

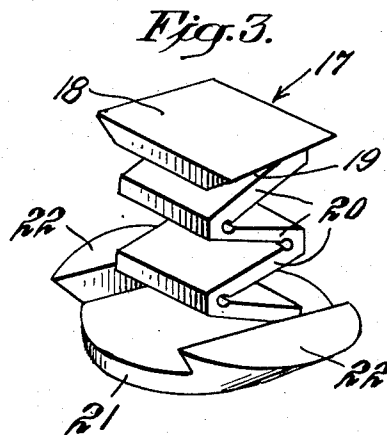
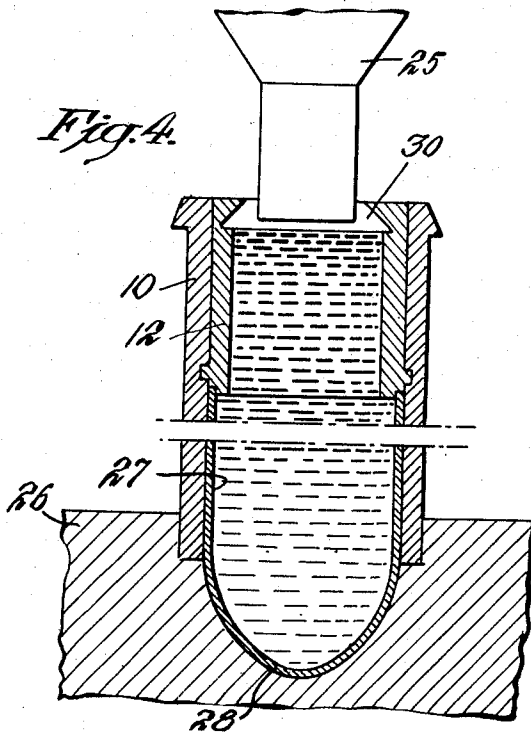
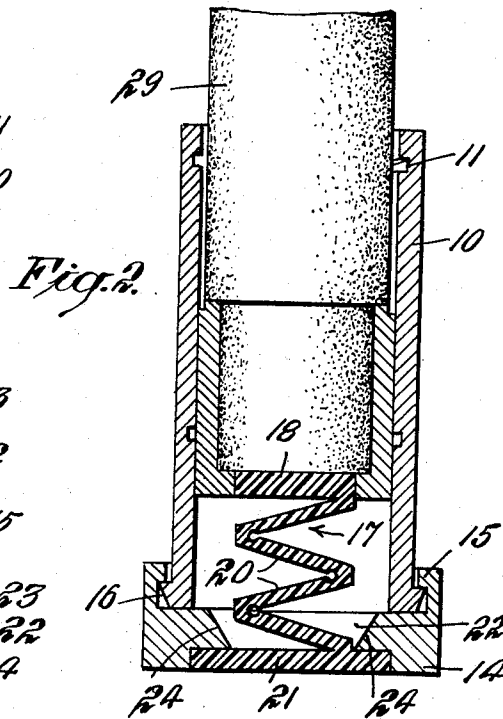
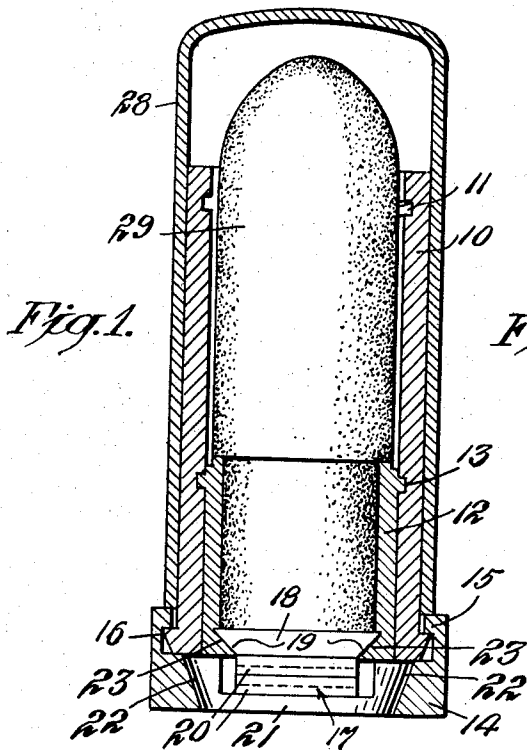
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S. M. CROCE ET AL

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METHOD OF FILLING COSMETIC CONTAINERS

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INVENTORS
Sandy M. Croce and
BY John W. Solomon
D. Myron Baker
ATTORNEY

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METHOD OF FILLING COSMETIC CONTAINERS

Santy M. Croce, Hauppauge, and John W. Solomon, New York, N. Y., assignors to Coty, Inc., New York, N. Y., a corporation of Delaware

Division of application Serial No. 513,138, June 3, 1955, now Patent No. 2,818,973, dated January 7, 1958. This application February 11, 1957, Serial No. 639,462

3 Claims. (Cl. 18—59)

This invention relates to a method of filling cosmetic containers and is described in connection with a lipstick case although other cosmetic substances may be involved. This application is a division of our prior application serial No. 513,138, filed June 3, 1955, now Patent No. 2,818,973.

In the above prior application, it was pointed out that 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 without particular success.

The above application provided a cosmetic container of the above type which assumed extremely simplified form although completely reliable in operation. The case employed a minimum of parts as was shown and could 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 as described in this and in the prior application 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 objective 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 intumed flange 15 which engages the lower outward flange 16 at the base of cylinder 10. The engage-

ment 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 intumed 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 30 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.

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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. A method of filling a cosmetic case which is formed with an outer cylinder and an internal rotatable tubular holder concentric therewith, said method comprising injecting a thermoplastic cosmetic substance while in a liquid state into both the cylinder and holder from a joint opening in the ends thereof while simultaneously spacing

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the entire body of the injected substance from the inner walls of the cylinder, said substance being injected in contact with the inner walls of the holder so as to adhere thereto when solidified.

2. The method according to claim 1 and wherein one end of the injected substance is shaped into oval form while it is being spaced from said inner walls.

3. A method of filling a cosmetic case which is formed with an outer cylinder and a vertically movable tubular holder within said cylinder and concentric therewith, said method comprising injecting a thermoplastic cosmetic substance while in a liquid state into both the cylinder and holder from a joint opening in the ends thereof while simultaneously spacing the entire body of the injected substance from the inner walls of the cylinder and filling said holder, said substance being injected in contact with the inner walls of the holder so as to adhere thereto when solidified.

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