CONTAINER FOR STORING AND DISPENSING FLOWABLE PRODUCTS

Fig. 1

A container for storing and dispensing flowable products, includes a base in the form of elongate cylindrical container sealed at one end, and open at its other end, and a combined closure and applicator for engaging the open end of the base, the combined closure and applicator having an applicator wand having a doe-foot-shaped roller ball applicator at its distal end. The distal end of the elongate applicator wand may be flocked at least in part.
PCT Utility Patent Application

Container for Storing and Dispensing Flowable Products

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This application claims the benefit of United States Patent Appl. No. 14/607,193, filed on Jan. 28, 2015, which is incorporated by reference in entirety.

Field of the Invention:

This invention relates to the field of cosmetic packaging, in particular a container for storing and dispensing flowable cosmetic products.

Background of the Invention:

Many cosmetic products are found in the flowable form including lipsticks, eyeshadow, blush, hair color, foundation, and the like. Such products often are sold in cylindrical containers where the cosmetic is stored in the cylindrical container and is applied to the lips, skin or hair, etc., with a doe foot applicator that is affixed to a cap/rod/applicator assembly. Skin care and cosmetics are most often are stored and dispensed from glass or plastic bottles. When color cosmetics such as eyeshadow and blush are found in the flowable form, they are stored and dispensed in either cylindrical containers with a cap/rod/applicator assembly, squeeze tubes, or the like.

Cosmetics companies are always searching for better and more efficient ways to store and dispense flowable cosmetic products. In particular, it is most desirable to sell such products in containers that both store and dispense the cosmetic from a single unit such that the storage container is also capable of dispensing the cosmetic directly onto the skin surface by drawing the dispensing portion of the container across the skin or hair surface.

An object of the invention is to provide a cosmetic storage and dispensing container for flowable cosmetic products. The applicator tip properties include: rolling, massaging and cooling effects.

A further object of the invention is to provide a cosmetic storage and dispensing container in a single unit, e.g. where the closure is integral to the storage container and serves as an application surface as well.
It is a further object of the invention to provide a storage and dispensing container for flowable cosmetic composition that may be operated with one hand if desired. From the preceding descriptions, it is apparent that the devices currently being used have significant disadvantages. Thus, important aspects of the technology used in the field of invention remain amenable to useful refinement.

Summary of the Invention:

A container for storing and dispensing flowable products, comprising a base in the form of elongate cylindrical container sealed at one end, and open at its other end; and a combined closure and applicator for engaging the open end of the base, the combined closure and applicator having an applicator wand having a roller ball applicator at its distal end, wherein the distal end of the elongate applicator wand which is flocked at least in part.

The roller ball applicator further comprises a doe-foot roller ball applicator; the roller ball can be captured adjacent the distal end of the applicator by a plurality of prongs; the applicator wand can be tapered at least in part from its proximal end to its distal end; the base can comprise a sealing ring adjacent its distal end for sealing product within the base, and for wiping excess product from the applicator as the applicator is withdrawn from the container; the base and the combined closure and applicator can threadedly engage one another; the doe-foot roller ball applicator can be biased at an angle of 20 to 60 degrees; the doe-foot roller ball applicator can be biased at an angle of 30 to 50 degrees; the doe foot roller ball applicator can be biased at an angle of about 45 degrees.

The present invention is directed to a container for storing and dispensing and applying flowable cosmetic products comprising: (a) a receptacle for storing a cosmetic product; and (b) a combination closure and roller applicator on a distal end of the closure. The distal end of the closure, surrounding the roller ball may be covered, at least in part, with a flocked material for holding cosmetic product.

In one embodiment of the invention, the distal end of the dispenser is in the form of a doe-foot applicator, biased at an angle of from about 20-60 degrees, more preferably about 30-50 degrees, most preferably about 45 degrees. The roller ball is maintained in a hollow in the distal end of the dispenser or inner wand by interference fit.
In a preferred embodiment of the invention, the distal end of the dispenser wand is formed of a flocked or plastic material, wettable by the cosmetic product.

The present invention introduces such refinements. In its preferred embodiments, the present invention has several aspects or facets that can be used independently, although they are preferably employed together to optimize their benefits. All of the foregoing operational principles and advantages of the present invention will be more fully appreciated upon consideration of the following detailed description, with reference to the drawings.

**Brief Description of the Drawings:**

Further features and advantages of the present invention will be seen from the following detailed description, taken in conjunction with the accompanying drawings, wherein like numerals depict like parts, and wherein:

Fig. 1 is a side elevational view of a cosmetic container in accordance with the present invention; Fig. 2 is a perspective view of the combination closure and applicator part of the present invention; Fig. 3 is side elevational view, in partial cross-section, showing details of the receptacle/combination closure and applicator; and Figs 4A and 4B are side views, from two sides, in cross-section, showing details of the distal end of the combination closure and applicator part, and Fig. 4C is an enlarged view, similar to Fig. 48, showing details of the distal end of the combination closure and applicator part.

**DESCRIPTION OF THE PREFERRED EMBODIMENTS**

Referring to Figs. 1-4, a combined cosmetic storage and dispensing container 10 is shown. The combined storage and dispensing container 10 comprises a base 12 in the form of an elongate cylindrical container sealed at one end 14, and open at its other end 16. End 16 preferably is externally threaded at 18 to engage with internal threads 20 of a combined closure and applicator 22 as will be described in detail below.

Combined closure and applicator 22 includes a cap 24 to which is mounted an elongate applicator wand 26. Applicator wand 26 has a doe-foot-shaped roller ball applicator 28 at its distal end 30. Roller ball 28 is held within a hollow cap 32 which fits over the distal end 30 of wand 26. As will be seen in particular in Figs. 4A and 4B, cap 32 is angled to expose one side of roller ball 28 more than the other side, creating a doe-foot shaped applicator end. Roller ball 28
is captured between cap 32 and resilient stem/seat 34, and held by a plurality of prongs 35, preferably three prongs, which reduce the surface area and friction on the ball.

The outer surface of cap 32 may be flocked in order to hold more product.

Preferably wand 26 is slightly tapered from its proximal end, so as to better engage with sealing ring 36 mounted at the open end of container 12. Sealing ring 36 serves the dual purpose of helping to seal the product within base 12, and of wiping excess product from the distal end of the applicator as the applicator is withdrawn from the container.

The combined container and dispenser in accordance with the present invention may be used with a variety of cosmetic products including lipstick, lip gloss, lip balm, skin care, serums, treatment creams, eye cream, blush, foundation, concealers, antiseptics, medicinal creams, ointments, skin cream, vein treatment, hair removers, dark circle creams, anti-aging products, moisturizers, oils, and the like.

While the invention has been described and illustrated as embodied in the preferred form of construction, it will be understood that various modifications may be made in the structure and arrangement of parts without departing from the spirit and scope of the invention. It is therefore understood that other modifications may be made to the present invention without departing from the scope of the invented claims.

The title, headings, terms and phrases used are not intended to limit the subject matter or scope; but rather, to provide an understandable description of the invention. The invention is composed of several sub-parts that serve a portion of the total functionality of the invention independently and contribute to system level functionality when combined with other parts of the invention. The terms "a" or "an" are defined as: one or more than one. The term "plurality" is defined as: two or more than two. The term "another" is defined as: at least a second or more. The terms "including" and/or "having" are defined as comprising (i.e., open language). The term "coupled" is defined as connected, although not necessarily directly, and not necessarily mechanically.

Any element in a claim that does not explicitly state "means for" performing a specific function, or "step for" performing a specific function, is not be interpreted as a "means" or "step" clause as specified in 35 U.S.C. Sec. 112, Paragraph 6. In particular, the use of "step of" in the claims herein is not intended to invoke the provisions of 35 U.S.C. Sec. 112, Paragraph 6.
We claim:

1. A container for storing and dispensing flowable products, comprising a base in the form of elongate cylindrical container sealed at one end, and open at its other end; and a combined closure and applicator for engaging the open end of the base, the combined closure and applicator having an applicator wand having a roller ball applicator at its distal end, wherein the distal end of the elongate applicator wand which is flocked at least in part.

2. The container of claim 1, wherein the roller ball applicator comprises a doe-foot roller ball applicator.

3. The container of claim 1, wherein the roller ball is captured adjacent the distal end of the applicator by a plurality of prongs.

4. The container of claim 1, wherein the applicator wand is tapered at least in part from its proximal end to its distal end.

5. The container of claim 1, wherein the base comprises a sealing ring adjacent its distal end for sealing product within the base, and for wiping excess product from the applicator as the applicator is withdrawn from the container.

6. The container of claim 1, wherein the base and the combined closure and applicator threadedly engage one another.

7. The container of claim 1, wherein the doe-foot roller ball applicator is biased at an angle of 20 to 60 degrees.

8. The container of claim 1, wherein the doe-foot roller ball applicator is biased at an angle of 30 to 50 degrees.

9. The container of claim 1, wherein the doe foot roller ball applicator is biased at an angle of about 45 degrees.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A45D 34/04 (2016.01)  
CPC - A45D 34/04 (2016.02)

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8) - A45D 34/00, 34/04, 40/18 (2016.01)  
CPC - A45D 34/04, 34/041, 34/042, 34/045 (2016.02)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

USPC -15/150; 132/218; 401/1 18, 126, 128, 209, 216, 217, 220; 424/63, 64 (keyword delimited)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PatBase, Google Patents, Google Scholar, Google

Search terms used: ball, roller, roller ball, flock, doe, doe foot, wand, stick, stem, lip gloss, applicator, cosmetics, dispensing, rollerball, prongs, fingers

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
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<tbody>
<tr>
<td>Y</td>
<td>US 2005/0109365 A1 (DUNTON et al) 26 May 2005 (26.05.2005) entire document</td>
<td>1, 2, 4-9</td>
</tr>
<tr>
<td>A</td>
<td>US 7,473,047 B2 (BIEGEL) 06 January 2009 (06.01.2009) entire document</td>
<td>1-9</td>
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</table>

Further documents are listed in the continuation of Box C.  
See patent family annex.

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