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COSMETIC CONTAINERS

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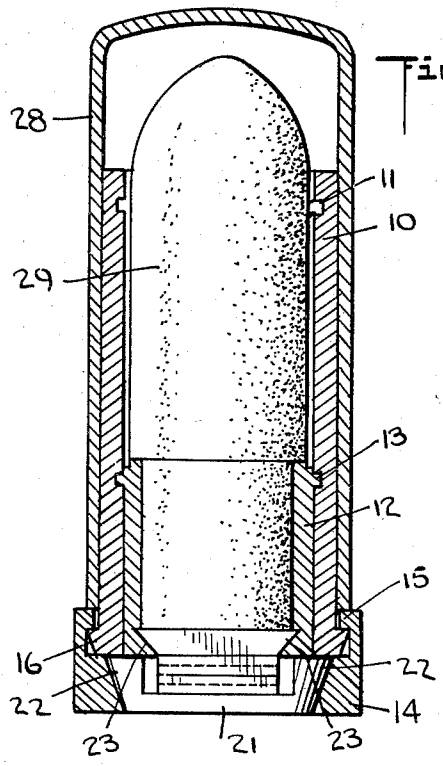
Fig. 1.



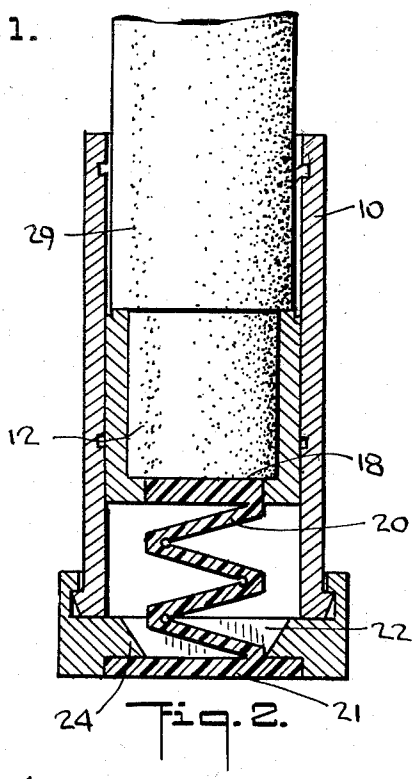
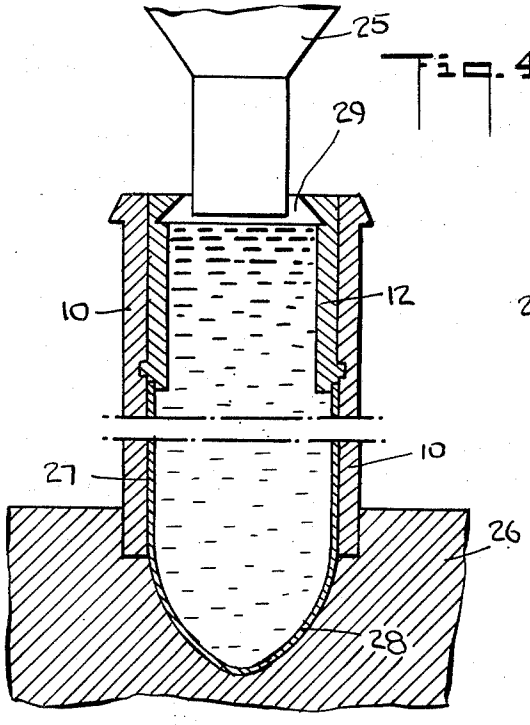


Fig. 2.

Fig. 4.



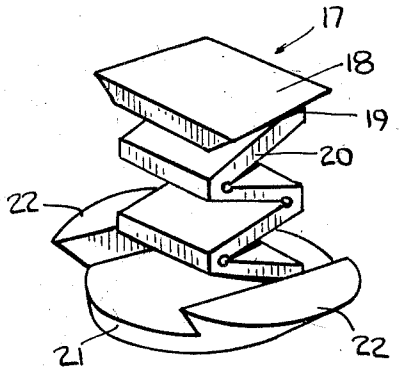


Fig. 3.

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COSMETIC CONTAINERS

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2 Claims. (Cl. 206—56)

This invention relates to cosmetic containers and method of filling the same and is described in connection with a lipstick case although other cosmetic substances may be involved.

Conventional lipsticks employ a plurality of inner sleeves and include a follower which is axially actuated in response to rotative movement of a base. It has been suggested, from time to time, to simplify this arrangement and various expedients have been devised but, as far as we are aware, without particular success.

With the foregoing in mind, it is the object of the present invention to provide a cosmetic container of the above type which assumes extremely simplified form although completely reliable in operation. This case employs a minimum of parts as will hereinafter be shown and may advantageously be formed of plastic with no metallic parts if so desired.

An important feature of the instant invention is the fact that the improved lipstick case can be filled directly with the lipstick substance instead of being molded in a mold and then transferred to a holder which is part of the conventional lipstick case. This is a most important feature as economizing on expense of production as will be recognized. In the form shown, the object is realized by introducing the cosmetic material through the open bottom of the cylinder as well as of the holder and employing a liner or the like to insulate or space the injected substance from the walls of the cylinder while imparting to it the desired oval shape at its top end. Thereafter a closure is applied to said open bottom.

The invention will be further understood from the following description and drawings in which:

Figure 1 is a longitudinal cross-sectional view of a lipstick case constructed according to the invention;

Figure 2 is a fragmentary view similar to Figure 1 and illustrating the action of the extensible motion transmission element;

Figure 3 is a perspective view of the extensible motion transmission element per se; and

Figure 4 is a view illustrating the method of filling the case.

The cosmetic case comprises an outer cylinder 10 which may be formed of any suitable plastic material although it may be metal if desired. The inner wall thereof is rifled with conventional spiral grooves 11 although a single groove may be employed. Rotatably and axially movable within the cylinder 10 is the follower holder 12 which is concentric with the cylinder and formed with pins or projections 13 engaged by the grooves 11. As will be well understood, rotation of the holder 12 causes it to move axially within the cylinder 10 for the purpose of advancing or retracting the cosmetic substance.

A rotatable base 14 is provided and such base has an upper inturned flange 15 which engages the lower outward flange 16 at the base of cylinder 10. The engagement is such as to permit relative rotation between the two elements as will be well understood.

A motion transmission element 17 which is extensible is connected to both the base 14 and the holder 12. Element 17 may be formed of a resilient plastic, i. e., nylon. It will be found that such material when in the form of a series of folded plates as illustrated, is capable of transmitting rotary movement from the base 14 to the holder 12 even while extending itself since it maintains itself rigid in respect to torque transmission.

Extensible element 17 comprises an integral top plate or section 18 which is planar and which is formed with inwardly bevelled sides 19 constituting a dovetail joint. Integrally connected with the top section 18 is a series of flat folds 20 each of which, like top section 18, is rectangular, being shown as substantially square. The thickness of such folds is in the order of .050 inch. The last fold is connected to the bottom section 21 which is shown as being circular. Integral with the sides of section 21 are a pair of lateral wings or bevels 22 constituting a dovetail joint.

Element 17 is connected into the structure by dovetailing its bevelled sides 19 into complementary inwardly side bevels 23 at the base of holder 12. Thus, it is merely necessary to slide top section 18 into the bevels 23 so that the resulting engagement is frictional. Thereafter, the wings 22 are frictionally engaged by inward bevels 24 of the base 14, such bevels 24 resting upon the bottom element 21 between the bevels 22 as illustrated in Figure 2.

In actual practice, the base 14 may first be assembled with the extensible element 17 and then they may both be applied together to the holder 12 and cylinder 10 by sliding the top section 18 into bevel 23 and finally snapping the inturned flange 15 over external flange 16, thus completing the assembly.

When base 14 is rotated in one direction, it will rotate the extensible element 17, the folds resisting any twisting action but transmitting the torque directly to the holder 12 through top element 18. As the holder rotates it must necessarily rise and it will pull the element 17 upwardly, the folds 20 extending accordingly as they become longitudinally unfolded. The resilient, bendable nature of the nylon material forms natural hinges between the plate-like sections or folds 20 so as to permit such extreme simplification of the extensible element while the flat nature of the folds results in satisfactory torque transmission qualities.

As an additional feature of great importance, we have devised means to fill the lipstick case directly instead of first filling the holder and thereafter assembling it in the case as is conventional practice. Thus, referring to Figure 4 we show a hopper 25 through which the cosmetic substance is injected for filling the case. The hopper itself is conventional as is the lipstick substance which is thermoplastic and maintained in liquid form while it is injected.

The cylinder 10 and holder 12 are both deposited in inverted form in a suitable receptacle formed in base 26. However, a spacer or liner 27 of concavo-convex form is interposed between the cylinder 10 and base 26, the open mouth of the liner 27 being disposed within the cylinder 10 while the closed oval-shaped end 28 rests within the receptacle. At this time, the cosmetic substance is applied through the bottom central opening 29 of the holder 12 and, of course, the bottom opening of cylinder 10. Such substance fills up the holder as well as the liner 27 so as to produce a lipstick of the desired oval shape at its end. It will be observed that the lipstick will be shielded from and will not make contact with the inner walls of cylinder 10 so as to avoid either becoming marred by the rifling, or sticking to such inner walls.

After filling, the base element 14 may be assembled with the extensible element 17 and they may be applied

as a unit to the bottom end of the cylinder as above set forth so as to complete the assembly thereof.

After the case has been assembled, a cover 28 may be applied as is conventional, such cover having leading edges which rest upon the inturned flange 15 as illustrated in Figure 1. It is optional whether the cup-like liner 27 is thereafter retained in place between the lipstick substance 29 and the inner walls of cylinder 10. Should it be retained in place, the user, after purchasing the lipstick, will simply remove the liner 27 which may advantageously take the form of a transparent plastic member of cup or thimble form. She may then prefer to discard the liner. On the other hand, the manufacturer may remove the liner after the case has been filled and the cosmetic substance set, whereupon the cover 28 will be applied to complete the entire assembly.

There has been shown what is now considered a preferred embodiment of the invention but it is obvious that numerous changes and omissions may be made without departing from its spirit.

What is claimed is:

1. In a cosmetic case including a cylinder, a follower holder adapted for simultaneous rotative and axial movement on said cylinder and a rotatable base on said cylinder, the provision of means for actuating said holder, said means comprising an extensible element connected at one end thereof to said base and at the other end to said holder, said extensible element including a series of flat folded sections normally overlying each other and being mutually extensible by unfolding said sections longitudinally, said extensible element being fabricated of a resilient, bendable plastic material whereby the folds between the sections constitute hinges, said sections being substantially square, the top section thereof being planar and being frictionally engaged with the bottom of said holder and the bottom section thereof being likewise planar and frictionally engaged with said rotatable base, both of said frictional engagements comprising slidable dovetail connections.

2. A cosmetic case comprising an outer cylinder, a follower holder adapted for simultaneous rotative and axial movement in said cylinder to advance or retract a stick of cosmetic substance therein, a base rotatably connected to the bottom end of said cylinder, an extensible element connected at the top end thereof to said holder and at the bottom end thereof to said base, said extensible element comprising a folded resilient plastic member having a connected series of flat, folded plate sections each normally overlying each other whereby the resilience of the material thereof forms natural hinges between the folded plate sections, said cylinder being formed with an internal, spiral groove, a projection on said holder engaging said groove, the top plate section of said series of sections being planar and dovetailed into the bottom of said holder, and the bottom plate section thereof being likewise planar and dovetailed into said rotatable base so as to be movable therewith, and mutually engaging flanges respectively on the top of said base and on the bottom of said cylinder, said cylinder and said base being formed of resilient plastic material whereby said flanges may be snap-fitted to each other.

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