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## Description

### BACKGROUND

[0001] Packaging of consumer items is important in attracting the attention of a potential customer such that the buyer will consider purchasing a product. Packaging that is attractive, appears to be of high quality, and conveys product details will often influence a consumer to purchase the product. For oral care products such as toothpaste, mouthwash, etc., product flavor is also often an important purchase consideration. For personal care products such as deodorants, antiperspirants, powders, lotions, etc., a potential consumer may select the product based, at least in part, on product fragrance.

[0002] The sensory qualities of flavor and fragrance are often described on product packaging using descriptive indicia such as text and/or graphics. While the descriptive indicia may provide a general indication of the sensory quality of the product, descriptive indicia can be subjective and may give a consumer an inaccurate understanding of the product contents and sensory qualities. As such, the actual flavor or fragrance of the product may vary from the user's expectations that are solely based on the text and/or graphics and may, in turn, lead to the customer's dissatisfaction with the product.

[0003] Developed to avoid this dissatisfaction, various conventional scent packaging designs are known. Packaging that allows a potential customer to experience the fragrance of a product, or an emulation of the fragrance, within the package may be referred to herein as "scent packaging" or a "scent package." As aromas are closely physiologically linked with flavor, fragrances delivered by scent packaging may further be used to provide a consumer with an indication of the flavor or taste of the product.

[0004] Various types of conventional scent packaging suffer from various problems. For example, some scent packaging continuously delivers a fragrance because the packaging does not seal the fragrance-producing material from the outside air, and thus the fragrance may become depleted before the product is sold and may also cross-contaminate the fragrance from adjacent scent packages having different fragrances. For another example, some scent packaging may use a substance embedded with a scent-emitting chemical that emulates the scent of the product within, and this substance may negatively affect the product within if it comes in contact with the product. Such conventional scent packaging may not ensure that the scent-emitting chemical is physically separated from the product, and the substance may thus negatively interact with the product, either before or after sale of the product.

[0005] Scent packaging that, for example, overcomes one or more problems of conventional scent packaging would be a welcome addition to the art.

WO 2006/004665 A2 refers to a bottle container having a dispensing closure placed thereon. The dispensing clo-

sure has a base that screws onto a threaded neck section of the bottle container. An orifice is disposed through a base that enables a scented product to flow through the base from an interior of the bottle. A flip cap is provided for selectively sealing the orifice. A tamper resistant seal is placed over a top of the bottle container.

EP 1 721 621 A1 refers to a package containing a product. The package comprises an opening which is sealed with an aluminum foil seal and a plastic lid joined to the main body of the bottle via a hinge. An enclosure is formed between the package and an internal surface of the plastic lid. 2 grams of perfume releasing hot melt adhesive are attached to the internal surface of said the plastic lid. The enclosure is saturated with a perfumed headspace.

WO 00/53508 A1 relates to a container in the form of a bottle, having a threaded neck, and containing a liquid product. The bottle is provided with a removable cap. The container is provided with a device comprising a cap liner directly carried by the cap of the bottle and impregnated with a volatile substance. The cap liner is assembled with a polymeric diffusion membrane which covers the surface of the cap liner facing the interior of the bottle. The membrane is molecularly permeable to the volatiles, but impermeable to liquids.

WO 2007/052227 A2 refers to a container including a perfuming means located within a space under a closure. The perfuming means is fitted into the closure by way of a friction fit around an orifice.

US 5 635 229 A refers to an aromatic member which encompasses a removable cap having an interior threaded base, for engagement with threads on a bottle, and a flip-open lid. An interior of the lid is covered with a layer of absorbent material onto which a scent is instilled. A thin removable plastic film covers the absorbent material prior to use. When the lid is snapped closed, a dispensing opening on the base is sealed.

US-A-2016/068315 discloses the following features of claim 1: a product package, comprising: a vessel defining an orifice; a product disposed within the vessel and configured to be dispensed from the vessel through the orifice; a cap that is configured to be attached to the vessel, wherein the cap is repositionable from a closed position to an open position, and from the open position to the closed position, wherein the cap comprises: a base; a top; a hinge that movably attaches the base to the top; a dispensing tip defining an opening, wherein the product package is configured to dispense the product from the opening defined by the dispensing tip; and a ring protruding from an inner surface of the top, wherein the ring encircles an end of the dispensing tip and the opening when the cap is in the closed position.

### BRIEF SUMMARY

[0006] Further areas of applicability of the present invention will become apparent from the detailed description provided hereinafter. It should be understood that the detailed description and specific examples, while in-

dicating some preferred aspects of the invention, are intended for purposes of illustration only and are not intended to limit the scope of the invention. The present invention relates to a product package as defined in claim 1 and to a method as defined in claim 4. Preferred embodiments are defined by the dependent claims.

**[0007]** A product package may include a vessel defining an orifice, a product disposed within the vessel and configured to be dispensed from the vessel through the orifice, a cap that is configured to be attached to the vessel, wherein the cap is repositionable from a closed position to an open position, and from the open position to the closed position, a seal positioned over the orifice and configured to seal the product within the vessel, and a scented material having a fragrance. The scented material is attached to a surface of the seal, and the product package is configured to release the fragrance of the scented material to an exterior of the product package when the cap is in the open position and to substantially prevent the release of the fragrance to the exterior of the product package when the cap is in the closed position.

**[0008]** Optionally, the seal may be configured to be removed to allow the product to be dispensed from the vessel, and the scented material may be configured to be removed simultaneously with a removal of the seal. The vessel may further include a threaded end, where the cap may be configured to be screwed onto the threaded end to place the cap in the closed position, and configured to be unscrewed from the threaded end to place the cap in the open position.

**[0009]** The product package may include optional text and/or graphics on the exterior of the product package that inform a consumer that the product package includes the fragrance that may be sampled by moving the cap from the closed position to the open position. The product may be one of a toothpaste, a mouthwash, a deodorant, an antiperspirant, a perfume, a powder, and a lotion.

**[0010]** In another implementation, a product package includes a vessel defining an orifice, a product disposed within the vessel and configured to be dispensed from the vessel through the orifice, a cap that is configured to be attached to the vessel, wherein the cap is repositionable from a closed position to an open position, and from the open position to the closed position, and a scented material having a fragrance, wherein the scented material is attached to the cap. The product package is configured to release the fragrance of the scented material to an exterior of the product package when the cap is in the open position and to substantially prevent the release of the fragrance to the exterior of the product package when the cap is in the closed position.

**[0011]** The cap includes a base, a top, a hinge that movably attaches the base to the top, and a dispensing tip defining an opening. The product package is configured to dispense the product from the opening defined by the dispensing tip. The cap further includes a ring protruding from an inner surface of the top, wherein the ring encircles an end of the dispensing tip and the opening

when the product package is in the closed position. The scented material is disposed in a pattern around the ring. Optionally, the cap may be configured to be removed from the vessel to provide access to a seal that blocks the orifice, and the seal may be configured to be removed to allow the product to be dispensed from the vessel.

**[0012]** The vessel may optionally include a threaded end where the cap is configured to be unscrewed from the threaded end to provide the access to the seal. The product may be one of a toothpaste, a mouthwash, a deodorant, an antiperspirant, a perfume, a powder, and a lotion.

**[0013]** A method for manufacturing a product package includes disposing a product into a vessel, the vessel defining an orifice, wherein the product is configured to be dispensed from the vessel through the orifice. The method further includes providing a seal and a cap, attaching a scented material to at least one of the seal and the cap, and attaching the seal to the vessel, wherein the seal is configured to seal the product within the vessel. The method further includes attaching the cap to the vessel, wherein the cap is repositionable from a closed position to an open position to release a fragrance from the scented material to an exterior of the product package, and from the open position to the closed position thereby substantially preventing the release of the fragrance to the exterior of the product package.

**[0014]** The attaching of the scented material to the at least one of the seal and the cap may include attaching the scented material to the seal. Further, the vessel may include a lip that defines the orifice, and the attaching of the seal to the vessel may further include attaching the seal to the lip. The seal may be configured to be removed from the lip prior to dispensing the product from the vessel. The attaching of the scented material to the at least one of the seal and the cap may include attaching the scented material to the cap.

**[0015]** The attaching of the cap to the vessel may include screwing the cap onto a threaded end of the vessel. The disposing of the product into the vessel may include disposing one of a toothpaste, a mouthwash, a deodorant, an antiperspirant, a perfume, a powder, and a lotion into the vessel.

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

**[0016]** The present invention will become more fully understood from the detailed description and the accompanying drawings, wherein:

FIG. 1 is an exploded view of a product package according to an implementation of the present teachings.

FIG. 2 is an assembled side view of the FIG. 1 product package;

FIG. 3 is an exploded view of a product package according to another implementation of the present teachings.

FIG. 4 is an assembled side view of the FIG. 3 product package.

FIG. 5 is a flow chart depicting a method for dispensing a product from a product package according to another implementation of the present teachings.

FIG. 6 is a flow chart depicting a method for manufacturing a product package in accordance with another implementation of the present teachings.

**[0017]** It should be noted that some details of the figures have been simplified and are drawn to facilitate understanding of the present teachings rather than to maintain strict structural accuracy, detail, and scale.

## DETAILED DESCRIPTION

**[0018]** The following description of various preferred aspects are merely exemplary in nature and are in no way intended to limit the present teachings, their application, or uses.

**[0019]** As used throughout, ranges are used as shorthand for describing each and every value that is within the range. Any value within the range can be selected as the terminus of the range. In the event of a conflict in a definition in the present disclosure and that of a cited reference, the present disclosure controls.

**[0020]** The present teachings described herein include a product package that allows a consumer to sample or smell a fragrance, aroma, and/or scent that emanates from a scented material within the package at the point of sale. The scent may be provided by any suitable carrier material, such by (or including) a natural material, a synthetic material, a gel, a solid, a liquid, etc., that is impregnated with a scent or otherwise releases, emits, diffuses, produces, or gives off a scent. Suitable scented materials are known in the art. When in a closed state, the presently described scent packaging releases little or no scent and, when in an open state, the scent packaging releases a scent that is suitable for sampling or smelling by a consumer. It will be appreciated that, in an aspect of the present teachings, a seal may provide complete sealing of the fragrance within the product package to prevent the release of the fragrance to the exterior of the product package such that no human-detectable amount of fragrance is released. In another aspect, the seal may be imperfect such that a small (e.g., barely human-detectable) amount of fragrance is released in the closed position, where the release of the fragrance is diminished but not completely eliminated. This may be referred to as "substantially sealed" and substantially prevents the release of fragrance to the exterior of the product package. In an aspect, "substantially sealed" may refer to a seal that limits the diminishment of the strength of the fragrance from the scented material to a 20% or less reduction over a 90 day period at room temperature, or to a 10% or less reduction over a 90 day period at room temperature. For purposes of this application, the term "sealed" includes product packages that are "substan-

tially sealed" and the term "substantially sealed" includes product packages that are "sealed," unless otherwise indicated.

**[0021]** The scent released by the scented material may be provided by a chemical(s) that releases a fragrance that is a replica, likeness, emulsion, or facsimile of the fragrance of the product, such as the same fragrance-inducing chemical(s) that is used in the product composition. In this instance, the scented material may release a first fragrance that is similar, substantially similar, or the same as a second fragrance released by the product. In other instances, the scent may be provided by a carrier material impregnated with an amount of the product itself, in which case the first fragrance released by the scented material may be the same as the second fragrance released by the product. In yet another instance, the scent may be provided by a carrier material impregnated with an amount of the product itself, with the carrier material contributing an odor(s) to the first fragrance that is dissimilar from the second fragrance released by the product, such that the first fragrance is only similar or substantially similar to the second fragrance. Thus the product may have a scent and the scented material may release a fragrance, where the fragrance is, or approximates, the scent. The fragrance may be released from the product package for as long as the product package remains in the open position. For example, the product package may be placed into the open position for one second or more, 30 seconds or more, or one minute or more, and the fragrance will be continuously released by the scented material from the product package for one second or more, 30 seconds or more, or one minute or more, respectively. Once the product package is placed into the closed position, the product package becomes sealed.

**[0022]** A first configuration of a product package or product dispenser 100 that provides a scent package according to the present teachings is depicted in the exploded perspective depiction of FIG. 1 and the assembled side view of FIG. 2. It will be appreciated that a product package in accordance with the present teachings may include structures that, for clarity and simplicity, have not been depicted in the figures, and that various depicted structures may be removed or modified. The product package 100 of FIGS. 1 and 2 includes a receptacle, container, or vessel 102 and a product 104 that may be stored within, and may be dispensed from, the vessel 102 during use by a user. The product package 100 further includes, a seal 106, for example a removable seal 106, and a cap 108, for example a removable cap 108.

**[0023]** The vessel 102 may be flexible, semi-rigid, rigid, or combinations thereof, and may be provided in the form of a tube, a bottle, or another suitable form. The vessel 102 may include a body 110 and an end 112 including an orifice 114. A lip 120 of the end 112 may define the orifice 114. The vessel 102 may further include a shoulder 116 positioned between, and attached to, the body 110

and the end 112. The end 112 of the vessel 102 may include threads 118 that mate with threads of the cap 108 (on the interior of the cap 108 and not depicted for simplicity) to provide or allow an attachment of the cap 108 to the threaded end 112 of the vessel 102 as depicted in FIG. 2, although other cap attachment techniques, as are known in the art, are contemplated.

**[0024]** During manufacture, the product 104 may be sealed or contained within the vessel 102 using the seal 106, for example, to reduce or prevent contamination, leakage, and/or deterioration of the product 104 prior to sale. The seal 106 may be or include, for example, a laminate that includes a foil such as a metal foil, a plastic or other polymer, etc. The seal 106 may be attached to the lip 120 of the end 112 using, for example, an adhesive 122, a heat sealing technique, or another technique or combination of techniques. Other types of seals as are known in the art are contemplated. The seal 106 may be removed or punctured by the product purchaser after the purchaser has taken the product home for use.

**[0025]** The product 104 may be in the form of a liquid, a paste, a gel, a solid, or another suitable form. The product 104 may be, for example, a personal care product such as toothpaste, mouthwash, deodorant, antiperspirant, perfume, lotion, or powder, or another product.

**[0026]** The cap 108 of FIGS. 1 and 2 includes a base 130, a top 132, and a hinge 134 that movably attaches the base 130 to the top 132. During use, the hinge 134 may bend or flex to allow the top 132 pivot away from the base 130 and open, thereby exposing a dispensing tip 136 having an opening 138, and to pivot toward the base 130 and close onto the base 130 such that the top 132 covers the dispensing tip 136. The top 132 of the cap 108 includes a ring 140 protruding from an inner surface 142 of the top 132. The ring 140 encircles the end of the tip 136 and the opening 138 of the tip 136 when the cap 108 is in a closed position. The ring 140 and the portion of the inner surface 142 within the ring 140 block the opening 138 and reduce or prevent the unwanted dispensing of the product 104 from the opening 138 when the top 132 is closed onto the base 130, as depicted in FIG. 2, where the cap 108, and thus the product package 100, is in the closed position. Conversely, the hinged cap 108 may allow dispensing of the product 104 from the opening 138 when the top 132, and thus the cap 108 and the product package 100, is in an open position of FIG. 1. The cap 108 is thus repositionable from the closed position to the open position and from the open position to the closed position.

**[0027]** FIG. 1 further depicts a scented material 144 positioned on the inner surface 142 of the top 132, and within the cap 108. FIG. 1 depicts the scented material 144 positioned or disposed in a circular pattern that encircles the ring 140, although it is contemplated that the scented material 144 may be positioned at other locations of the base 130 or top 132 that are within the cavity formed when the top 132 is closed on the base 130. For one example or another location (not individually depict-

ed for simplicity), the scented material 144 may be disposed in dot(s) around the inner sidewalls of the top 132. When the cap 108 is in the open position of FIG. 1, the scented material 144 is exposed and releases a scent, aroma, or fragrance 146 to an exterior of the product package 100. When the cap 108 is in the closed position of FIG. 2, the scented material 144, and the fragrance 146 released therefrom, is partially or completely sealed within the product package 100, such that little or none of the fragrance is released from the cavity formed when the top 132 is closed on the base 130 of the cap 108. As described above, the scented material 144 may be or include a natural material, a synthetic material, a gel, a solid, a liquid, etc., that is impregnated with a fragrance 146 or otherwise releases, emits, diffuses, produces, or gives off a fragrance 146. Suitable scent-releasing materials are known in the art. The fragrance 146 may be provided by a chemical(s) that releases a fragrance that is a replica, likeness, or facsimile of the fragrance of the product 104. In some instances, the chemical(s) may be the same fragrance-producing chemical(s) that is a component of the product 104. In other instances, the fragrance 146 may be provided by an amount of the product 104 itself used as, or as a component of, the scented material 144.

**[0028]** The product package 100 may further include text and/or graphical indicia 148 on the exterior of the product package 100 that includes text and/or graphics that informs a consumer that the product package 100 includes a fragrance 146 that may be sampled by opening the top 132 of the cap 108 or otherwise moving or repositioning the product package 100 from the closed position to the open position. While the product package 100 is displayed, for example, on a store shelf before purchase, the scented material 144 is sealed within the cap 108, and thus the scented package 100 releases little or none of the fragrance 146 to the exterior of the product package 100. Upon opening the cap 108 or otherwise placing the cap 108 in the open position, the fragrance 146 released by the scented material 144 may be sampled or smelled by the consumer before purchase. When the cap 108 is closed or otherwise placed in the closed position, the fragrance 146 released by the scented material 144 is contained within the interior of the product package 100, (e.g., within the cavity formed when the top 132 is closed on the base 130), with little or none of the fragrance 146 being released exterior to the product package 100. Before purchase, the seal 106 blocks the orifice 114. Further, the seal 106 provides a barrier that maintains a physical separation between the scented material 144 and the product 104.

**[0029]** After purchasing the product package 100, the consumer may remove the cap 108, for example, by rotating and unscrewing the cap 108 from the threads 118. The consumer may then remove the seal 106 to expose the product 104 within the vessel 102, for example, by peeling the seal 106 from the lip 120. The seal 106 may be discarded and the cap 108 may be replaced onto the

vessel 102, for example, by rotating and screwing the cap 108 onto the threads 118. The product 104 may then be dispensed from the product package 100, for example, by placing the cap 108 in the open position and applying pressure to the body 110 of the vessel 102 and to the product 104 therein such that the product 104 is forced out of the orifice 114, into the dispensing tip 136, and out of the opening 138.

**[0030]** After removing the seal 106 and replacing the cap 108, the ring 140 may reduce or prevent physical contact between the product 104 and the scented material 144.

**[0031]** It is contemplated that the product package 100, for example, the cap 108 design, may be modified from that depicted based, at least in part, on the characteristics of the product 104, such as the viscosity of the product being dispensed. The product package 100 may also be modified based, at least in part, on other considerations such as cost, form factor, design, etc. For example, the cap 108 may be a flip-top cap 108 as depicted, a screw cap, a friction fit cap, or another cap design that includes a selectively sealed or semi-sealed cavity. The product package 100 may include other structures, such as a roller ball or a spray pump in place of or in conjunction with the dispensing tip 136, depending on the product being dispensed as well as the design of the product package 100.

**[0032]** In the implementation of FIGS. 1 and 2, the scented material 144 may remain within the cap 108 during use of the product 104 and the product package 100 by the consumer, and the product package may be discarded by the consumer, for example, once the product 104 within the vessel 110 has been depleted.

**[0033]** Another product package 300 in accordance with an implementation of the present teachings is depicted in the exploded perspective view of FIG. 3 and the assembled view of FIG. 4. For ease of explanation, this implementation is discussed with reference to various like-numbered structures as described above and their description are not repeated. The product package 300 of this implementation is not part of the present invention, but is nevertheless useful to understand this invention. It will be appreciated that the product package 300 of this implementation may include other structures that, for clarity and simplicity, have not been depicted, while depicted structures may be removed or modified.

**[0034]** The product package 300 of FIGS. 3 and 4 includes a cap 302, for example, a screw cap 302 having interior threads (not depicted for simplicity) that mate with threads 118 of end 112. The cap 302 may thus be attached to, or removed from, the end 112 of the vessel 102 by either screwing, or unscrewing, the cap 302 relative to the threads 118 of the vessel 102. The product package 300 further includes a scented material 304 attached, for example permanently attached, to a surface of the seal 106 such that, when the seal 106 is attached to the lip 120, the seal 106 is positioned between the lip 120 and the scented material 304. The seal 106 thus

provides a barrier and maintains physical separation between the scented material 304 and the product 104 that is positioned or located inside of the vessel 102.

**[0035]** Additionally, the cap 302 is dimensioned such that when the cap 302 is screwed all the way onto the vessel 102 (e.g., when the cap 302 touches, or is at its closest point to, the shoulder 116 of the vessel 102 as depicted in FIG. 4), there is an interior space or cavity 306 between the top of the scented material 304 and the top 305 of the cap 302. Thus, when the cap 302 is attached to the vessel 102 as depicted in FIG. 4, the scented material 304 is positioned within the space or cavity 306 in the cap 302. While the product package 300 is displayed, for example, on a store shelf, the scented material 304 is sealed, or substantially sealed, within the cavity 306 of the cap 302, and thus scented package 300 does not release, or does not significantly release, the fragrance 146 to the exterior of the product package 300. When a potential consumer removes the cap 302 or otherwise places the product package 300 in the open position, for example, in a store, the fragrance 146 released by the scented material 304 may be sampled or smelled by the consumer before purchasing or buying the product. When the cap 302 is attached to the end 112, or the product package 300 is otherwise placed in the closed position, the fragrance 146 released by the scented material 304 is contained within the cavity 306 in the interior of the product package 300, with little or none of the fragrance 146 being released exterior to the product package 300.

**[0036]** In order to use the product 104 after purchasing the product package 300, the consumer may remove the cap 302, for example, by rotating and unscrewing the cap 302 from the threads 118. The consumer may then remove the seal 106 along with the scented material 304, for example, by peeling the seal 106 from the lip 120. The product 104 may then be dispensed from the product package 100, for example, by applying pressure to the body 110 of the vessel 102 and to the product 104 therein such that the product 104 is forced out of the orifice 114.

**[0037]** In contrast to the product package 100 of FIGS. 1 and 2, the scented material 304 of product package 300 is removed from the product package 300 simultaneously with the removal of the seal 106, and may be discarded with the seal 106. The scented material 304 is removed with no additional effort by the consumer, as the seal 106 is designed to be removed to provide access to the product 104 within the vessel 102 such that the product 104 may be dispensed from the vessel 102 through the orifice 114. Removal and discarding of the scented material 304 along with the seal 106, for example, reduces or prevents physical contact between the product 104 and the scented material 304.

**[0038]** It is further contemplated that the scented material 304 may be positioned on an interior surface of the cap 302, such as on the interior surface of the top 305 of the cap 302. In this implementation, the scented material 304 may remain with the cap 302 and eventually

discarded with the product package 300, for example, after the product 104 has been depleted. Moreover, it is contemplated that the scented material may be placed on both the seal and the cap in one or more of the implementations discussed herein.

**[0039]** FIG. 5 is a flow chart depicting an example of a method 500 for dispensing a product from a product package in accordance with an implementation of the present teachings. The method 500 may proceed by operation or use of one or more of the structures depicted in the figures described above, and thus is described with reference to FIGS. 1-4; however, it will be appreciated that the method 500 is not limited to any particular structure unless expressly stated herein.

**[0040]** The method begins at 502, where a product package 100, 300 is repositioned from a closed position to an open position, thereby releasing a fragrance 146 from a scented material 144, 304 of the product package 100, 300. At 504, the product package 100, 300 may be repositioned from the open position to the closed position, thereby sealing the fragrance 146 within the product package 100, 300 to at least a significant extent. These method acts may be performed, for example, by a consumer in a store prior to purchase of the product package 100, 300 and/or at home after purchasing the product. To dispense the product 104, a cap 108, 302 may be removed to expose a seal 106 positioned over an orifice 114 of a vessel 102. The seal 106 provides a barrier between the scented material 144, 304 and the product 104 within the vessel 102 of the product package 100, 300 as at 506. As illustrated at 508, the exposed seal 106 may be removed by the consumer from the product package 100, 300 to expose the product 104 within the product package 100, 300, thus providing the product 104 a path to exit the vessel 102. Optionally, while removing the seal 106, and for example with the scented material 304 attached to a surface of the seal 106, the scented material 304 may be simultaneously removed from the product package 300 as at 510. Subsequently, at 512, the cap 108, 302 may be replaced onto the vessel 102, and the product 104 may be dispensed from the vessel 102 through the orifice 114 as at 514.

**[0041]** It will be appreciated that while the method 500 is described as a series of acts or events, the present teachings are not limited by the ordering of such acts or events. For example, when initially dispensing the product 104 from the vessel 102 after removing the seal 106, the method 500 may include reversing method acts 512 and 514. In other words, after removing the seal 106 to expose the product 104 within the vessel 102 (which, in an implementation, may also include simultaneously removing the scented material 304 as at 510), the product 104 may be dispensed from the vessel 102 through the orifice 114 prior to replacing the cap 108, 302.

**[0042]** FIG. 6 is a flow chart depicting an example of a method 600 for manufacturing a product package in accordance with an implementation of the present teachings. The method 600 may proceed by operation or use

of one or more of the structures depicted in the figures described above, and thus is described with reference to FIGS. 1-4; however, it will be appreciated that the method 600 is not limited to any particular structure unless expressly stated herein.

**[0043]** At 602, the method 600 for manufacturing a product package 100, 300 begins by disposing a product 104 into a vessel 102, the vessel 102 defining an orifice 114, wherein the product 104 is configured to be dispensed from the vessel 102 through the orifice 114. The method 600 further includes providing a seal 106 and a cap 108, 302, as at 604, and attaching a scented material 144, 304 to at least one of the seal 106 and the cap 108, 302, as at 606. At 608, the seal 106 is attached to the vessel 102, for example, to a lip 120 that defines the orifice 114, where the seal 106 is configured to seal the product 104 within the vessel 102. In various implementations, the seal 106 may be attached to the vessel 102 after disposing the product 104 into the vessel 102, while in other implementations the seal 106 may be attached to the vessel 102 prior to disposing the produce within the vessel, or example, through an opening at an end of the vessel 102 opposite the lip 120 and the orifice 114. The method 600, at 610, further includes attaching the cap 108, 302 to the vessel 102, where the cap 108, 302 is repositionable from a closed position to an open position to release a fragrance 146 from the scented material 144, 304 to an exterior of the product package 100, 300, and from the open position to the closed position thereby substantially preventing the release of the fragrance 146 to the exterior of the product package 100, 300.

**[0044]** Various implementations of the present teachings thus provide a product package or scent package that allows a consumer to sample or smell a product fragrance at the point of sale. When the product package is in a closed position, the fragrance is enclosed within the product package, for example, within the cap or lid of the product package. When the product package is in an open position, the fragrance is released from the product package and is available for sampling or smelling by a consumer. As aromas are closely physiologically linked with flavor, fragrances delivered by scent packaging according to the present implementations may further be used to provide a consumer with an indication of the flavor or taste of the product.

**[0045]** While the present teachings have been illustrated with respect to one or more implementations, alterations and/or modifications can be made to the illustrated examples without departing from the scope of the appended claims. For example, it will be appreciated that while the process is described as a series of acts or events, the present teachings are not limited by the ordering of such acts or events. Some acts may occur in different orders and/or concurrently with other acts or events apart from those described herein. Also, not all process stages may be required to implement a methodology in accordance with one or more aspects of the present teachings. It will be appreciated that structural

components and/or processing stages can be added or existing structural components and/or processing stages can be removed or modified. The invention is, however, defined in the claims. Further, one or more of the acts depicted herein may be carried out in one or more separate acts and/or phases. Furthermore, to the extent that the terms "including," "includes," "having," "has," "with," or variants thereof are used in either the detailed description and the claims, such terms are intended to be inclusive in a manner similar to the term "comprising." The term "at least one of" is used to mean one or more of the listed items can be selected. As used herein, the term "one or more of" with respect to a listing of items such as, for example, A and B, means A alone, B alone, or A and B. The term "at least one of" is used to mean one or more of the listed items can be selected. Further, in the discussion and claims herein, the term "on" used with respect to two materials, one "on" the other, means at least some contact between the materials, while "over" means the materials are in proximity, but possibly with one or more additional intervening materials such that contact is possible but not required. Neither "on" nor "over" implies any directionality as used herein. The term "conformal" describes a coating material in which angles of the underlying material are preserved by the conformal material. The term "about" indicates that the value listed may be somewhat altered, as long as the alteration does not result in nonconformance of the process or structure to the described teachings. Finally, "exemplary" indicates the description is used as an example, rather than implying that it is an ideal. Other aspects of the present teachings will be apparent to those skilled in the art from consideration of the specification and practice of the disclosure herein. It is intended that the specification and examples be considered as exemplary only, with a true scope of the present teachings being indicated by the following claims.

**[0046]** Terms of relative position as used in this application are defined based on a plane parallel to the conventional plane or working surface of a workpiece, regardless of the orientation of the workpiece. The term "horizontal" or "lateral" as used in this application is defined as a plane parallel to the conventional plane or working surface of a workpiece, regardless of the orientation of the workpiece. The term "vertical" refers to a direction perpendicular to the horizontal. Terms such as "on," "side" (as in "sidewall"), "higher," "lower," "over," "top," and "under" are defined with respect to the conventional plane or working surface being on the top surface of the workpiece, regardless of the orientation of the workpiece.

## Claims

1. A product package (100), comprising:  
a vessel (102) defining an orifice (114);

a product (104) disposed within the vessel (102) and configured to be dispensed from the vessel (102) through the orifice (114);  
a cap (108) that is configured to be attached to the vessel (102), wherein the cap (108) is repositionable from a closed position to an open position, and from the open position to the closed position; and  
a scented material (144) having a fragrance, wherein the scented material (144) is attached to the cap (108),  
wherein the product package (100) is configured to release the fragrance of the scented material (144) to an exterior of the product package (100) when the cap (108) is in the open position and to substantially prevent the release of the fragrance to the exterior of the product package (100) when the cap (108) is in the closed position,  
wherein the cap (108) comprises:

- a base (130);
- a top (132);
- a hinge (134) that movably attaches the base (130) to the top (132);
- a dispensing tip (136) defining an opening (138), wherein the product package (100) is configured to dispense the product (104) from the opening (138) defined by the dispensing tip (136); and
- a ring (140) protruding from an inner surface (142) of the top (132),

wherein the ring (140) encircles an end of the dispensing tip (136) and the opening (138) when the cap (108) is in the closed position, wherein the scented material (144) is disposed in a pattern around the ring (140), wherein the ring (140) and a portion of the inner surface (142) within the ring (140) are configured to block the opening (138) when the cap (108) is in the closed position.

2. The product package of claim 1, wherein the product (104) is one of a toothpaste, a mouthwash, a deodorant, an antiperspirant, a perfume, a powder, and a lotion.
3. The product package of claim 1, further comprising text and/or graphics (148) on the exterior of the product package (100), wherein the text and/or graphics (148) are configured to inform a consumer that the product package (100) includes the fragrance that may be sampled by moving the cap (108) from the closed position to the open position.
4. A method for manufacturing a product package (100), comprising:



disposing a product (104) into a vessel (102), the vessel (102) defining an orifice (114), wherein the product (104) is configured to be dispensed from the vessel (102) through the orifice (114);

providing a seal (106) and a cap (108), wherein the cap (108) comprises a base (130), a top (132), a hinge (134), a dispensing tip (136) and a ring (140), wherein the hinge (134) movably attaches the base (130) to the top (132), wherein the dispensing tip (136) defines an opening (138), wherein the product package (100) is configured to dispense the product (104) from the opening (138) defined by the dispensing tip (136), wherein the ring (140) protrudes from an inner surface (142) of the top (132), and wherein the ring (140) encircles an end of the dispensing tip (136) and the opening (138) when the cap (108) is in a closed position;

attaching a scented material (144) in a pattern around the ring (140);

attaching the seal (106) to the vessel (102), wherein the seal (106) is configured to seal the product (104) within the vessel (102); and

attaching the cap (108) to the vessel (102), wherein the cap (108) is repositionable from the closed position to an open position to release a fragrance from the scented material to an exterior of the product package (100), and from the open position to the closed position thereby substantially preventing the release of the fragrance to the exterior of the product package (100).

5. The method of claim 4, wherein the attaching of the cap (108) to the vessel (102) comprises screwing the cap (108) onto a threaded end (112) of the vessel (102).
6. The method of claim 4, wherein the disposing of the product (104) into the vessel (102) comprises disposing one of a toothpaste, a mouthwash, a deodorant, an antiperspirant, a perfume, a powder, and a lotion into the vessel.

### Patentansprüche

1. Produktverpackung (100), die umfasst:

ein Behälter (102), der eine Öffnung (114) definiert;

ein Produkt (104), das in dem Behälter (102) angeordnet und konfiguriert ist, aus dem Behälter (102) durch die Öffnung (114) abgegeben zu werden;

eine Kappe (108), die konfiguriert ist, an dem Behälter (102) befestigt zu werden, wobei die Kappe (108) von einer geschlossenen Position

in eine offene Position und von der offenen Position in die geschlossene Position repositionierbar ist; und

ein parfümiertes Material (144) mit einem Duft, wobei das parfümierte Material (144) an der Kappe (108) befestigt ist,

wobei die Produktverpackung (100) konfiguriert ist, den Duft des parfümierten Materials (144) an ein Äußeres der Produktverpackung (100) abzugeben, wenn sich die Kappe (108) in der offenen Position befindet, und die Abgabe des Dufts an das Äußere der Produktverpackung (100) im Wesentlichen zu verhindern, wenn sich die Kappe (108) in der geschlossenen Position befindet,

wobei die Kappe (108) umfasst:

eine Basis (130);

ein Oberteil (132);

ein Scharnier (134), das die Basis (130) bewegbar an dem Oberteil (132) befestigt;

eine Abgespitze (136), die eine Öffnung (138) definiert, wobei die Produktverpackung (100) konfiguriert ist, das Produkt (104) aus der von der Abgespitze (136) definierten Öffnung (138) abzugeben; und

einen Ring (140), der von einer Innenfläche (142) des Oberteils (132) vorsteht, wobei

der Ring (140) ein Ende der Abgespitze (136) und die Öffnung (138) umgibt, wenn

sich die Kappe (108) in der geschlossenen Position befindet, wobei das parfümierte

Material (144) in einem Muster um den Ring (140) herum angeordnet ist, wobei der Ring

(140) und ein Abschnitt der Innenfläche (142) innerhalb des Rings (140) konfiguriert

sind, die Öffnung (138) zu blockieren, wenn

sich die Kappe (108) in der geschlossenen Position befindet.

2. Produktverpackung nach Anspruch 1, wobei es sich bei dem Produkt (104) um eine Zahnpasta, ein Mundwasser, ein Deodorant, ein Antitranspirant, ein Parfüm, ein Puder oder eine Lotion handelt.

3. Produktverpackung nach Anspruch 1, die ferner Text und/oder Grafiken (148) auf der Außenseite der Produktverpackung (100) umfasst, wobei der Text und/oder die Grafiken (148) so konfiguriert sind, dass sie einen Verbraucher darüber informieren, dass die Produktverpackung (100) den Duft umfasst, der durch Bewegen der Kappe (108) aus der geschlossenen Position in die offene Position probiert werden kann.

4. Verfahren zur Herstellung einer Produktverpackung (100), das umfasst:

Anordnen eines Produkts (104) in einem Behälter (102), wobei der Behälter (102) eine Öffnung (114) definiert, wobei das Produkt (104) konfiguriert ist, es aus dem Behälter (102) durch die Öffnung (114) abgegeben zu werden;  
 Bereitstellen einer Dichtung (106) und einer Kappe (108), wobei die Kappe (108) eine Basis (130), ein Oberteil (132), ein Scharnier (134), eine Abgabespitze (136) und einen Ring (140) umfasst, wobei das Scharnier (134) die Basis (130) bewegbar an dem Oberteil (132) befestigt, wobei die Abgabespitze (136) eine Öffnung (138) definiert, wobei die Produktverpackung (100) konfiguriert ist, das Produkt (104) aus der von der Abgabespitze (136) definierten Öffnung (138) abzugeben, wobei der Ring (140) von einer Innenfläche (142) des Oberteils (132) vorsteht, und wobei der Ring (140) ein Ende der Abgabespitze (136) und die Öffnung (138) umgibt, wenn sich die Kappe (108) in einer geschlossenen Position befindet;  
 Befestigen eines parfümierten Materials (144) in einem Muster um den Ring (140);  
 Befestigen der Dichtung (106) an dem Behälter (102), wobei die Dichtung (106) konfiguriert ist, das Produkt (104) innerhalb des Gefäßes (102) abzudichten; und  
 Befestigen der Kappe (108) an dem Behälter (102), wobei die Kappe (108) von der geschlossenen Position in eine offene Position, um einen Duft von dem parfümierten Material an ein Äußeres der Produktverpackung (100) abzugeben, und von der offenen Position in die geschlossene Position repositionierbar ist, wodurch die Abgabe des Dufts an das Äußere der Produktverpackung (100) im Wesentlichen verhindert wird.

5. Verfahren nach Anspruch 4, wobei das Befestigen der Kappe (108) an dem Behälter (102) das Aufschrauben der Kappe (108) auf ein Gewindeende (112) des Behälters (102) umfasst.
6. Verfahren nach Anspruch 4, wobei das Anordnen des Produkts (104) in dem Behälter (102) das Anordnen einer Zahnpasta, eines Mundwassers, eines Deodorants, eines Antitranspirants, eines Parfüms, eines Puders oder einer Lotion in dem Behälter umfasst.

## Revendications

1. Emballage de produit (100), comprenant:

un récipient (102) délimitant un orifice (114);  
 un produit (104) disposé dans le récipient (102) et conçu pour être distribué à partir du récipient

(102) en passant par l'orifice (114);  
 un bouchon (108) qui est conçu pour être fixé au récipient (102), le bouchon (108) pouvant être repositionné d'une position fermée à une position ouverte, et d'une position ouverte à la position fermée; et  
 une substance parfumée (144) ayant un parfum, la substance parfumée (144) étant fixée au bouchon (108),  
 l'emballage de produit (100) étant conçu pour libérer le parfum de la substance parfumée (144) vers l'extérieur de l'emballage de produit (100) lorsque le bouchon est dans la position ouverte et pour empêcher sensiblement la libération du parfum vers l'extérieur de l'emballage du produit (100) lorsque le bouchon (108) est dans la position fermée,  
 dans lequel le bouchon (108) comprend:

une base (130);  
 une partie supérieure (132);  
 une articulation (134) qui fixe amovible la base (130) à la partie supérieure (132);  
 une pointe de distribution (136) délimitant une ouverture (138), l'emballage de produit (100) étant conçu pour distribuer le produit (104) depuis l'ouverture (138) délimitée par la pointe de distribution (136); et  
 une bague (140) faisant saillie d'une surface intérieure (142) de la partie supérieure (132), dans lequel la bague (140) entoure une extrémité de la pointe de distribution (136) et l'ouverture (138) lorsque le bouchon (108) est dans la position fermée, dans lequel la substance parfumée (144) est disposée selon un motif autour de la bague (140), dans lequel la bague (140) et une partie de la surface intérieure (142) dans la bague (140) sont conçues pour bloquer l'ouverture (138) lorsque le bouchon (108) est dans la position fermée.

2. Emballage de produit selon la revendication 1, dans lequel le produit (104) est l'un parmi un dentifrice, un bain de bouche, un déodorant, un antisudorifique, un parfum, une poudre et une lotion.
3. Emballage de produit selon la revendication 1, comprenant en outre un texte et/ou des éléments graphiques (148) sur l'extérieur de l'emballage de produit (100), dans lequel le texte et/ou les éléments graphiques (148) sont conçus pour informer un consommateur que l'emballage de produit (100) comprend le parfum qui peut être testé en déplaçant le bouchon (108) de la position fermée à la position ouverte.
4. Procédé de fabrication d'un emballage de produit

(100), comprenant:

- la disposition d'un produit (104) dans un récipient (102), le récipient (102) délimitant un orifice (114) dans lequel le produit (104) est conçu pour être distribué à partir du récipient (102) en passant par l'orifice (114); 5
- l'utilisation d'un joint d'étanchéité (106) et un bouchon (108), dans lequel le bouchon (108) comprenant une base (130), une partie supérieure (132), une articulation (134), une pointe de distribution (136) et une bague (140), dans lequel l'articulation (134) fixant amovible la base (130) à la partie supérieure (132), dans lequel la pointe de distribution (136) délimite une ouverture (138), dans lequel l'emballage de produit (100) est conçu pour délivrer le produit (104) à partir de l'ouverture (138) délimitée par la pointe de distribution (136), dans lequel la bague (140) fait saillie d'une surface intérieure (142) de la partie supérieure (132), et dans lequel la bague (140) entoure une extrémité de la pointe de distribution (136) et l'ouverture (138) lorsque le bouchon (108) est dans une position fermée; 10
- la fixation d'une substance parfumée (144) selon un motif autour de la bague (140); 15
- la fixation du joint d'étanchéité (106) au récipient (102), dans lequel le joint d'étanchéité (106) est conçu pour isoler le produit (104) à l'intérieur du récipient (102); et 20
- la fixation du bouchon (108) au récipient (102), dans lequel le bouchon (108) peut être repositionné de la position fermée à une position ouverte pour libérer un parfum provenant de la substance parfumée vers l'extérieur de l'emballage de produit (100), et de la position ouverte à la position fermée empêchant ainsi sensiblement la libération du parfum vers l'extérieur de l'emballage de produit (100). 25
5. Procédé selon la revendication 4, dans lequel la fixation du bouchon (108) au récipient (102) consiste à visser le bouchon (108) sur une extrémité fileté (112) du récipient (102). 30
6. Procédé selon la revendication 4, dans lequel la disposition du produit (104) dans le récipient (102) consiste à disposer l'un parmi un dentifrice, un bain de bouche, un déodorant, un antisudorifique, un parfum, une poudre et une lotion dans le récipient. 35
- 40
- 45
- 50
- 55

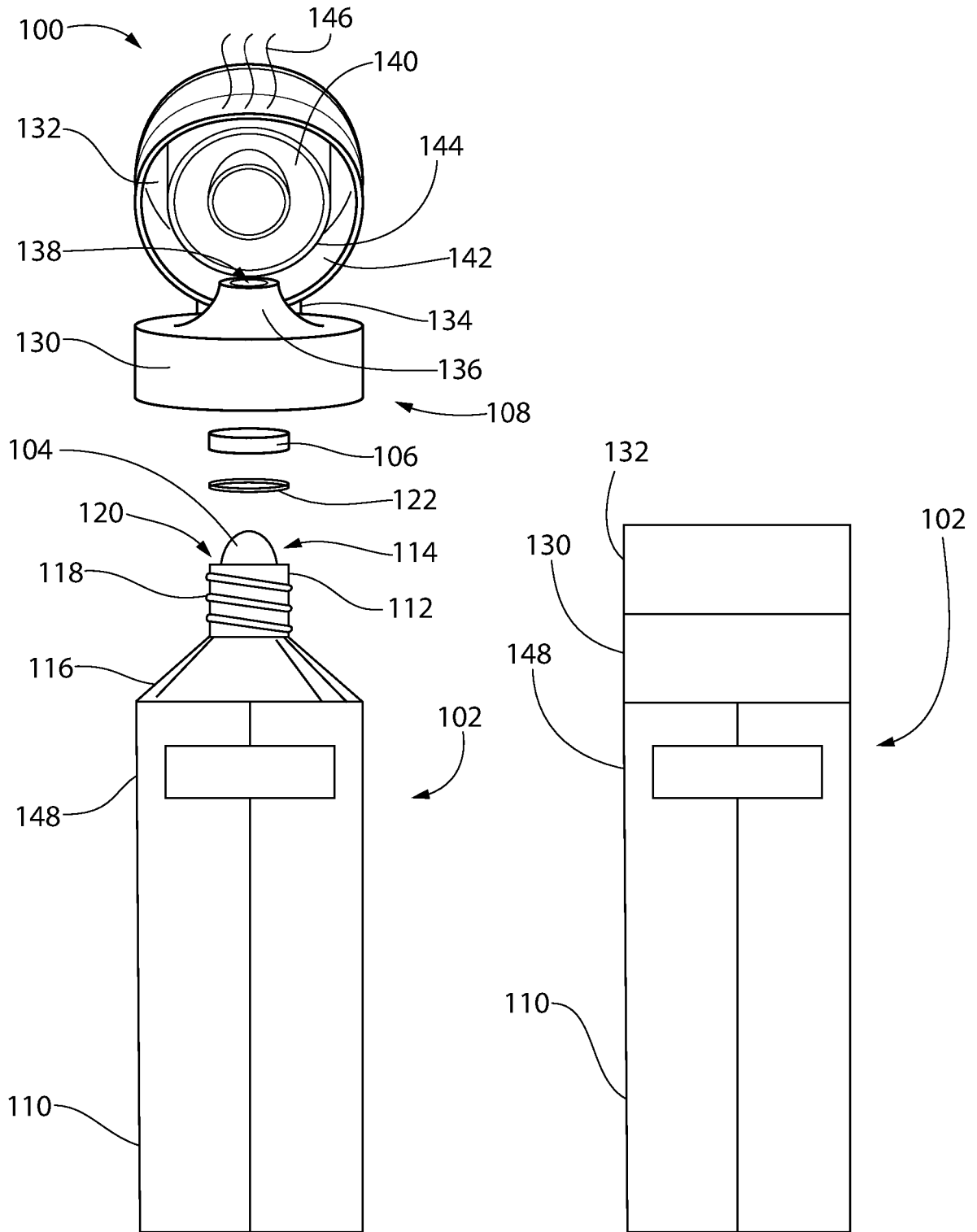


FIG. 1

FIG. 2

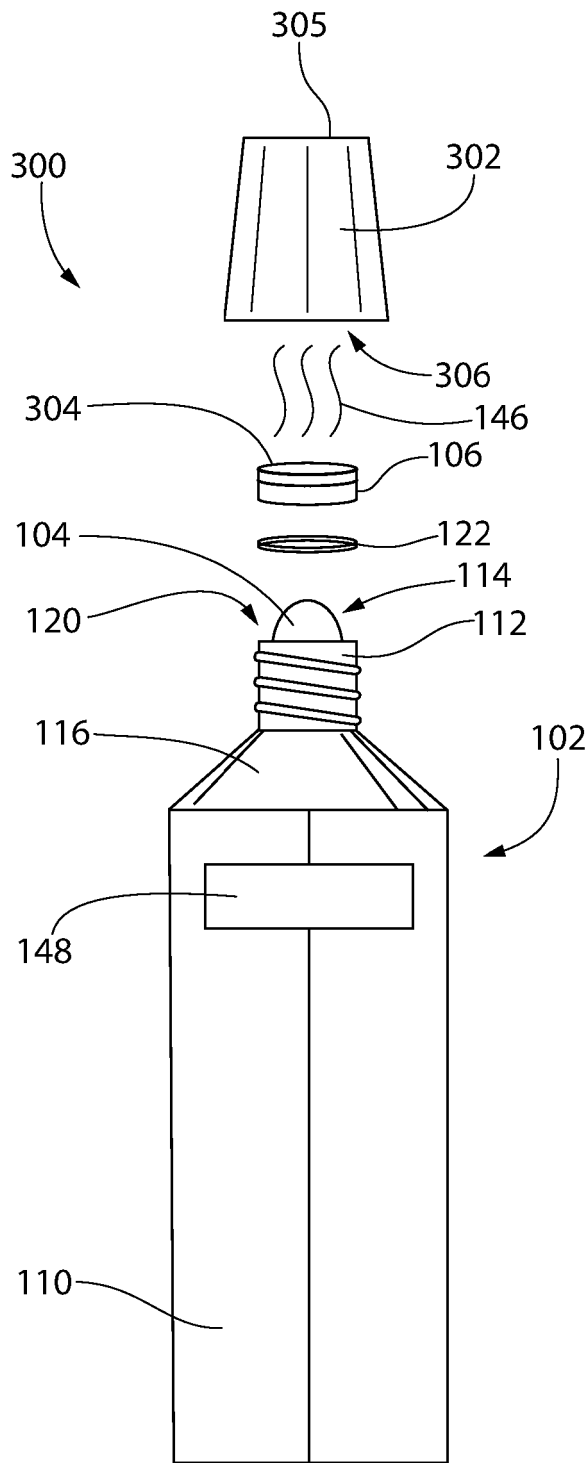


FIG. 3

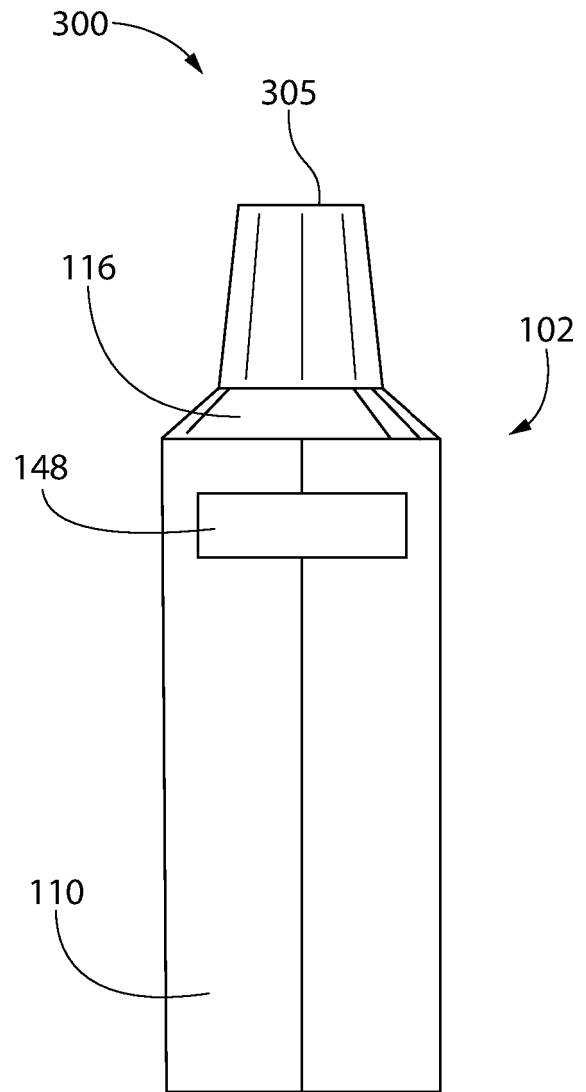


FIG. 4

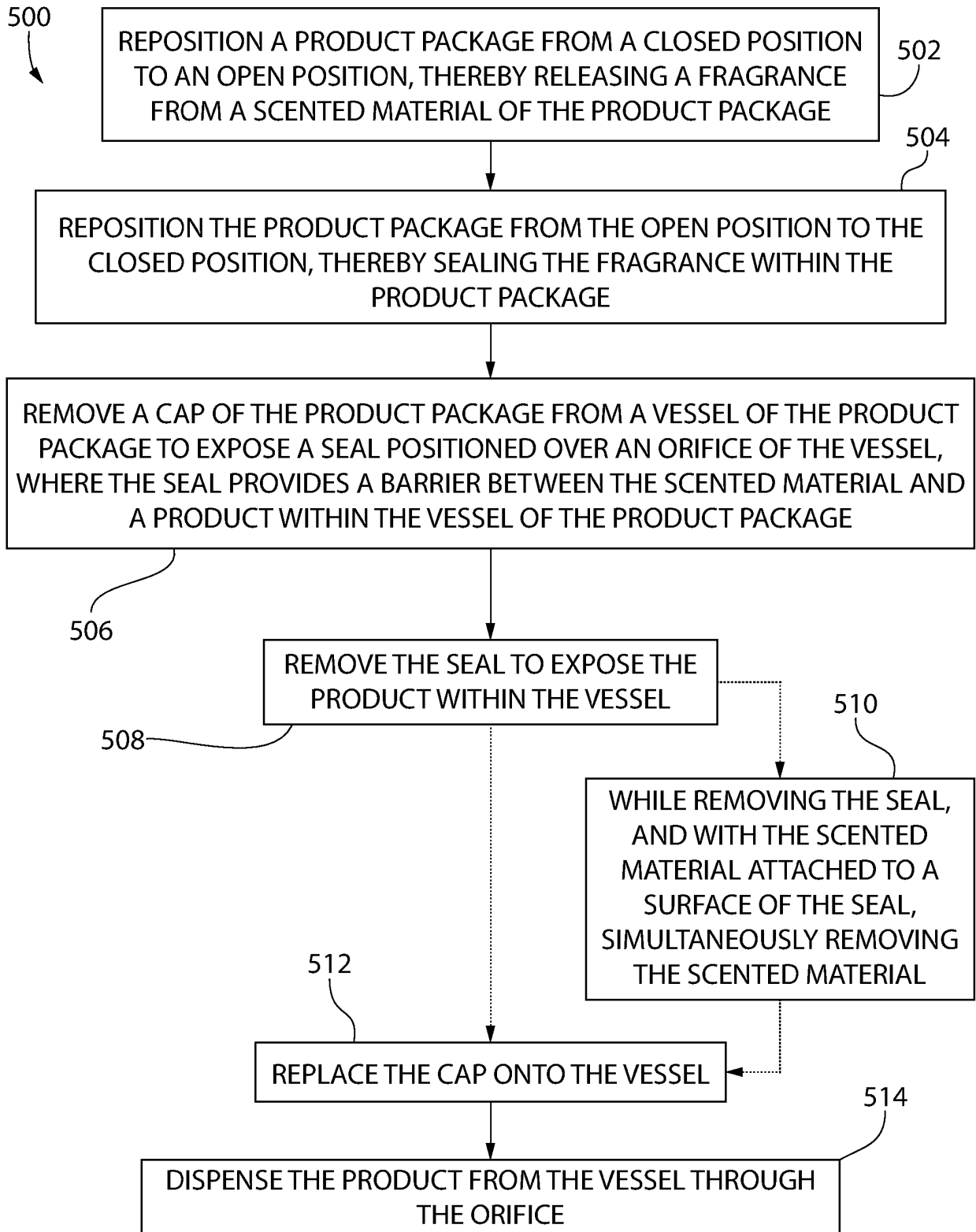


FIG. 5

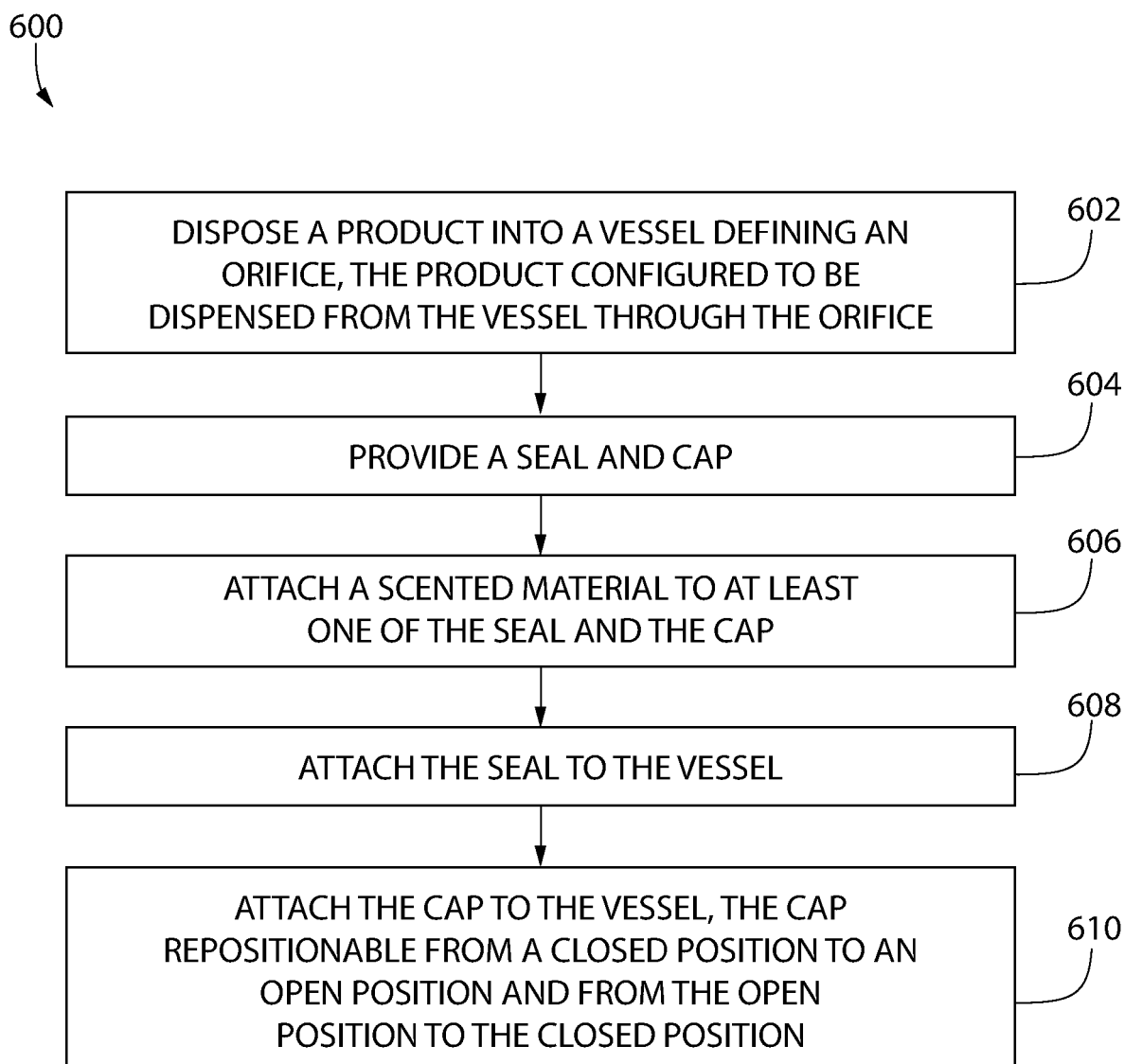


FIG. 6

**REFERENCES CITED IN THE DESCRIPTION**

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