March 14, 1944. H. S. RAY 2,344,060

COSMETIC HOLDER

Filed June 28, 1941 2 Sheets-Sheet 1

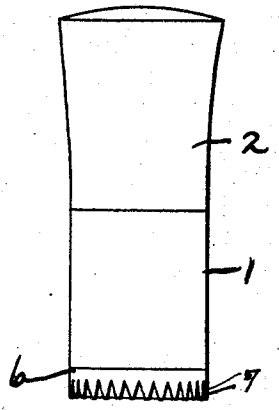


Fig. 1

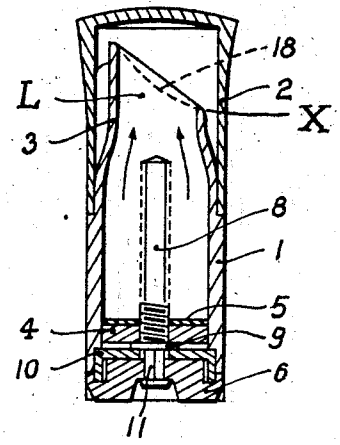


Fig. 2

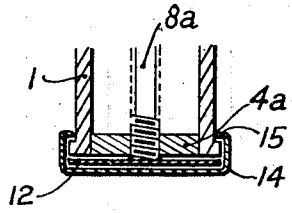


Fig. 3

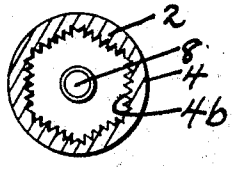


Fig. 4

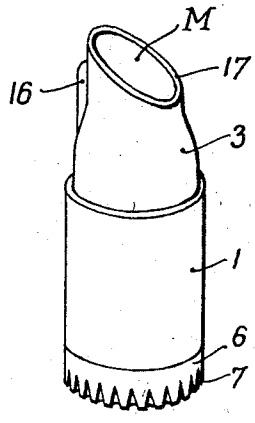


Fig. 5

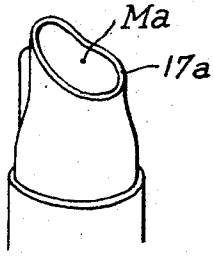


Fig. 6

Harry S. Ray INVENTOR.

BY Mason & Blum

ATTORNEYS

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COSMETIC HOLDER

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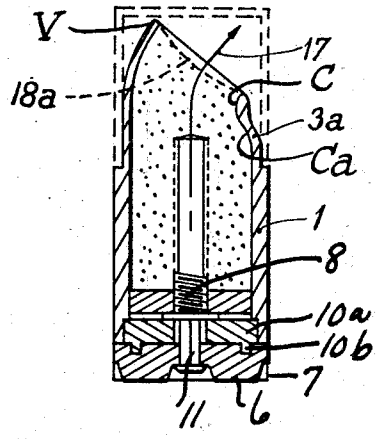


Fig. 7

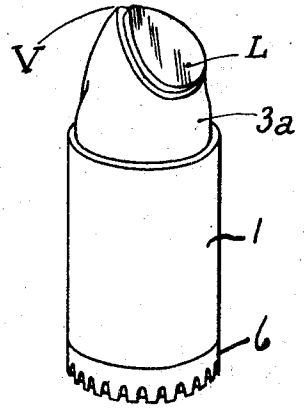


Fig. 8

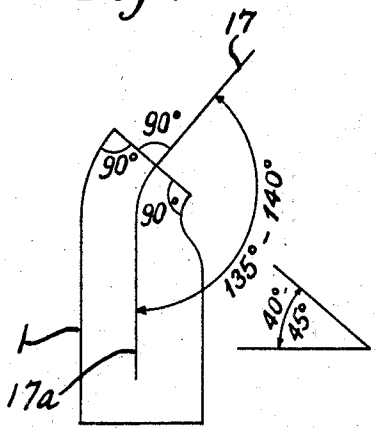


Fig. 9

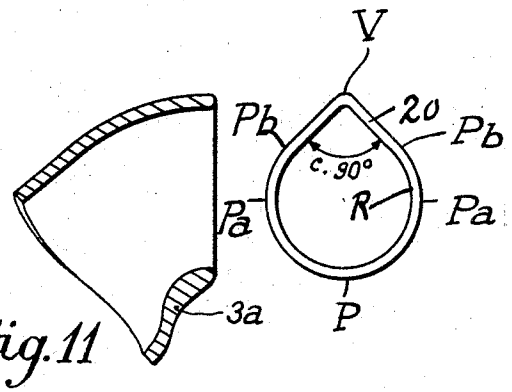


Fig. 10

Fig. 11

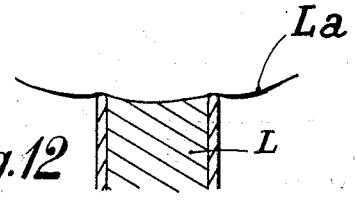


Fig. 12

INVENTOR.
Harry S. Ray
BY
Marc & Blum
ATTORNEYS

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UNITED STATES PATENT OFFICE

2,344,060

COSMETIC HOLDER

Harry S. Ray, New York, N. Y., assignor to Raynoldy Corporation, New York, N. Y., a corporation of New York

Application June 28, 1941, Serial No. 400,260

3 Claims. (Cl. 15—137)

My invention relates to a new and improved cosmetic holder, and to a new and improved method of applying a lipstick or other toilet preparation or cosmetic.

While the invention relates particularly to an improved lipstick holder and to an improved method of applying a lipstick or lipstick material, it is not limited to applying any particular type of toilet preparation or cosmetic.

One of the objects of the invention is to provide a holder from which the material of the lipstick or the like can be extruded in the form of a mass of continuous cross-section.

Another object of the invention is to provide a lipstick holder whose mouth is sufficiently large to permit part of the lip of the user to be pressed into said mouth, so that the lipstick can be applied without protruding the lipstick from the holder.

Another object of the invention is to provide a holder whose mouth has a rim or edge which is shaped and dimensioned so that said rim can be used as a wiper for removing excess cosmetic, and for spreading the applied cosmetic in the form of a thin layer of uniform thickness.

Another object of the invention is to provide a holder which can be readily manufactured and assembled and into which the cosmetic material can be directly filled, thus eliminating the necessity of first molding the cosmetic material into stick form or the like, and then inserting the sticks or the like into the holder.

Another object of the invention is to provide a holder in which the lipstick can be shaped and extruded by means of the holder, said lipstick preferably, but not necessarily, having sufficient inherent rigidity so that it will stand up under the pressure of application, independently of the support which is provided by the rigid wall of the holder, so that said lipstick has the same formula and rigidity as any conventional lipstick.

Another object of the invention is to provide a holder which will extrude the material of the cosmetic so that the exposed face will have a continuous sharp edge.

Other objects of the invention will be set forth in the annexed description and drawings, which illustrate preferred embodiments thereof.

Fig. 1 is a front elevation of the improved holder, with the cover in closing position.

Fig. 2 is a vertical central section of Fig. 1.

Fig. 3 is a detail vertical sectional view which illustrates another embodiment of the means for extruding the material of the lipstick or the like,

Fig. 4 is a horizontal sectional view of the body of the holder which is shown in Fig. 2.

Fig. 5 is a perspective view of the holder which is illustrated in Figs. 1 and 2, with the cover of the holder removed.

Fig. 6 is a detail perspective view which illustrates a different shape of the mouth of the body of the holder.

Fig. 7 generally corresponds to Fig. 2 and it illustrates another embodiment of the invention.

Fig. 8 is a perspective view of the body of the holder which is illustrated in Fig. 7.

Fig. 9 is an outline, in vertical elevation, of the inner wall of the holder which is shown in Figs. 7 and 8.

Fig. 10 is an end elevation of the mouth of the body of the holder, which is illustrated in Figs. 7–9, inclusive.

Fig. 11 is a vertical cross-section of the throat of the device which is shown in Figs. 7–10, with the plane of the mouth held vertical.

Fig. 12 is a diagrammatic view, partially in cross-section, illustrating how the lipstick material is applied to the lips.

In the embodiment of Figs. 1 and 2, the holder is provided with a body 1 which is made of any suitable plastic, such as cellulose acetate plastic, polystyrene, or any other thermoplastic molding material. The body 1 can also be made of any suitable metal. Said body is preferably made of translucent or transparent material.

The upper part of the body is provided with a shoulder, on which the cover 2 can be mounted. The outer end of the body 1 is provided with a converging extrusion nozzle 3. The mouth of the extrusion nozzle 3 is elliptical, in said embodiment of Figs. 1–5, and the plane of said ellipse makes an angle of approximately 40°–45° with a plane which is perpendicular to the vertical axis of the body 1. The body 1 is provided with a portion of uniform interior cross-section, in which a piston 4 is slidably located. This piston 4 is rigid and it can be made of any suitable thermoplastic molding material or metal or the like. The upper face of the piston 4 may be provided with a sealing washer 5 which is made of flexible material and which fits tightly but slidably against the inner wall of said portion of the body 1.

As shown in Fig. 4, the inner wall of the body 1 is shaped so as to prevent the piston 4 from turning relative to said inner wall. For example, the inner wall of the body 1 may be of general hexagonal shape and the piston 4 and the washer 5 have corresponding hexagonal shapes.

As shown in Fig. 4, the inner hexagonal wall

of the body 1 is provided with shallow vertical grooves 4b, of angular or other cross-section. These grooves will be filled with the colored cosmetic, and said filling will remain in said grooves as the piston 4 is raised, because the hexagonal piston 4 and its washer 5 have straight walls, which do not enter said grooves 4b. These grooves 4b are made sufficiently shallow, so that the lipstick material will be forced only upwardly, when the piston 4 is forced upwardly. If the body 1 is made of translucent or transparent material, the colored material in grooves 4b will form a continuous inner layer, which will conceal the piston 4 and the internal parts of the applicator. These grooves 4b may be omitted, and each internal face of the cylindrical part of the body 1 may have one or more of said grooves 4b. The lower end of the body 1 is provided with a rotatable head 6, which may have knurling 7. The piston 4 has an axial tapped bore, in which the threaded body of a screw 8 is located. The body of said screw 8 is threaded up to the top thereof, as only a portion of said threading is shown in Fig. 2. At the bottom of its threaded portion, the screw 8 is provided with a collar or head 9 which may or may not be integral with the screw 8. This collar 9 rests upon a cup-shaped rigid washer 10, whose vertical wall is rigidly connected, by cement or the like, to the corresponding portion of the wall of the body 1. The reduced shank 11 of the screw 8 passes through a suitable bore in said cupped washer 10 and the lower end of the member 11 is enlarged to provide a rigid and rivet-like connection with the recessed central part of the head 6.

The screw 8 can therefore be freely turned but it is held against longitudinal movement. Upon turning the head 6 of the screw 8, the piston 4 is moved upwardly towards the mouth of the extrusion nozzle 3. The lipstick material L is of any suitable formula which can provide a spreadable but rigid lipstick of the well-known type, which has sufficient rigidity to enable the use of the lipstick without any additional support from the holder. Formulas for lipsticks of this type are well-known in the trade, so that no specific formula need be given. The lipstick may be an easily spreadable paste, instead of having such inherent rigidity.

When the piston 4 is in the bottom position illustrated in Fig. 2, and when the cover 2 is removed from the body 1, the material for making the lipstick L can be poured in a heated liquid or plastic condition directly into the body 1. Said lipstick material need not be heated above 50° C. in order to become conveniently fluid for pouring purposes. As the average thermoplastic material, out of which the body 1 is made, begins to be affected by heat at temperatures above 70°, there is a sufficiently safe margin for the protection of said body. This makes it unnecessary first to mold the lipstick and then to insert the same into the holder. The lipstick material L has a recess which is occupied by the threaded shank of the screw 8. However, the nozzle 3 is sufficiently reduced in cross-section towards its mouth M, so that when the piston 4 is forced upwardly, the material of the lipstick L converges anterior said mouth, to form a mass of solid cross-section.

In the embodiment illustrated in Fig. 3, the screw 8a passes through the tapped bore of a piston 4a. The lower end of the screw 8a is rigidly connected to a rigid disc 12 which is of polygonal or other non-circular shape. This disc 12 is located in a cap 14 whose shape corresponds to that of the disc 12, so that the cap 14 and the screw 8a turn in unison. The cap 14 has a flange 15 which fits turnably on an external shoulder of the body 1.

The construction shown in Fig. 3 is specifically adapted for use in a construction in which the bottom parts of the device are made of metal, instead of being made of a plastic such as cellulose acetate or the like.

Although the ejector or piston 4 is moved in a direction which is inclined to the edge of the mouth M, the material L is extruded so that its exposed lateral face is substantially parallel to the rim of said mouth.

As shown in Fig. 5, any suitable part of the body, such as the outer wall of the extrusion nozzle 3, is provided with a lateral fin 16. When inserting the heated plastic or fluid material of the lipstick into the holder, this fin 16 can be used for holding the body of the holder in a suitable support, and with the plane of the mouth M in a horizontal position. For this purpose, the holder is provided with a bore which is suitably inclined to the horizontal plane, and said bore has a recess in which the fin 16 is then located, so that the body of the holder is held against turning, during the filling operation.

Fig. 5 clearly shows the rim 17 of the elliptical mouth M of the holder. The thickness of this rim 17 may be approximately 0.025 of an inch or less, as low as 0.015 of an inch. This rim 17 has is edges slightly rounded in order to avoid cutting the lips of the user, but due to its thinness, the wall 17 serves as a spreading and wiping device for wiping the lipstick material over the lips of the user, thus producing a clean and sharp and non-smudgy effect. The thickness of the rim 17 may exceed .025 of an inch, up to .04–.05 of an inch and even more. The inner edge of rim 17 can be fairly sharp and its outer edge may be rounded. If the rim is made too thick, the cosmetic which is taken up by the lip may be removed by said thick wall. Hence, the invention is not limited to any particular thickness of the wall of rim 17, save that said wall should act to spread the cosmetic evenly across the lip, but without wiping the cosmetic off the lip.

Excess material is removed from the lips and it remains adherent to the lipstick material, inwardly of the rim 17.

While the invention is not limited to the specific dimensions which are stated herein by way of example, the major axis of the elliptical mouth M may have a length of about ⅜ of an inch, and the minor axis may have a length of about $\frac{5}{16}$ of an inch. This may vary, because the device will be made in different sizes. However, the mouth preferably has a length which exceeds the width thereof. Therefore, as shown in Fig. 12, the holder may be passed against a lip La of the user, while the material L is flush or substantially flush with the edge of the mouth M, so that a part of said lip La of the user can be forced under slight pressure into the nozzle 3, to contact with the material L, as shown in Fig. 12. Preferably, the mouth M is shaped so as to accommodate only one lip at a time. By moving the holder relative to the lip, preferably, but not necessarily in the direction of the width or smaller dimension of the mouth, the lipstick material is then thinly spread and wiped by the wiping rim of the mouth over the surface of the lip while all the material of the lipstick L is lo-

cated in the extrusion nozzle 3, and any excess material is wiped off the lip and retained in said nozzle.

It is therefore unnecessary at any time to extrude the material of the lipstick beyond the mouth M, in order to apply the material to a lip or lips. This prevents smearing of the holder and produces an even and non-smudgy effect. Of course, as shown in Fig. 8, the material may be slightly extruded beyond the mouth M, if this is desired.

In order to enable the lip to be forced into the extrusion nozzle, in the manner shown in Fig. 12, the smallest dimension of the mouth M should not be less than about 0.375 of an inch.

In the embodiment of Fig. 6, the rim 18*a* of the mouth M*a*, instead of being of annular planar shape, is slightly concave at the long sides of the ellipse, following the concave broken line 18 which is shown in Fig. 2, and the line 18*a* which is shown in Fig. 7, so as to fit the mouth more accurately to the shape of the average lip.

In the embodiment of Figs. 1–6, the entire body of the holder, including the extrusion nozzle, has a single straight longitudinal axis.

In the embodiment of Fig. 7, the mechanism for operating the piston 4 is substantially the same as that shown in Fig. 2. In the embodiment of Fig. 7, the rigid washer 10*a* is rigidly connected to the body 1 by cement, and said washer 10*a* has an annular rib 10*b*, which fits in an annular groove of the turnable head 6, so that the washer 10*a* serves as a bearing for the turnable head 6, which turns the screw 8.

The mouth-portion of the body of the holder which is shown in Figs. 7–11, has a longitudinal axis 17, which makes an angle of about 135°–140° with the straight axis 17*a* of the body 1. The plane of the mouth is perpendicular to axis 17. This provides better support for the extruded layer of the lipstick material, if the device is used in this manner. This embodiment is also preferably used in the manner shown in Fig. 12. The rim R of the portion 3*a* of this embodiment is shaped as shown in Fig. 10, so as to have a portion of partial circular shape which terminates in a pointed portion whose walls 20 are substantially straight. This is convenient for producing the "cupid's bow" effect. The holder may also be dimensioned so that cosmetic may be applied simultaneously to both lips, in the manner shown in Fig. 12. Hence, when I refer to applying cosmetic to a lip, in a claim or claims, I include the simultaneous application of the cosmetic to both lips. The material L need not necessarily be a cosmetic, as medicinal materials may be applied.

The shape of the holder which is illustrated in Fig. 10, makes it unnecessary to provide the fin 16.

I have described preferred embodiments of my invention, but it is clear that numerous changes and omissions can be made without departing from its spirit.

The device or applicator may be used for applying material of any kind, and which need not necessarily be a cosmetic or toilet preparation, to any part of the body.

For convenience, the vertical line of the holder at point V is designated as the rear line of the holder, and the vertical line which passes through the point P is designated as the front line of the holder. The inner wall which is shown at the right-hand side of Fig. 7, has a convex portion C, which merges vertically into a concave portion C*a*. The inner wall has a convex shape circumferentially to the points P*a*, through an angle of about 90° on each side of the point P. The vertical convex curvature of said convex-wall portion diminishes gradually in both directions from point P, until said convex curvature is substantially zero at the points P*a*.

The concave shape which is indicated by C*a*, continues circumferentially about 135° from each side of point P, up to the points P*b*, and said degree of concave curvature is equal between point P and the respective points P*b*. This concave curvature gradually diminishes between points P*b* and V, until it is zero at V.

It will be noted that the rim of the mouth of the extrusion nozzle is free and exposed and shaped so that said rim can be directly contacted with the lip of the user. As illustrated in Fig. 8, the extruded material has a sharp edge. By reason of the dimensions previously mentioned, the extruded material has sufficient cross-section and strength to withstand the pressure under which said extruded material is applied to the lip of the user, especially since the length of the extruded mass is very small. Therefore, the desired sharp edge is not lost when the extruded material is pressed against the lip of the user.

In the embodiment of Fig. 2, the inner wall of the holder, including the extrusion throat or nozzle 3 thereof, substantially up to the lower end of said nozzle 3, is a symmetrical surface of revolution, whose axis is the common vertical axis of the body 1 and the screw 8. Above the lower end of the mouth, the inner wall of the device is a partial cylindrical wall, whose axis coincides with said common vertical axis.

I claim:

1. A lipstick device comprising a body which has a longitudinal axis, said body having an extrusion nozzle at one end thereof, said extrusion nozzle having a longitudinal axis which is inclined to the longitudinal axis of the body, said extrusion nozzle having a mouth whose rim is located in a plane which is substantially perpendicular to the axis of said extrusion nozzle, said body having a piston located therein, means adapted to move said piston towards said extrusion nozzle, said body having an extrudible lipstick filling which has been solidified in situ, said rim having a major axis and a minor axis, the length of said minor axis being substantially 83% of the length of said major axis, the thickness of said rim being substantially between .015 inch–.05 inch, said rim being wholly free and wholly exposed and shaped for direct contact with the lip of the user, said piston extruding said filling out of said nozzle with the free face of said filling substantially parallel to said rim.

2. A lipstick device comprising a body which has a longitudinal axis, said body having an extrusion nozzle at one end thereof, said extrusion nozzle having a longitudinal axis which is inclined to the longitudinal axis of the body, said extrusion nozzle having a mouth whose rim is located in a plane which is substantially perpendicular to the axis of said extrusion nozzle, said body having a piston located therein, means adapted to move said piston towards said extrusion nozzle, said body having a lipstick filling which has been solidified in situ, said rim having a major axis and a minor axis, the length of said minor axis being substantially 83% of the length of said major axis, the thickness of said rim being substantially between .015 inch–.05 inch, said rim having an apex in its internal lat-

eral cross-section, having a rim which is located in a plane which is inclined to the direction of movement of said piston, said rim being wholly free and wholly exposed and shaped for direct contact with the lip of the user, said piston extruding said filling out of said nozzle with the free face of said filling substantially parallel to said rim.

3. A lipstick device comprising a body which has a longitudinal axis, said body having a solid and extrudible lipstick filling and also having an extrusion nozzle at one end thereof, said extrusion nozzle having a longitudinal axis which is inclined to the longitudinal axis of the body, said extrusion nozzle having a mouth whose rim is located in a plane which is substantially perpendicular to the axis of said extrusion nozzle, said body having a piston located therein, means adapted to move said piston in a direction parallel to the longitudinal axis of said body towards said extrusion nozzle to extrude said lipstick filling out of said nozzle, said rim being wholly free and wholly exposed and shaped for direct contact with the lip of the user, the internal wall of said rim having a tapered cross-section which consists of two substantially symmetrical halves which meet substantially in a point, said piston extruding said filling out of said nozzle with the free face of said filling substantially parallel to said rim.

HARRY S. RAY.