



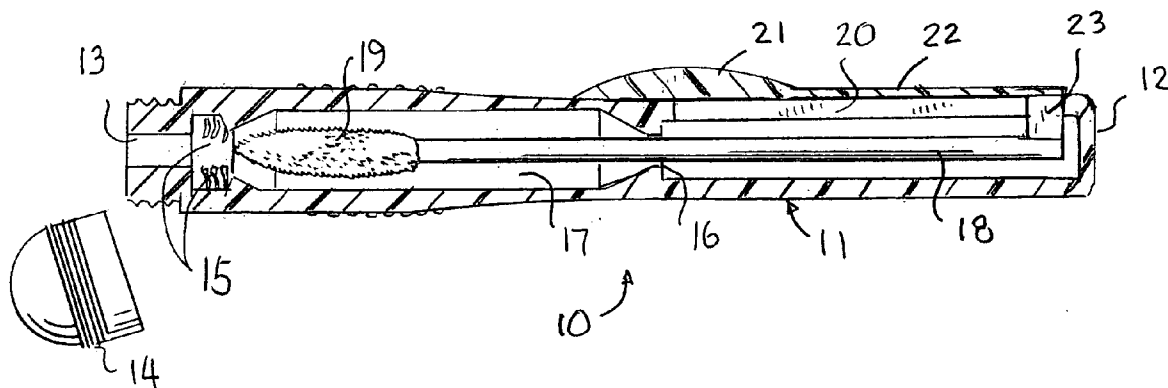
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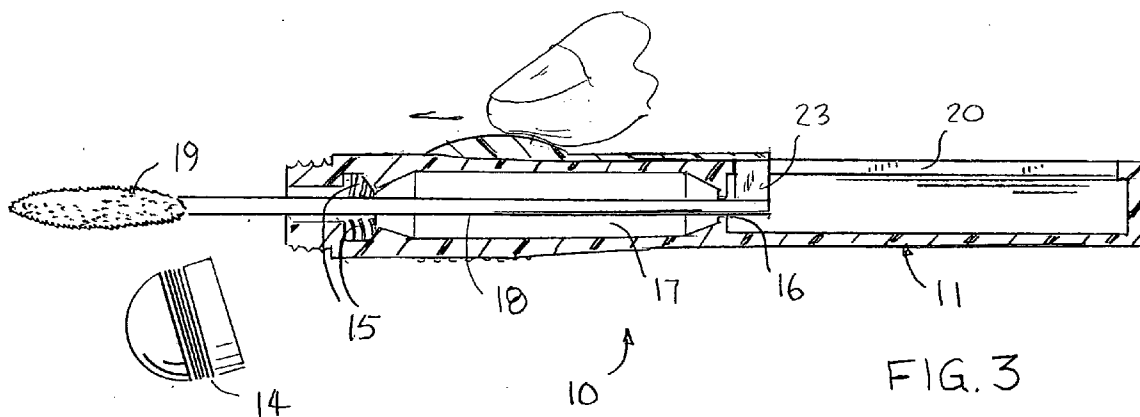
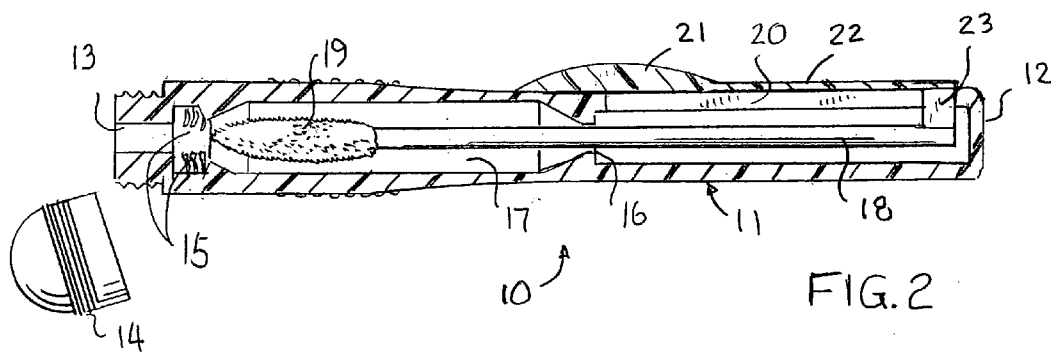
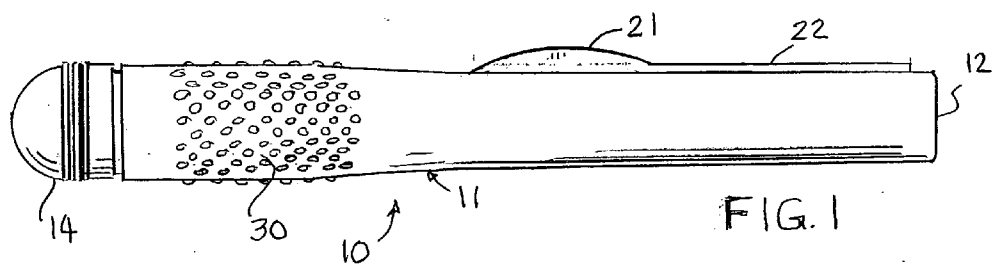
(19) **United States**(12) **Patent Application Publication**  
**Wynne**(10) **Pub. No.: US 2010/0065080 A1**(43) **Pub. Date: Mar. 18, 2010**(54) **RETRACTABLE MASCARA BRUSH****Publication Classification**(76) Inventor: **Charlotte Wynne**, Topanga, CA  
(US)Correspondence Address:  
**Dennis H. Lambert**  
**Attorney At Law**  
**7000 View Park Drive**  
**Burke, VA 22015 (US)**(51) **Int. Cl.**  
*A45D 40/26* (2006.01)  
*A46B 11/00* (2006.01)  
(52) **U.S. Cl.** ..... **132/218; 401/122; 401/129**(57) **ABSTRACT**

A retractable mascara applicator that can be operated with one hand. The applicator has a pen-like housing containing a mascara reservoir. An applicator rod is reciprocable in the housing and extends into the reservoir from a rearward end. A brush on a forward end of the rod is positioned in the reservoir when the rod is in a retracted position and projects beyond the housing when the rod is extended. A finger operated slide outside of the housing is connected directly with the applicator rod to retract it and extend it. In a preferred embodiment at least a portion of the housing is pliable and can be pressed inwardly to squeeze the reservoir and press the mascara paste against the brush.

(21) Appl. No.: **12/459,020**(22) Filed: **Jun. 25, 2009****Related U.S. Application Data**

(60) Provisional application No. 61/133,108, filed on Jun. 25, 2008.





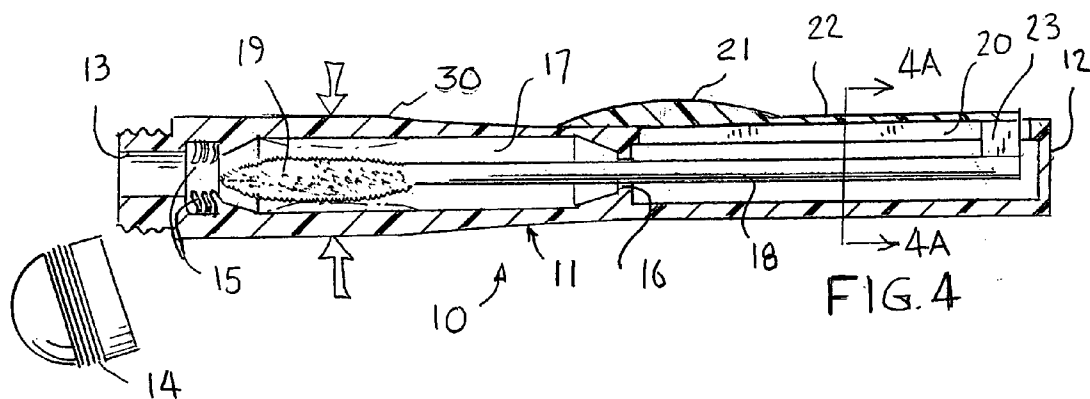
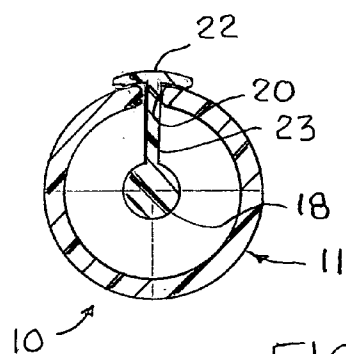


FIG. 5



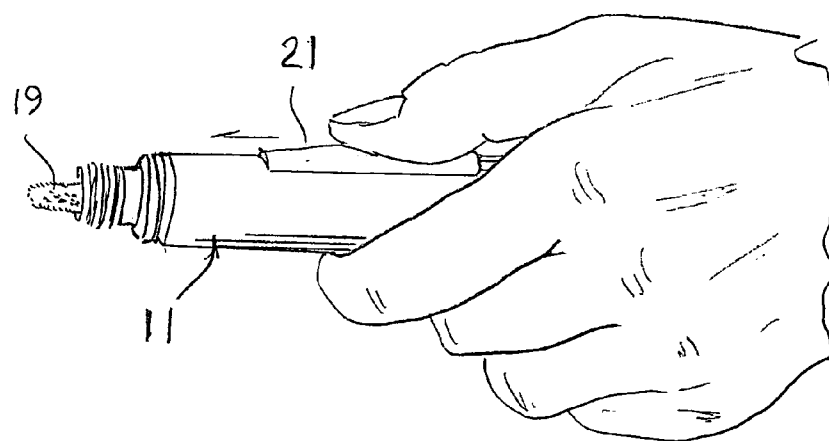
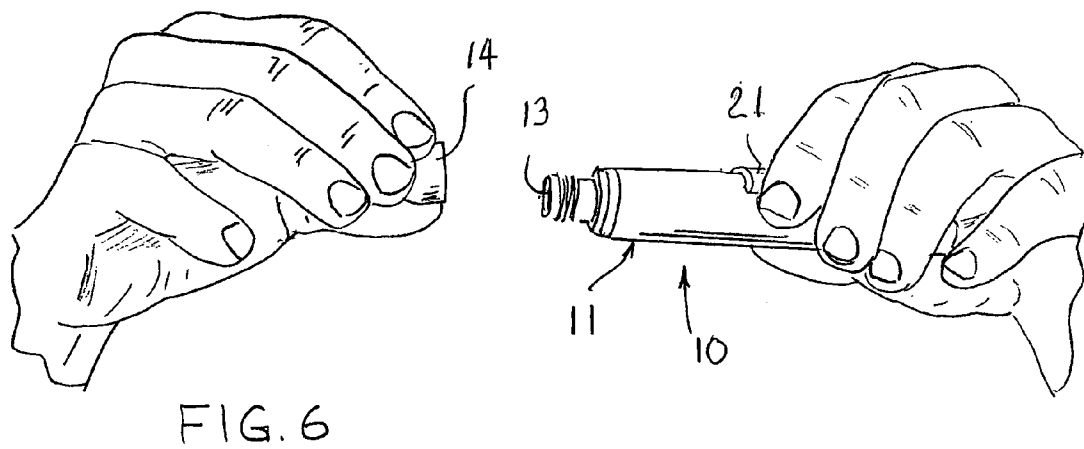


FIG. 7

## RETRACTABLE MASCARA BRUSH

### FIELD OF THE INVENTION

[0001] This application claims the benefit of U.S. Provisional Patent Application Ser. No. 61/131,108, filed Jun. 25, 2008.

[0002] This invention relates generally to cosmetics, and particularly to a brush for applying cosmetics, especially mascara.

### BACKGROUND ART

[0003] Mascara typically is applied with a brush applicator that is inserted into a container to pick up a quantity of the mascara and is then withdrawn from the container past a wiper that wipes excess mascara from the brush. The brush is then used to apply mascara to the eyelashes, and reinserted into the container to pick up a fresh supply of mascara. This usually requires the use of both hands: one to hold the container and one to hold the applicator.

[0004] The applicator disclosed in U.S. Pat. No. 6,718,990 is designed so that only one hand is required to operate it, but the structure is relatively complex. In the '990 patent a retractable applicator brush is reciprocated into and out of a mascara reservoir by a slide mechanism that comprises a knob or thumbwheel 26 connected through a drive belt or cable 22 to an applicator rod 20 on which the brush 18 is mounted. The drive belt and cable are described as flexible, and it is apparent how movement of the knob in a forward direction will pull through the cable or belt and retract the brush into the housing, but it is not apparent how movement of the knob in a rearward direction can "push" the cable or belt and extend the brush from the housing.

### DISCLOSURE OF THE INVENTION

[0005] The present invention is a simple and inexpensive retractable mascara applicator that can be operated with one hand. The applicator of the invention comprises a pen-like housing containing a mascara reservoir. An applicator rod is reciprocable in the housing and extends into the reservoir from a rearward end. A brush on a forward end of the rod is positioned in the reservoir when the rod is in a retracted position and projects beyond the housing when the rod is extended. A finger operated slide outside of the housing is connected directly with the applicator rod to retract it and extend it. In a preferred embodiment a portion of the housing can be pressed inwardly to squeeze the reservoir and press the mascara paste against the brush.

### BRIEF DESCRIPTION OF THE DRAWINGS

[0006] The foregoing, as well as other objects and advantages of the invention, will become apparent from the following detailed description when taken in conjunction with the accompanying drawings, wherein like reference characters designate like parts throughout the several views, and wherein:

[0007] FIG. 1 is a side view in elevation of the retractable mascara applicator of the invention.

[0008] FIG. 2 is a longitudinal sectional view of the applicator of FIG. 1, with the closure cap removed and showing the applicator in a retracted position in the applicator housing.

[0009] FIG. 3 is a longitudinal sectional view of the applicator of FIG. 1, with the closure cap removed and showing the applicator in an extended position with the brush outside the applicator housing.

[0010] FIG. 4 is a longitudinal sectional view similar to FIG. 2, showing in dot-and-dash lines how the sides of the housing and reservoir can be squeezed inwardly to press the mascara against the brush.

[0011] FIG. 4A is a transverse sectional view taken along line 4A-4A in FIG. 4.

[0012] FIG. 5 is a side view in elevation of an alternate form of applicator rod, wherein the rod is helically grooved to cause it and the brush to rotate as they are reciprocated in and out of the housing.

[0013] FIG. 6 depicts the closure cap being removed from the housing.

[0014] FIG. 7 depicts the slide being pushed forwardly and the brush beginning to extend out of the housing.

[0015] FIG. 8 depicts the slide and brush in a further forward or extended position.

[0016] FIG. 9 depicts the slide and brush fully extended.

[0017] FIG. 10 depicts the brush being used to apply mascara to the eyelashes.

[0018] FIGS. 11-13 depict the slide and brush in various stages of retraction.

### BEST MODES FOR CARRYING OUT THE INVENTION

[0019] The retractable mascara applicator of the invention is indicated generally at 10 in FIGS. 1-4A and 6-13. The applicator has an elongate, cylindrical, pen-like housing 11 with a closed end 12 and an open end 13. A removable cap 14 is releasably engaged on the open end by a threaded connection or snap fit or other suitable means. A wiper 15 is formed within the housing near the open end, and a seal 16 is formed within the housing in spaced relationship to the wiper, defining a mascara reservoir 17 between them. An applicator rod 18 extends longitudinally in the housing and in a retracted position has a rearward end positioned near the rearward closed end of the housing. The applicator rod slidably extends through the seal 16 and into the reservoir, and has a mascara brush 19 on its forward end, which is positioned in the mascara reservoir when the rod is in its retracted position as shown in FIG. 2.

[0020] A longitudinally extending slot 20 in one side of the housing (see FIG. 4A) extends over most of the length of the housing from near the closed end to near the open end, and a slide actuator 21 on the outside of the housing is connected to the rearward end of the applicator rod by an arm 22 extending longitudinally of the housing and a web 23 extended through the slot.

[0021] At least a portion 30 of the housing near the open end is pliable and preferably made of an elastomeric material such as plastic or the like so that it may be squeezed inwardly, as indicated in dot-and-dash lines in FIG. 4, to compress the reservoir and urge the mascara paste against the applicator brush to load it with mascara when the brush is positioned in the reservoir. The wiper 15 can be of conventional construction to wipe excess mascara off the brush in a known way, and the seal 16 is constructed to wipe mascara from the actuator rod as it is retracted through the seal.

[0022] Rather than the straight push-pull actuation described above, the applicator rod may be spirally shaped similar to a drill bit as depicted at 40 in FIG. 4A, and an

interior portion of the housing shaped to cooperate with the applicator rod so that it rotates as it is reciprocated in the housing, whereby the brush rotates as it moves in and out of the housing. In this configuration, the web would have to be attached to an annular groove or channel (not shown), or other suitable structure, in the rearward end of the rod so that the rod could rotate relative to the web.

**[0023]** The user may extend and retract the brush one or more times to load it with a desired amount of mascara prior to application of the mascara to the eyelashes. Following use of the applicator, the cap is replaced.

**[0024]** Although particular embodiments of the invention are illustrated and described in detail herein, it is to be understood that various changes and modifications may be made to the invention without departing from the spirit and intent of the invention as defined by the scope of the appended claims.

What is claimed is:

**1.** A retractable mascara applicator that can be operated with one hand, comprising:

- a pen-like housing containing a mascara reservoir with mascara paste in it;
- an applicator rod reciprocable in the housing and extending into the reservoir from a rearward end thereof;
- a brush on a forward end of the rod positioned in the reservoir when the rod is in a retracted position and projecting beyond the housing when the rod is extended;
- a finger operated slide outside of the housing connected directly with the applicator rod to extend it and retract it; and
- at least a portion of the housing being pliable so that it can be pressed inwardly to squeeze the reservoir and press the mascara paste against the brush.

**2.** A retractable mascara applicator as claimed in claim 1, wherein:

- wiper elements are at a forward end of the reservoir for wiping excess mascara from the brush as it is extended forwardly out of the reservoir and housing.

**3.** A retractable mascara applicator as claimed in claim 1, wherein:

- the applicator rod has a spirally twisted shape and rotates the brush as the applicator rod is extended and retracted relative to the housing.

**4.** A retractable mascara applicator as claimed in claim 2, wherein:

- the pen-like housing is tubular and has a closed end and an open end, said reservoir being adjacent said open end and said applicator rod extending into a chamber adjacent said closed end; and

- a seal is disposed between said reservoir and said chamber to prevent said mascara paste from moving from the reservoir into the chamber, said applicator rod extending through said seal.

**5.** A retractable mascara applicator as claimed in claim 4, wherein:

- a longitudinally extending slot is formed in a side of said housing in communication with said chamber; and
- a web is connected at an inner end thereof with a rearward end of said applicator rod and extends radially outwardly through said slot and is connected at an outer end thereof with said slide.

**6.** A retractable mascara applicator as claimed in claim 3, wherein:

- wipers are positioned at a forward end of said reservoir and adjacent said open end of said housing to wipe excess mascara paste from the brush as the brush is moved outwardly of the housing through the open end thereof.

**7.** A retractable mascara applicator as claimed in claim 6, wherein:

- a removable and replaceable cap is on the open end of the housing to close it until the applicator is ready for use.

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