UNITED STATES PATENT OFFICE

2,666,555

APPLICATOR FOR CREAM PREPARATIONS

Ralph L. Hill, Memphis, Tex.

Application June 16, 1950, Serial No. 168,599

1 Claim. (Cl. 223—340)

This invention relates to an applicator for cream preparations such as shaving creams, cosmetic creams and the like, and it is primarily an object of the invention to provide a device of this kind which allows the cream to be applied without an unhandy use of tubes, jars, etc., and without soiling the hands.

It is also an object of the invention to provide a device of this kind which when in use, is self-sealing and wherein the discharge of the cream is under control of a valve so located to be operated by a digit of a hand holding the applicator while in use.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved applicator for cream preparations whereby certain advantages are attained, as will be hereinafter more fully set forth.

In order that my invention may be better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein:

Figure 1 is a longitudinal sectional view taken through an applicator constructed in accordance with an embodiment of the invention, certain of the parts being in elevation and the valve in closed position;

Figure 2 is a view in front end elevation of the device as embodied in Figure 1;

Figure 3 is a sectional view taken substantially on the line 3—3 of Figure 1, looking in the direction of the arrows;

Figure 4 is a sectional view taken substantially on the line 4—4 of Figure 1, looking in the direction of the arrows; and

Figure 5 is a view in perspective of the valve herein comprised unappplied.

In the embodiment of the invention as illustrated in the accompanying drawings, I denotes a cylindrical casing of desired dimensions and which is initially open at both ends. The rear end of the casing I has threaded therein or otherwise detachably engaged therewith a cap C which carries a compressible coil spring 3 of requisite tension and size. One extremity of this spring 3 is anchored, as at 4, to the central portion of the inner face of the cap C while the opposite or outer extremity of the spring 3 is anchored as at 5, to the central portion of a follower disk or plate 6 to be hereinafter more particularly referred to.

Threading upon or otherwise releasably engaged with the forward end portion of the casing I is a second cap C having its interior intersected by a partition plate 7 snugly fitting within the cap C and welded or otherwise rigidly secured to the side wall 8 of the cap C. The free portion of the wall 8 of the cap C beyond the partition plate 7 has coupling engagement with the casing I.

The plate 7 has a radial slot or channel 9 in which travels a key 10 carried by the valve disk or plate 11 which has close sliding contact with the outer face of the disk or plate 7. The valve disk or plate 11 is of a size and contour to allow the same to have reciprocating movement across the partition plate 7 so that the openings 12 in the valve disk or plate 11 may be brought into register with the openings 14 in the plate 7.

Extending outwardly from the valve disk or plate 11 and substantially in alignment with the slot 9 of the plate 8 is an arm 15 which snugly passes through an opening 16 in the wall of the casing I and extends outwardly therefrom.

Fixed to the outer extremity of the arm 15 is a button or head 17 and surrounding the arm 15 and interposed between the button or head 17 and a washer 18 is an expansible coil spring 19 which operates to normally maintain the valve disk or plate 11 in a position with the openings 12 of the valve plate or disk 11 out of register with the openings 14 of the partition plate 7.

The washer 18 is snugly but freely mounted on the arm or stem 15 and is maintained by the spring 19 in close contact with the casing I whereby is prevented discharge of cream within the casing I out through the opening 16.

The head 20 of the cap C has openings 21 which are aligned with the openings 14 of the partition plate 7 and which openings 21 are continued out through the dauber lamina 22 over the outer face of the head 20 of the cap C and adhesively or otherwise secured thereto. While this dauber head may be of any material desired, it is preferred synthetic sponge rubber be used.

In the present embodiment of the invention the openings 12, 14 and 21 are three in number and the openings 14 are equi-distantly spaced around and from the axial center of the partition plate 7. Interspersed between the partition plate 7 and the head 20 of the cap C are the tubes 23 soldered or otherwise rigidly secured to the plate 6 and head 20 with said tubes 23 in communication with the openings 14 and 21 so that the cream within the casing I will readily pass therethrough.

The cream for use with the present device is preferably contained in a cartridge 24 which is snugly inserted within the casing I from the rear end after the cap 2 has been removed. Obviously before the cartridge 24 is applied the usual end caps therefor are removed. As the detail fea-
tures of the cartridge 24 form no part of the present invention, a detail description and illustration thereof is believed unnecessary.

The applied cartridge 24 has its inner end immediately adjacent to the valve disk or plate 11 and upon applying the cap 2, the follower disk or plate 6 is snugly engaged within the applied cartridge 24. This effects a compression of the spring 2 so that the action of the spring will cause the follower disk or plate 6 to press against the cream content of the cartridge 24 so that when the valve disk or plate 11 is moved to bring the openings 12 and 14 into register, cream will be ejected out through the openings 21 so that the dauber lamination 22 may be used to spread the cream in an even film over the face or other portion of a person. It is also to be pointed out that a digit of the hand holding the casing 1 can readily depress the arm or stem 15 when it is desired to bring the openings 12 of the valve disk or plate 11 into register with the openings 14 of the partition plate 7 of the cap C. Upon release of pressure upon the arm or stem 15, the spring 18 will immediately shift to the valve plate or disk 11 to its normal position with the openings 12 and 14 of the register and then outflow of the cream closed.

When the device is not in use, it is desirable to place over the cap C a supplemental cap S of a slip type to house the dauber lamination 22 to maintain the same in a sanitary condition.

With the present embodiment, a cartridge 24 is used, it is to be understood that the cream may be placed in bulk within the casing 1 and in which event the follower disk or plate 6 will be of a diameter to snugly fit within the casing 1 instead of within the cartridge 24, as shown in Figure 1 of the drawings.

In view of the foregoing, it is believed to be apparent that the applicator as herein comprised will substantially eliminate waste of cream and avoid the common messy practice of applying cream by the hands. As the cream passes out beyond the dauber lamination 22, the cream can be easily spread evenly upon the face or other portion of the body of a person by a patting or rubbing motion.

To prevent pressure of the cartridge 24 against the disk or plate 11, a plate 25 is threaded into or otherwise held within the cap C in close proximity to the valve or plate 11.

It is also to be noted that the tubes 23 extend through the openings 21 and impinge the lamination 22 and thus provide further means for holding the lamination 22 in place.

From the foregoing description, it is thought to be obvious that an improved applicator con-