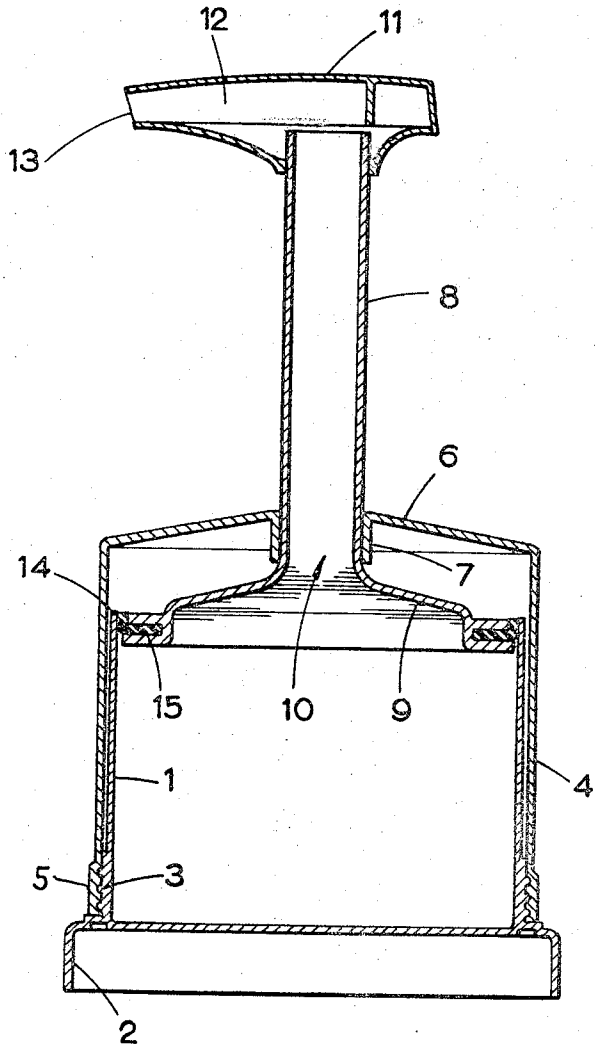
Aug. 22, 1967 H. A. ATKINS 3,337,092

DISPENSERS

Filed Feb. 9, 1966



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DISPENSERS

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ABSTRACT OF THE DISCLOSURE

The invention relates to a container for pasty materials such as hair creams which has a device for dispensing the pasty material. The container is generally cylindrical with an open end and a generally cylindrical cap with a closed end fits over the container and extends towards its closed end to provide a double wall. A tubular stem of a dispensing plunger extends through the cap and has a piston which is a sliding fit inside the container. The interior of the stem communicates with the interior of the container through an aperture in the piston so that when the dispensing plunger is depressed pasty material from the container is forced through the tubular stem and is discharged.

This invention relates to devices for dispensing pasty materials such as hair creams.

It is known to pack pasty materials such as hair creams and cosmetic creams in so-called "double walled" jars. Such jars have the advantages of strength and stability while the insulation provided by the air space between the two walls assists in preserving the materials. However, these jars have the disadvantage of "deceptive packaging" in that they are open to the attack that they deceive prospective customers by suggesting that they contain more material than they actually do contain.

It is an object of the invention to provide a combined dispenser and double walled container for such materials which does not suffer from these disadvantages and is attractive in appearance, simple in operation and economical to manufacture.

According to the present invention, such a device comprises a cylindrical container closed at one end and open at the other: a removable cylindrical closure cap which is closed at one end and open at the other end, the said cap fitting over the open end of the container and which extends to the closed end of the container thereby to provide a double wall; and a dispenser plunger which is slidably mounted in the closure cap and has a piston which is sliding fit inside the container, the said plunger having a discharge passage communicating with the interior of the container.

A preferred embodiment of the invention is illustrated in the sectional elevation which is the single figure of the accompanying drawing. The device for dispensing hair creams or similar pasty materials illustrated in the drawing is made of synthetic plastics material (for example, polystyrene) and comprises a cylindrical container **1** which is open at one end, hereinafter considered to be the top. This container has a base formed as a cylindrical skirt **2** extending below the closed bottom of the container and having a diameter larger than the diameter of the container **1**.

The cylindrical wall of the container **1** has an external annular shoulder **3** at the bottom immediately above or adjacent the skirt or base **2**. This shoulder **3** is externally screw threaded.

A removable closure and dispenser cap **4** having a height greater than that of the cylindrical wall of the container **1** has a lower end portion **5** of greater diameter than that of the remainder of the cap. This lower end portion **5** is internally screwthreaded so that it can be screwed on the externally screw-threaded portion **3** of the container **1**. Thus, when the cap **4** is screwed on to the container **1** it acts as an outer shell so that the device has a double wall.

The top **6** of the cap is of shallow truncated frustoconical form with a central aperture leading to an open cylindrical passage **7** inside the cap. A tubular neck or stem **8** of a dispenser plunger is slidable in this passage **7**. A piston **9** which is a sliding fit in the cylindrical container **1** is integral with the tubular stem or neck **8** and has an opening **10** so that when the piston is displaced downwards in the container **1**, pasty material inside the container will pass the passage formed by the inside of the tubular neck or stem **8**. A combined outlet and plunger handle **11** is fitted to the top of the neck or stem and has a lateral passage **12** communicating with the interior of the neck or stem and having a discharge mouth **13** at its outer end.

The dimensions of the container wall and the cap and the positions of the screw-threads are such that when the cap has been screwed into position on the container **1**, the piston is positioned near the top of cap ready for immediate use to dispense material from the device.

In order to provide a good seal between the piston **9** and the interior of the container **1**, a piston ring **14** of rubber or rubber-like material is fitted to the piston. This ring **14**, fits in an annular slot **15** in the piston with a portion of the ring outside the slot. When the piston **9** is fitted in the container, this outer portion of the ring **14** will turn upwards and will fit tightly against the inside of the cylindrical wall of the container **1**. This arrangement ensures that the interior wall of the container is swept cleanly of material to be dispensed.

An out-turned rim or flange can be provided at the top of the cylindrical wall of the container **1** if desired.

Re-fill containers can be sold with a plain cap which can be replaced by a dispenser cap as desired.

What I claim is:

A device for dispensing pasty materials comprising a cylindrical container with a closed end and an open end and an external screw-threaded shoulder adjacent said closed end; a cylindrical closure cap with a closed end and an open end, said cap having adjacent its open end an internally screw-threaded portion of greater diameter, said portion being screwed on said shoulder of said container thereby to provide a double wall, said closed end of said cap having an aperture; and a dispensing plunger including a tubular stem slidable in said aperture in said cap and a piston integral with said stem and a sliding fit in said container, said piston having an opening providing communication between the interior of said stem and the interior of said container, said piston also having an annular slot containing a piston ring.

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