March 15, 1932. A. S. LYHNE 1,849,531

LIPSTICK CONTAINER

Filed March 2, 1929

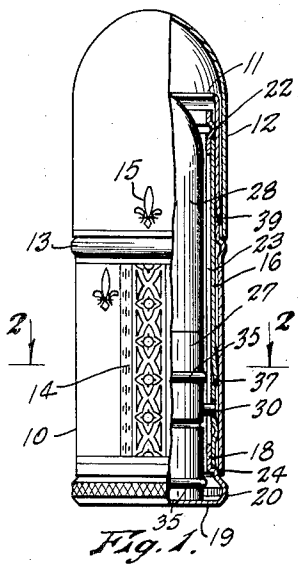


Fig. 1.

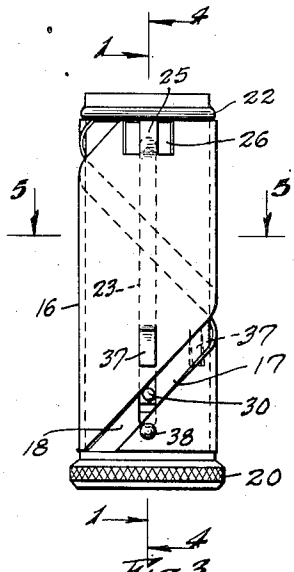


Fig. 3.

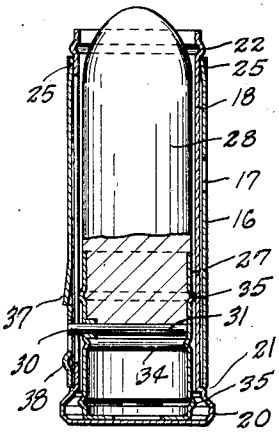


Fig. 4.

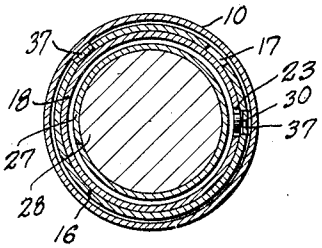


Fig. 2.

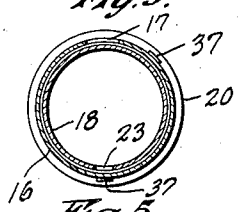


Fig. 5.

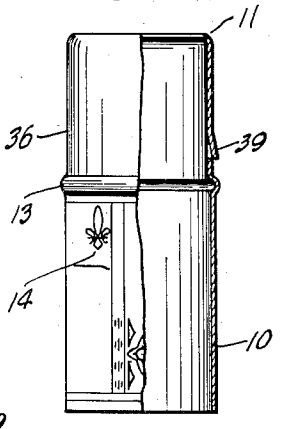


Fig. 6.

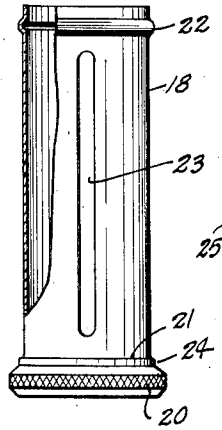


Fig. 8.

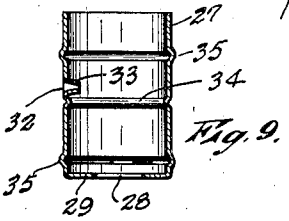


Fig. 9.

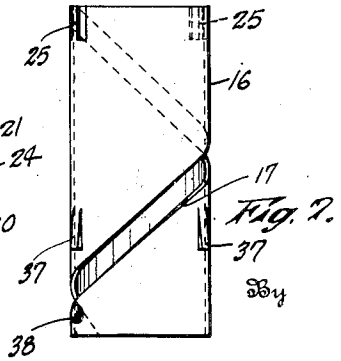


Fig. 7.

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UNITED STATES PATENT OFFICE

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LIPSTICK CONTAINER

Application filed March 2, 1929. Serial No. 343,856.

This invention relates to a lip stick container of the type in which the stick of cosmetic is supported in a carrier and is moved from the enclosing casing to expose the stick for use and then withdrawn into the casing, and it is an object to provide an improved construction in which the shifting means for the carrier of the cosmetic stick will operate more smoothly and with a better and more uniform action.

It is also an object of the invention to provide a construction which will effectively prevent the stick of cosmetic being forced back into the casing by pressure on the lips when using, but which will not interfere with the easy and uniform manipulation of the device.

It is another object of the invention to provide an improved construction of cam sleeve which will always be maintained in the proper operative position to insure shifting of the cosmetic carrier.

It is a further object of the invention to provide an improved construction of carrier which will have reduced friction in its enclosing sleeve to insure easier and better operation, and which will also hold the stick of cosmetic so that it will not be scraped by the sides of the casing when it is being advanced or retracted.

It is still another object of the invention to provide an improved means for mounting the guide pin for shifting the carrier and the cosmetic carried thereby.

With the foregoing and other objects in view, the invention consists in certain novel features of construction, combinations and arrangements of parts as will be more fully disclosed in connection with the accompanying drawings. In the drawings,

Fig. 1 is a partial side elevation and a partial section of the device in the closed position, the section of the two inner sleeves being substantially on line 1—1 of Fig. 3.

Fig. 2 is a transverse section thereof substantially on line 2—2 of Fig. 1 and on a somewhat larger scale.

Fig. 3 is a side elevation of the interior parts with the outer casing removed.

Fig. 4 is a longitudinal section thereof substantially on line 4—4 of Fig. 3.

Fig. 5 is a transverse section substantially on line 5—5 of Fig. 3.

Fig. 6 is a partial side elevation and partial longitudinal section of the outer casing.

Fig. 7 is a side elevation of the intermediate cam sleeve.

Fig. 8 is a partial side elevation and partial section of the inner rotary sleeve, and

Fig. 9 is a longitudinal section of the carrier before the guide pin is applied.

The improved lip stick container illustrated comprises an outer tubular shell 10 open at its opposite ends and preferably with its upper end turned inwardly somewhat as shown at 11 to facilitate inserting it in the lower open end of the cap 12 and a suitable distance from this open end this casing has an outwardly extending bead 13 to engage the end of the cap and form a stop to limit its movement. The body portion of the casing below the bead may or may not be provided with suitable surface ornamentation 14, but in relatively high priced articles a suitable design 14 is rolled in this surface by a suitable die, and a similar design, a portion of which is indicated at 15, may be rolled in the surface of the cap.

The propeller mechanism within the casing for moving the cosmetic to operative position or retracting it into the casing comprises an intermediate sleeve 16 which is preferably a strip of sheet metal having biased side edges so that when the strip is rolled into tubular form as shown in Figs. 3 and 7 these edges form a spiral groove 17 extending throughout the length of the sleeve. The sleeve is rolled to a diameter somewhat larger than the interior diameter of the casing 10 so that when it is inserted in the lower open end of the casing the sleeve will be depressed to the proper size against the resilient action of the metal, and this resilient action of the metal will hold the sleeve frictionally against the inner surface of the casing, and therefore, no locking or other securing means is required to retain the mechanism in the casing. During the propeller operation of shifting the cosmetic this frictional engagement between the sleeve and

the casing will hold the sleeve against rotation in the casing.

The sleeve 16 embraces an inner rotary sleeve 18 which is of a tubular construction closed at its lower end 19 and is expanded outwardly to form a head or flange 20 providing convenient means for rotating the sleeve 18, and to improve the grip on this flange or head it may be knurled as indicated. The sleeve 18 has a shoulder 21 a short distance from this flange or head and a bead 22 adjacent its open end between which the cam sleeve 16 is located and the opposite ends of this sleeve engage the shoulders formed at 21 and 22 to retain the sleeve 18 in proper relation to the sleeve 16. The sleeve 18 has a longitudinal slot 23 which cooperates with the spiral slot 17 and a guide pin which will later be described to shift the stick of cosmetic longitudinally in the casing. Between the shoulder 21 and the flange 20 this sleeve preferably has a short collar 24 which fits the open end of the casing 10 and effectively closes it as shown in Fig. 1. The cam sleeve 16 also has one or more spring lugs or ears 25 frictionally engaging the outer surface of the rotary sleeve 18 to offer certain frictional resistance to rotation of the sleeve 18 and to hold it in any position to which it may be rotated. One of these lugs will give this operation but it is preferred to provide two of these lugs arranged on diametrically opposite sides of the sleeve so as to balance it up. These lugs as shown are preferably formed by slitting the walls of the sleeve 16 longitudinally from the upper end as shown at 26, and before the sleeve is applied the lugs are bent inwardly so that the free ends of these lugs project inwardly from the surface of the sleeve. Therefore, when the sleeve 16 is compressed about the sleeve 18 by inserting it in the casing 10 these lugs 25 are forced outwardly and their spring or resilient action presses them against the outer surface of the sleeve 18 giving a nice smooth friction between these two sleeves which gives a uniform smooth operation, and the friction is sufficient to hold the sleeve 18 against accidental rotation and against rotation by pressure on the lip stick when in use.

Within the rotary sleeve 18 and slidable longitudinally therein is a carrier 27 for the cosmetic or lip stick 28. This carrier is of general tubular shape open at its upper end to receive the lower or inner end of the lip stick while this lower end has a smaller opening 28′ providing a partially closed end 29 which will prevent pushing the lip stick through the carrier should it be forced too far into it. This carrier has an outwardly extending projection 30 from its side wall projecting into the slots 23 and 17 in the sleeves 18 and 16, so that by relative rotation between these two sleeves this projection moves along the two slots by the camming action created and slides the carrier 27 and the lip stick 28 longitudinally to either project the lip stick from the open end of the sleeve for use or retract it into the sleeve, as shown in Figs. 1 and 4. This projection 30 is preferably provided by the outer free end of a transverse pin 31 mounted in the carrier. I have provided improved means for mounting this pin which is much less expensive to manufacture and assemble than the usual construction and which is much more satisfactory as it is held so that there is very little likelihood of its working loose in operation, and is also so held that it is not forced out of position in the act of forcing the stick of cosmetic into the carrier. To secure this I pierce the side wall of the carrier, as indicated at 32, and the walls about the opening are "carried down" as termed in the trade, or, that is, are drawn inwardly somewhat, as shown at 33, and below this opening I provide an inwardly extending bead 34. This opening 32 is made of somewhat smaller diameter than the pin 31 so that when the pin is forced into this opening the side walls 33 are expanded somewhat giving a firm tight grip on the surface of the pin. The pin is of such a length that its inner end engages the opposite inner surface of the carrier or lies closely adjacent it just above the bead 34, as shown in Fig. 4, while its outer end projects from the surface of the carrier and forms a guide projection 30. Thus the operation of assembling this pin merely involves forcing it inwardly through the opening 32 until its inner free end is stopped by the opposite wall of the carrier, and the free end 30 will then project from the side wall of the carrier the proper distance. The pin is thoroughly supported and tightly held by the walls about the pierced opening 32 and its inner free end is supported by the bead 34 so that it cannot be forced downwardly out of position should the lip stick 28 be forced too far into the carrier. It will be obvious that no riveting or other securing operations are required in mounting this pin.

I also preferably provide this carrier with one or more outwardly extending beads 35 to engage the inner surface of the rotary sleeve 18. These beads reduce the friction between the carrier and the sleeve making the carrier operate much easier and much more smoothly, especially if it should happen to be out of round. One bead will give this improved result but it is preferred to use two beads spaced longitudinally of the carrier as they will thus prevent wabbling or rocking movements of the carrier and the lip stick within the sleeve. Another important improvement effected by these beads is to space the sides of the lip stick or the cosmetic stick from the sides of the sleeve. Ordinarily for appearance and to insure that the stick properly fits in the carrier the outside diameter

of the stick is practically the same as the outside diameter of the carrier, and therefore, should the carrier be of the same diameter as the interior of the sleeve it would be difficult to so mount the stick that it would not scrape on the sides of the sleeve, thus interfering with the proper operation and also scraping off some of the cosmetic material to fall into the structure of the device making it operate unsatisfactorily and making it messy, besides spoiling its neat and attractive appearance. In the present construction the sides of the stick of cosmetic are held spaced from the sides of the sleeve by the beads 35 as shown on the drawing, these beads providing sufficient clearance to keep the surface of the stick away from the sleeve and prevent its being scraped by the end of the sleeve even should it be somewhat out of round or the stick not accurately centered in the carrier.

In rolling the designs, indicated at 14, in the body of the casing 10 considerable trouble has been experienced because this rolling operation being performed with considerable pressure expands the body of the casing so that at the end of the rolling operation it is of somewhat larger diameter than it was before this operation, and therefore, when the sleeves 16 and 18 are inserted sleeve 16 would not be compressed to the proper size, thus it would remain expanded somewhat so that the free end of the guide pin 30 would not always remain in the spiral slot 17 but would pass out of it to the interior of the sleeve, it being, of course, understood that the metals used are of thin gauge and the clearances allowed are small, the end 30 of the pin projecting ordinarily from the surface of the carrier only about a distance equivalent to the combined thicknesses of the two sleeves 16 and 18. Of course, as the upper portion 36 of the casing is not rolled it remains at its original diameter so that it compresses the upper end of the sleeve 16 to the proper size. I overcome the objection noted by providing sleeve 16 with outwardly extending spring lugs or ears 37 in the lower part thereof, preferably on opposite sides of the spiral slot 17, and these ears may be cut by slitting the walls of the sleeve on three sides and forcing the metal between the slits outwardly. Thus when the sleeve is inserted in the casing 10 these spring lugs or ears will engage the inner surface of the casing and will compress the sleeve 16 and retain it at the proper size, besides providing the proper frictional action between the sleeve and the casing to help retain the sleeve in the casing and prevent it turning therein during normal operation of the device. I also preferably provide a projection or nub 38 adjacent the corner of the sleeve where the slot 17 runs out so as to retain this free corner in proper relation to the sleeve 18. This lug may be formed by pressing out the wall of the sleeve.

The open end of the casing is closed by a suitable cap 12 which is slid on over the portion 36 of the casing and its movement is limited by the bead 13. The inturned end 11 of the casing is easily inserted in the open end of the cap and the cap is preferably of a somewhat loose fit on the casing so that it is easily applied or removed, but it should not be liable to accidentally drop off and to prevent this a friction lug is formed on the casing to engage the inner wall of the cap. The wall of the portion 36 may be slit and the portion of the wall between the slit forced outwardly to form a spring lug or ear 39 to frictionally and yieldably engage the inner wall of the cap and frictionally retain it on the casing, but will permit easy removal and application of the cap.

In assembling, the sleeve 18 with the carrier or lip stick holder 27 is inserted in the spring sleeve 16 with this sleeve 16 located between the shoulders 21 and 22. This assembly is then inserted in the lower open end of the casing 10, as indicated in Fig. 1, when the assembly is complete. It will be obvious that rotation of the sleeve 18 by the head or flange 20 will turn this sleeve 18 in the sleeve 16 which is held stationary by frictional engagement with the inner wall of the casing 10. Therefore, the slot 23 in the sleeve 18 will cause the carrier 27 to rotate with the sleeve 18 and will slide the pin 30 along the spiral groove 17. Therefore, cooperation of this pin with the side walls of this groove will slide the carrier 27 and the lip stick 28 longitudinally in the sleeve 18 to expose the end of the lip stick for use or retract it into the sleeve after use depending on the direction in which the sleeve 18 is rotated. The spring ears 25 provide sufficient friction to hold the lip stick in adjusted positions and prevent the stick being forced back into the sleeve by pressure on the lips when usng it.

Having thus set forth the nature of my invention, what I claim is:

1. In a lip stick container, an outer casing, a stationary sleeve of resilient sheet metal in the casing having a spiral guideway opening through the opposite ends thereof so that the sleeve can expand and contract, a rotary sleeve in the stationary sleeve having a longitudinal slot, a cosmetic carrier in the rotary sleeve having a lateral projection in said slot and guideway, and one or more spring lugs on the stationary sleeve tending to move inwardly therefrom so as to frictionally engage the surface of the rotary sleeve and tend to expand the stationary sleeve and hold it against the casing.

2. In a lip stick container, an outer casing, a stationary sleeve of resilient sheet metal in the casing having a spiral slot opening through the opposite ends thereof so that the sleeve can expand and contract, a rotary sleeve embraced by the stationary sleeve hav-

ing a longitudinal slot, a longitudinally movable cosmetic carrier in the rotary sleeve carrying a lateral projection in said slots, and spring lugs on the stationary sleeve on the opposite sides thereof tending to move inwardly therefrom so as to frictionally engage the outer surface of the rotary sleeve and tend to expand the stationary sleeve and hold it against the casing.

3. In a lip stick container, an outer casing, a stationary sleeve in the casing having a spiral slot extending throughout its length so that the sleeve may expand and contract, outwardly extending resilient lugs on the sleeve engaging the inner surface of the casing to prevent expansion of the sleeve and retain it to size, a rotary sleeve in the stationary sleeve having a longitudinal slot, a cosmetic carrier in the rotary sleeve, and an outwardly extending projection on the carrier guided for sliding movement in said slot as the inner sleeve is rotated.

4. In a lip stick container, an outer casing, a stationary sleeve in the casing having a spiral slot extending throughout its length so that the sleeve may expand and contract, outwardly extending resilient lugs on the sleeve on opposite sides of the slot to engage the inner wall of the casing and space the sleeve therefrom, a rotary sleeve embraced by the stationary sleeve and having a longitudinal slot, a cosmetic carrier longitudinally slidable in the rotary sleeve, and a lateral projection on the carrier guided in said slots.

5. In a lip stick container, an outer casing, a stationary sleeve in the casing having a spiral slot, a rotary sleeve in the stationary sleeve having a longitudinal slot, a cosmetic carrier in the rotary sleeve and slidable longitudinally thereof, said carrier being a cylindrical member open at one end to receive a stick of cosmetic and provided with two longitudinally spaced laterally projecting means to engage the inner surface of the rotary sleeve to space the carrier therefrom and hold the carrier straight in the sleeve, and an outwardly extending projection carried by the carrier and guided in said slots.

6. In a lip stick container, an outer casing, a stationary sleeve in the casing having a spiral slot, a rotary sleeve in the stationary sleeve having a longitudinal slot, a cosmetic carrier in the rotary sleeve and slidable longitudinally thereof, said carrier being a hollow shell open at one end to receive a stick of cosmetic and provided with a pair of longitudinally spaced outwardly extending beads to engage the inner surface of the rotary sleeve to space the carrier from said sleeve and hold the carrier straight in the sleeve, and a guide pin carried by the carrier projecting laterally into said slots.

7. In a lip stick container, an outer casing, a stationary sleeve in the casing having a spiral slot, a rotary sleeve in the stationary sleeve having a longitudinal slot, a hollow cosmetic carrier sildable longitudinally in the rotary sleeve and open at one end to receive a stick of cosmetic, and provided with a pair of longitudinally spaced laterally extending rigid spacing means on its outer surface to engage the inner surface of the rotary sleeve and hold the carrier and cosmetic stick spaced therefrom and also prevent their tipping in the sleeve, and a lateral guide pin on the sleeve extending into said slots.

8. In a lip stick container, a hollow cosmetic carrier slidable longitudinally and open at one end to receive a stick of cosmetic, the side wall of said carrier being pierced with an opening and having an inwardly extending bead on its inner wall below said opening, and a transverse guide pin forced into said opening so as to be frictionally held by the walls thereof, said pin extending across the carrier with its free inner end adjacent the opposite wall of the carrier above the bead to be supported thereby and with its outer end projecting from the carrier.

9. In a lip stick container, a hollow cosmetic carrier slidable longitudinally and open at one end to receive a stick of cosmetic, the side wall of said carrier being pierced with the walls of the opening drawn inwardly, said carrier also having an inwardly extending bead on its inner wall below said opening, and a transverse guide pin forced into said opening so as to have a tight fit therein and be frictionally held by the side walls thereof, said pin extending across the carrier with its inner free end above the bead so as to be supported thereby and its outer end projecting from the outer surface of the carrier.

10. In a lip stick container, a casing, a pair of concentric sleeves in the casing one of which is rotatable relative to the other, one of said sleeves having a spiral slot and the other a longitudinal slot, a tubular cosmetic carrier slidable longitudinally in the inner sleeve and open at one end to receive a stick of cosmetic, said carrier having a pair of longitudinally spaced outwardly extending beads to engage the inner wall of its enclosing sleeve to space the carrier and the stick therefrom and decrease friction between the carrier and the sleeve and also guide the carrier straight in the sleeve, and a guide pin carried by the carrier and having an outer end projecting from the side of the carrier into said slots.

In testimony whereof I affix my signature.

ANKER S. LYHNE.