



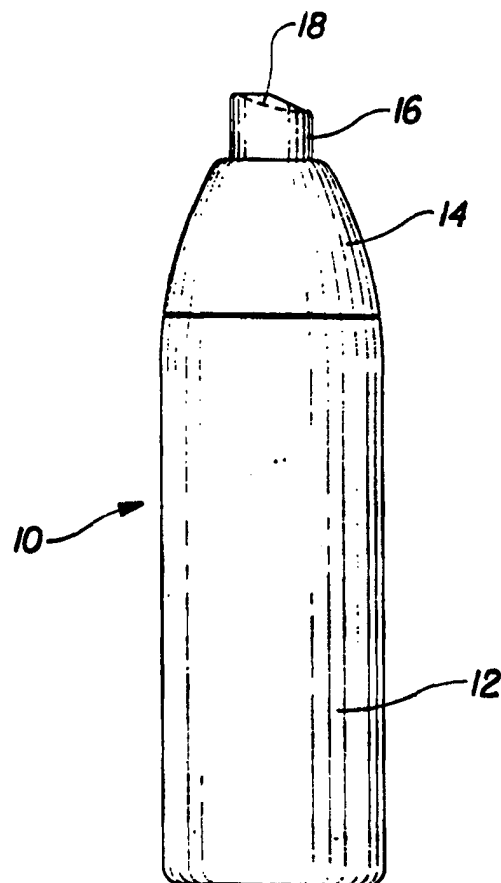
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(54) Title: ERGONOMIC SPRAY PACKAGE

(57) Abstract

Disclosed is an ergonomically designed spray package, that is comfortable for the user to hold and easy to use. This package substantially conforms to the shape of the human hand and index finger. The shroud and actuator of the package allow the index finger to conform to the package in a natural position so that the package may be actuated substantially solely by movement of the tip of the index finger.



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ERGONOMIC SPRAY PACKAGE

FIELD OF THE INVENTION

The present invention relates to spray packages. The present invention has further relation to such spray packages that are ergonomically friendly.

BACKGROUND OF THE INVENTION

Spray bottles or packages have traditionally come in various shapes and sizes. Most are uncomfortable for a consumer to use. Some packages are relatively large and bulky, and are difficult to hold with one hand. Others have sharply angled shoulder areas, between the actuator and the body of the package, that make it difficult for the consumer to reach the top of the actuator with the tip of the index finger. Still others have an actuator that extends relatively high above the shoulder area of the package, making it difficult at best for a consumer to hold the body of the package with the palm area of the hand, and still comfortably reach the top of the actuator with the tip of the index finger; these packages force the consumer to uncomfortably stretch the index finger in order to reach the top of the actuator.

There has therefore been a desire to have a spray package that is comfortable for the user to hold and easy to use, and that substantially conforms to the shape of the human hand and index finger.

SUMMARY OF THE INVENTION

Disclosed is an ergonomic spray package including a cylindrical container body having a top and a closed bottom, the body having a diameter of between about 1 inch and about 3 inches. The package also includes a shroud having a top, a bottom, and an outer surface, the shroud bottom being connected to the top of the container body, the shroud outer surface being outwardly convex with a radius of between about 5 and about 10 inches to conform to the shape of a human index finger resting upon the shroud outer surface. Also included is a spray actuator movably connected to and extending above the shroud top, the actuator having a top surface which is at least partially angled between about 10 degrees and about 45 degrees to conform to the tip of a human finger resting upon the actuator top surface. The combined positioning and configuration of the actuator, shroud, and container is such that a human hand can easily and comfortably grip the package and depress the spray actuator substantially solely by movement of the tip of the index finger.

BRIEF DESCRIPTION OF THE DRAWINGS

While the specification concludes with claims particularly pointing out and distinctly claiming the subject invention, it is believed the same will be better understood from the following description taken in conjunction with the accompanying drawings in which:

Figure 1 is an elevational view of an ergonomically designed spray package of the present invention.

Figure 2 shows the package of Figure 1 as held in the user's hand with the actuator in the upmost position.

Figure 3 shows the package of Figure 1 as held in the user's hand with the actuator depressed.

DETAILED DESCRIPTION OF THE INVENTION

Referring now to the drawings in detail wherein like numerals indicate the same element throughout the views there is shown in Figure 1 an embodiment of a spray package 10 of the present invention. Package 10 has container body 12, shroud area 14, and actuator 16. Container body 12 is typically cylindrical, having a preferred diameter of about 1 inch to about 3 inches, with a most preferred diameter of about 1.5 inches.

Shroud area 14 has basically a cone-like shape which provides a smooth transition from the diameter of the container body up to about the diameter of the actuator, with an outside surface that is convex; the radius of the convex surface of shroud 14 is preferably between about 5 inches and about 10 inches, with a most preferred radius of about 7 inches.

Actuator 16 is typically cylindrical, but with angled depression 18 on its top surface to accommodate the tip of a human index finger. The angled depression is preferably between about 10 degrees and about 45 degrees from the horizontal, with a most preferred angle of about 30 degrees from the horizontal.

Referring now to Figure 2, this package construction allows a consumer to easily grasp container body 12 in the palm of the hand, while gripping it with the thumb and three outer fingers, as shown. The index finger may then rest comfortably on the outer surface of shroud 14, while the tip of the index finger rests naturally on the angled depression atop actuator 16. As shown in Figure 3, this allows easy actuation with just the tip of the index finger.

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

WHAT IS CLAIMED IS:

1. An ergonomic spray package characterized by:

a container body configured and shaped so as to provide for comfortable and easy gripping by a human hand, and a spray actuator configured and shaped so that a tip of an index finger rests comfortably and easily on the actuator, wherein the hand readily conforms to the shape of the package and the actuator may be depressed substantially solely by movement of the tip of the index finger.

2. An ergonomic spray package characterized by:

a container body having a top and a closed bottom;

a shroud having a top, a bottom, and an outer surface, the shroud bottom being connected to the top of the container body, the shroud outer surface being outwardly convex to conform to the shape of a human index finger resting upon the shroud outer surface; and

a spray actuator movably connected to and extending above the shroud top, the actuator having a top surface which is at least partially angled to conform to the tip of a human finger resting on the actuator top surface;

the combined positioning and configuration of the actuator, shroud, and container being such that a human hand can easily and comfortably grip the package and depress the spray actuator substantially solely by movement of the tip of the index finger.

3. An ergonomic spray package characterized by:

a cylindrical container body having a top and a closed bottom, the body having a diameter of between about 1 inch and about 3 inches;

a shroud having a top, a bottom, and an outer surface, the shroud bottom being connected to the top of the container body, the shroud outer surface being outwardly convex with a radius of between about 5 and about 10 inches to conform to the shape of a human index finger resting upon the shroud outer surface; and

a spray actuator movably connected to and extending above the shroud top, the actuator having a top surface which is at least partially angled between about 10 degrees and about 45 degrees to conform to the tip of a human finger resting upon the actuator top surface;

the combined positioning and configuration of the actuator, shroud, and container being such that a human hand can easily and comfortably grip the package and depress the spray actuator substantially solely by movement of the tip of the index finger.

4. An ergonomic spray package characterized by:

a cylindrical container body having a top and a closed bottom, the body having a diameter of about 1.5 inches;

a shroud having a top, a bottom, and an outer surface, the shroud bottom being connected to the top of the container body, the shroud outer surface being outwardly convex with a radius of about 7 inches to conform to the shape of a human index finger resting upon the shroud outer surface; and

a spray actuator movably connected to and extending above the shroud top, the actuator having a top surface which is at least partially angled at about 30 degrees to conform to the tip of a human finger resting upon the actuator top surface;

the combined positioning and configuration of the actuator, shroud, and container being such that a human hand can easily and comfortably grip the package and depress the spray actuator substantially solely by movement of the tip of the index finger.

5. The package according to any of the preceding claims having an overall height of from about 4.5 inches to about 7.5 inches, and more preferably from about 5 to about 7 inches.

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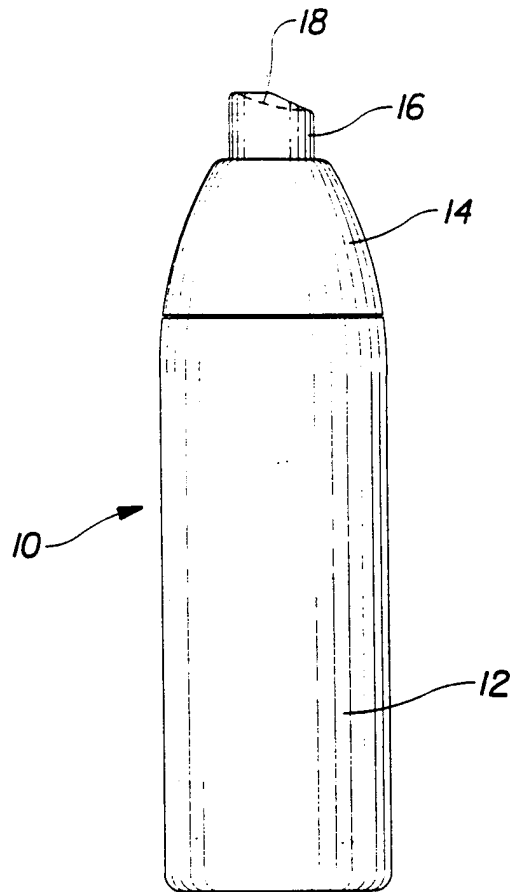


Fig. 1

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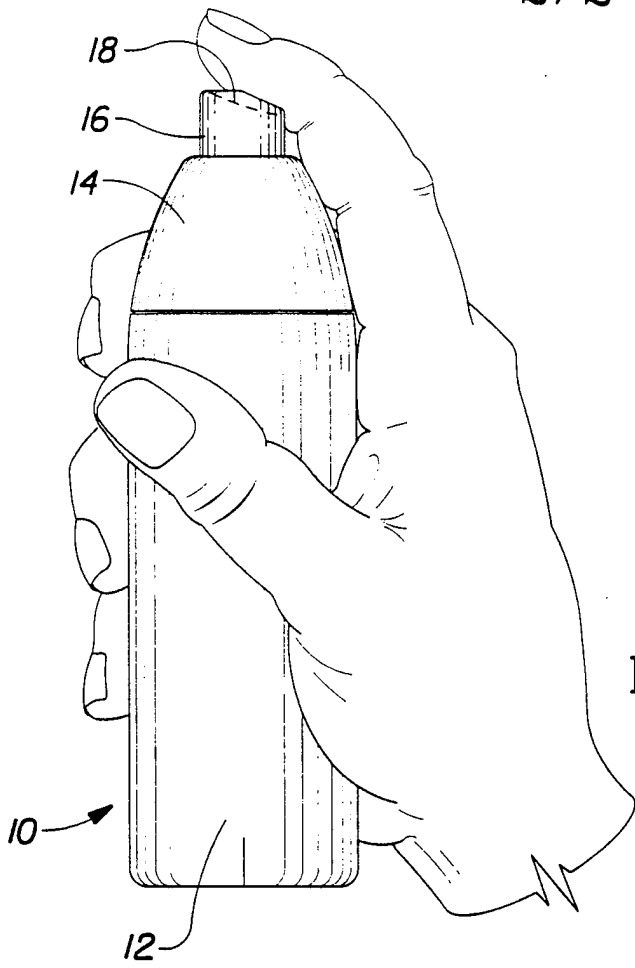


Fig. 2

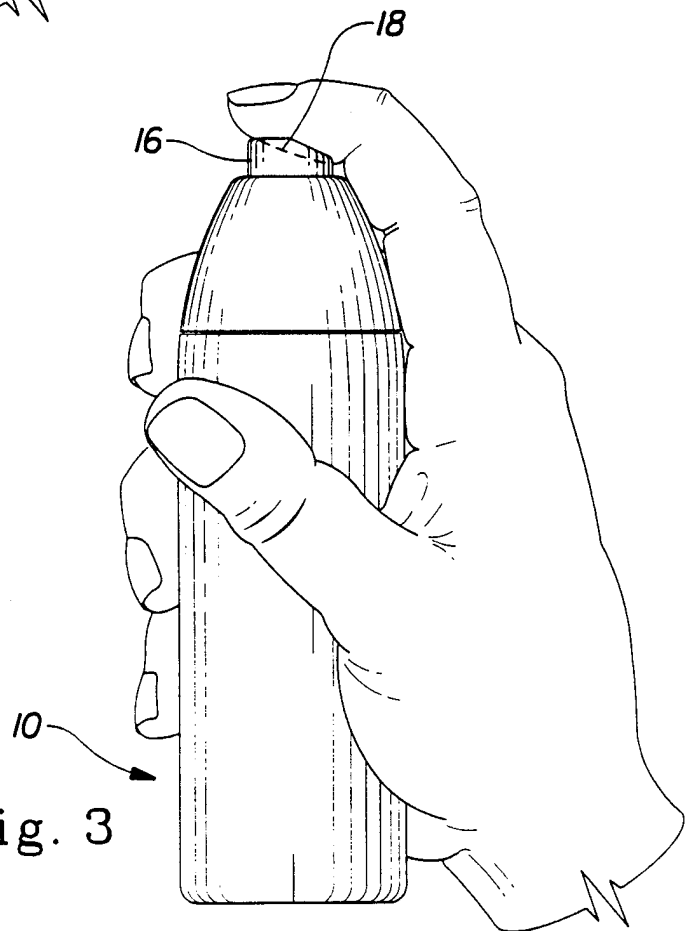


Fig. 3