

Oct. 25, 1966

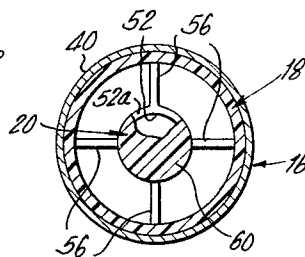
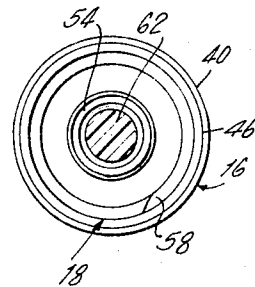
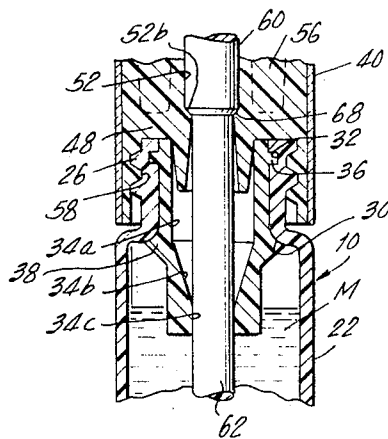
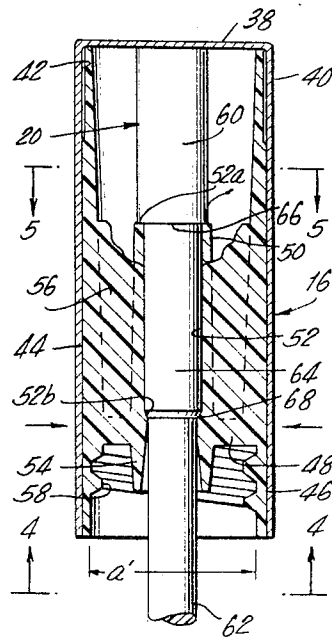
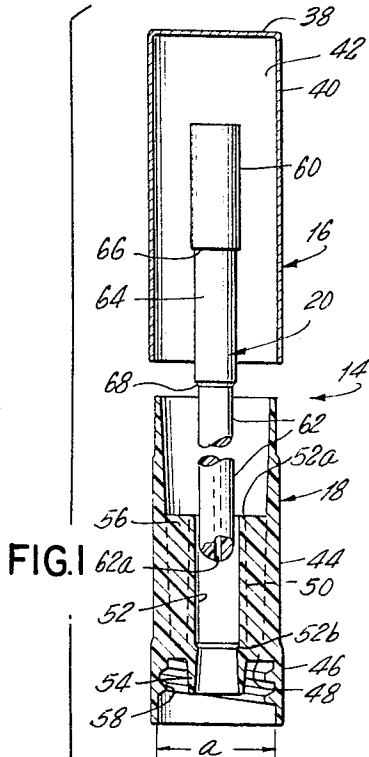
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3,280,421

COMBINED CONTAINER AND CLOSURE

Filed June 5, 1964

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

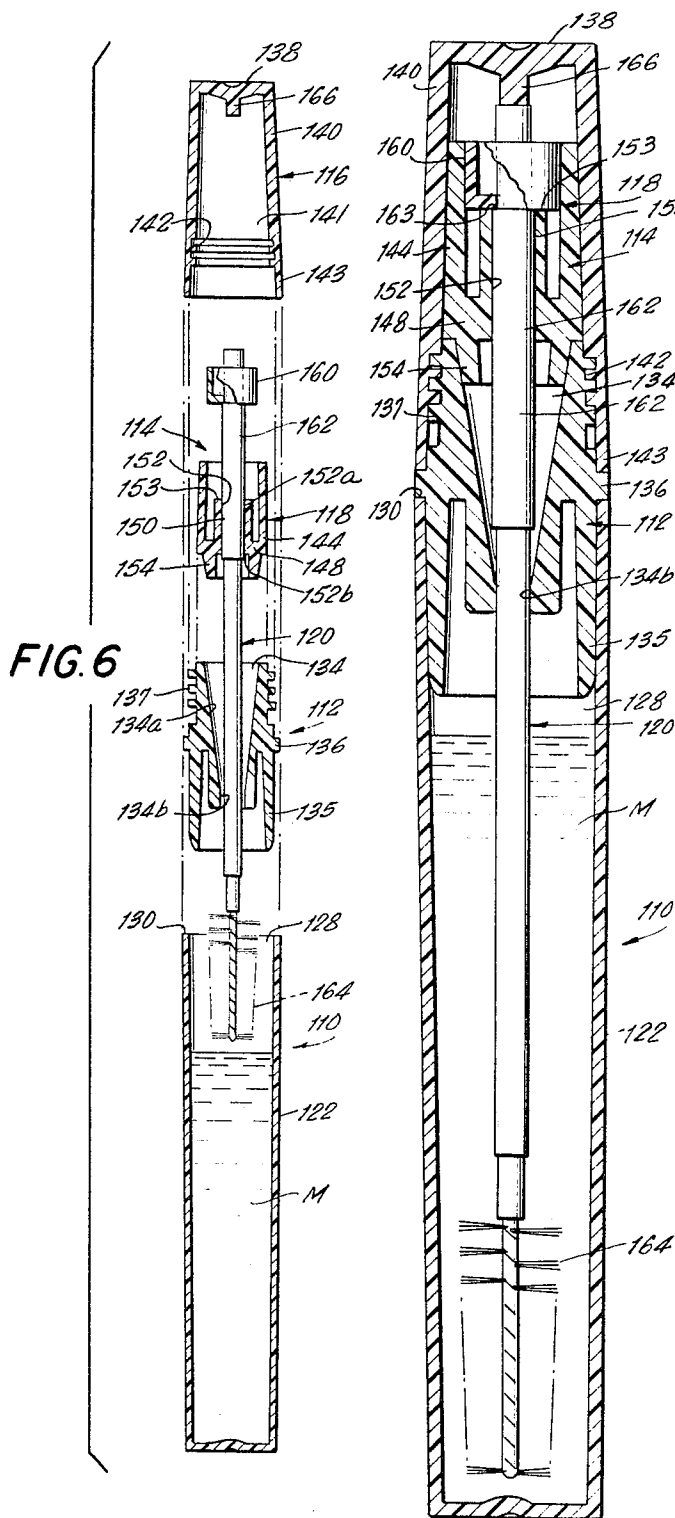


FIG. 6

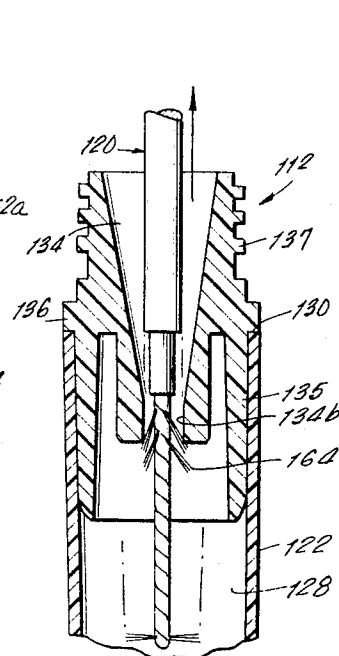


FIG. 7

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3,280,421

COMBINED CONTAINER AND CLOSURE

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12 Claims. (Cl. 15—520)

The present invention relates to a closure for a container and in particular to a combined cap and applicator for use in combination with a container. The present invention finds particular application for the storage and dispensation of cosmetic preparations, such as mascara. This is a continuation-in-part of my earlier filed application Serial No. 225,621, filed September 24, 1962, now forfeited, entitled Combined Container and Closure; application Serial No. 177,519, filed March 15, 1962, entitled Mascara Applicator, now abandoned; and application Serial No. 110,674, filed May 17, 1962, entitled Two Piece Closure for Cosmetic Containers, now abandoned.

In the manufacture of caps and applicators for cosmetic preparations, it is often difficult to reconcile aesthetic and functional requirements. To this end, it has been suggested that the cap and applicator be fabricated of a number of individual components which are assembled to meet the several requirements. For example, the closure may include a cap of substantially rigid material which is designed to meet the aesthetic requirements and one or more internal pieces which meets the functional requirements of providing a seal to the externally threaded neck of the container and an applicator which is received within the container and may be withdrawn therefrom when the closure is removed for the purposes of dispensing the preparation in the container. Such devices have not received widespread commercial acceptance due at least in part to the labor incident to achieving the assembly of the multiple parts and the relatively high unit cost. There exists a need for a combined closure and applicator of this general type which includes a minimum number of parts, yet meets the several functional requirements and provides the requisite external appearance for commercial acceptance. Preferably, the assembly of the several parts should involve minimal effort such that it may be performed by relatively unskilled labor or on an automatic or semi-automatic basis thereby materially reducing the cost of the unit.

Broadly, it is an object of the present invention to provide an improved closure and applicator which realizes one or more of the aforesaid objectives. Specifically, it is within the contemplation of the present invention to provide an improved container and closure for cosmetic preparation, such as mascara, which has the requisite external appearance, yet provides a fluid tight seal between the closure and container.

In accordance with an illustrative embodiment of the present invention, there is provided a closure for a container of the type having an externally threaded neck which closure comprises a cap of substantially rigid material including a top wall and a depending wall forming an internal socket and a liner of resilient material which is adapted to be inserted into the cap. The liner includes a mounting wall which is dimensioned to be force fitted into the internal socket, a centrally disposed and axially extending socket-forming wall providing a downwardly opening wand-receiving socket, and an annular sealing member concentric of the socket-forming wall and de-

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pending therefrom and adapted to make sealing contact with the neck of the container. The closure cap is provided with internal threads dimensioned to engage the external threads on the neck. An applicator is provided which includes a wand which is inserted into the wand-receiving socket. The liner is force fitted into the cap so as to cause a corresponding radial compression of a socket-forming wall to provide a substantially unitary assembly of the wand, the liner and the cap. Advantageously, the cap may be fabricated of metal, a rigid plastic or the like to provide the desired ornamentation for the closure, while the liner may be fabricated of resilient plastic material suitable to providing the desired mechanical assembly and the sealing action to the neck of the container.

One of the most economical methods for the fabrication of the container is by blow molding the same utilizing a relatively rigid plastic to provide the requisite structural rigidity for the container. With this type of container, and particularly when dispensing preparations such as mascara, it becomes relatively difficult to provide for wiping of the applicator to remove accumulation thereon during withdrawal of the applicator from the container.

Accordingly, as a further feature of the invention, the container includes a neck having an internal seat and a neck insert of resilient material which is forced fitted into the internal seat and provided with a bore in communication with the interior of the container and an annular wiper bounding the bore. The applicator is dimensioned in relation to the wiper to provide a wiping contact therebetween in response to withdrawal of the applicator from the container. Thus, the container exhibits the necessary structural stability, yet provides a resilient wiper which satisfies the functional requirement of removing accumulations during use of the applicator.

The above brief description, as well as further objects, features and advantages of the present invention will be more fully appreciated by reference to the following detailed description of a presently preferred, but nonetheless illustrative embodiment in accordance with the present invention, when taken in conjunction with the accompanying drawings, wherein:

FIG. 1 is an exploded view, with parts sectioned, showing the several components of my improved container and closure;

FIG. 2 is a view showing the cap, liner and applicator of the combined closure and applicator in their assembled condition;

FIG. 3 is a view showing the container and the neck insert in their assembled condition, with the closure threadedly engaging the neck of the container and the applicator projecting into the interior of the container;

FIG. 4 is a sectional view taken substantially along the line 4—4 of FIG. 2, and looking in the direction of the arrows; and,

FIG. 5 is a sectional view taken substantially along the line 5—5 of FIG. 2, and looking in the direction of the arrows.

FIG. 6 is an exploded view, with parts sectioned, showing the several components of a further embodiment of a combined container and closure;

FIG. 7 is a view, similar to FIG. 6, showing the closure, liner, applicator and neck insert of the combined closure and applicator in their assembled condition; and

FIG. 8 is an enlarged fragmentary view of the container and neck insert shown in FIG. 7, with the applicator removed.

Referring now specifically to the drawings, there is shown in FIG. 1, from bottom to top, the several components of my improved container and closure assembly which comprises a container 10 including a neck insert 12 and a combined closure and applicator 14 including an outer cap 16, a liner 18, and an applicator 20.

The container 10 includes a cylindrical body wall 22 having an upwardly projecting integral neck 24 formed thereon with external threads 26. The neck 24 bounds a neck opening 28 which terminates at a shoulder 30 at the juncture between the body wall 22 and the neck 24. An annular internal seat 32 is provided within the neck opening 28 at a location spaced below the upper open end of the neck opening and spaced above the shoulder 30. The configuration of the container 10 is particularly suited to manufacture on a mass production basis and at a relatively low unit cost by blow molding.

The neck insert 12, which is fabricated of a resilient elastomeric material such as polypropylene and like plastics, has an insert bore 34 which extends axially through the insert 12. The insert bore 34 includes a cylindrical section 34a extending inwardly from the upper open end thereof and terminating at an intermediate location, a conical section 34b which is of progressively decreasing cross section from the intermediate location toward the lower end of the insert 12, and a cylindrical wiper section 34c adjacent the lower end of the insert 12. On its exterior surfaces, the insert 12 is formed with spaced annular flanges 36, 37 which are shaped and spaced in relation to each other to be engaged respectively within the annular seat 32 and below the shoulder 30 with a force or snap fit, as may be appreciated by inspecting FIG. 3. The rigidity of the neck 24 of the container 10, the relative resilience of the insert 12, and the respective dimensional tolerances is such that the insert 12 may be forced or snap fitted into the neck 24 of the container 10 by axially thrusting the same into the neck opening 28, with the resulting assembly being such that it requires a virtual destruction of the container 10 and/or insert 12 to effect their disassembly. Although a two-part assembly for the container and insert has been illustrated, it will be appreciated that in some instances it will be possible to mold the same integrally, as for example, when the container is injection molded of a plastic which is sufficiently flexible to provide the desired wiping action.

The combined closure and applicator 14, which is here illustrated as a three-part assembly, includes the outer cap 16 which is of a substantially rigid material, such as of metal or a rigid plastic (i.e. urea resin, polystyrene or the like) and includes a circular top wall 38 and a depending cylindrical wall 40 which cooperates therewith to form an internal socket 42. Although a cap of substantially uniform cylindrical section has been illustrated, it will be appreciated that the cap may be formed by molding and provided with contoured outer surfaces to impart the desired external appearance to the cap.

The liner 18, which is fabricated of an elastomeric material (i.e. polyethylene) includes a substantially cylindrical mounting wall 44 which is dimensioned to be force fitted into the internal socket 42 in the cap 16 and an enlarged neck-engaging wall 46 which is likewise dimensioned to be force fitted into the internal socket 42 and to be somewhat radially compressed incident to such force fitting. Intermediate its ends and at the junction between the mounting wall 44 and the neck-engaging wall 46, the liner 18 is formed with an integral transverse partition 48. Projecting upwardly from the partition 48 and integral therewith is a centrally disposed and axially extending socket-forming wall 50 which provides a downwardly opening wand-receiving socket 52 having an inner end 52a terminating at a location spaced from the upper or inner end of the mounting wall 44 and

an outer end 52b which terminates at the transverse partition 48 and forms a seat, for a purpose to be subsequently described. Concentric of the socket-forming wall 50 is an annular sealing member 54 which is integral with and depends from the partition 48 and is disposed in spaced confronting relation to the neck-engaging wall 46. The annular sealing member 54, which is seen to be of progressively decreasing cross section from its upper end to its lower end, is dimensioned to make a sealing contact with the upper section 34a of the through bore 34 in the neck insert 12, as seen in FIG. 3. Projecting outwardly from the socket-forming wall 50 above the partition 48 are a plurality of radially extending ribs 56 (see FIG. 5) which extend throughout the length of the socket-forming wall 50 and are integral with both the socket-forming wall 50 and the mounting wall 44. The radially extending ribs 56 impart radial compressive forces from the mounting wall 44 to the socket-forming wall 50, for a purpose to be subsequently described.

The depending neck-engaging wall 46 is provided with internal threads 58 which are dimensioned to engage the external threads 26 on the neck 24 of the container 10. Incident to the molding and stripping of the liner 18, the internal diameter of the neck engaging wall 46, designated by the dimension a' becomes somewhat oversized as compared to the required final dimension a' to provide the tight interfit between the threads 58, 26. However, the radial compression of the enlarged neck-engaging wall 46 incident to the force fit into the cap 16, as may be appreciated by progressively inspecting FIGS. 1 and 2, will cause this dimension to be decreased to provide the desired tight sealing engagement between the closure 14 and the container 10.

The applicator 20 includes an enlarged head 60 at the inner end thereof which is joined to the elongated wand or applicator body 62 by an intermediate mounting section 64 which is of a length substantially equal to that of the socket-forming wall 50. The elongated wand 62 includes a dispensing bore 62a extending inwardly from the free end thereof and is of a diameter which is somewhat reduced as compared to the diameter of the wand-receiving socket 52 such that the wand 62 may be readily inserted into the wand-receiving socket 52 from the inner end 52a thereof and thrust therethrough. The intermediate mounting section 64 is of a diameter to provide a tight fit within the wand-receiving socket 52. The junction between the enlarged head 60 and the intermediate mounting section 64 provides an abutment shoulder 66 which is adapted to abut and bear against the adjacent inner end 52a of the socket-forming wall 50, while the junction between the intermediate mounting section 64 and the wand or applicator body 62 provides an inwardly directed step 68 which is adapted to bear against the seat 52b. Thus, the wand 62 may be driven home into the seated position as shown in FIG. 2 with relative ease by axial insertion from the inner end of the socket-forming wall 50 preliminary to the assembly of the liner 14 within the cap 16. The progressively diminishing cross section of the sealing member 54 in the region coextensive with the adjacent end of the wand 62 provides a clearance space therebetween which permits the sealing member 54 to flex inwardly incident to seating within the neck insert 12 of the container 10.

The actual assembly of the combined closure and applicator 14 involves the preliminary sub-assembly of the applicator 20 into the liner 18 by inserting the wand 62 through the inner end 52a of the socket 52 and thrusting the same home and until the intermediate mounting section 64 is received within the socket 52, with the abutment shoulder 66 seated against the inner end 52a of the socket-forming wall 52 and the step 68 disposed against the seat 52b. Thereupon this sub-assembly is assembled with the cap 16, either manually or with the aid of a relatively simple jig or fixture. The dimensions of the liner 18 are selected in relation to the internal socket 42

formed within the cap 16 to provide a forced fit incident to the assembly of the liner 18 within the cap 16. The force fitting causes a radial compression of the liner 18 and the transmission of such radial compression forces via the ribs 56 to the socket-forming wall 50 to provide a substantially unitary assembly of the applicator, the liner, and the cap.

In order to facilitate a more thorough understanding of the present invention, a typical sequence of operations in the use thereof will now be described:

Initially the container may be filled with mascara M or other cosmetic preparation in accordance with the desired end use for the instant storage and dispensing device. Thereupon, the depending wand or applicator body 62 is thrust through the opening 34 in the neck insert until the same is received within the interior of the container 10. Incident to such axial thrust, the threads 58 on the neck-engaging wall 46 of the closure 14 come into position wherein the threads 58 may be engaged with the external threads 26 on the neck 24 of the container by rotating the closure 14 relative to the container 10. Incident to the engagement of the closure on the container, the resilient sealing member 54 engages the contiguous portions of the neck opening 34 and provides the requisite seal at the neck opening. At such times as the wand or applicator 62 is to be used to dispense the mascara M within the container 10, the closure 14 is unthreaded and the wand 62 is withdrawn. This withdrawal achieves a wiping action throughout the extent of the applicator 62, with the dispensing bore or capillary 62a carrying a quantity of the cosmetic preparation therewith for dispensation by the user. It will be appreciated that the dispensing bore 62a may be replaced with a brush or other dispensing element with such brush or dispensing element for carrying with it the cosmetic preparation.

Referring now specifically to FIGS. 6 to 8 of the drawings, there is shown a further embodiment of a combined container and closure demonstrating features of the present invention, which comprises a container 110 including a neck insert 112 and a combined closure and applicator 114 including an outer cap 116, a liner 118, and an applicator 120.

The container 110 includes a cylindrical body wall 122 that bounds a neck opening 128 which terminates at a shoulder 130. The configuration of the container 110 is particularly suited to manufacture on a mass production basis and at a relatively low unit cost by blow molding.

The neck insert 112, which is fabricated of a resilient elastomeric material such as polypropylene and like plastics, has an insert bore 134 which extends axially through the insert 112. The insert bore 134 includes a conical section 134a of progressively decreasing cross section extending inwardly from the upper open end thereof toward an intermediate location and a cylindrical wiper section 134b extending inwardly from the intermediate location. On its exterior surfaces, the insert neck 112 is formed with a mounting wall 135 which extends upwardly from the lower open end of the neck insert and terminates in an annular flange 138. The mounting wall 135, which is concentric with the cylindrical wiper section 134b and a portion of the conical section 134a, is provided with external threads 137 that extend from the annular flange 138 to the upper open end of neck insert 112. As may be appreciated by progressively inspecting FIGS. 6 and 8, the neck insert 112 is force fitted onto the container 110, with the mounting wall 135 engaging the cylindrical body wall 122 and the flange 136 being seated on the shoulder 130. Although the assembly for the container and neck insert illustrated contemplates a force fit, it will be appreciated that it is possible to use an adhesive to join the members together, particularly when proper tolerances have not been maintained to allow for a force fit.

The combined closure and applicator 114, which is here illustrated as a three-part assembly, includes the

outer cap 116 which is of a substantially rigid material, such as of metal or a rigid plastic (i.e. urea resin, polystyrene or the like) and includes a circular top wall 138 and a depending cylindrical wall 140 which cooperates therewith to form an internal socket 141. The depending cylindrical wall 140 is provided with internal threads 142 which are dimensioned to engage the external threads 137 of neck insert 112 which is mounted on the container 110. In order to provide tight sealing engagement between the closure 114 and the container 110, the depending wall 140 is formed with an integral skirt extension 143 which extends beyond external threads 142 to the open end of closure 114. The skirt 143 is dimensioned such that the lip of the skirt will be seated on the outer shoulder of flange 136 when the closure 114 is threadably engaged with the container 110, as may best be appreciated by progressively inspecting FIGS. 6 and 7.

The liner 118, which is fabricated of an elastomeric material (i.e. polyethylene) includes a substantially cylindrical mounting wall 144 which is dimensioned to be force fitted into the internal socket 141 in the cap 116. Intermediate its ends the liner 118 is formed with an integral transverse partition 148. Projecting upwardly from the partition 148 and integral therewith is a centrally disposed and axially extending socket-forming wall 150 which provides a downwardly opening wand-receiving socket 152 having an outer end 152a which forms a seating-socket 153. Concentric of the socket forming wall 150 is an annular sealing member 154 which is integral with and depends from the partition 148. As is best illustrated in FIG. 6, the cylindrical mounting wall 144 projects upwardly from the partition 148 and is coaxial with socket-forming wall 150 to form the seating-socket 153 for mounting the applicator 120, as will subsequently be described. The annular sealing member 154, which is seen to be of progressively decreasing cross section from its upper end to its lower end, is dimensioned to make a sealing contact with the upper section 134a of the through bore 134 in the neck insert 112, as seen in FIG. 7.

The applicator 120 includes an enlarged head 160 at the inner end thereof which is joined to an elongated wand or applicator body 162 by means of a force fit and suitable adhesive. The inner end of wand 162 is provided with a reduced diameter which serves as a mounting shoulder 163 for seating the enlarged head 160. The elongated wand 162 includes a cylindrical dispensing brush 164 extending inwardly from the free end thereof and brush 164 is of a diameter which is somewhat increased as compared to the diameter of the wand-receiving socket 152. As the bristles forming the brush 164 are relatively resilient and flexible, the wand 162 may be readily inserted into the wand-receiving socket 152 from the inner end 152a thereof and thrust therethrough. The wand-receiving socket 152 is of a diameter to provide a tight fit, and it is also possible to use a suitable adhesive to provide an even more secure connection. The internal socket 141 is provided with an abutment stud 166 which extends from the top wall 138 and is adapted to abut and bear against the adjacent inner end of wand 160, as best seen in FIG. 7.

Thus, the wand 162 may be driven home into the seated position as shown in FIG. 7 with relative ease by axial insertion from the inner end of the socket-forming wall 150 preliminary to the assembly of the liner 114 within the cap 116. The progressively diminishing cross section of the sealing member 154 in the region coextensive with the adjacent end of the wand 162 provides a clearance space therebetween which permits the sealing member 154 to flex inwardly incident to sealing within the neck insert 112 of the container 110.

The actual assembly of the combined closure and applicator 114 involves the preliminary sub-assembly of the applicator 120 into the liner 118 by inserting the wand 162 through the inner end 152a of the socket 152 and thrusting the same home until the enlarged head 160 is received within the seating socket 153. Thereupon this

sub-assembly is assembled with the cap 116, either manually or with the aid of a relatively simple jig or fixture. The dimensions of the liner 118 are selected in relation to the internal socket 141 formed within the cap 116 to provide a forced fit incident to the assembly of the liner 118 within the cap 116. The neck insert 112 is also assembled onto the container 110 in a similar manner to the assembly of the closure and applicator 114. The mounting wall 135 is force fitted into the cylindrical body wall 122 with flange 136 abutting against the shoulder 130 of container 110.

In order to facilitate a more thorough understanding of the present invention, a typical sequence of operations in the use thereof will now be described:

Initially the container may be filled with mascara M or other cosmetic preparation in accordance with the desired end use for the instant storage and dispensing device. Thereupon, the depending wand or applicator body 162 is thrust through the opening 134 in the neck insert 112 until the same is received within the interior of the container 110. Incident to such axial thrust, the threads 142 on the depending body wall 140 of the closure 114 come into position wherein the threads 142 may be engaged with the external threads 137 on the neck insert 112 of the container by rotating the closure 114 relative to the container 110. Incident to the engagement of the closure on the container, the resilient sealing member 154 engages the contiguous portions of the neck opening 134 and provides the requisite seal at the neck opening. At such times as the wand or applicator 162 is to be used to dispense the mascara M within the container 110, the closure 114 is unthreaded and the wand 162 is withdrawn. This withdrawal achieves a wiping action throughout the extent of the applicator 162, with the dispensing brush 164 carrying a quantity of the cosmetic preparation therewith for dispensation by the user.

A latitude of modification, change and substitution is intended in the foregoing disclosure and in some instances some features of the invention will be employed without a corresponding use of other features. Accordingly, it is appropriate that the appended claims be construed broadly and in a manner consistent with the spirit and scope of the invention herein.

What I claim is:

1. In combination, a container including a neck having external threads and a closure for said container, said closure comprising a cap of a substantially rigid material including a top wall and a depending body wall forming an internal socket, a liner of a resilient material adapted to be inserted into said cap, said liner including a mounting wall dimensioned to be force fitted into said internal socket, an enlarged neck-engaging wall dimensioned to be force fitted into said internal socket and being radially compressed incident to such force fitting, a centrally disposed and axially extending socket-forming wall providing a downwardly opening wand-receiving socket, and a depending conical sealing member concentric of said socket-forming wall and depending therefrom and adapted to make sealing contact with said neck, said neck-engaging wall having internal threads dimensioned upon radial compression to engage said external threads on said neck, an applicator including a wand extending into said wand-receiving socket, said liner being force fitted into said cap to radially compress said neck-engaging wall causing a corresponding radial compression of said socket-forming wall to provide a substantially unitary assembly of said wand, said liner and said cap.

2. In combination, a container including a neck having an internal seat and external threads, a neck insert of resilient material force fitted into said internal seat and having a through bore providing a wiper, and a closure for said container comprising a cap of a substantially rigid material including a top wall and a depending body wall forming an internal socket, a liner of a resilient material adapted to be inserted into said cap and including a neck-

engaging wall dimensioned to be force fitted into said internal socket and a centrally disposed and axially extending socket-forming wall providing a downwardly opening wand-receiving socket, said neck-engaging wall having internal threads dimensioned to engage said external threads on said neck, an applicator including a wand adapted to engage said wiper during insertion and withdrawal from said container, said wand including a unitary section extending into said wand-receiving socket, said liner being force fitted into said cap and providing a substantially unitary assembly of said wand, said liner and said cap.

3. In combination, a container including a neck having an internal seat and external threads, a neck insert of resilient material force fitted into said internal seat and having a through bore providing a wiper, and a closure for said container comprising a cap of a substantially rigid material including a top wall and a depending body wall forming an internal socket, a liner of a resilient material adapted to be inserted into said cap and including a mounting wall dimensioned to be force fitted into said internal socket, a neck-engaging wall dimensioned to be force fitted into said internal socket, and a centrally disposed and axially extending socket-forming wall providing a downwardly opening wand-receiving socket, said neck-engaging wall having internal threads dimensioned to engage said external threads on said neck, an applicator including a wand adapted to engage said wiper during insertion and withdrawal from said container, said wand including a unitary section extending into said wand-receiving socket, said liner being force fitted into said cap and providing a substantially unitary assembly of said wand, said liner and said cap.

4. In combination, a container including a neck having an internal seat and external threads, a neck insert of resilient material force fitted into said internal seat and having a through bore providing a wiper, and a closure for said container comprising a cap of a substantially rigid material including a top wall and a depending body wall forming an internal socket, a liner of a resilient material adapted to be inserted into said cap and including a mounting wall dimensioned to be force fitted into said internal socket, a neck-engaging wall dimensioned to be force fitted into said internal socket, a centrally disposed and axially extending socket-forming wall providing a downwardly opening wand-receiving socket, and an annular sealing member concentric of said socket-forming wall and depending therefrom and adapted to make sealing contact with said neck insert, said neck-engaging wall having internal threads dimensioned to engage said external threads on said neck, an applicator including a wand adapted to engage said wiper during insertion and withdrawal from said container, said wand extending into said wand-receiving socket, said liner being force fitted into said cap and providing a substantially unitary assembly of said wand, said liner and said cap.

5. In combination, a container including a neck having external threads, and a closure for said container comprising a cap of a substantially rigid material including a top wall and a depending body wall forming an internal socket, a liner of a resilient material adapted to be inserted into said cap and including a mounting wall dimensioned to be force fitted into said internal socket, a neck-engaging wall dimensioned to be force fitted into said internal socket, a centrally disposed and axially extending socket-forming wall having an inner end and an outer end and providing a downwardly opening wand-receiving socket, said neck-engaging wall having internal threads dimensioned to engage said external threads on said neck, an applicator including an enlarged head at the inner end thereof and a wand projecting therefrom, said wand extending into said wand-receiving socket, said liner being force fitted into said cap, said enlarged head abutting the adjacent inner end of said socket-forming wall and said wand depending from the outer end thereof, the force

fitting of said liner into said cap providing a substantially unitary assembly of said wand, said liner and said cap.

6. In combination, a container including a neck having external threads and a closure for said container, said closure comprising a cap of a substantially rigid material including a top wall and a depending body wall forming an internal socket, a liner of a resilient material adapted to be inserted into said cap, said liner including an intermediate partition, a mounting wall extending upwardly from said partition and dimensioned to be force fitted into said internal socket and a neck-engaging wall depending from said partition and dimensioned to be force fitted into said internal socket, said neck-engaging wall having internal threads dimensioned to engage said external threads on said neck, and an applicator including a wand, said partition including a centrally disposed axially extending socket-forming wall providing a downwardly opening wand-receiving socket, said wand extending into said wand-receiving socket, said liner being force fitted into said cap, causing a radial compression of said socket-forming wall to provide a substantially unitary assembly of said applicator, said liner and said cap.

7. In combination, a container including a neck having external threads and a closure for said container, said closure comprising a cap of a substantially rigid material including a top wall and a depending body wall forming an internal socket, a liner of a resilient material adapted to be inserted into said cap, said liner including an intermediate partition, a mounting wall extending upwardly from said partition and being dimensioned to be force fitted into said internal socket and an enlarged neck-engaging wall depending from said partition and dimensioned to be force fitted into said internal socket and being radially compressed incident to such force fitting, said neck-engaging wall having internal threads dimensioned upon radial compression to engage said external threads on said neck, and an applicator including a wand, said partition including a centrally disposed axially extending socket-forming wall providing a downwardly opening wand-receiving socket, said wand extending into said wand-receiving socket, said liner being force fitted into said cap, the force fitting of said liner into said cap and the radial compression of said neck-engaging wall causing a corresponding radial compression of said socket-forming wall to provide a substantially unitary assembly of said applicator, said liner and said cap.

8. In combination, a container including a neck having external threads and a closure for said container, said closure comprising a cap of a substantially rigid material including a top wall and a depending body wall forming an internal socket, a liner of a resilient material adapted to be inserted into said cap, said liner including an intermediate partition, a mounting wall extending upwardly from said partition and being dimensioned to be force fitted into said internal socket and a neck-engaging wall depending from said partition and dimensionally to be force fitted into said internal socket, said neck-engaging wall having internal threads dimensioned to engage said external threads on said neck, an applicator including a wand, said partition including a centrally disposed axially extending socket-forming wall providing a downwardly opening wand-receiving socket, said wand extending into said wand-receiving socket, said liner being force fitted into said cap and the force fitting of said liner into said cap causing a radial compression of said socket-forming wall to provide a substantially unitary assembly of said applicator, said liner and said cap, and a sealing member formed integrally with said partition and disposed in spaced confronting relation to said internal threads for engagement with said neck internally thereof.

9. A closure for a container including a neck having external threads comprising a cap of a substantially rigid material including a top wall and a depending body wall forming an internal socket, a liner of a resilient material adapted to be inserted into said cap and including an in-

intermediate partition, a mounting wall extending upwardly from said partition and dimensioned to be force fitted into said internal socket and an neck-engaging wall depending from said partition and dimensioned to be force fitted into said internal socket, said neck-engaging wall having internal threads dimensioned to engage said external threads on said neck, an applicator including a wand, said partition including an annular supporting web integral with and projecting inwardly from said mounting and neck-engaging walls, a conical sealing member depending from said web and disposed in spaced confronting relation to said internal threads, and a centrally disposed axially extending socket-forming wall projecting upwardly within said sealing member and being integral therewith and providing a downwardly opening wand-receiving socket, said wand extending into said wand-receiving socket, said liner being force-fitted into said cap, the force fitting of said liner into said cap causing a radial compression of said socket-forming wall to provide a substantially unitary assembly of said applicator, said liner and said cap.

10. A closure for a container including a neck having external threads comprising a cap of a substantially rigid material including a top wall and a depending body wall forming an internal socket, a liner of a resilient material adapted to be inserted into said cap and including a mounting wall dimensioned to be force fitted into said internal socket and an enlarged neck-engaging wall dimensioned to be force fitted into said internal socket, said neck-engaging wall having internal threads dimensioned to engage said external threads on said neck, an applicator including a wand, a partition including an annular supporting web integral with and projecting inwardly from said mounting and neck-engaging walls, a conical sealing member depending from said web and disposed in spaced confronting relation to said internal threads, and a centrally disposed axially extending socket-forming wall projecting upwardly from said web and being integral therewith and providing a downwardly opening wand-receiving socket, said wand extending into said wand-receiving socket, said liner being force-fitted into said cap, the force fitting of said liner into said cap causing a corresponding radial compression of said socket-forming wall to provide a substantially unitary assembly of said applicator, said liner and said cap.

11. In combination, a container including a neck insert having external threads, and a closure for said container comprising a cap of a substantially rigid material including a top wall and a depending body wall forming an internal socket, a liner of a resilient material adapted to be inserted into said cap and including a mounting wall dimensioned to be force fitted into said internal socket, a centrally disposed and axially extending socket-forming wall having an inner end and an outer end and providing a downwardly opening wand-receiving socket, said depending body wall having internal threads dimensioned to engage said external threads on said neck insert, an applicator including an enlarged head at the inner end thereof and a wand projecting therefrom, said wand extending into said wand-receiving socket, said liner being force fitted into said cap, said enlarged head abutting the adjacent inner end of said socket-forming wall and said wand depending from the outer end thereof, the force fitting of said liner into said cap providing a substantially unitary assembly of said wand, said liner and said cap.

12. In combination, a container including a neck insert having external threads and a closure for said container, said closure comprising a cap of a substantially rigid material including a top wall and a depending body wall forming an internal socket, a liner of a resilient material adapted to be inserted into said cap, said liner including an intermediate partition, a mounting wall extending upwardly from said partition and being dimensioned to be force fitted into said internal socket, said depending body wall having internal threads dimensioned to engage

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said external threads on said neck insert an applicator including a wand, said partition including a centrally disposed axially extending socket-forming wall providing a downwardly opening wand-receiving socket, said wand extending into said wand-receiving socket, said liner being force fitted into said cap, the force fitting of said liner into said cap providing a substantially unitary assembly of said applicator, said liner and said cap, and a sealing member formed integrally with said partition for engagement with said neck insert internally thereof.

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