April 2, 1963

C. G. METREAUD

3,083,823

COSMETIC CONTAINER

Filed Aug. 2, 1961

Fig. 1.

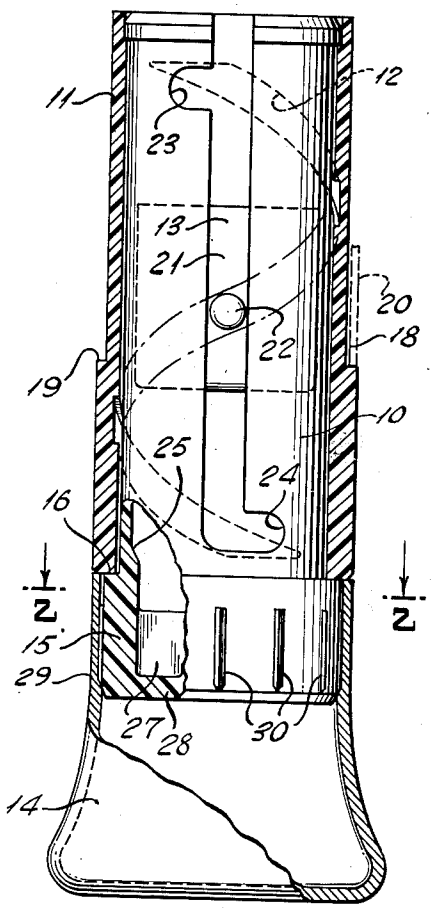
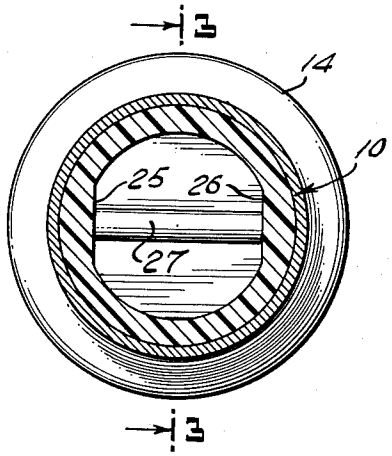


Fig. 2.



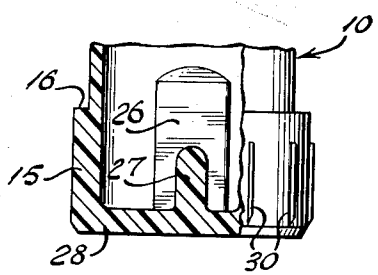


Fig. 3.

INVENTOR
CLAUDE G. METREAUD
BY Roy C. Hoffman
ATTORNEY

United States Patent Office 3,083,823 Patented Apr. 2, 1963

3,083,823

COSMETIC CONTAINER

Claude G. Metreaud, Wallingford, Conn., assignor to The International Silver Company, Wallingford, Conn., a corporation of Connecticut

Filed Aug. 2, 1961, Ser. No. 128,737
2 Claims. (Cl. 206—56)

My invention relates to an improved lipstick or the like container construction of the type wherein relative rotation of two tubular members produces propel-repel action in a carrier member.

It is an object of the invention to provide an improved construction of the character indicated featuring ease and uniformity of propel-repel action and, at the same time, lending itself to adaptation to a variety of decorative combinations, as by employment of different base operating handles and/or closure caps to achieve variety in appearance.

It is a specific object to meet the above object with a construction in which one of a variety of base operating handle members may be selected for permanent press-fit engagement to a plastic part of a basic propel-repel mechanism, and in which the nature of the fit is such as to assure permanent retention of the parts and yet not in any way impair the ease of propel-repel action.

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, a preferred form of the invention:

FIG. 1 is an enlarged view in elevation of a container embodying features of the invention and showing parts broken away and in longitudinal section to reveal internal details;

FIG. 2 is a sectional view in the plane 2—2 of FIG. 1; and,

FIG. 3 is a fragmentary view in partial section of the lower end of the inner tubular member of the propulsion mechanism, the section being taken in the plane 3—3 of FIG. 2.

Briefly stated, the invention contemplates a lipstick container construction of the type wherein two relatively rotatable tubular members are provided with cooperating cams which engage the follower of a carrier member so as to longitudinally propel or repel the same for dispensing or retracting lipstick mounted on the carrier member. According to the invention, the inner of these tubular members is formed of plastic and includes a base to receive by press-fit the cylindrical shell part of a selected one of a variety of base operating handle members, depending upon the decorative effect desired. The base operating handle member is of metal and is therefore of different elastic and other properties than the plastic part to which it is to be press-fitted, and to assure a uniformity of press-fit without impairing ease or consistency of action of the propel-repel mechanism, I provide strut means integral with the bore of the base which receives the press-fit so as to assure against undesired radially compressed displacement.

Referring to the drawings, the invention is shown in application to a lipstick container comprising inner and outer tubular members 10—11 which overlap for substantially their entire length and which include cooperating cam elements, such as the spiral groove 12 formed on the inner wall of the outer tubular member 11 and the straight longitudinal slot 13 formed along substantially the entire length of the inner tubular member 10. For actuating purposes, the inner tubular member 10 may be extended by an integral knob or fingerpiece, of configuration suited to the aesthetic appearance of the overall container, but for the type of construction shown, the actual fingerpiece 14 is a selected one of a variety having different desired decorative effects and applicable to the basic propel-repel mechanism. The point of attachment of the fingerpiece 14 to the inner tubular member 10 is at an enlarged cylindrical shell portion 15 which is integral with the lower end of the inner tubular member 10. This shell portion 15, being enlarged, defines at 16 a radial shoulder for limiting and thus locating the outer tubular member 11.

One or more friction ridges or elements 18 may be provided on the outer tubular member 11 adjacent a shoulder 19 for engagement with the inner surface of a closure cap, suggested at 20, to retain the same in place when the container is closed.

A lipstick or the like (not shown) is frictionally received within the bore of a carrier member 21 which is longitudinally slidable within the bore of the inner tubular member 10. The carrier member 21 includes a cam follower 22 projecting radially outwardly into cooperating engagement with both the slot 13 and the spiral cam 12 on the outer tubular member 11. If desired, lateral offset portions 23—24 may be provided at the longitudinal limits of the cam structure so as to allow the cam follower 22 to, in effect, lock against propulsion action for each of the two extremes of propelled movement. In the case of the offset 23, the location of cam follower 22 at this point will assure convenient use of the lipstick without any tendency of the propulsion mechanism to retract during use. In like manner, reception of the cam follower 22 in the offset 24 for the retracted position will assure longitudinal movement of the carrier member 21 in the absence of rotary movement of the tubular members.

In spite of the action of the offset 24 to reduce the tendency of inadvertent propulsion of the carrier from its retracted position, it does occur in the presence of vibration, as in the case of shipment when the loaded containers may be inverted, that the cam follower 22 may disengage from the offset 24 and the weight of the loaded carrier will tend to permit the lipstick to ride against the inner recess or bottom of the closure cap 18. To prevent this from occurring and in accordance with the teachings of William G. Clark application Serial No. 123,243 filed July 11, 1961, provision is made for interference fit between parts of the bore of the inner tubular member 10 and the adjacent cylindrical surface of the carrier member 21, at or near the downward limit of propulsion thereof, namely, the fully retracted position. Such interference-fit means may take the form of localized flats, as at 25—26, at angularly spaced locations in the lower part of the bore of the inner tubular member.

In order that placement of the fingerpiece 14 on the base structure or shell 15 shall not produce such radially inward displacement of the inner tubular member as to interfere with the ease of action or normal operation of the propel-repel mechanism, I provide in accordance with the invention strut means integral with the inner tubular member so as to establish angularly spaced regions of relatively rigid support for the shell portion 15 of the inner tubular member. In the form shown, this strut means provides two angularly spaced regions of rigid support and is thus a diametrically extending strut 27. This strut 27 is shown formed integral with the bottom 28 which closes the lower end of the inner tubular member, and it is also integral with the cylindrical side wall of the shell portion 15. In the form shown, the regions of strut connection to the side wall coincide with the location of flats 26 so that the strut performs the further function of precisely locating the flats 25—26 which are relied upon for interference-fit of the carrier when near the fully retracted position. Thus, uniformity of carrier pro-

pulsion and friction retention is assured regardless of variations within manufacturing tolerances for the tubular part **29** of the fingerpiece **14** or for the outer surface of the shell portion **15** which are to be permanently press-fitted to each other.

If desired, a plurality of elongated ribs or ridges **30** may be formed at spaced locations on the outer surface of the shell portion **15** so as to promote smooth piloting of the fingerpiece **14** during the press-fit operation. Preferably, these ribs or ridges **30** terminate short of the plane of the shoulder **16** so that the upper end of the fingerpiece **14** may overlap and extend beyond the ridges **30**, thus providing greater assurance of permanence in the press-fit.

It will be appreciated that I have described an improved lipstick construction which, without the provision of any further parts, nevertheless provides the very desirable result of assuring uniformity of propel-repel action and also uniformity of friction retention of the carrier in its retracted position regardless of tolerance variations that may exist in the parts which are to be press-fitted together. The basic propel-repel mechanism lends itself to a variety of decorative employments, in that variously formed metal fingerpieces may be readily received by press-fit over the base shell **15**.

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

I claim:

1. A lipstick or the like container comprising two relatively rotatable tubular members, one within the other and open at one longitudinal end, a cylindrical carrier member longitudinally slidable within the inner tubular member and including a radially outwardly projecting actuating cam follower, propel-repel cam means on each of said tubular members and coacting with said cam follower to longitudinally displace said carrier member upon relative rotation of said tubular members, said inner tubular member comprising an elongated plastic tube including a cylindrical base extending longitudinally beyond the lower end of the outer tubular member, said base being hollow and closed integrally at the lower end thereof and defining between the adjacent end of said outer tubular member and said closed end a cylindrical shell portion of limited radial yieldability, strut means integrally formed with said inner tubular member and bracing angularly spaced parts of said shell portion against inward radial yielding displacement, and a separate metal base operating handle member including a sleeve part press-fitted to the outer surface of said shell portion, whereby said shell portion may yield in angularly spaced localized radial compression to receive and sustain said press-fit and yet said strut means may positively assure against such radially inward displacement as to jeopardize ease of movement of said carrier member, particularly when near the lower limit of travel thereof, the inner surface of said inner tubular member near the location of the lower limit of travel of said carrier member being formed with a plurality of inwardly projecting localized angularly spaced flats for frictional retention by interference-fit with said carrier member upon propulsion to said lower limit, and said strut means supporting said shell portion at substantially the angular locations of said flats, whereby uniformity of friction engagement of said carrier member in the retracted position is assured regardless of variations within the tolerances of the tightness of said press-fit.

2. The container of claim 1, in which said strut extends diametrically of said shell portion and thus defines two spaced supported parts of said shell portion.

References Cited in the file of this patent

UNITED STATES PATENTS

2,999,585	Hultgren	Sept. 12, 1961
3,015,120	Anderson	Jan. 2, 1962
3,021,946	Harris	Feb. 20, 1962

FOREIGN PATENTS

1,084,654	France	July 13, 1954
1,187,211	France	Mar. 2, 1959
72,656	France	Nov. 23, 1959