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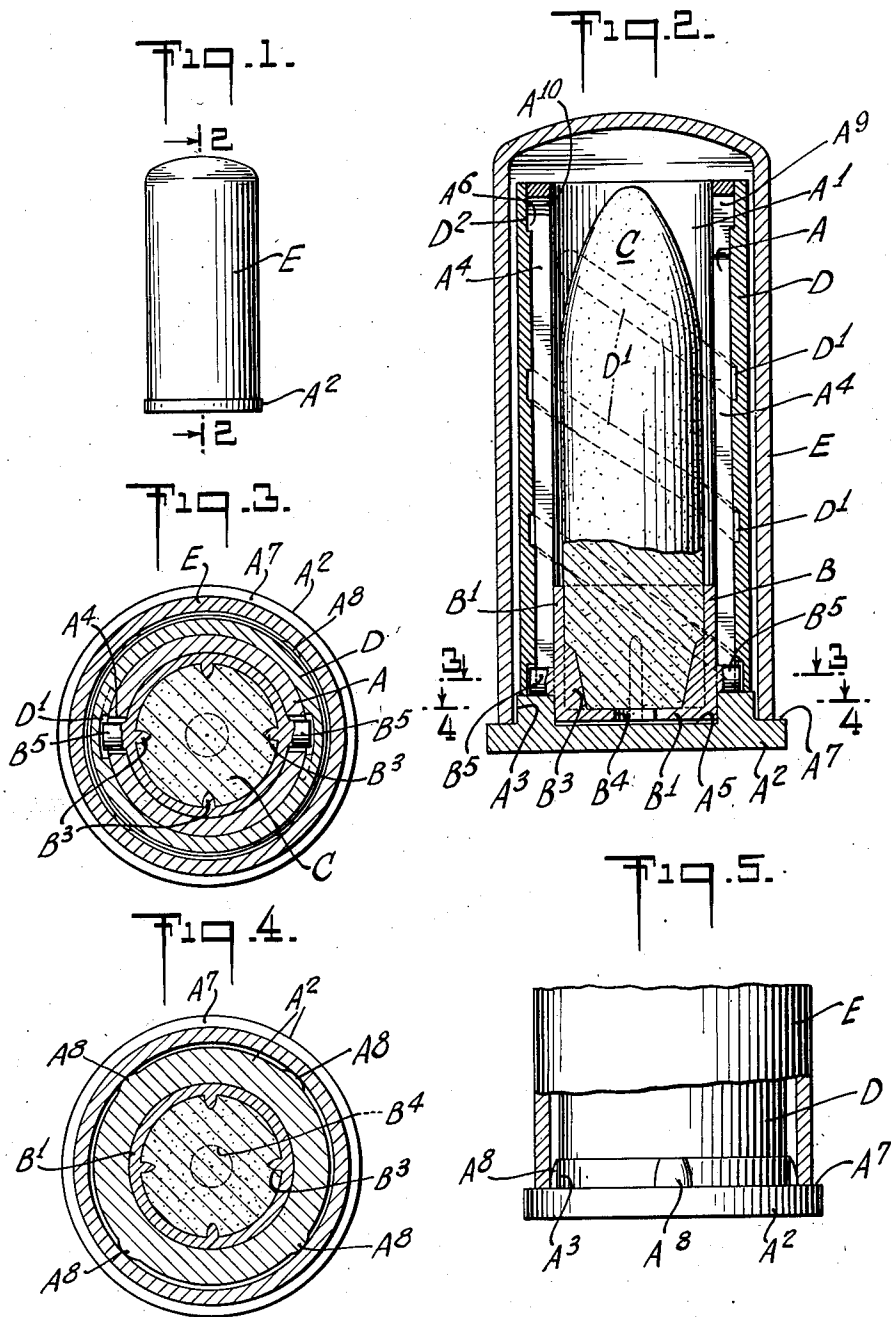
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LIPSTICK CONTAINER-DISPENSER

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2 Sheets-Sheet 1



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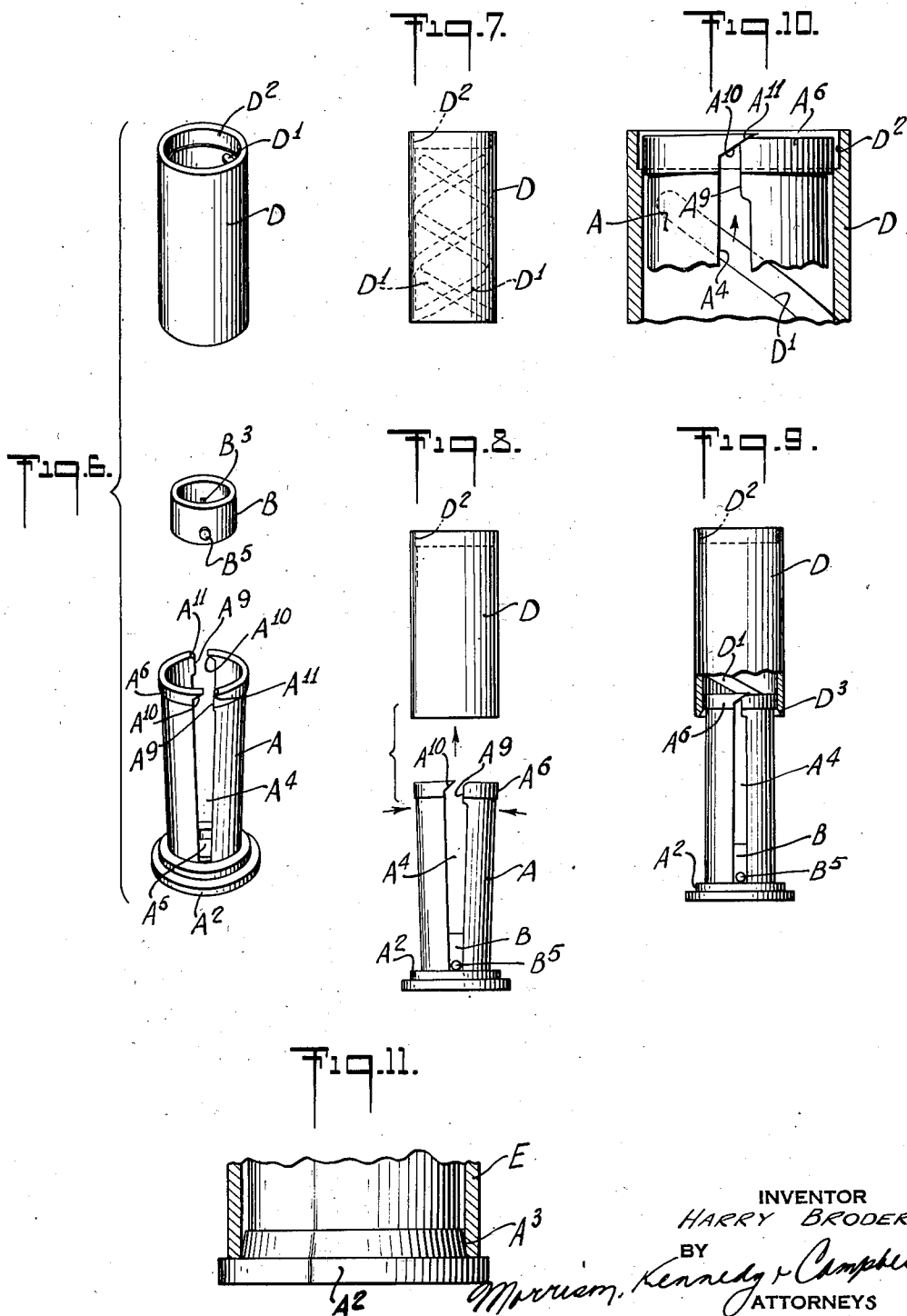
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LIPSTICK CONTAINER-DISPENSER

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12 Claims. (Cl. 206—56)

This invention relates to a lipstick container-dispenser of the type having a lipstick cartridge which is arranged to be retracted into the container and covered when not in use and uncovered and projected from the container a suitable distance when in use, the retraction and projection of the lipstick cartridge being effected by a relative rotation of certain of the container parts.

A commercial lipstick of the character in question consists of concentric inner and outer cylindrical shells, the inner shell presenting a longitudinal bore to receive a carrier for the lipstick cartridge, the carrier being provided with a laterally extending pin to cooperate with, say, a longitudinal slot in the inner shell and a spiral groove in the outer shell, the arrangement being such that as the outer shell is rotated relatively with respect to the inner shell in one direction, the carrier will be moved longitudinally along the bore to project the lipstick cartridge when its use is desired, whereas, when the parts are relatively rotated in the opposite direction, the carrier will be moved in the reverse direction to retract the lipstick cartridge into the bore when its use is not desired. It is also customary to provide such lipstick containers with a cover or cap to prevent access to the lipstick of contaminating foreign matter, as well as to prevent the lipstick itself from coming into contact with and soiling other articles. Such covers have consisted of a cap fitting over the open end of the bore and frictionally engaging the outer sleeve. While adequate to prevent contamination of the lipstick and to protect other articles from being soiled by the lipstick, such covers have the inherent disadvantage of permitting the outer and inner shells of the lipstick container to be rotated relatively even when the cover is in place, thus allowing the lipstick to be forced endwise against the cap and crushed.

Some prior lipstick container-dispensers have been made entirely of metal, but the metals to which manufacturers chiefly have been confined for economic reasons, suffer corrosion, and even though such metals are plated, the constant service to which these articles are put, very quickly destroys the plating, leaving the metal exposed and in an unsightly condition. This condition has been partly remedied by using plastics for the caps and the outer shells, but the manufacturers have continued to use metal for the remaining parts so that insofar as such parts are concerned, the inherent disadvantages of metal are retained.

According to the instant invention, the disadvantages flowing from the use of metal have been

obviated by making all elements of the container-dispenser of a molded plastic material, and this has been permitted by the use of certain improved constructional features which are described in detail later on. The other objection referred to, namely, the crushing of lipstick against the cap by inadvertent relative rotation of the inner and outer shells, has been eliminated by constructing the cap so that it engages a base portion of the inner shell member which extends beyond the outer shell member at one end, thereby completely enclosing the outer shell. By providing adequate clearance between the cap and the outer shell, it will be impossible relatively to rotate the inner and outer shells, with the result that the projection of the lipstick cartridge beyond the end of the bore and into contact with the cap will be avoided.

Other advantages possessed by the instant invention will be elucidated in the following detailed description when read in conjunction with the accompanying drawings of which:

Fig. 1 is an elevation of a lipstick container-dispenser embodying the present improvements;

Fig. 2 is a vertical sectional view on line 2—2 of Fig. 1;

Fig. 3 is a horizontal sectional view on line 3—3 of Fig. 2;

Fig. 4 is a horizontal sectional view on line 4—4 of Fig. 2;

Fig. 5 is an enlarged partial elevation of the lower portion of the container-dispenser with the cap partially broken away to show the means for holding the cap in place;

Fig. 6 is an exploded view of the container-dispenser without the cap;

Fig. 7 is an elevational view of the outer shell member;

Fig. 8 is an elevational view of the outer shell and the inner shell members preparatory to assembly;

Fig. 9 is an elevational view of the outer and inner shells just after the inner shell has entered the outer shell during the assembly operation;

Fig. 10 is a partial vertical sectional view through the top portion of the outer shell during the assembly of the inner shell therewith and just before the inner shell has seated in its final position; and

Fig. 11 is a view similar to Fig. 5, but showing a different embodiment of the means for holding the cap member in place.

The container-dispenser, when assembled for use, includes an inner cylindrical shell A having a bore A¹ serving as a guide for a cartridge recep-

tacle or carrier B containing a lipstick cartridge C. The bore A¹ is closed at the bottom by a base member A² formed integral with the shell A. An outer shell D, concentric with the inner shell A, encircles the latter with the exception of the base member A². The container-dispenser further includes a cap E completely enclosing the outer shell and which engages an outer cylindrical surface A³ of a reduced portion of the base A² (Figs. 1, 2 and 3).

The cartridge receptacle B is formed with a base portion B¹ and a cylindrical side wall B². It is open at the top to receive the lipstick cartridge C and, when the cartridge is inserted in the receptacle, it is held against turning with respect thereto, by a series of vertical ribs B³ formed integral with and projecting from the inner side wall B². Four such ribs B³ are shown, equally spaced about the receptacle wall, but it is apparent that a lesser or a greater number could be employed, if desired. The ribs B³ are substantially triangular in cross-section and taper toward the top so as to provide a maximum amount of frictional resistance to hold the cartridge in the receptacle, it being understood, of course, that the cartridge is relatively soft and must be pushed down into the receptacle when the device is loaded. Centrally of its base, the receptacle B is formed with a hole B⁴ to permit the escape of air as the cartridge is pressed into place. The receptacle B is also formed with a pair of diametrically opposed pins B⁵ projecting laterally from its outer cylindrical surface and which are located somewhat above the bottom B¹. The function of these pins is described later on.

For reasons hereinafter set forth, the inner shell A is formed, above its base A² in two sections, semi-cylindrical in cross-section except that their edges are cut away to present a pair of diametrically opposed vertical slots A⁴ through which the receptacle pins B⁵ extend. The pins B⁵ project beyond the slots and into a pair of spiral grooves D¹ presented by the inner wall of the outer shell D. The grooves D¹ start at the bottom of the shell, at diametrically opposed points, and terminate somewhat below the top thereof. According to this arrangement, when the receptacle B is in its lowermost position, as determined by the banking of the pins B⁵ against the base A² (which is recessed as at A⁵ to accommodate that portion of the receptacle below the pins B⁵), the lipstick cartridge will be located entirely within the confines of the bore A¹. However, assuming that the cap E has been removed, when the inner shell A and the outer shell D are relatively rotated as by holding the outer shell and rotating the base portion of the inner shell in one direction, the receptacle B, by virtue of the engagement of its pins in the spiral groove of the outer receptacle and the vertical slots of the inner receptacle, will be moved upwardly to project the lipstick beyond the bore so that access to it may be had and, conversely, when the inner and the outer shells are relatively rotated in the opposite direction, the receptacle B will be moved downwardly to retract the lipstick cartridge within the confines of the bore.

The inner shell A is formed, at the top, with an external annular boss A⁶ which fits into a complementary recess D² formed in the inner face of the outer shell D, the boss A⁶ and the recess D² presenting inter-engaging shoulders in a plane perpendicular to the axis of the container. At its lower end, the outer shell D engages the base A² of the inner shell. This construction, at

the opposite ends of the shells, effectively locks them against relative longitudinal movement, once the parts are assembled.

When the cap E is in place with its lower end engaging an annular shoulder A⁷, presented at the top of the larger portion of the base A², it completely encloses the outer shell D and is frictionally locked to said base by a series of four protrusions A⁸ equally spaced around the reduced cylindrical portion A³ thereof (Figs. 4 and 5). The protrusions A⁸ are formed integrally with the base and engage the inner wall of the cap with sufficient friction securely to hold the parts together against inadvertent removal. The friction, however, is not so great but that the user readily will be able to remove the cap.

Since the cap E, when in service, engages the base member of the inner shell A and since there is full clearance between the cap and the outer shell, relative rotation between the inner and the outer shells is impossible and there will be no danger of the lipstick cartridge being crushed against the top of the cap. These arrangements are particularly desirable since, in removing the cap, the user subconsciously tends relatively to rotate the parts when removing the cap and, were it possible to rotate the inner shell with reference to the outer shell, as would be the case in all instances where the cap engages the outer shell rather than the inner shell, crushing of the lipstick would inevitably follow.

Reference will now be made to details of construction that concern the manufacture and assembly of the parts, as distinguished from their operation when in service. As previously stated, the lipstick container-dispenser consists of four parts, including the cap, all of which are molded of a suitable plastic material. No problem is presented in molding the cap E or the receptacle B. Nor is there any problem in molding the outer shell D, despite the presence of the spiral grooves D¹ since, as the latter are open at the bottom, the shell can be backed off the core with a rotating movement.

The molded inner shell, however, is more complex. As shown in Figs. 6 and 8, there is formed in one edge of each slot near the top, a protrusion A⁹ which acts as a stop to limit the upward movement of the cartridge receptacle since it stands in the path of the adjacent pin B⁵ thereof. Then, too, the opposed walls of each slot terminate at the top, in complementary bevelled portions A¹⁰ and A¹¹, which, when the parts are assembled, overlap one another, giving an optical illusion of continuity except for a slight line which is unnoticeable unless attention is directed particularly to it. The illusion is further enhanced by bevelling oppositely the different edges of each shell section so that the slots appear to be cut along a common diameter.

When the outer and inner shells D and A have been assembled, the walls of the slots A⁴ are parallel. However, as molded, the edges of the slots flare outwardly toward the top. There are several reasons for molding the shell in this fashion. First, there is provided an adequate opening at the upper ends of the slots readily to admit the protruding pins B⁵ of the cartridge receptacle which is the first step in the assembly of the parts (Fig. 8). Another reason for the flare and the separation of the slot walls at the top is to facilitate removal of the shell from the molding core. After the shell has been molded, its inherent resiliency allows the cylindrical sections to be sprung apart sufficiently to enable the shoul-

ders A⁹ and the bevelled portions A¹⁰ and A¹¹ at the upper ends of the slots to clear that portion of the core which forms them, as the shell is removed from the core. After the shell has been removed, it again will assume its original shape as shown in Figs. 6 and 7.

After the cartridge receptacle B has been placed in the inner shell A, the latter is inserted endwise into the outer shell D. In performing this operation, the two cylindrical sections are pressed together against their natural tendency to maintain their molded form and entered into that end of the outer shell which is opposite the recess D², the entry being facilitated by an internal bevel D³ formed at the lower end of the outer shell (Fig. 9). Thereafter, the inner shell is pushed up into the outer shell until its base portion A² engages the end of said outer shell. At that time, the boss A⁶ at the top of the inner shell comes into register with the annular recess D² in the outer shell whereupon the sections of the inner shell being under stress, will spring out and seat in the recess. In Fig. 10, the parts are shown just before the boss A⁶ enters the recess, and in Fig. 2 the parts, after the boss has sprung into its final assembled position. It will be apparent now that by molding the inner shell with the sections thereof spread apart at their upper ends, as has been described, those sections, when the inner shell is assembled within the outer shell, will always be under an internal stress tending to maintain the boss at the top of the inner shell seated in the complementary recess in the outer shell. Indeed, such is the force tending to hold the parts together that it is almost impossible to unassemble them without breaking.

While it is conceivable that the inner shell A could be molded with but a single slot, such construction would lack the advantages of the double slot which is believed to be new. Thus, a double slot combined with a double internal spiral thread in the outer shell (Fig. 7) distributes the force, for traversing the cartridge receptacle, evenly at diametrically opposed points so that there is no tendency for the carrier to be tilted as it moves along the bore in either direction to project or retract the lipstick cartridge. Furthermore, despite the fact that the sections of the inner shell are not perpendicular to the base thereof as molded, nevertheless these sections per se can be molded in true cylindrical form and to the final radius the sections will have when the inner and outer shells are assembled. This insures that the boss, at the top of the inner shell, will fit snugly into the complementary recess of the outer shell throughout its entire periphery when the parts are assembled. This would not be likely if the inner shell were molded with but a single slot since then the sections would not have a true cylindrical shape except, perhaps, at the extreme bottom where the shell joins the base. Such a construction would not guarantee that the inner shell, when assembled, would have a true cylindrical section, in the absence of which the container would have an unsightly appearance at the top when the cap is removed. Crevices would appear allowing the ingress of dirt or other foreign matter and, of course, the receptacle B would not ride freely in the bore A¹ because of the binding action that would result between the receptacle and the wall of the inner shell. Then, too, if only a single slot were used, there would be a substantial separation at its upper end which would destroy the appearance of continuity possessed by the improved construction herein described.

Another advantage in the use of the comple-

mentary bevelled surfaces A¹⁰ and A¹¹ at the upper ends of the opposed cylindrical sections, flows from the fact that when the sections are pressed together for insertion into the outer shell member, the surfaces will ride one over the other. This enables the upper end of the inner shell member to conform to the smaller internal circumference of the outer shell member and then assume its normal assembled dimensions when the boss portions A⁶ seat in the recess D², the bevelled portions, at that time, sliding back to a position in which the upper ends of the semi-cylindrical sections are in the same plane.

In Fig. 11, there is illustrated another embodiment of the means for holding the cap E in frictional engagement with the base portion A² of the inner shell. Instead of using the raised protrusions A⁸, the surface A³ of the base member is formed with a slight taper so that when the cap is in place, it will be held onto the base member with a wedging action sufficient to prevent its inadvertent removal.

In the accompanying drawings, the invention has been shown merely in preferred form and by way of example, but obviously many variations and modifications may be made therein which will still be comprised within its spirit. It is to be understood, therefore, that the invention is not limited to any specific form or embodiment, except insofar as such limitations are specified in the appended claims.

Having thus described my invention, what I claim is:

1. A container-dispenser for a lipstick cartridge, said container-dispenser being composed wholly of molded plastic material and including, in combination, a cartridge receptacle, an inner shell member presenting a bore to accommodate said receptacle, an outer shell member relatively rotatable with respect to said inner shell member, in one direction, to project the lipstick cartridge outwardly from the bore for use and in the opposite direction, to retract the lipstick cartridge into the bore, said inner shell being molded with a base portion and two substantially semi-cylindrical sections diverging from said base portion and formed with bosses at the ends thereof opposite the base portion, said sections, upon insertion of the inner shell into the outer shell, being maintained in parallel relation under internal stress and said bosses being adapted to seat in a complementary recess formed in the outer shell member and to be held in said recess by the internal stress in said inner shell.

2. A combination according to claim 1, wherein the opposed ends of the bosses on the semi-cylindrical sections are complementary bevelled permitting said ends to override one another in a direction longitudinally of the sections as the inner shell is inserted in the outer shell, the said bosses assuming a co-planar position as they snap into the recess in the outer shell member.

3. A combination according to claim 1, wherein the outer shell is internally bevelled at the end opposite the recess to facilitate the entrance of the inner shell member during assembly.

4. A combination according to claim 1, wherein the two substantially semi-cylindrical sections, when assembled, present two longitudinal parallel-edge slots defined by the opposed edges of said then-parallel sections to guide a pair of diametrically opposed pins projecting laterally from the cartridge receptacle.

5. A combination according to claim 1, wherein the two substantially semi-cylindrical sections,

when assembled, present two longitudinal parallel-edge slots defined by the opposed edges of said then-parallel sections to guide a pair of diametrically opposed pins projecting laterally from the cartridge receptacle, and at least one of said slots having a pin stop molded in one of its edges.

6. A combination according to claim 1, wherein the two substantially semi-cylindrical sections, when assembled, present two longitudinal parallel-edge slots defined by the opposed edges of said then-parallel sections to guide a pair of diametrically opposed pins projecting laterally from the cartridge receptacle, and wherein the two said sections overlap at their upper ends along diametrically opposite lines offset with reference to the longitudinal center lines of said slots, as and for the purpose described.

7. A container-dispenser for a lipstick cartridge including, in combination, a cartridge receptacle having a laterally projecting pin, an inner shell member presenting a bore to accommodate said receptacle and formed with a longitudinal guide slot for the receptacle pin, and an outer shell member formed with a spiral groove to receive the receptacle pin, said outer shell member being rotatable relatively to the inner shell member, in one direction to project the lipstick cartridge outwardly from the bore for use, and in the opposite direction to retract the lipstick cartridge into the bore, characterized in that said inner and outer shell members are both composed wholly of molded plastic material and are held together in assembled relation by the mutual contact of a pair of overlapping square-seating annular surfaces located in a plane perpendicular to the axis of the container, one of said surfaces being constituted by a flat bottom wall of a cylindrical recess formed on the inner surface of the outer shell member at the top, and the other of said surfaces being constituted by a lower flat edge of a cylindrical boss formed on the outer surface of the inner shell member at the top and fitted into said cylindrical recess.

8. A container-dispenser for a lipstick cartridge according to claim 7, wherein the two shell members are assembled by the insertion of the outer end of the inner member into the lower end of the outer member, and characterized in that said inner shell member is split through at the top from the upper end of the guide slot to the upper edge of the cylindrical boss to permit such assembly and the subsequent overlapping of the square-seating annular surfaces formed on the shell members.

9. A container-dispenser for a lipstick cartridge according to claim 7, wherein the two shell members are assembled by the insertion of the outer end of the inner member into the lower end of the outer member, and characterized in that said inner shell member is split through at the top

from the upper end of the guide slot to the upper edge of the cylindrical boss to permit such assembly and the subsequent overlapping of the square-seating annular surfaces formed on the shell members, said split being inclined with respect to the longitudinal center line of the guide slot so as to conceal the presence of the slot in the assembled condition of the container.

10. A container-dispenser for a lipstick cartridge according to claim 7, characterized in that the width or height of the cylindrical boss on the inner shell member is the same as that of the cylindrical recess in the outer shell member, whereby the upper ends of the two shell members will be flush in the assembled condition of the container.

11. A container-dispenser for a lipstick cartridge according to claim 7, characterized in that the cylindrical boss on the inner shell member completely fills the cylindrical recess in the outer shell member, whereby to minimize any visual aspect of lack of integrality in the assembled condition of the container.

12. A container-dispenser for a lipstick cartridge including, in combination, a cartridge receptacle having a laterally projecting pin, an inner shell member presenting a bore to accommodate said receptacle and formed with a longitudinal guide slot for the receptacle pin, and an outer shell member formed with a spiral groove to receive the receptacle pin, said outer shell member being rotatable relatively to the inner shell member, in one direction to project the lipstick cartridge outwardly from the bore for use, and in the opposite direction to retract the lipstick cartridge into the bore, characterized in that all three of said elements are composed wholly of molded plastic material, each as an integral structure, and are held together in assembled relation by the mutual contact of a pair of overlapping square-seating annular surfaces located in a plane perpendicular to the axis of the container, one of said surfaces being constituted by a flat bottom wall of a cylindrical recess formed on the inner surface of the outer shell member at the top, and the other of said surfaces being constituted by a lower flat edge of a cylindrical boss formed on the outer surface of the inner shell member at the top and fitted into said cylindrical recess, said inner shell member being split through at the top from the upper end of the longitudinal guide slot to the upper end of the cylindrical boss to permit, first the insertion of the cartridge receptacle into the inner shell member, next the insertion of the upper end of the inner shell member into the lower end of the outer shell member, and finally the overlapping of the square-seating annular surfaces formed on the shell members to hold the parts together in assembled relation.

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