July 2, 1957 R. B. HOPGOOD 2,797,803

COSMETIC CONTAINER

Filed April 15, 1955

FIG. 1.

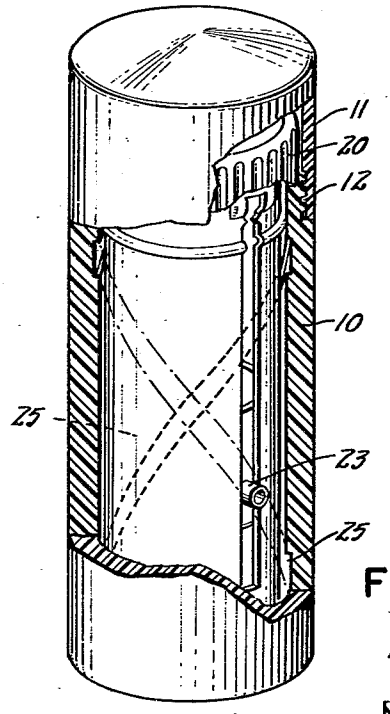


FIG. 2.

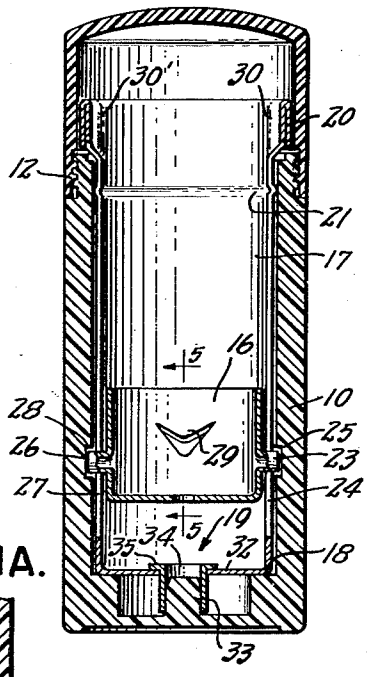


FIG. 1A.

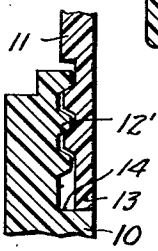


FIG. 3.

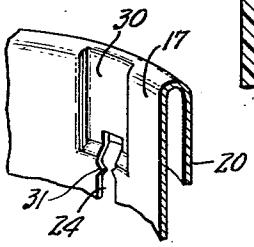


FIG. 4.

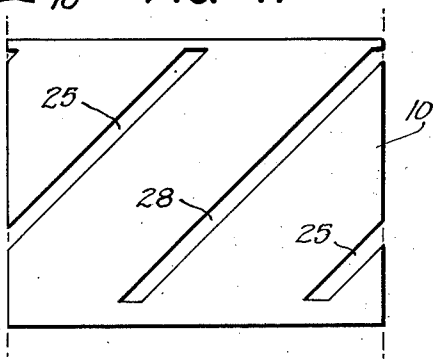


FIG. 5.

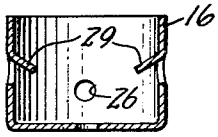
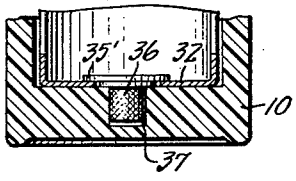


FIG. 6.



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COSMETIC CONTAINER

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My invention relates to a cosmetic container and is particularly concerned with structures adaptable to the dispensing of solid cosmetics with important volatile ingredients, as, for example, stick colognes, stick deodorants, and the like.

It is an object of the invention to provide an improved structure of the character indicated.

It is another object to provide an improved cosmetic container whereby important volatile ingredients of the cosmetic may be substantially hermetically sealed-in, when the container is not in use.

It is a specific object to meet the above objects with a structure incorporating self-propelling mechanism for use in dispensing the cosmetic.

Other objects and various further features of novelty and invention will be pointed out or will occur to those skilled in the art from a reading of the following specification in conjunction with the accompanying drawings. In said drawings, which show, for illustrative purposes only, preferred forms of the invention:

Fig. 1 is a perspective view of an assembled cosmetic container of the invention, parts being broken away and shown in section in order to reveal internal relationships;

Fig. 1A is an enlarged fragmentary sectional view of the fit of the cover and casing of Fig. 1;

Fig. 2 is a longitudinal sectional view of the container of Fig. 1;

Fig. 3 is an enlarged fragmentary view in perspective illustrating a detail of my container, for purposes of facilitating assembly;

Fig. 4 is a flat development of the internal wall of the casing of my container;

Fig. 5 is a vertical sectional view of the carrier of my container, as viewed in the plane 5—5 of Fig. 2; and

Fig. 6 is a fragmentary view similar to Fig. 2, but illustrating an alternative structure for securing the parts at the bottom of the casing.

Briefly stated, my invention contemplates an improved cosmetic container particularly adaptable to the dispensing of solid cosmetics having important volatile ingredients. The container may incorporate swivel-action propulsion mechanism for dispensing the cosmetics, and yet when the closure cap is in place, a hermetic-sealing relationship may be established, whereby the volatile ingredients are not lost and may be preserved, for extended life of the cosmetic. No actuable parts of the propulsion mechanism project externally of the casing when the closure cap is in place, and the seal is established solely between the closure cap and the casing.

Referring to Figs. 1 and 2 of the drawings, my invention is shown in application to a cosmetic container comprising, in reality, a two-part casing involving two cup-shaped parts 10—11; for convenience and better identification in the present description, the parts 10—11 will hereinafter be referred to as the casing 10 and the closure cap 11. The casing 10 and cap 11 are preferably formed as single molded pieces of a suitable plastic, such as polyethylene, and, for purposes of securing these parts

together in hermetically sealed relation, I have disclosed at 12 a threaded interfit of the parts.

As best shown in the enlarged fragmentary view of Fig. 1A, the threads on both parts 11—12 are preferably formed with flat bearing surfaces 12′ so as to establish in and of themselves a preliminary seal, extending for the full helical-development length of the threads. As a further seal, the skirt 13 of the closure cap 11 is formed circumferentially continuously, and for a substantial radial distance skirt 13 overlaps a shoulder 14 near the top or open end of the casing 10. Thus, when the cap 11 is secured to the casing 10, a double seal is established against loss of volatile ingredients. The inherently yieldable nature of the parts 10—11, made with the preferred plastic material, polyethylene, is such as to promote extensive areas of contact at both the described seals, when the parts are secured.

As indicated above, my container may include propulsion mechanism for a cosmetic to be dispensed. The container may thus include a carrier 16 within an inner tubular member 17, and both the carrier and the tubular member 17 may be and preferably are metallic, as of brass or steel. The tubular member 17 is shown seated on a circumferential ledge or shoulder 18 at the base of the casing 10, and means 19 at said base pivotally secure the inner tubular member 17 in the casing. The member 17 preferably extends axially beyond the open end of the casing 10 to provide means for manual actuation thereof, so that the casing and the tubular member 17 may be relatively rotated in order to propel the carrier 16. In the form shown, the upper or outer end of the tubular member 17 is formed with a turned-back actuating ring 20, which may be locally roughened, as suggested by flutings in Fig. 1, in order to promote manual grasping. A circumferential bead 21 near the open end of the casing 10 provides a smooth bearing support of the tubular member in the casing, as will be understood.

The propulsion means for the carrier 16 may utilize cams on the tubular member 17 and on the casing 10, and in the form shown, cams are provided in duplicate, with diametral symmetry. Thus, a first cam follower 23 on the carrier 16 engages a straight slot 24 in the tubular member 17, as well as a helical slot or groove 25 in the casing 10. In like manner, a second cam follower 26, diametrically opposite the follower 23, is accommodated in a straight cam slot 27 in the tubular member 17 and in a helical groove 28 in the casing 10. Lugs 29 are struck inwardly of the carrier 16 to retain inserted stick cosmetics.

The preferred manner of securing the tubular member 17 in the casing 10 is illustrated in Fig. 2, wherein means projecting upwardly from the base of the casing are shown to be in axial-retaining relation with a radially inwardly turned flange 32 formed at the base of the tubular member 17. The upwardly projecting means includes an integral stud 33, radially inwardly spaced with respect to the shoulder 18, and a bushing 34 is force-fitted over the stud 33. The bushing 34 is formed with a radially outwardly extending flange 35 in overlapping, and therefore retaining, relation with the flange 32. If desired, the bore of the bushing 34 may be roughened to improve the fastening to the stud 33, and also, if desired, local heat may be applied to the bushing 35 in order to permit the plastic to conform to and interlock with such roughened surface. I prefer that when the bushing 35 is secured to the stud 33, the flange 32 on the tubular member 17 shall have been axially downwardly stressed by a slight amount (against the seat or shoulder 32) so as to remove all possibility of axial play in the assembly.

To facilitate assembly of the parts, particularly when employing a carrier 16 having so-called drifted eyelets for the cam followers 23—26, wherein said eyelets are

formed prior to assembly, I have provided radially offset coves or recesses 30—30' (see Figs. 2 and 3) in the inner wall of the tubular member 17 at the upper or open end of the cam slots, such as the slot 24. The extent of such recesses 30—30' is preferably such as to permit insertion of the carrier, complete with cam followers 23—26 and cosmetic, there being a possibility of slightly pinching the rim of the tubular member 17 (during assembly) in order slightly to spread the diametrically opposed recesses 30—30' to accommodate the two cam followers 23—26. Once these cam followers have entered the slots 24—27, they may be forced past light-detent means 31, for detent-retention of the parts in assembled relation.

In the arrangement shown in Fig. 6, the upwardly extending means carried by the base of the casing 10 includes a stud having a roughened surface 36, force-fitted into a bore 37 in the base of the casing. Such stud projects upwardly from the base and includes a flange 35' corresponding to the flange 35 of Fig. 2. Axially stressed deflection of the flange 32 is not achieved in Fig. 6, and therefore the flange 35' preferably clears the flange 32 to permit free relative rotation.

It will be seen that I have provided an improved cosmetic container, particularly useful for the storage and dispensing of stick cosmetics. When the closure cap is secured to the casing, a double seal assures retention of important volatile ingredients of the cosmetic. Nevertheless, when the cap is removed, the cosmetic may be adjustably dispensed with the ease and convenience of conventional lipstick dispensers.

While I have described the invention in detail for the preferred forms shown, it will be understood that modifications may be made within the scope of the invention as defined in the claims which follow.

I claim:

1. A cosmetic container, comprising a cup-shaped casing including at the closed end thereof a central integral upstanding internal projection, a circumferential seat formed internally of said casing short of the bottom thereof and radially outwardly from said upstanding internal projection, a tubular member revolubly carried by said casing and including a portion projecting axially beyond the open end of said casing, said tubular member being seated on said seat and including at the seated portion a radially inwardly directed flange spanning the radial clearance between said seat and said upstanding internal projection, flanged means carried by said projection and in axially retaining relation with said inwardly directed flange, a cosmetic carrier within said tubular member, and propulsion means cooperating between said tubular member and the inner wall of said casing for propelling said carrier on relative rotation of said tubular member and of said casing.

2. A cosmetic container according to claim 1, in which the axial location of said flanged means on said projection is such that said inwardly directed flange resiliently axially loads said tubular member in seated relation with said seat.

3. A cosmetic container, comprising a cup-shaped casing having an opening at only one longitudinal end thereof and fully and integrally closed at the other longitudinal end thereof, a tubular member revolubly carried by said casing and including a portion projecting axially beyond the open end of said casing, said tubular member having at the end opposite said open end an inwardly turned flange having a central opening therein, force-fitted axially engaged plug and socket elements axially retaining said tubular member in said casing at said flange, one of said elements forming a part of said casing at the closed end thereof, the other of said elements including a retaining flange in radially overlapping and axially retaining relation with said inwardly turned flange, a cosmetic carrier within said tubular member, means coacting between and on relative rotation of said casing and said tubular member for propelling said carrier, and a closure cap circumferentially continuously axially overlapping and engaging said casing, said cap covering the projecting portion of said tubular member and being engageable in circumferentially continuous vapor-sealing relation with said casing.

4. A container according to claim 3, in which said one element is an upstanding axial projection, and said other element is a flanged bushing force-fitted to said projection.

5. A container according to claim 3, in which said one element is a bore in the closed end of said casing, and said other element is a flanged stud force-fitted in said bore.

6. A cosmetic container, comprising an elongated continuous one-piece cup-shaped casing open only at one longitudinal end thereof, an elongated tubular member revolubly secured at the base thereof to the bottom of said casing and including a circumferentially continuous actuating-ring portion projecting axially beyond the open end of said casing, a carrier within said tubular member, means cooperating between said tubular member and the inner wall of said casing for propelling said carrier upon relative rotation of said tubular member and of said casing, and a closure cap in tight removable axially overlapping and circumferentially continuous vapor-sealing relation with said casing at the open end thereof, said means propelling said carrier including a cam slot terminating short of both axial ends of said tubular member, said tubular member at the open end being formed with a radially outward offset including the end of said slot, whereby a carrier complete with cam follower may be inserted through the open end of said tubular member via the offset-slot portion.

7. A container according to claim 6, in which detent means cooperate between carrier and said tubular member near the offset part of said slot, whereby, once assembled to said carrier, said tubular member may retain said carrier.

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