A brush positioning apparatus adapted for utilization with a flexible mascara brush. The present invention permits positioning or repositioning of a flexible brush head to a desired angle while preserving the integrity of the brush's bristles through limited contact between the brush head bristles and apparatus. This limited contact minimizes deposition of product on the apparatus surface and minimizes bristle deformation while providing a clean and convenient method to position or reposition a flexible brush. A variety of structural mechanisms permit the apparatus to be utilized either as a freestanding instrument, or affixed to a typical mascara bottle that may be integrally formed as a portion of the bottle or retrofitted to existing bottles.
BRUSH POSITIONING APPARATUS AND METHOD

FIELD OF THE INVENTION

[0001] The invention relates generally to the field of cosmetics and specifically to makeup, brushes, and mechanisms to position the end of a flexible brush.

BACKGROUND

[0002] Mascara is used to coat eyelashes and make the eyes more pronounced on the face. Mascara provides accenting on the eyes and can make eyelashes appear darker, longer, and fuller. Mascara, found in a variety of consistencies ranging from a liquid to a relatively thick cream, is typically applied to the eyelashes with a brush. Mascara is typically contained within a bottle and collected on a brush surface. The brush is commonly mounted on a rod extending from a container top which is screwably attachable to the bottle. As the brush is inserted into the container, mascara adheres to the bristles, and mascara product is then transferred to the eyelashes when the user places the brush in contact with the eyelashes. The bristles of a typical mascara brush operate to clear away clumps and separate lashes and evenly distribute mascara. In use, the hand holding the mascara brush directs the bristles through the eyelashes starting at the root and continuing through the tips. Numerous mascara coats may be applied to the eyelashes if preferred, and variations of mascara application are known, including limiting mascara application to certain parts of the eyelash, and coating only bottom eyelashes. The application of mascara requires hand stability, dexterity, and precision and also requires the user to maintain stability of her head and face during application. This avoids the unwelcome problem of mascara soiling where product is not applied exclusively to the eyelashes resulting in product nottowardly deposited on the face.

[0003] Prior art mascara brushes were rigid and stiff. This stiffness commonly compels the user to assume an awkward hand and wrist position when attempting to apply mascara in the desired fashion. Furthermore, a rigid-style brush makes right-handed application of mascara onto the left eye difficult, imprecise, and may lead to mascara smudging.

[0004] A flexible cosmetic mascara brush allows the applicator to be bent to a desired angle. An angled brush simplifies mascara application and allows the user greater control and convenience. However, an inherent problem exists in the action of bending the brush: in order to bend the brush, the brush must be pressed against a surface in such a way to impart a necessary bending force to position the brush to the desired angle. This frequently leads a user to manually position a brush head, wherein the user grasps the flexible end of the brush with her fingertips and repositions it to a desired angle. More commonly, a user wishing to avoid soiling their hands with mascara will reposition the brush by using a disposable surface (such as facial tissue) to grasp the brush. The user may seek to position the brush indirectly by resting the brush against a firm surface and moving the handle to the desired location. All of these methods are problematic in that they remove much of the mascara from the brush. This leads the user to waste a substantial amount of product, and results in mascara soiling the user’s surroundings. Further, disposable make-shift surfaces such as a napkin, facial tissue, and the like, are not always conveniently available, and the user is forced to position the brush with her fingertips and soil her hands with mascara.

[0005] Moreover, in addition to the problems of product waste and soiling, repositioning a mascara brush utilizing the fingers (directly) or a firm surface (indirectly) unavoidably compresses a substantial number of individual bristles leaving those bristles disturbed. This bristle compression can cause permanent or semipermanent bristle damage or deformation resulting in suboptimal mascara application. Furthermore, once the mascara brush is bent, and the user completes mascara application, it is desirable to place the brush back into the mascara dispenser. Usually, this insertion is not possible: the repositioned brush will not fit into the mascara tube. If the user does manage to insert the brush into the tube in the bent position, this action may prevent mascara from fully lubricating and coating the bristles evenly because mascara is typically located around the inner periphery of the mascara bottle.

SUMMARY

[0006] The present invention permits the user to position or reposition a flexible brush head, and specifically a mascara brush head, to a desired angle while preserving the integrity of the brush head bristles and minimizing mascara product waste. The present invention apparatus facilitates positioning or repositioning of a flexible brush head through limited contact with a brush head to minimize deposition of product on the apparatus positioning surface and minimize bristle deformation. A variety of structural mechanisms are disclosed permitting the apparatus to be utilized either as a freestanding instrument or affixed to a typical mascara bottle. Regarding the latter, the apparatus may be integrally formed as a portion of a typical mascara bottle, or may retrofitted. Further, an embodiment of the present invention teaches an apparatus which may be manufactured as a freestanding unit that may be reversibly threadably affixed to existing mascara bottles; the apparatus may be removed from the mascara bottle when the mascara is exhausted, and reattached to a new bottle.

[0007] The present invention protects the bristles of the brush and minimizes mascara removal from the surface of the brush. Further still, the present invention eliminates the soiling resulting when a user attempts to straighten the brush by using paper, tissue, or one’s hands. Further, the present invention minimizes product waste where mascara is wasted on a paper, tissue, or user’s hands. Further still, the present invention eliminates costly staining of garments, purses, handbags, makeup bags, and the like and eliminates the need to clean up soiled paper and tissue. Further, the apparatus prevents bristle damage that may render the remaining product unusable. Further still, the freestanding embodiment of the present invention disclosed herein is small and easy to clean.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] FIG. 1 is a perspective view of an open mascara bottle and brush.

[0009] FIG. 2 is a perspective view of a closed mascara bottle and brush.

[0010] FIG. 3 is a top perspective view of an embodiment of the present invention.

[0011] FIG. 4 is a top perspective view of an embodiment of the present invention.
FIG. 5 is a front perspective view of an embodiment of the present invention. FIG. 6 is an exploded view of an embodiment of the present invention depicting a brush in contact with the filaments. FIG. 7 is a top perspective view of the present invention depicting a brush in contact with the filaments. FIG. 8 is a bottom perspective view of the present invention illustrating the apparatus partially inserted into an embodiment casing. FIG. 9 is a perspective view of an embodiment of the present invention illustrating the apparatus fully inserted into an embodiment casing. FIG. 10 is a perspective view of an embodiment of the present invention illustrating the apparatus fully removed from an embodiment casing. FIG. 11 is a perspective view of an embodiment of the present invention illustrating the apparatus fully removed from an embodiment casing. FIG. 12 is a top perspective view of an alternative embodiment of the present invention. FIG. 13 is a perspective view of an embodiment of the present invention depicting a cap in place. FIG. 14 is a perspective view of an embodiment of the present invention depicting the cap removed. FIG. 15 is a perspective view of an embodiment of the present invention depicting a brush in contact with the filaments. FIG. 16 is an exploded view of an embodiment of the present invention depicting the apparatus removed from a mascara casing. FIG. 17 is a perspective view of an embodiment of the present invention. FIG. 18 is a top perspective view of an embodiment of the present invention. FIG. 19 is a top perspective view of an embodiment of the present invention depicting a brush in contact with the filaments.

DETAILED DESCRIPTION OF CERTAIN ASPECTS OF THE PREFERRED AND ALTERNATIVE EMBODIMENTS

Turning now to the illustrations, FIG. 1 depicts a typical mascara bottle 5 in the open position. Bottle 5 has a bottom 10 and a top 15. The top 15 typically has a rod 20 which emanates from top 15 and mounted axially within. Rod 20 is typically comprised of a relatively tapered neck 25 which is coupled to brush head 30. A plurality of bristles 32 comprise a portion of brush head 30. FIG. 2 depicts a typical closed mascara bottle with top 15 threadably coupled to bottom 10.

Referring now to FIG. 3, an apparatus for actuating the terminal aspect of a brush generally 35, comprises a first support member 40, which is affixed to a plurality of relatively thin filaments 45 affixed to said first support member at a first end and extending perpendicularly from said first support 40. A second support member 50 is affixed to the second end of said plurality of filaments 45. FIG. 5 provides a perspective view illustrating the relatively thin nature of the apparatus.

Turning to FIG. 6, each filament 47 is a relatively long and slender strand that may be comprised of wire, plastic filament, laminated string, fiber, or other material capable of bending the surface of a flexible brush without breaking. Filaments 45 may be of any size and orientation. In one non-limiting example, filaments may be between 0.014-0.08 inches in diameter. The invention may be practiced with any filament diameter that permits repositioning of brush head 30 without the filaments 45 breaking, and accordingly will depend upon multiple factors including the chosen filament material, size and force required to reposition brush head 30, anticipated individual use characteristics, and other factors.

In use, as illustrated by FIG. 7 and FIG. 8 the first support 40 and second support 50 may be held by a user, and a bendably positionable mascara brush, having a brush head coated in mascara, may be placed in contact with filaments 45, said brush head making contact with said filaments 45, wherein said brush head may be positioned through manual pressure on brush head 30, and wherein a majority of bristles 32 on brush head 30 retain adherent mascara product.

In a preferred non-limiting embodiment, illustrated by FIGS. 3-8 inclusive, the orientation is a ladder-type pattern with filaments evenly spaced and perpendicularly disposed to the first support 40 and second support 50, although the present invention may be practiced using filaments 45 in a variety of orientations including as non-limiting examples a criss-crossing lattice, curved, diamond shaped, irregularly shaped patterns. Any filament orientation, composition, and size which permits the adjustment of a flexible mascara brush and prevents deformation of at least some of the bristles may be utilized. Given the differing nature of mascara viscosities and composition, it is specifically recognized that a variety of embodiment filaments 45 may be desirable, useful, and tailored to correspond to the properties of specific mascara and individual use characteristics. In one alternative embodiment, a single filament 55 may be utilized. Additionally, as illustrated by FIG. 12, the first 40 and second 50 members may be nonlinear and need not be identical.

Filaments 45 may be affixed to first support member 40 and second support member 50 through a variety of methods. In an alternative embodiment the entire apparatus 35 may be formed through injection molding as a single unit with filaments 45 being formed of plastic.

Referring to FIG. 8, in use, apparatus 35, comprising the first support 40, filaments 45, and second support 50, may be grasped by a user and held in the hand such that the user holds said first 40 and second 50 support member between the thumb and index finger. A brush having a flexible head may be placed in contact perpendicularly across filaments 45, such that the flexible brush head may be positioned by using apparatus 35 to exert force against brush head 30 while holding top 15 firmly. A brush head may also be positioned by placing head 30 across filaments 45 and exerting manual force on the top 15 of a typical mascara bottle while holding apparatus 35 firmly. FIGS. 7 and 8 illustrate a typical brush head 30 placed over filaments 45 to permit positioning/repositioning. FIG. 8 illustrates a bottom perspective view illustrating a typical brush head 30 positioned above said filaments 45 permitting a majority of bristles 32 to remain coated with mascara during the positioning/repositioning process.

Turning now to FIGS. 9-11 inclusive, in an alternative embodiment, apparatus 35 may be slidably disposed within a storage housing 55 to further facilitate ease of use and cleanliness. The proportions of housing 55 accommodate apparatus 35 such that when fully inserted, as illustrated by FIG. 10, the outermost surface of said first member 40 or second member 50 rest flushly relative to the remaining four surfaces of said housing. Apparatus 35 may be secured within housing 55 through a variety of means including frictional
engagement, snap lock, or detent engagement. In a preferred embodiment, apparatus is rested inside housing 55; when removal is desired, the exerts a small shaking force which will dislodge apparatus 35 from housing 55 whereupon it is fully separated from said housing as depicted by FIG. 11.

[0035] FIG. 12 illustrates an alternative embodiment wherein said first member 40 and second member 50 are accurately shaped, and the invention may be practiced using a grasping surface in any variety of shapes and sizes.

[0036] Now referring to FIGS. 13 and 14, in an alternative embodiment, filaments 45 are fixed between two projections 60 mounted on the bottom 10 of a mascara bottle 5. Projections 60 in one embodiment are oriented substantially perpendicular to the long axis of said bottom 10. In another embodiment, projections 60 are angled relative to bottom 10. Filaments 45 may be oriented in any direction, and have spacing, and filament number and width which provides a suitable surface to position the end of a flexible brush. FIG. 15 demonstrates the positioning/repositioning of brush head 30 accomplished by placing head 30 across filaments 45 and holding bottom 10 firmly while exerting force on top 15 or holding top firmly while exerting force on bottom 10.

[0037] In FIG. 16 and FIG. 17, another alternative embodiment that incorporates projections 60 on or as part of an annular ring 65. Said projections 60 may be fastened to ring 65 or formed integrally therewith. In one embodiment, ring 65 and projections 60 are formed of a singular unit. Ring 65 in one embodiment threadably engages the corresponding threadable portion of bottom 10 and reversibly fastens thereto. In another embodiment, ring 65 slides on bottom 10 and may be held in place through a variety of methods including snap fitting, frictional engagement, or others. FIG. 18 illustrates a top perspective view of the embodiment ring 65 apparatus bearing projections 60, and FIG. 19 illustrates ring 65 with a brush head 30 positioned on filaments 45; positioning and repositioning is as described above and may be accomplished with the ring coupled to bottom 10 or as a free-standing unit in the uncoupled state. In use, filaments 45 permit the positioning/repositioning of a flexible mascara brush without deforming or damaging the bristles while preserving a substantial quantity of mascara on the bristles.

[0038] In the alternative embodiment illustrated by FIGS. 16 and 17, the annular member, ring 65 may be utilized with existing mascara systems wherein the innermost aspect of annular ring bears threadung which corresponds to the threading on an existing mascara bottle such that ring 65 is capable of being threadably coupled thereto. Ring 65 may be retrofitted on existing mascara brush casing wherein the user, on purchasing mascara, may remove the top 15 containing the rod and brush within, and threadably couple ring 65 to the mascara case. The user then screwably fastens the mascara top 10 with ring 65 remaining in place. Ring 65 may be maintained in place during the useful life of the mascara product. When the mascara is empty, ring 65 is threadably uncoupled, and the empty mascara case discarded. Ring 65 may be retained and reinstalled on a new mascara case.

[0039] In the above embodiment, the repositioning surface has been described as a plurality of filaments, however, it should be noted that the repositioning surface may be comprised of a variety of materials permanently or reversibly affixed to mascara bottom 10, or used as a free-standing hand-held device. In one specific embodiment, brush head 30 may be repositioned through a knob mounted on bottom 10 such that brush head 30 may be repositioned by placing brush head 30 against a relatively narrow portion of said knob and exerting sufficient repositioning force. The present invention envisages various alternative structures permitting repositioning of brush head 30; the present invention may be practiced using any structure permitting brush head 30 to be positioned while retaining a majority of mascara on the brush, avoiding excessive bristle deformation, and unnecessary loss of mascara product.

[0040] Regarding method, the present invention discloses a method for repositioning a flexible brush. The method includes providing a positioning surface. The positioning surface is defined as any structure which permits a brush head 30 containing a plurality of bristles 32 to make contact with the surface such that a substantial number of the bristles 32 retain adherent mascara product. In one example, such a surface will permit at least a majority of bristles 32 to retain adherent mascara. As disclosed above, such surface may be freestanding or affixed to a mascara bottle. The method involves next providing a flexible brush containing a plurality of deformable brush bristles 32, and thereafter applying mascara to said brush head 30 wherein said mascara adheres to brush bristles 32. In one embodiment, the flexible brush 5 has a cap 15 affixed to an axial rod 20 which is coupled to a brush head 30, the brush head 30 being coupled to rod 20 though a flexible neck 25, and wherein said brush head 30 is bendably positionable relative to said rod 20 at said neck 25. The flexible brush 5 is capable of being positioned, and the brush head 30 contains a plurality of deformable brush bristles 32. The method includes next placing a flexible brush head 30, containing a plurality of brush bristles 32, on said repositioning surface wherein said brush head 30 makes contact with said surface, a substantial number of bristles 32 retain said adherent mascara. The method next involves exerting sufficient force on said brush head 30 to cause an angular repositioning of said brush head 30 relative to rod 20, and concludes with terminating application of said force when said brush head has reached the desired angle, and thereafter removing said flexible brush head 30 from said repositioning surface and application of mascara to user's eyelashes. The process is repeated to fill the user's needs.

[0041] In one embodiment, when the mascara brush is straight and an angled brush head is desired, the brush head is placed perpendicularly across the positioning apparatus, and the brush head positioned or repositioned. FIGS. 7, 8, 15, 19, generally illustrate the brush head 30 positioned on the present invention such that the bristles 34 locate themselves around one or more relatively slender filaments 47 positioned across a first 40 and second member 50 or a pair of projections 60.

[0042] Regarding use of the freestanding device, apparatus 35 is held in place by one hand while the other hand which is holding the handle of the mascara brush lifts the hand with mascara brush in such a way to assert pressure onto the mascara brush head causing bending at the location where he mascara brush head meets the mascara brush neck. This can continue until desired angle is reached.

[0043] Although the present invention has been described with reference to the preferred embodiments, it should be understood that various modifications and variations can be easily made by those skilled in the art without departing from the spirit of the invention. Accordingly, the foregoing disclosure should be interpreted as illustrative only and is not to be interpreted in a limiting sense. It is further intended that any other embodiments of the present invention that result from
any changes in application or method of use or operation, method of manufacture, shape, size, or material which are not specified within the detailed written description or illustrations contained herein yet are considered apparent or obvious to one skilled in the art are within the scope of the present invention.

What is claimed is:

1. An apparatus for actuating the terminal aspect of a brush, comprising:
   a first support member;
   a plurality of relatively thin filaments affixed to said first support member at a first end and extending perpendicularly from said first support;
   a second support member affixed to a second end of said plurality of filaments;
   wherein said first and second supports may be held by a user, and wherein a bendably positionable mascara brush, having a brush head coated in mascara, may be placed in contact with said filaments, said brush head making contact with said filaments, wherein said brush head may be positioned through manual pressure on said brush head, and wherein a majority of bristles on said brush head retain adherent mascara product.

2. The apparatus according to claim 1, wherein said filaments are comprised of wire.

3. The apparatus according to claim 1, wherein said filaments are comprised of plastic.

4. The apparatus according to claim 1, wherein said projections measure between 0.014-0.08 inches in diameter.

5. The apparatus according to claim 1, further comprising a storage housing wherein said apparatus may be slidably disposed such that when apparatus is fully inserted, the outermost surface of said second member rests flushly relative to the remaining surfaces of said housing.

6. A mascara housing comprising:
   a top;
   a bottom housing reversibly fastenable to said top;
   a pair of projections affixed to said bottom housing, said pair being substantially perpendicular to the long axis of said bottom, said projection having two substantially lateral sides, and having a plurality of relatively thin filaments affixed between said lateral sides.

7. An apparatus for actuating the terminal aspect of a brush, comprising:
   an annular ring, said ring having a pair of projections, and having a plurality of relatively thin filaments affixed between said projections, wherein said ring may be reversibly attached to an existing mascara bottle.

8. The apparatus according to claim 7, wherein the innermost aspect of said ring is threaded and may be threadably engaged with a threaded portion of an existing mascara bottle.

9. A method for positioning a flexible brush comprising:
   providing a positioning surface;
   providing a flexible brush having a cap affixed to an axial rod, said rod coupled to a brush head though a neck, wherein said brush head is bendably positionable relative to said rod by bending at said neck, and wherein said brush head contains a plurality of deformable brush bristles;
   applying mascara to said brush head wherein said mascara adheres to said brush bristles;
   placing a flexible brush head, containing a plurality of brush bristles, on said positioning surface wherein when said brush head makes contact with said surface, a substantial number of bristles retain said adherent mascara;
   exerting sufficient force on said brush head to cause an angular positioning of said brush head relative to said rod;
   terminating application of said force when said brush head has reached the desired angle; removing said flexible brush head from said positioning surface;
   applying mascara to user’s eyelashes.

10. The method according to claim 9, wherein said positioning surface is comprised of a first support member; a plurality of relatively thin projections affixed to said first support member at a first end and extending perpendicularly from said first support; a second support member affixed to a second end of said plurality of projections; wherein said first support, projections, and second support may be grasped by a user and held in the hand by holding said first and second support member, wherein a brush having a flexible distalmost end may be placed in contact with said positioning surface substantially perpendicularly across said projections, wherein said flexible end may be positioned through manual pressure exerted on said distalmost end.

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