

MASCARA DRYING AND EYELASH LIFTING DEVICE AND METHODS THEREFOR

CROSS-REFERENCE TO RELATED PATENT APPLICATIONS

[0001] This application claims priority to and incorporates U.S. Provisional Patent Application 63/438,453, filed January 11, 2023, entitled “Mascara Drying Applicator Apparatus and Methods Therefor,” in its entirety by reference.

BACKGROUND

[0002] In the realm of cosmetics and beauty products, it is generally known that the application of mascara on a user’s eyelashes can be heavy on the eyelashes when wet. The weight thus may cause the eyelashes to fall, and in some cases may smear over the eye. As such, many users attempt to dry the mascara. In doing so, some users further desire to curl and/or lift the eyelashes upward after application of the mascara using hand tools. Users try various methods to dry the eyelashes directly. For example, some attempt to dry the eyelashes directly with known hair dryers or even eyelash dryers. Regardless of the means used to dry the mascara, or even when allowed to simply dry without mechanical means, the eyelashes frequently end up drying in undesirable orientations (i.e., fallen flat, awry, etc.).

BRIEF DESCRIPTION OF THE DRAWINGS

[0003] The Detailed Description is set forth with reference to the accompanying figures. In the figures, the left-most digit(s) of a reference number identifies the figure in which the reference number first appears. The use of the same reference numbers in

different figures indicates similar or identical items. Furthermore, the drawings may be considered as providing an approximate depiction of the relative sizes of the individual components within individual figures. However, the drawings are not to scale, and the relative sizes of the individual components, both within individual figures and between the different figures, may vary from what is depicted. In particular, some of the figures may depict components as a certain size or shape, while other figures may depict the same components on a larger scale or differently shaped for the sake of clarity.

[0004] FIG. 1 illustrates an isometric view and a rear view of an embodiment of a mascara drying and eyelash lifting device of the instant disclosure.

[0005] FIG. 2 illustrates a top view and a bottom view of the mascara drying and eyelash lifting device according to FIG. 1 of the instant disclosure.

[0006] FIG. 3A illustrates a side cross-sectional view of the mascara drying and eyelash lifting device according to FIG. 1 of the instant disclosure.

[0007] FIG. 3B illustrates a bottom-looking, perspective cut-away view of the mascara drying and eyelash lifting device according to FIG. 1 of the instant disclosure.

[0008] FIG. 4A illustrates a top, side, and bottom views of an eyelash pad of the mascara drying and eyelash lifting device according to FIG. 1 of the instant disclosure.

[0009] FIG. 4B illustrates a partial perspective view of a different embodiment of an eyelash pad of the instant disclosure.

[0010] FIG. 4C illustrates a top view of a different embodiment of an eyelash pad of the instant disclosure.

[0011] FIG. 5 illustrates a top-looking, perspective view and a rotated side view of an embodiment of a mascara drying and eyelash lifting device according to FIG. 1 of the instant disclosure.

[0012] FIG. 6 illustrates schematic back and side views of an embodiment of a mascara drying and eyelash lifting device according to the instant disclosure.

[0013] FIG. 7 illustrates schematic top end views of various embodiments of a pad/air output vents for a mascara drying and eyelash lifting device according to the instant disclosure.

[0014] FIG. 8 illustrates an embodiment of a method of drying mascara and lifting a user's eyelashes using a mascara drying and eyelash lifting device according to the instant disclosure.

DETAILED DESCRIPTION

Overview

[0015] This disclosure is directed to a mascara drying and eyelash lifting device. A user may use this device when applying mascara to eyelashes on an eyelid. In some instances, a user may desire to have their eyelashes be more noticeable and to orient them in a preferred orientation, such as curling and/or lifting the eyelashes upward. Upon application of mascara, the product is more malleable than after it has dried. Accordingly, the device described herein helps to dry the mascara after application thereof to the eyelashes while simultaneously pressing against the user's eyelashes in order to assist the user in achieving the desired lifted orientation of the eyelashes.

Illustrative Embodiments of a Mascara Drying and Eyelash Lifting Device

[0016] FIG. 1 depicts an isometric view “A” and a back view “B” of an embodiment of a mascara drying and eyelash lifting device 100 (“device 100”). In an embodiment, the device 100 may include a handle 102 via which a user may manually grasp the device 100, an air applicator 104 (“applicator 104”) via which the user may dry the user’s eyelashes, and an eyelash pad 106 via which the user may apply pressure directly to the eyelash to lift the eyelashes.

[0017] In an embodiment, the handle 102 may include a power toggle 108, via which the user may turn and/or off the power to engage a motor 110. The power toggle 108 may be any one of, or a combination of, a touch sensitive surface on the outside of the handle 102, a mechanical switch or button engageable via a user’s thumb or finger disposed along an outside surface of the handle 102, or other toggle form that is suitable to power on the motor 110. The motor 110 may be completely or at least partially contained within the handle 102. Further, in an embodiment, the motor 110 may be a compressor motor or other motor sufficient to power an axial fan (discussed in more detail below but not shown in FIG. 1), both of which may be sized to fit (e.g., be supported, contained, etc.) within the handle 102. Additionally, and/or alternatively, it is contemplated that a fan may be supported outside of the handle (not shown), and the eyelashes may still be dried and lifted.

[0018] The motor 110 is engageable to pull air through the handle 102 of the device 100. As such, in an embodiment, the handle 102 may further include one or more sidewall air intake apertures 112 (“intake apertures 112”) via which the motor 110 may cause air to be pulled up through the handle 102 and exit out the applicator 104. The intake apertures 112 may be positioned anywhere in the handle 102 (or applicator 104, though not shown

as such) that provides a sufficient intake amount of air for drying the eyelashes. For example, as shown in FIG. 1, in an embodiment, the intake apertures 112 may be located at an end of the handle 102, whereat the intake apertures 112 are less likely to be blocked by the user's hand during use. Moreover, to minimize the risk of blocking the intake apertures 112 in an embodiment, the handle 102 may be sized such that a distance between the power toggle 108 and the intake apertures 112, in a longitudinal length direction, is greater than a width of the average target user's palm. Additionally, and/or alternatively, the intake apertures 112 may be sized, shaped, or located on the handle 102 in a least obstructive position based on how a user may hold the handle 102.

[0019] In an embodiment, the applicator 104 may include an air flow direction chamber 114 ("chamber 114"), which may be shaped to direct the incoming air toward one or more air output channels 116 to apply the air to the user's eyelashes. For example, in an embodiment, as shown in FIG. 1, the chamber 114 may have a conical, frustoconical, or other suitable shape, in which the air is forced to circulate in an upward direction so as to enter the one or more air output channels 116. The one or more air output channels 116 are disposed in fluid communication with the chamber 114 (and/or the handle 102 directly) to direct the air further to the upper end 118 of the applicator 104 where the air exits the vent aperture 120 and passes to the user's eyelashes to dry mascara.

[0020] In an embodiment, such as that shown in FIG. 1, where two air output channels 116 are positioned opposite of each other, the upper end 118 of the applicator 104 may bridge across between the two air output channels 116 so as to direct air across a length of the upper end 118. Doing so may provide air along a greater portion of a user's eyelash, thereby reducing drying time and enhancing the lift of the eyelashes.

[0021] Furthermore, by splitting the air flow along opposite sides of the applicator 104 before reuniting the air output channels 116, the applicator 104 includes a viewing window 122, which allows a user the ability to see better while using the device 100, instead of having a centralized flow through a channel that would obstruct the vision at least of the eye for which the eyelash is being lifted and dried. That is, the oppositely disposed air output channels 116, united with the bridge at the upper end 118 form a framed “viewing window” 122, as depicted. Accordingly, when the user dries the eyelash, the upper end 118 and the air output channels 116 are positioned out of the user’s direct view, so that the user is able to see and better position the applicator 104 as needed.

[0022] In an embodiment, FIG. 1 shows that the vent aperture 120 at upper end 118 of the applicator 104 may be delineated by a concave wall 124 on one side and an opposing vent wall 126 opposite the concave wall 124. The concave wall 124 may be shaped in an arch to correspond to the average convex curvature of the user’s eyelid and eyelash. While it is contemplated that the opposing vent wall 126 may be designed in some manner to also be concave, it is understood that such is not necessary, since only one side of the applicator 104 is usable at any time anyway. Further, the opposing vent wall 126 may be correspondingly shaped and in an embodiment, even beveled inward (see view A in FIG. 1 and top view D in FIG. 2) toward the concave wall 124 to assist in directing the drying air directly to the targeted eyelash.

[0023] As is indicated by the orientation of the elements above, in an embodiment, the device 100 may be used by placing the concave wall 124 side of the applicator 104 near the eyelash so that the air is forced from the opposite side of the device 100, away from the user’s eyeball. By doing so, the air is less likely to dry out the user’s eye and thereby

minimize irritation to the eye. While it is contemplated that a user might directly place the concave wall 124 against the eyelash to apply pressure thereon and lift the eyelash. However, as stated above and shown in FIG. 1, the device 100 may include the eyelash pad 106. In FIG. 1, for convenience and for clarity, the eyelash pad 106 is shown in an “exploded” view position, i.e., separated from the concave wall 124 at the upper end 118. This separation indicates that in an embodiment, the eyelash pad 106 may be removably attachable/detachable from the applicator 104. For example, the eyelash pad 106 may become too filthy, or it may be difficult to clean, and a user may desire to simply replace the eyelash pad 106 and not have to buy an entire device 100 again. Alternatively, the device may be used in a public shop or modeling group, where many users are present, and as a measure of sanitation, it may be desirable to swap the eyelash pad 106 between users and prevent unintentional transfer of bacteria from one user’s eye to the next. Thus, the eyelash pad 106 may be shaped and/or formed of a malleable material, such as silicone or a soft rubber, to conform to the shape of the concave wall 124 and may be attached to the concave wall either via a lower attachment portion 128a (see FIG. 4A) or a side attachment portion 128b. The eyelash pad 106 may thus be attached to the concave wall 124: either via sliding the concave wall into the lower attachment portion 128a, e.g., a slit, slot, groove, channel, etc., located in the lower side of the eyelash pad 106; or to a sidewall thereof via the side attachment portion 128b. The attachment may be done via a pre-applied adhesive or other applicable adhesive or chemical/mechanical means that can be done in situ when needed.

[0024] Alternatively, the eyelash pad 106 may be more fixedly secured to the concave wall 124 and may be cleansed, if desired or needed, for multiple uses.

[0025] Regardless of the structure of the connection, the eyelash pad 106 includes a pad side 130 which is placed against the user's eyelashes to gently press on and directly lift the eyelashes as desired when drying.

[0026] Moreover, it is considered that an embodiment (not shown) of the device may include a design where the eyelash pad may be connected directly to the handle. Alternatively, as described above, the eyelash pad 106 is considered to be connected to the handle 102, whether directly or indirectly (i.e., via the applicator 104), so that a user may place the eyelash pad in contact with a user's eyelashes. Note, "users" may include service providers using the device to dry and lift the eyelashes of a client or other individual other than themselves.

[0027] FIG. 2 depicts a bottom view C and a top view D of the device 100. In an embodiment, the handle 102 further includes a handle housing wall 200, which is enclosed by a bottom plate 202. The bottom plate 202 may include one or more air intake apertures 204, which are additional to, and distinct from the sidewall air intake apertures 112. Though depicted as a plurality of adjacent hexagonal openings, the air intake apertures 204 may be of any shape and may vary in size. Notably, the fan blades 206 may be seen through the air intake apertures 204.

[0028] An additional feature of the applicator 104 is also more clearly visible in the top view D of FIG. 2. In an embodiment, the upper end 118 of the applicator 104 may further include corners 208 that curve inward from the respective air output channels 116. The curvature of the corners 208 may help direct the drying air along the entirety of the length of the vent aperture 120.

[0029] In FIGs. 3A and 3B, the fan 300 is depicted in cross-section (taken along line 3A, see FIG. 2) and in a partial cut-away view (taken along line 3B, see FIG. 2). Fan 300 may be an axial fan, as shown, although other fan types, such as centrifugal or blower fans, are contemplated. As shown, in an embodiment, the fan 300 and fan blades 206 may be located near the distal end of the handle 102 that is farthest from the vent aperture 120. However, it is contemplated that the fan may be positioned otherwise and may still serve similarly (see FIG. 6, in which it is shown the fan may be positioned closer (more proximal) to the vent aperture 120, as shown in FIG. 1. Still, in other embodiments, not shown, the fan mechanism may be located in a middle area of the handle of the device. Regardless, FIGs. 3A and 3B further show an air passageway 302, leading from the fan 300 through the handle 102 and to the applicator 104.

[0030] FIG. 4A depicts a top view E, a side view F, and a bottom view G of the eyelash pad 106 of FIG. 1, while FIGs. 4B, and 4C depict alternative eyelash pads 400 and 402, respectively. Eyelash pad 400 may, for example, be much thinner and somewhat stiffer than eyelash pad 106 and may be formed of a different material. Eyelash pad 402 may further be shaped differently as well, such as the crescent shape shown. In an embodiment, an eyelash pad 106, 400, 402 may have a texture 404 that may enhance the ability of the pad to secure the eyelashes in the desired position while drying. For example, texture 404 may include laterally spaced elongated grooves/depressions in the pad, small channels, ridges, hash marks, bumps, intersecting micron sized peaks and valleys at the pad side 130, etc.

[0031] As an alternative embodiment, FIG. 5 depicts an isometric view H and a rotated side view I of a version of a mascara drying and eyelash lifting device 500 (“device 500”).

As shown in FIG. 5, the applicator 502 has a concave wall 504 surface that is positioned on the opposite side of the vent aperture(s) 506, compared to the orientation of the vent aperture 120 with respect to the concave wall 124. In the device 500, the air will undoubtedly blow at least partially across the user's eyeball, which may cause the user to have dry eyes temporarily. Nevertheless, such an embodiment is contemplated as the eyelash is still able to be dried and pressed upon with the corresponding concave wall 504 to lift the eyelash.

[0032] Additionally, FIG. 5 shows an alternative location for air intake apertures 508. That is, air intake apertures 508 may be located along a mid-section of the device 500 if desired.

[0033] FIG. 6 depicts a schematic back view J of another embodiment of a mascara drying and eyelash lifting device 600 ("device 600"). In an embodiment, the device 600 may include an ergonomic handle 602 via which the user may grasp the device using either the palm and fingers, or via one or more fingers and the thumb. For example, in an embodiment, the handle may have a width that approximates the length of an average user's first link of an index finger and/or a thumb.

[0034] Additionally, the device 600 may include an applicator 604 and an eyelash pad 606. The eyelash pad 606 may be curved as shown in FIG. 6 to assist a user by being pressed against the eyelashes in a similar curve shape over the eyeball. Accordingly, the eyelash pad 606 may be curved in two directions, such as away from the handle 102 in the lengthwise direction, and in a direction transverse thereto. In other embodiments, the eyelash pad 606 may be curved in only a single direction.

[0035] FIG. 6 shows further that device 600 may include a power toggle 608. Further, in an embodiment, a device 600 (and any other embodiments disclosed herein) may include another settings toggle 610. Settings toggle 610 may permit the selection of different amounts of time for the application of air, force, volume flow, etc. or other applicable settings, to be modified for a user-customized drying feature to exit the device 600 at vent aperture 612 (not directly visible in FIG. 6).

[0036] FIG. 7 depicts schematic top views of potential shapes of a vent aperture of a mascara drying applicator device. For example, embodiment 700 depicts a continuous slot for vent aperture 700a. (Also depicted in embodiment 700 is a Pad, however, such is not required for each or any of the views for which FIG. 7 is merely depicting different vent apertures. The embodiment 702 depicts a vent aperture 702a having a surface which surface is perforated with a single row of sectioned openings, divided by thin walls. Alternatively, embodiment 704 depicts a vent aperture 704a having a surface which is perforated with holes of a predetermined size, overlapping in two (or more) rows.

[0037] FIG. 8 illustrates a method 800 of using a mascara drying and eyelash lifting device, as disclosed herein. In an embodiment, the method 800 may include a step 802 of applying mascara to eyelashes. In step 804, the user may hold the device up to the eyelash by pressing the eyelash pad against the eyelash. In step 806, the user turns on the air flow by toggling the power toggle on the device. The user holds the device in place for a predetermined amount of time (e.g. ranging from 1-30 sec, 15 sec, 20 sec, 25 sec, 30 sec, etc., or more or less), in step 808. Finally, if necessary, the user powers down the device 810 (in the case where a timer doesn't automatically shut off the device).

Conclusion

[0038] Although several embodiments have been described in language specific to structural features and/or methodological acts, it is to be understood that the claims are not necessarily limited to the specific features or acts described. Rather, the specific features and acts are disclosed as illustrative forms of implementing the claimed subject matter.

WHAT IS CLAIMED IS:

1. A mascara drying and eyelash lifting device comprising:
a handle;
an eyelash pad connected to the handle; and
a fan supported by the handle to blow air across the eyelash pad.
2. The mascara drying and eyelash lifting device according to claim 1, wherein the eyelash pad is connected to the handle via at least one air output channel including a vent aperture at a distal end thereof, where the vent aperture is disposed immediately adjacent the eyelash pad.
3. The mascara drying and eyelash lifting device according to claim 1, wherein the handle includes a housing, and
wherein the fan is contained within the housing.
4. The mascara drying and eyelash lifting device according to claim 1, wherein the fan is an axial fan, positioned at a first end of the handle, so as to draw the air into the handle at the first end via air intake apertures and to push the air out a second end of the handle into at least one air output channel.
5. The mascara drying and eyelash lifting device according to claim 1, further comprising an air applicator through which the fan pushes the air to blow across the eyelash pad, the air applicator being connected to an end of the handle and to the eyelash pad.

6. The mascara drying and eyelash lifting device according to claim 1, wherein the eyelash pad is removably attachable.

7. The mascara drying and eyelash lifting device according to claim 1, further comprising an air applicator including:

a pair of air output channels,

a chamber directing the air from the handle into the pair of air output channels, which are disposed on opposite sides of the chamber,

a bridge that joins between the pair of air output channels, forming a frame of a viewing window, and

a vent aperture extending along the bridge.

8. A mascara drying and eyelash lifting device comprising:

a handle including a fan therein;

an air applicator connected to the handle; and

an eyelash pad connected to the air applicator,

wherein the fan blows air through the handle and the air applicator across the eyelash pad from a vent aperture at an end of the air applicator.

9. The mascara drying and eyelash lifting device according to claim 8, wherein the air applicator includes a viewing window.

10. The mascara drying and eyelash lifting device according to claim 8, wherein the eyelash pad is formed of a silicone material.

11. The mascara drying and eyelash lifting device according to claim 8, wherein an end of the air applicator includes a concave side to which the eyelash pad is removably attachable.

12. The mascara drying and eyelash lifting device according to claim 8, wherein the device dries mascara on eyelashes while simultaneously causing the eyelashes to be lifted due to pressure applied to the eyelashes via the eyelash pad.

13. The mascara drying and eyelash lifting device according to claim 8, wherein the eyelash pad attaches to the end of the air applicator at a side such that the air flows across an upper side of the eyelash pad, thereby minimizing air being blown at a user's eyeball.

14. The mascara drying and eyelash lifting device according to claim 8, wherein the handle includes a power toggle to start the fan.

15. The mascara drying and eyelash lifting device according to claim 8, wherein the handle includes a settings toggle to alter timing of the device once powered on.

16. A method of using a mascara drying and eyelash lifting device, the method comprising steps of:

applying mascara to eyelashes;

holding the mascara drying and eyelash lifting device up to the eyelash by pressing an eyelash pad against the eyelashes;

turning on air flow by toggling a power toggle on the mascara drying and eyelash lifting device; and

holding the mascara drying and eyelash lifting device in place for a predetermined amount of time.

17. The method according to claim 16, further comprising a step of turning off the power to the mascara drying and eyelash lifting device.

18. The method according to claim 16, further comprising a step of setting a timer setting via a setting toggle.

19. The method according to claim 16, further comprising a step of providing the mascara drying and eyelash lifting device, which includes:

a handle including a fan therein,

an air applicator connected to the handle, and

the eyelash pad connected to the air applicator,

wherein the step of turning on air flow causes a fan to blow air through the handle and the air applicator across the eyelash pad from a vent aperture at an end of the air applicator.

20. The method according to claim 16, wherein the predetermined amount of time ranges from 1 and 30 seconds.