

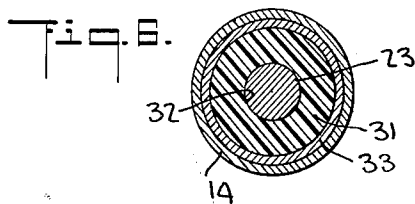
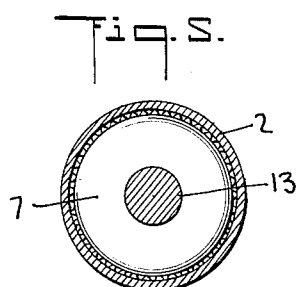
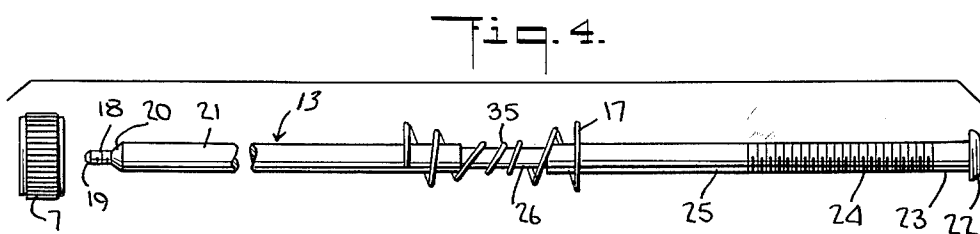
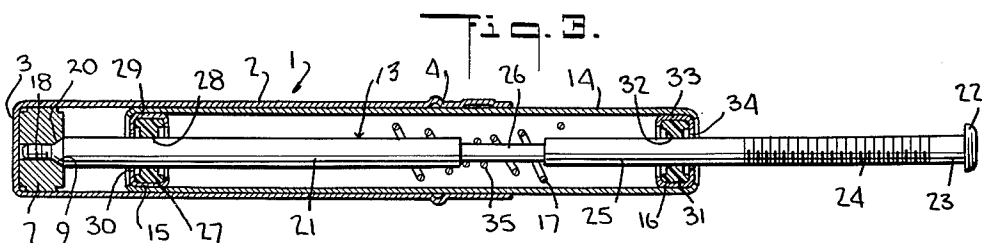
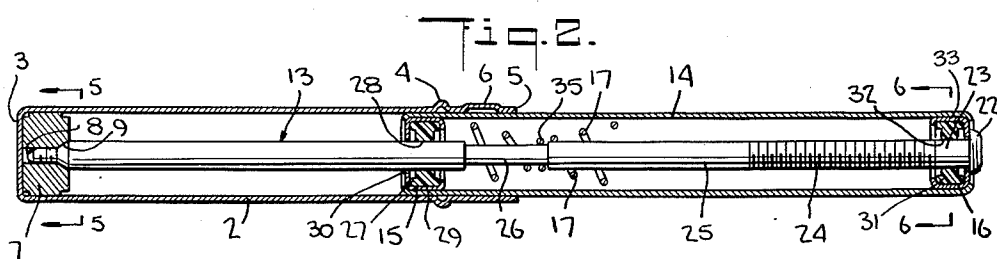
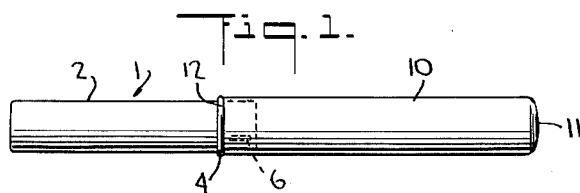
Jan. 16, 1962

J. AVERSA

3,016,560

APPLICATORS

Filed Nov. 13, 1959



INVENTOR.
JOSEPH AVERSA
BY *Gustav Drews*
his ATTORNEY

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3,016,560

APPLICATORS

Joseph Aversa, Scarsdale, N.Y.
(270 Lafayette St., New York 12, N.Y.)
Filed Nov. 13, 1959, Ser. No. 852,638
2 Claims. (Cl. 15—510)

This invention relates to applicators in general and more especially to applicators to be used as eyebrow pencils, lipsticks, lipstick brushes, perfume dispensers or to be used to apply eye shadow, such as disclosed in United States Letters Patent No. 2,867,829.

Among the objects of the present invention it is aimed to provide an improved cosmetic or medicament applicator characterized by a container to carry a cosmetic or medicament, a housing closed at one end into which said container is slidable, an applying rod secured at one end to the inner closed end of said housing and extending therefrom through said container, resilient washers in the ends of said container through which said rod extends, a head on the outer end of said rod, said rod having an elongated smooth cylindrical portion extending through said housing and a serrated, fluted, or threaded portion extending from said housing to said head, a short smooth cylindrical portion between said head and said serrated portion, said container being movable along said rod into and out of "use" position, said elongated and short cylindrical portions registering with said washers in non-use position of said container to effect fluid tight joints, said head limiting the outward movement of said container, a recess in said rod spaced from said serrated portion but disposed in said container in the outermost non-use position of said container, an hour glass spring mounted on said rod with its intermediate diminished portion disposed in said recess to anchor said spring on said rod against displacement when said container is moved into and out of "use" position, and a removable cap frictionally secured to said housing to enclose said container and therewith said rod in non-use position.

It is still another object of the present invention to provide an improved applicator of the character aforesaid in which said housing and cap may be composed of an expensive material and fabricated with or into an expensive ornamental conformation and in which said rod and container are removable from said housing when the medicament or cosmetic is exhausted, to enable preserving the housing and cap for a refill.

These and other features, capabilities, and advantages of the invention will appear from the subjoined detailed description of one specific embodiment thereof illustrated in the accompanying drawings in which:

FIG. 1 is a side elevation of the device with the cap in place.

FIG. 2 is an enlarged transverse section showing the container in extended or closed position.

FIG. 3 is an enlarged section similar to FIG. 2 with the applicator rod in extended or open position.

FIG. 4 is an exploded view of the applicator rod and plug with the rod partly broken away.

FIG. 5 is a section on the line 5—5 of FIG. 2.

FIG. 6 is a section on the line 6—6 of FIG. 2.

In the embodiment shown, the applicator consists of a housing 1 having a cylindrical wall 2 and a closed end 3, an external rib 4 adjacent its open end 5 and a plurality of longitudinally extending external projections or bosses 6.

Adjacent the inner end 3 there is frictionally anchored the plug 7 having a central internally threaded opening 8 with a chamfered or flared recess 9 facing outwardly away from the closed end 3. For closing the unit when not in use there is provided the cap 10 having a closed end 11 to receive the ridges 6 for frictionally anchoring

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the cap 10 to the housing 1. The cap 10 in its innermost closed position has its outer open edge 12 engaging the rib 4 on the housing 1.

The active parts of the applicator are removably connected to the housing 1 and consist essentially of the applying rod 13, container 14, plugs 15 and 16, and hour-glass spring 17. The rod 13 is provided with a short threaded portion 18 at its inner end terminating in a flared end 19 and having a chamfer 20 between the thread 13 and the smooth cylindrical portion 21 of the rod 13. The outer end of the rod 13 is provided with a head 22 having a short smooth cylindrical portion 23 adjacent the head and then a short serrated, fluted or threaded portion 24 extending from the smooth cylindrical portion 23 to the smooth cylindrical portion 25 of the rod 13. Between the cylindrical portions 21 and 25 of the rod there is provided the annular recess 26. The position of the recess 26 is predetermined for the purposes hereinafter set forth.

The rod 13 in operative position extends through the container 14 which has formed at its ends the plugs 15 and 16. The plug 15 consists of a washer 27 composed of a resilient material such as neoprene, rubber, or the like, provided with an opening 28 frictionally to receive the rod 13. The washer 27 in turn is provided with a metal cover 29 having an opening 30 registering with the opening 28 frictionally to receive the rod 13 and spun over the outer edge of the washer 27. The plug 16 is similarly constructed having an inner washer 31 composed of a resilient material such as neoprene, rubber, and the like, provided with an opening 32 frictionally to receive the rod 13 which washer 31 in turn is similarly covered with a metal cover 33 having an opening 34 registering with the opening 32 in the washer frictionally to receive the rod 13. The cover 33 furthermore extends around the outer periphery of the washer 31 and is spun over the edge of the same. The disc portions of the covers 29 and 33 having the openings 30 and 34 respectively are disposed to face outwardly from the container 14.

In assembling, one of the plugs, as an instance, the plug 16, is secured to one end of the housing 14. Thereupon the spring 17 is inserted into the container 14. Thereupon the other plug 15 is secured into and at the other end of the container 14. Thereupon the rod 13 with the threaded portion 18 in advance is passed through the registering openings 32 and 34 in the washer 31 and cover 33 respectively until the rod 13 extends into the container 14 about one-half inch. The rod 13 thus co-operates with the plug 16 to constitute a cork for one end of the container 14. Thereupon the cosmetic or medicament is fed to the container 14 through the registering openings 28 and 30 in the washer 27 and cover 29 respectively until the container 14 is filled to the desired degree. Thereupon the rod 13 is passed through the spring 17 and the registering openings 28 and 30 in the washer 27 and cover 29 respectively until the head 22 of the rod engages the plug 16 whereupon the intermediate diminished portion 35 of the spring 17 will snap into the recess 26 of the rod 13. Thereafter when the rod 13 is moved relative to the container 14, the spring 17 will move with the rod 13 and agitate the contents so that whatever precipitation is formed will be agitated into solution.

After the rod 13 is so extended through the two plugs 16 and 15, the refill unit is then ready to be attached to the plug 7 in the inner end of the housing 1. The rod 13 and container 14 are then introduced into the housing 1 when the rod 13 will be aligned with the threaded opening 8 in the plug 7 and when the rod engages the plug 7 it is turned until the rod 13 is secured to the plug 7 and thereby the container 14 anchored against removal from

the housing 1 until the rod 13 is again released from the plug 7.

From the foregoing it will be seen that as shown in FIG. 3 in the "use" position, the washers 27 and 31 will engage the smooth cylindrical portions 21 and 25 of the rod 13 to constitute fluid-tight joints in such "use" position. In turn when the container 14 is moved outwardly into the "out of use" position, the washer 31 will engage the smooth cylindrical portion 23 adjacent the head 22 and the washer 27 will engage the smooth cylindrical portion 21 of the rod 13 to constitute fluid-tight joints. In other words in both the "use" position that shown in FIG. 3, and in the "out of use" position, that shown in FIG. 2, the fluid-tight joints will be formed to prevent the outward leakage of any of the cosmetic in the housing 14.

In the use of this applicator, it is of course understood that the serrated portion 24 will acquire some of the medicament or cosmetic in the container and when extruded into the position shown in FIG. 3, it will contain a predetermined coating of medicament to enable the user to grasp the housing 1 and apply the medicament by brushing the serrated portion 24 on to the eyebrows, eye lashes, eye lids, lips, or the like.

In practice, the housing 1, container 14, and plugs 7, 15 and 16 may be composed of any suitable material such as a thermoplastic, or a light metal such as aluminum, while the rod 13 and spring 17 are preferably composed of a light metal such as aluminum.

In the claims for the sake of brevity, the word "serrated" will be used to cover not only a portion that is serrated, but also a portion that is fluted or threaded.

It is obvious that various changes and modifications may be made to the details of construction without departing from the general spirit of the invention as set forth in the appended claims.

I claim:

1. An applicator comprising a housing, a container

slidably mounted in said housing, an applying rod slidably movable in said container, means for connecting one end of said rod at the inner end of said housing, a serrated portion on said rod to extend from said container when said container is moved into said housing, resilient washers in the ends of said container to receive said rod, said rod having smooth, cylindrical portions to cooperate with said washers to constitute fluid-tight joints between said container and said rod, a recess in said rod, and an hourglass spring having its intermediate diminished portion snapped into said recess and positioned in said container to move with said rod and relative to said container and thereby agitate the contents of said container.

2. An applicator comprising a housing, a container slidably mounted in said housing, an applying rod slidably movable in said container, means for connecting one end of said rod at the inner end of said housing, a serrated portion on said rod to extend from said container when said container is moved into said housing, resilient washers in the ends of said container to receive said rod, said rod having smooth, cylindrical portions to cooperate with said washers to constitute fluid-tight joints between said container and said rod, a head at the free end of said rod, a short smooth cylindrical portion constituting one of said smooth cylindrical portions disposed between said serrated portion and said head, and extended smooth cylindrical portions on said rod constituting other of said smooth cylindrical portions, a recess in said rod intermediate said extended cylindrical portions, and an hourglass spring having its intermediate diminished portion snapped into said recess and positioned in said container to move with said rod relative to said container and thereby agitate the contents of said container.

References Cited in the file of this patent

UNITED STATES PATENTS

2,476,324	Reich	July 19, 1949
2,867,829	Aversa	Jan. 13, 1959