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SPRINKLING BOTTLE AND CAP FOR PERFUME AND OTHER VOLATILE LIQUIDS

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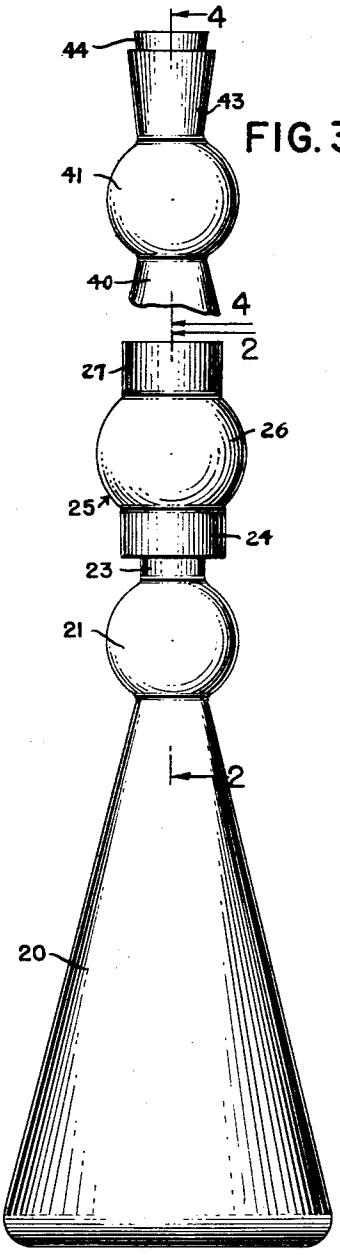


FIG. 3.

FIG. 1.

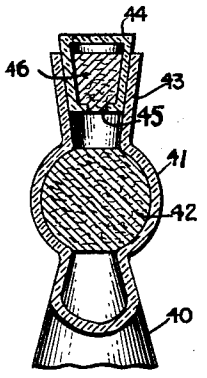


FIG. 4.

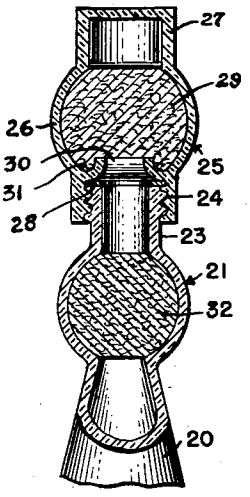


FIG. 2.

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SPRINKLING BOTTLE AND CAP FOR PERFUME AND OTHER VOLATILE LIQUIDS

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1 Claim. (Cl. 239—326)

This invention relates to a sprinkling bottle and cap for perfume and other volatile liquids.

It is the principal object of the present invention to provide a sprinkling bottle and cap with either of which one can with safety, by a quick shake or flick motion of the bottle or cap, produce a fine spray of the liquid contents so that upon contact with expensive evening gowns or clothing, discoloration resulting from the usual drop and spill procedure with the present perfume bottles cannot happen.

It is another object of the invention to provide a bottle for medical and toilet preparations whereby the bottle may be used directly for applying preparations to the skin and eliminate the need for a cloth or applicator.

It is still another object of the invention to provide a fine spray dispensing cap for perfume bottles.

It is a further object of the invention to provide a bottle that may contain a large quantity of perfume, with a diffusing material so that with a shake of the bottle a heavy spray can be produced and in combination therewith a stopper or cap having similar diffusing material into which a small quantity of the liquid can be poured so that by a shake of the stopper or cap a more fine spray can be had, whereby the user of the bottle and cap has a choice of the spray, a fine spray with more economy or a heavy spray with the shake of the bottle.

Still further objects of the invention are to provide a perfume sprinkling bottle and cap, having the above objects in mind, which is of simple construction, inexpensive to form, will not hinder the filling of the bottle, which requires the mere insertion of hair material to render the bottle adaptable for spraying purposes, compact, that permits pleasing shapes of bottle and stopper, efficient and effective in use.

For other objects and for a better understanding of the invention, reference may be had to the following detail description taken in connection with the accompanying drawing, in which:

Figure 1 is an elevational view of a perfume bottle and stopper, both of which are adapted to dispense perfume in the form of a fine spray,

Fig. 2 is a fragmentary vertical sectional view taken through the upper end of the bottle and through the stopper along line 2—2 of Fig. 1,

Fig. 3 is a fragmentary elevational view of a bottle and stopper constructed according to a modified form of the invention, and

Fig. 4 is a vertical sectional view taken on line 4—4 of Fig. 3.

Referring now particularly to Figs. 1 and 2, **20** represents a tapered bottle body on the upper end of which is a bulbous or dilated hollow neck portion **21** having a threaded end **23** to which an internally-threaded portion **24** of a dispensing cap **25** may be attached.

This dispensing cap **25** also has a bulbous or dilated portion as indicated at **26** and a cylindrical closed end portion **27** by which the cap **25** may be grasped when it is to be shaken to disperse the liquid therefrom. When

the cap **25** is tightly threaded upon the threaded end **23** of the bottle neck portion **21** and against a sealing washer **28** the bottle contents such as perfume or other highly volatile liquid, is retained in the bottle against evaporation.

If it is desired to dispense a small fine spray of the liquid, the bottle is up ended so that a small quantity of this liquid is accumulated in the cap and upon a mass of springy hair-like material **29** disposed in the bulbous portion **26** of the cap **25** and held against downward displacement to the internally-threaded open portion **24** by a radially-inwardly and upwardly turned portion **30** providing for an annular groove **31** in the lower end of the bulbous portion **26** of the cap in which a certain amount of the perfume or other liquid which has not been absorbed by the hair-like material **29** and to thereby provide within the cap a small quantity of the liquid which will be available in the cap and make it unnecessary for the bottle to be up ended each time liquid is to be dispensed by the cap.

Since the liquid clings by surface tension to the hairs of the mass **29**, a quick shake or flick motion of the cap will cause the small quantities of the liquid to be delivered to the atmosphere in the form of a very fine spray so that a large area of the surface intended to be covered with the liquid will have this liquid properly and effectively distributed thereover for a maximum effect and evaporation. With the liquid distributed on the surface of the clothing in this manner there is little chance of the clothing being discolored therefrom. The cap **25** may be formed and shaped and adapted for use upon any bottle adapted to contain perfume or other highly volatile solutions. Since the weight of the liquid drawn off into the cap is small, a fine spray will result.

If a less fine or heavy spray is desired the liquid can be dispensed directly from the bottle body **20** and through a similar hair-like mass **32** provided in the bulbous neck portion **21** of the bottle. Since the body of the liquid **20** in the bottle is greater and with a similar quantity of the mass, it will pass through the hair-like material **32** with greater force and a less fine spray will result. The liquid in passing through the hair-like material will be drawn along the surfaces of the hairs and thereby split into many paths and with a quick shake or flick motion of the bottle be dispensed in the form of a still small spray to the surface of the body or clothing to be treated with the liquid.

Thus, to provide a fine spray, the cap is used and for a less fine spray, the bottle is used. In both instances, the hair-like material breaks up the liquid body and serves to create the spray particles. This hair-like material can be in the form of natural animal hair, glass, metal or plastic hairs or other similar fine hair-like material of a springy nature adapted to be compressed and placed through the opening and allowed to expand in the bulbous portion thereof with such force as to be retained therein and to withstand the flick motion of either the cap or the bottle without separation therefrom while the liquid is being dispensed.

In Figs. 3 and 4, there is shown a modified form of the invention wherein the bottle has a tapered opening and the cap or stopper is of tapered shape adapted to fit tightly within the tapered opening. The bottle has a similar tapered body portion **40** and a bulbous or dilated neck portion **41** lying below the tapered opening that contains a mass of springy hair-like material **42** and a tapered end **43** adapted to receive a tapered stopper **44** with an opening **45** in its lower end and having a mass of hair-like material **47** thereover.

By up ending the bottle a portion of the liquid therein can flow through the opening **45** into the stopper **44**. The liquid clings to the hairs in the stopper so that as

the stopper is given a quick shake or a flick motion the liquid is freed from the hairs and emitted in the form of a fine spray that is passed therethrough. If more of the liquid is wanted in the form of a fine spray, the stopper is replaced and the bottle is up ended and liquid is passed through the opening **46** into the stopper **14**. The hair-like material **42** will not sufficiently impede the slow pouring of the liquid through the neck portion of the bottle so that quantities of the liquid can be taken from the bottle in full liquid form by slow pouring. A less fine spray can be dispensed by shaking the bottle in the manner above described.

It should now be apparent that there has been provided a combined sprinkling bottle and cap in which varying quantities of the perfume or other volatile liquid can be dispensed in small fine spray of minute particles, either from the cap or the bottle itself, making unnecessary the need for elaborate spraying equipment.

While various changes may be made in the detail construction of the bottle and cap, it shall be understood that such changes shall be within the spirit and scope of the present invention as defined by the appended claim.

What is claimed is:

A perfume dispenser comprising a bottle body having a bulbous neck portion, with a hair-like material in the bulbous portion, an end portion on the bulbous neck portion and forming an integral part of the neck portion, and a hollow cap removably fitted on the end portion and having an opening in the lower end thereof through which a liquid in the bottle body may pass and having a hair-like material contained therein, said bottle body, when the cap is removed, dispensing a spray of perfume which is diffused through the hair-like material in the neck portion upon a quick shaking motion of the bottle body, and the cap when removed from the end portion, dispensing a fine spray as diffused from the hair-like material in the cap upon a quick shaking motion of the cap when a smaller amount of spray is desired as compared with the spray from the bottle body.

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