products in general, according to one or more of the preceding claims, characterized in that said product ejecting piston comprises a bottom which is circumferentially encompassed by a gasket which can be tightly engaged with the side walls of said product chamber.

5. A vessel for paste and cream products in general, according to one or more of the preceding
claims, characterized in that said product ejecting piston comprises a diametrical wall, designed for operating as a handle element for rotatively driven the product ejecting piston.

6. A vessel for paste and cream products in general, according to one or more of the preceding claims, characterized in that said product delivery hole has a frustum of cone or tapering configuration.

7. A vessel for paste and cream products in general, according to one or more of the preceding claims, characterized in that said closure means for removably closing said product delivery hole comprise a projection defined on a cover removable coupled to said ceiling.

8. A vessel for paste and cream products in general, according to one or more of the preceding claims, characterized in that said cover is made as a single piece with said vessel outer body.

9. A vessel for paste and cream products in general, according to one or more of the preceding claims, characterized in that said cover comprises a gripping lug, diametrically arranged with respect to the pivot portion of said cover, said gripping lug with said covering in a closure condition thereof, being arranged at a nail cut-out, defined by said vessel outer body.

10. A vessel for paste and cream products in general, according to one or more of the preceding claims, characterized in that said gap, closed at the bottom thereof by the engagement between said male thread and inner thread, provides a thermal barrier for thermally protecting said products held in said
chamber.

11. A vessel for paste and cream products in general, such as cosmetic, pharmaceutical products and the like, according to one or more of the preceding claims, and substantially as broadly disclosed and illustrated and for the intended aim and objects.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B65D83/76

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B65D B05B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Date of the actual completion of the international search: 20 June 2003

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