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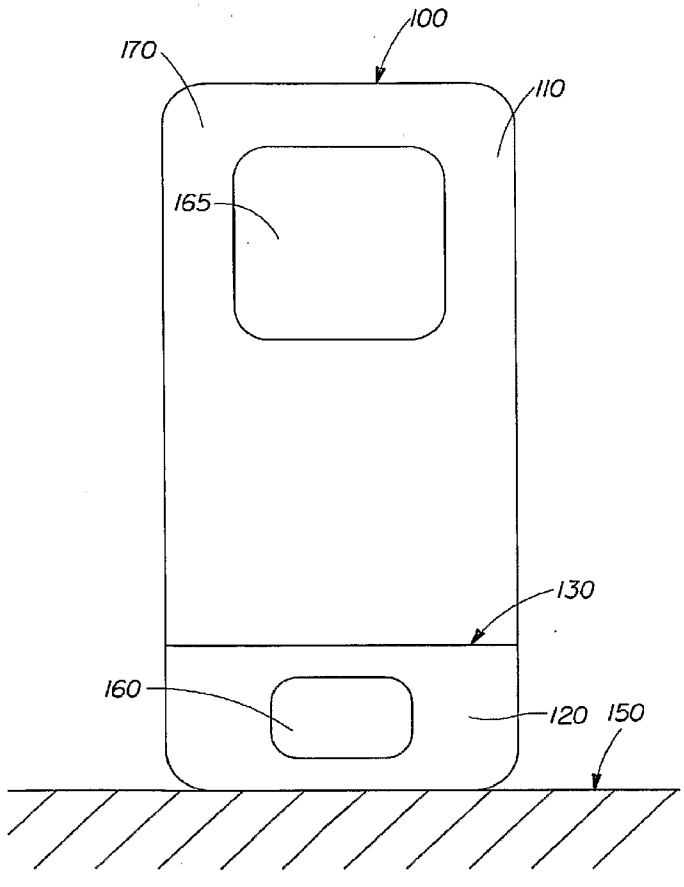
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(54) Title: CONCENTRATED COMPOSITIONS CONTAINED IN BOTTOM DISPENSING CONTAINERS



(57) Abstract: The present invention relates to, concentrated detergent compositions in bottom dispensing containers.

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CONCENTRATED COMPOSITIONS CONTAINED IN BOTTOM DISPENSING CONTAINERS

FIELD OF THE INVENTION

The present invention relates to, concentrated detergent compositions in bottom dispensing containers.

BACKGROUND OF THE INVENTION

Liquid compositions, such as detergents have traditionally been sold in opaque bottles. However, use of clear bottles can be aesthetically appealing to consumers as they can see the color of the product, its consistency, and suspended particles if they are present. However; the use of clear bottles can lead to destruction of colorant by ultraviolet light. (Also know as UV or UV light) By UV light is meant light having wavelength of about 250 to about 460 nanometers (nm). Specifically, UVA generally is in range 320-400 nm, UVB about 290 to 320 nm and UVC below 290 nm, down to about 250 nm.

Furthermore, the need for updated packaging is particularly difficult to satisfy for heavy duty liquid detergents and other liquid consumer products since the liquid product poses challenges to the packaging engineer. For instance, the package must still permit convenient dispensing by consumers, who range in age from children through middle aged adults and up into the older population. In addition, the difficulties in ensuring structural integrity of the package are markedly increased. Moreover, it is desirable to provide such packaging at a low cost to consumers.

Consequently, the need remains for a consumer product convenient and easy to use which is aesthetically appealing to consumers which will resist the destruction by UV light of the container and/or the components of any composition therein.

SUMMARY OF THE INVENTION

One aspect of the invention relates to an article of commerce for storing and dispensing liquid compositions comprising:

(a) a transparent or translucent bottom dispensing container; and

(b) a transparent or translucent concentrated detergent composition, stored in the bottom dispensing container, wherein the transparent or translucent concentrated detergent composition comprises:

(i) a surfactant;

(ii) from about 1% to about 50%, by weight of the composition, of water; and

(iii) a UV absorbing material.

Another aspect of the invention relates to an article of commerce for storing and dispensing liquid compositions comprising:

(a) a transparent or translucent bottom dispensing container having a wall, wherein the wall includes a UV absorbing material; and

(b) a transparent or translucent concentrated detergent composition, stored in said bottom dispensing container, wherein the transparent or translucent concentrated detergent composition comprises:

(i) a surfactant; and

(ii) from about 1% to about 50%, by weight of the composition, of water.

Another aspect of the invention relates to an article of commerce for storing and dispensing liquid compositions comprising:

(a) a transparent or translucent bottom dispensing container having one or more polymeric labels, wherein said polymeric label is transparent or translucent and comprises indicia and UV absorbing material; and

(b) a transparent or translucent concentrated detergent composition, stored in said bottom dispensing container.

BRIEF DESCRIPTION OF THE DRAWINGS

In the accompanying drawings:

FIGURE 1 is an illustrative example of a front view of one possible bottom dispensing container.

FIGURE 2 is a section of the bottom dispensing container of FIGURE 1.

FIGURE 3 is an illustrative example of a front view of another possible bottom dispensing container.

FIGURE 4 an exploded view of the bottom dispensing container of FIGURE 3.

FIGURE 5 is a section of the bottom dispensing container of FIGURE 3 showing the valve in the closed position.

FIGURE 6 is a section of the valve of the bottom dispensing container of FIGURE 3.

FIGURE 7 is a section of the bottom dispensing container of FIGURE 3 showing the valve in the open position.

FIGURE 8 is an illustrative example of the bottom dispensing container illustrated in FIGURE 3 being gripped by a human hand.

FIGURE 9 is an illustrative example of another bottom dispensing container.

DETAILED DESCRIPTION OF THE INVENTION

1). UV absorbing material - The bottom dispensing container, one or more polymeric labels attached thereto and/or the concentrated detergent composition comprise a UV absorbing material. The UV absorbing material protects UV sensitive ingredients, such as dyes, colorants, enzymes and other components present in the composition from harmful UV radiation. The presences of UV absorbing material in the bottom dispensing container or any polymeric labels attached thereto additionally acts to protect the bottom dispensing container material from harmful UV radiation.

Any suitable UV absorbing material may be used. In one embodiment the UV absorbing material is selected from UV absorbers, fluorescent dyes, and mixtures thereof.

The amount of UV absorbing material present will depend upon a number of factors such as: where the material will be, i.e. in a polymeric label, in the concentrated detergent composition and/or the bottom dispensing container; which UV absorbing material is being used; and/or which UV sensitive materials are present in the concentrated detergent composition.

In one embodiment the amount of UV absorbing material present in the concentrated detergent composition is from about 0.001% to about 5%, more specifically from about 0.05% to about 1%, by weight of the concentrated detergent composition.

In another embodiment the amount of UV absorbing material present in any one polymeric label is from about 0.0001% to about 5%, more specifically from about 0.05% to about 1%, by weight of a polymeric label.

In another embodiment the amount of UV absorbing material present in the bottom dispensing container is from about 0.0001% to about 3%, more specifically from about 0.05% to about 1%, by weight of the bottom dispensing container.

UV Absorbers - Among families of UV absorbers which may be used are benzophenones, salicyclates, benzotriazoles, hindered amines and alkoxy (e.g., methoxy) cinnamates.

Recitation of these classes is not meant to be a limitation on other classes of UV absorbers which may be used.

Water soluble UV absorbers particularly useful for this application include, but are not limited to: phenyl benzimidazole sulfonic acid (sold as Neo Heliopan, Type Hydro by Haarmann and Reimer Corp.), 2-hydroxy-4- methoxybenzophenone-5-sulfonic acid (sold as Syntase 230 by Rhone-Poulenc and Uvinul MS-40 by BASF Corp.), 2-(2- hydroxy-5-methylphenyl) benzotriazole (sold as Tinuvin P by Ciba-Geigy Corp. of Tarrytown, N.Y), sodium 2,2'-dihydroxy-4,4'-dimethoxy-5- sulfobenzophenone (sold as Uvinul DS-49 by BASF Corp.), and PEG-25 paraaminobenzoic acid (sold as Uvinul P-25 by BASF Corp.).

Other UV absorbers which may be used are defined in McCutcheon's Volume 2, Functional Materials, North American Edition, published by the Manufacturing Confectioner Publishing Company (1997), a copy of which is hereby incorporated by reference into the subject application.

UV absorber may be present in the formulation with or without fluorescent dye. The amount of UV absorber used in the formulation is from about 0.001% to about 3%, more specifically from about 0.05% to about 1%.

Fluorescent Dyes - Classes of fluorescent dyes which may be used include stilbeness; coumarin and carbostyril compounds; 1,3-diphenyl-2-pyrazolines; naphthalimides; benzazdyl substitution products of ethylene, phenylethylene, stilbene, thiophene; and combined hateroaromatics.

Among fluorescent dyes which may be used are also the sulfonic acid salts of diamino stilbene derivatives such as taught in U.S. Pat. No. 2, 784,220 to Spiegler or U.S. Pat. No. 2612,510 to Wilson et al., both of which are hereby incorporated by reference. Polymeric fluorescent whitening agent as taught in U.S. Pat. No. 5,082,578, hereby incorporated by reference into the subject application, are also contemplated by this invention.

Optiblanc MTB and Optiblank NW (Stilbene triazine derivatives) are among the trade names of dyes which may be used. These are available from 3V Sigma, S.p.A. of Bergamo, Italy.

Finally, other fluorescent dyes which may be used are defined in McCutcheon's Volume 2, Functional Materials, North American Edition as noted above in connection with UV absorbers.

If so desired, different fluorescent dye could be blended together in the packaging material or label of the invention.

Fluorescent dyes particularly useful for this application include, but are not limited to: the distyrylbiphenyl types such as Tinopal CBS-X from Ciba Geigy Corp. and the cyanuric chloride/diaminostilbene types such as Tinopal AMS, DMS, 5BM, and UNPA from Ciba Geigy Corp. and Blankophor DML from Mobay. Fluorescent dye may be present in the container with or without UV absorbers. If present, fluorescent dye is used in the formulation, containers or label each optionally at from about 0.001% to about 3%, specifically between about 0.001% and about 0.5%, by weight of the composition.

Mixtures thereof - In one embodiment the UV absorbing material may comprise a mixture of fluorescent dyes and/or UV absorbers.

2) Bottom Dispensing Container - The articles of commerce of the instant invention comprise a transparent or translucent bottom dispensing container. In one embodiment the transparent or translucent bottom dispensing container may also optionally have one or more polymeric labels attached thereto.

In one embodiment the bottom dispensing containers include an opening on the bottom for dispensing the liquid and actuation means for dispensing the liquid. One type of bottom dispensing container is a squeeze actuated container. Squeeze containers are usually formed from a resiliently deformable material and have an opening that may have a valve to control the flow through the opening. One type of useful valve is an on-off valve that is actuated by rotating the valve. Another particularly useful valve is a pressure-responsive dispensing valve that controls the flow according to a pressure difference across the valve. Such a valve can be configured to be normally closed and to assume an open configuration when the container is squeezed. Optional features of bottom dispensing squeeze containers include a cap to prevent loss of the liquid between dispensing. Bottom dispensing containers of rigid materials having pump mechanisms are also suitable for use herein.

Bottom dispensing containers have several advantages over other packaging configurations. The container does not need to be inverted, requiring fewer user motions for dispensing and providing greater positioning and dispensing control than for containers that dispense by pouring or inverting and squeezing. Thus for example, the user does not have to rotate his wrist and wait for a viscous liquid to travel to the opening, or have trouble controlling the flow rate when the container is full as in the use of containers adapted to pour from the top. Bottom dispensing containers can also be configured to allow nearly all of the liquid to be dispensed--something usually not possible with containers having a pump on the top. Bottom dispensing containers having pressure-responsive valves also have the advantage of not requiring a separate closure mechanism.

The bottom dispensing container may be made of any suitable material as long as the material is transparent or translucent. In one embodiment the bottom dispensing container comprises a polymeric material, although other containers such as paperboard cartons with film windows and glass bottles may be used. In one embodiment the bottom dispensing container, is a polymeric material selected from polypropylene (PP), polyethylene (PE), polycarbonate (PC), polyamides (PA) polyethylene terephthalate (PET), polyvinylchloride (PVC), polystyrene (PS), and combinations thereof.

The bottom dispensing container of the present invention may be of any form or size suitable for storing and packaging liquids for household use. For example, in one embodiment, the bottom dispensing container has a capacity, i.e. the amount of compact liquid detergent composition that it can releasably contain therein, of from about 100 ml to about 3000 ml, more specifically from about 250 ml to about 1500 ml. In one embodiment, the bottom dispensing container is suitable for easy handling, for example the bottom dispensing container may have a handle or a part with such dimensions as to allow easy lifting or carrying the bottom dispensing container with one hand.

In another embodiment, the bottom dispensing container has a means suitable for pouring the liquid detergent composition and means for reclosing the bottom dispensing container. The pouring means may be of any size or form but, preferably will be wide enough for conveniently dosing the concentrated detergent composition. The optional closing means may be of any form or size but usually will be screwed on, or clicked on, or otherwise attached to the container to close the bottom dispensing container. The optional

closing means may be cap which can be detached from the bottom dispensing container. Alternatively, the optional cap can still be attached to the bottom dispensing container, whether the bottom dispensing container is open or closed. The optional closing means may also be incorporated in the container.

In one embodiment, the bottom dispensing container is a bottom dispensing bottle.

The bottom dispensing container may be formed by any suitable process such as, thermoforming, blow molding, injection-molding, or injection stretch blow molding (ISBN). In one embodiment, when the UV absorbing material is present in the wall of bottom dispensing container, the UV absorbing material is added to the glass or polymeric material of which the bottle is made while it is molten and mixed therewith prior to forming the bottom dispensing container.

In one embodiment, the bottom dispensing container includes one or more walls, which comprise one or more layers, one or more of which may include a UV absorbing material. The layers may, if desired, be very thin, e.g., less than 0.01 inch thick and may range to and above 0.2 inches in thickness, especially from 0.015 inches to 0.02 inches on the low end up to 0.17 or 0.2 on the high end.

In another embodiment, the bottom dispensing container may comprise a front and back on opposite sides of the bottom dispensing container.

Illustrative suitable bottom dispensing containers may be found in U.S. Patent No. 6,705,492, issued on March 16, 2004 to Lowry; U.S. Patent No. 4,969,581, issued on November 13, 1990 to Seifert et al; U.S. Patent No. 6,494,346, issued on December 17, 2002 to Gross et al; U.S. Patent No. 5,626,262, issued on May 6, 1997 to Fitten et al; U.S. Patent No. 5,655,687, issued on August 12, 1997 to Fitten et al; U.S. Patent No. 4,728,006, issued on March 1, 1988 to Drobish et al; U.S. Patent No. 6,269,837, issued on August 7, 2001 to Arent et al; U.S. Patent No. 4,749,108, issued on June 7, 1988 to Dornsbusch et al; U.S. Patent No. 6,675,845, issued on January 13, 2004 to Volpenheim et al; WO 92/21569 entitled "Inverted Dispenser", published December 10, 1992 in the name of Canada Inc; WO 01/04006 entitled "Container", published January 18, 2001 in the name of Unilever; EP 21,545 published January 7, 1981 in the name of The Procter and Gamble Company; and EP 811,559 published December 10, 1997 in the name of Unilever. Illustrative examples of bottom dispensing containers may also be found in copending U.S.

Provisional Patent Application No 60/797,975 entitled "Fabric Treatment Dispensing Package" filed on 05/05/2006 in the name of Ann Dewree, et. al., Attorney Docket Number 10403P.

Polymeric Label - It may be desirable to have a label on the container. In one embodiment, of the present invention the bottom dispensing container has one or more polymeric labels. In another embodiment the polymeric label is translucent or transparent and includes indicia and a UV absorbing material.

A label provides a convenient point-of-purchase site for the indicia and the like. The term "label" is used herein in the broadest sense to include the tangible medium that may contain a UV absorbing material and one or more indicia, that may be expressed including, by way of illustrative example, the placing of indicia directly onto a container (e.g., printing or molding), the printing of indicia on a substrate wherein the substrate is placed on, or associated therewith, the outside surface of the container, or packaging such as boxes that enclose the container. In one embodiment, an olfactory scent descriptor may also be provided via a label (e.g., packaging). For example, the label itself may be scented, i.e., comprises a scent.

The optional labels of the present invention may generally mimic the shape of the bottom dispensing container. Illustrative examples of suitable labels include partially wrap-around labels, wrap-around labels, shrink-wrap labels, stickers, in-mold labels, hang-tags, labels conveying the name of the product and combinations thereof.

In one embodiment, the label is a clear substrate such that the indicia may be printed onto the label and the container or composition therein (if the container is transparent/translucent) is substantially visible by the consumer through the label where the indicia is absent. Without wishing to be bound by theory, a clear label may maximize the color of the composition or the tint of the container in communicating to the consumer.

In another embodiment, the label has a background color to further communicate to the user. For example, if the scents or scent identifiers are magnolia and orange, the label may have an orange background color to further communicate this scent experience to the user given the visual association of an orange color to orange fruit and/or orange blossoms and hence the orange scent.

In one embodiment, the label is "shrink wrapped" on the container. In another optional embodiment, the label is adhered to the container by an adhesive.

The UV absorbing material may be present on the polymeric label in any suitable fashion. Illustrative examples include, incorporation of the UV absorbing material in a label or the label's adhesive or overprint varnishes/coatings, or inner coextruded "adhesive" polymer layer on a container, particularly to reduce the destruction by UV light UV sensitive ingredients in a concentrated detergent composition held within the container or to protect the material of which the container is made or ingredients therein. In accordance with the present invention, the level of UV absorbing material in the label may be small (about 0.001% to about 3%, specifically from about 0.05 to 0.5 wt.%).

The labels, when present, may be made of any suitable polymeric material, e.g., polypropylene, polyethylene (HDPE, MDPE, LDPE, LLDPE), polypropylene (PP, OPP), blends of PP and PE, polyvinyl. chloride (PVC), polyethylene terephthalate (EPET, PETG, OPET) polystyrene (PS, HIPS) and combinations thereof.

The present invention finds particular use in transparent or translucent labels especially for transparent or translucent containers. The invention is also of particular use where the transparent or translucent container contains a transparent or translucent concentrated detergent composition although the concentrated detergent composition may also be opaque.

In one embodiment, the label is a transparent or translucent, in-mold or pressure--sensitive, plastic label. More specifically, the label is applied to a clear, transparent or translucent bottle. A concentrated detergent composition's colorant, perfume and other organic chemical components can degrade when exposed to UV light, which is strong enough to break chemical bonds. The use of a UV absorbing material and in the label or the label's adhesive or overprint varnishes/coatings would protect the concentrated detergent composition and preserve its appearance, odor and quality, and also would protect the container or other type of plastic container from degradation.

The UV absorbing material may also be added to the hot melt adhesive on an in-mold label, or to the pressure-sensitive adhesive on the back of a pressure-sensitive label. Alternatively, the UV absorbing material may be added to the overprint varnishes or top coatings.

A UV absorbing material may be added to clear plastic labels (in-mold, or top coatings on the label adhesives used for PS and IML's, pressure-sensitive or stretch or shrink-on label types) to add protection from UV light exposure for the product and/or the container, more specifically, plastic or polymeric container. Additive levels can range from about 0.001 wt. % to about 0.3 wt. %, specifically from about 0.1% to about 0.3% wt. Incorporation into the label's adhesive facilitates the manufacturing process, as the plastic film material would remain the same as non-UV protected label stock. This also would be true for overprint coatings.

The label, when present, may cover from e.g., about 50% to about 95% of the transparent or translucent surface of the container, particularly if it is a wrap-around type label. In one embodiment, the label covers from about 50% to about 95% of the total surface of the container, irrespective of whether all or part of the surface is transparent or translucent. For maximum protection, a label containing the UV absorbing material may also be applied to a container which contains a UV absorbing material. Likewise, the concentrated detergent composition therein may contain a UV absorbing material, if desired.

Label thickness for an IML (in mold label) usually ranges from about 0.1mm to about 2 mm, but could be thinner for stretch and shrink-on labels.

Indicia

As used herein, "indicia" refers to scent, branding, packaging, properties, sound, words, phrases, letters, characters, brand names, company names, company logos or symbols, descriptions, logos, icons, designs, designer names, symbols, motifs, insignias, figures, marks, signals, colors, textures, shapes, tokens, advertisements, and combinations thereof.

In one embodiment, the indicia is selected from words, phrases, brand names, company names, descriptions, perfume names, designer names, advertisements, and combinations thereof. The indicia may be in one or more than one language.

In another embodiment, one or more indicia may be printed directly on the bottom dispensing container. In another embodiment, one or more indicia may be embossed on the container.

The various different and optional embodiments of the bottom dispensing container, deformable container, and/or dispensing cap may be further explained and illustrated with reference to Figures 1 to 9.

Figure 1, is also an illustrative example of a bottom dispensing container **100**, comprising a deformable container **110** and a dispensing cap **120** which is removably attached thereto. The deformable container **110** has a bottom end **130** with an opening **140** (Figure 2) therein. The dispensing cap **120** is removably attached to the bottom end **130** of the deformable container **110** covering the opening **140**. The dispensing cap **120** is also shown resting on the surface **150** in an upright position.

Figure 1 is an illustrative example of a bottom dispensing container **100** having indicia **160** and **165** associated therewith. The indicia **160** and **165**, which may be the same or different are in association with the deformable container **110** and the dispensing cap **120**. In this embodiment the indicia in association therewith **160** and **165** are two labels which are fastened to the deformable container **110** and the dispensing cap **120** via adhesive.

The deformable container **110** of Figure 1 also has a top end **170** which is distal to the bottom end **130**. The deformable container **110** is also capable of resting on the surface **150** in an upright position with top end **170** contacting the surface **150**, that is, now inverted with respect to the deformable container **110** as shown in Figure 1.

As noted previously any portion of the bottom dispensing container **100** such as the deformable container **110** and/or the dispensing cap **120** can be translucent or transparent.

Figure 2, is a section view of one possible embodiment of the bottom dispensing container **100** of Figure 1 along line 2 of Figure 1. This section view shows the concentrated detergent composition **180** and the optional valve **175**, through which the concentrated detergent composition **180** is dispensed. Also shown is the wall **190** of the deformable container **110**.

Figure 3 is another alternative example of a bottom dispensing container **300**, comprising a deformable container **310** and a dispensing cap **350** which is removably attached thereto. The deformable container **310** is attached, e.g. by snap fitting, to a dispensing end **320** having a base **330** for supporting the deformable container **310** in an

upright position with a dispensing opening **340** therein. The dispensing cap **350** covers the opening **340** and the valve **430** (Figure **5**). The dispensing cap **350** supports the deformable container **310** in an upright position. The dispensing cap **350** is removably attached to the deformable container **310** over the dispensing opening **340** and covering the valve **430** and opening **340**. The dispensing cap **350** is formed of a cup shaped member **410** having a face **360** and a cylindrical wall **370** which extends from the face to define an interior **380** of the dispensing cap **350**. The face **360** of the dispensing cap **350** is also shown resting on the surface **390** in an upright position. The dispensing cap **350** is capable of receiving and dispensing concentrated composition **450** (Figure **5**), more specifically dispensing the concentrated composition within a washing machine.

The bottom dispensing container **300** having indicia **400** and **405** associated therewith. The indicia **400** and **405**, which may be the same or different are in association with the deformable container **310** and the dispensing cap **350**. In this embodiment the indicia in association therewith **400** and **405** are two labels which are fastened to the deformable container **310** and the dispensing cap **350** via adhesive.

Figure **4** is an exploded view of the bottom dispensing container **300** of Figure **3**, which shows the dispensing cap **350** as releasably attached to the deformable container **310**.

Figure **5** is a section view of one possible embodiment of the bottom dispensing container **300** of Figure **4** along line **5**. This sectional view shows the inner cavity **440** which is for storing the concentrated detergent composition **450** and the optional valve **430**, through which the concentrated detergent composition **450** is dispensed. Also shown is the wall **420** of the deformable container **310**. The valve **430** is shown in the closed position, such that concentrated detergent composition **450** is prevented from flowing through the dispensing opening **340**.

Figure **6** is a section view of one possible embodiment of the valve **430** of Figure **5** along line **6**. The valve **430** has a small cross slit **460** therethrough.

Figure **7** is a section view of one possible embodiment of the bottom dispensing container **300** of Figure **4** along line **5**. The valve **430** is shown in the open position, such

that concentrated detergent composition **450** is allowed to flow from the inner cavity **440** and through the dispensing opening **340**.

The valve **430** in one embodiment only allows the concentrated detergent composition **450** to pass through the dispensing opening **430** when it is subjected to a pressure greater than that of the concentrated detergent composition **450** under normal gravity.

Alternatively, the valve **430** in another embodiment is a bimodal valve wherein the bimodal valve has a first mode of operation capable of retaining the concentrated detergent composition **450** without leakage when the deformable container **310** is subjected to unintentional external forces, such as can be seen illustrated in Figure **5**, and a second mode of operation capable of dispensing the concentrated detergent composition **450** when the deformable container **310** is subjected to external forces intentionally applied by a user, such as can be seen illustrated in Figure **7**.

Figure **8** is an illustrative example of the bottom dispensing container **300** of Figure **3** being gripped by a human hand **500** and dispensing the concentrated detergent composition **450**. (Note: the human hand or parts thereof, are not part of the scope of the present invention).

Figure **9** is an illustrative example of another possible container. In Figure **9**, the bottom dispensing container **700** comprises a spherical deformable container **610** and a rectangular dispensing cap **620**. The bottom dispensing container deformable container and dispensing cap of the present invention may be any shape.

3) Concentrated Detergent Compositions

The concentrated detergent composition may be any transparent or translucent cleaning consumer products such as light duty liquid detergents (hand dishwashing detergents or "LDL"), light duty detergents ("LDD"- laundry detergents designed to be used on delicate fabrics such as silks, wool and the like) heavy duty liquid laundry detergents ("HDL"), automatic dishwashing gels, personal washing compositions, such as body washes, shampoos or fabric softeners. In one embodiment the composition is a transparent or translucent HDL. The UV absorbing material in the container, polymeric label and/or composition is intended to protect against destruction of UV sensitive ingredients, such as dyes, colorants, enzymes and other components in the product.

As used herein "concentrated detergent compositions" refers to compositions containing a lower amount of water, compared to conventional compositions, such as liquid detergent compositions.

The concentrated detergent compositions may be of any suitable form, but are specifically not a solid, (i.e., tablet or granule) or gas form. Examples include liquids, gels, liquid-gel and the like. The compositions herein suitably have a sufficiently fluid rheology that they may be dosed either by the consumer, or by automated dosing systems controlled by domestic or commercial laundry appliances.

In general, the compositions herein may be isotropic or non-isotropic. However, they do not generally split into separate layers such as phase split detergents described in the art. One , illustrative composition is non-isotropic and on storage the composition is either (i) free from splitting into two layers or, (ii) if the composition splits into layers, a single major layer is present and comprises at least about 90% by weight, more specifically more than about 95%, even more specifically more than about 99% of the composition. Other illustrative compositions are fully isotropic.

"Gel" as used herein includes a shear thinning gel with a pouring viscosity in the range of from 1,000 to 5,000 mPas (milli Pascal seconds), more specifically less than 3,000 mPas, even more specifically less than 1,500 mPas. Gels include thick liquids. More specifically, a thick liquid may be a Newtonian fluid, which does not change its viscosity with the change in flow condition, such as honey or syrup. This type of thick liquid is very difficult and messy to dispense. A different type of liquid gel is shear-thinning, i.e. it is thick under low shear (e.g., at rest) and thin at high flow rates. The rheology of shear-thinning gels is described in more detail in the literature, see for example WO04027010A1 Unilever.

Other illustrative compositions according to the present invention are pourable gels specifically having a viscosity of at least 1,500 mPa.s but no more than 6,000 mPa.s, more specifically no more than 4,000 mPa.s, even more specifically no more than 3,000 mPa.s and even more specifically still no more than 2,000 mPa.s.

Yet other illustrative compositions according to the present invention are non-pourable gels specifically have a viscosity of at least 6,000 mPa.s but no more than 12,000

mPa.s, more specifically no more than 1 0,000 mPa.s, even more specifically no more than 8,000 mPa.s and even more specifically still no more than 7,000 mPa.s.

Illustrative specific liquid or gel form compositions herein include heavy-duty liquid laundry detergents for use in the wash cycle of automatic washing-machines and liquid finewash and/or color care detergents. These suitably have the following rheological characteristics: viscosity of no more than 1,500 mPa.s, more specifically no more than 1,000 mPa.s, still more specifically, no more than 500 mPa.s. In one embodiment, these compositions have a viscosity of from 30 to 400 mPas and are either Newtonian or shear-thinning. In these definitions and unless specifically indicated to the contrary, all stated viscosities are those measured at a shear rate of 21 s^{-1} and at a temperature of 25°C.

Viscosity herein can be measured with any suitable instrument, e.g., a Carrimed CSL2 Rheometer at a shear rate of 21 sec^{-1}.

The concentrated detergent compositions may be of any color, or shade. They may include one or more suspended phases, particles or combinations thereof. The concentrated detergent compositions of the invention are capable of suspending particulate solids, although particularly preferred are those systems where such solids are actually in suspension. The solids may be undissolved electrolyte, the same as or different from the electrolyte in solution, the latter being saturated electrolyte. They may be materials which are substantially insoluble in water alone. Examples of such substantially insoluble materials are aluminosilicate builders and particles of calcite abrasive.

As used herein, when a composition and/or method is "substantially free" of a specific ingredient(s) it is meant that specifically none of the specific ingredient(s) is purposefully added to the composition, but yet it is understood to one of ordinary skill in the art that trace amounts of specific ingredient(s) may be present as impurities in other additives, i.e. the composition contain less than about 0.1%, by weight of the composition of the specific ingredient(s).

In one embodiment the concentrated detergent compositions are opaque. In another embodiment the concentrated detergent composition is translucent or transparent.

Surfactants

In one embodiment the concentrated detergent composition of the present invention may contain one or more surface active agents (surfactants). The surfactant may be

selected from anionic, nonionic, cationic, amphoteric, zwitterionic and mixtures thereof. In one embodiment, surfactant detergents for use in the present invention are mixtures of anionic and nonionic surfactants although it is to be understood that any surfactant may be used alone or in combination with any other surfactant or surfactants. When present in the concentrated detergent composition, the surfactant may comprise , from about 1% to about 75%, more specifically from about 5% to about 70%, by weight of the concentrated detergent composition.

Illustrative examples of surfactants useful herein are described in U.S. Patent 3,664,961, Norris, issued May 23, 1972, U.S. Patent 3,919,678, Laughlin et al., issued December 30, 1975, U.S. Patent 4,222,905, Cockrell, issued September 16, 1980, in U.S. Patent 4,239,659, Murphy, issued December 16, 1980, U.S. Patent. No. 4,285,841, Barrat et al, issued August 25, 1981, U.S. Patent No. 4,284,532, Leikhim et al, issued August 18, 1981, U.S. Patent No. 4,285,841, U.S. Patent No. 3,919,678 and in U.S. Patents 2,220,099 and 2,477,383. Surfactants generally are well known, being described in more detail in Kirk Othmer's Encyclopedia of Chemical Technology, 3rd Ed., Vol. 22, pp. 360-379, "Surfactants and Detersive Systems", McCutcheon's, Detergents & Emulsifiers, by M.C. Publishing Co., (North American edition 1997), Schwartz, et al., Surface Active Agents, Their Chemistry and Technology, New York: Interscience Publishers, 1949; and further information and examples are given in "Surface Active Agents and Detergents" (Vol. I and II by Schwartz, Perry and Berch).

Illustrative examples of suitable nonionic surfactants include: alcohol ethoxylates (e.g. Neodol 25-9 from Shell Chemical Co.), alkyl phenol ethoxylates (e.g. Tergitol NP-9 from Union Carbide Corp.), alkylpolyglucosides (e.g. Glucapon 600CS from Henkel Corp.), polyoxyethylenated polyoxypropylene glycols (e.g. Pluronic L-65 from BASF Corp.), sorbitol esters (e.g. Emsorb 2515 from Henkel Corp.), polyoxyethylenated sorbitol esters (e.g. Emsorb 6900 from Henkel Corp.), alkanolamides (e.g. Alkamide DC212/SE from Rhone-Poulenc Co.), and N- alkypyrrolidones (e.g. Surfadone LP-100 from ISP Technologies Inc.); and combinations thereof. Additional, illustrative suitable nonionic surfactants are those disclosed in U.S. Pat. Nos. 4,316,812 and 3,630,929.

Nonionic surfactant, when present in the gel detergent composition may be present in the amount of from about 0.01% to about 70%, more specifically from about 1% to

about 50%, even more specifically from about 5% to about 40%, by weight of the gel detergent composition.

Illustrative examples of suitable anionic surfactants includes: linear alkyl benzene sulfonates (e.g. Vista C-500 commercially available from Vista Chemical Co.), branched linear alkyl benzene sulfonates (e.g. MLAS), alkyl sulfates (e.g. Polystep B-5 commercially available from Stepan Co.), branched alkyl sulfates, polyoxyethylenated alkyl sulfates (e.g. Standapol ES-3 commercially available from Stepan Co.), alpha olefin sulfonates (e.g. Witconate AOS commercially available from Witco Corp.), alpha sulfo methyl esters (e.g. Alpha-Step MCp-48 commercially available from Stepan Co.) and isethionates (e.g. Jordapon CI commercially available from PPG Industries Inc.), and combinations thereof.

Anionic surfactant, when present in the gel detergent composition may be present in the amount of from about 0.01% to about 70%, more specifically from about 1% to about 50%, even more specifically from about 5% to about 40%, by weight of the gel detergent composition.

Specific cationic surfactants which can be used as surfactants in the subject invention are described in detail in U.S. Pat. No. 4,497,718. Specific cationic surfactants include C8-C18 alkyl dimethyl ammonium halides and analogs in which one or two hydroxyethyl moieties replace one or two methyl moieties.

Cationic surfactant, when present in the gel detergent composition, may be present in the amount of from about 0.01% to about 70%, more specifically from about 1% to about 50%, even more specifically from about 5% to about 40%, by weight of the gel detergent composition.

Examples of amphoteric surfactants are sodium 3(dodecylamino)propionate, sodium 3-(dodecylamino)propane-1-sulfonate, sodium 2-(dodecylamino)ethyl sulfate, sodium 2-(dimethylamino) octadecanoate, disodium 3-(N-carboxymethyldodecylamino)propane 1- sulfonate, disodium octadecyl-imminodiacetate, sodium 1-carboxymethyl-2- undecylimidazole, and sodium N,N-bis(2-hydroxyethyl)-2-sulfato-3- dodecoxypropylamine.

Amphoteric surfactant, when present in the gel detergent composition may be present in the amount of from about 0.01% to about 70%, more specifically from about 1%

to about 50%, even more specifically from about 5% to about 40%, by weight of the gel detergent composition.

Examples of zwitterionic surfactants which may be used herein are set forth in U.S. Pat. No. 4,062,647.

Zwitterionic surfactant, when present in the gel detergent composition may be present in the amount of from about 0.01% to about 70%, more specifically from about 1% to about 50%, even more specifically from about 5% to about 40%, by weight of the gel detergent composition.

Water

The concentrated detergent compositions according to the present invention may contain a liquid carrier, in one embodiment water. Typically the amount of the liquid carrier when present in the compositions herein will be relatively large, often comprising the balance of the cleaning composition, but can comprise from about 5 wt% to about 85 wt% by weight of the cleaning composition. In one embodiment low levels, about 1% to about 50% by weight of the cleaning composition of liquid carrier is utilized.

The most cost effective type of aqueous, non-surface active liquid carrier is, of course, water itself. In one embodiment the water is selected from distilled, deionized, filtered and combinations thereof. In another optional embodiment, the water may be untreated.

The liquid carrier herein may also contain low levels of materials which serve as phase stabilizers and/or co-solvents for the compositions herein. Materials of this type include C_1-C_3 lower alkanols such as methanol, ethanol and/or propanol. Lower C_1-C_3 alkanolamines such as mono-, di- and triethanolamines can also be used, by themselves or in combination with the lower alkanols. If present, phase stabilizers/co-solvents can optionally comprise from about 0.1% to about 5.0% by weight of the compositions herein.

Aesthetics

The concentrated detergent composition and the bottom dispensing container may have any desired appearance or aesthetics. The concentrated detergent composition and the bottom dispensing container may be opaque, transparent or translucent, of any color or appearance, such as a pearlescent liquid. In one embodiment, the concentrated detergent composition may contain air or gas bubbles, suspended liquid droplets, simple or multiple

emulsion droplets, suspended particles and the like and combinations thereof. Suitable sizes include from about 0.1 microns to about 5 mm, even more specifically from about 20 microns to about 1mm. These optional suspended liquids and/or particles are visible as discrete entities, i.e. different color, shape, texture, and the like and combinations thereof. These suspended liquids and/or particles may be a different color, texture or some other visually distinguishing feature than the other portions of the concentrated detergent composition.

Additionally, the concentrated detergent composition and the bottom dispensing container may be any color or combination of colors. It is also to be understood that the term "color" not only includes all the colors of the visible spectrum, namely, red, orange, yellow, green, blue, teal, brown, purple, lilac, sea green, tan, navy, violet, pink and the like, it also includes all shades, tones, hues and the like, such as dark blue, light, blue, light green, etc, of these colors, as well as black, white, and grey and all shades, tones, hues and the like of these. Furthermore, the concentrated detergent composition and the bottom dispensing container may also in addition have any additional visual treatments, such as for example, a combination of varied refractive indices, pearlescence, opalescence, reflective, holographic effect, metallic color, gloss finish, matte finish and the like and combinations thereof.

In another embodiment the concentrated detergent composition may comprise two or more visually distinctive regions. Each region can itself comprise one or more distinct physical phases. The term "visually distinctive" as used herein describes compositions in the bottom dispensing container or upon being dispensed that display visually different regions. These different regions are either distinctively separate or partially mixed as long as the concentrated detergent composition remains visible to the naked eye. The combination of these visually distinctive regions can be chosen to produce any of a wide variety of patterns, including for example: striped, marbled, rectilinear, interrupted striped, check, mottled, veined, clustered, speckled, geometric, spotted, ribbons, helical, swirl, arrayed, variegated, textured, grooved, ridged, waved, sinusoidal, spiral, twisted, curved, cycle, streaks, striated, contoured, anisotropic, laced, weave or woven, basket weave, spotted, and tessellated. The pattern may be striped and may be relatively uniform and even across the dimension any bottom dispensing container. Alternatively, the striped

pattern may be uneven, i.e. wavy, or may be non-uniform in dimension. The striped pattern does not need to necessarily extend across the entire dimension of any bottom dispensing container.

The term "stripe" as used herein means that each phase present in the concentrated detergent composition occupies separate but distinct physical spaces inside the bottom dispensing container in which it is stored, but are in direct contact with one another. (i.e. they are not separated by a barrier and they are not emulsified or mixed to any significant degree). The stripes may be relatively uniform and even across the dimension of the bottom dispensing container. Alternatively the stripes may be uneven, i.e. wavy, or may be non-uniform in dimension. The stripes do not necessarily extend across the entire dimension of the bottom dispensing container. The "stripe' can comprise various geometric patterns, various colors and, or glitter or pearlescence, providing that the concentration of these forms visually distinct bands or regions.

The term "marbling" as used herein refers to a striped design with a veined and/or mottled appearance similar to marble.

While many variations in the physical characteristics of the components are possible, i.e., color, viscosity, rheology, texture, density etc, variations in color are widely sought. The specific design or pattern achieved (i.e., width, length of stripe or marbling etc.) in the concentrated detergent composition can be varied by varying a number of factors for example, rheological characteristics of the phases, diameter of the dispensing means, presence or absence of rotation of the container during filling, rate of speed and constancy and the like and combinations thereof.

Adjunct Ingredients

The liquid detergent composition may comprise one or more adjunct ingredients to give it additional desired properties, of functional and/or aesthetic nature.

The compositions and methods described herein may include an adjunct ingredient, specifically from about 0.0001% to about 95%, even more specifically from about 0.001% to about 70%, by weight of the concentrated detergent composition, of an adjunct ingredient.

In one embodiment of the instant invention, the adjunct ingredient may be selected from builders, brightener, dye transfer inhibitor, chelants, polyacrylate polymers,

dispersing agents, colorant dye, hueing dyes, perfumes, processing aids, bleaching additives, bleach activators, bleach precursors, bleach catalysts, solvents, co-solvents, hydrotropes, liquid carrier, phase stabilizers, soil release polymers, enzyme stabilizers, enzymes, soil suspending agents, anti-redeposition agents, deflocculating polymers, bactericides, fungicides, UV absorbers, anti-yellowing agents, anti-oxidants, optical brighteners, suds suppressors, opacifiers, suds boosters, anticorrosion agents, radical scavengers, chlorine scavengers, structurants, fabric softening additives, other fabric care benefit agents, pH adjusting agents, fluorescent whitening agents, smectite clays, structuring agents, preservatives, thickeners, coloring agents, fabric softening additives, rheology modifiers, fillers, germicides and mixtures thereof. Further examples of suitable adjunct ingredient and levels of use are described in U.S. No. Patent 3,936,537, issued February 3, 1976 to Baskerville, Jr. et al.; U.S. No. Patent 4,285,841, Barrat et al., issued Aug. 25, 1981; U.S. Patent No. 4,844,824 Mermelstein et al., issued Jul. 4, 1989; U.S. Patent No. 4,663,071, Bush et al.; U.S. Patent No. 4,909,953, Sadlowski, et al. issued Mar. 20, 1990; U.S. Patent No. 3,933,672, issued January 20, 1976 to Bartoletta et al.; U.S. Patent No. 4,136,045, issued January 23, 1979 to Gault et al; U.S. Patent No. 2,379,942; U.S. Patent No. 3,308,067; U.S. Pat. No. 5,147,576 to Montague et al; British Pat. No. 1,470,250; British Patent No. 401,413 to Marriott; British Patent No. 461,221 to Marriott and Guam British Patent No. 1,429,143; and U.S. Patent No. 4,762,645, Tucker et al, issued August 9, 1988.)

Nonlimiting examples of some of possible adjunct ingredients follows.

Non-limiting examples of suitable chelants include, S,S-ethylenediamine disuccinic acid (EDDS), Tiron® (otherwise know as Catechol-2,5-disulfonate as the acid or water soluble salt), ethylenediamine tetraacetic acid (EDTA), Diethylenetriaminepentaacetate (DTPA), 1-Hydroxyethylidene 1,1 diphosphonic acid (HEDP), Diethylenetriamine-penta-methylene phosphonic acid (DTPMP), dipicolinic acid and salts and/or acids thereof and mixtures thereof. Further examples of suitable chelating agents and levels of use are described in U.S. Pat. Nos. 3,812,044; 4,704,233; 5,292,446; 5,445,747; 5,531,915; 5,545,352; 5,576,282; 5,641,739; 5,703,031; 5,705,464; 5,710,115; 5,710,115; 5,712,242; 5,721,205; 5,728,671; 5,747,440; 5,780,419; 5,879,409; 5,929,010; 5,929,018; 5,958,866; 5,965,514; 5,972,038; 6,172,021; and 6,503,876.

Examples of suitable builders which may be used include water-soluble alkali metal phosphates, polyphosphates, borates, silicates and also carbonates; water-soluble amino polycarboxylates; water-soluble salts of phytic acid; polycarboxylates; zeolites or aluminosilicates and combinations thereof. Specific examples of these are: sodium and potassium triphosphates, pyrophosphates, orthophosphates, hexametaphosphates, tetraborates, silicates, and carbonates; water-soluble salts of mellitic acid, citric acid, and carboxymethyloxysuccinic acid, salts of polymers of itaconic acid and maleic acid, tartrate monosuccinate, tartrate disuccinate; .

Enzymes which may be used in this invention are described in greater detail below. In one embodiment the optional enzyme when present may be selected from protease, cutinase, hemicellulase, peroxidases, cellulases, xylanases, lipases, phospholipases, esterases, cutinases, pectinases, keratanases, reductases, oxidases, phenoloxidases, lipoxygenases, ligninases, pullulanases, tannases, pentosanases, malanases, ß-glucanases, arabinosidases, hyaluronidase, chondroitinase, lactase, amylase and mixtures thereof.

A non-limiting list of suitable commercially available enzymes include: Amylases (α and/or β) are described in WO 94/02597 and WO 96/23873. Commercial examples are Purafect Ox Am® [Genencor] and Termamyl®, Natalase®, Ban®, Fungamyl® and Duramyl® [all ex Novozymes]. Cellulases include bacterial or fungal cellulases, e.g. produced by *Humicola insolens*, particularly DSM 1800, e.g. 50Kda and ~43kD [Carezyme ®]. Also suitable cellulases are the EGIII cellulases from *Trichoderma longibrachiatum*. Suitable lipases include those produced by *Pseudomonas* and *Chromobacter* groups. Preferred are e.g. Lipolase®, Lipolase Ultra®, Lipoprime® and Lipex® from Novozymes. Also suitable are cutinases [EC 3.1.1.50] and esterases. Carbohydrases e.g. mannanase (US6060299), pectate lyase (WO99/27083) cyclomaltodextringlucanotransferase (WO96/33267) xyloglucanase (WO99/02663). Bleaching enzymes eventually with enhancers include e.g. peroxidases, laccases, oxygenases, (e.g. catechol 1,2 dioxygenase, lipoxygenase (WO 95/26393), (non-heme) haloperoxidases . Suitable proteases include, Alcalase®, Savinase®, Kannase®, Everlase®, Esperase® available from Novozymes; Purafect®, Purafext Ox®, Properase® available from Genencor; BLAP and BLAP variants available from Henkel; Maxatase and Maxacal of Gist-Brocades; Kazusase of

Showa Denko; and K-16 -like proteases available from KAO. Additional illustrative proteases are described in e.g. EP130756, WO91/06637, WO95/10591, WO99/20726, US 5030378 (Protease "A") and EP251446 (Protease "B").

Hydrotropes may be added to the gel detergent compositions. Hydrotrope reduces and prevents liquid crystal formation, and more specifically hydrotropes may be optionally present in the gel detergent compositions. Illustrative hydrotropes include propylene glycol, glycerin, ethanol, urea, salts of benzene sulphonate, toluene sulphonate, xylene sulphonate, cumene sulphonate and mixtures there of. Illustrative salts include to sodium, potassium, ammonium, monoethanolamine, triethanolamine and mixtures thereof. In one embodiment the hydrotrope is selected from propylene glycol, glycerin, xylene sulfonate, ethanol, urea and combinations thereof. In one embodiment the amount of the optional hydrotrope may be in the range of from about 0 to about 15%, more specifically from about 0.1 to 8%, even more specifically from about 0.2 to about 6%, even more specifically still from about 0.5 to about 3%.

One optional adjunct ingredient is a pH jump system (e.g., boron compound/polyol), as described in the U.S. Pat. No. 5,089,163 and 4,959,179 to Aronson et al. The inclusion of the pH jump system ensures that the pH jumps up in the washing machine to neutralize fatty acid, so as to obtain the benefits of neutralized fatty acid and to minimize surfactant amount.

In one embodiment the gel detergent compositions are substantially free (i.e. contain less than about 1%, even more specifically less than about 0.5%, even more specifically still less than about 0.1% of) of traditional thickening agents, such as cross-linked polyacrylates, polysaccharide gums (e.g. xantham), gellan, pectin, carrageenan, gelatin. However, in other specific alternative embodiment these traditional thickening agents may be used.

The list of optional ingredients above is not intended to be exhaustive and other optional ingredients which may not be listed, but are well known in the art, may also be included in the composition.

Transparent or translucent

As used herein, "translucent or transparent" refers to a transmittance of greater than about 25% transmittance of at least one wavelength of electromagnetic radiation in the

visible spectrum (approx. 410-800 nm), more specifically a transmittance of more than about 25%, even more specifically more than about 30%, even more specifically still more than about 40%, yet even more specifically still more than about 50% in the visible part of the electromagnetic spectrum wherein % transmittance equals:

$$\frac{1}{10^{\text{absorbancy}}} \times 100\%.$$

Alternatively, a container, composition and the like may be considered translucent or transparent if the absorbency of the bottle of the visible electromagnetic spectrum is less than about 0.6. An illustrative example of a translucent or transparent object would be a clear bottle or clear composition. Another example of a translucent or transparent object would be a bottle or composition which is colored, such having a blue or red tint, but still has a transmittance of greater than about 25% transmittance of at least one wavelength of electromagnetic radiation in the visible spectrum.

In one embodiment, the concentrated detergent composition is transparent or translucent and has a transmittance of at least about a 50% transmittance of light using a 1 cm cuvette at wavelengths of about 410 nanometers to about 800 nanometers.

Additional illustrative information and examples of translucent or transparent and opaque containers and/or compositions and the like can be found in U.S. Pat Nos. 6,630,437 issued to Murphy et al; 6,756,350 issued to Giblin et al; 6,631,783 issued to Giblin et al; and 6,159,958 issued to Bae-Lee et al.

As used herein, "opaque" refers to a transmittance of less than about 25% transmittance of all wavelengths of electromagnetic radiation in the visible spectrum, more specifically a transmittance of less than about 20%, even more specifically less than about 15%, even more specifically still less than about 10%, yet even more specifically still less than about 5% in the visible part of the electromagnetic spectrum. Alternatively, a container, composition and the like may be considered opaque if the absorbency of the bottle of the visible electromagnetic spectrum is greater than about 0.6.

Methodology -Measurement of Absorbency and Transmittance- Instrument: Milton Roy Spectronic 601.

Procedure:

1. Both the spectrophotometer and the power box were turned on and allowed to warm up for 30 minutes.

2. Set the wavelength: Type in the desired wavelength on the keypad (i.e., 590, 640, etc.). Press the [second function] key. Press the "go to λ" [yes] key. The machine is then ready to read at the chosen wavelength.

3. Zero the instrument: Press the [second function] key. Press the "zero A" [% T/AIC]. Instrument should then read "XXX NM 0.000 A T"

4. Open the cover, place sample vertically and in front of the sensor.

5. Close the lid and record reading (ex. 640 NM 0.123 A T)

Note: All readings are taken in "A" mode (absorbency mode). Zero instrument with every new wavelength change and/or new sample.

Absorbency Values for Two Typical Plastic Bottles

Wavelength (in nm)	Polyethylene (HDPE) 0.960 mm thickness	Polypropylene (PP) 0.423 mm thickness
254 (non-visible)	1.612	1.886
310 (non-visible)	1.201	0.919
360 (non-visible)	0.980	0.441
590 (visible)	0.525	0.190
640 (visible)	0.477	0. 169

All documents cited in the Detailed Description of the Invention are, in relevant part, incorporated herein by reference; the citation of any document is not to be construed as an admission that it is prior art with respect to the present invention. To the extent that any meaning or definition of a term in this written document conflicts with any meaning or definition of the term in a document incorporated by reference, the meaning or definition assigned to the term in this written document shall govern.

While particular embodiments of the present invention have been illustrated and described, it would be obvious to those skilled in the art that various other changes and modifications can be made without departing from the spirit and scope of the invention. It is therefore intended to cover in the appended claims all such changes and modifications that are within the scope of this invention.

CLAIMS

What is claimed is:

1. An article of commerce for storing and dispensing liquid compositions comprising:

(a) a transparent or translucent bottom dispensing container, preferably having a transmittance of at least 25% in the visible spectrum; and

(b) a transparent or translucent concentrated detergent composition, stored in said bottom dispensing container, wherein said transparent or translucent concentrated detergent composition comprises:

(i) a surfactant;

(ii) from 1% to 50%, by weight of the composition, of water; and

(iii) a UV absorbing material, preferably selected from UV absorbers, fluorescent dyes, and mixtures thereof.

2. The article of commerce according to Claim 1 wherein said transparent or translucent concentrated detergent composition has a transmittance of at least a 50% transmittance of light using a 1 cm cuvette at wavelengths of 410 nanometers to 800 nanometers.

3. The article of commerce according to Claim 1 wherein said transparent or translucent concentrated detergent composition further comprises an adjunct ingredient selected from builders, brighteners, dye transfer inhibitors, structurants, chelants, polyacrylate polymers, dispersing agents, colorant dyes, perfumes, processing aids, bleaching agents, bleach activators, bleach catalysts, solvents, enzymes, soil release polymers, and mixtures thereof.

4. The article of commerce according to Claim 1 wherein said transparent or translucent bottom dispensing container is a polymeric material.

5. An article of commerce for storing and dispensing liquid compositions comprising:

(a) a transparent or translucent bottom dispensing container having a transmittance of at least 25% in the visible spectrum and having a wall, wherein said wall includes UV absorbing material; and

(b) a concentrated transparent or translucent detergent composition, stored in said bottom dispensing container, wherein said concentrated detergent composition comprises:

(i) a surfactant, preferably a surfactant selected from anionic surfactants, cationic surfactants, nonionic surfactants, amphoteric surfactants, zwitterionic surfactants and mixtures thereof; and

(ii) from 1% to 50%, by weight of the composition, of water.

6. The article of commerce according to Claim 5 wherein said UV absorbing material is selected from UV absorbers, fluorescent dye, and mixtures thereof.

7. The article of commerce according to Claim 5 wherein said concentrated detergent composition has a transmittance of at least a 50% transmittance of light using a 1 cm cuvette at wavelengths of 410 nanometers to 800 nanometers.

8. The article of commerce according to Claim 5 wherein said concentrated detergent composition is opaque.

9. An article of commerce for storing and dispensing liquid compositions comprising:

(a) a transparent or translucent bottom dispensing container having a transmittance of at least 25% in the visible spectrum and having one or more polymeric labels, wherein said polymeric label is transparent or translucent and comprises indicia and UV absorbing material; and

(b) a concentrated detergent composition, stored in said bottom dispensing container.

10. The article of commerce according to Claim 9 wherein said polymeric label covers from 50% to 95% of the surface area of said container.

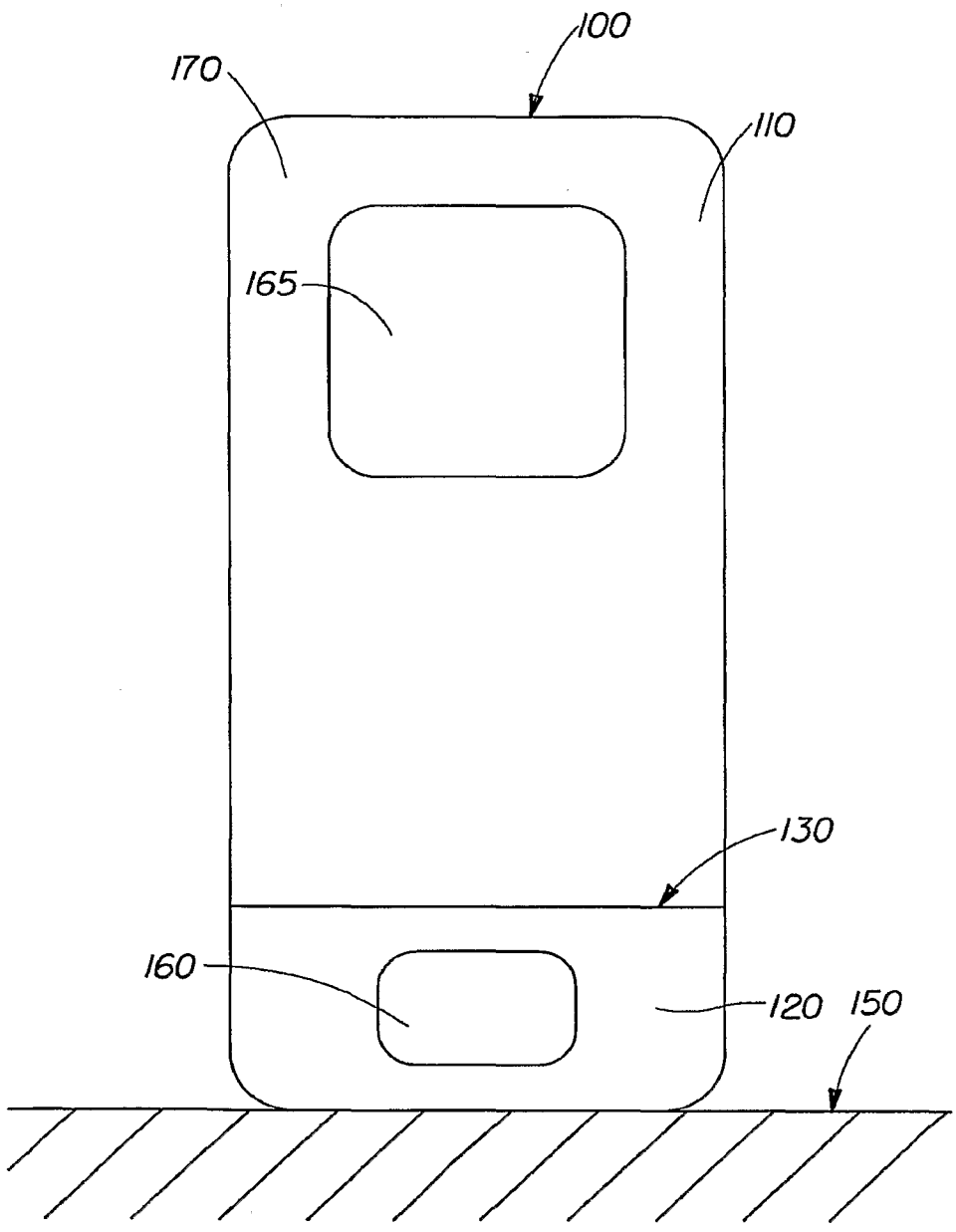


Fig. 1

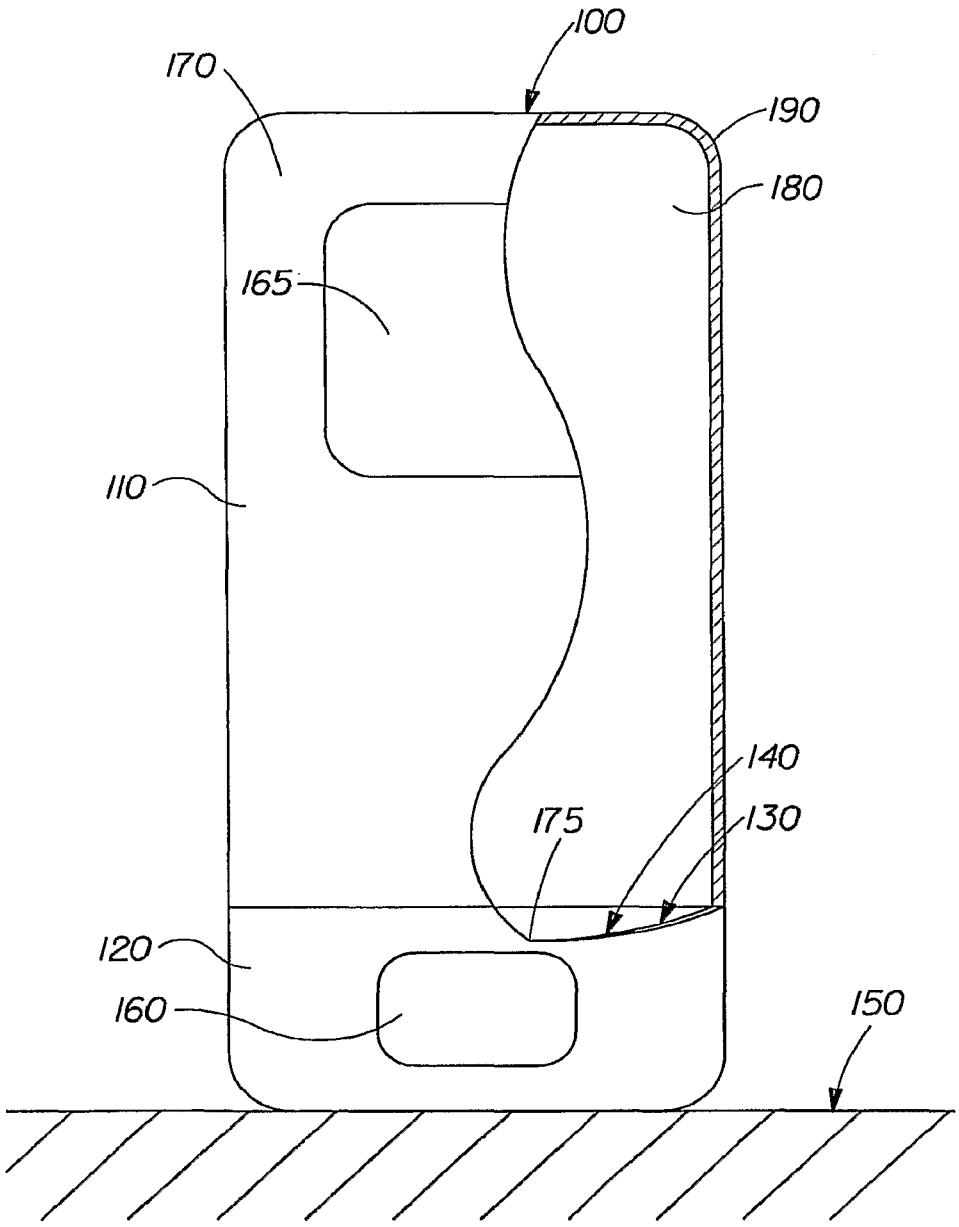


Fig. 2

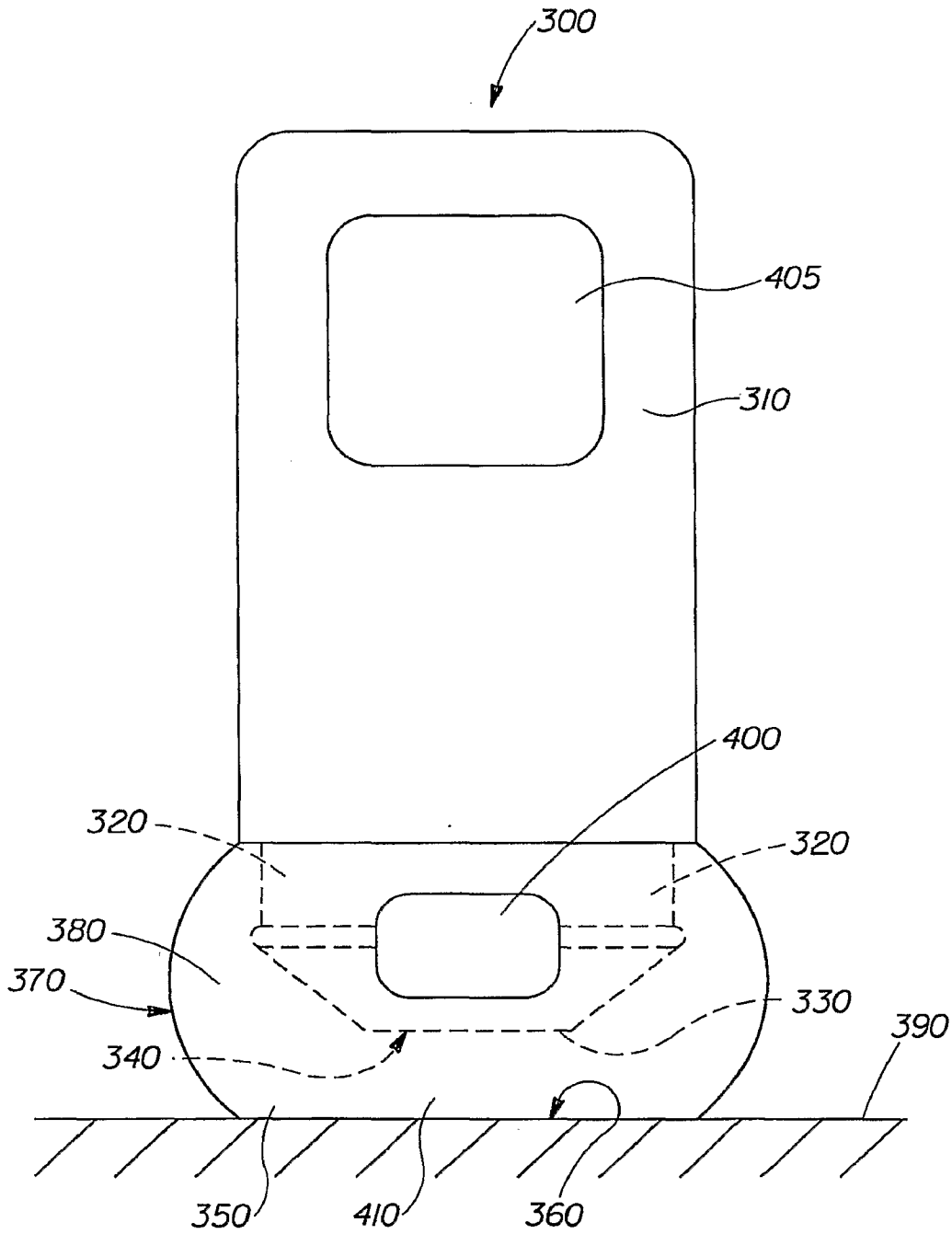


Fig. 3

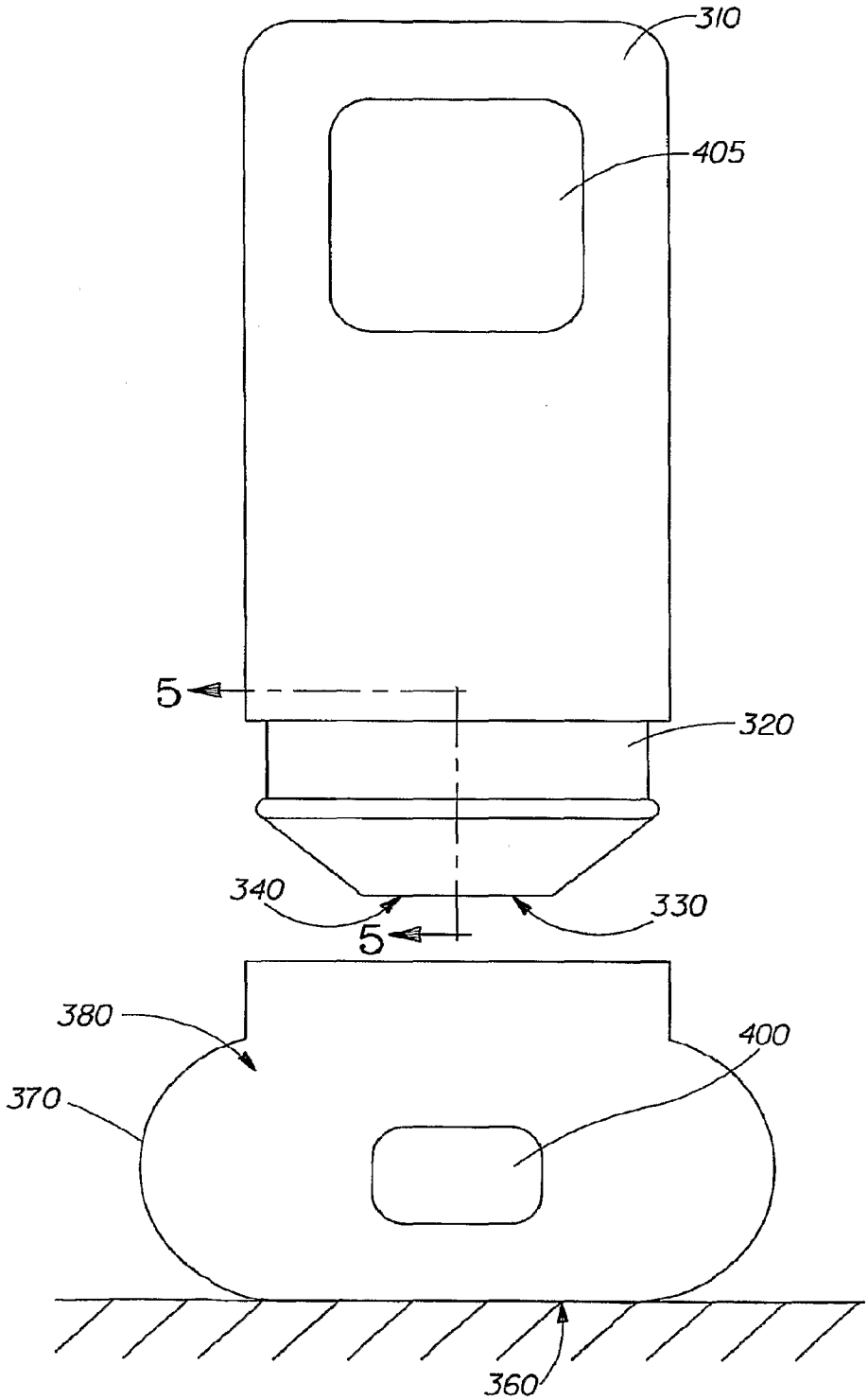


Fig. 4

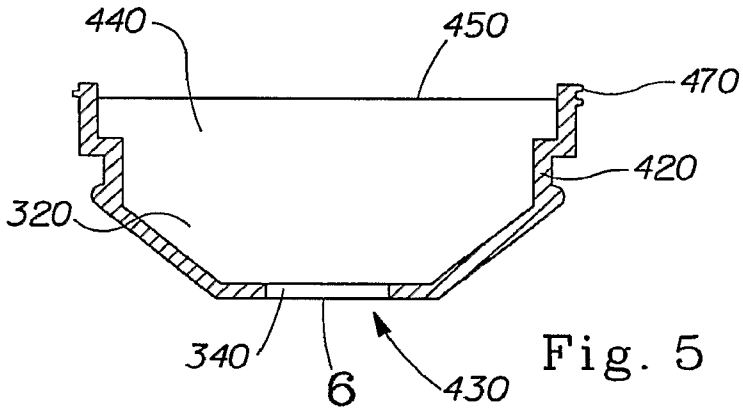


Fig. 5

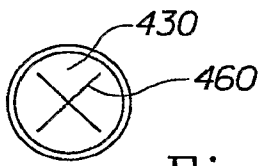


Fig. 6

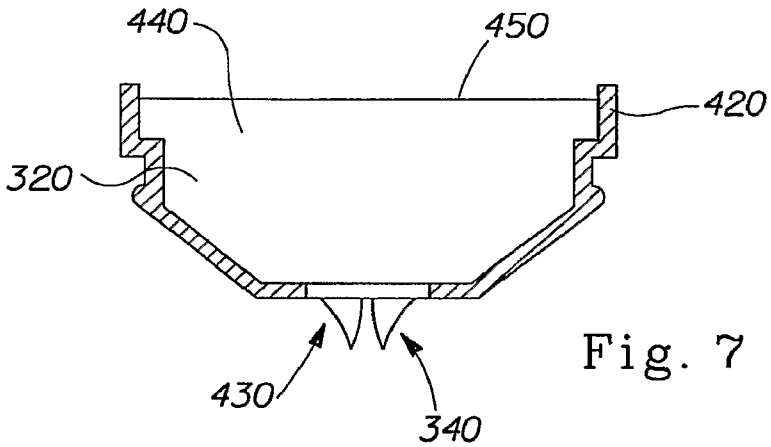


Fig. 7

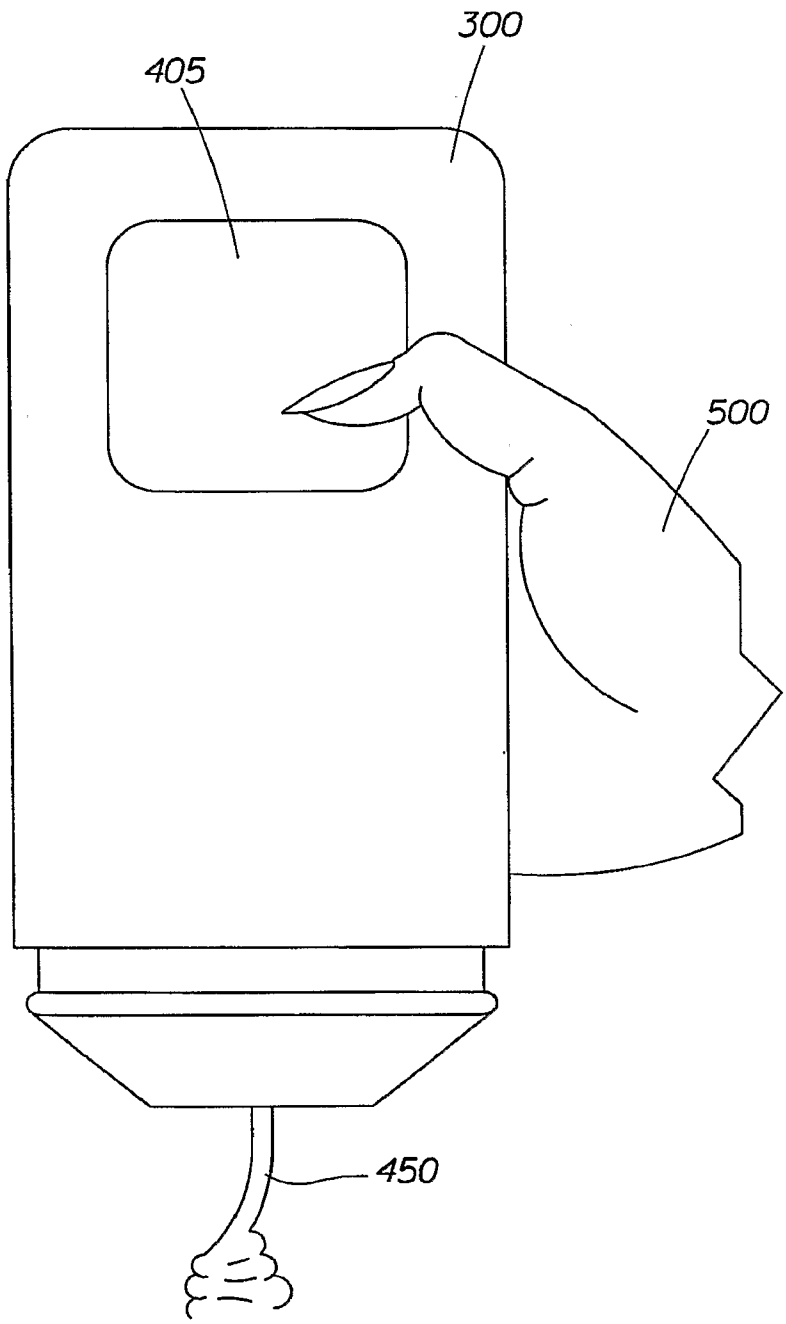


Fig. 8

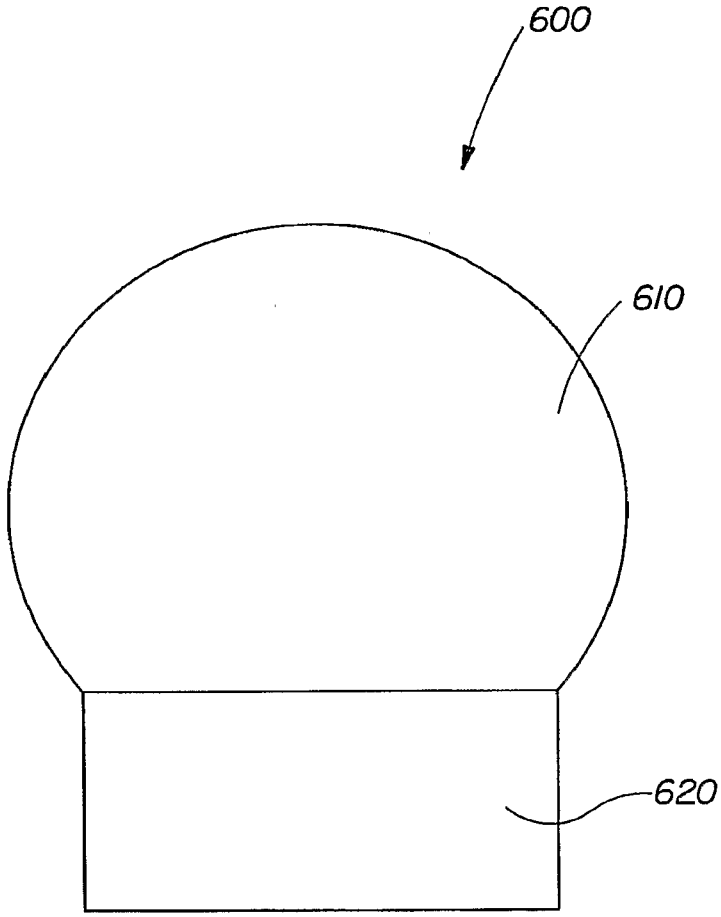


Fig. 9