

Nov. 24, 1959

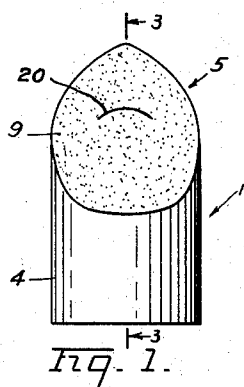
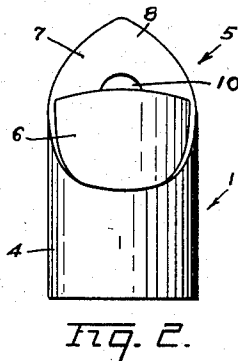
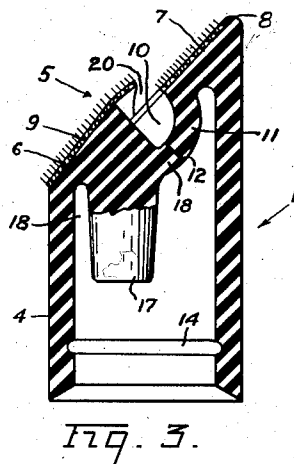
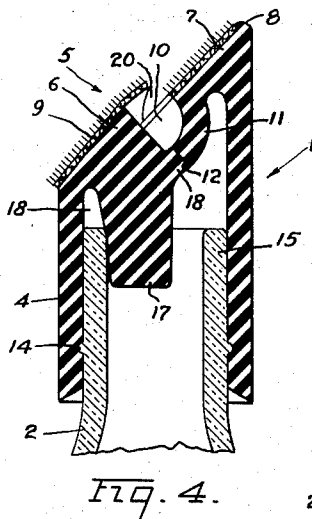
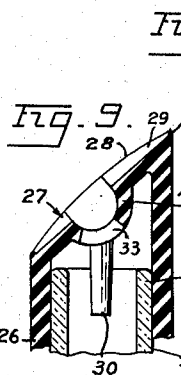
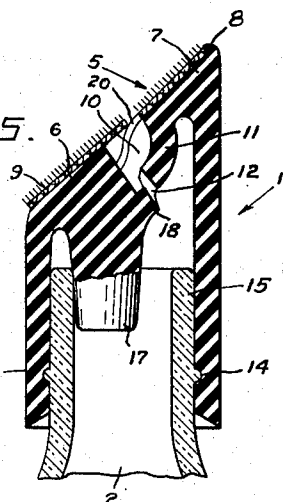
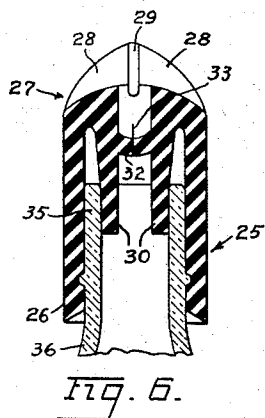
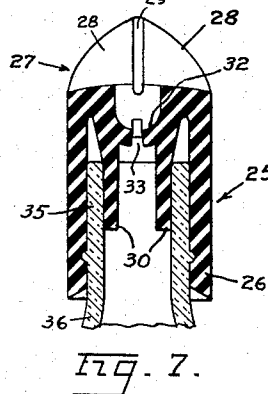
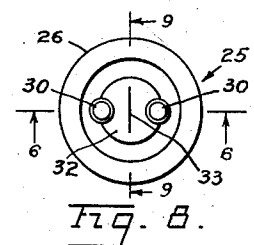
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2,913,748

LIQUID OR CREAM APPLICATOR TOPS FOR CONTAINERS

Filed Nov. 12, 1957

2 Sheets-Sheet 1



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LIQUID OR CREAM APPLICATOR TOPS FOR CONTAINERS

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2 Sheets-Sheet 2

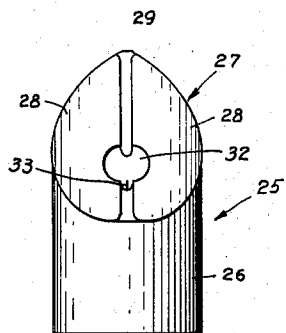


Fig. 10.

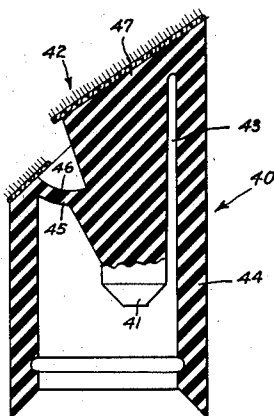


Fig. 11.

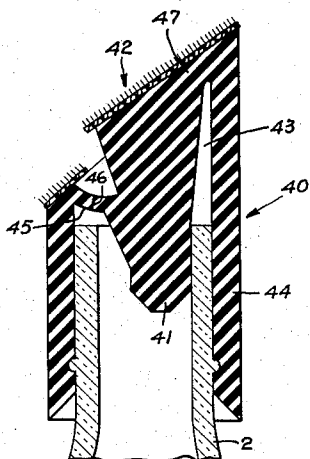


Fig. 12.

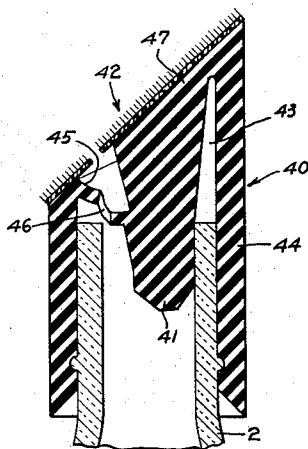


Fig. 13.

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2,913,748

LIQUID OR CREAM APPLICATOR TOPS FOR CONTAINERS

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Application November 12, 1957, Serial No. 695,554

8 Claims. (Cl. 15—139)

This invention relates to liquid or cream applicator tops for containers.

The primary object of the invention is to provide a resiliently compressible applicator top for containers such as tubes or bottles for the purpose of applying the liquid or cream, for instance, in connection with shoe polish; means being provided in the applicator top to firmly close the dispensing slit of the applicator yet allow the spreading of such slit when pressed upon the surface to be coated.

Particularly it is an object of the invention to provide applicator top for dispensing tubes or containers for liquid or cream which top is made out of rubber or plastic or similar resiliently compressible material and which has a slit arranged for the dispensing of said liquid or cream when pressed upon the surface to be coated and wherein a projection is provided inside of the top for engagement with the container or bottle to apply pressure for keeping the slit normally tightly closed.

I am aware that some changes may be made in the general arrangements and combinations of the several devices and parts, as well as in the details of the construction thereof without departing from the scope of the present invention as set forth in the following specification, and as defined in the following claims; hence I do not limit my invention to the exact arrangements and combinations of the said device and parts as described in the said specification, nor do I confine myself to the exact details of the construction of the said parts as illustrated in the accompanying drawings.

With the foregoing and other objects in view, which will be made manifest in the following detailed description, reference is had to the accompanying drawings for the illustrative embodiment of the invention, wherein:

Fig. 1 is a front view of an applicator top.

Fig. 2 is a view identical with Fig. 1, with the absorbent fabric removed.

Fig. 3 is a central longitudinal cross-section of the applicator top taken along the line 3—3 of Fig. 1.

Fig. 4 is a cross-section of the applicator top placed on a bottle.

Fig. 5 is a cross-section of the applicator top showing the slit open.

Fig. 6 is a vertical central cross-section through a modified form of the applicator top taken along the line 6—6 of Fig. 8.

Fig. 7 is a vertical central cross-section through the modified form showing the slit therein open.

Fig. 8 is a bottom view of the modified form of the applicator top.

Fig. 9 is a partial central cross-section through the same taken along the line 9—9 of Fig. 8.

Fig. 10 is a front view of said modified form.

Fig. 11 is a vertical central cross-section through a second modified form.

Fig. 12 is a vertical central cross-section of the latter form showing the applicator on the bottle, and

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Fig. 13 is a cross-section of said applicator showing it open.

The applicator top 1, shown in Figs. 1-5 is used on a bottle 2, or other container, for the purpose of spreading liquid contained in said bottle over a surface to be coated.

The applicator top 1 is made of rubber, or resilient plastic, and comprises a cylindrical hollow body 4, the top of which is closed with a diametrically slanted wall 5, which is preferably covered by a piece 9 of absorbent material for spreading liquid, such as shoe polishing cream, over a surface, such as shoe. The lower portion 6 of said slanted wall bulges outwardly in relation to the upper portion 7 thereof, which latter part terminates with a sharp point 8 at its highest point.

A generally rounded or dished bowl or indent 10 is formed in the middle of the slanted wall 5 by curving a portion of said wall downwardly to make a semi-spherical bowl 11. A slit 12 is cut radially across said bowl 11, which slit forms the dispensing aperture through which the liquid is dispensed from the bottle. Whenever an internal pressure should develop in the container 2, it squeezes the bowl 11 and closes the slit 12.

The lower portion of the cylindrical body 4 is provided with a circular recess 14, or is otherwise suitably adapted to engage the exterior of the neck 15 of the bottle 2 so as to hold the applicator top 1 firmly on the bottle.

The applicator top 1 is provided with an internal projection 17 which extends downwardly from the under side of the slanted wall 5 at its lowest end and near the body 4. The projection 17 is preferably made slightly conical, its diameter decreasing toward its free end.

Fig. 4 shows that the neck 15 of the bottle 2 enters the space 18 between the projection 17 and the cylindrical body 4, which space is somewhat narrower than the thickness of the neck wall of the bottle, whereby said projection 17 is pressed toward the slit 12 and is also tilted in the same direction. The net result of this double action is to close tightly the slit 12 and to hold it closed until an external pressure is applied on the applicator top 1 for opening the same.

In order to open said slit 12, the lower portion 6 of the slanted wall 5 of the applicator top 1 is pressed upon the surface to be covered with liquid, contained in the bottle 2, as illustrated in Fig. 5. This pressure forces the portion 6 and integral therewith the projection 17 and the lip 18 forming a portion of the bowl 11, downwardly, thus opening the slit 12, whereupon the liquid passes from the bottle into the indent 10 and therefrom through the slot 20 in the piece 9 onto the surface.

The various experiments conducted with this applicator top indicated that the provision of the slit 12 in the semi-spherical bowl 11 permitted to hold internal pressures up to 15 lbs. per square inch, which is further increased by the pressure action of the projection 17 on said slit.

Figs. 6, 7, 8 and 9 show a modified form of the applicator top 25. The latter has the same cylindrical body 26 closed by the slanted wall 27, which is raised in the middle and is divided into two halves 28 by a longitudinal groove 29.

The applicator top 25 is formed with two projections 30 located on the transverse central line of the slanted wall 27 and close to the body 26. A semi-spherical bowl 32 is formed in the slanted wall 27 between said projections 30. The bowl 32 is formed with a radial slit 33 extending longitudinally in relation to the groove 29.

When the applicator top 25 is placed on the neck 35 of a bottle 36, the projections 30 are moved and swung toward each other, thus squeezing said bowl 32 and facilitating the closing of the slit 33.

In order to open the slit, the halves 28 of the slanted

wall 27 are pressed against a surface to be covered with liquid contained in the bottle 36. This pressure is transmitted to the projections 30 which compress slightly, whereby the slit 33 is opened, as shown in Fig. 8, and the liquid is permitted to flow out of the bottle.

Figs. 11, 12 and 13 show further modification in which an applicator top 40 has only one internal projection 41 which extends downwardly from the under side of the slanted wall 42 near its uppermost point. The space 43 between the projection 41 and the cylindrical body 40 is narrower than the thickness of the neck wall of the bottle 2. Therefore, when said applicator top is placed on said bottle, as shown in Fig. 12, said projection 41 is moved toward the vertical center line of said bottle.

The top 40 has a concave bowl 45 in the lower portion of said wall 42 with a slit 46 therein which is securely closed by the displacement of the projection 41 when the applicator is on the bottle.

The upper portion 47 of said slanted wall 42 is raised. In order to open said slit 46 the applicator top 40 is pressed against the surface to be covered with liquid in the bottle 2. This pressure forces the raised portion 47 downwardly and thus opens the slit 46, as shown in Fig. 13.

I claim:

1. A self closing applicator top for dispensing containers having a discharge neck with securing means thereon, said top comprising a hollow generally cylindrical body of resiliently compressible material, having an open end, an element in said open end adapted to engage said securing means on the discharge neck of said container, an inclined end wall forming the applicator end of the container slanting at an angle to the axis of said applicator top, an indented portion of said applicator wall forming a rounded recess in the outer surface of said inclined applicator wall, and having a dispensing slit across the bottom of said recess and through said indented portion of said wall for dispensing liquid when said inclined wall is pressed on a surface so as to open said slit, integral elastic means extended inwardly from the underside of said inclined wall adjacent said indented portion to be pressed against the side of the neck of said container when the cylindrical body is secured in place so as to exert pressure toward tightly closing said slit.

2. A self closing applicator top for dispensing containers having a discharge neck with securing means thereon, said top comprising a hollow generally cylindrical body of resiliently compressible material, having an open end, an element in said open end adapted to engage said securing means on the discharge neck of said container, an inclined end wall forming the applicator end of the container slanting at an angle to the axis of said applicator top, an indented portion of said applicator wall forming a rounded recess in the outer surface of said inclined applicator wall, and having a dispensing slit across the bottom of said recess and through said indented portion of said wall for dispensing liquid when said inclined wall is pressed on a surface so as to open said slit, a pair of integral elastic projections extended from the underside of said inclined wall inwardly and spaced from the periphery of said cylindrical body being laterally on opposite sides of said recess, said slit being formed generally vertically between said projections, said projections being spaced from said engaging element to bear against the inside of the neck of said dispensing container when the applicator is in position thereon so as to exert opposite lateral pressures on said indented portion for tightly closing the slit.

3. A self-closing applicator top for dispensing containers having a discharge neck with securing means thereon, said top comprising a hollow generally cylindrical body of resiliently compressible material, having an open end, an element in said open end adapted to engage said securing means on the discharge neck of said container, an inclined end wall forming the applicator end

of the container slanting at an angle to the axis of said applicator top, an indented portion of said applicator wall forming a rounded recess in the outer surface of said inclined applicator wall, and having a dispensing slit across the bottom of said recess and through said indented portion of said wall for dispensing liquid when said inclined wall is pressed on a surface so as to open said slit, integral elastic means projecting from the inside of said inclined wall inwardly and being engageable with the inside of the discharge neck of said container to exert pressure upon said inclined wall from the inside toward said slit for normally closing said slit tightly, and an element projecting from the outer face of said inclined wall at one side with respect to said slit so as to enhance the pressure on said side of said slit for opening the slit when said inclined face is pressed upon a surface to be coated.

4. A self-closing applicator top for dispensing containers having a discharge neck with securing means thereon, said top comprising a hollow generally cylindrical body of resiliently compressible material, having an open end, an element in said open end adapted to engage said securing means on the discharge neck of said container, an inclined end wall forming the applicator end of the container slanting at an angle to the axis of said applicator top, an indented portion of said applicator wall forming a rounded recess in the outer surface of said inclined applicator wall, and having a dispensing slit across the bottom of said recess and through said indented portion of said wall for dispensing liquid when said inclined wall is pressed on a surface so as to open said slit, integral elastic means projecting from the inside of said inclined wall inwardly and being engageable with the inside of the discharge neck of said container to exert pressure upon said inclined wall from the inside toward said slit for normally closing said slit tightly, and an element projecting from the outer face of said inclined wall at one side with respect to said slit so as to enhance the pressure on said side of said slit for opening the slit when said inclined face is pressed upon a surface to be coated, the said projecting element being below said slit with respect to the incline of said end wall.

5. A self closing applicator top for dispensing containers having a discharge neck with securing means thereon, said top comprising a hollow generally cylindrical body of resiliently compressible material, having an open end, an element in said open end adapted to engage said securing means on the discharge neck of said container, an inclined end wall forming the applicator end of the container slanting at an angle to the axis of said applicator top, an indented portion of said applicator wall forming a rounded recess in the outer surface of said inclined applicator wall, and having a dispensing slit across the bottom of said recess and through said indented portion of said wall for dispensing liquid when said inclined wall is pressed on a surface so as to open said slit, integral elastic means projecting from the inside of said inclined wall inwardly and being engageable with the inside of the discharge neck of said container to exert pressure upon said inclined wall from the inside toward said slit for normally closing said slit tightly, and an element projecting from the outer face of said inclined wall at one side with respect to said slit so as to enhance the pressure on said side of said slit for opening the slit when said inclined face is pressed upon a surface to be coated, and the said projecting element being above said slit near the top of said inclined wall so as to exert an inclined force for opening.

6. A self-closing applicator top for dispensing containers having a discharge neck with exterior securing means thereon, said top comprising a hollow generally cylindrical body of resiliently compressible material, having an open end for engagement with said securing means, an inclined end wall forming the applicator end of the top slanting at an angle to the axis of said top, an

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indented portion of said end wall forming generally a concavo-convex bowl and having a dispensing slit across the bottom of said bowl for dispensing liquid, an integral elastic projection extending from the upper part of the underside of said inclined wall spaced from the wall of said cylindrical body and engageable with the inside of said neck for applying pressure on the bowl for tightly closing said slit when said applicator is placed on a dispensing container, a raised portion on the outside surface of said inclined wall substantially opposite said projection for pressing against a surface to be coated to open said slit.

7. A self closing applicator top for a dispensing container having a discharge neck with exterior top engagement means thereon, said top comprising a hollow body of resiliently compressible material, circumferential side-walls of said body fitting over said neck and engaging said engagement means, an inclined end wall forming the applicator end of the top slanting at an angle to said top and being held by said body spaced outwardly from said neck, an indented portion of said inclined wall forming a concavo-convex bowl projecting inwardly from said end wall and having a dispensing slit across the bottom

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of the bowl for dispensing liquid when said inclined end wall is pressed on a surface so as to open said slit, a projection extending from the inside of said inclined wall inwardly of said body adjacent said bowl and being spaced from the adjacent circumferential wall of said body to receive the wall of said neck between said projection and adjacent wall of said body thereby to urge said projection toward said bowl for normally compressing the bowl and closing said slit.

8. The self-closing applicator top defined in claim 7, wherein said projection extends from said inclined end wall between said bowl and the lower end of the inclined end wall.

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