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2,990,834

MASCARA CONTAINER AND APPLICATOR

Filed July 6, 1959

FIG. 1.

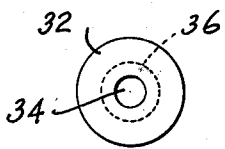
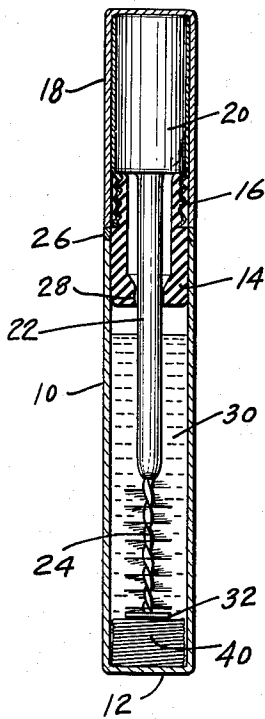


FIG. 5.

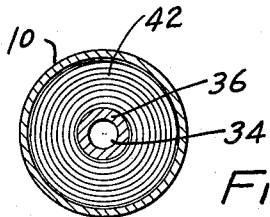


FIG. 6.

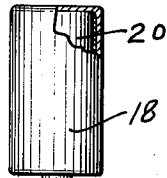


FIG. 2.

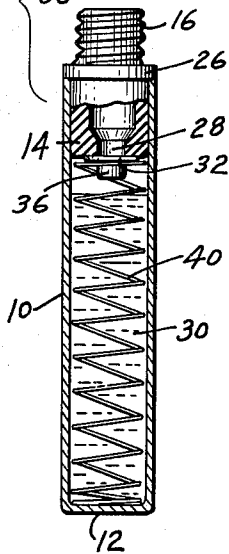


FIG. 3.

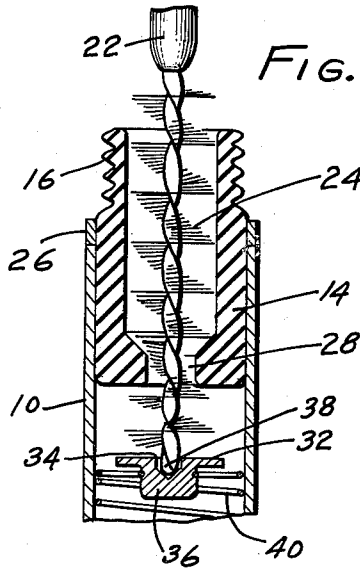
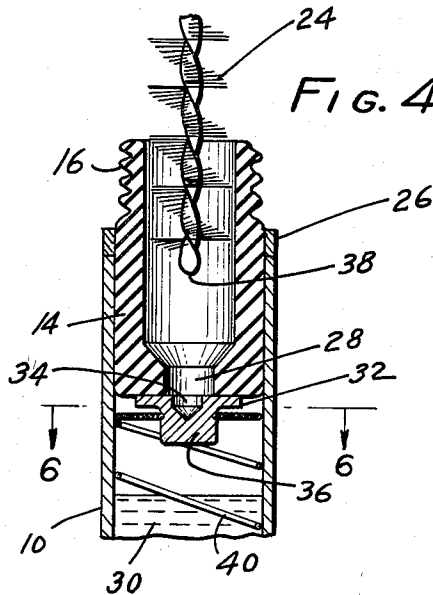


FIG. 4.



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2,990,834
MASCARA CONTAINER AND APPLICATOR
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 1 Claim. (Cl. 132—85)

This invention relates to an improved mascara container and applicator and has for one of its principal objects the provision of a device of the class described which will enable the user of mascara and similar products to readily apply the same with a minimum of effort and with excellent results.

One of the important objects of this invention is the provision of a container for mascara or similar products which will always be automatically sealed against ingress of air, which air has a tendency to dry out or harden the contents, rendering the same either difficult to apply or absolutely useless.

Another and further important object of the invention is to provide a container and applicator combination for mascara or the like which is so constructed that, when operated, the contents are automatically stirred and thoroughly mixed, whereby a proper consistency of necessary and desirable material is upon the brush or other applying means as soon as the same is withdrawn from the case or container.

Yet another object of the invention relates to the provision in a mascara container and applicator of a combination sealing valve and centering element for the brush or other applying means, whereby the undesirable excess or droplet usually present on the extreme end of the applicator is automatically eliminated, thereby preventing accidental dripping and also avoiding the possibility of smearing during use.

Another and still further important object of the invention resides in the production, in a mascara container and applicator of resilient means which performs several functions, including automatic stirring of the contents each time it is used, a perfect seal against ingress of foreign material when the applicator is withdrawn and which also serves to maintain the sealing element properly centered at all times.

Other and further important objects of the invention will be apparent from the disclosures in the accompanying drawings and following specification.

The invention, in a preferred form, is illustrated in the drawings and hereinafter more fully described.

In the drawings:

FIGURE 1 is a vertical section of the improved mascara container and applicator of this invention, showing the same as closed, in which position it is not in use.

FIGURE 2 is an exploded view illustrating the mascara container and applicator of this invention, with the applicator withdrawn from the case or container prior to actual use.

FIGURE 3 is an enlarged partial section showing the brush or other applicator about to be withdrawn or partially inserted in the container and illustrating the sealing action of the valve element.

FIGURE 4 is a view somewhat similar to FIGURE 3, but illustrating the applicator as almost entirely out of the case and with the valve actually closed and in sealing position.

FIGURE 5 is a top plan view of the disc-like valve.

FIGURE 6 is a horizontal section, taken on the plane of the line 6—6 of FIGURE 4, looking in the direction indicated by the arrows and showing a slightly modified form of the invention.

As shown in the drawings:

The reference numeral 10 indicates generally the case or container of the improved mascara container and applicator of this invention. This is closed at the bottom 12

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and has a metallic or other plug 14 inserted in its open upper end which projects beyond the case to some extent and is externally screw threaded, as best shown at 16 in FIGURE 3, for the reception of the correspondingly internally threaded portion of a cap or closure 18. This cap or closure includes a plug or the like 20, terminating in an integral extension 22 into which a brush or other applicator 24 is fitted, as best shown in FIGURE 2. The plug 20 may be removable from the cap 18 or the cap may be used as part of the handle of the applicator, as desired or convenient. A gasket or the like 26 affords a proper sealing means when the cap 18 is fitted into position.

As best shown in FIGURE 3, the plug 14 is provided with a central opening, and this opening is narrowed at its lower end 28 to an internal diameter just slightly larger than the external diameter of the handle extension 22 of the plug 20. This size is such that the brush portion 24 will easily pass through the opening in either the inserting or removing operation. When the container is closed, a rather effective seal is provided between the handle portion 22 and the sides of the opening 28, as shown in FIGURE 1; and, of course, this sealing action is enhanced and assured by the gasket 26, thereby preventing undesirable leakage of the contents 30.

A valve or closure element 32 is provided for sealing the opening 28 when the container is open and the applicator removed. This is in the form of a disc (FIGURE 5) with a central opening 34 in its top and includes a cylindrical restricted base 36, as shown in FIGURE 3. This disc is of a diameter less than the internal diameter of the case 10, and its upper face fits closely against the under-face of the hollow plug 14. This action is assured by means of a helical spring 40 fitted inside the case below the plug 14 and extending to the bottom thereof (FIGURE 2). The compression of this spring is such that the valve element 32—36 is always held securely in position when the applicator 22—24 is withdrawn.

As best shown in FIGURE 4, the spring 40 is so connected to the valve element 32—36 that it is always properly centered with relation to the opening 28 in the plug 14, and this also assures a proper similar positioning of the recess 34 with respect to the end 38 of the applicator element 22—24.

Thus, proper centering of the applicator with respect to the opening 28 and the entire case 10 will always be assured when the same is inserted, and the reverse is true when the applicator is being withdrawn. This action also automatically removes any surplus mascara or other material from the brush 24 or other applicator means.

Additionally, when the applicator is inserted into the case, the mascara or other liquid or semi-liquid material 30 is thoroughly stirred because of the joint action of the brush or other applicator element and the associated collapsing movement of the helical spring 40. This serves to scrape any accumulated more or less semi-solid material from the sides of the container 10, thereby providing a much better and more desirable mixture of the contents at all times.

Referring now to FIGURE 6, it will be noted that a spiral helical spring 42 can be employed, which has its smallest dimension at its lower end and is fastened to the valve element 32—36 in the same manner as shown in FIGURE 4 for centering purposes. The spiral formation of the spring 42 does, in many cases, provide an even better mixing and intermingling of the contents 30 of the case 10 when the applicator is withdrawn or inserted. The valve 32 can be larger and with holes for better mixing.

Many applicators and devices of this type do not include bristles 24, but comprise other similarly acting means, but any or all of these types will readily conform

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to the construction herein shown and described. For example, some applicators comprise merely a solid shaft or rod similar to the rod 22, but longer and knurled or screw threaded at its lower end and also somewhat pointed to fit into the opening 34 in the valve disc 32. Such applicators are in some cases more efficient than brushes, but either or any type can be employed with little or no change in the apparatus of this invention.

It will be seen that herein is provided a mascara container and applicator which retains the contents thoroughly sealed at all times, thereby preventing drying out or contamination of the mascara or other material. Additionally, the material is automatically thoroughly mixed and blended each time the applicator is used and with no additional effort on the part of the operator. The valve element is self-centering and automatically prevents accumulation of an undesirable excess of the outermost end of the applicator, thereby eliminating annoyance and possible discomfort.

I am aware that many changes may be made and numerous details of construction varied throughout a wide range without departing from the principles of this invention; and I, therefore, do not propose limiting the patent granted hereon otherwise than as necessitated by the prior art.

I claim as my invention:

A mascara container and applicator comprising a cylindrical case, a removable closure for the case, a hollow plug in the upper end of the case, said hollow plug including an integral screw threaded extension projecting beyond the end of the case, the closure being internally screw threaded for interfitting with the upper end of the plug, an applicator fixed in the closure, said applicator comprising a rod, a brush on the end of the rod, said rod

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and brush being of external diameter to fit through the opening in the plug and extending through the plug when the closure is in position, a valve movable in the case, means for seating the valve against the lower end of the plug, said means comprising a helical spring in the case below the valve, said spring being of an external diameter slightly less than the internal diameter of the case, an integral extension on the lower end of the valve, the upper loop of the spring surrounding said extension and serving to center the valve with relation to the plug, a central depression in the upper face of the valve, said depression receiving the lower end of the applicator and brush upon insertion of said elements into the case and through the plug, the opening in the plug being restricted at its lower end to a diameter slightly larger than the applicator rod, the upper portion of said opening being of a diameter slightly larger than the extended diameter of the applicator brush whereby the applicator brush and rod are both automatically centered with respect to the case when the closure is applied to the case.

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