Dec. 16, 1958 A. M. WAHLE 2,864,494

LIPSTICK STRUCTURES

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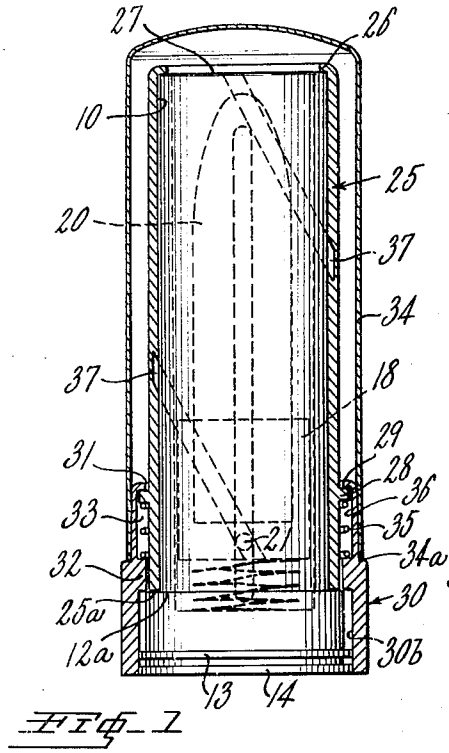


FIG. 1

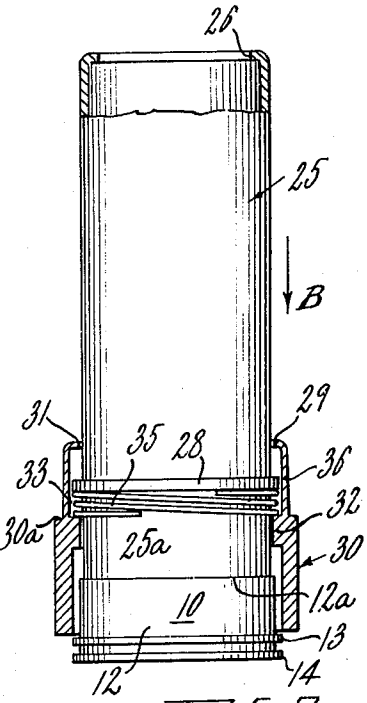


FIG. 2

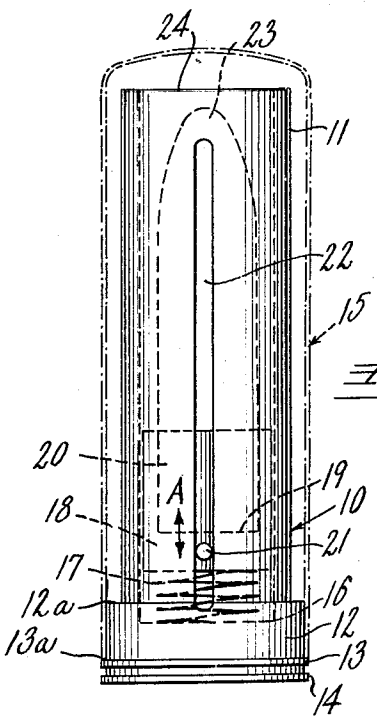


FIG. 3

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Fig. 4

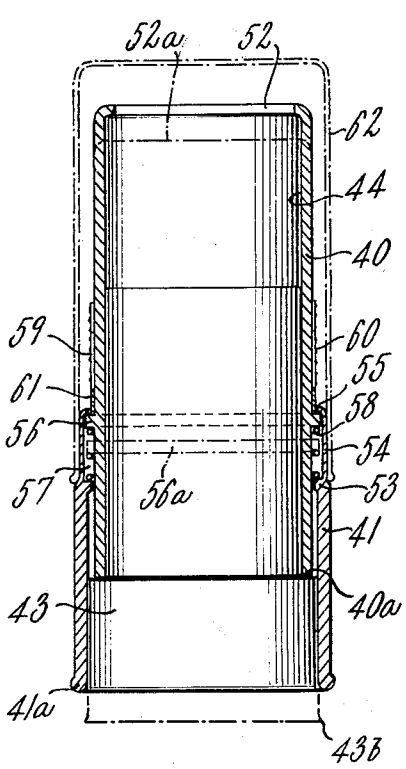


Fig. 5

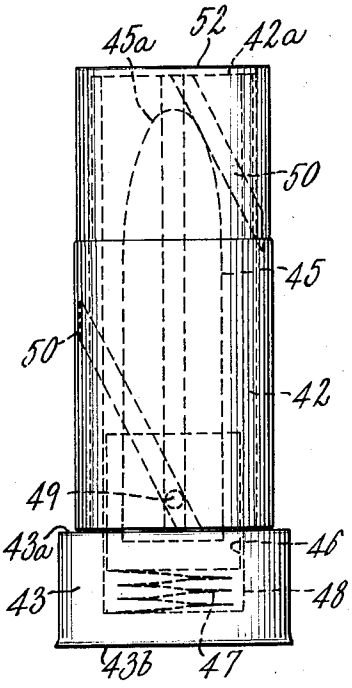
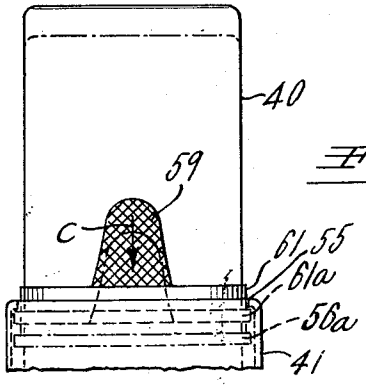


Fig. 6



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LIPSTICK STRUCTURES

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Application May 7, 1957, Serial No. 657,651

7 Claims. (Cl. 206—56)

This invention relates to lipstick holders and more particularly to lipstick casings for receiving and discharging lipstick refills.

It is one of the objects of the present invention to provide means facilitating the automatic removal of a lipstick refill from a lipstick casing, in which such refill is completely hidden and is thus not accessible, when the lipstick refill is to be replaced.

It is another object of the present invention to provide means affording easy insertion of a lipstick refill in a lipstick casing and the automatic ejection of the lipstick refill without causing any soilage of the hand or garment of the user.

It is another aim of the invention to provide means conducive to a simplified construction of the lipstick casing which requires substantially only a few parts, may be readily manufactured through mass production methods at a greatly reduced cost, and is very efficacious in operation.

It is still a further object of the present invention to provide means ensuring easy operation of the ejector means incorporated in a lipstick casing without requiring any instructions for the user to manipulate said ejector means for disposing of used or replaceable refill.

The above and other objects of the invention will become further apparent from the following detailed description, reference being made to the accompanying drawings, showing preferred embodiments of the invention.

In the drawings:

Fig. 1 shows a vertical section through the cover and lipstick casing according to the invention provided with an ejector device for the removal of a lipstick refill therefrom.

Fig. 2 shows in elevation, partly in section, the lipstick casing of Fig. 1 with the ejector device in operative position for releasing the lipstick refill from the lipstick casing, the cover for the latter being omitted.

Fig. 3 shows in elevation a lipstick refill with a cover therefor indicated in dotted lines as it is marketed before the insertion of said refill in a lipstick casing made in accordance with the invention.

Fig. 4 shows a vertical section of a modified lipstick casing constructed with an ejector device made in accordance with the invention.

Fig. 5 shows an elevational view of a lipstick refill employable with the lipstick casing of Fig. 4.

Fig. 6 is a fragmentary, elevational view of a part of the ejector device according to Fig. 4 indicated in two different positions.

Referring now more particularly to Figs. 1 to 3, there is shown in Fig. 3 a lipstick refill housing or cartridge **10** having a sleeve or cylindrical portion **11** with a lower rotatable end portion of piece **12**, which is provided with projecting spaced circular rims **13** and **14**. On the upper projecting surface **13***a* of rim **13** may be seated a cover **15** (indicated in dotted lines), as it is marketed prior to the insertion of the refill housing in a permanent lipstick casing, which is generally made from any suitable material, such as precious metal. Within end piece **12** is retained on bottom **16** a spring **17** on which is seated longitudinally moving means in the form of a cup-shaped holder **18** adapted to receive a body of cosmetic paste or lipstick cake **20**, the bottom **19** of which is seated within said cup **18**. Cup **18** is provided with a pin **21** adapted to ride in a slot **22** of sleeve **11**, whereby pin **21** may be moved in the directions of arrows A, so that said longitudinally moving means with lipstick cake and in particular its pointed applicator end **23** may be moved in a well-known manner beyond the upper edge **24** of sleeve **11**.

The lipstick casing into which this refill housing **10** is to be inserted consists of an inner tubular member or sleeve **25** having the inwardly turned or crimped upper abutment or rim **26** defining an end opening **27**. Inner tubular sleeve **25** has further an outwardly extending annular abutment or collar **28** for a purpose later described. The lipstick casing is further provided with an outer tubular member or sleeve **30** having an upper inwardly turned end **29** thereby providing an opening **31** through which the inner tubular sleeve **25** telescopically projects. End or flange **29** overlies abutment or collar **28** and thus couples one tubular casing part **30** to the other tubular casing part **25** to facilitate relative axial movement as well as rotational movement of said parts to each other.

The outer tubular sleeve **30** has further an inner flange-shaped abutment or collar **32** and thus provides between collar **28** and collar **32** a chamber or pocket **33** in which is located a coil spring **35** which tends to spread collars **28** and **32** of the tubular lipstick casing means **25** and **30** apart as clearly seen in Fig. 1. When the tubular casing means **25**, **30** are to be closed a cover **34** extends under friction over the reduced lower outer sleeve member portion **36** of the outer tubular sleeve **30** and abuts with its end **34***a* on to a shoulder **30***a* as can be most clearly seen in Figs. 1 and 2.

The inner tubular sleeve member **25** is provided, in the present instance, with an inner helical groove **37**, whereby when lipstick refill housing **10** with the projecting pin **21** is inserted through the tubular outer means **30** rims **13** and **14** will frictionally engage the inner surface **30***b* of the outer tubular means or sleeve **30**, whereby the latter when held firmly in the hand of the operator may be rotated relative to the inner tubular sleeve **25**. Thus pin **21** moves along in said helical groove **37** of sleeve **25** and propels the follower or cup **18** carrying the lipstick matter **20** in the direction of the end opening **27** of inner tubular means or sleeve **25**, after cover **34** has been removed from the aforesaid casing.

If the lipstick refill and lipstick thereof need replacement and since the refill housing cannot be touched or reached by means of the hands of the operator (the refill housing being completely enclosed in the aforesaid tubular means as shown), all that the operator has to do is to slide inner sleeve **25** in axial direction according to arrow B (Fig. 2) whereby collar **28** with sleeve **25** are pressed against the action of spring **35** relative to outer tubular sleeve **30** so that the lower end piece **12** of the refill housing will engage with its upper edge or abutment **12***a* the corresponding lower edge **25***a* of tubular inner sleeve **25**. Thus the lipstick refill **10** may be readily disengaged from the outer sleeve **30** while the remainder of the refill housing may be still frictionally engaged with the inner surface of collar **32**, as most clearly seen in Fig. 2. Thus it is possible to grasp the projecting refill housing parts **12**, **13** and **14** by the fingers of the hand of a user in order to completely withdraw the refill from the open end of the tubular lipstick casing part **30**.

Referring now more particularly to the embodiment

shown in Figs. 4 to 6, there is shown in section in Fig. 4 an inner tubular means or sleeve member **40** and an outer tubular means or sleeve member **41** into which latter is inserted a complete refill lipstick housing **42** having the lower or end piece **43** and the upper sleeve piece **44** in which there is inserted a lipstick **45** which is seated in longitudinally moving means, such as a cup-shaped member **46** which may be supported by means of a spring **47** within a recess **48** of lower end piece **43**.

The cup **46** carrying lipstick **45** is guided by means of pin **49** in helical guide groove **50** of the refill housing itself so that the front or applicator end **45***a* of lipstick **45** may be projected beyond the open end **52** of the tubular sleeve member **40**. To this end, lower piece **43** of the lipstick refill housing frictionally engages the inner lower surface of outer sleeve member **41** and upon rotation of the latter relative to inner sleeve member **40** lipstick **45** is moved by means of cup **46** to project, as just pointed out.

As can be seen from Fig. 5, the upper end **42***a* of refill housing **42** is recessed with respect to the upper open end **52***a* defining abutment **52** on the outer tubular casing part **40** as refill housing **42** is shorter in length than coupled telescopic tubular means or casing parts **40, 41**. The outer and lower casing part **41** has an inner collar **53** and a reduced sleeve portion **54** terminating in an annulus or flange **55** which is crimped inwardly and engages over a rim-shaped flange collar or shoulder **56** on the inner tubular sleeve member **40**. A pocket or chamber **57** is provided between annular abutment **53** and annular collar **56** in which pocket there is accommodated a coil spring **58**, the action or force thereof being sufficient to spread apart tubular sleeve members **40, 41** into one extreme position, as may be readily realized. If desired, regulation of the action of spring **58** may be had in any known manner, so that sleeve members **40, 41** remain in an extended position and engagement as seen in Fig. 4. It is to be noted that these tubular members **40, 41** may be moved in axial direction thereof and against the action of spring **58** into another extreme position.

Either directly connected to or forming parts of inner sleeve member **40** are opposite flat, knurled finger pieces **59, 60** against which the fingers of a user may be applied to facilitate displacement of inner sleeve member **40** lengthwise or axially of and relative to outer and lower sleeve member **41** against the action of spring **58** for the purpose of stripping the lower portion or end piece **43** of refill housing **42** beyond the lower open end **41***a* of the coupled lipstick casing parts, so that the lowermost edge or abutment **40***a* of sleeve **40** comes to push against projecting portion **43***a* of end piece **43**. The consequence of this pushing operation is that the refill housing or device will thus be ejected from said telescoped casing parts to a position whereby the end **43***b* of end piece **43** may be completely projected beyond the outer casing sleeve **41** in which a part of the end piece **43** may be still retained to some extent under friction.

The position of the uppermost end **52***a* of the sleeve member **40** upon initial ejection movement, has been lowered as may be realized from Fig. 4. The displacement of collar or shoulder **56** to a position **56***a* against the action of spring **58** is indicated in Figs. 4 and 6 in dotted lines. Arrow C engraved in finger piece **59** (only one finger piece being seen in Fig. 6) indicates the direction of longitudinal or axial displacement of inner tubular sleeve member **40** relative to sleeve member **41** in order to effectuate the aforesaid ejector movement. Finger pieces **59, 60** may be retained on said sleeve member **40** by means of a friction ring **61** as shown.

It is further to be noted that in assembled condition the lipstick casing with inserted refill housing will be closed by a cover **62** indicated in dot and dash lines.

When finger pieces **59, 60** are displaced as aforesaid, ring member **61** assumes a position **61***a*, as indicated in dotted lines in Fig. 6, whereas collar **56** assumes a position **56***a*, as seen in Figs. 4 and 6, in which ring member **61** has passed the opening defined by annulus **55**.

From the foregoing disclosure it ensues that the lipstick case equipped with novel ejector means consists generally of a two-part casing in tubular form, whereby one tubular part is not only movable in axial or lengthwise direction of the other tubular part, but both tubular parts are also rotatable relative to each other, in telescopic relation, so that upon frictional engagement of one of the parts with a lipstick refill housing, this refill housing may be coupled with said one tubular part for operating the lipstick cake as hereinabove explained. The other tubular part is so constructed that it cooperates with said one tubular part in any suitable manner and, specifically, as exemplified hereinabove, ejects the refill housing after the lipstick cake has been used or is to be replaced without soiling the fingers of the hand of the user.

It is well understood that other ejector means may be built in the lipstick case structure as shown, however, the latter was found to be easily employable with a great variety of lipstick refill housing constructions now on the market and does not lead to any inordinate increase in production cost.

It can thus be seen that there has been provided according to the invention, a holder for a lipstick refill housing comprising two tubular members each having a free end and an adjacent end and telescopically engaged at said adjacent ends with each other and forming said casing, means resiliently coupling said adjacent ends of said members together and permitting displacement of the latter in axial direction toward each other, a cap for engaging the free end of one of said members, said one member being provided with a shoulder for abutment with a corresponding portion provided on said refill housing, friction producing means retaining said refill housing in said tubular members, when said refill housing is inserted through the open end of said other member, said one member when axially moved relative to the other member displacing said corresponding portion of said refill housing within said other tubular member, thereby at least partly overcoming said friction and permitting stripping off said refill housing from said other tubular member for facilitating removal of said refill housing from said casing.

Various changes and modifications may be made without departing from the spirit and scope of the present invention and it is intended that such obvious changes and modifications be embraced by the annexed claims.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent, is:

1. A holder with a refill housing having a follower therein for retaining a lipstick and for removal of said refill housing from said holder; comprising two telecopic tubular means terminating in two opposite open ends, means coupling said tubular means with each other for rotation and axial movement relative to each other, said tubular means upon axial movement to each other assuming two extreme positions, said refill housing in one of said extreme positions of said tubular means being completely enclosed in said tubular means, first collar means provided on one of said tubular means, spring means supported on said first collar means and extending therefrom and contacting second collar means spaced from said first collar means and provided on said other tubular means, said other tubular means being provided with abutment means against which said refill housing is located in said one extreme position, said refill housing having a rotatable portion, and means operatively connecting said rotatable portion of said refill housing with said follower, said one tubular means frictionally engaging said rotatable portion of said refill housing to thereby facilitate operation of said follower upon relative rotation of said tubular means to each other, so that said lipstick when retained in said follower may be displaced by the latter in said refill housing and projected through

one of said open ends of said tubular means, said rotatable portion of said refill housing in another extreme position of said tubular means and against the action of said spring means being disengaged through the intermediary of said abutment means from said one tubular means for facilitating removal of said refill housing through the other open end of said tubular means.

2. A case with a refill housing having a longitudinally movable follower therein for a substance to be dispensed therefrom and for removal of said refill housing from said case; comprising two telescopically engaged tubular means provided with respective coupling means for rotation and lengthwise movement of said tubular means relative to each other, said refill housing being provided with a rotatable portion and being completely encased in said tubular means in one position of the latter, means operatively connecting said rotatable portion with said follower, shoulder means provided on at least one of said tubular means, spring means supported on said shoulder means and extending therefrom for contact with the other of said tubular means, said one tubular means frictionally engaging said rotatable portion of said refill housing thereby permitting operation of the latter through the intermediary of said follower upon relative rotation of said tubular means with respect to each other, and abutment means on said other tubular means and normally engaged by said refill housing, said refill housing being projectable beyond said one tubular means upon relative axial telescopic movement of said other tubular means against the action of said spring means toward said one tubular means in another position of said tubular means, thereby disengaging said rotatable portion of said refill housing from said tubular means for removal from the latter.

3. A holder with a refill cartridge therefor which has a first stationary portion and a second tubular rotatable portion operatively connected with a follower in said stationary portion for advancing and retracting material when placed in said follower; said holder comprising an outer tubular member, an inner tubular member arranged in telescopic relationship with said outer tubular member, said inner tubular member being received at least partially within said outer tubular member, coupling means respectively provided on said tubular members for rotatably and axially telescopically connecting the latter and including spring means for normally biasing said inner tubular member from said outer tubular member, and an abutment at one end of said inner tubular member and engaged by said cartridge so that the latter extends through said outer tubular member into said inner tubular member, said cartridge engaging with its rotatable portion said outer tubular member, means operatively connecting said follower via said rotatable portion of said cartridge with said tubular members, whereby upon rotation of said outer tubular member said rotatable portion of said cartridge will be actuated to advance and retract said material via said follower whereas upon telescoping movement of said tubular members toward one another and against the action of said spring means said abutment displaces said cartridge to the extent that said rotatable portion of said cartridge will be freed from engagement with said outer tubular member thereby facilitating removal of said cartridge from said holder.

4. A holder comprising a receptacle and a refill cartridge, said cartridge having a cylindrical stationary portion and a rotatable portion for moving a follower within said cylindrical portion, means operatively connecting said follower with said rotatable portion, said receptacle including a first tubular member and a second tubular member yieldably coupled in telescopic relationship with said first tubular member and being received at least partially therewithin, respective means including a spring for coupling said tubular members together and for biasing said tubular members in a direction apart from each other, and an abutment on said second tubular member engageable by said cartridge, said cartridge being received in said receptacle with said rotatable portion frictionally engaged by said first tubular member, whereby upon rotation of said first tubular member said rotatable portion will be rotated for moving said follower in said cartridge and whereby upon telescoping movement of said tubular members toward each other and against the action of said spring at least a part of said rotatable portion of said cartridge will be disengaged from said first tubular member for removal of said cartridge from the receptacle.

5. A lipstick applicator comprising a casing defined by outer and inner telescopic tubular members, means coupling said tubular members for rotation and lengthwise movement relative to each other, a refill housing for a body of cosmetic paste and located in said casing, longitudinally movable means in said refill housing for holding said body of cosmetic paste, means interconnecting said longitudinally movable means with one of said tubular members, each of said tubular members being provided with collar means spaced a predetermined distance from each other, spring means disposed between and abutting said collar means for biasing said tubular members apart from each other to assume one position substantially corresponding to the length of said refill housing, whereby the refill housing is completely enclosed within said casing, and abutment means on said inner tubular means for contact with a portion of and for positioning said refill housing in said one position of said tubular members, said outer tubular member being frictionally engaged with said refill housing to thereby permit movement of said body of cosmetic paste via said interconnecting means and said movable holding means upon relative rotation of said outer and inner tubular members, upon lengthwise movement of said tubular members relative to each other into another position said spring means being compressed through the intermediary of said collar means thus displacing said refill housing by said abutment means beyond said tubular members for removal of said refill housing from said casing.

6. A lipstick applicator comprising a case defined by outer and inner telescopically disposed tubular members each terminating in opposite open ends, coupling means connecting said outer and inner members for rotation and lengthwise movement relative to each other, a refill housing including a rotatable element, follower means within said refill housing and operatively connected to said rotatable element, means for longitudinally moving said follower means in response to the rotation of said rotatable element for displacing a body of lipstick in said refill housing, said coupling means including spring means abutting against respective parts of said tubular members for biasing said tubular members away from each other and into one position substantially corresponding to the length of said refill housing, whereby the refill housing is completely enclosed within said casing, the inner surface of said outer tubular member being frictionally engaged with said rotatable element of said refill housing to effectuate moving said follower means with said lipstick body through the open end of said inner tubular member upon relative rotation of said outer and inner tubular members, and abutment means on said inner tubular member for engagement with said refill housing, whereby lengthwise movement of said tubular members relative to each other into another position and against the action of said spring means brings about displacement of said refill housing and disengagement of said rotatable element of said refill housing from said inner surface of said outer tubular member thereby facilitating removal of the refill housing from said case.

7. A lipstick holder with a lipstick refill housing and for removal of the latter from said holder; comprising a case provided with a first tubular part and with a second tubular part, coupling means retaining said first and second tubular parts in telescopic relation to each other, whereby said tubular parts may be rotated as well as

moved in axial direction to each other to two extreme positions, respectively, said first tubular part and said second tubular part being in one of said extreme positions coextensive in length with said lipstick refill housing so that the tubular parts completely encase said refill housing, said second tubular part terminating in an abutment against which said refill housing normally abuts, a longitudinally movable follower for carrying a lipstick, and means operatively connecting said follower with a rotatable portion provided on said refill housing, said first tubular part being frictionally engaged with said rotatable portion of said refill housing so that said rotatable portion may be operated upon rotation of said first tubular part relative to said second tubular part, said second tubular part when moved in axial direction relative to

said first tubular part into another of said extreme positions displacing via said abutment said refill housing beyond said first tubular part, thus disengaging said refill housing from said first tubular part for removal of said refill housing from said case.

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