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(54) **ELECTRICAL MASCARA APPLICATOR**

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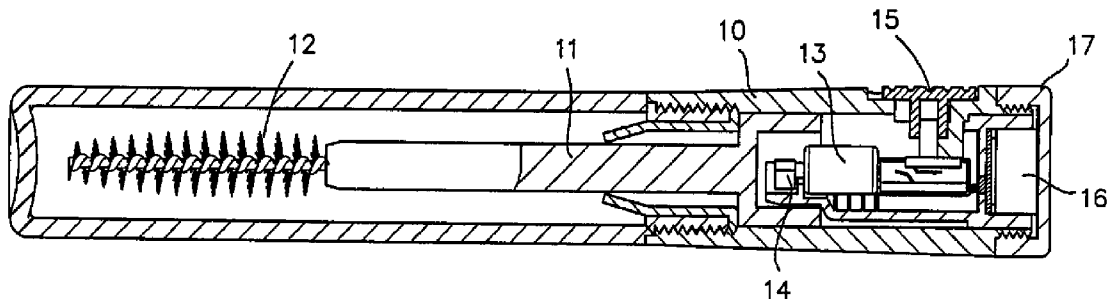
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(57) **ABSTRACT**

A novel mascara applicator is therefore provided herein. The applicator contains a hollow body member and a plastic stick is extended out from an open side of the body member. The stick has bristles arranged radially from the extended end of the stick. Inside the body member, there is a seat for the installation of an electrical motor with an eccentric weight at an end of the motor's axle, and a switch that is exposed out of the body member for turning on/off the applicator by electrically connecting the motor to a battery also housed inside the body member.

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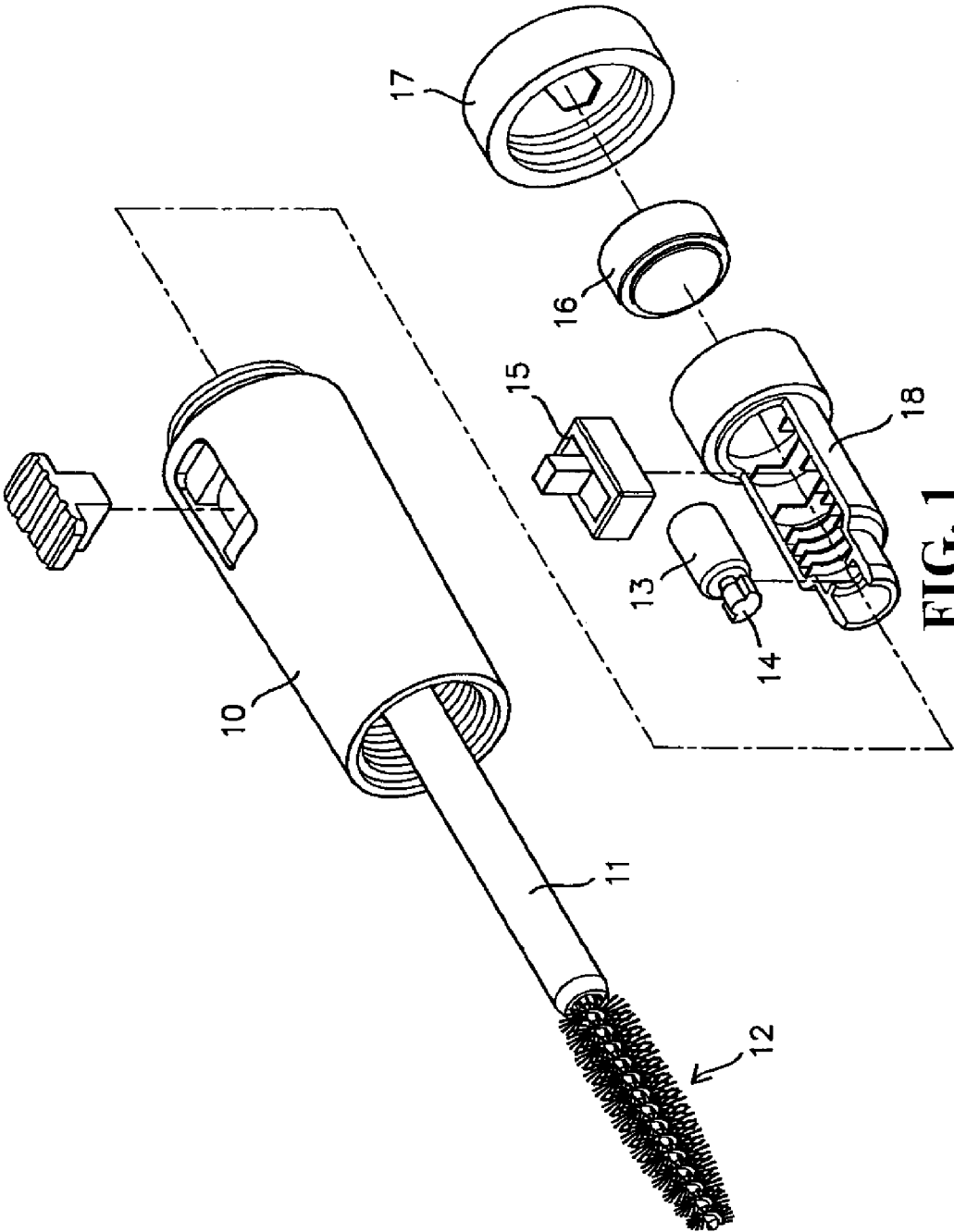


FIG. 1

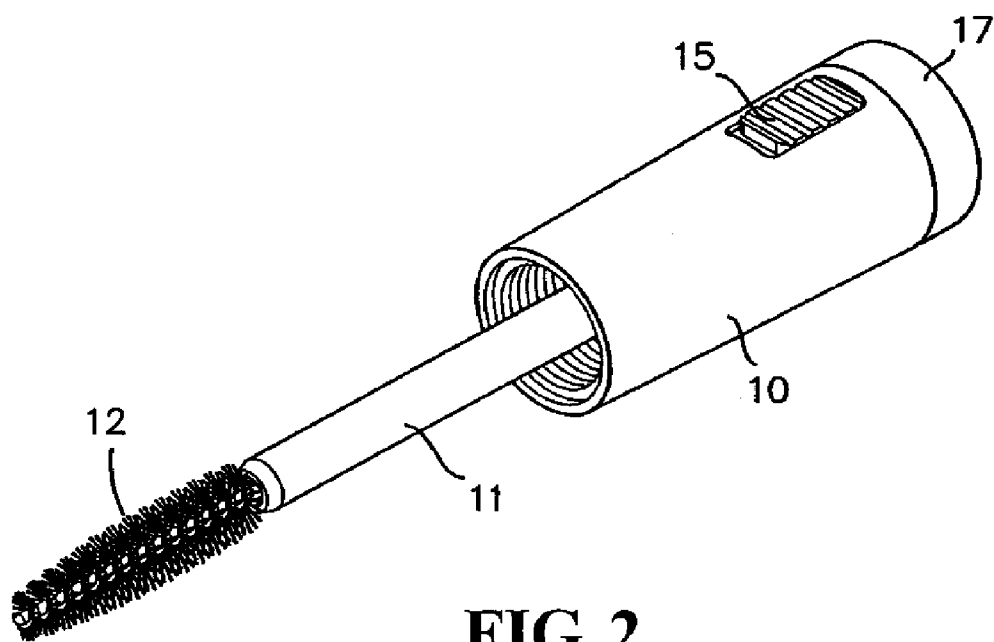


FIG. 2

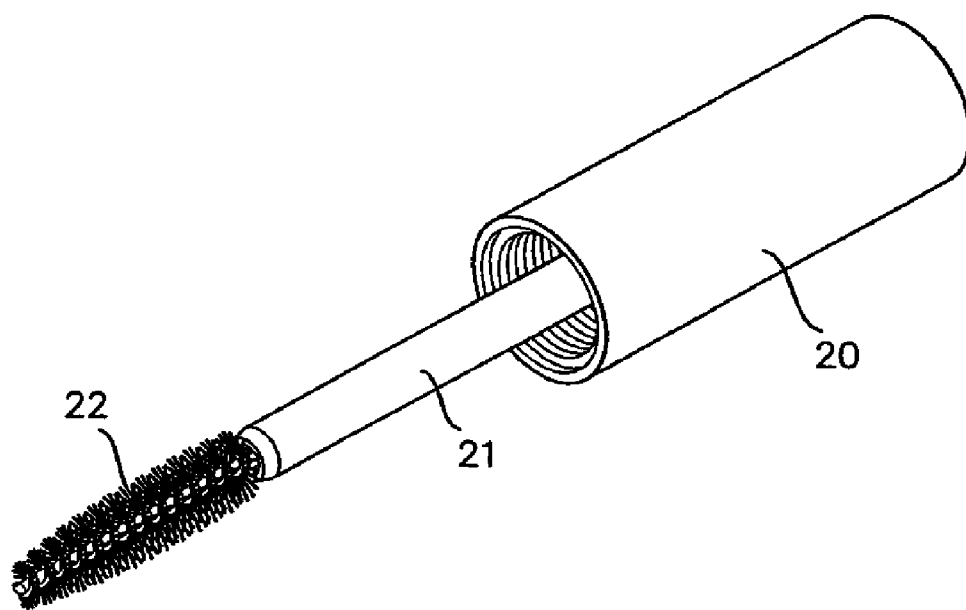


FIG. 5
PRIOR ART

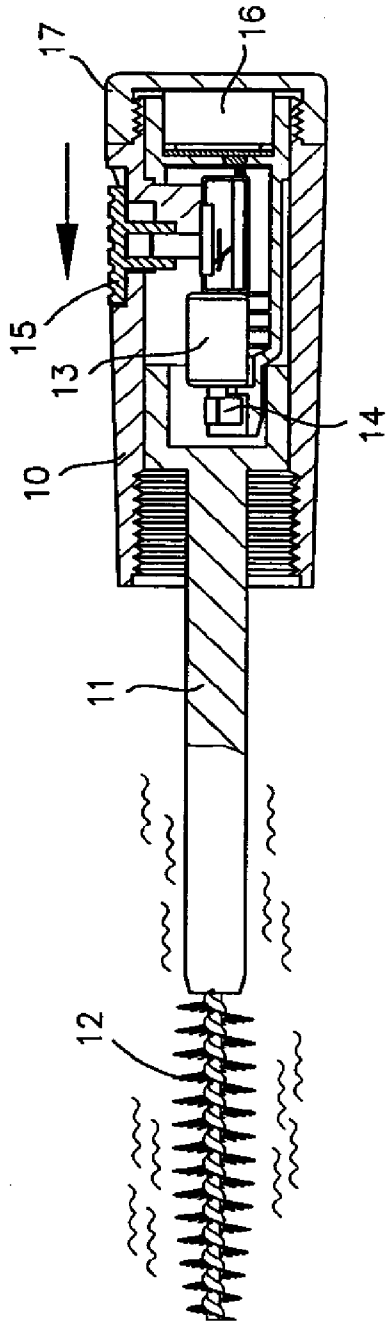


FIG. 4

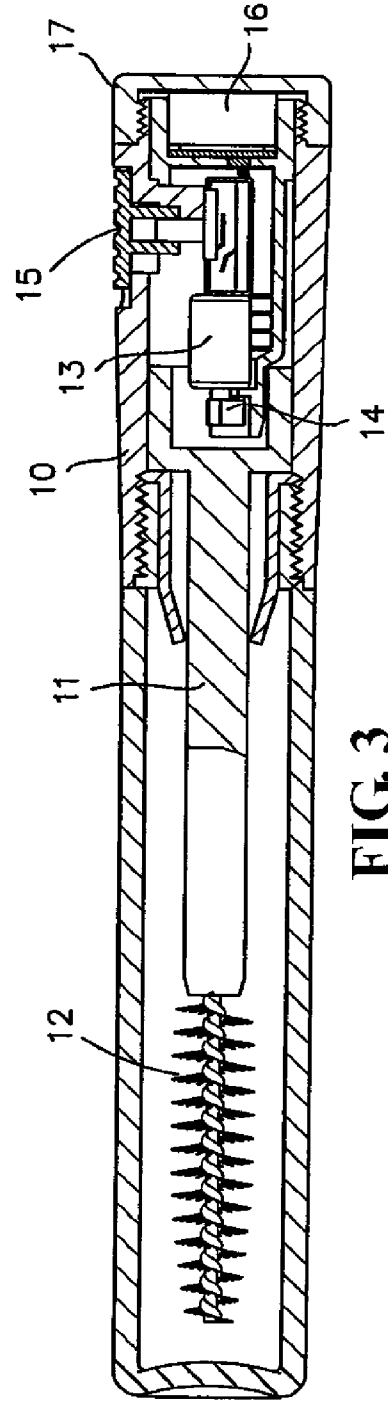


FIG. 3

ELECTRICAL MASCARA APPLICATOR

TECHNICAL FIELD OF THE INVENTION

[0001] The present invention generally relates to mascara applicators, and more particularly to a mascara applicator whose bristles are driven by an electrical more into high-frequency vibration.

DESCRIPTION OF THE PRIOR ART

[0002] A conventional mascara applicator, as illustrated in FIG. 5, contains a hollow and cylindrical cap member 20 having an open side and a stick 21 extended out from the open side of the cap member 20 along an axial direction of the cap member 20. At the extended end of the stick 21, bristles 22 are provided for the application of mascara. Usually, the applicator is directly plugged into a mascara-holding bottle (not shown) so that the stick 21 and its bristles 22 are housed in the bottle and the bristles 22 are dipped in the mascara. To apply the mascara, a user has to pull out the applicator from the bottle, scrape off excessive mascara from the bristles 22, and apply the mascara by repeatedly brushing her eyelashes with the bristles 22. This process is usually repeated quite a number of times before the mascara is uniformly and satisfactorily applied. Mostly this is due to that the mascara is not evenly attached to the bristles 22 and the applicator has to be maneuvered delicately, which is quite difficult even for a sawy user.

SUMMARY OF THE INVENTION

[0003] A novel mascara applicator is therefore provided herein. The applicator contains a hollow body member and a plastic stick is extended out from an open side of the body member. The stick has bristles arranged radially from the extended end of the stick. Inside the body member, there is a seat for the installation of an electrical motor with an eccentric weight at an end of the motor's axle, and a switch that is exposed out of the body member for turning on/off the applicator by electrically connecting the motor to a battery also housed inside the body member.

[0004] The foregoing objectives and summary provide only a brief introduction to the present invention. To fully appreciate these and other objects of the present invention as well as the invention itself, all of which will become apparent to those skilled in the art, the following detailed description of the invention and the claims should be read in conjunction with the accompanying drawings. Throughout the specification and drawings identical reference numerals refer to identical or similar parts.

[0005] Many other advantages and features of the present invention will become manifest to those versed in the art upon making reference to the detailed description and the accompanying sheets of drawings in which a preferred structural embodiment incorporating the principles of the present invention is shown by way of illustrative example.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006] FIG. 1 is a perspective diagram showing the various components of an electrical mascara applicator according to an embodiment of the present invention.

[0007] FIG. 2 is a perspective diagram showing the electrical mascara applicator of FIG. 1 after it is assembled.

[0008] FIG. 3 is a sectional diagram showing the electrical mascara applicator of FIG. 1 when it is turned off and dipped in a mascara-holding bottle.

[0009] FIG. 4 is a sectional diagram showing the electrical mascara applicator of FIG. 1 when it is turned on.

[0010] FIG. 5 is a perspective diagram showing a conventional mascara applicator.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0011] The following descriptions are exemplary embodiments only, and are not intended to limit the scope, applicability or configuration of the invention in any way. Rather, the following description provides a convenient illustration for implementing exemplary embodiments of the invention. Various changes to the described embodiments may be made in the function and arrangement of the elements described without departing from the scope of the invention as set forth in the appended claims.

[0012] As shown in FIGS. 1 to 4, a mascara applicator according to an embodiment of the present invention contains a hollow body member 10 for sealing and joining to a mascara-holding bottle (shown in FIG. 4). The body member 10 has two corresponding open sides and a plastic stick 11 is extended out from a first open side of the body member 10. The stick 11 has bristles 12 arranged radially from the extended end of the stick 11. Inside the body member 10, there is a seat 18 for the installation of an electrical motor 13 with an eccentric weight 14 at an end of the motor 13's axle. Also positioned on the seat 18 is a switch 15 that is exposed out of the body member 10 for turning on/off the applicator by electrically connecting the motor 13 to a battery 16 also housed inside the body member 10. Preferably, the battery 16 is positioned between the seat 18 and a cap 17 for sealing a second open side of the applicator. As such, the battery 16 could be easily accessed through the second open side after removing the cap 17.

[0013] To use the applicator, the switch 15 is turned on and electricity from the battery 16 is conducted to the motor 13. As the motor 13 is driven, the eccentric weight 14 is put into high-speed spin. The eccentric weight 14 would press against the body member 10 for each spin and the body member 10 as well as the stick 11 and the bristles 12 thereby vibrates at a high frequency. The high-frequency vibration of the bristles 12 has a number of advantages. First of all, it shakes the mascara to the tips of the bristles 12 for more efficient application. Secondly, the uniform and delicate vibration of the bristles 12 helps the application of the mascara to the eyelash more quickly and evenly.

[0014] While certain novel features of this invention have been shown and described and are pointed out in the annexed claim, it is not intended to be limited to the details above, since it will be understood that various omissions, modifications, substitutions and changes in the forms and details of the device illustrated and in its operation can be made by those skilled in the art without departing in any way from the spirit of the present invention.

I claim:

- 1. An electrical mascara applicator, comprising:
 - a hollow body member having two corresponding open sides;
 - a stick extended out from a first open side of said body member, said stick having a plurality of bristles arranged radially from an extended end of said stick;

an electrical motor housed inside said body member having an eccentric weight at an end of said motor's axle that presses against said body member for each spin of said motor;

a battery housed inside said body member for the provisioning of electricity to said motor; and

a switch electrically connecting said battery to said motor, said switch exposed out of said body member for turning on/off said applicator;

wherein, when said switch is turned on and electricity from said battery is conducted to said motor, said eccentric

weight is put into high-speed spin; said body member as well as said stick and bristles thereby vibrates at a high frequency.

2. The electrical mascara applicator according to claim 1, wherein said battery is capable of being accessed through a second open side of said body member that is sealed by a removable cap.

3. The electrical mascara applicator according to claim 1, wherein said motor and said switch are installed on a seat housed inside said body member.

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