

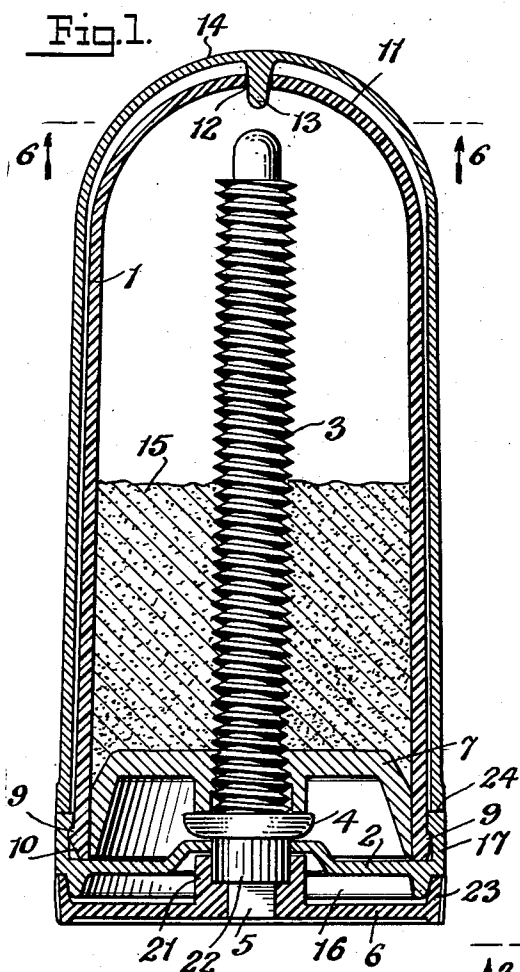
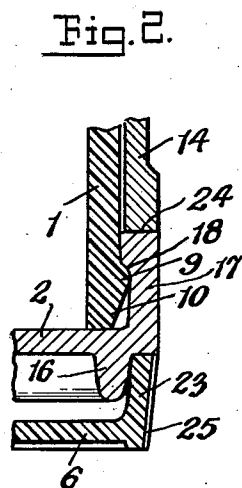
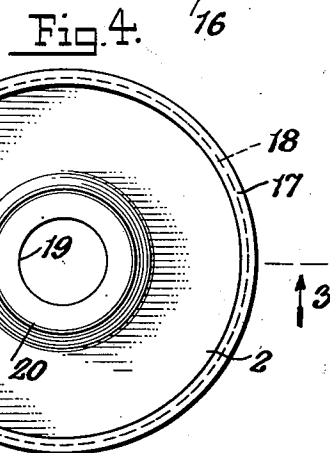
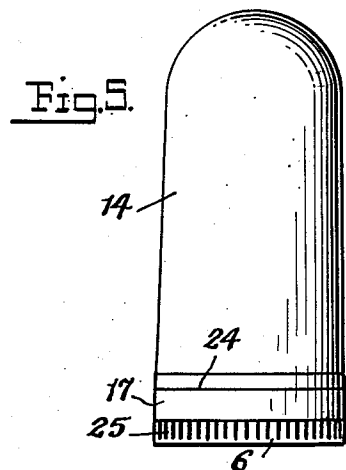
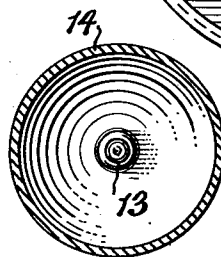
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COMBINED CONTAINER AND APPLICATOR

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2,816,309

COMBINED CONTAINER AND APPLICATOR

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1 Claim. (Cl. 15—137)

This invention relates to a combined container and applicator of a construction permitting it to be effectively used for pasty or creamy substances such as deodorant creams, shaving creams or other similar materials, and particularly those intended for application to parts of the body.

It is an object of the invention to provide a device of the above-mentioned character by means of which creams or other paste-like substances can be conveniently held and can be dispensed and applied in regulatable amounts to the body, and conveniently spread thereover within the selected area, such as, for example, in the case of a deodorant cream, in the armpits.

It is another object of the invention to provide a holder, dispenser and applicator which can be conveniently carried in a handbag, toilet case or other receptacle; which will enclose and protect its contents in a completely sanitary manner; which will permit of the dispensation and application of the cream economically, without waste, in a regulatable manner, and which will permit of the application or spreading of the cream uniformly and evenly over the selected area.

It is still another object of the invention to provide a container and applicator which can be economically manufactured, with the major parts thereof of plastic materials, if desired.

It is an object of the invention to provide means in a container of this character, by which the outlet opening can be easily cleaned and retained in condition for permitting the easy egress of the contents of the container.

With these and other objects to be hereinafter set forth in view, we have devised the arrangement of parts to be described, and more particularly pointed out in the claim appended hereto.

In the accompanying drawing, wherein an illustrative embodiment of the invention is disclosed,

Fig. 1 is a vertical, sectional view through a combined container and applicator, constructed in accordance with the invention;

Fig. 2 is a detail view in section, showing the interlock between the body and closure disk;

Fig. 3 is a sectional view, taken substantially on the line 3—3 of Fig. 4, looking in the direction of the arrows;

Fig. 4 is a top plan view of the closure disk;

Fig. 5 is a side elevational view of the container and applicator in closed condition, and

Fig. 6 is a sectional view of the closure cap taken substantially on the line 6—6 of Fig. 1, looking in the direction of the arrows.

Referring to the drawing, 1 indicates the body or housing of the device. The same is preferably, but not necessarily, made of plastic material or it can be made of metal and it is generally cylindrical in shape and is provided at one end with the closure disk indicated at 2. Located centrally of the closure disk 2 and extending axially through the body 1 of the container is a rotatable threaded spindle 3. At one end, the spindle is provided with a non-round or square portion 5 attached to a rotatable operat-

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ing disk 6, which has a wall 23 provided with a knurled peripheral edge. When the disk 6 is grasped between and rotated by the fingers, the spindle 3 will be correspondingly rotated since it is fixedly attached to the disk. The flange 4 formed on or attached to the spindle 3 prevents axial movement of the spindle and retains the disk 6 closely adjacent to the outer surface of the closure disk.

As will be clearly seen in Fig. 3, the closure disk 2 is centrally formed with a raised or elevated portion 20 formed with the opening 19 through which passes a cylindrical portion 22 on the stem 3, said cylindrical portion of the stem being freely rotatable in said opening 19. Said cylindrical portion 22 is fitted within the central boss 21 of the operating disk 6, as clearly seen in Fig. 1.

The closure disk 2 is formed with a circumferential wall 17 provided with an undercut groove 18 in its inner face and said groove fits over a rounded shoulder 9 formed on the rear end of the body 1 on the outer face thereof. The portion of the body 1 extending rearwardly from the rounded shoulder 9, is tapered as indicated at 10 and this facilitates the fitting of this portion of the body 1 into the groove 18, since the closure disk can be sprung into place, or actually snapped into position over the open rear end of the body 1. The closure disk 2 may be composed of metal and the springiness thereof, together with the springiness in the plastic-material body 1, permits the snap engagement just mentioned. The body 1 is, of course, filled with the creamy contents 15 before the closure disk 2 is attached and while the stem 3 and piston 7 are out of the body 1.

At the bottom of the closure disk is provided an annular wall 16 located inwardly of the wall 17. When the operating disk 6, is fitted on the closure disk 2, the wall 23 will fit on the outside of wall 16, which acts as a bearing for the operating disk, which thus rotates around the stationary closure disk 2.

Threadably mounted on the spindle 3 is a cup-shaped piston member 7 which is located within the body 1 of the container, and said piston member is adapted to be moved up and down within the body 1 by the rotative movement of the spindle 3 caused by manual turning of the disk 6. The piston is, of course, centrally threaded to threadably accommodate the threads on the spindle 3, and the frictional engagement of the flange of the piston against the wall of the body is sufficient to prevent it from rotating or turning within the body 1. If necessary, one or more ribs can be provided on the inner wall surface of the body 1 to engage one or more slots or notches provided in the edge of the piston and thus positively prevent rotation of the piston.

From the foregoing, it will be clear that when the disk 6 is rotated by manual operation, the piston 7 can be moved up or down on the spindle, and when it is moved upwardly, as viewed in Fig. 1, the paste-like material or cream contained within the body 1, and shown at 15, and in advance of the piston 7, will be urged upwardly or toward the outlet end of the body.

At its outlet end the body 1 is provided with an integral rounded, dome-like portion 11 constituting the applicator of the device. The same is preferably, but not necessarily, integrally formed on the upper end of the body. It is sufficient to state that the dome-like end constitutes a smooth, rounded terminal for the upper end of the body, and which can be freely rubbed against the body of the user without causing injury or irritation, since the top portion 11 of the dome-like cap is perfectly smooth and free from any protuberances or projections likely to injure tender skin. Since the holder is primarily designed for the spreading of a creamy deodorant in the armpits, the rounded, dome-like end can be said to be of armpit shape to be smoothly rubbed against these sensitive parts of the body without causing irritation or undue friction,

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Provided centrally at the top of the domed cap member 10 is an outlet hole or aperture 12, and it is through this aperture that the cream 15 is extruded to thereby reach the surface of the dome-like applicator when the piston is caused to be moved in the direction toward the domed end 11. The drawing shows one aperture, but it will be apparent that this number may be increased according to the nature of the material being dispensed or the amount required for spreading in the armpits or other portion of the body. The user can readily regulate the amount being dispensed by turning the disk 6 slowly and watching the cream as it is forced through the aperture or hole 12 until the proper amount has been squeezed through the hole.

As the cream is forced through the hole 12, it will tend to spread on the convex surface of the domed applicator 11 and it is merely a matter of then applying this cream-coated surface against the body and spreading the cream thereover in the required area.

When not being used, the body 1 including the domed end 11 thereof, is covered and protected by means of the cap-like closure member shown at 14, which is shown to be frictionally fitted in place over the body 1, or held thereon by a bayonet joint or other securing means of known construction. The interior of the closure cap 14 is formed with a central stud 13 of conical form and the same is of sufficient length to extend through and act as not only a closure member or stopper for the hole 12, but as a cleaner as well, thus preventing clogging of this opening since it will clean out the same each time that the closure cap is fitted in place over the body 1. The upper edge 24 on the closure disk 2 acts as a shoulder or stop to limit the telescoping movement of the closure cap with respect to the body 1 and thus prevents the stud 13 from being jammed in hole 12.

The construction of the device is such that most of the major parts may, if desired, be constructed of plastic materials or of thin metal and hence economical manufacture is possible.

Having described a single embodiment of the invention, it is obvious that the same is not to be restricted thereto, but is broad enough to cover all structures coming within the scope of the annexed claim.

What we claim is:

In a combined container and applicator for creamy materials, a cylindrical body having an integrally-formed convex end provided with a central outlet opening extending through it, said body having an open opposite end and tapered at said end as well as provided with a rounded

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shoulder inwardly of said end, a disk-shaped closure member for said end of the body, said closure member having a peripheral wall formed with an annular undercut groove in its inside face, the tapered end of the body entering the closure member and fitting in said groove and the rounded shoulder engaging under the upper surface of the groove to thereby attach the closure member to the end of the body, said closure member being provided on its bottom and inwardly of its peripheral wall, with an annular wall defining a shoulder between it and the peripheral edge of the closure member, an operating disk fitted against the bottom of the closure member, said operating disk having a peripheral wall having its upper edge in contact with said shoulder, said peripheral wall being fitted around the outside of the annular wall of the closure member, a central boss provided on the operating disk, the closure member having a centrally elevated portion presenting a recess beneath it, said recess accommodating said boss, a threaded stem having a non-round end secured at one end in the boss, said stem having a cylindrical part located partly in the boss and having a part rotative in the elevated portion, said stem extending axially through the elevated portion and into the body for the greater portion of the length of the body, a flange on the stem at the side of the closure member opposite to that at which the operating disk is located to thereby restrain the operating disk from axial separation from the closure disk, a piston threadably mounted on the stem within the body, and a closure cap being provided at its end with a stud fitting completely through the central outlet opening in the body.

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